APPENDIX C

AGENCY CONSULTATION

FEDERAL

Canadian Environmental Assessment Agency
Agence canadienne d'évaluation environnementale

55 St. Clair Avenue East
Suite 907
Toronto, Ontario
M4T 1M2

55, avenue St-Clair Est
Bureau 907
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July 12, 2010

Patrick Gillette
President and CEO
Xeneca Power Development Inc.
5160 Yonge Street, Suite 520
Toronto, Ontario
M2N 6L9

Dear Mr. Gillette,

Re: Waterpower Projects

Thank you for your letter and project overviews received on June 30, 2010 related to the ten waterpower projects, with generating stations proposed at 18 different locations. Project overviews have been received for the following waterpower projects: Allen and Struthers; Big Eddy; Ivanhoe River; Kapuskasing River; Larder and Raven; Marter Township; Serpent River; Vermillion River; Wanatango Falls; and Half Mile Rapids. From your cover letter, 19 different locations with awarded Feed-In-Tariff contracts were mentioned; however, 18 different locations resulted from the preliminary review of all the project overviews. Your clarification regarding this would be much appreciated.

The *Canadian Environmental Assessment Act* (the Act) may apply to federal authorities when they contemplate certain actions or decisions in relation to a project that would enable it to proceed in whole or in part. A federal environmental assessment may be required when a federal authority: is the proponent of a project; provides financial assistance to the proponent; makes federal lands available for the project, or issues a permit, licence or any other approval as prescribed in the *Law List Regulations.*

Based on our telephone conversation with Mark Holmes (Xeneca Power Development Inc.) on July 6, 2010, it is our understanding that the proposed waterpower project at the Half Mile Rapids site on the Petawawa River is undergoing a federal environmental assessment which is being conducted by National Defence Canada (DND). Because this project is not subject to the Ontario *Environmental Assessment Act,* the Canadian Environmental Assessment Agency does not have a role in this project. We encourage you to continue to work with DND regarding the waterpower project at Half Mile Rapids.

In the case of projects that are subject to the Ontario *Environmental Assessment Act*, if there is uncertainty as to whether the Act may also apply, the Agency can help proponents answer this question. For projects that are subject to the Act, the Agency will act as the federal environmental assessment coordinator (FEAC) and facilitate the involvement of the federal authorities in a co-ordinated assessment aimed at meeting all agencies' needs simultaneously.

In order for the Agency to undertake either of these roles, it must have a project description that can be distributed to various federal authorities to determine their interest in the project. It is recognized that at the early stages of the planning process, there may not be much detailed information to provide. However, proponents should try to provide some information on:

- the nature of the project and its location;
- federal decisions which may be made in relation to the project;
- whether federal funding is being contemplated or federal lands are required.

To better assist proponents, the Agency has developed an Operational Policy Statement, which provides guidance in preparing project descriptions. This is available on the Agency's website at:
http://www.ceaa-acee.gc.ca/013/0002/ops_ppd_e.htm

If your purpose in sending us notification of your project is to determine whether the *Canadian Environmental Assessment Act* applies, please be aware that simple notification will not be sufficient. A project description will be required for the above listed projects except for the waterpower project at Half Mile Rapids on the Petawawa River.

Important Note: Please be aware that release of documents to the public may be part of the EA process. Information provided by you related to the EA for these projects will be part of the Canadian Environmental Assessment Registry and will be made available to members of the public, if requested. A package with additional information will be provided to you upon submission of the project description. Should you provide any documents that contain confidential or sensitive information that you believe should be protected from release to the public, please contact the undersigned to obtain an Exclusion Form. This Form can be used to identify the information to be considered for exclusion from the Canadian Environmental Assessment Registry and the rationale for the exclusion.

If you have any questions regarding any of the above, please contact the undersigned at 416-952-1585 or by email at amy.liu@ceaa-acee.gc.ca.

Sincerely,

Original Signed By:

Amy Liu
Project Manager

Copy: Mark Holmes, Xeneca Power Developments Inc.

Canadian Environmental Assessment Agency
Agence canadienne d'évaluation environnementale

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March 17, 2011

Patrick Gillette
PGillette@xeneca.com

Dear Mr. Gillette:

Re: Environmental Assessments under the *Canadian Environmental Assessment Act* – Xeneca Power Development Inc. Development Proposals

I'm writing on behalf of the Canadian Environmental Assessment Agency's Ontario Region staff who are federal environmental assessment coordinators for several hydroelectric facility proposals by Xeneca Power Development Inc. (Xeneca).

This letter includes input from federal authorities who have environmental assessment (EA) responsibilities for the following Xeneca projects: Half-Mile Rapids (Petawawa River), Big Eddy (Petawawa River), Four Slide Falls (Serpent River), McCarthy Chute (Serpent River), Kapuskasing River, Larder and Raven (Larder River), The Chute (Ivanhoe River), Third Falls (Ivanhoe River), Wabageshik Rapids (Vermillion River) and Allen & Struthers (Wanapitei River).

The Canadian Environmental Assessment Agency (the Agency) is taking this opportunity to provide advice, with the goal of facilitating complete, efficient and cooperative EA processes for Xeneca's projects.

Quality and Availability of Local and Site Specific Baseline Data

When an assessment is required under the *Canadian Environmental Assessment Act*, federal authorities with an EA responsibility (responsible authorities) determine what information is required.

Scoping documents outline the information that is needed for each assessment based on the factors listed in Section 16 of the *Canadian Environmental Assessment Act*. To date, scoping documents have been issued by the responsible authorities for Half-Mile Rapids (Petawawa River) and Big Eddy (Petawawa River). The remaining scoping documents will be released in the near future. Xeneca should refer to these documents to determine the baseline data requirements for the assessments.

It's our understanding that Xeneca's intended approach involves:

- using recently collected baseline information in order to complete draft EAs by June 2011;
- releasing this data to federal and provincial regulators in the winter-spring of 2011; and
- completing, prior to the permitting stage, any additional studies that may be required.

The Agency would like to point out that adequate baseline data must be collected to support the assessment of potential environmental effects for each project. Responsible authorities will advise if baseline data gaps exist. If so, Xeneca will be asked to collect the necessary data and incorporate it into the EA. This task would need to be completed before an EA decision can be reached by the responsible authorities.

Federal-Provincial EA Coordination

I understand that provincial Class EA requirements apply to most of Xeneca's projects. In order to maximize efficiencies, the Agency recommends that Xeneca follow a coordinated EA process. This approach usually results in the submission of one body of documentation for each project that satisfies both provincial and federal EA requirements.

However it is Xeneca's choice whether to pursue a coordinated or uncoordinated approach to completing the EAs.

Xeneca's Proposed Draft EA Report Submission Deadlines and Proposed Review Schedule

I have been advised that Xeneca would like to submit draft EA reports for most, if not all, of the proposed projects by June 2011, and would like to begin site clearing and preparation for most projects in the fall of 2011 or early 2012. I understand that, to date, Xeneca has placed equal priority on all of its projects for the purposes of the federal review.

Federal review teams will work cooperatively to assist in a timely review and are willing to receive technical reports as they become available, and in advance of draft EA reports, to provide Xeneca with as much early feedback as possible. However, receipt and review of this material by the members of the federal review teams will not limit the subsequent formal and complete review that will be undertaken at the draft and final EA stages.

Please note that federal review times will depend on the quality of the reports, the complexity of project-specific issues, the level of associated public and Aboriginal concern, competing priorities of expert reviewers, and the number of reports submitted concurrently.

Xeneca is urged to consider measures to facilitate the review process. For example, clustering submissions or communicating the order in which Xeneca would like projects to be reviewed. This would enable federal review teams to provide their input in the most useful and effective manner possible, especially given Xeneca's ambitious schedule.

I understand that Xeneca is subject to regulatory processes associated with the mandates of the federal responsible authorities and you may have already received correspondence from those authorities outlining their regulatory requirements. Responsible authorities urge Xeneca to provide the detailed information for federal regulatory decisions either within, or parallel to, the EA process to provide more timely federal regulatory decisions. Xeneca may want to reconsider the regulatory and construction requirements post-EA and revise their timelines accordingly, where feasible.

Thank you in advance for your consideration and attention to the above matters. Should you wish to discuss further, please contact Ms. Stephanie Davis, Environmental Assessment Analyst at (416) 954-7334, or stephanie.davis@ceaa-acee.gc.ca.

Yours sincerely,

for

Darla Cameron
Section Leader
Canadian Environmental Assessment Agency
Ontario Region

c.c.:

Federal review teams for: Half-Mile Rapids (Petawawa River); Big Eddy (Petawawa River); Four Slide Falls (Serpent River); McCarthy Chute (Serpent River); Kapuskasing River Larder and Raven (Larder River); The Chute (Ivanhoe River); Third Falls (Ivanhoe River) Wabageshik Rapids (Vermillion River); Allen & Struthers (Wanapitei River)

Ontario Ministry of the Environment: Vicki Mitchell, Laurie Brownlee, Ellen Cramm, Carrie Hutchison

Ontario Ministry of Natural Resources: Rick Gordon, Bob Robinson, Joanna Samson,Trevor Griffin; Jim Beal, Lina Pozzebon; Sandra Dosser, David Barbour, Tim Mutter, Kim Mihell, Celesin Marchand

OEL Hydrosys: Tami Sugarman, Karen Fortin

Muriel Kim

From: Mark Holmes [mholmes@xeneca.com]
Sent: June 9, 2011 9:30 AM
To: Samantha Leavitt
Subject: FW: HADD

From: Mark Holmes
Sent: Monday, September 14, 2009 9:59 AM
To: 'Hallett, Jennifer'
Cc: 'Edmond'; Don Chubbuck; 'Robert J. Steele'; Patrick Gillette
Subject: HADD

September 14, 2009

Jennifer Hallett
Fish Habitat Biologist,
Northern Ontario District
Ontario-Great Lakes Area
Central & Arctic Region

Fisheries and Oceans Canada
Government of Canada

1219 Queen Street East,

Sault Ste. Marie, ON
P6A 2E5

Dear Jennifer:

Thank you for your email and letter dated August 5, 2009.

You indicate that our proposed project on the Serpent River will involve a Harmful Alteration Disruption or Destruction (HADD) of fish habitat and, as such, we will require an Authorization under the Fisheries Act which then triggers the need for a CEAA screening report.

At our meeting in Sault Saint Marie on July 5, our consultant Robert Steele from NRSI Inc. presented preliminary results of studies to date and he provided an outline of studies we anticipate will be undertaken later in 2009 and 2010 that will assess fish communities, populations and habitat.

Subsequently, a summer (August 2009) study of the length of the Serpent River stretching from Pecors Lake to McCarthy Lake was undertaken. This very comprehensive study has provided some good base knowledge of what fish are present in the river and the areas being utilized by those species.

We have also gleaned considerable information from other sources i.e. evidence of water quality, and we are not aware of any information that suggests there will be significant impacts on fish populations in these water bodies.

We would like to determine what information you have that definitively indicates that our projects will result in a HADD in these water bodies and where potential effects on habitat may occur.

Xeneca Inc. is committed to mitigation programs for any project in order to minimize or eliminate potential effects, but such a program cannot be defined at this point for the proposed Serpent River Projects.

The proposed projects involve only a minimal change to water levels in Lake McCarthy, less than 5cm, at maximum power level. This is well within natural lake level fluctuations which may occur based on factors as simple as wind setup. On an annualized basis historical evidence indicates that fluctuations may be well over 1 metre. We do not anticipate any potential effects on Lake Trout or other species due to this small change in water level, but we will asses this further using results from our field studies.

Jennifer, based on the aforementioned, and, as we proceed with these projects and more information becomes available, we readily seek your advice on when you feel a possible application for an Authorization may be appropriate.

We look forward to working with you and your office as project definition and planning evolves.

Please call me if you wish to discuss this matter (416-590-9362).

Best regards,

Mark Holmes
Vice President
Corporate Affairs
Xeneca Power Development

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North York
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Xeneca Power Development Inc.

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

Minutes

Re: **Agency Discussions re: Xeneca Power Hydro Development Projects Fisheries Act Authorizations**

Date/Time: **February 11, 2011, 10:00am to 12:10pm**

Location: **Holiday Inn Toronto Airport East**
600 Dixon Road
Toronto, ON M9W 1J1

Participants Present:
Robert Steele – NRSI
Andrew Schiedel - NRSI
Bill Touzel – OEL HydroSys
Patrick Gillette – Xeneca
Ed DeBruyn – DFO
Jennifer Thomas – DFO
Thomas Hoggarth – DFO
Carl Jorgensen – DFO
Cindy Mitton-Wilkie – DFO

Participants by Teleconference:
Tami Sugarman – OEL HydroSys
Julie Dahl – DFO
Jim Beal – MNR
Dave Brown – MNR
Bob Bergmann – MNR
Sandra Dosser – MNR

The following Meeting Minutes were recorded jointly by Andrew Schiedel of Natural Resource Solutions Inc. and Cindy Mitton-Wilkie of Fisheries and Oceans Canada. The notes reflect the understanding of discussions held at the meeting and were previously circulated for review by participants between March 8 and March 21, 2011. Some minor comments were received and corresponding revisions were made. These minutes are now considered accurate.

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1. **Introductions**

2. **Opening comments**

Patrick Gillette – Xeneca
Xeneca currently has 19 small hydroelectric projects, most of which are run-of-the-river with some projects having opportunities for limited peaking. All of these are located in northeastern Ontario.

Patrick had spoken with DFO staff about doing habitat banking or regional scale compensation, and is aware of other projects, such as some in the mining sector, which are in need of compensation within the northeast region. He asked whether there are sites that DFO or MNR are dealing with where Xeneca could contribute as a means of fish habitat compensation. He also suggested that Xeneca could potentially propose projects as well. They are looking for opportunities for bigger 'wins' instead of dealing with small compensation projects on a site basis.

DFO – Ed Debruyn

Ed indicated that there is a lot of uncertainty with the FIT contracts, and there is the reality of timelines. He has spoken with MOE regarding meeting the challenges of the regulatory process. He was at an OWA roundtable meeting where there were similar discussions about the regulatory process and the EA process. All parties are working toward the same end. MNR and DFO are working collectively and effectively to make decisions, with MNR regulating fisheries and DFO regulating Habitat.

Ed said there are some places where it makes sense to do this regional compensation and we need to determine where it may make sense. There is work underway to develop agreements on how to do things better. They are working with OWA on strategic issues, and there is similar work underway elsewhere across the country. DFO needs to better understand what is being proposed by Xeneca. DFO can take ideas and give them consideration, and discuss them with MNR.

Ed reminded the Xeneca group that DFO is bound by Policy, and they need to determine where they may be setting precedents. They are held accountable by members of the public as to what they are doing and how they are implementing their policies. In that regard, he requested that meeting minutes be circulated.

Dave Brown - MNR

Dave indicated that he did not have specific comments. MNR staff will be in listening mode during the meeting. They want to hear the discussions and then have further discussion with DFO.

3. Background – What is driving Xeneca's desire to pursue regional scale fish habitat compensation?

Rob Steele (NRSI) provided background on the Xeneca projects, the complexity of developing fish habitat compensation plans, and the timing challenges for the projects. A copy of his presentation is attached.

- Xeneca Power currently has 19 proposed hydroelectric projects at various locations across central and eastern Ontario (Rivers include Vermilion, Wanapitei, Frederick House, Ivanhoe, Serpent, Petawawa, Larder and Kapuskasing)
- The relative size and complexity of these projects introduces difficulty in terms of traditional "like for like" fish habitat compensation at the project level (i.e. distance of river being altered may be too large)

- Timing associated with multiple "separate" *Fisheries Act* Authorizations vs. project timelines also adds complexity

4. Goals and Objectives of Today's Discussions

- Provide General Understanding of Xeneca Project Types
- Provide summary of pressures related to project schedule
- Introduce potential concepts for larger scale fish habitat compensation
- Determine Information needed from Xeneca?
- Provide forum for open discussion
- Determine next steps and action items

5. Project Schedules

Patrick Gillette (Xeneca) discussed the numerous FIT contracts and indicated that 40 of those contracts are hydro. Xeneca has 19 of the hydro FIT contracts. There is a 5 year contract schedule. Xeneca is one year into the process. There is about 18 to 24 months to complete the EA, and 12 to 16 months to complete permitting. It is challenging just to develop 19 hydro projects, and the schedule of the FIT contracts adds further challenge.

Patrick explained that there is an incentive in these contracts to provide peaking capability, such that a small river gets about a 35% premium in operating revenue. The province does not require peaking as part of the FIT contracts. Instead, they offer a premium on the price of electricity produced between 11am and 7pm on any weekday (Monday – Friday) of the year. From 7pm to 11am on the weekday and during weekends and holidays, they are offered 10% less than the standard price. The facilities are not 'on call' to provide peak power.

Patrick described the timing constraints for ordering equipment. Equipment cannot be ordered until the design and operation plan is in place, because this can affect the type of turbine and other equipment that is required.

Bill Touzel (WESA) indicated that financing is also a factor in the timing of equipment orders. Once the project is further along in the EA and approvals processes, the financing becomes available to order equipment.

Patrick Gillette (Xeneca) added that having a Notice to Proceed from the Ontario Power Authority (OPA) contributes to the ability to proceed with equipment orders. A Notice to Proceed is dependent upon the completion of the provincial EA process. Fear of government change and the potential cancellation of the FIT contracts is another reason to wait to order equipment.

Ed Debruyn (DFO) asked about Xeneca's project priorities. Do they all have the same level of priority? If some projects are higher priority, which ones are they?

Patrick Gillette (Xeneca) indicated that they are in the process of preparing operation plans, which will be completed in the next 30 to 60 days. They will then use this information to begin triaging the projects. Factors under consideration also include acceptance of projects by locals which presents a clearer path through the EA process.

Action: Xeneca to provide project priority list in 30 to 60 days.

Ed Debruyn (DFO) indicated that there are many demands on DFO's fixed resources. Renewable energy is not the only priority.

Bill Touzel (WESA) explained that the 5-year FIT contracts have penalties for not meeting the timeline of the contract.

Patrick Gillette (Xeneca) indicated that he views permitting as the real bear. The financial burden incurred during permitting is a collective function of the processes with all the various permits and the responsible agencies. The easier and more functional the Xeneca team can make the process for the agencies, the fewer burdens Xeneca needs to bear as a result of permitting.

6. Discussion of Xeneca Projects and Range of Anticipated Fish Habitat Impacts

Patrick Gillette (Xeneca) indicated that the generator sizes for the 19 projects range from 1.5 MegaWatts for the smallest generator, to the range of 3 to 7 MegaWatts for most of the projects, and 9 MegaWatts for the largest generator. Rob Steele reviewed two examples of Xeneca's project representing the smallest fish habitat impact and the largest fish habitat impact.

- The McCarthy Chutes project on the Serpent River has a small inundation area in terms of both river length and area, and a close-coupled powerhouse that does not create a flow bypass reach.
- The Four Slides Falls project has a very large inundation area in terms of river length (6km) and area. It also has a bypass reach because a penstock conveys flow to a powerhouse located downstream of the dam.

7. Potential Concepts for Consideration

Rob Steele (NRSI) presented various concepts for consideration.

- Preserving Areas for Conservation: Xeneca could purchase private lands alongside a river and set it aside for conservation.
- Orphan Mine Site Rehabilitation

    - Currently more than 5,700 known abandoned mine sites located within Ontario,
    - Approximately 4,000 sites could potentially be hazardous to public health and safety and to the environment, including potential toxic impact on aquatic habitat.
    - Approximately 30 - 40 per cent of Ontario's abandoned mine sites are estimated to be located on Crown land. (http://www.mndmf.gov.on.ca/mines/mg/abanmin/default_e.asp)
- Example – Xeneca's McGraw Falls Project
- Example – Graveyard Chutes
    - Located on Aux Sable River near a Provincial Water Park close to the Town of Massey, Sudbury District.
- In general, Xeneca can adopt smaller projects with their staff and resources to get the work done. Are there projects that DFO/MNR wants done?
    - The Larder and Raven project is an example where the hydroelectric facility is small, having a 1.5 MegaWatt generator. Work is required at the site that the project cannot fund, but the work could be done with some resources from another project.

Thomas Hoggarth (DFO) suggested that this regional concept may be more complex and onerous than treating the 19 sites individually, which is contrary to the suggestion by Xeneca's consultants, that regional compensation will simplify the compensation process. Also habitat banking must be completed and monitored before being given credit that can be applied to your project, so it does not work with the FIT timelines.

Bill Touzel (WESA) clarified that the intention is to find existing problems and fix them, not to bank habitat.

Thomas Hoggarth (DFO) pointed out that the EA process will become more complex as additional projects and locations are used. More geographic areas and issues will be added to the EA. He said it is a good idea to think about regional habitat compensation, but in reality the timeline may not be improved.

Ed Debruyn (DFO) agreed that the compensation site would be added to the project's EA.

Bill Touzel (WESA) indicated that Xeneca's team is aware of the issues and complexities. At this point we are not yet at the point of those complexities. Xeneca needs buy-in to the regional compensation approach.

Ed Debruyn (DFO) indicated that DFO's presence at the meeting provides indication of potential and interest in regional compensation. At the same time, DFO must be sure they are within the 3 principles of the Policy for the Management of Fish Habitat.

1. Fish Habitat Conservation
2. Fish Habitat Restoration
3. Fish Habitat Development

Jennifer Thomas (DFO) indicated that they need to have information on the habitat issues at the each site before they can discuss concepts and potential projects for compensation. Some examples would include: fish and fish habitat resources, potential impacts to fish and fish habitat (e.g. physical habitat, fish passage), mitigation, compensation options on site, residual impacts that can't be compensation on site. This information needs to be developed with local staff input.

Bill Touzel (WESA) said Xeneca is very close to being able to provide that.

Action: Xeneca to provide operation plans to local DFO and MNR staff.

Rob Steele (NRSI) indicated that he would like to see a matrix of the various projects and their residual fish habitat impacts. This list could be provided to senior DFO staff.

Action: Once draft operational plans are available, NRSI to provide impacts to fish and fish habitat.

Action: Once Xeneca has worked with local staff, NRSI to provide senior DFO and MNR staff a matrix of impacts that could not be compensated for on-site.

Dave Brown (MNR) said MNR would like to have some discussions with both DFO and the MNR field staff regarding the operational plans.

Bill Touzel (WESA) clarified that the agency field staff do not yet have the operational plans.

Dave Brown (MNR) said that is his concern.

Patrick Gillette (Xeneca) suggested that circulation to agency field staff and agency senior staff in parallel. Xeneca will also strive to get their operational plans out ASAP to get some feedback.

Ed Debruyn (DFO) said he understands Dave Brown to be saying that the agency staff needs to discuss the veracity of the impacts before discussing the nature of the compensation that is required.

Bill Touzel (WESA) expressed concern for the timeline implications.

Tom Hoggarth (DFO) said he did not hear anything that suggested timeline implications. It's a matter of first confirming the impacts with the agency field staff without discussing compensation. His staff are hearing people say that impacts do not need to be discussed because we are going regional with the compensation. He suggests:

1. Agree on the impacts
2. Determine on a case-by-case basis whether regional or site-specific compensation is the better way to go.

Ed Debruyn (DFO) said he is hearing that the agencies need a cogent way to determine and agree on impacts.

Patrick Gillette (Xeneca) indicated that we know the physical impacts, and Xeneca is working on discerning the operational impacts. We need to wrap our minds around the process of how to get where we need to go.

Julie Dahl (DFO) said that doing off-site rehabilitation of other sites elsewhere in the watershed or in an adjacent watershed is not new. Going to other watersheds is included in the hierarchy of preferences for compensation. At-site compensation is preferred, and that is done first. If it is not possible to compensate for all impacts on site, they consider off-site, like-for-like compensation. Off-site compensation that is not like-for-like is on the list, but is further down on the hierarchy of preferences. Julie also stated that the concept of money in lieu of compensation is not one of the options outlined in DFO's policy.

Julie also said we need to be clear that we are compensating, not mitigating. The EA phase work is where 'tweaking' happens to mitigate impact and that is not part of compensation (for the residual impacts).

Julie clarified that it is not new to combine several small impacts from a project into a larger habitat compensation effort, but it is less tested to combine impacts from multiple projects into a larger compensation effort.

Rob Steele (NRSI) reviewed the second slide titled "Potential Concepts for Consideration'.

- Removal of Existing Control Structures
  - MNR owns 391 dams in Ontario
  - Some of these are very old and no longer have a water control function (estimated at 25%)
  - Many of these are barriers to fish movement
- Species at Risk (SARA/ESA)
  - Using the concept of "net benefit" can some of the species at risk habitat impacts be compensated for off-site?

Carl Jorgenson (DFO) said the SARA/ESA work may not get acknowledgement under the *Fisheries Act.*

8. Questions for DFO

Regarding information requirements, the following actions were identified:

- Initiate regional staff involvement in conjunction with the introduction of operation plans and for the assessment of impacts to fish and fish habitat.
- Provide the matrix of habitat impacts along with the operation plans.

Patrick Gillette (Xeneca) indicated that when there is uncertainty about impacts and the compensation is also uncertain, Xeneca can commit to further study to raise the certainty regarding impacts and implement corrective measures if necessary.

Carl Jorgenson (DFO) said DFO has embraced some of this as adaptive management. Impacts are monitored on an ongoing basis. Some of these things are routine on authorizations.

Regarding case studies that DFO/MNR are aware of, Rob Steele (NRSI) referred to Jennifer Thomas's earlier statement about needing to understand impacts. They do not want to talk about case studies or potential projects without first understanding the impacts requiring compensation.

Are there legislative or policy impediments? Rob Steele (NRSI) asked whether the compensation is required to be included in the EA.

Thomas Hoggarth (DFO) said the compensation location becomes part of your project and therefore part of the same EA. This brings the greater audience of both projects into the EA.

Julie Dahl (DFO) agreed, but said again that it is not new that the scope of the EA increases.

Bill Touzel (WESA) agreed that there are complexities in the federal EA process, and asked whether they should decouple the provincial Hydro Class EA from the federal EA.

Action: Patrick Gillette (Xeneca) suggested that the Xeneca team go back and come up with ideas. He can involve their environment lawyer to help come up with solutions.

Bill Touzel (WESA) said decoupling the provincial and federal EAs is desirable because it allows for earlier conclusion to the provincial EA and prevents the provincial EA from being expanded in scope geographically.

9. Open discussion

Much discussion occurred throughout the presentation, and no further open discussion time was required.

10. Next Steps

Actions were reviewed:

1. Xeneca to provide an indication of project priorities to senior DFO and MNR staff once they have determined this based on the operation plans.
2. Xeneca to provide operation plans to local staff (DFO and MNR).
3. NRSI to provide impacts to fish and fish habitat along with the operation plans to local staff (DFO and MNR).
4. Once Xeneca has worked with local staff, NRSI to provide senior DFO and MNR staff a matrix of impacts that could not be compensated for on-site.
5. Xeneca to review their strategy for the EA process with respect to the possibility of decoupling the provincial and federal EAs.

Ed Debruyn (DFO) has met with the CEA Agency director regarding priorities. He would like to know Xeneca's intentions for the EA process. Ed's next meeting with the CEA Agency director is on March 11.

Jennifer Thomas (DFO) emphasized that given the time lines and realities of the FIT program open communication at the local and operational level will be critical for all parties and, where there may be disputes, they should be advanced to DFO senior staff or MNR senior staff.

Rob Steele (NRSI) thanked everyone for their participation and adjourned the meeting at approximately 12:10pm.

Xeneca Power Development Inc.

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

Xeneca Power Hydro Development Projects

Agency Discussion – Fisheries Act Authorizations

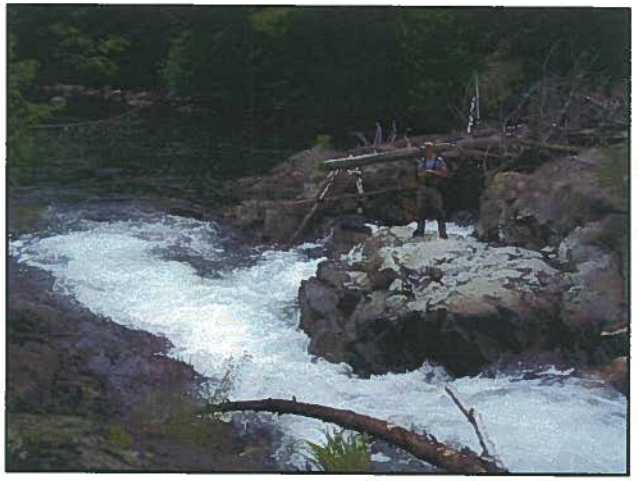
Feb 11, 2010

Opening Comments

Xeneca Power – Patrick Gillette

DFO - Ed DeBruyn

Four Slide Falls – Serpent River, On



Background

- **Xeneca Power currently has 19 proposed hydroelectric projects at various locations across central and eastern Ontario (Rivers include Vermilion, Wanapitei, Frederickhouse, Ivnahoe, Serpent, Petawawa, Larder and Kapuskasing)**

- **The relative size and complexity of these projects introduces difficulty in terms of traditional "like for like" fish habitat compensation at the project level (i.e. distance of river being altered may be too large)**

- **Timing associated with multiple "separate" *Fisheries Act* Authorizations vs. project timelines also adds complexity**

Goals and Objectives

- Provide General Understanding of Xeneca Project Types
- Provide summary of pressures related to project schedule
- Introduce potential concepts for larger scale fish habitat compensation
- Determine Information needed from Xeneca?
- Provide forum for open discussion
- Determine next steps and action items

McCarthy Chutes – Serpent River, On

Project Schedules

- **Feed in Tariff Contract Schedules**
  - 5 Year Contract Schedule
  - 18 – 24 Month EA Schedule
  - 12 – 16 Month Permitting Schedule
  - 24+ months to order equipment and commence construction in late summer.
  - 3 – 6 months pre-commissioning work.
- **Power Supplied to the Grid in 2015**

McPherson Falls –
Vermillion River, On

Xeneca Projects

Range of Project Types

1) McCarthy Chutes

- Very short zone of inundation (300 m)
- Close-coupled (powerhouse incorporated in dam

2) Four Slide Falls

- Longer zone of inundation (6 km)
- Weir- Penstock arrangement with bypass reach

Potential Concepts for Consideration

- **Preserving Areas for Conservation**
  Example – Little Abitibi River Provincial Park
- **Orphan Mine Site Rehabilitation**
  - Currently more than 5,700 known abandoned mine sites located within Ontario,
  - Approximately 4,000 sites could potentially be hazardous to public health and safety and to the environment.
  - Approximately 30 - 40 per cent of Ontario's abandoned mine sites are estimated to be located on Crown land. (http://www.mndmf.gov.on.ca/mines/mg/abanmin/default_e.asp)
  - Example – Xeneca's McGraw Falls Project

Third Falls –
Ivanhoe River, On

Potential Concepts for Consideration

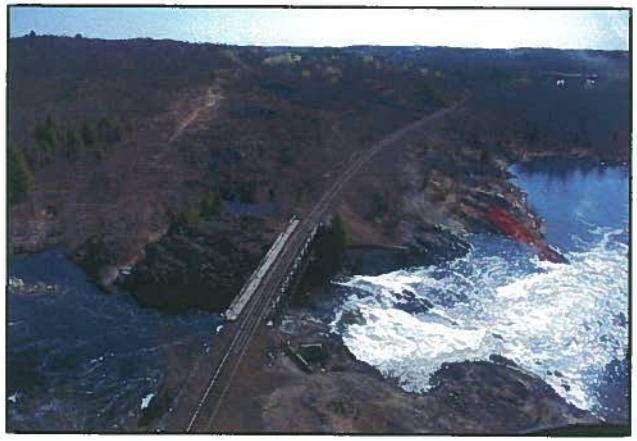
Removal of Existing Control Structures

- MNR owns 391 dams in Ontario
- Some of these are very old and no longer have a water control function (estimated at 25%)
- Many of these are barriers to fish movement

Species at Risk (SARA/ESA)

- Using the concept of "net benefit" can some of the species at risk habitat impacts be compensated for off-site?

Soo Crossing – Vermillion River, On



Questions for DFO?

- Are there outstanding information requirements that DFO needs from Xeneca to facilitate internal discussions on this subject
- Are there existing case studies of large scale compensation for us to consider
- Are there legislative or policy impediments to undertaking a regional scale approach to fish habitat compensation?
- If so, can these be overcome within the time frame of these projects (i.e. within the next two years)?

Muriel Kim

From: Tami Sugarman
Sent: January 24, 2011 4:37 PM
To: Ed Laratta; mholmes@xeneca.com; 'Mike Vance'
Cc: Philippa McPhee; 'Rob Steele'
Subject: FW: Xeneca's Proposed Waterpower Projects on the Serpent River; McCarthy Chute & Four Slide Falls

Hello Ed, Mark and Mike
As per today's meeting as well as other sites, EC has forwarded sampling protocols for testing for Acid Rock Drainage at sites (surface water quality issue, geologically dependant). Where acid bearing rocks occur.
It is important that you have this information so that you can coordinate your plans for technical drilling program for the sites to ensure it is undertaken in a way that addresses environmental concerns from EC and MOE on surface water quality.
Tami

Tami Sugarman - OEL-HydroSys Carp - (613) 839-1453 x229

From: Shaw,Michael [Burlington] [mailto:Michael.Shaw@ec.gc.ca]
Sent: January 24, 2011 12:01 PM
To: Tami Sugarman
Cc: Caitlin Scott; Kondrat, Todd (ENE)
Subject: Xeneca's Proposed Waterpower Projects on the Serpent River; McCarthy Chute & Four Slide Falls

As discussed at the meeting today, please note that the sampling protocols were developed by Natural Resources Canada under the "MEND" program and used to identify whether excavated rock materials at specific locations are potentially acid generating and the following guidance documents should be referenced when undertaking rock sampling:

- List of Potential Information Requirements in Metal Leaching, Acid Rock Drainage Assessment and Mitigation Work, MEND* Report 5.10E, on behalf of MEND and sponsored by The Mining Association of Canada, MEND and Natural Resources Canada (Mining and Mineral Sciences Laboratories), January 2005. (EC can provide a copy of this document on request)
  *{Mine Environment Neutral Drainage (MEND) Program}

- Guidelines for Metal Leaching and Acid Rock Drainage at Minesites in British Columbia, Price W.A. and Errington J.C., Ministry of Energy and Mines, August 1998
  <http://www.empr.gov.bc.ca/Mining/Permitting-Reclamation/ML-ARD/Pages/Guidelines.aspx>

Mike

Michael Shaw
Environmental Assessment Officer
Environmental Assessment Section
Environmental Protection Operations Division - Ontario
Environmental Stewardship Branch
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Michael Shaw
Agente d'évaluation environnementale
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Gouvernement du Canada
Site Web: www.ec.gc.ca

From: Environmental Assessment Information [mailto:eainfo@oel-hydrosys.ca]
Sent: Friday, January 21, 2011 3:07 PM
To: Anne Whalen; Brent St. Denis; Brett Smith; Caitlin Scott; Carrie Hutchison; Colin Hoag; Bell,Dave [CEAA]; David Pickles; Dawn-Ann Metsaranta@ontario.ca; Gerry Webber; Haya Finan; Helen Kwan; Jennifer Hallett; Jennifer Lillie Paetz; John Jone; Katherine Kirzati; Kim Mihell; Lesley Sprague; Malcolm White; Mei Ling Chen; Shaw,Michael [Burlington]; Narren Santos; Paul Marleau; Paul Norris; Rod Sein; Ron Dorscht; Simon Spooner
Cc: Tami Sugarman; Philippa McPhee; elaratta@xeneca.com; Colin Hoag
Subject: FINAL Agenda: EA Coordination Meeting for Xeneca's Proposed Waterpower Projects on the Serpent River; McCarthy Chute & Four Slide Falls

In addition to the previous e-mail below, should you encounter any difficulties connecting to the conference call please contact;

Tami Sugarman	613-894-3509
Kai Markvorsen	613-277-1164

Thank you,

Pilar DePedro

Good afternoon

A final agenda is attached for the McCarthy Chute and Four Slide Falls Projects EA Coordination Meeting, it has been revised
to include meeting location, date and time, there were no comments received for additional items of discussion on the
draft agenda. For those of you not attending, this agenda is being forwarded for your files.

The meeting will be held on **January 24th, 2011 @ 9:30 am** at the Delta Sault Ste. Marie Waterfront Hotel , 208 St. Mary's River Drive, http://www.deltahotels.com/en/hotels/ontario/delta-sault-ste-marie/directions-and-local-events/.

Please plan for a working lunch...a light lunch will be provided for those of you joining us in person.

If you will be joining us by teleconference, we ask that you are also able to continue through the working lunch.

Teleconferencing details are as follows:

Toll free: 1-866-797-9101
Conference ID: 4093876

Please have a copy of the project description issued by Xeneca for the meeting, since we will be referring to this document.
If you did not receive a copy of the project description, it may be accessed electronically at:

http://www.oel-hydrosys.ca/News/tabid/349/EntryId/7/Xeneca-Power-Development-Inc-Project-Descriptions-for-Eight-Small-Hydroelectric-Projects.aspx

Regards,

Pilar DePedro

Environmental Assessment Information - OEL-HydroSys Carp - (613) 839-1453

Environmental Assessment Information
OEL-HydroSys Inc. – 3108 Carp Rd. - P.O. Box 430, Carp, Ontario, Canada K0A 1L0
(T) (613) 839-1453 (F) (613) 839-5376
eainfo@oel-hydrosys.ca – www.oel-hydrosys.ca

OEL-HydroSys, WESA Envir-Eau, WESA, WESA Technologies, members of WESA Group Inc.

Muriel Kim

From: Shaw,Michael [Burlington] [Michael.Shaw@ec.gc.ca]
Sent: April 18, 2011 4:40 PM
To: Bell,Dave [CEAA]
Cc: Dobos,Rob [Burlington]; Moreno-Colacci,Jesica [Ontario]; haya.finan@tc.gc.ca; Jennifer Hallett; Mei Ling Chen; Scott, Caitlin; Laurie Brownlee; Environmental Assessment Information
Subject: RE: EC Comments on Surface Water Quality Monitoring Program, 2010 on Serpent River: Four Slide Falls GS and McCarthy Chute GS (EC File # 2008-143)

Hi Dave:
This is further to the comments in my April 11 email below which provided advice to the Responsible Authorities on the subject project. The following additional comments on the surface water monitoring undertaken at each of the proposed generating stations have been provided for your consideration, as the issues identified below were overlooked during our earlier review.

Four Slide Falls:

Surface Water Quality Monitoring Program - Serpent (Four Slide Falls) letter dated February 24th, 2011 addressed to Mr. Edmond Laratta:

> *Table 1: Serpent (Four Slide Falls) Surface Water Locations and General Observations*: It is indicated on this table that water level at both SW1, SW3 and SW4 was "low" and that the water current at SW1 was "moderate," and that it was "slow" at SW3 and SW4. EC recommends that the Proponent should ensure that actual measurements of water levels (i.e. depth) and water currents are conducted at all water quality sampling stations.
>
> *Table 3: Serpent (Four Slide Falls) PWQO Surface Water Exceedances*: It is indicated on this table that water quality samples collected on August 26, 2010 had elevated levels above the PWQO for chromium, copper and zinc at SW1; elevated levels of chromium and zinc at SW3; and elevated levels of chromium at SW4. It is indicated in the letter to Mr. Edmond Laratta that the source of these elevated concentrations is unknown. EC requests that the Proponent also indicate if they will conduct further studies in the area to confirm whether there is an on-going source of contamination, or if these are naturally occurring concentrations.
>
> The Proponent did not provide a measure of water hardness for the water samples collected and analyzed for SW1, SW3 and SW4. EC requests that the Proponent provide an estimate of hardness for the water quality samples analyzed as part of this assessment and recommend that they should ensure that water hardness is measured and reported for all future samples collected.

McCarthy Chute:

Surface Water Quality Monitoring Program - Serpent (McCarthy Chute) letter dated February 24th, 2011 addressed to Mr. Edmond Laratta:

> *Table 1: Serpent (McCarthy Chute) Surface Water Locations and General Observations*: It is indicated on this table that water level at both SW1 and SW3 was "low" and that the water current at SW1 was "moderate" and it was "slow" at SW3. EC recommends that the Proponent should ensure that actual measurements of water levels (i.e. depth) and water currents are conducted at all water quality sampling stations.
>
> *Table 3: Serpent (McCarthy Chute) PWQO Surface Water Exceedances*: It is indicated on this table that water quality samples collected on August 24, 2010 had elevated levels above the PWQO for chromium and zinc at SW1; and elevated levels of chromium and copper at SW3. It is indicated in the letter to Mr. Edmond Laratta that the source of these elevated concentrations is unknown. EC requests that the Proponent also indicate if they will conduct further studies in the area to confirm whether there is an on-going source of contamination or if these are naturally occurring concentrations.

The Proponent did not provide a measure of water hardness for the water samples collected and analyzed for SW1, SW3 and SW4. The Proponent should provide an estimate of hardness for the water quality samples analyzed as part of this assessment and it should ensure that water hardness is measured and reported for all future samples collected.

Mike

From: Shaw,Michael [Burlington]
Sent: Monday, April 11, 2011 4:28 PM
To: Bell,Dave [CEAA]
Cc: Dobos,Rob [Burlington]; Moreno-Colacci,Jesica [Ontario]; 'haya.finan@tc.gc.ca'; Jennifer Hallett; Mei Ling Chen; 'Scott, Caitlin'; Laurie Brownlee; 'Environmental Assessment Information'
Subject: EC Comments on Surface Water Quality Monitoring Program, 2010 on Serpent River: Four Slide Falls GS and McCarthy Chute GS (EC File # 2008-143)

As requested, Environment Canada (EC) has reviewed the water quality monitoring report referenced in the request below from OEL-HydroSys Inc. on behalf of the project proponent (Xeneca Power Development Inc.).

The following comments are provided to the Responsible Authorities for the subject project(s) under the *Canadian Environmental Assessment Act* (CEAA) on behalf of EC in context of our role as an expert Federal Authority per section 12(3) of CEAA as part of the overall screening of the project(s).

As the report/monitoring program is similar for each of the proposed hydroelectric generating stations at Four Slide Falls and McCarthy Chute (and are on the same river), we have provided one set of comments that would apply to both reports, except as noted.

Specific comments are provided below for your consideration.

Surface Water Quality Monitoring Program letter(s) dated February 24th, 2011 addressed to Mr. Edmond Laratta:
EC requests that the Proponent provide maps in the updated reports depicting the location of the spring and summer 2010 sampling stations (i.e. McCarthy Chute GS: SW1 and SW3; Four Slide Falls GS: SW1, SW3 and SW4) where water quality samples have been collected. EC also requests that the location of the proposed Four Slide Falls (Serpent River) and McCarthy Chute Hydroelectric Generating Stations and their associated headponds should be clearly depicted on the maps (requested in the foregoing statement).

The Proponent should clarify if water quality sampling has been conducted at any of the following study areas for the McCarthy Chute GS:

- McCarthy Lake (i.e. upstream of the site for the hydroelectric generating station;
- downstream of McCarthy Chute
- future headpond area

Section 4.1.2 - Field Studies Proposed by the Proponent: Fish Species Inventory
It is indicated that a *"generalized sampling of the fish community was conducted to determine the full range of species utilizing the river both above and below the proposed dam site."*

The Proponent should indicate on a map the study area that was sampled as part of the Fish Species Inventory survey and as part of the Walleye Spawning Survey.
The Proponent should conduct a baseline sport fish mercury tissue study in order to determine baseline mercury concentrations in fish tissue at a reference location (i.e. upstream of the future Four Slide Falls headpond) and at an exposure area (i.e. at the site of the future Four Slide Falls headpond).

As indicated in EC's Metal Mining Effluent Regulations (MMER's) technical guidance document, tissue samples collected for mercury analysis should be of one sex and one age class, if possible. If this is not possible, then the sex of each fish

making up the laboratory sample for mercury analysis should be recorded and reported. This is especially relevant for the walleye species. In a study by Gewurtz, Bhavsar and Fletcher (2010), it is indicated that statistical analysis of samples collected by Ontario Ministry of the Environment's (MOE's) Sport Fish Contaminants Program, have found that for the walleye spp., there is a significant difference in fish tissue mercury concentrations amongst the genders (mercury tissue concentrations in males being greater than concentrations in females). EC recommends that the Proponent should also collect the following endpoints for the fish collected for the fish tissue mercury study:

a. Total length
b. Total body weight
c. Age
d. Sex
e. Weight of its liver and hepatopancreas

If fish are sexually mature, they following enpoints should be measured as well:

a. Egg size
b. Fecundity
c. Gonad Weight

These endpoints should be analyzed statistically to determine if there are significant statistical differences between exposure and reference fish specimens.

A YOY tissue mercury survey should be conducted as well. The collected YOY should be measured for:

a. Total length
b. Total body weight

EC recommends that the adult and YOY mercury tissue surveys should be conducted prior to the construction and operation of the headpond and post-headpond construction, on an annual basis for at least the first three years post-construction in order to closely monitor any changes in mercury tissue concentration that could result from the construction of the headpond. The surveys could be conducted on a bi-annual basis after the first three years of operation of the hydropower plant. Also, water quality samples should be collected and analyzed from each of the fish sampling areas:

Table 5.1 - Potential Effects Identification Matrix for Construction and Operation:
The Proponent provided a list of potential effects on the aquatic ecosystem under the criteria of "General Natural Environment Considerations" {Four Slide Falls GS (p. 27); McCarthy Chute GS (p. 29).} It is indicated that one of the potential adverse effects on water quality or quantity (surface water) is a "*potential effect during operation due to shoreline erosion, inundation of terrestrial land in head ponds (e.g. nutrients, mercury inputs) and accidental spills.*" EC recommends that the Proponent consider the potential increase in mercury levels in surface water and the potential subsequent increase in fish tissue mercury levels that could result.

Table 5.1 - Potential Effects Identification Matrix for Construction and Operation:
The Proponent listed a series of potential effects on the aquatic and riparian ecosystem under the criteria "Aquatic and Riparian Ecosystem Considerations" {Four Slide Falls GS (p. 29-31); McCarthy Chute GS (p. 33). It is indicated that one of the potential adverse effects on surface water is a potential "*change in water temperature in headpond due to increased surface area and slower flow velocity anticipated to be negligible.*" It is indicated that no mitigation measures will be required since the overall thermal regime of the river will likely be unaffected. It had been previously indicated in Section 2.4.1 "*Energy and Water Requirements and Sources*" that "*small amounts of cooling water may be withdrawn from the Serpent River to cool powerhouse components.*" EC recommends that the Proponent should provide an estimate of the expected temperature and volume of the thermal discharge from the powerhouse. Also, EC requests that the Proponent clarify if this discharge would be released to the Serpent River.

Environment Canada's comments and recommendations are intended to provide expert support to project proponents and decision-makers, in accordance with its program related responsibilities and associated guidelines and policies. These comments are in no way to be interpreted as any type of acknowledgement, compliance, permission, approval, authorization, or release of liability related to any requirements to comply with federal or provincial statutes and regulations. Responsibility for achieving regulatory compliance and cost effective risk and liability reduction lies solely with the project proponent.

We understand that this email will become part of the RA's public registry as required under CEAA. In this context we acknowledge that our emails may be added to the registry in accordance with *Access to Information Act* and *Privacy Act* requirements

We trust that the above comments will assist you in advancing the EA screening for this project.

Please contact me if you wish to discuss our comments and recommendations, or any other matters related to our advice on this project.

Yours Sincerely,

Mike

Michael Shaw
Environmental Assessment Officer
Environmental Assessment Section
Environmental Protection Operations Division - Ontario
Environmental Stewardship Branch
Environment Canada
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Michael Shaw
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Téléphone 905-336-4957
Gouvernement du Canada
Site Web: www.ec.gc.ca

From: Environmental Assessment Information [mailto:eainfo@oel-hydrosys.ca]
Sent: Tuesday, March 15, 2011 12:58 PM
To: Anne Whalen; Brent St. Denis; Brett Smith; Caitlin Scott; Bell,Dave [CEAA]; David Pickles; Dawn-Ann; Gerry Webber; Haya Finan; Helen Kwan; Jennifer Hallett; Jennifer Lillie Paetz; John Jone; Katherine Kirzati; Kim Mihell; Laurie Brownlee; Lesley Sprague; Malcolm White; Mei Ling Chen; Shaw,Michael [Burlington]; Narren Santos; Paul Marleau; Rod Sein; Ron Dorscht; Simon Spooner; Colin Hoag; Paul Norris
Cc: Tami Sugarman; elaratta@xeneca.com; rsteele@nrsi.on.ca
Subject: Surface Water Quality Monitoring Program, 2010 and call for Technical Reviewers

Good afternoon,

As a follow up to discussions held during the EA Coordination meeting held in January 2011 in support of the proposed Serpent River Waterpower Projects being developed by Xeneca Power Development Inc. we have attached for your review the baseline surface water quality investigation reports. This report documents the results of the surface water monitoring program undertaken through the 2010 field season at the project sites.

The proponent is also planning to release additional supporting documentation according to the following schedule:

Hydrological Modeling Study and Operating Plan – week of March 21st or earlier
Baseline Biological report – available
Archaeological Stage 1 Summary Report – week of March 28th or earlier

Could you please advise which reports you would be interested in receiving along with the number of copies and in what format (FTP, CD-ROM, hard copy).

Additionally, at the EA Coordination meeting, it was determined that a technical review committee comprised of qualified persons from regulatory review bodies should be formed. If you or an associate is interested in participating as a technical reviewer, please provide the contact(s) name and contact information. Once we have determined who the interested reviewers are we will begin scheduling these meetings. Two focused technical meetings are planned for early spring; the first is tentatively being scheduled for mid-April to discuss the Hydrological Modeling and Operating Plan. A meeting to discuss surface water quality and habitat assessment requirements is also required. This second meeting may be held concurrent to the first meeting or, if necessary as a separate discussion. Please indicate which meeting you or someone from your organization would be interested in participating in.

Regards,

Kai

O E L HYDROSYS

Environmental Assessment Information
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(T) (613) 839-1453 (F) (613) 839-5376
eainfo@oel-hydrosys.ca – www.oel-hydrosys.ca

OEL-HydroSys, WESA Envir-Eau, WESA, WESA Technologies, members of WESA Group Inc.

Muriel Kim

From: Melanie Lalani [melanie.lalani@hc-sc.gc.ca]
Sent: December 21, 2010 8:33 AM
To: Tami Sugarman
Cc: Katherine Hess; Wendy Harris; dave.bell@ceaa-acee.gc.ca
Subject: Re: Xeneca Waterpower EA Coordination meeting for McCarthy Chute and Four Slide Falls, Serpent River - January 24, 2011
Attachments: contribute-contribution-eng.pdf; environ_assess-eval-eng.pdf; pic09227.gif; pic08624.gif

Tami,
Just letting you know that Health Canada won't be attending the EA Coordination meetings for the Xeneca projects as Health Canada does not have a regulatory function in the EA process. We will be pleased to participate in the EA once we have received a specific request from a federal responsible authority. However, I've attached information that will be useful as you proceed with the EA. It outlines Health Canada's roles and expertise in EAs, as well as identifies human health information needs.

Moving forward on the project, Katherine Hess and Wendy Harris will be leading Health Canada's participation in the projects, as outlined below.
There were some difficulties in opening the project descriptions for the projects, so could you please send these directly to Kathy and Wendy (cc'd on this email)?

Many thanks and best wishes for the holidays, Melanie

Wabageshik (Vermilion) Hydro Project - Katherine Allen and Struthers Hydro Project - Katherine Larder and Raven Hydro Project - Katherine

Ivanhoe River Hydro Project - Wendy
Serpent River Hydro Project - Wendy
Kaupuskasing River Hydro Project - Wendy (See attached file: contribute-contribution-eng.pdf)(See attached file:
environ_assess-eval-eng.pdf)
Melanie Lalani
Regional Environmental Assessment Coordinator Ontario Region Health Canada 180 Queen Street West, 10th floor Toronto, Ontario M5V 3L7

Office: (416) 954-5013
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Fax: (416) 952-4444
email: melanie_lalani@hc-sc.gc.ca

From: Tami Sugarman <tsugarman@oel-hydrosys.ca>
To: "carrie.hutchison@ontario.ca" <carrie.hutchison@ontario.ca>, "dave.bell@ceaa-acee.gc.ca" <dave.bell@ceaa-acee.gc.ca>, "jennifer.hallett@dfo-mpo.gc.ca" <jennifer.hallett@dfo-mpo.gc.ca>, "EnviroOnt@tc.gc.ca" <EnviroOnt@tc.gc.ca>, "melanie_lalani@hc-sc.gc.ca" <melanie_lalani@hc-sc.gc.ca>, "EACoordination_ON@inac-ainc.gc.ca" <EACoordination_ON@inac-ainc.gc.ca>, "Rob.Dobos@ec.gc.ca" <Rob.Dobos@ec.gc.ca>, "Caitlin.Scott@NRCan.gc.ca"

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<simon.spooner@ontario.ca>, "brett.smith@ontario.ca"
<brett.smith@ontario.ca>

Cc: 'Ed Laratta' <elaratta@xeneca.com>, Philippa McPhee <pmcphee@wesa.ca>, Rob Steele <rsteele@nrsi.on.ca>

Date: 2010-12-20 05:26 PM

Subject: Xeneca Waterpower EA Coordination meeting for McCarthy Chute and Four Slide Falls, Serpent River - January 24, 2011

Good afternoon;

We trust that you have had a chance to review the Xeneca Project Descriptions issued to you on or about November 16, 2010 for the above captioned proposed waterpower projects.

The Four Slide Falls site is located approximately 5.5 km upstream from the McCarthy Chute project on the Serpent River. The proposed GS developments will be reviewed under the Class Environmental Assessment for Waterpower Projects planning process; it is anticipated that the projects may also trigger a Screening under the CEAA.

In an effort to combine our efforts for these two undertakings, which are located on the same river, we are proposing an all day EA coordination meeting for McCarthy Chute and Four Slide Falls project on January 24th, 2011. A venue remains to be secured for the event, if you have any suggestions they would be welcomed. Teleconferencing will also be available.

Details will be finalized and forwarded to you in early January, our hope with issuing this request today was to notify everyone as soon as possible so that they can reserve this date on their calendar. Please inform me as soon as possible as per your organization's participation in this event.

A draft Agenda is attached, suggested additions are welcomed.

This invitation has been respectfully issued on behalf of Xeneca Power Corporation Inc.

Best Regards,

Tami Sugarman

(Embedded image moved to file: pic09227.gif)

Tami Sugarman, B.Sc., P.Geo. - Principal, Environmental Assessment and Approvals Coordinator
OEL-HydroSys Inc. - 3108 Carp Road - P.O. Box 430, Carp Ontario K0A 1L0
(T) (613) 839-1453 x229 (C) (613) 894-3509 (F) (613) 839-5376
tsugarman@oel-hydrosys.ca - www.oel-hydrosys.ca

[attachment "Coordination Meeting AGENDA template.doc" deleted by Melanie Lalani/HC-SC/GC/CA]

PROVINCIAL

Xeneca Limited Partnership
5160 Yonge St., Suite 520, Toronto, ON M2N 6L9
tel 416-590-9362 fax 416-590-9955 **www.xeneca.com**

December 21, 2009

To:

Erin Nixon
Ministry of Natural Resources
Renewable Energy Planner - SAULT STE MARIE DISTRICT
64 Church St
Sault Ste Marie ON P6A3H3

SUBJECT: MNR Review of Four Slide Falls Waterpower Site Strategy

Dear Erin:

Please find below some additional information clarifying and/or adding to the information required by MNR regarding the Four Slide Falls WSS. We have attempted to maintain the information format and categories established in the original WSS submission.

We propose that this material form an addendum to the original WSS documents.

If you have further comments or questions, I can be reached at the contact information provided at the end of this addendum. Kindly indicate if all issues have been adequately addressed, and we will prepare the document in appropriate format and quantities as an addendum to all current copies of the Four Slide Falls WSS.

1. The intent of the suggested development concept is not to significantly raise or alter the existing water level regimes including the 2 to 100-yr flood elevations of Pecors Lake by the construction of the proposed dam. To confirm, the development concept is to construct a dam type control structure on the Serpent River downstream of the Percors Lake at the site of a small waterfall identified as Four Slide Falls (please refer to Appendix L submitted for the most recently proposed site location). The resulting small head pond created by the dam would 'flood back' to match the existing Pecors Lake water level. Lake levels are expected to vary with inflow to the Lake based on the Lake's storage characteristics. Measurements of Pecors Lake levels and hydrologic model simulations of flood events would need to be undertaken during the EA to fully ascertain the existing water level range and its typical annual variation in order to establish the final height of the dam crest and operating range for the spillway gate.

2. Our field studies to date indicate very low lake trout densities in the Serpent River. Studies also indicate the fish in the river are subject to several stressors, particularly seasonal temperatures that are well above those optimal for lake trout. As such, the Four Slide Falls project could, by way of increased river depth, create an environment better suited to trout and other cold water species. It is also noteworthy that our studies have concluded there is NO fish passage at Four Slide Falls.

Section 3.0 - Project Plan and Site Information

The selection of the Q_{95} as the 'minimum compensation flow' was purely an assumption made for the purpose of estimating a minimum volumetric flow requirement during reservoir refill periods in order to facilitate the spreadsheet peaking calculations presented in Appendix C. In effect, this flow was considered to be the absolute minimum acceptable (bypass) flow that would have to be maintained during reservoir refilling periods. The purpose of this exercise was not to establish a specific operational commitment for a defined minimum compensation flow, but rather to explore the feasibility of intermediate peaking during low inflow periods and to determine the size of the turbine unit for the purpose of preliminary costing and estimation of the expected maximum on-peak energy generation for the development concept.

If intermediate peaking is pursued, it is agreed that the actual compensation/environmental flow once established through the EA process may be higher than Q_{95} based on the inventory of VECs present and their sustainability requirements.

Xeneca fully intends to address MNR's concern regarding compensatory water flow in both the Class EA and Water Management Plan.

Section 3.2 – Mapping Requirements

New maps and figures have been prepared for a new location 1.6 km downstream of what was submitted to MNR in the May 2009 WSS. New mapping, photos and figures have been prepared to illustrate the new conceptual site development and layout which were compiled as Appendix L and submitted to your office electronically on December 21, 2009 and in hard copy mailed January 11, 2010.

Additional information regarding hydrology of the new site will be forthcoming once LiDar analysis has been completed by our engineering consultants.

For clarity, incremental inundation (area) refers to the land area inundated by the proposed head pond based on the proposed normal operating level. Total inundation (area) refers to both the land and existing water area inundated by the proposed head pond. In absence of detailed topographic mapping to identify the actual inundation area, the MNR OBM mapping was used to provide an initial estimate of these areas. This may result in a highly conservative estimate of total inundation.

Section 4.0 - Technical and Operational Aspects of the Site Development

For clarity, the Serpent River WMP was approved March 17, 2009.

Section 5.0 – Financial Analysis

5.3) NFMDS Prepared for Site

Given the development concept proposes a close-couple powerhouse configuration discharging the flow directly back into the river, there is no need to recognize a residual (bypass) flow in the RETScreen simulations since there is no diversion of river water from one location to another. Flows would be decreased over the small waterfall, but the flows discharged from the powerhouse would discharge directly into the river immediately downstream at the base of the falls. Inputting a non-zero residual flow in RETScreen would erroneously have the effect of subtracting this flow from the entire flow duration curve, thereby resulting in an underestimation of the energy generation.

Section 6.0 – Experiential and Additional Financial Information

6.1) Project Team Knowledge

Environmental Assessment to be undertaken by Hatch or other qualified experts with inputs from Xeneca staff Don Chubbuck/Ed Laratta and fieldwork from NRSI, Archaeology by Habitat Works, Woodlands Heritage or other qualified expert. The team includes extensive internal and external experience in this area including Patrick Gillette, Mark Holmes, Don Chubbuck, Ed Laratta and several consultants all of whom are listed in the Appendices.

7.1) Information Required in Relation to the Site Description Package

Our intent with respect to socio-economic impact analysis is to address any issues in the EA stage via public open houses, website, newsletter, media outreach etc. Should the level of public interest warrant, a stakeholder advisory committee could be struck.

Values and information in the table will be provided for the broader zone of influence as well as strategies for mitigation of potential effects in EA process.

8.1) Consultation

Social/economic sampling will occur as individual and group stakeholders are identified via public outreach programs.

Timelines for consultation will be presented through EA process.

Meetings (December 2009) have been held with Chief Day of Serpent River First Nation. A memorandum of understanding is being prepared for the Community's consideration.

As per the policy direction of the government's Green Energy, Green Economy Act, it is Xeneca's intent to work with Serpent River throughout the Development Process and to assist the Community in accessing programs and funding that may allow participation in the project.

Among Acts that may be affect policy direction are:

- Aggregate Resources Act;
- Fish and Wildlife Conservation Act;
- Endangered Species Act;
- Crown Forest Sustainability Act.

For clarity, under Section 8.2 d), the wording should read "Public Lands Act Work Permit" and not "Work Permit". Additionally, the LRIA is recognized as a separate approval process.

Section 9 – Results of Public Notification

9.1) Public Notification Details

With regard to section (d), while issues will ideally be resolved prior to Notice of Completion, there may be potential for difficult-to-resolve issues that may require some extra time and commitment. In that event, a number of strategies are in place, including, but not limited to workshops, focus group meetings or individual meetings.

Section 10 – Proposed Milestone Dates

For clarity, the project milestones list should include "Approval of Water Management Plan."

Erin, thank you to you and your MNR team for the review and feedback in this document.

Best regards,

Mark Holmes, VP Corporate Affairs
Xeneca Power Development
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mholmes@xeneca.com

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February 3, 2010

Mr. Bob Johnson
District Manager
Ministry of Natural Resources
Sault Ste Marie District
64 Church Street
Sault Ste Marie, ON
P6A 3H3

Re: Waterpower Project Status

Dear Mr. Johnson,

With respect to MNR's renewable energy site release process, we have been notified by a third party requesting the current status of our projects. Listed below are the MNR sites in your District for which applications to the OPA's FIT launch program have been submitted:

- 2CD14
- 2CD15

Please confirm the current status of each project, based on the following stages:

1. Application Fee Processed
2. MNR Provides Site Description Package
3. MNR and Applicant Scoping Meeting
4. Waterpower Application Declaration Form submitted
5. Aboriginal Community Engagement undertaken
6. a) District Manager Decision to proceed
   b) District Manager Decision to delay
   c) District Manager Decision to cancel
7. Public Notification undertaken
8. Applicant of Record awarded

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Thank you for your prompt response to this enquiry. We look forward to hearing back from you.

Yours truly,

Vanesa Enskaitis

Public Affairs Liaison
Xeneca Power Development
T: 416-590-9362 X 104
F: 416-590-9955
E: venskaitis@xeneca.com

Muriel Kim

Subject: FW: draft email

From: Mark Holmes [mailto:mholmes@xeneca.com]
Sent: March 11, 2010 5:11 PM
To: Dosser, Sandra (MNR)
Cc: jim.beal@ontario.ca; Patrick Gillette; Robert J. Steele; Tami Sugarman
Subject: FW: draft email

March 11, 2010

Sandra:

As you may be aware, the Sault Ste. Marie District has been contacted by consultants hired by Xeneca to undertake scientific field studies related to potential renewable energy (waterpower) development on the Serpent River. Some of these studies are related to spring freshet aquatics and terrestrial flora and fauna. As such, it is critical that scientific take permits be issued within the next couple of weeks to ensure the season is not missed.

As well, seasonal aquatic and terrestrial studies i.e. is summer and fall) may need to be completed. Much of the field study work on this river system was completed in 2009, but further sampling may be required.

However, according to our consultants and confirmed through direct contact with MNR staff from the Sault Ste. Marie District, scientific research permits may be denied until a FIT (Feed in Tariff) contract is issued for the project(s). The approach appears to be in conflict with MNR policy as outlined by the MNR's Renewable Energy Section in Peterborough and presents an unreasonable obstacle to the timely collection of data relevant to these developments. Moreover, permits were already issued for 2009 Field Season prior to this Project submitting its WSS so the rationale of not issuing Field Permits to wrap-up field studies seems arbitrary and problematic because this information could be useful to resolve the concerns raised on the upstream impact of the waterpower facility on Pecors and McCarthy Lakes.

More generally, after your discussion with Patrick Gillette (President & COO) consultants and staff were requested to be considerate of MNR District's limited resources. Review of Scopes of work were shifted to a voluntary exercise at the District's discretion. Consultants were instructed to simply request Field Permits. Given prolonged delays in executing the 2007 Policy and Procedures and the OPA criteria, withholding of Field Permits based on lack of resources is difficult to understand. Could you, as Regional Renewable Energy Coordinator, also kindly clarify the MNR's scientific permit policy or provide rationale as to why permits would be denied to bona fide, accredited field technicians and scientists.

Further, it has now been 28 days since the February 11 conference call between Xeneca, SSM District and the Renewable Energy Coordinator's office during which an action item was brought forward to have Xeneca's engineering consultants from Hatch Energy present evidence to MNR's Regional Engineer. Engineer to engineer discussions were listed as critical to providing MNR with evidence that water levels in McCarthy Lake will not be affected by the operations of a waterpower facility on the Serpent River.

Kindly advise when a meeting of the MNR engineering staff can be arranged in a timely manner with Hatch to resolve these technical issues and, please advise if there is any rationale not to issue Field Permits so further data can be collected on waterpower sites.

Please be aware that given the time constraints if MNR will not issue Field Permits so data collection commence in 2010 the Applicant cannot guarantee there will be sufficient time to address MNR issues as we move forward.

Thanks and best regards,

Mark Holmes
Vice President
Corporate Affairs
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Muriel Kim

From: Mark Holmes [mholmes@xeneca.com]
Sent: June 9, 2011 9:22 AM
To: Samantha Leavitt
Subject: FW: trout lake policy

From: Mark Holmes
Sent: Tuesday, April 20, 2010 2:50 PM
To: 'Nixon, Erin (MNR)'
Subject: RE: trout lake policy

Thanks Erin:

I've seen this material already but what we need is are the definitions i.e. reservoir, and the lake trout policy details. The link you provided has none of the details on which the McCarthy issues are based.

Mark

From: Nixon, Erin (MNR) [mailto:erin.nixon@ontario.ca]
Sent: April 20, 2010 1:18 PM
To: Mark Holmes
Cc: Green, Emily (MNR)
Subject: RE: trout lake policy

Hi Mark,

If you click on the link in my email below, it will take you to the LT Lake policy.

I'm going to send you a letter shortly on the Four Slides development. We should probably get discussions moving on that one. I know that we've had some conversations, but am thinking that we've certainly focussed more time on McCarthy.

Regards,

Erin.

Erin Nixon
Renewable Energy Planner
Sault Ste. Marie District
64 Church Street
Sault Ste. Marie, ON

Tel: 705-941-5128
Eml: 705-949-6450

From: Mark Holmes [mailto:mholmes@xeneca.com]
Sent: April 20, 2010 12:24 PM
To: Nixon, Erin (MNR)
Subject: RE: trout lake policy

Thanks Erin:

We've certainly reviewed the MNR site release policy with great interest and look forward to reviewing the Lake Trout policy in detail as soon as you can get it to us.

With regard to LTL policy reference in site release, I did note that it specified developments "ON" a lake whereas McCarthy Chute is 300 m downstream (same old arguments ... I know).

Will continue to work with your office to find solutions ...

Thanks

Mark

From: Nixon, Erin (MNR) [mailto:erin.nixon@ontario.ca]
Sent: April 20, 2010 12:05 PM
To: Mark Holmes
Cc: Dosser, Sandra (MNR)
Subject: RE: trout lake policy

Hi Mark,

Sorry I'm so tardy at getting back to you. I've been out of the office quite a bit lately and am just catching up on my emails. I can provide you with both the LT Lake Policy/Procedure, which was just finalized this week, as well as the new Site Release. The prohibition on development on a LT lake is actually captured in the Site Release (attached – see section 2, p. 2), while the general prohibition regarding disposition on LT lakes is captured in PL 4.02.01 - Acquisition Review and Land Disposition Process. (link to policy: http://www.mnr.gov.on.ca/255939.pdf).

Regards,

Erin.

Erin Nixon
Renewable Energy Planner
Sault Ste. Marie District
64 Church Street
Sault Ste. Marie, ON

Tel: 705-941-5128
Eml: 705-949-6450

From: Mark Holmes [mailto:mholmes@xeneca.com]
Sent: April 13, 2010 4:23 PM
To: Nixon, Erin (MNR)
Subject: FW: trout lake policy

Hey Erin:

Hope allz well with you in the Soo.

As you are aware, Sandra Dosser promised us the lake trout lake policy and definitions during last's week's teleconference. Apparently she is away until April 23 so am wondering if she tasked anyone else to do it in her absence or if you could assist in getting the materials to us.

Kindly advise,

Thanks

Mark Holmes
Vice President
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From: Mark Holmes
Sent: April 13, 2010 4:18 PM
To: 'Dosser, Sandra (MNR)'
Subject: trout lake policy

Sandra:

As per our request during last week's teleconference, just wondering if the lake trout lake policy material and definitions were on the way yet.

Kindly advise,

Mark Holmes
Vice President
Corporate Affairs

Muriel Kim

From: Mark Holmes [mholmes@xeneca.com]
Sent: June 9, 2011 9:17 AM
To: Samantha Leavitt
Subject: FW: meeting on June 9

From: Mark Holmes
Sent: Wednesday, May 26, 2010 11:45 AM
To: 'bob.johnston@ontario.ca'
Cc: Ed Laratta; Don Chubbuck; Patrick Gillette; Arnold Chan
Subject: meeting on June 9

Bob:

Thanks again for arranging a face to face meeting in Toronto.

I presume that you have gone to your staff and regional folks for their list of concerns and informational needs and just want to respectfully suggest that issues be framed as technical questions that Xeneca can attempt to answer to the respective satisfaction of MNR engineers, bios and planners. Issues need to be made specific and formulated with a clear understanding of what the project is and is not.

Leaping to the conclusion that this project is an impoundment that will induce large, new fluctuations in water levels on McCarthy Lake is fundamentally wrong, and that any fluctuation to lake levels will be minimal and pose NO threat to lake trout. We know, that it takes much larger fluctuations than are proposed to damage lake trout spawning, and any impact will be specific to where they spawn.

MNR staff also need to clearly understand that the small magnitude of water level change is diurnal, not seasonal.

Bob, I remain confident that we will soon reach agreement and can move forward comfortably with this project.

Very best regards,

Mark Holmes
Vice President
Corporate Affairs
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July 12, 2010

Mr. Bob Johnston, District Manager
Ministry of Natural Resources
64 Church Street
Sault Ste. Marie, ON P6A 3H3

Dear Mr. Johnston:

RE: Four Slide Falls project

Xeneca LP ("Xeneca"), the Applicant for Four Slide Falls, is pleased that your District is contemplating proceeding with issuing Applicant of Record status for Four Slide Falls. As you are aware, the site has been awarded FIT Contracts by the Ontario Power Authority (OPA).

Xeneca commits to addressing Ministry of Natural Resources Lake Trout Lake issues, policies and regulations during the Class Environmental Assessment for Waterpower (Class EA). In order to ensure this commitment is met, Xeneca requests all information pertaining to the history of the policy as well as the rationale, goals and objectives of the program.

Xeneca will complete all necessary studies and seek expert opinion to quantify and qualify the issue of lake trout in the upstream and downstream areas of the project. Potential impacts of the project will be highlighted and mitigation measures outlined along with any potential benefits the project may have for lake trout. This information will be provided to the Sault Ste. Marie District MNR office and will be denoted as part of the Class EA.

Xeneca understands that it must appropriately address the Lake Trout Lake policy issues. As with any other affected species, Xeneca will outline in the Class EA if the project is to cause environmental changes and how, through design and operation of the waterpower plant, impacts will be mitigated to acceptable levels and/or how environmental benefits may be derived.

Xeneca is aware that MNR may withhold Location Approval if the Lake Trout issue is not appropriately addressed. We hope to work with the MNR to ensure that the Class EA adequately addresses the concerns of the MNR so that permit applications may be prepared in accordance with the Class EA with reasonable assurance that such permits will be acceptable to the MNR.

We thank you in advance for your kind consideration of this matter and we look forward to working with your office.

Yours truly,

Patrick W. Gillette
President & COO

cc. Jim Beal, Regional Renewable Energy Coordinator

Muriel Kim

From: Dan Gibson [dgibson@nrsi.on.ca]
Sent: November 1, 2010 10:29 AM
To: 'Mihell, Kim (MNR)'
Cc: steele@nrsi.on.ca; Tami Sugarman; 'Ed Laratta'; 'Don Chubbuck'
Subject: Xeneca ESA proposed Meeting Dates
Attachments: Sault District Briefing - ESA Agency Discussions.pdf

Hi Kim,
Further to our discussion this morning I would like to request a meeting date with yourself and the District ESA and Fisheries Biologists to discuss the potential requirements for ESA Permits and Agreements for the two Xeneca Power Projects within your district (Four Slides and McCarthy Chutes on the Serpent River). Please find attached a project briefing for each related to known/potential ESA intersections on the Serpent River.

I'd like to propose a meeting on either Wed, Thursday or Friday next week (November 10, 11 or 12) when we (the project team) can meet with you to discuss.

Thanks Kim and I look forward to hearing from you.

Best Regards.....,

Dan Gibson, M.E.Sc.
Senior Aquatic Biologist
Natural Resource Solutions Inc.
225 Labrador Drive, Unit 1
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Xeneca Power Development Inc.

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

ESA Agency Discussions Xeneca Power Hydro Electric Projects

To: **MNR Sault Ste. Marie District**

From: **NRSI on Behalf of Xeneca Power**

Date: **October 5, 2010**

Re: **ESA Briefing Package**

Please find attached an ESA briefing document to serve as a backgrounder for our discussions proposed during the week of November 8-12, 2010. This briefing memorandum is intended to summarize the known and potential ESA occurrences and intersections with the following proposed waterpower facilities within Sault Ste. Marie District MNR:

1) McCarthy Chutes – Serpent River
2) Ford Slide Falls – Serpent River

Please refer to the attached maps for corresponding site locations and project study areas.

1.0 McCarthy Chutes – Serpent River

Project Site – Summer 2009

1.1. Review of EA/ESA Data Collected to Date

As part of the ongoing Class Environmental Assessment for the McCarthy Chutes development project, NRSI field programs (2009 and 2010) have consisted of 5 separate site visits, listed as follows:

1) April/May 2009 - walleye spawning survey for 20 days of observation. Nighttime observations using spotlights, angling and egg mats yielded no walleye

2) Two site visits were undertaken in June 2010 for vegetation and breeding bird surveys.
    a. Vegetation polygons in the inundation area were delineated,
    b. species inventories were made of vegetation and breeding birds, and
    c. spring water quality samples were taken at upstream and downstream locations.

3) Fish sampling and habitat mapping took place in August 2010.
    d. Habitat was mapped at a coarse scale,
    e. Fish sampling included minnow traps, angling, RIN Netting, Gill netting and electrofishing.
    f. Thirteen species of fish were documented with no ESA Species occurrences.

4) Summer water quality samples were taken in August 2010.

ESA Primary and Secondary Data Collections/Review

A letter dated July 13, 2010 from Collin Hoag, Policy Advisor for the Ontario Waterpower Association indicates the following with respect to the proposed McCarthy Chutes generating station:

- "There is no known intersection of species-at-risk with the Serpent River project"

Further to this, based on NRSI's internal review of significant species using the NHIC's Biodiversity Explorer, the following species were noted:

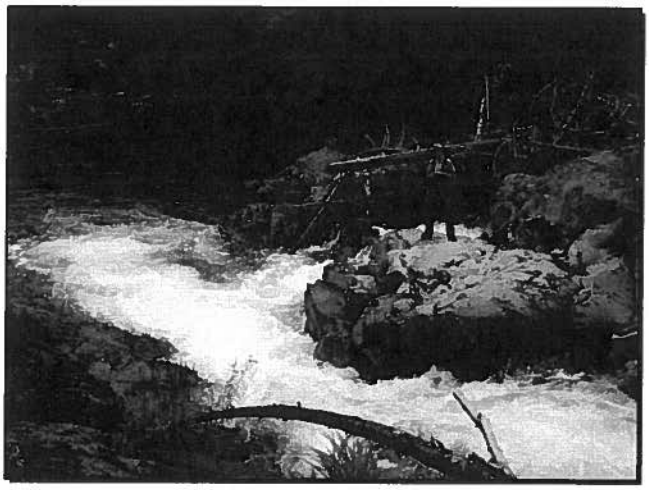
- Queen Snake *(Regina septemvittata)* COSEWIC: Threatened SARO List: Endangered (to be listed within next 3 months)

The Queen Snake uses the riparian margins of streams with slow currents and gravel bottoms; shorelines with rocks and debris; old quarries; canals and aquatic habitat with overhanging trees, particularly willows. Suitable habitat for this species is found within the project area.

To date, no species-at-risk have been observed during NRSI fieldwork.

2.0 Four Slide Falls Site – Serpent River

Project Site – Summer 2009



2.1 Review of EA/ESA Data Collected to Date

As part of the ongoing Class Environmental Assessment for the Four Slide Falls development project, NRSI field programs (2009 and 2010) have consisted of 5 separate site visits, listed as follows:

1) April/May 2009 - Walleye spawning survey for 20 days of observation. Nighttime observations using spotlights, angling and egg mats yielded no walleye

2) August 2009 – Reconnaissance drift of the Serpent River between Pecors Lake and McCarthy Lake. Five incoming tributaries were also electrofished. Angling for fish community determination also occurred.

3) Two site visits were undertaken in June 2010 for vegetation and breeding bird surveys.
   g. Vegetation polygons in the inundation area were delineated,
   h. species inventories were made of vegetation and breeding birds, and
   i. spring water quality samples were taken at upstream and downstream locations.

4) Fish sampling and habitat mapping took place in August 2010.
   j. Habitat was mapped at a coarse scale,
   k. fish sampling included electrosfishing and angling

   l. Twelve species of fish were documented with no ESA Species occurrences.

5) Summer water quality samples were taken in August 2010.

ESA Primary and Secondary Data Collections/Review

A letter dated July 13, 2010 from Collin Hoag, Policy Advisor for the Ontario Waterpower Association does not document any intersections of ESA species with the Four Slide Falls Hydroelectric Project area.

- "There is no known intersection of species-at-risk with the Serpent River project"

Based on our internal review of significant species using the NHIC's Biodiversity Explorer, we found no records of species at risk in the study area.

However, at an initial meeting with OMNR in July of 2009, the project team was informed by MNR that Peregrine falcon might be found in the project area.

- Peregrine Falcon (*Falco Perigrinus*)

  COSEWIC: Special Concern SARO List: Threatened (S3b)

The Peregrine Falcon nest on rock cliffs and crags especially those situated near water. Our observations in both 2009 and 2010 indicate that no such suitable habitat is present within the Four Slides area.

BioDiversity Explore was also used to search for natural areas, significant plant communities, wildlife concentration area, ANSI's and Provincial Parks. This search was done in a 10 km square grid surrounding the site of the proposed dam and powerhouse. No such occurrences were found within the general study area.

Xeneca Power Development Inc.

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

Project No. 1166

FINAL - Meeting Minutes

Re: ESA Meeting with MNR Sault Ste Marie District – November 18, 2010

Attendees:
Emily Green, Renewable Energy Biologist
Adam Dyke, Renewable Energy Planning Intern
Nathan Hanes, SAR Biologist
Tom Mispel-Beyer, Information Tech
Jim Trottier, Area Biologist
Jessica Sicaly, SAR Technician
Tami Sugarman, OEL-HydroSys
Philippa McPhee, OEL-HydroSys
Kai Markvorsen, OEL-HydroSys
Dan Gibson, NRSI
Rob Steele, NRSI

Absent:
Kim Mihell, Planner
Ed Laratta, Xeneca Power Inc.

Meeting Minutes

Meeting and introductions at 1:00pm

Dan Gibson provided an overview of the purpose and goals of the meeting including;

- With reference to the Briefing Document, provide a general description of the work completed to date on-site;
- With input from the MNR, develop a common understanding of endangered species concerns at McCarthy Chute and Four Slide Falls;
- Preliminary scoping of required SAR permitting and potential for operational agreements.

Tami S ugarman followed up by providing an overview of the timelines for the environmental assessment and the project. She emphasized that Xeneca has received

Feed-In Tariff contracts for McCarthy Chute and Four Slide Falls from the OPA. These contracts require the proposed projects be constructed and operational by April, 2015 which necessitates aggressive project schedules. Xeneca would like to conclude the EA processes by the spring of 2011 and have initial permitting requirements settled to allow for site preparation and construction in late 2011 and early 2012.

Dan Gibson posed a question concerning expected SAR permitting timelines based on MNR's experience on other projects?

- **Nathan Hanes** responded providing a tentative estimate of six to twelve months for SAR permitting but indicated that site specific concerns may result in these timelines being extended.

McCarthy Chute

Referencing the Briefing Document, **Dan Gibson** outlined the work that had been done so far at the site including:

- April/May 2010, Twenty day Walleye spawning survey
- June 2010, Site visits for breeding bird surveys and vegetation identification/delineation in the expected area of inundation.
- August 2010 Fish sampling and habitat mapping (minnow traps, angling, RIN netting, gill netting and electrofishing)
- Water quality samples were also taken upstream and downstream of the project site during June and August 2010 site visits.

Rob Steele indicated that the RIN Netting had been added to the program in order to be consistent with work carried out for other sites. However, due to constraints, the data collected was only representative of fish community sampling and could not be used as population sampling data.

Site investigations did not reveal the presence of any ESA species at the site.

Dan Gibson cited that preliminary desktop investigations of the NHIC database have thus far indicated that the only species at risk with a range that may intersect the site was the Queen Snake.

A letter dated July 13, 2010 from the OWA (Collin Hoag) indicated that there was no known intersection of species-at-risk with the project.

Dan Gibson asked the MNR representatives to confirm these findings based on their knowledge of the project area?

- **Jim Trottier** indicated that the McCarthy Chute was north of the Queen Snake's range and that it was not a concern for the project. **Nathan Hanes** concurred with this comment.
- The site however, is within the range of the Blanding's Turtle and inventory work will be required. It was noted that Blanding's Turtle can have large ranges and dispersed sightings may make the effective implementation of measures difficult. MNR indicated that a key time for identifying presence/absence of the turtles would be in April/May when the turtles will be basking for long periods of time in visible locations.

Rob Steele indicated that a single Blanding's Turtle had been observed by the project team approximately 8km from the project site in 2008. **Rob Steele** began a discussion concerning what potential impacts the proposed project may have on Blanding's turtles, including construction, inundation and water level fluctuations.

Tami Sugarman indicated that the project description document contained a brief description of the project's proposed footprint and operational plan and that these would be further refined moving forward through the project. Preliminary access and transmission mapping was also provided in the document.

Dan Gibson followed this by indicating that while the mapping was only considered at a very high level at this point and the route alternatives would be further refined and investigated moving forward. **Dan Gibson** posed a question to the MNR concerning what they would require in terms of work to identify the presence/absence of Blanding's turtles and their habitat?

- **Jim Trottier** responded by saying that extensive surveys to identify habitat and to confirm the presence or absence of Blanding's turtle within the projects area of influence would be required before a permit to construct would be given. An operational agreement would only be considered by the Ministry if Blanding's' Turtle were confirmed to be present at the site.

Dan Gibson indicated that the permitting process would be initiated following the identification of potential interactions between the turtles and the project as well as any anticipated impacts and/or mitigation measures. **Dan Gibson** indicated that a desktop review and air photo analysis would be conducted through the winter to identify the

location of any potential habitat. **Dan Gibson** asked whether the MNR had any protocol for field investigations to identify Blanding's turtles or their habitat.

- The MNR was unable to reference a specific protocol but said they would confer with their experts and other regional staff to see if there was an established protocol or approach that should be followed. It is believed that such as protocol is warranted for Blanding's Turtle. **Dan Gibson/Rob Steele requested that a timeline be provided for such a protocol to be developed in order to facilitate surveys next spring.**

Dan Gibson discussed an Occurrence Protocol discussed with other districts as follows.

Occurrence protocol

The preferred approach is to first avoid interactions with SAR or their habitat. Failing this option, project redesign of infrastructure/operations or implementation of mitigation measures in order to minimise potential impacts will be pursued. Given the time constraints of the FIT projects, the consulting team proposes an adaptive management approach in which the proponent will commit to ground surveys and a monitoring plan to be conducted after the EA and before construction (2011 field season). In summary, the occurrence protocol will include:

- A desktop survey (through air photo interpretation) for key habitat in inundation area, power line routes or access roads.

- Where key habitats exist, a detailed ground survey is required (see above request for sampling protocol). **Tami Sugarman** said that that this work timing (May) would coincide well with the rest of the project and the results could likely be included into the EA document.

- If impacts to Blanding's turtle are anticipated/confirmed, a Permit under Section 17(2)C of the ESA will be required and an overall benefit to the species will be required/discussed. Preference will be giving to regional benefit rather than a provincial benefit however; a combination of strategies may also be discussed.

Dan Gibson then asked what sort of approach the MNR would take regarding the permit requirement to demonstrate a net benefit to the species.

- The MNR responded by saying that they were unfamiliar with the exact requirements to demonstrate a net benefit with regard to waterpower projects and they would need to confer with their Regional office. Their initial approach would be to look for a regional net benefit that would cover both the McCarthy Chute and Four Slide Falls projects.

Dan Gibson and **Rob Steele** asked if there was enough knowledge about the species in the region to determine what measures could be taken to provide a net benefit.

- **Jim Trottier** responded saying that the main threats to Blanding's Turtles come from road mortality and illegal harvesting/capture rather than a loss of habitat so any implemented measures would need to address these issues.

NRSI and MNR then discussed several alternatives and mitigation strategies that might be taken including:

- Gating and limiting access along roadways
- Road signage and warnings for key periods of the year where and when the turtles are active.
- Operational constraints for the headpond
- Public education programs
- Artificial nest creation (nest boxes/covers) and monitoring
- Eco passages under roadways and roadside barriers (similar to what has been done in Algonquin Park for Wood Turtles and Killbear Park for Rattle Snakes

Dan Gibson and **Rob Steele** asked if there would be opportunities for the proponent to (financially) support ongoing recovery strategies or studies/research grants to fill knowledge gaps as part of an overall net benefit.

- **Nathan Hanes** responded that he would confer with the Regional Support group and get back to NRSI and agreed that this option may have validity.

Four Slide Falls

Dan Gibson summarized the studies and efforts that had been undertaken so far (see Briefing Document). It was noted that RIN work did not occur at this site due to the unsuitability of the river for netting.

Both initial NRSI project work (background info and field work) and OWA advice revealed no potential for SAR at the site. At a meeting with the MNR in July of 2009 the project team was advised that Peregrine Falcon might be found in the area.

Rob Steele indicated that NRSI had investigated the area, including helicopter fly-over, through 2009 and 2010 and looked for appropriate breeding and nesting habitat. No suitable habitat was identified in the anticipated project footprint.

- **Jim Trottier** indicated that there was an identified nest on Cork Lake, 10-12km from the outlet of Pecors Lake though, given NRSI's investigations, it is unlikely that their range extends into the project area.

Dan Gibson asked if Blanding's Turtle would be a concern at the Four Slide site, similarly to McCarthy Chute, and if an ESA permit/agreement would be required.

- **Jim Trottier** and **Nathan Hanes** responded that Blanding's turtle would again be a concern and that permits and approvals, as well as supporting studies would be required.

A discussion followed concerning field investigation protocols, potential mitigation measures, etc. (see similar discussion for McCarthy Chute above). **Rob Steele** offered to work cooperatively with the Ministry in developing protocols for field investigations. MNR agreed to this approach.

Meeting adjourned at 2:30pm.

Muriel Kim

From: Keable, Lisa (MNR) [Lisa.Keable@ontario.ca]
Sent: February 25, 2011 1:00 PM
To: Tami Sugarman
Cc: Kai Markvorsen; Rob Steele
Subject: RE: Four Slides Falls

Thanks for the quick reply Tami,
We will go with the map provided in the PD, and Figure 1 of NRSI's report.
*Apologies for spelling your name incorrectly!

Regards,

Lisa Keable
Renewable Energy Biologist
Ministry of Natural Resources
Sault Ste. Marie District
Ph. 705-941-5138
Fax 705-949-6450
Eml lisa.keable@ontario.ca

From: Tami Sugarman [mailto:tsugarman@oel-hydrosys.ca]
Sent: February 25, 2011 12:02 PM
To: Keable, Lisa (MNR)
Cc: Kai Markvorsen
Subject: RE: Four Slides Falls

Hi Lisa
We have just reviewed three document, as such;

- WSS document (which I presume is the "maps MNR has on file");
- the Project Description map provided by Xeneca last November 2010; and,
- the maps provided in NRSI's recent report.

We see a discrepancy between the earlier WSS dam location and the dam location shown in the NRSI as well as the Xeneca PD documents. The PD and the NRSI dam location corresponds and that location to the best of our knowledge is the correct location as shown in the attachments.

Does this help?
Tami

Tami Sugarman, B.Sc., P.Geo. – Principal, Senior Environmental Approvals Advisor
OEL-HydroSys Inc. – 3108 Carp Road - P.O. Box 430, Carp, Ontario, Canada K0A 1L0
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tsugarman@oel-hydrosys.ca – www.oel-hydrosys.ca

OEL-HydroSys, WESA Envir-Eau, WESA, WESA Technologies, members of WESA Group Inc.

From: Keable, Lisa (MNR) [mailto:Lisa.Keable@ontario.ca]
Sent: February 25, 2011 11:05 AM
To: Tami Sugarman
Subject: Four Slides Falls

Hi Tammy,
There seems to be some discrepancy between a few maps we have received from Xeneca, NRSI, as well as maps MNR has on file, in terms of the actual dam location for Four Slides Falls. I was wondering if we could be provided with the most recent map showing the dam location proposed for Four Slide Falls. I know you are likely fairly busy, however we are hoping you can get this information to us asap, so we can continue our review of the field work components that Rob Steele provided to us at the EA Coordination meeting.

Lisa Keable
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Ministry of Natural Resources
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Ph. 705-941-5138
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Eml lisa.keable@ontario.ca

Muriel Kim

From: Rob Steele [rsteele@nrsi.on.ca]
Sent: February 28, 2011 9:20 AM
To: Mihell, Kim (MNR); Keable, Lisa (MNR)
Cc: Tami Sugarman; Ed Laratta
Subject: Four slide Mapping
Attachments: NRSI_1056_Fig1_FourSlides_StudyArea_20K_2010_12_21_SWM.pdf

Kim

Lisa called me last week to point out a discrepancy in our mapping for the Four Slide falls existing condition report. It had to do with the proposed dam location showing in two different locations on our Study Area Map versus our Vegetation Map. Upon further investigation, I have determined that, as part of the operational planning process, the engineers are considering a dam location approx 1.5 km downstream of the original location as shown in the Waterpower Site Strategy. Our field work was based on the WSS location as this was the only location under consideration at that time. If the operational plan in fact changes the dam location, we will have to do additional field work in 2011 in that area of river not previously covered. In the meantime, our existing conditions report will continue to show the original location being considered. Therefore, please find attached a revised Figure 1 which will eliminate the discrepancy noted by Lisa.

Rob-

Robert J. Steele, B.Sc.
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(e) rsteele@nrsi.on.ca
www.nrsi.on.ca

Muriel Kim

From: Patrick Gillette [pgillette@xeneca.com]
Sent: March 2, 2011 2:38 PM
To: Beal, Jim (MNR); Mark Holmes
Cc: Arnold Chan; Vanesa Enskaitis
Subject: RE: Lake Trout Lake and update meeting

Hey Jim:

Just wondering if there was anything new from what we received the last time the issue arose. Operational plans are being done and I want to make sure we are in alignment so this is not a issue that causes mutual headaches.

Let me know if there some dates in April that work for everyone to meet for a update.

Cheers,

Patrick

Patrick W. Gillette BA, MES, MPA
5160 Yonge Street
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M2N 6L9
Tel: 416-590-9362
Cell: 416-697-4004
Fax: 416-590-9955

From: Beal, Jim (MNR) [mailto:jim.beal@ontario.ca]
Sent: Wednesday, March 02, 2011 9:34 AM
To: Patrick Gillette; Mark Holmes
Cc: Arnold Chan; Vanesa Enskaitis
Subject: RE: Lake Trout Lake and update meeting

Patrick, Mark;

Look forward to speaking with you again; however, I'm not sure what new information you are anticipating regarding L. Trout lakes?

Jim Beal

Renewable Energy Provincial Field Program Coordinator
Regional Operations Division
Ontario Ministry of Natural Resources
300 Water Street, 4th Floor, South Tower

Tel: 705-755-3203
Fax: 705-755-3292

E-mail jim.beal@ontario.ca

From: Patrick Gillette [mailto:pgillette@xeneca.com]
Sent: Tuesday, March 01, 2011 6:23 PM
To: Beal, Jim (MNR); Mark Holmes
Cc: Arnold Chan; Vanesa Enskaitis
Subject: Lake Trout Lake and update meeting

Hi Jim and Mark:

Jim is there any new information on the Trout Lake Trout policy that MNR can provide? Mark please follow-up with Jim on what we have defining the policy.

Jim we should schedule a update meeting. How is April?

Cheers,

Patrick

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Cell: 416-697-4004
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Muriel Kim

From: Brownlee, Laurie (ENE) [Laurie.Brownlee@ontario.ca]
Sent: April 21, 2011 10:28 AM
To: Robert Steele
Cc: Kai Markvorsen; Pilar DePedro; Ed Laratta
Subject: RE: Draft Existing Conditions Reports for Serpent River

Thanks Robert:

I was able to download all but the McCarthy Chutes Technical documents – it had a different naming suffix than the Four Slide – ".zipx"

As the keeper of the official EA file, I will need to put hard copies on file. Can you provide these?

Thanks,

Laurie

Laurie Brownlee, MCIP, RPP
Environmental Planner/EA Coordinator - Northern Region
Ministry of the Environment
Tel: 705-564-7162
Fax: 705-564-4180
email: laurie.brownlee@ontario.ca

From: Robert Steele [mailto:rsteele@nrsi.on.ca]
Sent: April 18, 2011 2:52 PM
To: Brownlee, Laurie (ENE)
Cc: Kai Markvorsen; Pilar DePedro; Ed Laratta
Subject: Draft Existing Conditions Reports for Serpent River

Laurie

I understand from OEL Hydro-Sys that you have requested a copy of the Draft Existing Conditions report which Natural Resource Solutions prepared for the Four slide Falls and McCarthy Chutes Hydroelectric Developments on the Serpent River. Both reports can be obtained from our FTP site by following the instructions below

Please enter in the user name and password below

http://basswood.nrsi.on.ca:8080/index.php or this one if the first does not work
http://basswood.nrsi.on.ca/epiware/index.php

user - Xeneca Power2
password - sault2

Click on the 'Library' tab and you should see the "Sudbury District" folder on the left-hand side. Click this folder to see its contents appear to the right. You can download the files by right clicking and selecting

download.
Please contact me if you have any problems accessing this information
--

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Muriel Kim

From: Brett Woodman [bwoodman@nrsi.on.ca]
Sent: May 13, 2011 5:28 PM
To: Mihell, Kim (MNR)
Cc: Green, Emily (MNR); Keable, Lisa (MNR); Dyck, Adam (MNR); Trottier, Jim (MNR); Langis, Ilsa (MNR); Dillabough, Kirk(MNR); Nixon, Erin (MNR); Hanes, Nathan (MNR); Sicoly, Jessica (MNR); Tami Sugarman; rsteele
Subject: Re: Biological Scoping Meeting: McCarthy Chute and Four Slide Falls

Kim,
Thank-you for these dates, however I am scheduled to be on the stand at an OMB hearing when it resumes on June 20th and will definitely not be able to commit to anything else that week. Is there any possibility of having this sooner? As this file is still new to me I would love to have your input as soon as possible to feed into this year's field work. If sooner is not possible would it be possible to have preliminary discussions with the biologists to get their input? I am particularly aware of the importance / seasonality of work that needs to happen in June such as breeding bird work. I appreciate your consideration in these matters.
Regards,
Brett

Brett Woodman
Natural Resource Solutions, Inc.
519-725-2227 (Office)
519-580-0098 (Mobile)
bwoodman@nrsi.on.ca

Sent from my BlackBerry.

From: "Mihell, Kim (MNR)" <Kim.Mihell@ontario.ca>
Date: Fri, 13 May 2011 16:08:04 -0400
To: Brett Woodman<bwoodman@nrsi.on.ca>
Cc: Green, Emily (MNR)<emily.green@ontario.ca>; Keable, Lisa (MNR)<Lisa.Keable@ontario.ca>; Dyck, Adam (MNR)<Adam.Dyck@ontario.ca>; Trottier, Jim (MNR)<jim.trottier@ontario.ca>; Langis, Ilsa (MNR)<ilsa.langis@ontario.ca>; Dillabough, Kirk(MNR)<kirk.dillabough@ontario.ca>; Nixon, Erin (MNR)<erin.nixon@ontario.ca>; Hanes, Nathan (MNR)<nathan.hanes@ontario.ca>; Sicoly, Jessica (MNR)<Jessica.Sicoly@ontario.ca>
Subject: Biological Scoping Meeting: McCarthy Chute and Four Slide Falls

Hi Brett,

I have discussed possible dates with some of our staff, and we would suggest one or two days between June 20 and 22. Please let me know which dates you prefer.

To ensure that we can properly prepare and provide meaningful input, please provide the following in advance of the meeting:

- Accurate Zone of Influence descriptions and mapping (details vary significantly between the various reports we currently have)
- Proposed field work for 2011
- Reports on any work completed thus far that was not included in the characterization reports (for example, if any work has been conducted this spring)

If you have any questions please contact myself or Lisa Keable.

Thank you,

Kim

Kim Mihell
Renewable Energy Planner
MNR - Sault Ste. Marie District
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Fax (705) 949-6450
kim.mihell@ontario.ca

From: Brett Woodman [mailto:bwoodman@nrsi.on.ca]
Sent: May 10, 2011 2:33 PM
To: Mihell, Kim (MNR)
Subject: FW: Biological Scoping Meeting

Hi Kim,

Following on the voicemail message that I just left for you, I wanted to follow-up with an email so that you have my contact details. I have just been asked by Rob Steele of our office to take over as the project manager for the two Serpent rRver sites. As such I am keen to sit down and scope 2011 field work before to far into the field season. I have just gone through this process for my other site on the Frederickhouse River with the Cochrane District Area Bio, Chris Chenier. So that I understand the MNR process is this a meeting or conference call that is scheduled through you? I look forward to speaking with you shortly to figure out the next steps,

Regards,

Brett

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From: Robert Steele [mailto:rsteele@nrsi.on.ca]
Sent: Tuesday, May 03, 2011 1:35 PM
To: Mihell, Kim (MNR)
Cc: Andrew Schiedel; Tami Sugarman; Ed Laratta; Brett Woodman
Subject: Biological Scoping Meeting

Kim

As a followup to our meetings last week, we need to schedule a sit down with your biologists and DFO to scope out the issues associated with the Xeneca projects at McCarthy chutes and Four Slide falls and then determine what implications this has for planned field efforts. As the 2011 field season is upon us we would like to do this as soon as we possibly can.

I'm envisioning a meeting at your office in the Sault although some people may have to join by phone. These sessions tend to be much more productive when we can throw maps down on the table and look at them together.

Please check with your bios and then throw out some possible dates for the meeting.
I I suggest that we set two days aside and use all or part of the second day only if we have to.

Here's a list of possible participants

MNR

Kim Mihell
Lisa Keable

Nathan Hanes

DFO

Carl Jorgensen and/or Kelly Eggert

NRSI

Rob Steele, Brett Woodman

Xeneca

Ed Laratta

OEL HydroSys

Tami Sugarman or designate

--

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Muriel Kim

From: Keable, Lisa (MNR) [Lisa.Keable@ontario.ca]
Sent: May 18, 2011 11:22 AM
To: Tami Sugarman
Cc: bwoodman@nrsi.on.ca
Subject: MNR Four Slide Falls Project Description Comments
Attachments: MNR_Project Description Comments_Four Slide Falls_18 May 2011.doc.pdf

Hi Tami,
I sent this letter out to Patrick Gillette this morning – Brett Woodman left me a message indicating that these letters should also go through you as well. My apologies for not initially cc'ing you on it, it must have slipped my mind. I will be sure to include you on future letters/correspondence relating to Four Slide Falls and McCarthy Chutes.

I hope that all is going well,

Lisa

Lisa Keable
Renewable Energy Biologist
Ministry of Natural Resources
Sault Ste. Marie District
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Fax 705-949-6450
Eml lisa.keable@ontario.ca

From: Keable, Lisa (MNR)
Sent: May 18, 2011 9:56 AM
To: 'pgillette@xeneca.com'
Cc: Dosser, Sandra (MNR); Mihell, Kim (MNR); Green, Emily (MNR); Nixon, Erin (MNR); Langis, Ilsa (MNR); Trottier, Jim (MNR); Deyne, Greg (MNR); Dillabough, Kirk(MNR); 'Hallett, Jennifer'; Brownlee, Laurie (ENE); 'Robert Steele'; 'bwoodman@nrsi.on.ca'
Subject: MNR Four Slide Falls Project Description Comments

Hi Patrick,

Please see the attached document for MNR's comments pertaining to the project description provided by Xeneca Power Development Inc. for the proposed Four Slide Falls Waterpower Facility.

If you have any questions please do not hesitate to contact myself or Kim Mihell at kim.mihell@ontario.ca.

Regards,

Lisa Keable
Renewable Energy Biologist
Ministry of Natural Resources
Sault Ste. Marie District
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Ontario

Ministry of Natural Resources
Ministère des Richesses naturelles

Visit us at our website
http://www.gov.on.ca

Call any MNR Office in Ontario for information at -
1-800-667-1940 (English)
1-800-667-1840 (French)
8:30 am to 5:00 pm - Monday to Friday

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May 18, 2011

Mr. Patrick Gillette
Xeneca Power Development Inc.
5160 Yonge St., Suite 520
Toronto, Ontario
M2N 6L9

Dear Mr. Gillette:

SUBJECT: MNR Comments on Site 2CD14, Four Slide Falls (Serpent River) Project Description Report

Thank you for providing the Sault Ste. Marie District Ministry of Natural Resources Office with a copy of the Four Slides Falls (Serpent River) Hydroelectric Generating Station Project Description, as prepared by Xeneca Power Development Inc. MNR has had the opportunity to review this report and I am pleased to provide you with our review comments below. I hope that you find these comments helpful as you continue through the Site Release and Environmental Assessment processes. Our main comments are captured below in the body of this letter. Attached is a spreadsheet with our additional input.

1. General

We recommend that Xeneca harmonize the Waterpower Class Environmental Assessment (EA) process with other approval processes (e.g., Resource Stewardship and Facility Development Class EA, Lakes and Rivers Improvement Act requirements, Water Management Planning requirements). The Waterpower Class EA should be as inclusive as possible to ensure that all requirements for MNR's permitting and approvals have been met. Public notices must mention all processes being addressed in

conjunction with the Waterpower Class EA in order to meet the requirements for each project. Any components not addressed through this EA process will not have EA coverage and separate screening and consultation will be necessary prior to the issuance of permits and approvals.

2. Pecors Lake Water Levels

Information presented within this report does not provide sound data demonstrating that Pecors Lake will not be impacted by fluctuating water levels and/or will not be used as a reservoir. MNR hydrologists have used the hydrological information provided in the Project Description to calculate the water power potential. The proposed 7.3MW value provided in the report is substantially higher than the value calculated by MNR. It is recommended that Xeneca engineers meet with the MNR hydrologists to discuss these discrepancies.

It is proposed that the area of inundation will flood 6.9km upstream from the dam location, which floods within approximately 100m from Pecors Lake. Pecors Lake is a designated naturally reproducing lake trout lake and therefore the use of this lake for the purpose of infrastructure related to the development of this project is prohibited (PL 4.10.05). Detailed hydrological analysis will be required to show that Pecors Lake will be hydrologically separated from the area of inundation, and will not be impacted by fluctuating water levels as a result of development. A longitudinal profile of the river for the full extent of the proposed zone of influence both upstream and downstream showing existing and proposed water levels would be helpful to assess potential changes and effects. It is also recommended to use the Streamflow Analysis and Assessment Software (SAAS) to assess bypass flow alternatives at individual sites. These two pivotal pillars of information for all sites are the key to making an informed decision with respect to LRIA location and LRIA plans and specifications approval.

3. Lakes and River Improvement Act approvals and Hydrological Operating Strategies

As stated above, MNR recommends that Lakes and Rivers Improvement Act (LRIA) requirements be met through the EA process to reduce the likelihood of future project delays. The purpose of the LRIA is to provide for the management, protection, preservation and use of the waters in Ontario and the land under them, as well as the fish, wildlife and other natural resources dependent on the lakes and rivers. The LRIA also provides for the protection of public rights, the interests of riparian owners, the natural amenities of the lakes and rivers and their respective shores and banks. The LRIA protects persons and property by ensuring that dams are suitably located, constructed, operated and maintained and are of appropriate nature in regards to clauses (a) to (e) of the LRIA. The LRIA applies to both private and Crown Land.

Based upon the limited data currently provided in the project description report, it appears that the Four Slide Falls site has been designed to rely upon un-natural head and what could be conceived as un-natural flow conditions. MNR is concerned that the extensive area of inundation proposed for this site may significantly alter the water chemistry and quality within the reservoir, and in turn, the water flowing downstream into McCarthy Lake. Given that McCarthy Lake is a designated naturally reproducing lake trout lake, the resulting alterations with respect to water quality (i.e. temperature, dissolved oxygen, sedimentation, mercury levels etc.), could potentially cause detrimental effects to current lake trout populations and management strategies. Such

impacts would be in direct conflict with the objectives and strategies defined for Fisheries Management Zone 10 (discussed further below). A reservoir of this size will also impact terrestrial habitat (i.e. riparian and forest communities and wildlife) as well as aquatic habitat utilizing existing natural fast water areas.

P. 5, Section 1.1.2 Nature of the Project
This section correctly indicates that Applicant of Record has not been awarded for this site. To clarify, this process has not been completed for the following reasons.

First, Xeneca has not completed all required steps in the Site Release process. Namely, the required public notification has not been published.

Second, MNR is concerned with the potential fluctuation of levels in Pecors Lake. As discussed above, Pecors Lake is a designated naturally reproducing lake trout lake, and the Site Release Policy prohibits the release of any site that will use a designated lake trout lake as a reservoir. MNR's regional hydrologist's initial calculations indicated that the project as descry'ibed will not have the capacity (7.3MW) presented in the project description.

MNR will not issue permits/approvals for a site without AoR status. As previously communicated to Xeneca, any environmental assessment work undertaken before Site Release is complete is at the proponent's risk.

P.10, Section 1.1.7 Environmental Assessment Processes
MNR disagrees with the 'managed waterway' categorization for the site. MNR considers this section of river to be unregulated and therefore unmanaged. The Four Slide Falls site, and the proposed Zone of Influence, is located upstream of the Zone of Influence delineated in the existing Serpent River Water Management Plan.

P. 14, Section 2.1.8 Transmission
The disposition of rights to Crown resources is subject to screening under MNR's Class Environmental Assessment for Resource Stewardship and Facility Development Projects (Class EA-RSFD).

For proposed projects that require *EA Act* approval under the Waterpower Class EA, dispositions of Crown resources associated with the project will not be subject to screening under the Class EA-RSFD. However, MNR will not proceed with the disposition unless the applicant provides evidence that they have complied with their *EA Act* requirements. MNR will participate in the EA process to ensure that ministry interests are considered.

MNR retains decision-making and approval authority for all dispositions regardless of a project's authorization under the *EA Act*.

Dispositions of Crown resources for transmission <115kv will be subject to screening under the RSFD EA. A Project Description is required and the scope of that project description is found on p. 19 of RSFD EA manual.

The RSFD process can be harmonized with the Waterpower Class EA process. Under this approach, all public consultation and notices must reference all planning processes being undertaken. If the transmission corridor is not addressed concurrently with the

Waterpower Class EA process, a separate process will be required before dispositions can be issued.

P. 14, Section 2.1.9 Area of Inundation
Significant changes have been made to the proposed reservoir size and generating capacity for Four Slides Falls since the Waterpower Site Strategy was received by MNR in May 2009. MNR has concerns with the potential impacts associated with the large inundation area proposed. The creation and utilization of this reservoir could substantially change the flow, nutrient and thermal regime of waters within the area of impoundment, which will ultimately flow into McCarthy Lake, a designated naturally reproducing Lake Trout Lake. It is essential that baseline information is collected to characterize the existing nutrient, thermal, and flow regime of waters flowing into McCarthy Lake, as well as determining existing nutrient and water chemistry parameters within the lake. Furthermore, depending on how far the zone of influence carries downstream from the Four Slide Falls dam location, lakes beyond McCarthy Lake may be impacted as well (in particular, Tweedle Lake and Sheddon Lake). Should these lakes be included within the zone of influence (i.e. changes to water quality/chemistry parameters or flows/levels result from the development/operation of Four Slide Falls) monitoring should include these locations as well. Impacts such as habitat alteration, erosion and sedimentation, and increased mercury methylation rates and fish contamination will need to be considered as well. All potential negative impacts to McCarthy Lake from the development of Four Slide Falls must be identified in the EA process. Cumulative effects resulting from the development of Four Slide Falls and McCarthy Chutes hydroelectric facilities will have to be addressed.

Fisheries Management Zone 10
Impacts such as those described above would be in direct conflict with the defined objectives for the management zone in which the project is located. The proposed Four Slide Falls Hydroelectric Generating Station is located within Fisheries Management Zone 10. Lake Trout Operational Objectives and Management Strategies have been developed to protect and manage Lake Trout within this zone. With respect to the development of this project, the following strategies and/or strategies should be adhered to:

a. Maintain/enhance water quantity/quality, sediment quality, and water levels of lake trout lakes within natural ranges suitable for lake trout.
b. Plan for new roads and trails in a manner that does not significantly improve access to self-sustaining lake trout lakes. As a minimum, roads and trails should not be constructed within 400m of policy lake trout lakes. Policy lakes with existing access should be evaluated to determine potential for increased risk associated with new roads or trails.
c. Minimize the introduction and spread of aquatic invasive species; including both exotic and native species.

Further information on Fisheries Management Zone 10: Lake Trout Operational Objectives and Management Strategies can be found at:
http://www.mnr.gov.on.ca/stdprodconsume/groups/lr/@mnr/@letsfish/documents/document/267914.pdf
A hard copy may be requested from the MNR Sault Ste. Marie District as well.

Baseline Data Collection
Based on the above discussion, MNR recommends that the following water quality baseline information be collected above the proposed dam location within the area proposed for inundation, at the proposed dam site, within the bypass reach, downstream of the proposed tailrace, as well as within each basin of McCarthy Lake.

Dissolved gasses (DO, total dissolved gases) – *should include late summer oxygen profiles for McCarthy Lake*
pH
Alkalinity
Conductance
Dissolved solids
Suspended solids
Turbidity/light transmission
Nutrients (total phosphorus, total Kjeldahi nitrogen, nitrate/nitrite, total ammonia)
Organic matter (dissolved organic carbon)
Primary productivity (chlorophyll-a)
Contaminant (mercury in fish tissue)
Water column mercury

It is recommended that the proponent discuss water quality parameters with MOE as well.

P. 14, Section 2.2.1 Type of Proposed Project
The information provided suggests a regulated peaking type operation. The project description states that "*Production shifting will occur during periods of low flow when the river drops below the plant capacity.*" The degree of flooding proposed also suggests that there will be significant storage associated with the site.

Therefore, the operating regime proposed for this project must take into account the effects on downstream users. Is it possible that peaking operations at Four Slide Falls will have a cascading effect downstream through McCarthy Lake to peak the proposed facility at McCarthy Chute?

The compounding and cumulative effects of multiple dam developments on a river system are complex. Net results are difficult to impossible to evaluate, especially when varied modes of operation are proposed. Thus, varied peaking proposals are viewed less favourably.

Hydrology and hydraulic information will require careful attention to detail and provide supporting documentation. Current information relating to flows and levels lacks supporting references. Albeit early in the project design, we will be expecting detailed information pertaining to the flows and levels to be provided during the EA stages of the process.

Minimum flow passage requirement methods have not been identified. Although quantification of such flows has yet to be determined, the requirement for such minimum flow passage methods must be determined and accounted for.

Throughout the report, terms such as daily flow modifications and run-of-the-river with modified peaking are used. These terms will have to be defined within the EA document using hydrological data and flow regime values for a better understanding of these definitions. Similarly, the report states that "no long term storage of water is proposed." The size of the reservoir proposed for this facility suggests that long term storage will occur. Please provide further information with respect to water storage, draw-downs, and water level fluctuations within the reservoir.

P. 26, Section 5.1 Zone of Influence (ZOI)
As per previous comments, the ZOI will need to be accurately modelled and clearly delineated, identifying both upstream and downstream limits. MNR would suggest that considering the end of the powerhouse tailrace to be the downstream limit is underestimating the area affected. Based on the proposed operating regime, it is likely that the ZOI will extend well downstream, affecting McCarthy Lake and potentially the proposed McCarthy Chute development. Any tributaries affected by inundation will need to be included in the ZOI. All stakeholders that could be impacted will then need to be consulted.

Further comments with respect to the project description for Four Slide Falls are provided on the subsequent pages.

If you have any questions about the above comments, please feel free to contact me at lisa.keable@ontario.ca or (705) 941-5138 or Kim Mihell at kim.mihell@ontario.ca (705) 941-5107.

Sincerely,

Lisa Keable

Lisa Keable
Renewable Energy Biologist

cc. Sandra Dosser, MNR Northeast Region
Kim Mihell, MNR Sault Ste. Marie, Renewable Energy Planner
Erin Nixon, MNR Sault Ste. Marie, Renewable Energy Planner
Ilsa Langis, MNR Sault Ste. Marie, A/Planning and Information Management Supervisor
Jim Trottier, MNR Blind River, Management Biologist
Greg Deyne, MNR Timmins, NE Reg Pol/Prog/Plan Senior Biologist
Kirk Dillabough, MNR Sault Ste. Marie, Northshore Area Supervisor
Jennifer Hallet, DFO, Fish Habitat Biologist, Northern Ontario District
Laurie Brownlee, MOE, Environmental Planner/EA Coordinator - Northern Region
Rob Steele, Natural Resource Solutions Inc., Senior Biologist
Brett Woodman, Natural Resource Solutions Inc., Biologist

ID	Page #	Section, Table, or Figure	Comment
	5	1.1.2	EA coverage is required before MNR can issue permits for road upgrades or new road construction on Crown land. If these project elements are not addressed through the Waterpower Class EA, additional EA processes will be triggered when work permits are submitted. Furthermore, please refer to the Fisheries Management Zone 10: Lake Trout Operational Objectives and Management Strategies for new road/road upgrade strategies with respect to Lake Trout lakes.
	11-12	1.4, Table 1.2	As noted in the project description, the list of potential regulatory approvals is not comprehensive. For example, as the project evolves approvals may be required under the Aggregate Resources Act.
	11-12	1.4, Table 1.2	Following on the above comment, the Forest Fires Prevention Act applies to all construction/maintenance/operation activities in/around forested areas. Any operations occurring under the Crown Forest Sustainability Act (e.g., overlapping licence to harvest trees in order to establish the site/transmission lines) must be compliant with the Modifying Industrial Operations Protocol. Proponent will need to consider how to manage the accumulation of debris (e.g., slash from land clearing). If the intent is to burn this material, permits and/or a prescribed burn plan would be required. These require MNR approval. Fire hazard (or potential for fire starts) associated with transmission lines must be addressed. Sufficient width and maintenance of vegetation underneath should be noted. FireSmart principles should also be considered to prevent naturally occurring wildfires from impacting the facility/transmission lines, as well as to help stop or slow fires initiated within the facility from spreading/impacting adjacent Crown and private lands (Ontario resources: www.ontario.ca/fireprevention or national site: http://www.partnersinprotection.ab.ca/
	13	2.1.2	According to the Four Slide Falls Hydro Project – General Headpond Inundation Plan mapping provided within the Project Description Report, the elevation of the proposed head pond is 284.00. Xeneca Power will need to demonstrate to the satisfaction of the MNR that the head-pond of the proposed project and Pecors lake will remain separated during all times and during all flow conditions.
	13	2.1.3	As noted above, MNR's calculations suggest that the project as described will not have the

			installed capacity identified in the project description (7.3MW). Additional hydraulic modeling detail and discussion is required.
	13	2.1.4	As noted in previous comments, any road upgrades or new roads require EA coverage before MNR will issue a disposition.
	15	2.2.3	The Serpent River Water Management Plan was approved in March 2009.
	18	3.2.1, Table 3.2	Need to know the period that the mean monthly flows were calculated
	19	3.2.1 Fish and Fish Habitat	Pecors Lake is also a designated naturally reproducing lake trout lake.
	20	3.2.2 Species at Risk	Blanding's turtle is not listed within the report as a potential Species at Risk that may be found within the study area. It is recommended that you contact Nathan Hanes, Species at Risk biologist (705) 941-5139 to discuss this species as well as other SAR species that have the potential to occur within the study area.
	21	3.3.1 Hunting/Harvesting	The Site Information Package provided in 2008 included information on trapping and baitfish harvest. The information provided is as follows: The project falls within one registered trapline area: BL-084. The project area falls within a registered commercial baitfish harvesting area for Joubin and Gaiashk Townships. All of the holders of permits for these areas should be included in all phases of consultation.
	21	3.3.1 Recreation/Tourism	McCarthy Lake has also been identified as a potential site for cottage lot development by the City of Elliot Lake
	22	3.3.1 Proximity to Aboriginal Reserves and Traditional Territory	As per the definitions in the Crown Land Waterpower Site Release Policy and Procedure (4.10.05), Serpent River First Nation, Mississauga First Nation, and Sagamok Anishnawbek are Identified Aboriginal Communities (IAC). As per the non-competitive Site Release procedure, there are business to business requirements associated with IACs. In addition, the North Channel Metis Community has been identified as a Local Aboriginal Community and should be included in consultation efforts for the site. The Consultation Unit of the Metis Nation of Ontario in Ottawa should also be kept informed about this project.
	22	4.1 Biological Assessments	Note that the Zone of Influence must be clearly modelled and delineated before MNR can confirm that the area assessed was adequate. We expect that this modeling will be provided as part of the EA.
	23-24	4.1.2 Breeding Birds	The report states that breeding bird surveys were conducted by walking along the shoreline of the river in the vicinity of the proposed dam site. MNR recommends that these surveys be undertaken throughout the project study area as well as 120m beyond the study area limits

			and should include proposed areas of inundation, proposed roads and hydro corridors, as well as areas proposed for all other infrastructure associated with the facility (i.e. penstock, power house etc.).
	24	4.1.2 Fish Habitat Mapping and Fish Species inventory	Noted that no lakes were included in the study area. As per above comments, a clearly modeled ZOI is required at the EA stage, and the studies completed must address the entire area.
			The description of the project area does not mention natural disturbance regimes in the area (e.g., large stand replacing wildfires)
	27	Table 5.1	When considering the environmental impacts, no mention was made of the potential these projects have to impact the environment through increases to fire start (e.g., construction activity, new access and human caused fires, transmission lines and vegetation, etc.). • "Public health and/or safety": no mention of potential for increased fire starts associated with these projects. This could impact the project site, adjacent forestry/other values, as well as public use and transportation in the area (smoke and/or direct threat of loss resulting from forest fires). Currently evaluated as "-L," would suggest that the potential impact be elevated as fire hazard and risk are considered. • "Natural vegetation and terrestrial habitat links": The natural fire regime (or emulation thereof) would be altered as a result of this project. There is no mention of the impact that more fire in an area could have, or how excluding emulation of fire (forest harvest) would impact the terrestrial habitat
	27	Table 5.1 Water Quality of Quantity	Strongly recommend changing potential level of effect to –H, given concerns associated with proposed level of inundation i.e height of dam and the proposed volume of the impoundment relative to the discharge of the river and potential downstream impacts to McCarthy Lake – a designated naturally reproducing lake trout lake which conflicts with Fisheries Management Objectives for FMZ10.
	30	Table 5.1 Fish Habitat	Suggest changing potential level of effect to –H, given concerns associated with proposed level of inundation and potential impacts in water quality as well as temporal changes in water quanitity to a downstream designated naturally reproducing lake trout lake (McCarthy Lake) and conflict with FMZ10 objectives.
	30	Table 5.1 Fisheries	Potential effects on fisheries are identified as both low negative and low positive, but only impacts noted are a potential increase in habitat and a change in habitat type in the headpond area. Furthermore, what species does this increase in habitat impact? Will this be consistent with the Fisheries Management Objectives (for example, an increase in smallmouth bass

			habitat is not consistent with the objectives). There is no mention of how increased access, changes in thermal regime, nutrient levels in outflow, dewatering of bypass areas, changes in the natural flow regime, or how impacts to fish connectivity may impact native fish communities and their distribution. Furthermore, further information is needed with respect to the statement "potential increase in habitat." i.e. What species of fish? Will this be consistent with the Fisheries Management Objectives for these sites?
	31	Table 5.1 Water Temperature	'No mitigation required – overall thermal regime of the river not likely affected.' Would suggest that this claim cannot be confirmed until operating plans are further refined, methods for passing minimum flows defined, etc. The increased exposure to sunlight as a result of the increased surface area from the river to the reservoir over time will likely affect temperatures.
	32	Table 5.2 Access to Inaccessible Areas	A low potential negative effect is identified for the increase of access to inaccessible areas, but the rationale does not describe the potential effects to the land and resource use that could result from development. No mitigation measures are proposed. Suggest that potential negative effects are high given that roads are documented in literature as being vectors to increased exploitation and introduction of new species.

Muriel Kim

From: Samantha Leavitt [SLeavitt@xeneca.com]
Sent: June 9, 2011 1:37 PM
To: Samantha Leavitt
Subject: FW: RE: Xeneca Natural Characterization Reports

-------- Original Message --------
Subject:RE: Xeneca Natural Characterization Reports
Date: Fri, 20 May 2011 13:51:08 -0400
From: Keable, Lisa (MNR) <Lisa.Keable@ontario.ca>
To: Robert Steele <rsteele@nrsi.on.ca>
CC: Trottier, Jim (MNR) <jim.trottier@ontario.ca>

Hi Rob,
The strategies were endorsed by the Fisheries Management Zone 10 Advisory Council and went public in 2009.
Yes, there are SMBA in Pecors Lake.

Let me know if you need anything else,

Lisa Keable
Renewable Energy Biologist
Ministry of Natural Resources
Sault Ste. Marie District
Ph. 705-941-5138
Fax 705-949-6450
Eml lisa.keable@ontario.ca

From: Robert Steele [mailto:rsteele@nrsi.on.ca]
Sent: May 20, 2011 12:48 PM
To: Keable, Lisa (MNR)
Subject: Re: Xeneca Natural Characterization Reports

Hi Lisa

I',m just reviewing this document that you sent me in preparation for our June 9th meeting. I have a couple of questions.

1. When was this document published. I don't see a date on it?

2. Is there smallmouth bass in Pecors Lake presently?

Robert J. Steele, B.Sc.
Senior Aquatic Biologist
Natural Resource Solutions Inc.
225 Labrador Drive, Unit 1
Waterloo, ON, N2K 4M8
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(e) rsteele@nrsi.on.ca
www.nrsi.on.ca

On 4/6/2011 1:50 PM, Keable, Lisa (MNR) wrote:
Hi Rob,

As mentioned in my previous email to NRSI outlining some preliminary concerns MNR had identified upon review of the Natural Characterization reports for Four Slide Falls and McCarthy Chutes, we do have further comments to provide to you with respect to recommendations of field surveys to be conducted within the study areas. Please note that this email does not constitute MNR's complete comments. However, as requested, we are providing comments to you as they arise, to help inform the 2011 field season.

Although MNR does manage for smallmouth bass, staff have agreed that we will not require that spawning surveys be conducted for this species for inclusion in the EA process. This decision is based on the Fisheries Management Zone 10 Lake Trout Operational Objectives and Management Strategies, attached for your reference.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Lisa Keable
Renewable Energy Biologist
Ministry of Natural Resources
Sault Ste. Marie District
Ph. 705-941-5138
Fax 705-949-6450
Eml lisa.keable@ontario.ca

F N

May 19/11

From: F N
Sent: Thursday, May 26, 2011 12:46 PM
To: F N
Subject: FW: Upcoming Biological Scoping Meeting
Attachments: image002.jpg

Categories: Mississauga, MNR

-----Original Message-----
From: BigEddy SmallHydro
Sent: Thursday, May 26, 2011 12:41 PM
To: F N
Subject: serpent FW: Upcoming Biological Scoping Meeting

-----Original Message-----
From: Ed Laratta
Sent: Thursday, May 19, 2011 11:31 PM
To: Brett Woodman; Don Chubbuck; BigEddy SmallHydro; bwoodman@nrsi.on.ca
Cc: 'Robert Steele'; 'Tami Sugarman'; Grace Yu; Ed Laratta; Nava Pokharel; Ed Laratta; rsteele@nrsi.on.ca; Grace Yu; Don Chubbuck
Subject: RE: Upcoming Biological Scoping Meeting

-----Original Message-----
From: Ed Laratta
Sent: Thursday, May 19, 2011 11:31 PM
To: Brett Woodman; Don Chubbuck; BigEddy SmallHydro; bwoodman@nrsi.on.ca
Cc: 'Robert Steele'; 'Tami Sugarman'; Grace Yu; Ed Laratta; Nava Pokharel; Ed Laratta; rsteele@nrsi.on.ca; Grace Yu; Don Chubbuck
Subject: RE: Upcoming Biological Scoping Meeting

Brett/Don/Grace,
I will find someone to look after this next week.
They will likely not be ready with an assessment in time for the meeting on June 9.
Ed.

-----Original Message-----
From: Brett Woodman [mailto:bwoodman@nrsi.on.ca]
Sent: Thu 19/05/2011 11:02 AM
To: Don Chubbuck
Cc: 'Robert Steele'; Ed Laratta; 'Tami Sugarman'
Subject: FW: Upcoming Biological Scoping Meeting

Don,

Following on yesterday's letter from MNR re the Four Slide Falls Project Description, the following email outlines MNR's recommendation to bring a Limnologist to the meeting. I believe that Ed and Rob had spoken about this possibility in the past. NRSI does not have any Limnologists on staf, however OEL Hydrosys may, although I am not sure of their exact qualifications. Alternatively, we can recommend one. Please consider how you would life me to proceed. Perhaps we can talk later today?

Brett

NRSI_ESignature_BDW_Outlook

P Please consider the environment before printing this e-mail or its attachment(s)

From: Keable, Lisa (MNR) [mailto:Lisa.Keable@ontario.ca]
Sent: Thursday, May 19, 2011 10:43 AM
To: Brett Woodman
Cc: Tami Sugarman; Ed Laratta; Robert Steele; Brownlee, Laurie (ENE); Green, Emily (MNR); Nixon, Erin (MNR); Mihell, Kim (MNR)
Subject: Upcoming Biological Scoping Meeting

Hi Brett,

I wanted to touch base with you on the Xeneca Biological Scoping meeting that is scheduled to occur on June 9th for the proposed Four Slide Falls and McCarthy Chutes waterpower facilities.

Based on concerns outlined by MNR which were circulated yesterday with respect to the Four Slide Falls Project Description, we wanted to stress the importance of having a limnologist or water quality technician/analyst present at this meeting. The potential negative impacts to water quality parameters within the Serpent River (and ultimately affecting existing conditions within McCarthy Lake) as a result of the extensive impoundment of water associated with the development and operation of the Four Slide Falls dam, is a significant concern that must be addressed during the EA process.
MNR looks forward to discussing these concerns further to ensure that proper monitoring is undertaken and impacts are addressed within the EA.

Also - I just wanted to inquire as to whether MOE has been contacted to take part in this meeting, as it would be in the best interest of all if they were present as well.

If you require any further information, please do not hesitate to contact me.

Sincerely,

Lisa Keable

Renewable Energy Biologist

Ministry of Natural Resources

Sault Ste. Marie District

Ph. 705-941-5138

Fax 705-949-6450

Eml lisa.keable@ontario.ca

Muriel Kim

From: Patrick Gillette [pgillette@xeneca.com]
Sent: May 27, 2011 12:54 PM
To: Linley, Richard (MNR)
Cc: Arnold Chan; Mark Holmes; Uwe Roeper; rsteele@nrsi.on.ca
Subject: FW: MNR Fisheries Management Zone 10.pdf, MNR Application Review & Land Disposition Process.pdf, McCarthy Chute SDP.pdf, Four Slide Falls SDP.pdf
Attachments: MNR Fisheries Management Zone 10.pdf; MNR Application Review & Land Disposition Process.pdf; McCarthy Chute SDP.pdf; Four Slide Falls SDP.pdf

<<MNR Fisheries Management Zone 10.pdf>> Hi <<MNR Application Review & Land Disposition Process.pdf>> R <<McCarthy Chute SDP.pdf>> ic <<Four Slide Falls SDP.pdf>> hard:

In preparation of our meeting, let me try to summarize the challenges being faced at "Four Slide Falls" and "McCarthy Chute" on the Serpent River.

The original Site Description Packages issued (attached) for the sites indicated they were eligible for Waterpower Development. However, as we progressed through the site release process and the file shifted to Sault Ste. Marie from Blind River Districts and the Region became involved the "Trout Lake Trout" policy was introduced. Both projects are located downstream of Trout Lakes (Pecor lake is downstream of Four Slide and McCarthy Chute is downstream of McCarthy Lake) that are being restocked. Both lakes have been impacted in the past by local uranium mining and acid rain. The wisdom of restocking lakes which may have uranium particles in them with trout for consumption is something I will leave for your consideration.

The "Trout Lake Trout" policy as best we can determine is an appendix added in July 2008 to PL 4.02.01 APPLICATION REVIEW AND LAND DISPOSITION PROCESS (Appendix A Crown Land Disposition and Lake Trout Lakes). Please see attached. This Appendix was inserted after the sites had been accepted for waterpower development; "Grandfathering" has been rejected by MNR. In the most recent version of the Waterpower Site Release policy a change was also made to prohibit structures on a Trout Lake; this was also not part of the process when the applications were accepted.

Expert opinion is that the proposed waterpower plants will have no negative impacts on the Trout! Xeneca has also indicated a willingness to support trout stocking and other efforts to maintain and enhance trout population in the lakes. That is, we want to work with the MNR. This has not resolved the issue. Moreover, that the Class EA process and DFO's process thereafter could address these issues have been also rejected as adequate.

In the past MNR has made the following arguments:

- Even though the waterpower plants will cause no negative impacts and could have positive impacts on the trout, because there may be an impact/change (i.e., positive) the "Trout Lake Policy" allows for the cancellation of the project. This leverage from the referenced appendix highlighted in the attached on page 18.

- MNR keeps saying "Trout Lake Policy" does not allow the lakes to be used as reservoirs; I cannot find this reference. Regardless we are not constructing water control structures to store water, but only to manage water flows; lake levels are to be kept within their seasonal norms. MNR staff keeps arguing this is a reservoir by quoting Websters dictionary, to the frustration of technical experts.

- The only way to align with the "Trout Lake Policy" is if the projects are "Run of River," bypassing the Class EA process.

McCarthy Chute was granted Applicant of Record by the District Manager after severe opposition by the Region and Peterborough. Four Slide has met the same criteria, but no Applicant of Record has been issued.

MNR has now brought forward it Fisheries Management Plans (attached) and three issues are directed to impede these sites:

- prohibition on roads near Trout Lakes;
- the issue that the projects might encourage bass habitat to the detriment of trout; and
- DFO will support MNR fishery policy causing a HADD.

This is most obvious at the Serpent River sites, but Fishery Management Plans seem to being issued in a negative manner at all our FIT sites.

The two key individuals raising these issues are Sandra Dosser and Greg Deyne.

My "Ask" is that staffs are requested to work with Xeneca to build the projects in a manner that do not negatively affect the trout and if an activity benefits the trout it should be allowed. Example, keeping lake levels at the higher end of the seasonal norms could benefit the trout. Stocking of trout and culls of bass can also be done to ensure Ministry objective can be met as part of a mitigation plan.

The wider "Ask" is staffs are asked to stop using policy to try to stop or delay projects and to work toward reasonable and positive solutions. This shifts the focus away from Xeneca spending money on addressing "ghost" issues (e.g., after two years of study we do not find certain species, but the MNR insists they are there with no proof and pushes for more study -- this is the lochness monster affect) or using policy and process in a inappropriate way that is bordering on abuse of process. Instead, if we work together these resources could be used to produce positive environmental affects and better data collection for the benefit of the province; e.g., funding the stocking of trout lakes.

Applicant of Record at Four Slide would also be appreciated and would help with establishing First Nation engagement precedence to issue Applicant of Record.

Look forward to chatting.

Thanks

Patrick

Patrick W. Gillette BA, MES, MPA
President and COO
5160 Yonge Street
Suite 520
North York, Ontario, Canada
M2N 6L9
Tel: 416-590-9362
Cell: 416-697-4004
Fax: 416-590-9955

-----Original Message-----
From: Judy Leavitt
Sent: Friday, May 27, 2011 11:35 AM
To: Patrick Gillette
Subject: MNR Fisheries Management Zone 10.pdf, MNR Application Review & Land Disposition Process.pdf, McCarthy Chute SDP.pdf, Four Slide Falls SDP.pdf

Patrick
As requested.

Judy

The message is ready to be sent with the following file or link attachments:

MNR Fisheries Management Zone 10.pdf
MNR Application Review & Land Disposition Process.pdf McCarthy Chute SDP.pdf Four Slide Falls SDP.pdf

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

Ministry of Natural Resources

Ontario

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Fisheries Management Zone 10:

Lake Trout Operational Objectives and Management Strategies

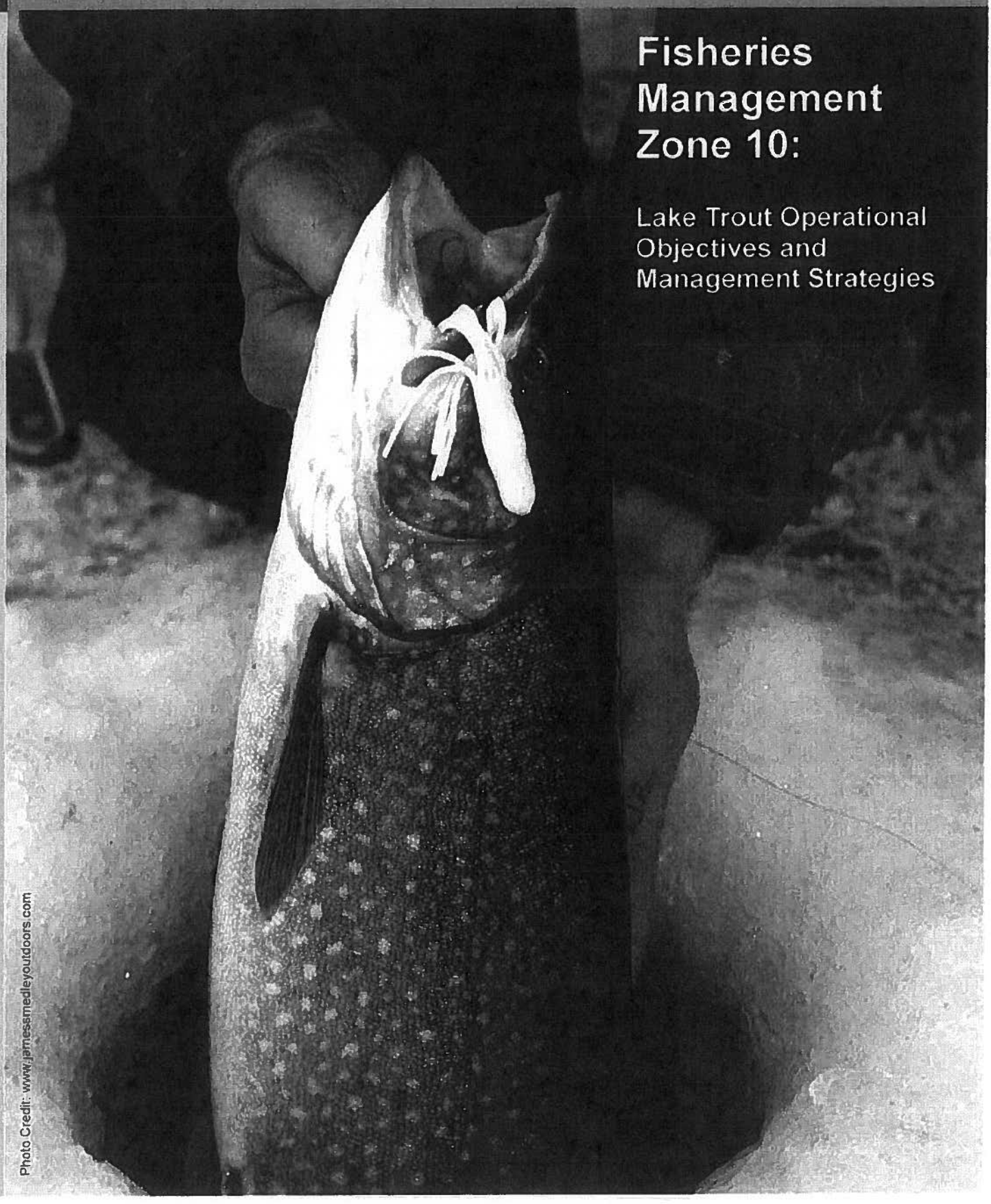


Photo Credit: www.jamessmedleyoutdoors.com

FMZ 10: Lake Trout Operational Objectives and Management Strategies

Lake trout are the second most frequent sport fish species by lake area on record in Fisheries Management Zone 10 (FMZ 10), and are a popular sport fish in this zone.

According to the report *Status of Lake Trout Populations in Northeastern Ontario (2000-2005) (further referenced as NER Lake Trout Report by Selinger et al. 2006)*, only 32% of lake trout lakes were found to have a high abundance of lake trout, and of these, only 17% were fished at a sustainable level (figure 1) (see *Fact Sheet: Lake Trout in Fisheries Management Zone 10* for more information).

Given this information, MNR and the FMZ 10 Advisory Council decided to make management of lake trout its first focus. In order to protect this valuable resource, the MNR FMZ 10 Project Team, working in cooperation with the FMZ 10 Advisory Council, developed a series of operational objectives to guide the development of strategies with the intent of protecting lake trout while continuing to provide fishing opportunities.

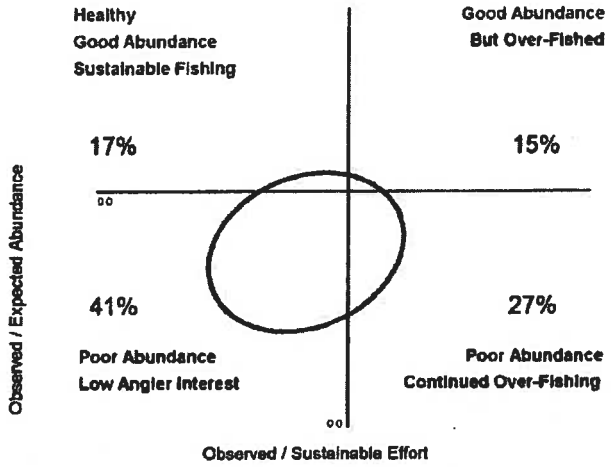
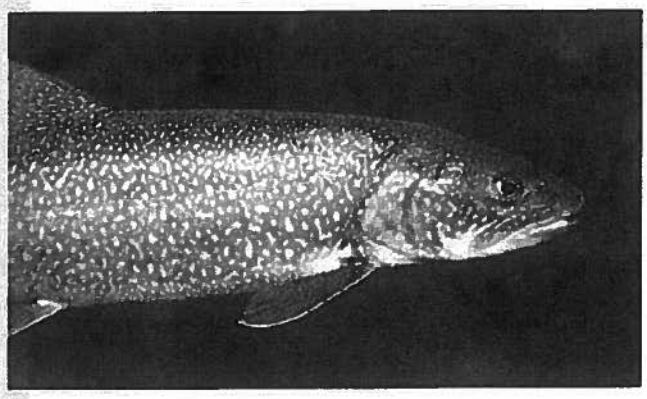


Figure 1. Graph showing the current state of lake trout lakes in FMZ 10.



Fisheries Management Zone 10

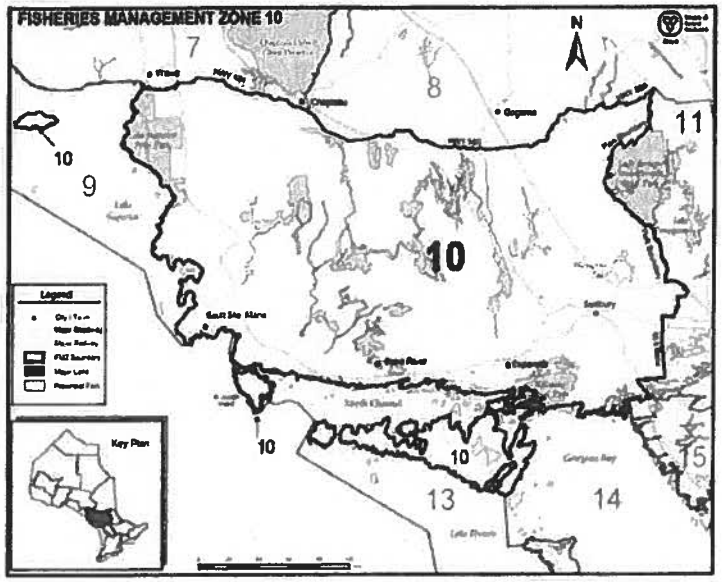


Figure 2. Map showing FMZ 10 boundaries.

FMZ 10 lies north of Lake Huron and Georgian Bay. Its eastern border extends northwards from the mouth of the French River to Elk Lake and the western border follows the east shore of Lake Superior from Sault Ste. Marie north to Wawa. FMZ 10 includes the 'Specially Designated Waters' of the French River and Manitoulin Island.

The landscape is characterized by the Ontario shield's shallow soils, ancient bedrock and boreal forests. This zone also has the most lake trout and brook trout lakes of all the northeast zones. Numerous streams flow into Lakes Superior and Huron and the inland lakes are generally small, deep and clear.

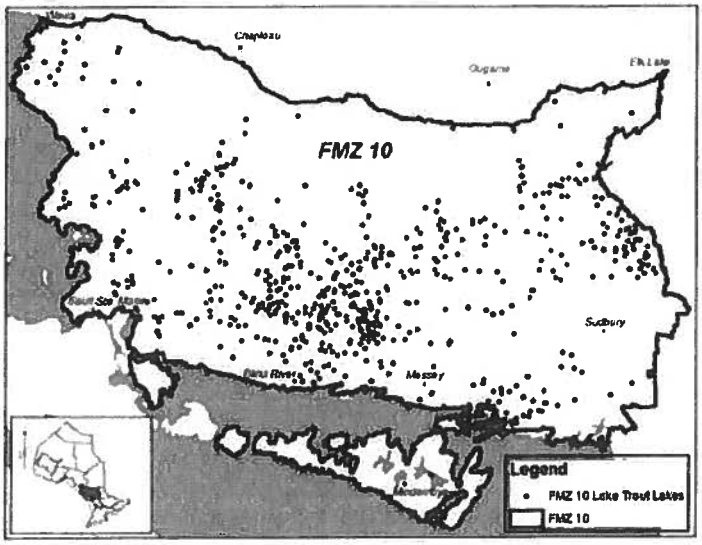


Figure 3. Map of lake trout distribution in FMZ 10

FMZ 10: Lake Trout Operational Objectives and Management Strategies

Objective 1: Increase the number of self-sustaining lake trout lakes in FMZ 10 above abundance benchmarks to 50% *(from 32%)* within 20 years.

Based on the NER Lake Trout Report, only 32% of lakes sampled meet the abundance benchmark in FMZ 10, and nearly half of these lakes are presently subject to unsustainable levels of fishing pressure. Given the percentage of lakes just below the abundance benchmark and slower reproductive recovery of lake trout, it is considered likely that, with management changes, a minimum of 50% of the lake trout lakes could be above the abundance benchmark, within a 20 year time frame.

Strategies

In order to achieve this objective, lake trout harvest needs to be reduced. Harvest strategies available for use are documented in the *Regulatory Guidelines for Managing the Lake Trout Recreational Fishery in Ontario* (lake trout tool kit).

As recommended in the lake trout tool kit and the *NER Lake Trout Report*, the harvest regulation for FMZ 10 should decrease to a limit of 2 lake trout. This report also states that a catch and possession limit of 2 lake trout is not sufficient to address sustainability concerns. Recovery of acid stressed waters (Objective #4) will increase overall sustainable angling effort by providing new opportunities and may displace pressure on existing lakes.

1. **Reduce harvest by decreasing possession limit, applying size limit, and altering seasons.**

Fisheries regulations implemented as of January 1, 2010 will help to achieve this objective.

The regulations for lake trout are:
Catch & Possession: S-2, C-1, one fish over 40cm
Open Season: January 1 to Labour Day

2. **Plan for new roads and trails in a manner that does not significantly improve access to self-sustaining lake trout lakes. As a minimum, roads and trails should not be constructed within 400 m of policy lake trout lakes. Policy lakes with existing access should be evaluated to determine potential for increased risk associated with new roads or trails.**

This strategy will be referred to MNR's Northeast Leadership team to determine the best way to limit new access to natural lake trout lakes, in the Northeast region including FMZ 10.

3. **Promote to anglers the proper way to handle and release fish.**

The development of educational products explaining the proper way to handle and release fish is ongoing. Catch, photo and release workshops and educational material are being released in FMZ 10 in 2010.

4. **Maintain current or similar seasons for put-grow-take fisheries to deflect fishing effort from vulnerable naturally reproducing lakes.**

For Fisheries Management Zone 10, the objective for put-grow-take fisheries will be to divert angling pressure away from naturally reproducing waters. For this reason MNR districts will be encouraged to have seasons for put-grow-take fisheries consistent with the zone wide seasons for naturally reproducing lakes of the same species.

Objective 2: Minimize the introduction and spread of aquatic invasive species; including both exotic and native species.

Strategies

This objective speaks to limiting both the spread of native species (bass: rock, smallmouth and largemouth) and exotic species including gobies, spiny water flea, etc. into new lakes.

The *NER Lake Trout Report* states that lake trout abundance was found to be significantly lower where smallmouth and rock bass were present and there were disproportionately more healthy lakes where smallmouth bass were absent. Competing species are often introduced deliberately by well meaning, misinformed people wanting to improve the fishery or by careless use of bait.

1. **Undertake public education programs to educate anglers as to the consequences of fish introductions through careless use of bait and unauthorized fish transfers.**

The MNR has undertaken an Invasive Species program in partnership with the Ontario Federation of Anglers and Hunters, whose goal is to identify lakes which currently contain invasive species, and educate the public regarding the spread of aquatic invasive species. Educational materials produced to date include signs at boat launches and public service announcements played on the radio.

2. **Increase enforcement priority on the illegal transfer of live fish or live spawn.**

The spread of aquatic invasive species has been a provincial enforcement priority for the past several years. Conservation Officers across the province are practicing protective measures to ensure minimal release of aquatic invaders on a District level.

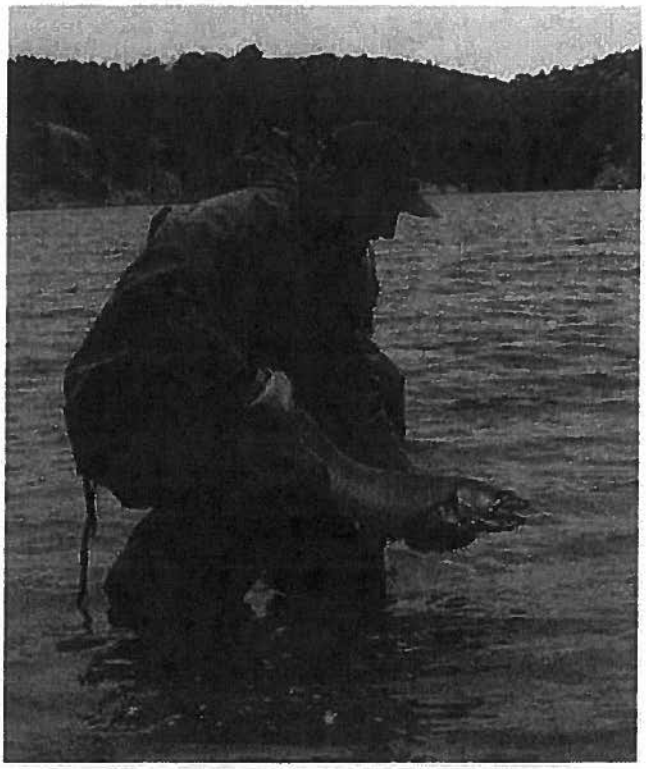
Some activities planned to date have been bait bucket inspections, live well inspections, and outreach programs such as educating anglers about transferring live bait and fish between waters. Further work is planned in this area, including the implementation of more restrictive license conditions for the sale of bait fish, and the addition of several training courses for Conservation Officers to improve their effectiveness in preventing the spread of aquatic invaders.

3. **The spread of invasive species can be linked to road access. New roads should be planned in a manner that does not significantly improve access to self-sustaining lake trout lakes. As a minimum, roads and trails should not be constructed within 400 m of policy lake trout lakes. Policy lakes with existing access should be evaluated to determine potential for increased risk associated with new roads or trails.**

This road strategy will be referred to MNR's Northeast Leadership team to determine the best way to limit new access to natural lake trout lakes, in the Northeast region including FMZ 10.

4. **With the bait industry, implement Hazard Analysis and Critical Control Point (HACCP) training for all bait dealers and harvesters.**

This practice is currently ongoing in most MNR District Offices in FMZ 10.



Objective 3: Increase the proportion of mature (older than 10 years) female lake trout to 25% *(from current 19%)* in 20 years.

Based on the NER Lake Trout Report, the proportion of female lake trout beyond age 10 is currently 19%. This value is considered to be low given a life span for the species of 50+ years and a review of reference data from unexploited populations.

Within a 20 year timeframe, it is considered likely that a target of 25% can be attained. This objective indicates a desire to increase the proportion of mature fish and enhance reproductive potential of NER lake trout populations in FMZ 10.

Strategies

A shortened late summer season in FMZ 10 would

reduce selective harvest of mature females and improve reproductive potential. There is unpublished literature which suggests that larger females are much more vulnerable to angling than males late in the summer season.

This happens because females must feed much more aggressively than males at this time of year given energy requirements associated with egg production. In light of this, season restrictions can be put in place to protect females at this critical time.

1. Reduce harvest of mature females by implementing size and season restrictions consistent with mature female life history.

Fisheries regulations implemented as of January 1, 2010 will help to achieve this objective.

The regulations for lake trout are:
Catch & Possession: S-2, C-1, one fish over 40cm
Open Season: January 1 to Labour Day

Objective 4: Increase the number of self-sustaining lake trout populations by 20 lakes in 20 years.

Given recent improvements in water chemistry within acid damaged waters, experience in recovery actions, and fish community dynamics it is considered reasonable to achieve self-sustaining lake trout populations in 20 more lakes though active fisheries restoration efforts.

Strategies

34 of the lakes where native lake trout populations were extirpated as a result of acidification are presently suitable for lake trout and restoration is underway. An additional 31 lakes require further water quality improvement.

1. Continue with rehabilitative stocking on acid damaged lakes where water quality permits.

Rehabilitative stocking of acid damaged lakes continues across FMZ 10. Water quality of acid damaged lakes currently unsuitable for restoration efforts will continue to be monitored for signs of recovery and suitability for reintroductions.

2. Monitor the success of restoration efforts on individual lakes and modify if necessary.

Monitoring of lake trout lakes with previous rehabilitative stocking continues on a District level.

Objective 5: Maintain/enhance water quantity/ quality, sediment quality, and water levels of lake trout lakes within natural ranges suitable for lake trout.

Strategies

This objective will be achieved through MNR's existing planning process.

1. Address lake trout habitat requirements through resource management planning and plan input and review.

This work occurs through planning efforts, such as Forest Management Planning, and through policies, such as the Lakeshore Capacity Policy, and the Crown Land Disposition Policy.

2. Potential effects of draw downs on lake trout should be given continued consideration through water management planning exercises.

This work occurs through the implementation and enforcement of the Water Management Planning Process.

Objective 6: Protect the extent and function of critical lake trout habitat and restore degraded habitats that support fish populations and fisheries.

Strategies

This objective will be largely achieved through MNR's existing land use planning process. It will also provide direction to local groups when

determining potential restoration projects.

1. Engage local districts Community Fish and Wildlife Involvement Program (CFWIP) partners and stewardship groups.

CFWIP funds continue to be available to partners interested in conducting recovery work. Also, the continued expansion of the Ontario Stewardship Program into the north has stimulated more communities to initiate stewardship activities across OMNR districts enclosed within FMZ 10. Efforts to engage local communities and organizations to participate in stewardship activities are ongoing.

2. Resource management planning and plan input and review.

This work occurs through land use planning efforts, such as Forest Management Planning, and through policies, such as the Lakeshore Capacity Policy, the Crown Land Disposition Policy, and Department of Fisheries and Oceans fish habitat regulations.

Objective 7: Consider anticipated impacts of climate change on other operational objectives and associated management decisions.

As surface waters warm and longer stratification periods produce anoxia in deeper waters, usable habitat for lake trout will contract. This in turn will result in reductions in sustainable harvest levels and sustainable angling pressure. Populations in marginal lakes may be lost entirely regardless of exploitation effects.

Strategies

1. Strategies identified for objectives 1 through 6 will help mitigate the effects of climate change to some extent.

2. Identify those waters at greatest risk in order to quantify potential impacts to the resource base and guide future management decisions.

Options to evaluate risk include:

Identifying lakes with a maximum depth of 12 m and less; Identifying super clear lakes; Identifying lakes that meet the above criteria that have competing warm water species and alternative deep water forage species.

MNR has identified the lakes at greatest risk, and will consider the sensitivities of these lakes during future management planning.

Objective 8: Enhance the quality of lake trout angling in FMZ 10; including increasing the number and size of angled fish.

Strategies

1. By meeting objectives 1 through 7, a higher quality of lake trout angling within FMZ 10 should be achieved.

With input from the FMZ 10 Advisory Council, the MNR has prepared the *FMZ 10: Lake Trout Operational and Management Strategies* to guide landscape management within FMZ 10.

MNR sought public input of the objectives and strategies in March and April of 2009. The result was that the majority of the public approved of the objectives and strategies and the fisheries regulations which will help to achieve these objectives.

The data collected during the broad scale fisheries monitoring program will allow for evaluation of fish population status and changes over time; distribution, extent and diversity of aquatic ecosystems; and connections between stressors and aquatic resources. This data will also support future State of the Resources Reporting.

The *FMZ 10: Lake Trout Operational Objectives and Strategies* will be reviewed by the MNR and Advisory Council in 10 years time or unless there are compelling management reasons to initiate a review prior to the designated review period.

Muriel Kim

From: Blake, Marty (MNR) [marty.blake@ontario.ca]
Sent: June 6, 2011 6:01 PM
To: Patrick Gillette; Beal, Jim (MNR)
Cc: Rob Steele; Arnold Chan; Mark Holmes; Langis, Ilsa (MNR); Nixon, Erin (MNR); Brindle, Ginette (MNR); Dosser, Sandra (MNR); Deyne, Greg (MNR); Ritchie, Grant (MNR); Ed Laratta; bwoodman@nrsi.on.ca
Subject: RE: Serpent River
Attachments: Jun0611-Xeneca-Meeting.pdf

All-

I suggest we postpone the scoping meeting scheduled for later this week. It would be unfair for all involved to proceed with such uncertainty in regard to this key policy direction. I will send you the original AOR letter later this week and a have attached letter outlining my concerns that you will receive as an original shortly.

Both Jim and I would be available for a call Friday Afternoon (Let me know if that works for you and I will send a calendar request with dial in details).

Thanks
MB

Martin D. Blake
District Manager
Sault Ste. Marie District
Ministry of Natural Resources
Phone (705) 941 5120
Fax (705) 949 6450
marty.blake@ontario.ca

From: Patrick Gillette [mailto:pgillette@xeneca.com]
Sent: June 6, 2011 2:09 PM
To: Patrick Gillette; Beal, Jim (MNR)
Cc: Blake, Marty (MNR); Rob Steele; Arnold Chan; Mark Holmes
Subject: RE: Serpent River

Hi Jim:

In reference to you email below; is the attached the letter you mention? If not, could you send the correspondence so we are all clear.

Thanks,

Patrick

Patrick W. Gillette BA, MES, MPA
President and COO
5160 Yonge Street
Suite 520
North York, Ontario, Canada
M2N 6L9

Tel: 416-590-9362
Cell: 416-697-4004
Fax: 416-590-9955

From: Patrick Gillette
Sent: Sunday, June 05, 2011 8:49 PM
To: 'Beal, Jim (MNR)'
Cc: Blake, Marty (MNR); Rob Steele; Arnold Chan
Subject: RE: Serpent River

Hi Jim:

I think a call with Marty is a good idea; how is this week?

Cheers,

Patrick

Patrick W. Gillette BA, MES, MPA
President and COO
5160 Yonge Street
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From: Beal, Jim (MNR) [mailto:jim.beal@ontario.ca]
Sent: Tuesday, May 24, 2011 2:03 PM
To: Patrick Gillette
Cc: Blake, Marty (MNR); Rob Steele
Subject: RE: Serpent River

Hi Patrick;

Sorry I haven't been in contact in a while, it's been extremely busy.

I would enjoy talking with you again, especially about Four slide; I think McCarthy we have talked all too much about and you have our letter of confirmation which explains our position.

If you or Rob want to put together a call with Marty and I that would be fine.

Jim Beal

Renewable Energy Provincial Field Program Coordinator
Regional Operations Division
Ontario Ministry of Natural Resources
300 Water Street, 4th Floor, South Tower

Tel: 705-755-3203
Fax: 705-755-3292

E-mail jim.beal@ontario.ca

From: Patrick Gillette [mailto:pgillette@xeneca.com]
Sent: Friday, May 20, 2011 1:41 PM
To: Rob Steele; Beal, Jim (MNR)
Subject: Serpent River

Hi Jim and Rob:

Jim, I was chatting with Rob Steele and you may want to give him a call to discuss.

Rob is concerned that discussion on the two sites on the Serpent River (Four Slide and McCarthy) is going in less than positive direction. Once again it's related to the "Trout Lake Policy" and additionally Fish Management.

Jim, I want a reasonable accommodation as it relates to these projects and that includes mitigation (e.g., taking steps to help MNR meet its goals) and operations. From what Rob is saying this is not the direction that MNR staff is going.

Can I suggest you chat with Rob and then take any steps you deem appropriate. Please call me with any questions.

Thanks,

Patrick

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Tel: 416-590-9362
Cell: 416-697-4004
Fax: 416-590-9955

Ministry of Natural Resources

District Manager's Office
Sault Ste. Marie District Office
64 Church Street
Sault Ste. Marie, ON P6A 3H3
Tel.: 705-941-5120
Fax.: 705-949-6450
Email: marty.blake@ontario.ca

Ministère des Richesse naturelles

Bureau du gérant de district
Bureau du district de Sault Ste. Marie
64, rue Church
Sault Ste. Marie, ON P6A 3H3
Tél.: 705-941-5120
Téléc.: 705-949-6450
Courriel: marty.blake@ontario.ca

Ontario

June 6, 2011

Patrick Gillette
Xeneca Power Development Inc.
5160 Yonge St., Suite 520
Toronto,ON
M2N 6L9

Dear Patrick:

Further to the April 28, 2011 meeting held to discuss proposed operating plans and Rob Steele's email of June 2, 2011, I have decided to postpone the biological scoping meeting for Xeneca's proposed Serpent River waterpower sites, currently scheduled for Thursday, June 9, 2011.

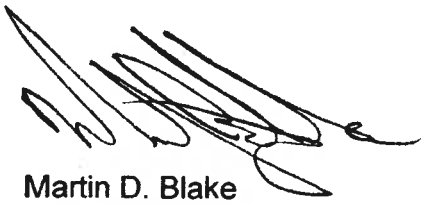
MNR has a definitive policy prohibiting the use of designated lake trout lakes for waterpower developments. MNR is unable to entertain mitigation discussions for a project that is contrary to policy. As the intent of the scoping meeting includes discussion of the use of McCarthy Lake as a reservoir, I do not believe the meeting will serve to support MNR's interests. Similarly, MNR continues to have concerns with the proposed Four Slide Falls development relative to the lake trout lake policy. MNR requires additional information on the project, including a final project description, to participate in a productive biological scoping meeting.

As was communicated to Xeneca on April 28, 2011 when the proposed operating plans for McCarthy Chute and Four Slide Falls were presented, for the projects to proceed MNR requires that Xeneca design them such that they conform to policy. At that time, we will be happy to engage in discussions around biological scoping, potential impacts from development, and mitigation measures.

In the meantime, I understand that Jim Beal, MNR Renewable Energy Coordinator, Southern Region will be contacting you to arrange a meeting to discuss these sites further.

Please contact me if you have any questions or would like to discuss timelines for submitting revised operating plans and additional information, as well as rescheduling the scoping meeting.

Sincerely,



Martin D. Blake
District Manager
Sault Ste. Marie District

c: Ed Laratta, Xeneca Power Development Inc.
Rob Steele, Natural Resources Solutions Inc.
Brett Woodman, Natural Resources Solutions Inc.
Ginette Brindle, Regional Director, Northeast Region
Sandra Dosser, Renewable Energy Coordinator, Northeast Region
Greg Deyne, Senior Biologist, Northeast Region
Grant Ritchie, Manager, Northeast Region Planning Unit
Jim Beal, Renewable Energy Coordinator, Southern Region
Ilsa Langis, A/Planning & Information Management Supervisor, Sault Ste. Marie
Erin Nixon, Renewable Energy Planner, Sault Ste. Marie

Muriel Kim

From: Blake, Marty (MNR) [marty.blake@ontario.ca]
Sent: June 7, 2011 5:09 PM
To: Patrick Gillette; Beal, Jim (MNR)
Cc: rsteele@nrsi.on.ca; Arnold Chan; Mark Holmes; Langis, Ilsa (MNR); Nixon, Erin (MNR); Brindle, Ginette (MNR); Dosser, Sandra (MNR); Deyne, Greg (MNR); Ritchie, Grant (MNR); Ed Laratta; bwoodman@nrsi.on.ca
Subject: UUR: Serpent River

All -

I have been requested to continue with the meeting originally schedule for Thursday June 9, 2011. My staff will participate as scheduled. For those planning to attend MNR's position remains the same.

I trust you still all have the appropriate travel arrangements in place. Its my understanding nothing else had been cancelled and the meeting particulars will remain the same.

Regards
MB

Martin D. Blake
District Manager
MNR Sault Ste. Marie
Sent from my BlakeBerry Wireless Handheld

From: Blake, Marty (MNR)
To: 'Patrick Gillette' <pgillette@xeneca.com>; Beal, Jim (MNR)
Cc: Rob Steele <rsteele@nrsi.on.ca>; Arnold Chan <achan@xeneca.com>; Mark Holmes <mholmes@xeneca.com>; Langis, Ilsa (MNR); Nixon, Erin (MNR); Brindle, Ginette (MNR); Dosser, Sandra (MNR); Deyne, Greg (MNR); Ritchie, Grant (MNR); 'elaratta@xeneca.com' <elaratta@xeneca.com>; 'bwoodman@nrsi.on.ca' <bwoodman@nrsi.on.ca>
Sent: Mon Jun 06 18:00:37 2011
Subject: RE: Serpent River

All-

I suggest we postpone the scoping meeting scheduled for later this week. It would be unfair for all involved to proceed with such uncertainty in regard to this key policy direction. I will send you the original AOR letter later this week and a have attached letter outlining my concerns that you will receive as an original shortly.

Both Jim and I would be available for a call Friday Afternoon (Let me know if that works for you and I will send a calendar request with dial in details).

Thanks
MB

Martin D. Blake
District Manager
Sault Ste. Marie District
Ministry of Natural Resources
Phone (705) 941 5120
Fax (705) 949 6450
marty.blake@ontario.ca

From: Patrick Gillette [mailto:pgillette@xeneca.com]
Sent: June 6, 2011 2:09 PM
To: Patrick Gillette; Beal, Jim (MNR)
Cc: Blake, Marty (MNR); Rob Steele; Arnold Chan; Mark Holmes
Subject: RE: Serpent River

Hi Jim:

In reference to you email below; is the attached the letter you mention? If not, could you send the correspondence so we are all clear.

Thanks,

Patrick

Patrick W. Gillette BA, MES, MPA
President and COO
5160 Yonge Street
Suite 520
North York, Ontario, Canada
M2N 6L9
Tel: 416-590-9362
Cell: 416-697-4004
Fax: 416-590-9955

From: Patrick Gillette
Sent: Sunday, June 05, 2011 8:49 PM
To: 'Beal, Jim (MNR)'
Cc: Blake, Marty (MNR); Rob Steele; Arnold Chan
Subject: RE: Serpent River

Hi Jim:

I think a call with Marty is a good idea; how is this week?

Cheers,

Patrick

Patrick W. Gillette BA, MES, MPA

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5160 Yonge Street
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Sent: Tuesday, May 24, 2011 2:03 PM
To: Patrick Gillette
Cc: Blake, Marty (MNR); Rob Steele
Subject: RE: Serpent River

Hi Patrick;

Sorry I haven't been in contact in a while, it's been extremely busy.

I would enjoy talking with you again, especially about Four slide; I think McCarthy we have talked all too much about and you have our letter of confirmation which explains our position.

If you or Rob want to put together a call with Marty and I that would be fine.

Jim Beal

Renewable Energy Provincial Field Program Coordinator
Regional Operations Division
Ontario Ministry of Natural Resources
300 Water Street, 4th Floor, South Tower

Tel: 705-755-3203
Fax: 705-755-3292

E-mail jim.beal@ontario.ca

From: Patrick Gillette [mailto:pgillette@xeneca.com]
Sent: Friday, May 20, 2011 1:41 PM
To: Rob Steele; Beal, Jim (MNR)
Subject: Serpent River

Hi Jim and Rob:

Jim, I was chatting with Rob Steele and you may want to give him a call to discuss.

Rob is concerned that discussion on the two sites on the Serpent River (Four Slide and McCarthy) is going in less than positive direction. Once again it's related to the "Trout Lake Policy" and additionally Fish Management.

Jim, I want a reasonable accommodation as it relates to these projects and that includes mitigation (e.g., taking steps to help MNR meet its goals) and operations. From what Rob is saying this is not the direction that MNR staff is going.

Can I suggest you chat with Rob and then take any steps you deem appropriate. Please call me with any questions.

Thanks,

Patrick

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North York, Ontario, Canada
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Tel: 416-590-9362
Cell: 416-697-4004
Fax: 416-590-9955

Pilar DePedro

From: Keable, Lisa (MNR) [Lisa.Keable@ontario.ca]
Sent: July-21-11 10:35 AM
To: elaratta@xeneca.com
Cc: Tami Sugarman; bwoodman@nrsi.on.ca; rsteele@nrsi.on.ca; Langis, Ilsa (MNR); Nixon, Erin (MNR)
Subject: Biological Scoping Meeting Follow-up - Four Slide Falls and McCarthy Chutes

Hi Ed,

I wanted to touch base with you as a follow-up to the biological scoping meeting that occurred on June 9th, 2011 for the proposed Four Slide Falls and McCarthy Chute Generating Stations. MNR is looking forward to reviewing the meeting minutes to provide any further comments on discussions that occurred. Can you please indicate when those minutes are expected to be distributed for review?

In the meantime, MNR has a few key points that were discussed at the meeting and I wanted to pass along this information today to ensure that these points were considered for the Environmental Assessments for the two aforementioned proposed projects:

It is recommended that potential impacts to McCarthy Lake resulting from changes to flow, temperature, and dissolved oxygen regimes (etc.) due to the development/operation of the Four Slide Falls dam are identified and addressed within the EA for Four Slide Falls. Furthermore, a detailed description identifying how the Four Slide Falls reservoir will be filled with water (including but not limited to frequency, duration, compensation flows below dam during this time etc.) be included within the EA so that all potential impacts can be identified and appropriate mitigation measures can be implemented.

Revised fisheries management objectives have been developed (post-biological scooping meeting) and provided to DFO, NRSI, and OEL Hydrosys, for the proposed Four Slide Falls Hydro Facility. These objectives should be considered and utilized to determine appropriate construction, operation, and mitigation measures for this project. It is recommended that DFO be contacted to discuss habitat alteration disruption or destruction based on these objectives. MNR is still in discussions regarding the potential impacts to the naturally reproducing rainbow trout population within the Serpent River based on current operation plans to inundate approximately 6km of prime rainbow trout habitat. Further comments will be provided upon review of the Environmental Assessment for this project.

Finally, MNR's understanding of current walleye utilization within the Zone of Influences for Four Slide Falls and McCarthy Chutes, is that with the exception of the reach of river just below the first set of rapids adjacent to Pecors Lake, there were no walleye (or evidence of walleye spawning activity) observed within the Serpent River. Can this please be confirmed as soon as possible? MNR would also like to verify that brook trout spawning surveys and habitat characterization of tributaries to the Serpent River will be undertaken so that potential impacts to this species and their habitat can be assessed and appropriate mitigation measures can be applied.

As always, if you would like to discuss any of these concerns further, please do not hesitate to call or email me.

Regards,

Lisa Keable
Renewable Energy Biologist
Ministry of Natural Resources
Sault Ste. Marie District
Phone: (705) 941-5138

Xeneca
Power Development Inc.

5160 Yonge St., Suite 520, Toronto, ON M2N 6L9
tel 416-590-9362 fax 416-590-9955 www.xeneca.com

June 10, 2010

Ministry of the Environment
Sault Ste. Marie District
239 Bay Street, 3rd Floor
Sault Ste. Marie, ON P6A 1W7

To whom it may concern,

As you may be aware, Xeneca Power Development Inc. has been awarded 19 Feed in Tariff contracts by the Ontario Power Authority ("OPA") to purchase water generated renewable power. The following sites are believed to be within your jurisdiction:

Near North Boundary – MNR site #4LF09 on the Kapuskasing River
Middle Twp. Buchan – MNR site # 4LF05 on the Kapuskasing River
Lapinigam Rapids – MNR site #4LE03 on the Kapuskasing River
Outlet Kapuskasing Lake – MNR site #4LE01 on the Kapuskasing River
Four Slide Falls – MNR site # 2CD14 on the Serpent River
McCarthy Chute – MNR site # 2CD15 on the Serpent River

An attached map provided on CD will help to further identify the site locations for each of the projects. Additionally, included in this package is a draft of the Notice of Commencement under the Class EA for Waterpower Projects which will be issued shortly, as well as descriptions of the projects listed above.

This letter is intended to notify your agency of the pending projects and invite agency comment and/or participation where applicable.

Upon review, you may be aware the OPA schedule will prove challenging to both Xeneca and the affected government agencies, as we now have less than 60 months to bring these waterpower projects to commercial operation. This concurs with an analysis of the process by the Ontario Waterpower Association, industry experts and our consultants.

To move forward in a timely manner, we are requesting the following:

- Ministry of the Environment's ("MOE") acknowledgement of receipt of this notice.
- Indication if the MOE intends to comment on some, or all of the projects. If the MOE intends to participate, please indicate the appropriate agency personnel who will handle the Xeneca project files.

Xeneca
Power Development Inc.

- A MOE list of any known issues, concerns and/or comments with respect to the projects, as well as any known non-government stakeholders whom may have interest in these projects.

Please note Xeneca is prepared to meet with the MOE by teleconference to discuss any issues, and requests to be advised of any permits the MOE may require from Xeneca and/or its consultants in order to complete the MOE policy and procedures.

Please contact Xeneca Power Development Inc. with any questions or concerns.

Yours truly,

Patrick Gillette
President and COO
Xeneca Power Development LP

Muriel Kim

Subject: FW: Waterpower Projects on Serpent River: Four Slide Falls and McCarthy Chute

---

From: Patrick Gillette
Sent: Wednesday, September 01, 2010 11:32 AM
To: Hutchison, Carrie (ENE)
Cc: Vanesa Enskaitis; Samantha Leavitt; Mark Holmes; Ed Laratta
Subject: RE: Waterpower Projects on Serpent River: Four Slide Falls and McCarthy Chute

Hi Carrie:

I believe we have received all MOE responses and thank you for your kind consideration and helpful comments and observations.

As it pertains to Notice of Commencement ("NOC") we are carefully considering your letters; as will be outlined our primary focus of the NOC publications was engagement with First Nations and stakeholders given the desire for consultation on our projects that was generated by the Ontario Power Authority's ("OPA") public announcements and stakeholder sessions concerning FIT projects. Based on your insightful comments we are assessing the need to reissue the NOC and I hope your Ministry will understand our focus at the time was on engagement with First Nations and stakeholders and was based on the inquiries generated by the OPA process that were directed to our office.

Xeneca staff will follow-up as per your request; if you require confirmation of any correspondence please contact Vanesa Enskaitis.

Best regards,

Patrick

Patrick W. Gillette BA, MES, MPA
Preseident, COO, Director, Officer
Xeneca Power Development Inc./Xeneca LP
5160 Yonge Sttreet
Suite 520
North York, Ontario, Canada
M2N 6L9
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Cell: 416-697-4004.
Fax: 416-590-9955

From: Hutchison, Carrie (ENE) [mailto:carrie.hutchison@ontario.ca]
Sent: Wednesday, September 01, 2010 10:49 AM
To: Patrick Gillette
Cc: Vanesa Enskaitis; Samantha Leavitt
Subject: RE: Waterpower Projects on Serpent River: Four Slide Falls and McCarthy Chute

Hello Mr. Gilette,

I want to be certain that Xeneca received the response I sent with the e-mail below regarding the Four Slide Falls and McCarthy Chute Waterpower Projects on the Serpent River. Could you, or one of your staff, please confirm receipt of our response?

Many thanks in advance,

Sincerely,

Carrie

Carrie Hutchison

Environmental Planner/EA Coordinator
Ontario Ministry of the Environment
Phone (807) 475-1720
Facsimile (807) 475-1754

From: Hutchison, Carrie (ENE)
Sent: August 09, 2010 11:06 AM
To: 'PGillette@xeneca.com'
Cc: 'venskaitis@xeneca.com'; 'samantha@xeneca.com'; Morash, Patrick (ENE); Stewart, Rod (ENE); Nixon, Erin (MNR); Quirke, Christopher (MEI)
Subject: Waterpower Projects on Serpent River: Four Slide Falls and McCarthy Chute

Hello Mr. Gillette,

Please find attached the Ministry of the Environment's (MOE) response regarding the Four Slide Falls and McCarthy Chute portion of the proposed waterpower development site package sent to our Sault Ste Marie District Office, and dated June 10, 2010. Please in future be aware that I will be the primary contact for MOE during the class environmental assessment process for the Four Slide Falls and McCarthy Chute site. Please do not hesitate to contact me if you have any questions regarding the content of the attached correspondence, MOE's mandate, or regarding the environmental assessment process in general.

Sincerely,

Carrie Hutchison

Carrie Hutchison

Regional Planner/ EA Coordinator
Technical Support Section, Northern Region
Ontario Ministry of the Environment
Telephone: (807) 475-1720 Toll Free: 1(800) 875-7772
Facsimile: (807) 475-1754
E-mail: carrie.hutchison@ontario.ca

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Thunder Bay, ON P7E 6S7

Ontario

Fax: (807) 475-1754
Direct Line: (807) 475-1720

August 9, 2010

Mr. Patrick Gillette
President and COO
Xeneca Power Development Inc.
5160 Yonge St., Suite 520
Toronto, ON
M2N 6L0
E-mail: PGillette@xeneca.com

Dear Mr. Gillette:

Re: Xeneca Power Development Inc. Proposed Waterpower Projects on the Serpent River: Four Slide Falls – MNR Site # 2CD14 and McCarthy Chute – MNR Site #2CD15

Thank you for your letter of June 10, 2010, notifying the Ministry of the Environment's (MOE) Sault Ste. Marie District Office of Xeneca Power Development Inc.'s (Xeneca) intent to initiate a Class Environmental Assessment (EA) for the above-noted proposed waterpower project. You have indicated that the proposed facilities will have a combined generation capacity of less than 200 MW. Projects of this nature require approval under the Ontario *Environmental Assessment Act* (EAA). In order to obtain the authority for the project to proceed, Xeneca must plan for the project in accordance with the process outlined in the *Class Environmental Assessment for Waterpower Projects* (October 2008).

As the Regional Environmental Assessment Coordinator for the above mentioned project, I will serve as the primary MOE contact for the above noted project. My detailed contact information is at the conclusion of this letter. As stipulated in the Waterpower Class EA (page 33), I am a mandatory contact for all required notices which include the Notice of Commencement and Notice of Completion. For projects situated on unmanaged waterways, there is an additional mandatory notice, the Notice of Inspection (Section 4.4.2 Page 41 Waterpower Class EA). In addition, I request I be provided any other notices and relevant information (i.e. technical studies related to MOE's mandate, information updates) issued during the environmental assessment process for the proposed facilities, including a copy of the Statement of Completion upon completion of the Waterpower Class EA process. Correspondence provided to MOE's Sault Ste Marie District Office indicated that in addition to a cover letter, draft Notice of Commencement, and Project Overview, a CD was also provided. Please provide a copy of that CD directly to me so that its contents can be reviewed effectively by this office. Finally, as the MOE's primary contact for this project, I have reviewed the information provided with your letter of June 10,

2010, and offer the following guidance regarding the requirements of the Class Environmental Assessment for Waterpower Projects.

Mandatory Notification of MOE Regional Coordinator
It is unclear to MOE at this time if the Notice of Commencement for this project has been issued and published in local newspapers. A Notice of Commencement for this project is posted at http://owa.ca/assets/files/classea/Notice-of-Commencement-Serpent-River.pdf. To date, however, I have not received a final version the Notice of Commencement. I must be contacted in addition to the MOE Sault Ste. Marie District Office, and any additional MOE contacts Xeneca chooses to notify directly. When you supply the final Notice of Commencement to me, please advise me if and when the final Notice of Commencement has been (or will be) published in local newspapers, and specifically in which papers it was (or will be) published.

Status of Waterway (managed/unmanaged)
Xeneca has indicated that the proposed project will be situated on a managed waterway. At this time MOE recommends that this classification be discussed with the Ministry of Natural Resources (MNR), and MOE. If any portion of the anticipated influence area of the proposed project is situated on an unmanaged waterway (*which would include sections of a waterway without an established human-made water management regime regardless of the presence of human-made structures*) then Xeneca should proceed with this project as directed in the Waterpower Class EA for a new project on an unmanaged waterway. If this is the case then a new Notice of Commencement clarifying the classification for this project will need to be issued.

Draft Notice of Commencement Review
Review of the Draft Notice of Commencement supplied to MOE reveals two additional concerns that will require reposting of the Notice of Commencement if it has been published in the same form as in the Draft Notice.

- The supplied map is required to provide the anticipated zone of influence for your project (see page 33 of the Waterpower Class EA). This has not been done and as such, this notice does not meet the information requirements for the Notice of Commencement. One objective of the Notice of Commencement is to aid parties in determining if they have an interest in the project and the absence of an anticipated zone of influenced greatly reduces the value of this notice in meeting that objective. Suggested further improvements to the supplied map include provision of a scale and north arrow in order to increase clarity.
- A tentative schedule is required content in the Notice of Commencement (again see page 33 of the Waterpower Class EA). The tentative schedule should provide readers with some understanding of the speed with which the EA process is expected to move forward to completion. Other waterpower proponents have chosen to also include information such as anticipated construction periods, and the anticipated date of commissioning.

It is also noted that Xeneca has excluded the last paragraph included in the Notification Template for the Notice of Commencement in Appendix D of the Waterpower Class EA. Xeneca may wish to include this paragraph in any re-issued Notice of Commencement for this project. Finally, clarity would be further improved if the re-issued Notice of Commencement spelled out Transformer Station (instead of using TS) when referring to the Elliot Lake Station; included the voltage and general route of the proposed transmission line if that route is available; and stipulated the expected generation capacity of the McCarthy Chute and Four Slide Falls sites separately.

In addition to the above, Xeneca should be made aware that in order for the Notice of Commencement to meet the notification requirements of specific statutes, the Notice must specifically identify those statutes and must also meet all their information requirements. As such the supplied Draft Notice of Commencement would only address provincial Environmental Assessment Act (EAA), and Canadian Environmental Assessment Act (CEAA) requirements if all information requirements were met (*as indicated above it does not meet provincial requirements*). Xeneca may want to include specific listings of statutes and environmental assessment process (if others are triggered) and further information in order to address additional notification requirements upon the re-issuing of the Notice of Commencement for this project.

Applicant of Record Status and Environmental Assessment Information Requirements
It is noted that at this time, Xeneca does not hold Applicant of Record Status from the MNR for these sites. It is outlined in the Waterpower Class EA that prior to commencing the Class EA process, projects on provincial Crown land are expected to have satisfied appropriate requirements for the MNR's Waterpower Site Release and Development Review process. Applicant of Record Status is provided at the conclusion of that process. Part of the intent of this as a first step is to help inform the Class EA process and ensure proponents are able to make a fully informed decision on whether they wish to proceed with the Class EA and seek other necessary approvals. By proceeding with the Waterpower Class EA for this project before completing MNR's site release process, Xeneca takes on the added risks associated with not having the same information as would be available if Applicant of Record status had been obtained initially. The information and consultation expectations of the Waterpower Class EA process remain the same regardless of whether or not the Applicant of Record status is obtain before initiation of the environmental assessment.

Coordination Meeting with Agencies
MOE strongly recommends Xeneca initiate a coordination meeting, as described on page 32 of the Waterpower Class EA. This meeting should occur before a Notice of Commencement for a project is released and is an important step that can assist agencies in understanding your project. Relevant provincial and federal agencies should be participants in the coordination meeting. In advance of this meeting, more detailed information such as that outlined in the project description and environmental context section of the Waterpower Class EA (see page 31) should be provided to relevant agencies. It is anticipated that affected agencies, including the MOE, would be better able to assist in the identification of potential issues following the receipt, and their subsequent evaluation of this more detailed information.

Environmental Report
In accordance with the Waterpower Class EA, an Environmental Report must be prepared for proposed projects. In addition, for projects on unmanaged waterways, provision of a draft Environmental Report for review at the time of the Notice of Inspection is required. The Environmental Report must be reflective of the relative complexity of the project, as informed through the evaluation and consultation processes. Section 4.0 (pages 29-43) of the Waterpower Class EA describes the environmental assessment planning process. Also, the Environmental Report must contain the information as outlined in Section 4.4 (pages 40-41), including the assessment of significance of effects as outlined in Section 4.3.1. Sections 6.0 and 7.0 (pages 61-69), and discuss public, agency, and Aboriginal Community consultation considerations.

Aboriginal Engagement/Involvement

At Applicant of Record stage, the MNR currently provides proponents who hold a Feed-In-Tariff (FIT) contract with a list of Aboriginal Communities that should be consulted regarding proposed projects. That list of Aboriginal Communities is developed in consultation with MOE and should be utilised during consultation efforts to satisfy the requirements of the Waterpower Class EA process. Also, the Waterpower Class EA document provides information that may be of assistance in developing an engagement approach specific to Aboriginal Communities. If for some reason you do not have a list of Aboriginal Communities provided through the Applicant of Record process, then MOE recommends that you refer to our Aboriginal Information Resources website (http://www.ene.gov.on.ca/en/eaab/aboriginal-resources.php). In this situation, agencies listed on the website should be contacted to assist you in determining which Aboriginal Communities may be affected by, or have an interest in, your project. MOE recommends that you provide notification directly to the Aboriginal Communities who may be affected by, or have an interest in, your project and provide them with an opportunity to participate as early as possible in the environmental assessment process.

Draft Environmental Report and Notice of Completion

Once the final Environmental Report is complete, a Notice of Completion must be must be issued to all who have expressed an interest in the project, as well as to those on the distribution list for the Notice of Commencement (including newspapers or other publications). Although not a requirement of the process, MOE encourages that a draft of the Environmental Report be supplied to relevant agencies and interested parties for comment before issuance of the Notice of Completion because addressing outstanding concerns prior to the mandatory 30 day comment period can reduce the risk of receiving Part II Order requests. The final Environmental Report must be made available for public and agency review for a period of at least 30 calendar days, during which documentation, including technical reports and other supporting information, may be reviewed and comments may be submitted to Xeneca.

Consultation/ Issue Resolution

Xeneca is reminded that when concerns are raised during the public/agency comment period, the concerned party should be consulted in an attempt to resolve the concerns. Discussions to this end should proceed for an appropriate period of time, even if this means the 30-day review period is exceeded. The Director of Environmental Assessment and Approvals Branch should be notified of any extensions to the consultation period. Xeneca must also advise the concerned party that if such discussions are unsuccessful at resolving the concerns, they can submit an elevation request, if they have not already done so, to the Director of the Environmental Assessment and Approvals Branch, Ministry of the Environment, within a further seven calendar days following the end of discussions (see page 74 of the Waterpower Class EA for further details).

Other Required Permits and Approvals

Completion of the Waterpower Class EA under the EAA does not relieve proponents from the responsibility to obtain any necessary approvals or permits required under other legislation for the project. Xeneca is reminded that the project may not receive approvals under other provincial legislation or commence construction until it has successfully satisfied its obligations under the EAA.

Agency Consultation and Federal Triggers for Waterpower Projects
At this time, Xeneca is directed to Section 4.1.2 and Appendix E of the Waterpower Class EA for information on provincial and federal agencies that should be contacted, and for triggers of the CEAA. If the federal environmental assessment process is triggered, there is an opportunity to coordinate the federal and provincial environmental assessment processes as discussed in Section 5.2 of the Waterpower Class EA. MOE also recommends that Xeneca contact the Canadian Environmental Assessment Agency as soon as possible for assistance in evaluation of the application of the CEAA to the proposed undertaking, and to determine the scope of any assessment that may be required for the Federal EA process. The Canadian Environmental Assessment Agency may be contacted at (416) 952-1576.

Xeneca is remained that the MNR is a mandatory contact for hydroelectric projects. The Waterpower Class EA process should be coordinated with MNR's *Lakes and Rivers Improvement Act* provisions. Please refer to Section 5.3.1 of the Waterpower Class EA for guidance on coordinating these processes.

I trust that the above information will be of some assistance as you proceed with the Class EA process. Please feel free to contact me at any time if you have any questions regarding the MOE's mandate, or the environmental assessment process under Class Environmental Assessment for Waterpower Projects. I look forward to further discussing this project with you at the anticipated project coordination meeting for this proposal.

Sincerely,

Carrie Hutchison

Carrie Hutchison
Regional Planner/ EA Coordinator
Technical Support Section, Northern Region
Ontario Ministry of the Environment
Ste. 331, 435 James Street South,
Thunder Bay, Ontario, P7E 6S7
Telephone: (807) 475-1720 Toll Free: 1(800) 875-7772
Facsimile: (807) 475-1754
E-mail: carrie.hutchison@ontario.ca

C Vanesa Enskaitis, Xeneca
Samantha Leavitt, Xeneca
Patrick Morash, MOE
Rod Stewart, MOE
Erin Nixon, MNR
Christopher Quirke, MEI
Regional File: EA 02 11 Four Slide Falls & McCarthy Chute

Xeneca
Power Development Inc.

5160 Yonge St., Suite 520, Toronto, ON M2N 6L9
tel 416-590-9362 fax 416-590-9955 www.xeneca.com

September 27, 2010

Carrie Hutchison
Regional Planner/ EA Coordinator
Technical Support Section, Northern Region
Ontario Ministry of the Environment
Ste. 331, 435 James Street South,
Thunder Bay, ON P7E 6S7

Dear Ms Hutchinson:

Re: Xeneca Limited Partnership Proposed Waterpower Projects on the Serpent River:

- **Four Slide Falls – MNR Site # 2CD14**
- **McCarthy Chute – MNR Site #2CD15**

Thank you for your letter of August 9, 2010 responding to our June 10, 2010 correspondence regarding Xeneca Limited Partnership's ("Xeneca") intent to initiate a Class Environmental Assessment for Waterpower Projects ("EA") for the proposed waterpower projects noted above.

Xeneca is committed to adhering to the principals of open public consultation and engagement throughout the development of the proposed projects. Xeneca has competent staff with experience in the permitting and construction of waterpower plants in Ontario and that staff have engaged proficient consultants to complete the necessary tasks in a professional manner. We intend to work closely with your Ministry and others during this challenging period of FIT project development.

We appreciate your input and advice regarding our proposed projects and look forward to working with you as we precede through the EA process and post-EA approvals.

Response to your comments:

1. You have indicated that, as the Regional Environmental Assessment Coordinator for the above projects, you will serve as the primary MOE contact for the above projects.

   Your contact information has been duly noted, as has your designation as mandatory contact for all required Notices in the EA process. In addition, we will also provide you any other notices and relevant information (i.e. technical studies related to MOE's mandate, information updates) issued during the EA preparation and review process for the proposed facilities.

2. As per your request, a copy of the CD and information package provided to Mr. John Taylor, MOE Northern Region Director, and to MOE's Sault Ste Marie District Office will be sent to your attention. Please accept our apology for this oversight.

   The correspondence issued to your MOE Region over the past few months has been addressed to your Director, Mr. John Taylor, and he had advised us to deal directly with Paula Allen, as the Regional Planner and EA-Coordinator. We have since clarified your role, Ms. Allen's role, Ms. Cramm's role and Ms. Mitchell's role and will address future correspondence accordingly. A copy of our letter and Mr. Taylor's response is attached.

3. Please note that a Notice of Commencement (NoC) for each of these projects was published in both English and French in the local newspapers in July and August 2010.

   Electronic copies of these Notices will be sent to you for all our FIT sites. A copy of these was provided to your Director electronically and by regular mail on June 25, 2010. We would have been very happy to incorporate your comments had they been received prior to publishing.

4. *Updated Notice of Commencement*
   I would like to address directly your comment that:
   "In addition to the above, Xeneca should be made aware that in order for the Notice of Commencement to meet the notification requirements of specific statutes, the Notice must specifically identify those statutes and must also meet all their information requirements. As such the supplied Draft Notice of Commencement would only address provincial Environmental Assessment Act (EAA), and Canadian Environmental Assessment Act (CEAA) requirements."

   The Notice of Commencement is intended to fulfill Xeneca's obligations and notification requirements under the EAA and the CEAA and one of its primary functions is to engage stakeholders by making the public aware of the proposed projects and how to get more information. Our PICs and EA documents would provide a preliminary list of post-EA approvals that may be required for the project. The full and final list may not be developed until a final design is available at the end of the EA process.

   We appreciate you bringing to our attention that some post-EA approvals processes also require notifications and that these could be addressed most efficiently in the Notice of Commencement publication. We respect your role in the Class EA process and your indication that our Notices were inadequate. We will re-draft the Serpent River Notice of Commencement and provide you a copy for comment. We will again have the final version printed in the Elliot Lake Standard. This reissue will also need to incorporate advertising of our PIC due to time limitations. Our PICs is planned for the month of November, 2010.

Please understand that given the level of public interest in our projects after FIT announcements, we felt it was crucial to reach out early to the wide range of groups and individuals who wanted to engage but for various reasons might not or could not contact us directly. The only process available to the waterpower developer to make this outreach is through the EA and the issuance of the Notice of Commencement. We felt it important to provide a means for stakeholders to engage as soon as possible. The processes under the Class EA and GEA are not well established or understood in the province so we strove to give stakeholders as long as we possibly could to consult with us. Indeed, since our Notices of Commencement were issued we have been delighted with the level of public input that we were able to address quickly.

5. *Status of Waterway (managed/unmanaged)*
   We recently received an email from MNR Sault Ste. Marie district with this same question.

   To the best of our understanding, the Serpent River is a managed waterways as there is in place a Water Management Plan approved by MNR titled the **"Serpent River Generating Station Streamlined Water Management Plan"**. Apparently, MNR does not agree and we are puzzled by their position which, to the best of my knowledge, has not been taken on any other project in the province. Xeneca needs clarification on this and have asked our attorney to study this issue with you.

6. *Map used in the Notice of Commencement*
   Our projects and the zones of influence are all on Crown Land. The maps used in our Notices show the project areas and they reach out to stakeholders in the wider community surrounding our projects. The Notices give very clear indication of the project location relative to local reference points. There are rarely any inhabitants in the immediate area of the projects and zones of influence. We have not seen any Notice of Commencement issued by any proponent which only shows a limited area of a few hundred meters around a waterpower project.

   We should have added a North Arrow and will include this in our updated Notices.

7. *Project Schedule*
   The project schedule will be included in our updated Notice of Commencement.

8. *Confidential Input by Stakeholders*
   We intend to follow the OWA format regarding confidentiality in the updated Notices of Commencement.

9. *Applicant of Record*
   Xeneca applied for Applicant of Record for these sites in June 2008 but we have yet to receive any indication from MNR as to why this status has been delayed. We have met and written to MNR on several occasions since June 2008 and, in the meantime, we continue to meet with FN representatives for these sites.

   The FIT contract from OPA has a limited time frame of 60 months. Although, we continue to engage with MNR and hope to get Applicant of Record, it would be inappropriate and contrary to FIT requirements for us to delay even further action toward moving our projects forward. While 60 months may seem like a long time to establish commercial operation, recent history with waterpower development has shown it can take much longer to work through the process. The EA may take up to 24 months (assuming no requests to the Minister for a Part II Order),

approval, permitting and tenure can take a further 12 months or more to issue and construction will probably require up to 24 months. Given the time period of the FIT Contracts and the obligation to make best efforts to meet regulated timelines, Xeneca must move forward with the EA process.

Again, as a result of the public announcements by OPA and subsequent stakeholder sessions with Aboriginal Communities and other stakeholders on the project, and the subsequent requests for information from these stakeholders, Xeneca was concerned that failure to initiate the process would be contrary to the participatory approach envisioned by the Ministry of Energy, OPA, and MOE under the FIT process.

10. *Coordination Meetings*
We are in the process of preparation for coordination meetings. Our Project Descriptions are in preparation and will be issued shortly. The meetings will likely happen in the October and November timeframe at various venues to be determined. We will contact you to set a suitable date.

11. *Environmental Report*
Your comments are noted and appreciated. Public and agency input throughout the EA process and review of our draft Class EA reports is important to us.

12. *Aboriginal Engagement*
We have been in contact with Aboriginal Communities and Groups since 2007. We have discussed our projects, environmental issues, participation agreements and our archeological programs. These discussions are extensive and ongoing.

13. *Draft Environmental Report and Notice of Completion*
Thank you for your comments. We fully intend to provide draft reports and documents to agencies and address their input. We value this input and it is essential to address this input in designing a better project.

14. *Consultation/Issue Resolution*
We are now preparing a Consultation Plan and we will work tirelessly with stakeholders to identify and address issues, as best we can. We strive to develop mitigation plans and methods to minimize the potential effects of our projects while maintaining the spirit of proceeding with our projects on multi-use rives where power generation is now an identified use by government.

15. *Other Required Permits and Approvals*
We have a draft permit plan in the making and will present this at our PIC and in our PDs. Your input will be sought as we proceed through the EA and into the post-EA process. Xeneca wants to prepare most permit applications in Q1 and Q2 of 2011 and will seek your input to ensure these are complete and can then be submitted as soon as possible after EA approval.

16. *Agency Consultation and Federal Triggers*
We trust that this information will evolve through the upcoming coordination meetings and subsequent discussions.

If you wish, I would be pleased to send you a copy of Xeneca's Aboriginal Engagement Policy.

Xeneca is working to ensure that the goals of (i) the government's renewable energy policy; (ii) the environmental assessment process, (iii) the MNR's site release policy, and (iv) post-EA approvals requirements are met in connection to our FIT contract obligations.

I look forward to your input on our updated Notices of Commencement with announcement of Public Information Centers, which will be provided to you shortly. Furthermore, we are pleased to continue to work with you during the remainder of the EA and effects mitigation process.

I also want to thank you again for your letter and your attention to our projects.

Yours truly,

Edmond Laratta
Xeneca Power Development Inc.
Manager, Environmental Services and Approvals
5160 Yonge Street, Suite 520
North York, ON M2N 6L9

Cc. Tami Sugarman, WESA Inc.
Philippa McPhee, WESA Inc.
Patrick Morash, MOE
Rod Stewart, MOE
Kim Mihell, MNR
Christopher Quirke, MEI
Regional File: EA 02 11 Four Slide Falls and McCarthy Chute

Muriel Kim

From: Hutchison, Carrie (ENE) [carrie.hutchison@ontario.ca]
Sent: October 14, 2010 1:52 PM
To: Vanesa Enskaitis
Cc: Allen, Paula (ENE); Tami Sugarman; Philippa McPhee; Ed Laratta; Scott Stoll; Sugar, Alissa(ENE); Cramm, Ellen (ENE); Amodeo, Piero (ENE); Mitchell, Vicki (ENE)
Subject: RE: Revised Notice of Commencement and PIC Announcement

Hello Vanesa,

I understand from your telephone conversation with me previously that Xeneca would like to post the revised Notice of Commencement for the McCarthy Chutes and Four Slide Falls Project on October 20, 2010. It is not anticipated that MOE will be in a position to respond in detail to your proposed revised Notice of Commencement by that date, however we may well have concerns regarding statements provided therein. MOE will respond to your correspondence in a timely manner.

Sincerely,

Carrie Hutchison

Carrie Hutchison
Environmental Planner/EA Coordinator
Ontario Ministry of the Environment
Phone (807) 475-1720
Facsimile (807) 475-1754

From: Vanesa Enskaitis [mailto:VEnskaitis@xeneca.com]
Sent: October 01, 2010 11:52 AM
To: Hutchison, Carrie (ENE)
Cc: Allen, Paula (ENE); Tami Sugarman; Philippa McPhee; Ed Laratta; Scott Stoll
Subject: RE: Revised Notice of Commencement and PIC Announcement

Carrie,

Thank you for your speedy response and we look forward to your additional comments.
I have attached a revised map for the Revised NoC/PIC announcement sent to you yesterday. It addresses some of your original comments.
Please consider this version the most up-to-date.

Kind regards,

Vanesa

From: Hutchison, Carrie (ENE) [mailto:carrie.hutchison@ontario.ca]
Sent: Thursday, September 30, 2010 12:49 PM
To: Vanesa Enskaitis
Cc: Allen, Paula (ENE)
Subject: RE: Revised Notice of Commencement and PIC Announcement

Hello Vanesa,

Thank you for providing your Revised Notice of Commencement and PIC Announcement for review by MOE. I have quickly looked at the provided Notice and concluded that it does not meet the notification requirements as stipulated on

page 33 of the Class Environmental Assessment for Waterpower Projects (October 2008) for the Notice of Commencement.

I will provide a more detailed response to your supplied Revised Notice of Commencement in future.

Also, holding a public information center before conducting the recommended meeting with relevant agencies (see page 32 of the Class Environmental Assessment for Waterpower Projects) is not recommended as discussion of the approach to public consultation is one of the subjects that are expected to be addressed at the meeting with relevant agencies.

Currently, I am not certain who will be attending the PIC for the Four Slide Falls and McCarthy Chutes project. To assist MOE with this decision will Xeneca please advise if you will be holding a meeting with relevant agencies regarding this project?

Sincerely,

Carrie

Carrie Hutchison

Environmental Planner/EA Coordinator
Ontario Ministry of the Environment
Phone (807) 475-1720
Facsimile (807) 475-1754

From: Vanesa Enskaitis [mailto:VEnskaitis@xeneca.com]
Sent: September 30, 2010 11:18 AM
To: Hutchison, Carrie (ENE)
Cc: Tami Sugarman; Philippa McPhee
Subject: Revised Notice of Commencement and PIC Announcement

September 30, 2010

Dear Ms. Hutchison,

Thank you for your initial comments regarding Notice of Commencement filed for Xeneca Power Development Projects within the jurisdiction of your office.

We appreciate your input and direction and have incorporated it into the revised Notice of Commencement which are attached for your review and comment. Also note that the revised Notice of Commencement will also include and Notice of Public Information Centres (attached). We believe the notices fulfill requirements outlined in the Ontario Waterpower Association Class Environmental Assessment for Waterpower.

It is intended that the attached will be published in local media within the next 20 days. Any additional comments you may have regarding these attached notices should be provided back to Xeneca prior to October 20, 2010.

Further, we will shortly be issuing invitations to affected government agencies to attend the Public Information Centres. Kindly advise if you will not be attending and who from your office will be attending in order that we may communicate the invitation to them directly.

If you have any questions, please do not hesitate to contact me. We look forward to working with you along the EA process and beyond.

Vanesa Enskaitis

Public Affairs Liaison
Xeneca Power Development Inc.
5160 Yonge Street, Suite 520
Toronto, ON M2N 6L9
T: 416-590-9362 X 104

Muriel Kim

From: Hutchison, Carrie (ENE) [carrie.hutchison@ontario.ca]
Sent: December 20, 2010 11:08 AM
To: Tami Sugarman
Subject: FW: Xeneca Serpent River PIC Panels
Attachments: Serpent River PIC Ad for Dec 1 - nov 29.pdf; Xeneca Generic PIC Panels - dec 9.pdf; Serpent River PIC Panel - Dec 6.pdf

Hello Tami,

Thank you for your voice mail today. I guess MOE's e-mail filter is getting very particular. I know will have to check J-mail routinely for messages that should not be there.

I did receive the attached information regarding the PIC for the McCarthy Chute and Four Slide Falls projects. Also, I will get back to you regarding MOE's preferred dates for the Project Coordination meeting once I obtain responses from the appropriate staff.

Sincerely,

Carrie

Carrie Hutchison
Environmental Planner/EA Coordinator
Ontario Ministry of the Environment
Phone (807) 475-1720
Facsimile (807) 475-1754

From: Vanesa Enskaitis [mailto:VEnskaitis@xeneca.com]
Sent: December 09, 2010 2:46 PM
To: Hutchison, Carrie (ENE)
Cc: Tami Sugarman; Philippa McPhee; Ed Laratta; Mark Holmes
Subject: Xeneca Serpent River PIC Panels

December 9, 2010

Hi Carrie,

Was sorry to hear that you could not make out to Elliot Lake for our Serpent River Public Information Centre. We had a great showing and a good cross-section of community members.
Attached you will find that I have put together a PDF of the two sets of panels that were set up for viewing on December 1, 2010, as well as the original PIC Ad that appeared in the Elliot Lake Standard on November 19 & 24th.

Please let me know if you need anything else.

Best regards,
v.

Vanesa Enskaitis

Public Affairs Liaison
Xeneca Power Development Inc.
5160 Yonge Street, Suite 520
Toronto, ON M2N 6L9
T: 416-590-9362 X 104
F: 416-590-9955
E: venskaitis@xeneca.com

Muriel Kim

From: Karen Fortin
Sent: February 1, 2011 11:41 AM
To: Mark Holmes; ed laratta; Mike Vance
Cc: Pilar DePedro; Hall, Phil (MNR)
Subject: FW: McCarthy Chute and Four Slide Falls - MOE requesting documentaiton

Importance: High

MOE request for available documentation from Xeneca subsequent to EA Coordination meeting.
Since I was not at the meeting, and Tami is away this week, perhaps someone from Xeneca can respond to what is/is not available for MOE review.

Karen

Karen Fortin - OEL-HydroSys Carp - (613) 839-1453 ext. 261

From: Hutchison, Carrie (ENE) [mailto:carrie.hutchison@ontario.ca]
Sent: Tuesday, February 01, 2011 11:34 AM
To: Bill Touzel; Karen Fortin; Kearon Bennett
Cc: Tami Sugarman
Subject: FW: McCarthy Chute and Four Slide Falls

Hello there,

I am not certain who best to direct this message to, however, I would like to make certain that your firm receives the message below as early as possible so the related documents can be supplied to MOE for review. Please advise if this should or must wait for Tami's return.

Sincerely,

Carrie

Carrie Hutchison
Environmental Planner/EA Coordinator
Ontario Ministry of the Environment
Phone (807) 475-1720
Facsimile (807) 475-1754

From: Hutchison, Carrie (ENE)
Sent: February 01, 2011 11:29 AM
To: 'Tami Sugarman'
Cc: Dorscht, Ron (ENE)
Subject: McCarthy Chute and Four Slide Falls

Hello Tami,

From my notes associated with the Project Coordination Meeting for the McCarthy Chute and Four Slide Falls projects, I understand that there are 5 reports for each site at this point. I believe I asked for an outline of what was in each report

so MOE could determine who we need to distribute them to for internal review. Regardless, my understanding is that the five reports listed below are available at this time:

1. Archaeological Report
2. Surface Water Quality
3. Baseline Natural Heritage Study
4. Nibblet Report on Spawning
5. Modelling and Operations Stage proposal.

Not having the topics covered in the reports makes it difficult to determine specifically which ones address MOE's mandate of land, air, and water protection for technical review. I suspect we should see only the last four reports listed above as most often the Archaeological Report is not reviewed by MOE. As such, could you start by providing 2 hard copy and 2 electronic copy of each of the last four documents to MOE. We will advise if further hard copies are required.

Sincerely,

Carrie

Carrie Hutchison
Environmental Planner/EA Coordinator
Ontario Ministry of the Environment
Phone (807) 475-1720
Facsimile (807) 475-1754

Ministry of Transportation

Engineering Office
Planning and Design Section
Northeastern Region
301-447 McKeown Avenue
North Bay, ON P1B 9S9
Tel.: 705-497-5456
Fax.: 705-497-5499

Ministère des Transports

Bureau du genie
Section de planification et de conception
Region du Nord-Est
301-447, avenue McKeown
North Bay, ON P1B 9S9
Tél.: 705-497-5456
Téléc.: 705-497-5499

Ontario

February 18, 2011

OEL-HydroSys Inc.
3108 Carp Rd.
P.O. Box 430
Carp, ON K0A 1L0

Attention: Tami Sugarman

Dear Ms. Sugarman:

RE: Xeneca Power Development Inc.
Larder and Raven GS – MTO New Liskeard Area (Hwy 624)
Ivanhoe the Chute GS – MTO Cochrane Area (Hwy 101)
Serpent Four Slide Falls GS – MTO Sudbury Area (Hwy 108)
Serpent McCarthy Chute GS – MTO Sudbury Area (Hwy 17)
Vermilion River Wabashik GS – MTO Sudbury Area (Hwy 17 or 6)
Wahnapitei River Allen and Struthers GS - MTO Sudbury Area (Hwy 637)

This is in reply to your earlier circulations concerning the above noted proposed power development projects.

I'm pleased to advise that in general, the Ministry of Transportation of Ontario (MTO) has no objections.

According to the information you provided, all sites are to be accessed via existing and proposed new roads that will eventually connect to Provincial Highways using existing entrances. As per the *Public Transportation and Highway Improvement Act*, MTO Entrance permits will be required if any modifications are required at highway entrances. Prior to making permits available, the MTO must inspect the entrance locations to ensure that our safety and operational requirements are met. Depending on the posted speed of the highway, the following minimum visibility requirements are required:

80 km/h posted = 230 metres of visibility in each direction
90 km/h posted = 250 metres of visibility in each direction

(over)

Concerning the proposed power lines, these lines must be placed outside our right-of-ways (ROW). MTO Encroachment and/or Building/Land Use permits will be required for any proposed crossing of our ROW or for lines located within 45 metres from the limits of our ROW. Vertical clearance of highway crossings must meet the requirements of MTOD – 2245.020 (copy attached).

Concerning the Allen and Struthers location, the proposed power line will cross Highway 69 near it's junction with Highway 64 west of Alban. In the near future, the Ministry will be four laning this section of Highway 69 and an interchange is planned at this junction. The power line alignment must not interfere with our proposed interchange location. Detailed information concerning our alignment may be found at www.highway69.ca .

You may obtain further information concerning our permit and setback requirements by contacting the following Corridor Management Officers:

New Liskeard – Ms. Natalie Dugas, e-mail: natalie.dugas@ontario.ca
Cochrane – Ms. Sandy Knight, e-mail: sandy.knight@ontario.ca
Sudbury – (Vermillion & Serpent River Sites) – Ms. Lise Taylor, e-mail: lise.taylor@ontario.ca
Sudbury – (Wahnapitae River site) - Ms. Anne Poliquin-Chaput: e-mail: anne.poliquin-chaput@ontario.ca

I trust the above is of assistance. Should you wish to discuss the contents of this letter, please call.

Sincerely,

Paul F. Marleau
Corridor Management Planner

cc. Natalie Dugas, MTO New Liskeard
Sandy Knight, MTO Cochrane
Lise Taylor, MTO Sudbury
Poliquin-Chaput, MTO, Sudbury

MINIMUM VERTICAL CLEARANCES

	LOCATION OF WIRES OR CABLES	MINIMUM VERTICAL CLEARANCES ABOVE FINISHED GRADE									
		COMMUNICATIONS CABLE AND SPAN WIRE	LOW VOLTAGE CABLE 0–750V	HIGH VOLTAGE CABLE							
				>750V ≤22kV	>22kV ≤50kV	>50kV ≤90kV	>90kV ≤120kV	>120kV ≤150kV	>150kV ≤200kV	220kV (360kV)	318kV (500kV)	442kV (735kV)
1	OVER FREEWAYS, EXPRESSWAYS, AND RAMPS	6.0	6.0	6.0	6.0	6.0	6.1	6.4	6.9	10.5	15.7	20.7
2	OVER KING'S HIGHWAYS AND OTHER ROADWAYS	4.7	4.7	5.1	5.5	5.8	6.1	6.4	6.9	10.5	15.7	20.7
3	OVER AREAS LIKELY TO BE TRAVELLED BY VEHICLES (OTHER THAN RESIDENTIAL DRIVEWAYS)	4.7	4.7	5.1	5.5	5.8	6.1	6.4	6.9	10.5	15.7	20.7
4	ALONGSIDE ROADS IN DENSELY POPULATED AREAS	4.7	4.7	5.1	5.5	5.8	6.1	6.4	6.9	10.5	15.7	20.7
5	ALONGSIDE ROADS OR OVER AREAS UNLIKELY TO BE TRAVELLED BY VEHICLES	3.3	3.7	4.5	4.9	5.2	5.5	5.8	6.3	6.5	7.5	8.7
6	OVER RESIDENTIAL DRIVEWAYS	4.0	4.0	5.1	5.5	5.8	6.1	6.4	6.9	10.5	15.7	20.7
7	OVER AREAS ACCESSIBLE TO PEDESTRIANS ONLY	2.8	3.4	3.7	4.0	4.3	4.6	4.9	5.4	5.6	6.6	7.8
8	ABOVE TOP OF RAIL AT RAILWAY CROSSINGS	7.6	7.6	7.9	8.4	8.7	9.0	9.3	9.8	10.0	11.0	12.2

NOTES:

A Clearances shown are under maximum sag conditions as defined in CSA C22.3, No.1–06.
B Voltages are rms line to ground. Voltages in brackets are phase to phase.
C This MTOD is the same as OPSD–217.030.
D All dimensions are in metres unless otherwise shown.

MINISTRY OF TRANSPORTATION ONTARIO DRAWING	November 2007	Rev	0
MINIMUM VERTICAL CLEARANCES FOR AERIAL CABLE SYSTEMS	----------		
	MTOD–2245.020		

Muriel Kim

From: White, Charlsey (MAH) [Charlsey.White@ontario.ca]
Sent: November 19, 2010 3:49 PM
To: Tami Sugarman
Cc: Tovey, Dan (MAH)
Subject: RE: Xeneca Power Development Inc. proposed projects on the Serpent River - Project Description Documents Notice

Good Afternoon again;

Both locations, McCarthy and Four Slides, are located entirely within the Municipality of Elliot Lake. It appears that the lands are crown lands, however the exact location should be verified with the Ministry of Natural Resources. In the case that the lands are not crown lands, the City of Elliot Lake is the delegated approval authority for planning approvals, should planning approval be required.

It is noted that the McCarthy Lake site is located in close proximity to existing rural shoreline residential uses. This may cause a conflict and should be reviewed with the City of Elliot Lake.

It is noted that the Four Slides Falls project is located on a recreational canoe route through the City of Elliot Lake. This development may conflict with the recreation use and should be reviewed with the City of Elliot Lake.

Both locations are located within traditional aboriginal hunting and fishing areas. We recommend that you contact the local First Nation and Métis communities in this regard.

Thank you for providing us with the opportunity to comment on this proposal. Please keep our office in your distribution list for upcoming notices.

Have a great afternoon.

Charlsey White, M.C.I.P., R.P.P.
Planner - Algoma District
Northeastern Municipal Services Office
Ministry of Municipal Affairs and Housing
Suite 401, 159 Cedar Street
Sudbury ON P3E 6A5
Tel:(705) 564-6855; Fax:(705) 564-6863
e-mail: charlsey.white@ontario.ca

From: Kai Markvorsen [mailto:kmarkvorsen@oel-hydrosys.ca]
Sent: November 19, 2010 3:16 PM
To: White, Charlsey (MAH)
Cc: Tami Sugarman
Subject: RE: Xeneca Power Development Inc. proposed projects on the Serpent River - Project Description Documents Notice

Hello Ms. White,

As requested, please find attached a copy of the site location map included in the McCarthy Chute and Four Slide Falls Project Description documents. Please let us know if there is any other information you require.

Best regards,

Kai

Kai Markvorsen, B. Sc. – Environmental Consultant
OEL-HydroSys Inc. – 3108 Carp Rd. - P.O. Box 430, Carp Ontario K0A 1L0
(T) (613) 839-1453 x 248 (C) (613) 277-1164 (F) (613) 839-5376
kmarkvorsen@oel-hydrosys.ca – www.oel-hydrosys.ca

OEL-HydroSys, WESA Envir-Eau, WESA, WESA Technologies, members of WESA Group Inc.

From: Tami Sugarman
Sent: November 19, 2010 2:58 PM
To: Kai Markvorsen
Subject: FW: Xeneca Power Development Inc. proposed projects on the Serpent River - Project Description Documents Notice
Importance: High

Kai
Can you assist Ms. White and send her a location map please.
Thanks
Tami

Tami Sugarman - OEL-HydroSys Carp - (613) 839-1453 x229

From: White, Charlsey (MAH) [mailto:Charlsey.White@ontario.ca]
Sent: November 19, 2010 2:51 PM
To: Tami Sugarman
Subject: FW: Xeneca Power Development Inc. proposed projects on the Serpent River - Project Description Documents Notice
Importance: High

Good Afternoon;

I have tried to use the link and passwords below however the site will not open for me. All I am looking for is a map of these locations. Can you please send me a map for my review.

Thank you.

Charlsey White, M.C.I.P., R.P.P.
Planner - Algoma District
Northeastern Municipal Services Office
Ministry of Municipal Affairs and Housing
Suite 401, 159 Cedar Street
Sudbury ON P3E 6A5
Tel:(705) 564-6855; Fax:(705) 564-6863
e-mail: charlsey.white@ontario.ca

Please consider the environment before printing this email note.

From: Tovey, Dan (MAH)
Sent: November 19, 2010 10:51 AM
To: White, Charlsey (MAH)
Subject: FW: Xeneca Power Development Inc. proposed projects on the Serpent River - Project Description Documents Notice
Importance: High

Hi Charlsey:
Fyi...not sure if we have much info to provide on these projects. DT

From: Tami Sugarman [mailto:tsugarman@oel-hydrosys.ca]
Sent: November 16, 2010 3:55 PM
To: amy.liu@ceaa.acee.gc.ca; Hutchison, Carrie (ENE); kelly.withers@dfo-mpo.gc.ca; EnviroOnt@tc.gc.ca; melanie_lalani@hc-sc.gc.ca; EACoordination_ON@inac-ainc.gc.ca; Mihell, Kim (MNR); Webber, Gerry (MTC); Debicki, Ruth (MNDMF); Boyer, Heather (MNDMF); Tovey, Dan (MAH); Thatcher, Hillary (MEI); Rukavina, Martin (MAA); greg.godain@ontario.ca; cityclerk@cityssm.on.ca; lesley.sprague@city.elliotlake.on.ca; johnjone@blindriver.ca; awhalen@sables-spanish.ca; brent.st.denis@ontera.net; Rob.Dobos@ec.gc.ca; EA-SPI/EE-ISP@nrcan.gc.ca
Cc: Ed Laratta; Vanesa Enskaitis; Philippa McPhee; pnorris@owa.ca
Subject: Xeneca Power Development Inc. proposed projects on the Serpent River - Project Description Documents Notice
Importance: High

Good afternoon:

On behalf of Xeneca Power Corporation Inc. we are pleased to provide you with the attached letter of introduction and directions to accessing and downloading the project description documents for the proposed Xeneca Power Corporation Inc. waterpower developments at the Four Slide Falls Project site and the McCarthy Chute Project site both located on the Serpent River in northeastern Ontario. Xeneca has been awarded Feed-in Tariff (FIT) contracts for these sites by the Ontario Power Authority (OPA).

You are included on our email list as you have been identified as the one-window contact for your organization and are listed as such on the Contact List for each project. We ask that you distribute this information to colleagues within your organization that should be involved in the planning process. If the main contact for your organization is someone else other than you please inform us at EAinfo@oel-hydrosys.ca as soon as possible so that our staff can update the contact list accordingly.

We have elected to distribute these documents in electronic format for environmental reasons. You may access our FTP site by completing the following instructions:

Site: ftp://clientftp.wesa.ca

Username: XENECA
Password: WESA.2010

An attached word document guide will assist you with the download process. You will need to activate passive mode in your Internet Explorer browser to be able to access the FTP site behind our corporate firewall.

Aboriginal communities located nearby will also be receiving this notice directly from Xeneca's First Nation and Aboriginal Relations Liaison, Mr. Dean Assinewe.

A hard paper copy and/or CD Rom copy of each project description document will be issued shortly to the federal agencies and Aboriginal communities that have requested them.

Others: If you require a paper and/or CD Rom copy in addition to this electronic copy please notify us at EAinfo@oel-hydrosys.ca within the next two (2) business days otherwise we will assume that this electronic version is adequate.

The Serpent River development sites are located approximately 5.5 km apart and are interpreted to be independent of each other based on hydrology and biology. We have therefore decided to pursue a separate Class Environmental Assessment for Waterpower Projects planning process for each site.

The project description is intended to provide an overview of the project components, general information on the project's setting and relevant background information on the project. This Project Description is also designed to assist the proponent in ensuring that all aspects of the project are accounted for in enough detail to allow the public, Aboriginal communities and government agencies to provide meaningful comment throughout the Class EA process. The information will allow you to identify your environmental assessment and regulatory requirements associated with the projects. It will also allow a federal authority to determine if it will be a Responsible Authority (RA) under CEA Act or whether it is able to provide technical expertise as an expert advisor.

It is our intention to schedule a proponent-agency EA coordination meeting as soon as possible. We hope that this project description document will assist you in preparing for this meeting to discuss the following in the context of the project's proposed schedule;

- applicable policies and procedures administered by each agency (list of statutes and regulations) and list of required approvals for the project;
- a comprehensive list of values and issues of concern/benefit identified with the site and the project (natural, socio-cultural, economic);
- data and information collection procedures; and,
- a consultation and engagement plan.

We trust this submission is adequate for these purposes. Please do not hesitate to contact us with any questions or clarifications.

Respectfully submitted on behalf of Xeneca Power Corporation Inc.,

Tami Sugarman and Philippa McPhee, EA Project Managers
OEL-HydroSys Inc.

Tami Sugarman, B.Sc., P.Geo. — Principal, Environmental Assessment and Approvals Coordinator
OEL-HydroSys Inc. — 3108 Carp Road - P.O. Box 430, Carp Ontario K0A 1L0
(T) (613) 839-1453 x229 (C) (613) 894-3509 (F) (613) 839-5376
tsugarman@oel-hydrosys.ca — www.oel-hydrosys.ca

OEL-HydroSys, WESA Envir-Eau, WESA, WESA Technologies, members of WESA Group Inc.

Muriel Kim

From: Tovey, Dan (MAH) [Dan.Tovey@ontario.ca]
Sent: November 23, 2010 2:22 PM
To: Tami Sugarman
Cc: VEnskaitis@xeneca.com; Kaufman, Wendy (MAH); White, Charlsey (MAH); Pilar DePedro; Elms, Michael (MAH)
Subject: Xeneca Power Development Inc.
Attachments: 94MNR100003 northeastern ontario FIT projects.doc

Hello Tami,

Over the last few days this office has received several emails containing the link to the project description and advance notice on upcoming meetings for FIT projects in the following locations:

- Allan and Struthers (Wanapitei R)
- Serpent River
- Larder River
- Ivanhoe
- Wabagishik Rapids

An individual response re the Larder River was provided via email on Friday, November 19, 2010.

Review of our files has revealed that a comprehensive response regarding 19 FIT projects was provided by our office to Mr. Peter Gilette by mail on July 20, 2010 following a telephone discussion with Vanesa Enskaitis. The unsigned version of our response is attached for your reference.

Thank you for providing us with a second opportunity to comment on some of these projects, but this first response will be the only comments that our office will be putting forward.

The Petawawa River notice should be directed to Mike Elms, Manager of Community Planning and Development, of our Eastern Municipal Services Office (c.c.'d on this email).

Thank you,

Dan Tovey|Manager(A)
Northeastern Municipal Services Office
Ministry of Municipal Affairs and Housing
☎: 705.564.7128|🖷:705.564.6863|✉:dan.tovey@ontario.ca

Visit our OnRAMP Site at: www.mah.gov.on.ca\onramp-ne

Please consider the environment before printing this email note.

From: Tami Sugarman [mailto:tsugarman@oel-hydrosys.ca]
Sent: November 21, 2010 1:10 PM
To: Liu,Amy [CEAA]; Hutchison, Carrie (ENE); rich.rudolph@dfo-mpo.gc.ca; EnviroOnt@tc.gc.ca; EACoordination_ON@inac-ainc.gc.ca; melanie_lalani@hc-sc.gc.ca; Rob.Dobos@ec.gc.ca; Caitlin.Scott@NRCan.gc.ca; Robinson, Bob L. (MNR); Webber, Gerry (MTC); Miller, Chuck (MNR); Morello, Murray (MNDMF); Tovey, Dan (MAH); Kaufman, Wendy (MAH); Gibson, Amy (MEI); Pickles, David (MAA); Godin, Greg (MTO); paul.sajatovic@sudbury.ca;

Ministry of Municipal Affairs and Housing

Municipal Services Office
Northeastern
159 Cedar Street, Suite 401
Sudbury ON P3E 6A5
Telephone: 705 564-0120
Toll Free: 1 800-461-1193
Fax: 705 564-6863
Web : www.mah.gov.on.ca/onramp-ne

Ministère des Affaires municipales et du Logement

Ontario

Bureau des services aux municipalités
du Nord-Est
159, rue Cedar, bureau 401
Sudbury ON P3E 6A5
Téléphone : 705 564-0120
Sans frais : 1 800 461-1193
Télécopieur : 705 564-6863
Site Web: www.mah.gov.on.ca/onramp-ne

July 20, 2010

VIA REGULAR MAIL

Mr. Peter Gillette
Xeneca Power Development Inc.
5160 Younge Street, Suite 520
Toronto, ON M2N 6L9

Dear Mr. Gillette,

RE: Northeastern Ontario FIT Projects
Request for Comments

Thank you for providing MAH with notice of 19 potential FIT projects located across northeastern Ontario. This notice and package of materials including mapping was received on June 16, 2010. Please note that this office does not intend to comment specifically on any of these projects.

As per conversation between myself and Vanesa Enskaitis of your office on July 19, 2010, it is understood that you have already contacted some municipalities with respect to these projects. It is recommended that any municipalities that may be affected by these projects should be provided with notice. In particular:

- the Allen & Struthers project appears to be within the Municipality of Killarney;
- 3 of the 4 projects on the Vermillion River appear to be within the City of Greater Sudbury, and the fourth may be of interest to the Township of Nairn and Hyman;
- the two projects on the Serpent River appear to be within the City of Elliot Lake;
- the project on the Blanche River appears to be within the Township of Chamberlain;
- the project on the Larder River may be of interest to the Township of Larder Lake and/or the Township of McGarry; and
- the projects on the Kapuskasing River and Ivanhoe River may be of interest to the Township of Chapleau.

For future reference, the mapping of our regional office's area of coverage is available at http://www.mah.gov.on.ca/Page5869.aspx.

If you have further questions, please do not hesitate to contact me directly at 705-564-6802.

Sincerely,

Wendy Kaufman, MCIP, RPP
Planner

Execution Copy

NON-DISCLOSURE AND STANDSTILL AGREEMENT

THIS AGREEMENT is made the 8th day of April, 2008

Between

XENECA POWER DEVELOPMENT INC.
a company incorporated under the *Business Corporations Act*
of the Province of Ontario, Canada, ("Xeneca")

- and -

1713399 ONTARIO INC.
a company incorporated under the *Business Corporations Act*
of the Province of Ontario, Canada, ("1713399")

- and -

1713400 ONTARIO INC.
a company incorporated under the *Business Corporations Act*
of the Province of Ontario, Canada, ("1713400")

- and -

PELE MOUNTAIN RESOURCES
a company incorporated under the *Business corporations Act*
of the Province of Ontario, Canada ("PMR")

WHEREAS:

1. Xeneca, 1713399, 1713400 and PMR have agreed to disclose to each other certain of their Confidential Information (as hereinafter defined) in connection with certain proposed business arrangements between Xeneca, 1713399, 1713400 and PMR.

2. Xeneca, 1713399, 1713400 and PMR have agreed to enter into this Agreement in order to protect and preserve their respective interests in the Confidential Information.

3. PMR wishes to discuss potential arrangements for use of the electricity distribution line(s) that provides electricity to the Pele Mountain Resources mining and processing operations that is planned for a location approximately 15 km from the site of the proposed waterpower development sites known as Four Slide Falls and McCarthy Chute, and Xeneca, and Ontario 1713399, 1713400 are open to such discussions.

IN CONSIDERATION of the premises and the respective agreements in this Agreement and of other good and valuable consideration, the receipt and sufficiency of which are acknowledged by each of the parties hereto, the parties agree as follows:

ARTICLE 1
INTERPRETATION

1.1 Definitions:

In this Agreement, unless the subject matter or context is inconsistent therewith:

"Affiliate" of a Party means any Person which (i) controls directly or indirectly such Party; (ii) is, directly or indirectly, controlled by such Party; or (iii) is, directly or indirectly, controlled by a Person which, directly or indirectly, controls such Party; the term "control" includes the right to exercise *50%* or more of the voting rights respecting the election of directors of a corporation;

"Agreement" means this non-disclosure agreement and any written agreement supplementing or amending this agreement; all uses of the words **"hereto"**, **"herein," "hereof," "hereby"** and **"hereunder"** and similar expressions refer to this agreement and not to any particular section or portion of it;

"Business Day" means any day of the week other than a Saturday, Sunday or statutory or civic holiday observed in Toronto, Ontario;

"including" and **"includes"** shall be deemed to be followed, by the statement **"without limitation"** and neither of such terms shall be construed to limit any word or statement which it follows to the specific or similar items or matters immediately following it;

"Parties" means Xeneca, 1713399, 1713400 and PMR, collectively, or individually as the context permits or requires;

"Person" includes an individual, body corporate, partnership, joint venture, trust or unincorporated organization, the Crown or any agency or instrumentality thereof, or any other entity recognized by law;

"Representatives" of a Party means its directors, officers, employees, agents and representatives, including its solicitors, accountants and financial advisers; and

"Confidential Information" means the confidential information of either Xeneca, 1713399, 1713400 and PMR, as applicable, including agreements, equipment, specifications, plans, processes, instructions, manuals, data (including data relating to research, development, manufacturing or selling of products or services), records and procedures, confidential information, know-how, and trade secrets in respect thereof.

ARTICLE 2
CONFIDENTIALITY

2.1 Obligations

Each Party agrees:

(a) to treat, and agrees to cause its Representatives to treat, as confidential the other Party's Confidential Information; and

(b) that neither it nor any of its Representatives shall, at any time, use in any way for its own purpose or for the purposes of any other Person, or divulge or disclose to any Person, any of such Confidential Information not otherwise contemplated by this Agreement.

2.2 Notice of Disclosure or Use

Each Party shall notify the other Party promptly in writing of any actual, apprehended or threatened disclosure or use of the other Party's Confidential Information of which it becomes aware which may breach this Agreement.

2.3 Records

Each Party and its Representatives shall not make or permit to be made any copies, transcriptions, notes or other reproductions of all or any part of the other Party's Confidential Information or concepts related to them without the prior written consent of such other Party. Each Party acknowledges and agrees that all documents, notes, samples and other materials incorporating or constituting the other Party's Confidential Information or copies thereof are the sole property of such other Party.

2.4 Return of Records

A Party shall, upon the written request of the other Party for the return of Confidential Information, return such Confidential Information to the requesting Party within 20 Business Days.

2.5 Remedies for Breach

Each Party acknowledges and agrees with the other Party that:

(a) without the agreements set forth herein, the other Party would not have made the Confidential Information available and that such agreements are reasonable in the circumstances and are necessary to protect the economic position of the other Party; and

(b) the breach by any Party of any of the provisions of this Agreement would cause serious and irreparable harm to the other Party which could not adequately be compensated for in damages and, in the event of such a breach, the party in breach consents to an injunction being issued against it restraining it from any further breach of such provision, but the provisions of this subsection shall not be construed so as to be in derogation of, or to in any way limit, modify or impair, any other remedy which the other Party may have in the event of such a breach.

2.6 Exceptions

The obligations of each Party under this Agreement (the **"Obligated Party")** shall not apply to the other Party's Confidential Information which it can prove:

(a) are readily available to the public, otherwise than by reason of a breach of this Agreement by the Obligated Party;

(b) are lawfully and in good faith obtained by the Obligated Party from an independent third party without a breach of this Agreement or, to such Obligated Party's knowledge, any other agreement providing for the non-disclosure of the Confidential Information, as shown by documented or other competent evidence in order to establish the third party as the source of the Confidential Information;

(c) are independently developed at any time by the Obligated Party (or by any Person related thereto) as shown by documented or other competent evidence without recourse to the other Party's Confidential Information; or

(d) are required, in the opinion of legal counsel, by law to be made public.

ARTICLE 3
NON-SOLICITATION

3.1 Non-Solicitation

A Party will not, directly or indirectly:

(i) use the Confidential Information of the other Party or take any action based upon such Confidential Information to interfere in any way with any contractual or other aspects of the business of the other Party or its Affiliates; or

(ii) for a period of two years from the date of this Agreement, directly or indirectly, solicit for employment or similar status or hire any employees of any of the other Party or its Affiliates with whom it has had contact or become known to it in connection with its consideration of the proposed business arrangement between the Parties, provided however that the foregoing provisions will not prevent such Party from employing any such individual who contacts the Party on his own initiative without any direct or indirect solicitation by, or encouragement from, such Party.

ARTICLE 4
STANDSTILL

4.1 PMR Standstill

PMR shall not discuss with any third party hydro-electric power developer any project that would involve the electricity distribution line or lines serving waterpower facilities at the sites known as Four Slide Falls or McCarthy Chute or the right to the right-of-way of such line for a period of 60 days from the date first mentioned above. The foregoing standstill obligation shall not apply to any discussions with the third party that contacted PMR on or about April 8th, 2008.

ARTICLE 5
GENERAL

5.1 Assignment/Enurement

This Agreement is not assignable by a Party without the prior written consent of the other Party. This Agreement shall enure to the benefit of and be binding upon the Parties hereto and their respective successors and permitted assigns.

5.2 Governing Law

This Agreement shall be governed by, and interpreted and enforced in accordance with, the laws in force in the Province of Ontario (excluding any rule or principle of the conflict of laws which might refer such interpretation to the laws of another jurisdiction). Each of the Parties irrevocably submits to the non-exclusive jurisdiction of the courts of Ontario with respect to any matter arising hereunder or related hereto.

5.3 Severability

If any provision of this Agreement is held to be illegal or unenforceable for any reason, such provision will be severed herefrom and the remainder of the Agreement will remain in full force and effect.

5.4 Notices

Any notice, demand or other communication required or permitted to be given or made hereunder shall be in writing and shall be sufficiently given or made if made to the head office of the Party.

5.5 Waiver

No waiver or waivers by any Party hereto of any breach of any of the provisions of this Agreement shall be deemed to or shall constitute a waiver of any other breach of the same or any other provision of this Agreement and no waiver shall have effect unless made in writing.

5.6 Counterparts and Copies

This Agreement may be executed in counterparts, and all such counterparts together shall constitute one and the same Agreement. Any party may deliver an executed copy of this agreement to the other parties by fax or by email, but upon request by any other party, the delivering party shall immediately deliver an originally executed copy of this agreement to the other parties.

IN WITNESS WHEREOF the Parties have executed this Agreement as of the date first above written.

XENECA POWER DEVELOPMENT INC.

Per: _____

Name: Patrick W. Gillette
Title: President

I have authority to bind the Corporation

1713399 ONTARIO INC.

Per: _____

Name: Mark Holmes
Title: President

I have authority to bind the Corporation

1713400 ONTARIO INC.

Per: _____

Name: Mark Holmes
Title: President

I have authority to bind the Corporation

PELE MOUNTAIN RESOURCES

Per: _____

Name: Al Shefsky
Title: President

I have authority to bind the Corporation

Ministry of
Northern Development, Mines and Forestry

Mineral Development and Lands Branch

Willet Green Miller Centre
3rd floor, 933 Ramsey Lake Road
Sudbury ON P3E 6B5
1-888-415-9845 ext. 5840
Tel.: (705) 670-5840
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Ministère du
Développement du Nord,
des Mines et des Forêts

Direction de l'exploitation des minéraux et de la gestion des terrains miniers

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Téléc. :705 670-5863

Ontario

File No.

May 25, 2010

Mr. Ken Kukkee
194 Raynard Road
Thunder Bay ON P7G 1K7

Dear Mr. Kukkee:

RE : Valuable Water Powers not Included in Claim, Subsection 33(1) of the Mining Act R.S.O. 1990

I am writing you at the request of Xeneca Limited Partnership who is the holder of a Feed-in-Tariff contract from the Ontario Power Authority for the potential waterpower development of a site known as McGraw Falls located within unpatented mining claim 3005579.

At this time I would like to remind you that Section 33(1) of The Mining Act applies to water power resources within your mining claim.

Section 33(1) of the Mining Act reads "A water power that lies within the limits of a mining claim and that is capable of producing 150 horsepower or more at low water mark in its natural condition **shall not be deemed to be part of the claim for the use of the holder of the claim."**

Should you have any further questions on this matter please contact Scott Cousineau A/Senior Lands Technician at 1-888-415-9845 ext 5859.

Sincerely,

Roy Donomme
Senior Manager
Mining Lands Section

✓c.: Xeneca Power Development Inc.

Ontario

Ministry of
Northern Development,
Mines and Forestry

Ministère du
Développement du Nord,
des Mines et des Forêts

933 Ramsey Lake Road
Sudbury, ON P3E 6B5
Phone: 705-670-5887
Fax: 705-670-5807

Ms. Samantha Leavitt
Xeneca Power Development Inc.
520-5160 Yonge St
Toronto ON M2N 6L9

July 8, 2010

Dear Ms. Leavitt

This letter is in response to the review of Xeneca Power Development Inc.'s proposal relating to 18 hydro-electric developments. The Resident Geologist Program (RGP) has done the following with regard to each development:

1. checked the site of the proposed dam to determine its status with regard to tenure and alienation of surface rights and mining rights;
2. checked the Ministry's Abandoned Mines Information System (AMIS) database to determine whether any mining-related hazards are recorded in the area of the dam, or within a one-kilometre radius of it;
3. checked the Ministry's Assessment File Report Inventory (AFRI) database to determine whether past mineral exploration activity has been reported for the area;
4. reviewed the Xeneca "Project Overview" for each site to assess the potential environmental considerations identified by the company; and
5. used the GIS-based "Metallic Mineral Potential Estimation Tool" to get an estimation of the mineral potential of the dam sites.

The outcomes of these reviews are listed in the Attachment to this letter.

.../2

An additional concern that relates to all of these sites is that they will have power lines ranging from 1.1 to 22 kilometres in length associated with them. All of the types of assessments that have been done for the dam sites themselves must also be done for the transmission corridors, and the concerns raised in the Attachment with regard to the individual dam sites will also need to be addressed for each of the transmission corridors.

I trust that you will find this in order.

Yours truly,

Ruth Debicki

R.L. Debicki, P.Geo.
Land Use Policy and Planning Coordinator

cc: Jennifer Lillie-Paetz, Environmental Assessment Coordinator, MNDMF

ATTACHMENT 1
Xeneca Power Development Inc.'s Proposals
MDNMF Comments – Resident Geologist Program

1. With regard to each project, Xeneca has recognized "riparian rights" in its Project Overview documents as being potential environmental considerations, and has identified the following four categories of land to which those riparian rights might apply:

   - Crown Land;
   - Federal Land and Private Land;
   - Federal Land (DFB Petawawa); and
   - Crown and Private Land

   Xeneca has not recognized in its Project Overview documents that there are two rights in land: surface rights, and mining rights. Each may be held be different owners, and the owners of each have their own rights and obligations. Should Xeneca wish to undertake any work on a property where a mining claim is held by a third party, the *Mining Act* requires the company to obtain the approval of the claimholder before undertaking such work, or – failing such approval – the consent of the Lieutenant Governor in Council, regardless of whether the surface rights are held by the Crown or by some other private owner.

   The status of land tenure at the dam sites (as noted on MNDMF's CLAIMaps website on July 7, 2010), is summarized in the table below.

Project Site	Mining Lands		Surface Rights		Other "Allen-ations"
	Claims	Leases	Patented	Crown	
Allen & Struthers	None	none	No	Yes	No
Big Eddy	None	none	No	CFB Petawawa	Yes
Cascade Falls	None	none	Yes	No	No
Four Slide Falls	Yes : 4221194	none	No	Yes	No
Half Mile Rapids	none	none	No	Yes	No
Lapinigam Rapids	none	none	No	Yes	Yes
Larder & Raven	none	none	No	Yes	Yes
Marter Twp.	none	none	Yes	No	Maybe
McCarthy Chute	none	none	No	Yes	Yes
McPherson Falls	None	none	Yes	No	No
Middle Twp. Buchan	none	none	No	Yes	Yes
Near North Boundary	none	none	No	Yes	Yes
Outlet Kapuskasing Lake	none	none	No	Yes	Yes

..../2

Soo Crossing	none	none	Yes	No	No
The Chute	none	none	No	Yes	Yes
Third Falls	Yes : 3006261	none	No	Yes	Yes
Wabageshik	none	none	No	Yes	No
Wanatango Falls	Yes : 1154617	none	No	Yes	Yes

Note that there are currently mining claims in good standing at three of the proposed dam sites. There are no mining leases at any of the proposed dam sites.

Since the mining tenure in the Province is constantly changing, however, Xeneca is advised to check the Ministry's CLAIMaps website at:

http://www.mndm.gov.on.ca/mines/lands/claimap3/disclaimer_e.asp

on a regular basis to determine the status of their areas of interest.

In addition to considerations regarding the mineral rights of the proposed dam sites, Xeneca may have to consider other factors with regard to the status of the land at several of the sites. It appears that there are privately owned lands at four of the sites. The owner may be the Ministry of Natural Resources (as opposed to the Crown), or some other third party.

There are other "alienations" at ten of the Crown-owned sites that may also need to be addressed. These alienations may be *Mining Act* withdrawals that would accommodate hydro-electric developments, but they may reflect other alienations such as protected area status that would make development difficult.

Depending upon the extent of inundation from the development, or the location of infrastructure related to the hydro-electric development, similar considerations may have to be addressed for the area surrounding the dam site itself. The table below lists the status of lands within a one-kilometre radius of the coordinates of the dam site, and shows that five of the sites have mining claims nearby, two have mining leases nearby. In addition, it shows that seven sites have patented surface rights nearby and 11 have "other alienations" nearby.

Project Site	Mining Lands		Surface Rights		Other "Allen-ations"
	Claims	Leases	Patented	Crown	
Allen & Struthers	None	None	Yes	Yes	No
Big Eddy	None	None	No	No	Yes
Cascade Falls	None	Yes	Yes	No	No

.../3

Four Slide Falls	Yes: 4221194 and 4221193	None	No	Yes	No
Half Mile Rapids	None	None	No	Mckay Yes Petawawa No	No
Lapinigam Rapids	None	None	No	Yes	Buchan, Clouston and Davin Yes Amundsen No
Larder & Raven	None	None	No	Yes	Yes
Marter Twp.	Yes: 4225614 and 5225613	None	Yes	Yes	Marter Yes Chamber, Iain No
McCarthy Chute	None	None	No	Yes	Yes
McPherson Falls	None	None	Yes	No	No
Middle Twp. Buchan	None	None	No	Yes	Yes
Near North Boundary	None	None	No	Yes	Yes
Outlet Kapuskasing Lake	None	None	No	Yes	Yes
Soo Crossing	None	Yes	Yes	No	No
The Chute	None	None	No	Yes	Yes
Third Falls	Yes: 3006261, 3006260, 3006253 and 3006257	None	No	Yes	Yes
Wabageshik	Yes: 4254407	None	Yes	Yes	No
Wanatango Falls	Yes: 3006946, 1190501, 1154618, 1154614, 1154622, 1219621, 1154621, 1154613, 1154617, 1154627, 4230128, 1154626, 1154616, 1154612, 1154620, 1154619, 1154611, 1154615 and 1154625	None	Yes	Yes	Mann: Yes Duff: No

.../4

2. The status of mining-related hazards, as identified using the Ministry's Abandoned Mines Information System (AMIS) database, is summarized below.

   Mining-related hazards are normally divided into two categories; those in very close proximity to the dam sites; and those centred within one kilometre of the dam sites. Depending upon the type of a hazard, its effects may extend beyond its "pinpoint" surface location. For example, underground workings may extend laterally for significant distances from a shaft; windblown contaminants can affect areas surrounding an un-rehabilitated tailings area; and contaminated surface or groundwater may flow beyond the site of a physical hazard.

   The table below indicates the number of recorded hazards that may need to be considered with regard to each proposed development. The first column gives the name of the project. The second indicates the number of hazards within the township where the proposed dam site is located. The proposed dam site may actually be more than one kilometre from any hazard, but more detailed work would have to be done to determine this. A preliminary review suggests that there are no mining-related hazards in the "immediate vicinity" of the proposed dam sites. The third column indicates the numbers of recorded hazards in all townships within a one-kilometre radius of each proposed development, because some of the proposed developments are close to one or more township boundaries.

Project Site	AMIS Reports – Township of Project Site	AMIS Reports –Townships within one kilometre of Project Site
Allen & Struthers	1	1
Big Eddy	None	None
Cascade Falls	13	13
Four Slide Falls	1	1
Half Mile Rapids	None	None
Lapinigam Rapids	None	Buchan, Clouston, Amundsen and Davin: None
Larder & Raven	None	None
Marter Twp.	1	Marter: 1 (Mine site within 1 Township); Chamberlain: None
McCarthy Chute	1	Proctor: 1; Deagle: None
McPherson Falls	9	9
Middle Twp. Buchan	None	None
Near North Boundary	None	None
Outlet Kapuskasing Lake	None	None
Soo Crossing	13	13

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The Chute	None	None
Third Falls	None	None
Wabageshik	7	7
Wanatango Falls	1	Mann: 1; Duff: None

Xeneca Power Development Inc. should take these areas into consideration as a matter of health and safety for any of its employees who may be working in the area. In addition, Xeneca Power Development Inc. should be aware that it is an offence under the *Mining Act* to alter, destroy, remove or impair any rehabilitation work made in accordance with the Act.

Please note that the information provided with regard to AMIS sites has been compiled from various sources, and the Ministry makes no representation and takes no responsibility that it is accurate, current or complete. Xeneca Power Development Inc. may wish to undertake its own independent investigation to validate this information.

3. The Ministry's Assessment File Report Inventory (AFRI) database provides an indication as to whether past mineral exploration activity has been reported for the area.

For the townships in which the proposed sites are located, the numbers of assessment reports listed in the table below are on file with the Ministry. The first column gives the name of the project. The second indicates the number of assessment reports within the township where the proposed dam site is located. The proposed dam site may actually be more than one kilometre from the subject area of any or all of the assessment reports, but more detailed work would have to be done to determine this. The third column indicates the numbers of assessment reports in all townships within a one-kilometre radius of each proposed development, because the sites of some of the proposed development sites are close to one or more township boundaries.

Project Site	AFRI Reports – Township of Project Site	AFRI Reports –Townships within one kilometre of Project Site
Allen & Struthers	None	None
Big Eddy	None	None
Cascade Falls	58	58
Four Slide Falls	12	12
Half Mile Rapids	1	Mckay: 1; Petawawa: None
Lapinigam Rapids	0 or 1	Buchan: 0 or 1; Clouston, Amundsen and Davin: None
Larder & Raven	62	62

.../6

Marter Twp.	29	Marter: 29; Chamberlain: 5
McCarthy Chute	12	Proctor: 12; Deagle: 10
McPherson Falls	18	18
Middle Twp. Buchan	None	Clouston: None; Buchan: 0 or 1
Near North Boundary	0 or 1	Clouston: None; Buchan: 0 or 1; Maude and Allenby: 1
Outlet Kapuskasing Lake	None	None
Soo Crossing	58	58
The Chute	11	11
Third Falls	64	64
Wabageshik	78	78
Wanatango Falls	Approximately 232	Mann: Approximately 232; Duff: 36

Again, please note that the information provided with regard to the assessment reports has been compiled from various sources, and the Ministry makes no representation and takes no responsibility that it is accurate, current or complete. Other exploration and development work that may have been done, but not reported is also protected by the *Mining Act*.

Xeneca Power Development Inc. should note that if mineral development workings or claim markings are not recognized and subjected to damage (e.g., claim lines or grid lines are destroyed by cutting vegetation), the *Mining Act* requires that compensation shall be paid to the claimholder.

4. The "Project Overviews" for each of the sites were reviewed to assess the potential "environmental" considerations identified by the company. Four considerations were identified for every site. They are:

   - fish species, habitat and migration;
   - terrestrial vegetation and habitat;
   - First Nations / Aboriginal traditional land / resource use; and
   - recreational use and navigation.

   A fifth consideration, commercial operations and tourism, was identified for the following six sites:

   - Cascade Falls;
   - Lapinigam Rapids;
   - McPherson Falls;
   - Middle Twp. Buchan;
   - Near North Boundary; and
   - Wabageshik Rapids.

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The term "commercial operations and tourism" is unclear, and should be clarified. It should include forestry operations, and mineral exploration and development in addition to tourism. Off mine-site exploration and deposit appraisal expenditures in Ontario are expected to be close to $500 million in 2010; the possibility that exploration might be occurring on or around the proposed development sites must be considered.

5. For the sites under consideration as potential dams, it is normal practise for the Ministry of Natural Resources to ask the Ministry of Northern Development, Mines and Forestry to withdraw either the surface rights, or both the surface and mining rights from staking. When a request for a withdrawal is received, the Resident Geologist Program normally carries out a mineral resource assessment as part of its review.

   Given the early stage of the current proposals, full mineral resource assessments were not done, but the GIS-based "Metallic Mineral Potential Estimation Tool" was used to estimate the mineral potential of the dam sites. Scores of 65 or higher are normally considered to have provincial significance. Eight of the 18 sites under consideration have scores higher than 65. A more detailed assessment may result in different scores for some of the sites (e.g., lower scores for the sites scoring 100).

Site	Score/100	Ore Deposit Model
Allen & Struthers	62	Paleoplacer Uranium Deposits
Big Eddy	41	Diamond-Bearing Rocks / Carbonatite – Alkalic Intrusive Complex
Cascade Falls	100	Sudbury Igneous Complex Hosted Cu-Ni-PGE
Four Slide Falls	67	Lode Gold
Half Mile	41	Diamond-Bearing Rocks / Carbonatite – Alkalic Intrusive Complex
Lapinigam Rapids	41	Diamond-Bearing Rocks / Carbonatite – Alkalic Intrusive Complex
Larder and Raven	81	Diamond-Bearing Rocks
Marter Township	96	Lode Gold
McCarthy Chute	19	Lode Gold
McPherson Falls	100	Sudbury Igneous Complex Hosted Cu-Ni-PGE
Middle Twp. Buchan	41	Diamond-Bearing Rocks / Carbonatite – Alkalic Intrusive Complex
Near North Boundary	41	Diamond-Bearing Rocks / Carbonatite – Alkalic Intrusive Complex
Outlet Kapuskasing Lake	41	Diamond-Bearing Rocks / Carbonatite – Alkalic Intrusive Complex
Soo Crossing	100	Sudbury Igneous Complex Hosted Cu-Ni-PGE

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The Chute	41	Diamond-Bearing Rocks / Carbonatite – Alkalic Intrusive Complex
Third Falls	93	Volcanic-Hosted Massive Sulphides
Wabageshik Rapids	62	Paleoplacer Uranium Deposits
Wanatango Falls	93	Volcanic-Hosted Massive Sulphides

The Provincial Policy Statement, issued under the *Planning Act*, provides that development and activities that would preclude or hinder the establishment of new operations or access to the resources in areas of provincially significant mineral potential shall only be permitted if:

- resource use would not be feasible; or
- the proposed land use or development serves a greater long-term public interest; and
- issues of public health, public safety and environmental impact are addressed.

The Ministry of Northern Development, Mines and Forestry considers the direction provided by the Provincial Policy Statement when assessing whether or not to approve applications for withdrawal orders.

Pilar DePedro

From: Smith, Brett (MEI) [Brett.Smith@ontario.ca]
Sent: January-05-11 12:03 PM
To: Tami Sugarman
Subject: RE: Aboriginal partnerships

Hello Tami,

The Ministry of Energy will not be attending the upcoming coordination meetings in January. However, the project descriptions that you have provided are very useful and we would like to track the status of these projects, so please keep me on the distribution list for any notices.

I hope the New Year finds you well Tami. Best regards,

Brett Smith
416-212-5416

From: Tami Sugarman [mailto:tsugarman@oel-hydrosys.ca]
Sent: December 23, 2010 11:42 AM
To: Smith, Brett (MEI)
Subject: RE: Aboriginal partnerships

Hi Brett
Xeneca presently has 19 signed FIT contracts. We are engaged for 14 of them to conduct EA planning. There are 12 EAs planned for those 14 sites. Four more project descriptions have been drafted but not released to date. Therefore, we are still in the EA stage for all 14 sites. Regulatory approvals follow the successful completion of the EA.

As soon as the remaining project descriptions are finalized you will receive a copy along with an invitation to the EA coordination meeting. Does the MEI want to attend these meetings as we have a few scheduled for the sites listed below in January? Let me know.
Best regards,
Tami

O E L
HYDROSYS

Tami Sugarman, B.Sc., P.Geo. — Principal, Environmental Assessment and Approvals Coordinator
OEL-HydroSys Inc. — 3108 Carp Road - P.O. Box 430, Carp Ontario K0A 1L0
(T) (613) 839-1453 x229 (C) (613) 894-3509 (F) (613) 839-5376
tsugarman@oel-hydrosys.ca — www.oel-hydrosys.ca

OEL-HydroSys, WESA Envir-Eau, WESA, WESA Technologies, members of WESA Group Inc.

From: Smith, Brett (MEI) [mailto:Brett.Smith@ontario.ca]
Sent: December 23, 2010 11:33 AM

To: Tami Sugarman
Subject: RE: Aboriginal partnerships

Hi again Tami,

You may be able to help with this request. I have summaries for eight proposed projects (below), but I believe there are about 20 recently proposed Xeneca projects at various stages of regulatory approvals.

Is it possible to share the project description documents for the ones not listed below? If the projects have advanced to complete Class EAs, I am happy to receive those documents as well.

- Allen & Struthers GS
- Big Eddy GS
- Four Slide Falls GS
- Half Mile Rapids GS
- Larder and Raven GS
- McCarthy Chute GS
- The Chute GS
- Wabageshik Rapids GS

Best regards,

Brett Smith
416-212-5416

From: Tami Sugarman [mailto:tsugarman@oel-hydrosys.ca]
Sent: December 21, 2010 4:13 PM
To: Smith, Brett (MEI)
Subject: RE: Aboriginal partnerships

No worries at all, no need to apologize.
All the best of the season!

Tami Sugarman, B.Sc., P.Geo. — Principal, Environmental Assessment and Approvals Coordinator
OEL-HydroSys Inc. — 3108 Carp Road - P.O. Box 430, Carp Ontario K0A 1L0
(T) (613) 839-1453 x229 (C) (613) 894-3509 (F) (613) 839-5376
tsugarman@oel-hydrosys.ca — www.oel-hydrosys.ca

OEL-HydroSys, WESA Envir-Eau, WESA, WESA Technologies, members of WESA Group Inc.

From: Smith, Brett (MEI) [mailto:Brett.Smith@ontario.ca]
Sent: December 21, 2010 4:01 PM
To: Tami Sugarman
Subject: RE: Aboriginal partnerships

My apologies Tami, and thank you for your prompt response.

Happy holidays,

Brett Smith
416-212-5416

From: Tami Sugarman [mailto:tsugarman@oel-hydrosys.ca]
Sent: December 21, 2010 4:00 PM
To: Smith, Brett (MEI)
Subject: RE: Aboriginal partnerships

Hello Brett
I'm sorry but OEL-HydroSys Inc. is not involved in this business aspect of the projects so I am unable to provide such insights except to inform you that they have in their employ Mr. Dean Assinewe who is responsible for aboriginal engagement matters. It would be best to contact Xeneca's President, Patrick Gillette pgillette@xeneca.com , or Aboriginal Relations Liaison, Dean Assinewe dassinewe@xeneca.com about this particular matter.
Best regards,
Tami

Tami Sugarman, B.Sc., P.Geo. — Principal, Environmental Assessment and Approvals Coordinator
OEL-HydroSys Inc. — 3108 Carp Road - P.O. Box 430, Carp Ontario K0A 1L0
(T) (613) 839-1453 x229 (C) (613) 894-3509 (F) (613) 839-5376
tsugarman@oel-hydrosys.ca — www.oel-hydrosys.ca

OEL-HydroSys, WESA Envir-Eau, WESA, WESA Technologies, members of WESA Group Inc.

From: Smith, Brett (MEI) [mailto:Brett.Smith@ontario.ca]
Sent: December 21, 2010 12:39 PM
To: Tami Sugarman
Subject: Aboriginal partnerships

Good afternoon Tami,

I was reviewing the project descriptions for proposed hydro stations and would like to know more about potential Aboriginal partnerships.

In section 1.2.1 of each project's description, Xeneca states that it "is presently pursuing the possibility of partnering with interested identified Aboriginal communities." Can you provide some insights into how Xeneca is engaging communities with respect to partnership? I understand that context plays an important role, but I am interested to know how Xeneca will approach those discussions with the various communities.

Thank you for any help, and please don't hesitate to call me if you would prefer to discuss over the phone. Best regards,

Brett Smith
Senior Advisor
First Nation and Métis Policy and Partnerships Office

Ministry of Energy
880 Bay Street, 3rd Floor
Toronto, ON M7A 2C1

P: 416-212-5416
F: 416-327-3344

Pilar DePedro

From: Environmental Assessment Information
Sent: March-18-11 1:43 PM
To: Karen Fortin; Kai Markvorsen
Subject: FW: Surface Water Quality Monitoring Program, 2010 and call for Technical Reviewers

---

Environmental Assessment Information - OEL-HydroSys Carp - (613) 839-1453

From: Kwan, Helen L. (MEI) [mailto:Helen.L.Kwan@ontario.ca]
Sent: March-18-11 1:41 PM
To: Environmental Assessment Information
Cc: Smith, Brett (MEI)
Subject: RE: Surface Water Quality Monitoring Program, 2010 and call for Technical Reviewers

Hello Karen/Kai,

Please keep us informed of the development for the technical meetings for the various Xeneca sites. While the Ministry of Energy may not participate in every meeting, it is useful to us know how these projects are proceeding through the Class EA process.

Thank you,

Helen Kwan
Senior Project Advisor
Renewable Energy Facilitation Office
Ministry of Energy
77 Grenville Street, 9th Floor
Toronto, ON M5S 1B3

416.212.0501 | helen.l.kwan@ontario.ca

From: Environmental Assessment Information [mailto:eainfo@oel-hydrosys.ca]
Sent: March 14, 2011 3:44 PM
To: Amy Vickery-Menard; Anne Kmyta; Smith, Brett (MEI); Caitlin Scott; Carl Jorgensen; Leith, Carroll (ENE); Clermont Lapointe; Pickles, David (MAA); Edward Ross; Cramm, Ellen (ENE); Gerry Cunnington; Webber, Gerry (MTC); Kwan, Helen L. (MEI); Jana Von Oosten; Lillie-Paetz, Jennifer (MNDMF); Kirzati, Katherine (MTC); Kentish, Lianne (ENE); Matt Reimer; Mei Ling Chen; Khan, Mohammad Sajjad(ENE); Nancy Allick; Daigle, Nancy (MNR); Santos, Narren (ENE); Patricia Bodick; Paul Kelly; Marleau, Paul (MTO); Gordon, Rick (MNR); Sein, Rod (ENE); Walker, Shaun (MNR); Sheryl Lusk; Spooner, Dr. Simon (MTC); Stephanie Davis; Transport Canada
Cc: Tami Sugarman; elaratta@xeneca.com; ormgkb@ormg.org
Subject: Surface Water Quality Monitoring Program, 2010 and call for Technical Reviewers

Good afternoon,

As a follow up to discussions held during the EA Coordination meeting held in January 2011 in support of the proposed Larder and Raven Waterpower Project being developed by Xeneca Power Development Inc on the Larder River, we have attached for your review the baseline surface water quality investigation report. This report documents the results of the surface water monitoring program undertaken through the 2010 field season at the project site.

The proponent is also planning to release additional supporting documentation according to the following schedule:

Hydrological Modeling Study and Operating Plan – week of March 21st or earlier
Baseline Biological report – week of March 28st or earlier.
Archaeological Stage 1 Summary Report – week of March 28th or earlier

Could you please advise which reports you would be interested in receiving along with the number of copies and in what format (FTP, CD-ROM, hard copy).

Additionally, at the EA Coordination meeting, it was determined that a technical review committee comprised of qualified persons from regulatory review bodies should be formed. If you or an associate is interested in participating as a technical reviewer, please provide the contact(s) name and contact information. Once we have determined who the interested reviewers are we will begin scheduling these meetings. Two focused technical meetings are planned for early spring; the first is tentatively being scheduled for mid-April to discuss the Hydrological Modeling and Operating Plan. A meeting to discuss surface water quality and habitat assessment requirements is also required. This second meeting may be held concurrent to the first meeting or, if necessary as a separate discussion. Please indicate which meeting you or someone from your organization would be interested in participating in.

Regards,

Karen

O E L
HYDROSYS

Environmental Assessment Information
OEL-HydroSys Inc. – 3108 Carp Rd. - P.O. Box 430, Carp, Ontario, Canada K0A 1L0
(T) (613) 839-1453 (F) (613) 839-5376
eainfo@oel-hydrosys.ca – www.oel-hydrosys.ca

OEL-HydroSys, WESA Envir-Eau, WESA, WESA Technologies, members of WESA Group Inc.

McCarthy Chutes and Four Slide Falls Hydroelectric Development

Briefing Notes for July 9, 2009 Scoping Meeting

Prepared for:
Xeneca Power Development
5160 Yonge Street,
North York
M2N 6L9

Project No. 928

Date: June, 2009

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

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Appendices

1.0 Brief Description of Project Concepts

1.1 McCarthy Chutes Development

The McCarthy Chutes, located at the outlet of McCarthy Lake (see Figure 1 of Appendix 1), consists of three separate drops as follows:

- Rapids 1: An estimated ±2 m drop at the outlet of McCarthy Lake.
- Rapids 2: An estimated ±4 m drop located ±300 m downstream of Rapids 1. The riverbanks
- Rapids 3: A negligible drop located ±400 m downstream of Rapids 2.

The suggested development concept for the McCarthy Chutes would be a stand alone facility with a dam situated across the river atop the chutes at the location of Rapids 2. (see Figure 2 of Appendix 1)The dam is envisioned to be a ±62 m long concrete gravity dam with a maximum height of 5 m (elev. ±251.0 m). The dam would incorporate a ±30 m wide concrete spillway with a control gate or rubber dam that would maximize generating head whilst maintaining an operational water level the same as McCarthy Lake at ±250.0 m.

The powerhouse and intake structure would be close-couple design and would be situated on the left side of the river (looking downstream). It is expected that construction of the intake and draft tube would require rock blasting through the left river bank. The proposed 'regulated' normal operating water level would be at elev. ±250.0 m. The dam would flood back ±300 m of the Serpent River to McCarthy Lake, inundating an ±4 ha area between the proposed dam and McCarthy Lake. (see Figure 3 of Appendix 1)

The anticipated development head for the site would be ±7 m. In terms of power generation, the facility is envisioned to operate as a run-of-the-river facility with some potential for intermediate peaking during peak demand periods, approximately 6-8 hours a day, 5 days a week.

During the 8-hour peaking operations, depending upon inflow conditions, the McCarthy Lake level would be drawn down a maximum of ±0.05 m. During the 16-hour off-peak period, the reservoir level would refill back to its regulated operating level. During the 16-hr off-peak refill period, a minimum compensation flow would be maintained to the bypass reach.

1.2 Four Slide Falls Development

The site is situated at Four Slide Falls within a well defined, v-shaped forested valley that is ±20 - 25 m deep (see Figure 4 of Appendix 1). Upstream of the falls, the river is

moderately wide shallow and slow moving. with several distinct meanders characteristic of a low gradient watercourse. River substrates are predominately alluvial sands. The riverbanks are densely treed and there are grasses lining the shoreline at the water's edge, periodically interspaced with boulders or bedrock outcrops.
Downstream of the falls, the Serpent River reach exhibits different characteristics than upstream. The river appears wider than upstream and there is a deep pool feature at the base of the falls that is backwatered by a hydraulic control section about 100 m downstream of the falls. River substrates are sand, overlain by cobbles, large rocks and boulders. Downstream of the pool, the river becomes shallow (less than 0.5 m deep) and appears to be slightly higher gradient with faster moving water conditions. The riverbanks are densely treed.

The suggested development concept for Four Slide Falls would be a standalone facility with a dam situated across the river atop the falls. The dam is envisioned to be a concrete dam, approximately 170 m across and would incorporate a ±20 m wide concrete spillway with a crest elevation of ±280.0 m. A higher dam is possible given the depth of the valley at the site if the concept was to flood entirely back to the Pecors Lake elevation of ±284 m. However, the higher dam would be considerably longer, resulting in considerably increased cost for the marginal gain in head.

The powerhouse and intake structure would be close-couple design and would be situated on the left side of the river (looking downstream). It is expected that construction of the intake and draft tube would require rock blasting through the left river bank. The proposed 'regulated' normal operating water level would be at elev. ±280.00 m. The dam would flood back ±4 km of the Serpent River to a point ±500 m downstream of Pecors Lake, inundating a total area of ±75 hectares of area. (see Figure 5 of Appendix 1).

In terms of power generation, the facility is envisioned to operate predominately as a run-of-the-river facility with some capability for peaking, approximately 8 hours a day, 5 days a week. During the 8-hour peaking operations, depending upon inflow conditions, the reservoir level would be drawn down to a maximum of ±0.3 m. During the 16-hour off-peak period, the reservoir level would refill back to its' regulated operating level. During the 16-hr off-peak refill period, a minimum compensation flow would be maintained to the downstream river.

2.0 Available Background Information

2.1 Designated Natural Areas

Based on information from the Natural Heritage Information Centre (2009a), no designated natural areas are found within the Serpent River Study Site (McCarthy Chute and Four Slide Falls). There are no provincial parks or conservation reserves within the plan area. However, the study site does fall within The Serpent River Enhanced Management Area (E222r) which includes the Serpent River waterway from Dunlop and Ten Mile Lake area (Beange Twp.) down to Highway 17. The management strategy for this area is to protect recreational and natural values along the river, while permitting compatible resource uses. This also includes a 30 to 90 metre forest harvesting reserve.

2.2 Significant Species

2.2.1 Natural Heritage Information Center Review

McCarthy Chutes

Based on the Natural Heritage Information Centre (2009b) no rare species are found within the McCarthy Chutes portion of the study area. Three species: Blanding's turtle *(Emydoidea blandingii,* sand reed grass *(Calamovilfa longifolia var. Magna)* and Milksnake *(Lampropeltis triangulum)* have been identified within 8 km of the study area. These species and their habitat are discussed in more detail below.

Blanding's Turtle:
COSEWIC: Threatened OMNR: Threatened (S3)
The Blanding's turtle preferred habitat is shallow water marshes or bogs, but can also be found in coves of large lakes that have soft muddy bottoms. Their surrounding habitat is important particularly in the summer as they like to move from aquatic habitat to terrestrial habitat. The Blanding's turtle is known to hibernate in bogs. Suitable habitat for this species is found within the Serpent River Study Area (McCarthy Chute and Four Slide Falls) (OMNR 2000).

During the spring 2009 field season NRSI biologist observed a Blanding's turtle at a distance of approximately 8.2 km from McCarthy Chutes. The location of this individual was documented and UTM coordinates were taken through the use of a Garmin GPS unit.

Sand Reed Grass:
COSEWIC : Not ranked OMNR: S3
This species can be found on active sand dunes and open plains, it can also be found in forest openings on stabilized sand dunes (OMNR 2000). Suitable habitat for this species is not likely to be present within the study area.

Milksnake:
COSEWIC: Special Concern, OMNR: Special Concern
The milksnake prefers a variety of different habitat types, such as farmlands, meadows, hardwood or aspen stands, pine forest that have brushy or woody cover, as well as river bottoms or bogs (OMNR 2000). Suitable habitat for this species is found within the Serpent River (McCarthy Chute and Four Slide Falls) study site.

Four Slide Falls

On the Natural Heritage Information Centre (2009b) no rare species are found within the Four Slide Falls portion of the study area. Two species: Coast Jointweed *(Polygonella articulate)* and Milksnake are known within 12 km of Four Slide Falls. These species and their habitat are discussed in more detail below

Coast Jointweed:
COSEWIC: Not Ranked, OMNR: (S3)
This species can be found on sand beaches of rivers and lakeshores, as well as in sandy openings in jack pine forest. It is also often found along sandy or gravelly roadsides and railway embankments (OMNR 2000).

Milksnake:
COSEWIC: Special Concern, OMNR: Special Concern
The milksnake prefers a variety of different habitat types, such as farmlands, meadows, hardwood or aspen stands, pine forest that have brushy or woody cover, as well as river bottoms or bogs (OMNR 2000). Suitable habitat for this species is found within the Serpent River (McCarthy Chute and Four Slide Falls) study site.

2.2.2 Environment Canada Species at Risk Review

Environment Canada (2009) list six species that are known to have range that overlap with the Serpent River (McCarthy Chute and Four Slide Falls) study site. These species are listed in Table 1.

Table 1. Environment Canada Significant Species known from the Study Area and Vicinity

Scientific Name	Common Name	SRANK	OMNR	COSEWIC
Canis lupus lycaon	Eastern Wolf		SC	SC
Ixobrychus exilis	Least bittern	S3B	THR	THR
Falco peregrinus	Peregrine Falcon	S2S3B	THR	SC
Emydoidea blandingii	Blanding's Turtle	S3	THR	THR
Lampropeltis triangulum	Milksnake	S3	SC	SC
Danaus plexippus	Monarch butterfly	S4B,S2N	SC	SC

Legend:

Provincial Rank (Srank)	OMNR	COSEWIC
S1 Extremely Rare	END Endangered	END-R Endangered-Regulated
S2 Very Rare	THR Threatened	THR Threatened
S3 Rare to uncommon	SC Special Concern	SC Special Concern
S4 Common	NAR Not at Risk	NAR Not at Risk
5 Very Common		
SZN Non-breeding migrants/vagrants		

2.3 Serpent River Watershed Monitoring Program

The Serpent River Watershed Monitoring Program (SRWMP) was a joint initiative of Rio Algom and Denison Mines Ltd. It was an ecosystem based aquatic monitoring program designed to evaluate the effects of mine discharges on the Serpent River, evaluate the effectiveness of mine decommissioning plans, and assess long term trends in environmental quality within the watershed.

The program consists of 5 key components: water quality, sediment quality, benthic community assessment, fish health assessment, and radiation and metal doses to humans and wildlife utilizing the watershed. This monitoring was to be conducted on a 5 year cycle and include 20 lakes and 28 stream reaches. The first cycle of sampling was undertaken in the fall of 1999 (the second in 2004).

Geographic overlap with the study area for the proposed Serpent River Hydroelectric Project occurred at only two locations: Pecors Lake outflow and McCarthy Lake outflow. At these locations water quality and benthic community assessment were carried out. [1]

[1] The lakes themselves were sampled to assess water quality, sediment quality, benthic communities, fish health, and risk to humans and wildlife consuming fish from the watershed.

Water quality sampling was conducted to assess levels of salts/total dissolved solids, metals, and pH. The most consistent indicators of mine influence across the watershed include salts/dissolved solids, manganese, barium, strontium, silicon, selenium, and silver. These indicators exceeded background concentrations in at least 40% of samples. Other parameters occasionally exceeded Provincial Water Quality Objectives, but were associated with a few specific sites.

Sediment sampling occurred in conjunction with benthic sampling at 3 locations within lakes. Extraction analyses and toxicity testing indicated that much of the metal concentrations are present in a form that is biologically unavailable.

Benthics were sampled in conjunction with sediment sampling at 3 locations within lakes, as well as in stream/river locations (i.e. Pecors and McCarthy outflows). No significant differences in benthic community characteristics were observed between references lakes and streams and those downstream of mine sites.
Fish health assessment was conducted in lakes downstream of mine sites (including Pecors and McCarthy), as well as reference lakes upstream of mine sites. Health assessment involved measurement of characteristics associated with growth, condition, and reproduction of white sucker. Similar health characteristics were seen in upstream and downstream lakes.

Seven lakes (including McCarthy and Pecors Lakes) were selected to assess potential metal and radiation doses to wildlife utilizing the watershed. Concentration measurements obtained from water, sediment, and vegetation were used to estimate potential effects. Results indicated that negative effects were unlikely.

Sport fish were sampled via overnight gill nets in McCarthy Lake to assess tissue metal and radionuclide concentrations relative to human consumption benchmarks. Smallmouth bass were sampled in 1999 and again in 2004 with northern pike. None of the tissue concentrations measured in individual fish were above human consumption benchmarks.

In summary, although water and sediment chemistry indicated mining influence, concentrations of mine-related elements were not associated with biological effects.

2.4 Serpent River Watershed State of the Environment – January 2009

Prepared by: Minnow Environmental Inc.

This document outlines an integrated approach for monitoring and assessing cumulative effects of mines on chemical and biological conditions in the Serpent River watershed. The objective is to integrate information regarding tailings management areas' performance with conditions downstream, such that existing conditions within the watershed may be considered in terms of mine sources and future conditions within the watershed may be anticipated.

Water quality, fish health, and sport fish contamination were noted and referenced from the *Serpent River Watershed Monitoring Program – 1999 Final Report and/or 2005 Report.*

2.5 McCarthy Lake Management Plan – November 2001

The McCarthy Lake Management Plan states that *no comprehensive inventory of wildlife species has been carried out in the McCarthy Lake area.* Fish species noted within the lake include lake trout, whitefish, smallmouth bass, yellow perch, and walleye.

2.6 Pecors Lake Management Plan – November 2001

The Pecors Lake Management Plan states that *no comprehensive inventory of wildlife species has been carried out in the Pecors Lake area.* Fish species noted within the lake include lake trout, walleye, whitefish, lake herring, burbot, white sucker, northern sucker, smallmouth bass, yellow perch, rock bass, bullhead, and lake chub. Preliminary consultation with MNR

2.7 Preliminary Consultation with MNR

NRSI met with Jim Trottier, Area Biologist for MNR's Blind River office, on May 5, 2009 MNR has little to no file information available with the exception of some 1984 netting results that suggest that there was a viable population of walleye in McCarthy Lake at the time. There was not a report on this netting but Jim did have a statement in their files to this effect. MNR knows very little about this part of the Serpent River. More information is avaialbe for the river from Camp Lake downstream (due to the WMP process) but this information is of little to no value for this project.

3.0 2009 Field Work

3.1 Walleye Spawning Surveys

3.1.1 Habitat Assessment

- Habitat assessments were conducted at each of the locations to identify potential spawning locations and holding locations for walleye
- Included in the assessments were substrate types, water levels and visual flow observations, potential barriers, water temperatures,

Abandoned Road Crossing downstream of McCarthy Chutes

- This area was visited on numerous occasions and different flow/water levels (from April 25th to May 17th)
- This location is not a barrier to fish migration in either direction (upstream or downstream)
- Substrates within the actual chute (old crossing) consist of bedrock
- Surrounding substrates consist of bedrock in the main channel and along sections of shoreline, sands and fine material within back eddies and slack water and some isolated areas with broken bedrock or boulder.
- There is limited to no spawning substrates present i.e. cobble, gravel, rubble
- There is holding and deep water areas but walleye may not be using these if no spawning areas are present

McCarthy Chute

- This area was visited on numerous occasions and different flow/water levels (from April 25th to May 17th)
- This location is a barrier to fish migration upstream but there is potential for fish to slip/fall down the chute from upstream
- The chute contains a bedrock substrate
- During the spring visit water levels were up and water was flowing over both the west and east side of the chute including a small 2m wide overflow channel along the east side through the forest
- Directly downstream of the chute along the west side of the river the channel substrates consist of bedrock, boulder, rubble, cobble and some gravel through a long riffle section extending downstream to the meander
- Along the east side of the river the channel flows over submersed terrestrial vegetation where substrates consist of vegetation, cobble, and gravel
- This shorter riffle section extends downstream to a large pool in front of a bedrock nub
- There is a large back eddy present along the east bank where the small overflow channel flows into and substrates consist of silt, sand and detritus
- Downstream of the bedrock nub an additional large deep back eddy pool is present
- Within the centre of the river downstream of the chute a submersed island consisting of terrestrial vegetation is present

- Walleye spawning substrates and flows are present throughout the channel between the submersed terrestrial island and the west bank.
- Isolated areas of preferred walleye spawning substrates are present between the submersed island and the east bank
- Deep holding and staging areas are present downstream of the riffles in back eddies and pools

Four Slide Area

- This area was visited on numerous occasions and different flow/water levels (from April 25th to May 17th)
- Approximately 2.0km downstream of Four Slide Falls is an additional falls and rapids which are a barrier to walleye migration upstream: spawning habitat with riffles pools, cobble, rubble and boulder are present downstream of this barrier. If walleye migrate upstream from McCarthy Lake this would be as far as they could get.
- Four Slide Falls is a barrier to fish migration upstream however fish could potentially fall over the falls downstream
- This isolates the area downstream of Four Slide Falls (to the falls 2.0km downstream) to a resident walleye population if one is present at all
- Directly downstream of Four Slide Falls is a large pool. Depths did not appear greater than 3-4m during the spring site visit
- Downstream of the pool is a large long riffle with substrates of cobble, rubble, and boulder
- The river downstream of the falls is relatively shallow with long runs, riffles and small pools
- There is very limited deep holding water for walleye especially during summer low flow periods
- Woody debris, logs, and fallen trees line the shorelines of this section of river
- Fine materials such as sand, silt and detritus have deposited in slack water
- This section of river appears more indicative of trout habitat than walleye habitat
- A long run is present upstream of the falls the substrate is made up of sand and silt material with woody debris (approximately 2-3km)

3.1.2 Fish Sampling/Angling

Old Road Crossing downstream of McCarthy Chutes

- This location was angled on 8 occasions (8 different days) from April 24th to May 17th
- Total angling time was approximately 14 hours 40 minutes
- Angling was conducted from both shorelines and extended approximately 300m downstream of the old bridge crossing location
- A total of 5 northern pike were captured and an additional 3 were observed
- No walleye were captured or observed

McCarthy Chute

- McCarthy chute was angled on 7 occasions (7 different days) from April 25th to May 17
- Total angling time was approximately 13hours 20minutes
- Angling was conducted from both shorelines and extended approximately from McCarthy lake outflow to 500m downstream of the chute
- All available habitats were angled including rapids, riffles, back eddy's, and pools
- There were no fish captured or observed

Four Slides

- Angling took place on 5 occasions (5 different days) at specific access points, from Pecors Lake outlet downstream to the falls and rapids approximately 2km downstream of Four Slide Falls (access was an issue).
- A total of approximately 10hours 15minutes of angling time
- No fish were captured at the Pecors Lake outlet (cyprinids were observed)
- No fish were captured a the falls or rapids located 2.0km downstream of Four Slide Falls
- One rainbow trout was captured approximately 250m downstream of Four Slide Falls (it should be noted that only 10minutes of angling time was dedicated towards targeting trout with a blue fox spinner)
- No other fish were captured or observed through this section of river

3.1.3 Visual Spotlighting Surveys

Visual spotlighting surveys were conducted after dark to shine 1,000,000 candle power spot lights into the water in an attempt to see walleye eyes reflecting back.

- McCarthy Chute was spotlighted twice (once from the west bank on May 4th and once from the east bank on May 14th)
- No walleye were observed

- Pecors Lake outflow was also spotlighted twice (once on May 5th and once on May 14th)
- No adult walleye were observed however 3 potential juvenile walleye (2008 young of the year) were observed at the old logging road debris downstream of the ATV bridge on May 5th
- No walleye were observed on May 14th

3.1.4 Egg Mat Sampling

The egg mats used for deployment are constructed of a metal plate measuring 38cm X 25cm X .06cm and wrapped with industrial furnace filter fabric which is held in place by 4 metal clips. A length of rope was attached to a D-ring on the plat and buoyed by a small float. The egg mats weighed approximately 7Kg. The coarse nature of the furnace filter fabric allowed the entrapment of eggs within the fibers. The filter fabric on the egg mats were scanned thoroughly for the presence of trapped eggs.

- Three egg mats were deployed at the Pecors Lake outflow on May 14th and retrieved on May 16th
- No eggs were collected in the mats

- Eight egg mats were deployed at McCarthy Chutes on May 14th and retrieved on the 15th then redeployed and retrieved on the 16th
- No eggs were collected in the mats

3.2 Herpetofauna Monitoring

The first round of amphibian sampling occurred on the evenings of May 4 and 5, 2009. Round 2 occurred on the evenings of June 4 and 6, 2009. Amphibian monitoring was conducted at a total of 7 stations. These stations are shown on Figure 1 and Figure 2 and described in more detail in Table 1.

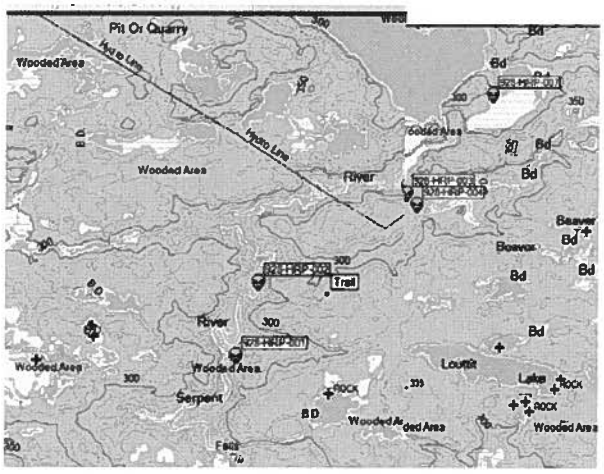


Figure 1. Downstream of Pecors Lake

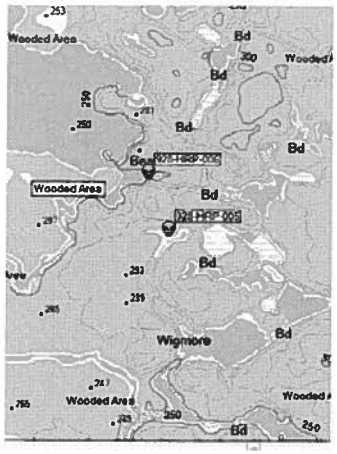


Figure 2. Downstream of McCarthy Lake

Table 2. Herpetofauna Monitoring Station Descriptions

Station	Description
HRP-001	located along river in small alder/shrub wetland.
HRP-002	located along river in small alder/shrub wetland.
HRP-003	located back to back with HRP-004, faces small oxbow.
HRP-004	located back to back with HRP-003, faces beaver pond.
HRP-005	in wetland that may be impacted by proposed road leading to Chutes/GS
HRP-006	located at beaver pond adjacent to river at McCarthy Chutes. May be impacted by back flooding.
HRP-007	control station.

Observations

Visit 1: Spring peepers, wood frogs, and a painted turtle were noted at monitoring stations. A Blanding's turtle (threatened both nationally and provincially) was seen approximately 8.2km from McCarthy Chutes while in transit. A snapping turtle was seen approximately 250m from HRP-006 and a garter snake was observed approximately 100m, both near the same wetland complex as HRP-006.

Visit 2: Springs peepers, gray tree-frogs, and green frogs were observed while conducting point counts at monitoring stations. No other species were observed.

4.0 Site Access Issues

- All sites were accessed with the use of ATV's
- No truck access available due to wet, muddy, soft logging roads and washouts
- Logging roads can be traveled by 4x4 trucks later in the year

- *Old Road Crossing downstream of McCarthy*
  - This location can be accessed from either side of the river with the use of ATVs and a 30-45minute ride
  - The east side can be accessed later in the year with a 4x4 truck but the west side cannot due to washouts

- *McCarty Chutes*
  - The site access to get to the chutes was from the east side of the river via 45minute ATV ride along logging roads then a 100m walk through the bush to access the east side of the chutes
  - Access to the west side of the chutes was with the use of a boat driving across McCarthy Lake to the top end of the chutes and walking down to the west side
  - ATV access was not possible along the west side due to wash outs and flooding
  - Later in the year the east side can be accessed with a 4x4 truck but the west side cannot due to wash outs.

- *Four Slides*
  - Limited access to the site even with ATVs due to one creek crossing. Water levels of the creek have to drop before access can be gained
  - After water levels drop Four Slides can be accessed with ATVs but 4x4 trucks do not have access to the site at any time due to blocked ATV and Snowmobile Bridge at Pecors Lake plus an additional creek crossing.
  - ATV ride is approximately 45min to 50min then 200m walk through bush to access site.
  - Pecors lake crossing can be accessed with 4x4 truck later in the year

An attempt to access Four Slides from McCarthy Lake via boat was unsuccessful due a barrier in the form or a large riffle/rapids and chutes/falls (approximately 3.8km upstream from McCarthy Lake) which also acts as barriers to walleye migration up stream.

5.0 References:

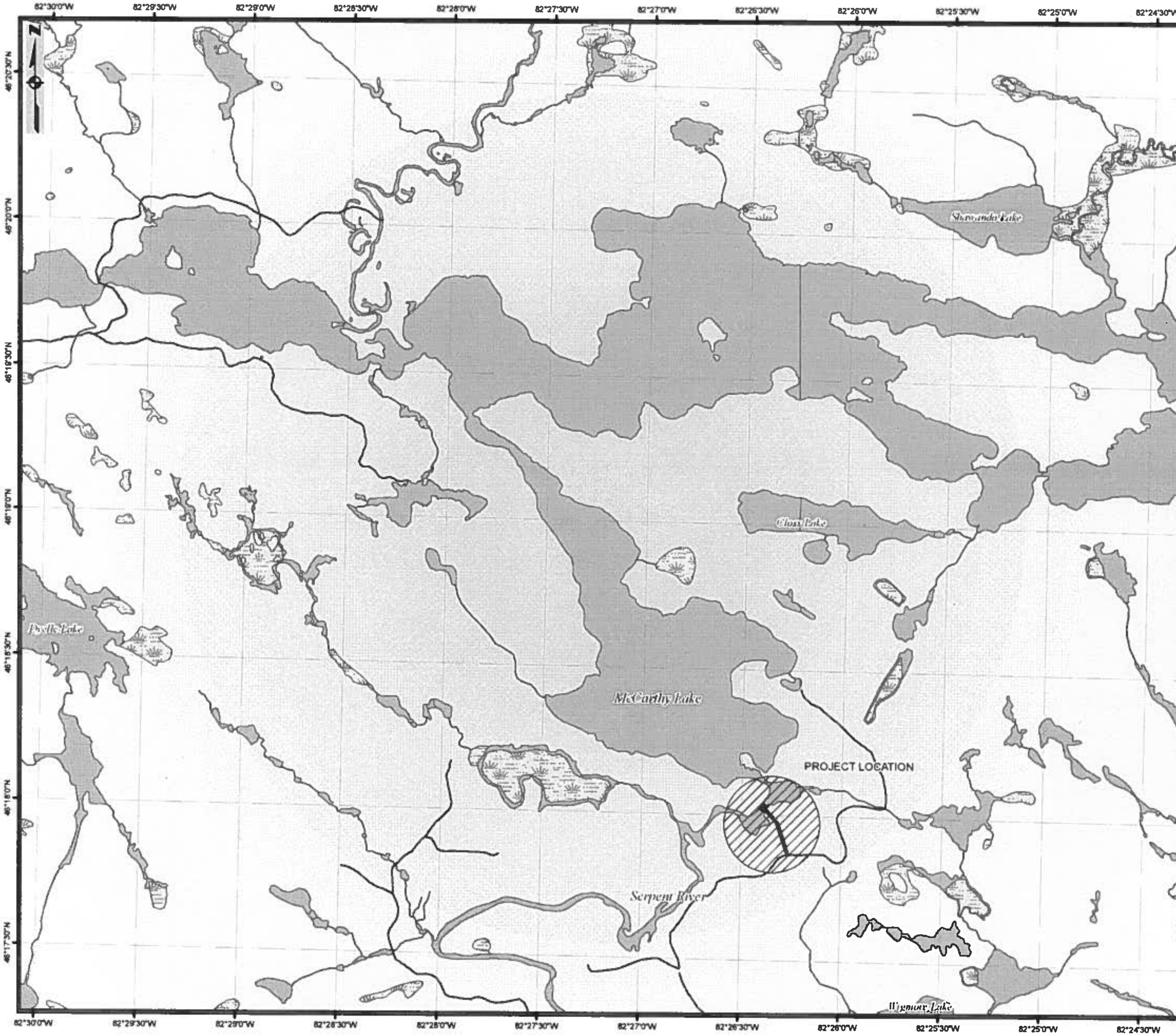
Environment Canada. 2009. Species at Risk. Online: http://www.speciesatrisk.gc.ca/default_e.cfm

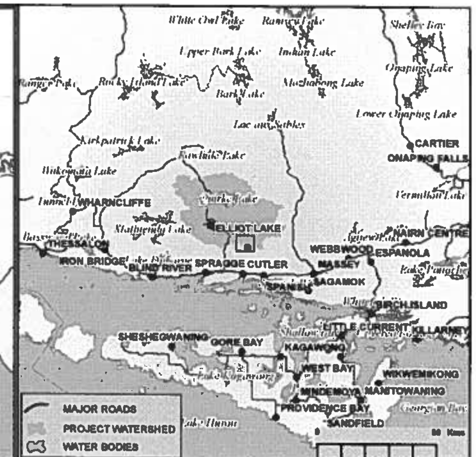
Natural Heritage Information Centre. 2009a. Natural Areas Search. Ministry of Natural Resources. Online: http://nhic.mnr.gov.on.ca/MNR/nhic/areas.cfm

Natural Heritage Information Centre. 2009b. Species Search. Ministry of Natural Resources. Online: http://nhic.mnr.gov.on.ca/MNR/nhic/species.cfm

Ontario Ministry of Natural Resources, 2000. Significant Wildlife Habitat Technical Guide – Appendix G.

APPENDIX I
Related Figures





NOTES:

1. MAPPING INFORMATION SHOWN ON THE DRAWING HAS BEEN DERIVED FROM THE DIGITAL DATA FROM MNR DATABASE
2. PROJECTED COORDINATE SYSTEM IS NAD 1983, UTM ZONE 17N

LEGEND

- DAM SITE
- WSC GAUGE
- MAJOR ROADS
- PROPOSED ACCESS ROAD
- RAILWAY
- EXISTING UTILITY LINES
- WATER BODIES

DAM SITE LOCATION:

UTM COORDINATES: 389105(E), 5128446(N) (m)

GEOGRAPHIC COORDINATES: 82° 26' 24" (W), 46° 18' 02" (W)

Xeneca Power Development Inc

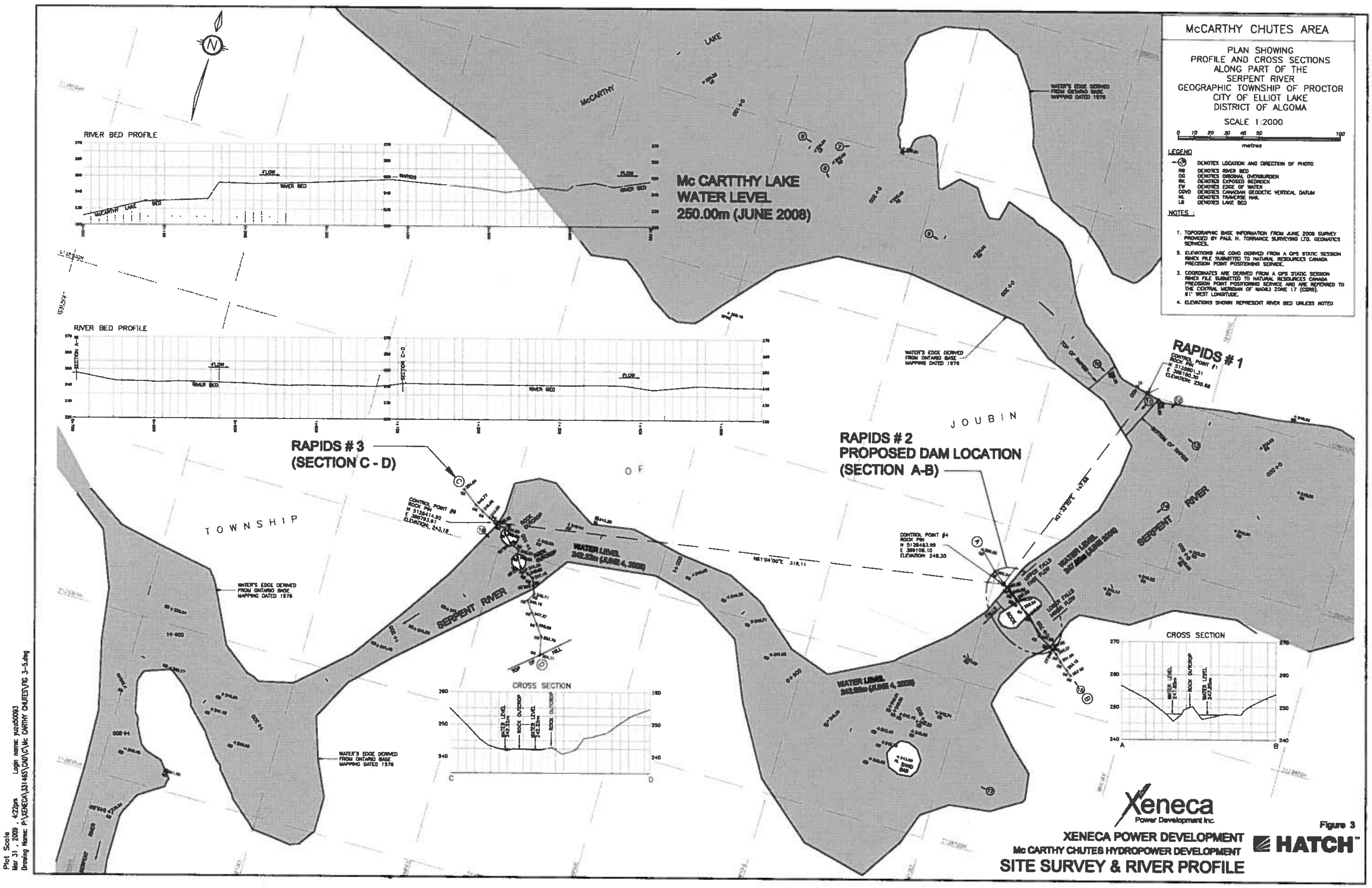
0 1 : 25,000 1 Kms

XENECA POWER
SERPENT RIVER HYDRO PROJECT
MCCARTHY CHUTES - LOCATION PLAN

FIGURE 1

HATCH

Figure 1


McCARTHY CHUTES AREA
PLAN SHOWING
PROFILE AND CROSS SECTIONS
ALONG PART OF THE
SERPENT RIVER
GEOGRAPHIC TOWNSHIP OF PROCTOR
CITY OF ELLIOT LAKE
DISTRICT OF ALGOMA
SCALE 1:2000
0 10 20 30 40 50 100
metres
LEGEND
DENOTES LOCATION AND DIRECTION OF PHOTO
RB DENOTES RIVER BED
OG DENOTES ORIGINAL OVERBURDEN
RK DENOTES EXPOSED BEDROCK
EW DENOTES EDGE OF WATER
CGVD DENOTES CANADIAN GEODETIC VERTICAL DATUM
NL DENOTES TRAVERSE NAIL
LB DENOTES LAKE BED
NOTES :
1. TOPOGRAPHIC BASE INFORMATION FROM JUNE 2008 SURVEY PROVIDED BY PAUL H. TORRANCE SURVEYING LTD. GEOMATICS SERVICES.
2. ELEVATIONS ARE CGVD DERIVED FROM A GPS STATIC SESSION RINEX FILE SUBMITTED TO NATURAL RESOURCES CANADA PRECISION POINT POSITIONING SERVICE.
3. COORDINATES ARE DERIVED FROM A GPS STATIC SESSION RINEX FILE SUBMITTED TO NATURAL RESOURCES CANADA PRECISION POINT POSITIONING SERVICE AND ARE REFERRED TO THE CENTRAL MERIDIAN OF NAD83 ZONE 17 (CSRS). 81° WEST LONGITUDE.
4. ELEVATIONS SHOWN REPRESENT RIVER BED UNLESS NOTED
RIVER BED PROFILE
FLOW
RIVER BED
McCARTHY LAKE BED
McCARTHY
LAKE
Mc CARTTHY LAKE
WATER LEVEL
250.00m (JUNE 2008)
RAPIDS # 1
RAPIDS # 2
PROPOSED DAM LOCATION
(SECTION A-B)
RAPIDS # 3
(SECTION C - D)
JOUBIN
OF
TOWNSHIP
SERPENT RIVER
WATER LEVEL
242.22m (JUNE 4, 2008)
WATER'S EDGE DERIVED
FROM ONTARIO BASE
MAPPING DATED 1978
CONTROL POINT #4
ROCK PIN
N 5128463.96
E 389106.10
ELEVATION: 248.35
N81°04'00"E 318.11
CROSS SECTION
WATER LEVEL
ROCK OUTCROP
A
B
C
D
Xeneca
Power Development Inc.
XENECA POWER DEVELOPMENT
Mc CARTHY CHUTES HYDROPOWER DEVELOPMENT
SITE SURVEY & RIVER PROFILE
Figure 3
HATCH™
Plot Scale
Mar 31, 2009, 4:22pm
Login name: yuzo50093
Drawing Name: P:\XENECA\331465\CAD\C\Mc CARTHY CHUTES\FIG 3-5.dwg
Figure

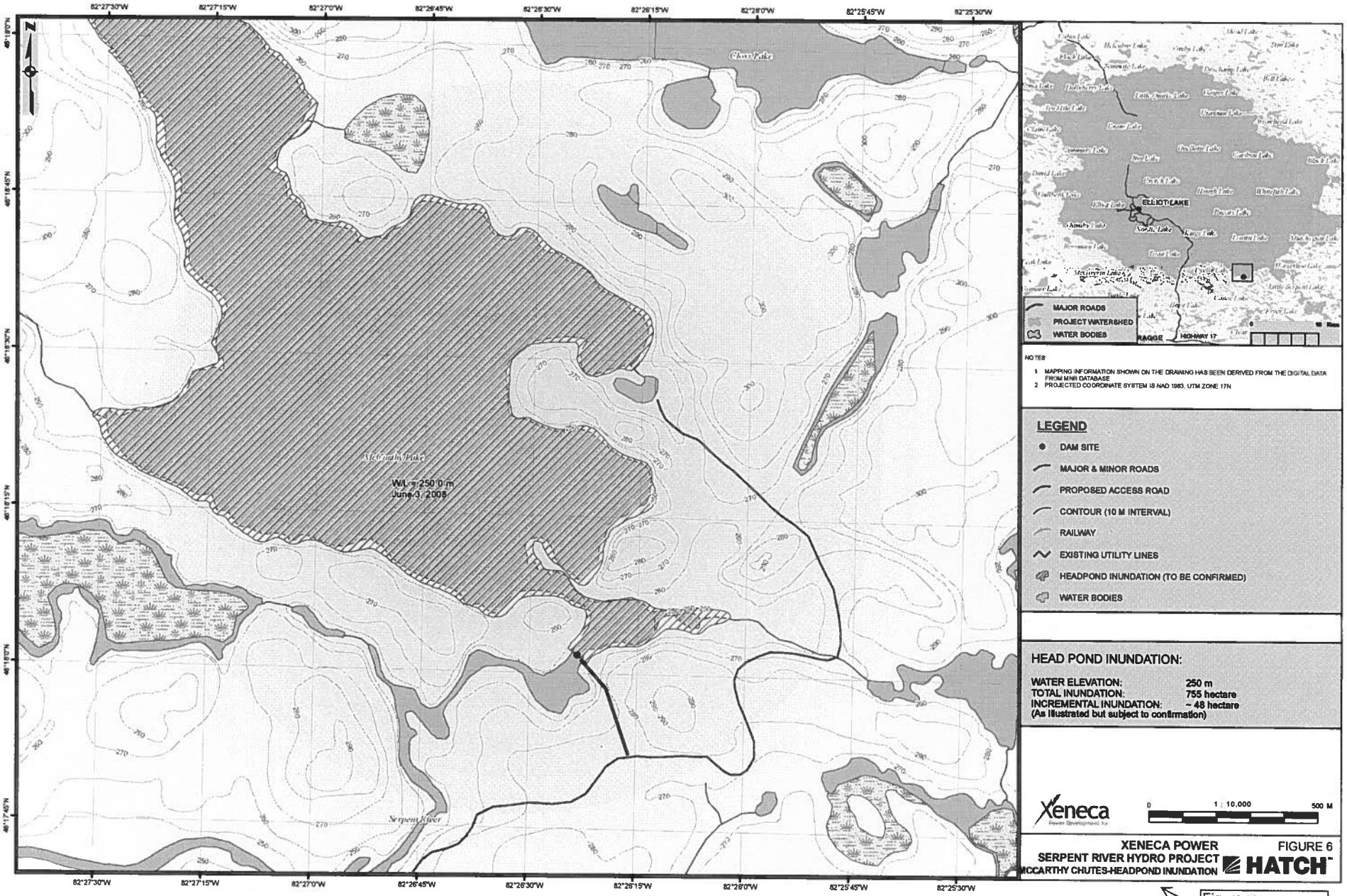

82°27'30"W
82°27'15"W
82°27'0"W
82°26'45"W
82°26'30"W
82°26'15"W
82°26'0"W
82°25'45"W
82°25'30"W
46°19'0"N
46°18'45"N
46°18'30"N
46°18'15"N
46°18'0"N
46°17'45"N
N
Ghost Lake
McCarthy Lake
WL = 250.0 m
June-3, 2008
Serpent River
ELLIOT LAKE
North Lake
Ragged Lake
HIGHWAY 17
MAJOR ROADS
PROJECT WATERSHED
WATER BODIES
NOTES:
1. MAPPING INFORMATION SHOWN ON THE DRAWING HAS BEEN DERIVED FROM THE DIGITAL DATA FROM MNR DATABASE
2. PROJECTED COORDINATE SYSTEM IS NAD 1983, UTM ZONE 17N
LEGEND
DAM SITE
MAJOR & MINOR ROADS
PROPOSED ACCESS ROAD
CONTOUR (10 M INTERVAL)
RAILWAY
EXISTING UTILITY LINES
HEADPOND INUNDATION (TO BE CONFIRMED)
WATER BODIES
HEAD POND INUNDATION:
WATER ELEVATION: 250 m
TOTAL INUNDATION: 755 hectare
INCREMENTAL INUNDATION: ~ 48 hectare
(As illustrated but subject to confirmation)
Xeneca
1 : 10,000
500 M
XENECA POWER
SERPENT RIVER HYDRO PROJECT
MCCARTHY CHUTES-HEADPOND INUNDATION
FIGURE 6
HATCH

Figure 6

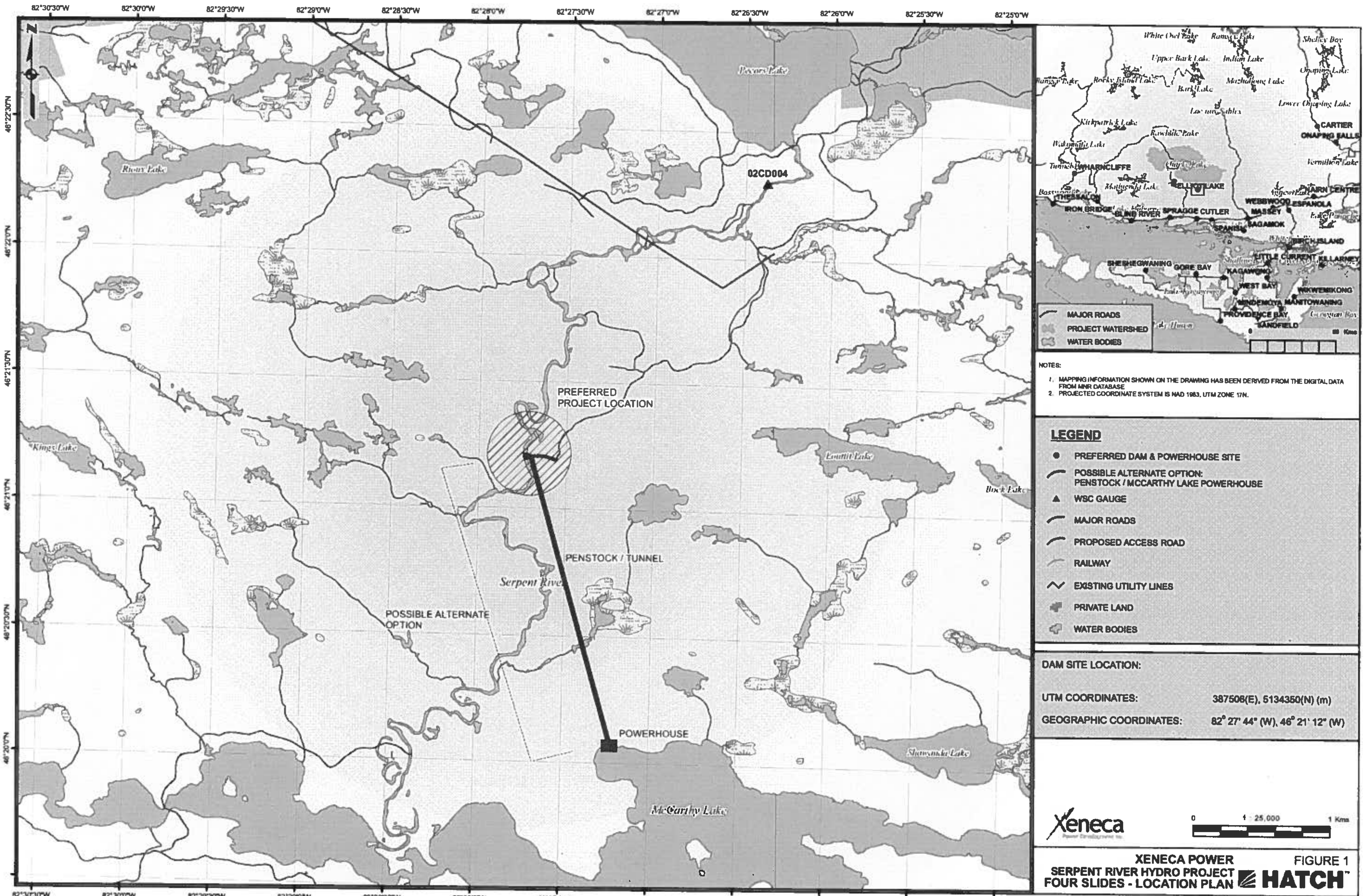
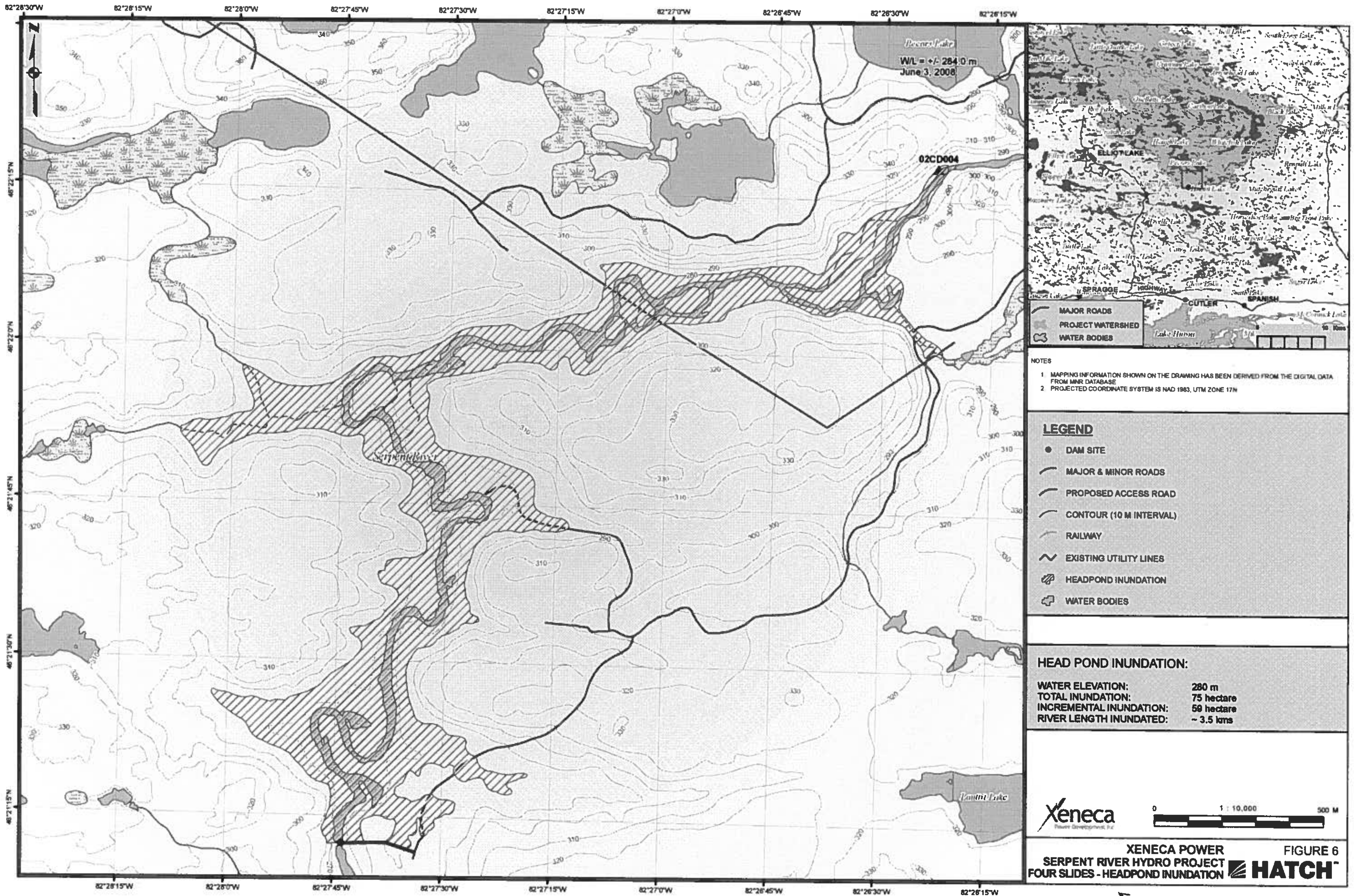

PREFERRED
PROJECT LOCATION
PENSTOCK / TUNNEL
POSSIBLE ALTERNATE
OPTION
POWERHOUSE
Serpent River
McCarthy Lake
Shawanda Lake
Loutit Lake
Rock Lake
Pecors Lake
Rioux Lake
Kings Lake
02CD004
MAJOR ROADS
PROJECT WATERSHED
WATER BODIES
NOTES:
1. MAPPING INFORMATION SHOWN ON THE DRAWING HAS BEEN DERIVED FROM THE DIGITAL DATA FROM MNR DATABASE
2. PROJECTED COORDINATE SYSTEM IS NAD 1983, UTM ZONE 17N.
LEGEND
PREFERRED DAM & POWERHOUSE SITE
POSSIBLE ALTERNATE OPTION: PENSTOCK / MCCARTHY LAKE POWERHOUSE
WSC GAUGE
MAJOR ROADS
PROPOSED ACCESS ROAD
RAILWAY
EXISTING UTILITY LINES
PRIVATE LAND
WATER BODIES
DAM SITE LOCATION:
UTM COORDINATES: 387506(E), 5134350(N) (m)
GEOGRAPHIC COORDINATES: 82° 27' 44" (W), 46° 21' 12" (W)
Xeneca
0 1 : 25,000 1 Kms
XENECA POWER
SERPENT RIVER HYDRO PROJECT
FOUR SLIDES - LOCATION PLAN
FIGURE 1
HATCH

Figure 4



W/L = +/- 284.0 m
June 3, 2008
02CD004
Pecors Lake
MAJOR ROADS
PROJECT WATERSHED
WATER BODIES
ELLIOT LAKE
SPRAGGE
CUTLER
SPANISH
Lake Huron
NOTES
1 MAPPING INFORMATION SHOWN ON THE DRAWING HAS BEEN DERIVED FROM THE DIGITAL DATA FROM MNR DATABASE
2 PROJECTED COORDINATE SYSTEM IS NAD 1983, UTM ZONE 17N
LEGEND
DAM SITE
MAJOR & MINOR ROADS
PROPOSED ACCESS ROAD
CONTOUR (10 M INTERVAL)
RAILWAY
EXISTING UTILITY LINES
HEADPOND INUNDATION
WATER BODIES
HEAD POND INUNDATION:
WATER ELEVATION: 280 m
TOTAL INUNDATION: 75 hectare
INCREMENTAL INUNDATION: 59 hectare
RIVER LENGTH INUNDATED: ~ 3.5 kms
Xeneca
0
1 : 10,000
500 M
XENECA POWER
SERPENT RIVER HYDRO PROJECT
FOUR SLIDES - HEADPOND INUNDATION
FIGURE 6
HATCH

Figure

Serpent River Hydroelectric Development

Natural Environment Scoping Meeting

July 9, 2009 1:30 p.m.

MNR offices, 64 Church Street, Sault Ste. Marie

1. Welcome and Introductions (Rob Steele, NRSI)
2. Brief Project Concept Description (Mark Holmes, Xeneca Power)
3. Transition to GEA/REA (Mark Holmes)
4. Summary of Existing Information (Rob Steele)
5. Summary of 2009 Field Work to date (Rob Steele)
6. Description of Site Access Challenges (Rob Steele)
7. Agency Requirements for Field Work
    - Ministry of Natural Resources
    - Ministry of the Environment
    - Department of Fisheries and Oceans
8. Waterpower Site Strategy (WSS) review and Next Steps
9. Fieldwork Schedule

Directions:
Airport Road North
East on Second Line to Hwy 17
South on Hwy 17 (Hwy 17 turns into Pim Street)
Follow Pim St. to Queen Street and turn left (East)
The first right is Church Street

64 Church is on the left hand side.
Meeting Site Phone 705 941-5128

Serpent River Hydroelectric Development
Natural Environment Scoping Meeting
July 9, 2009 1:30pm

Held at Ministry of Natural Resources Sault Ste. Marie District Office, 64 Church St.

Attendees:

MNR: Erin Nixon, Jim Trottier, Ernie Gatien, Julie Johnston, Kim Mihell
MOE: Carrie Hutchison, Ed Snucins
DFO: Jennifer Hallett
Xeneca: Mark Holmes, Ed Larattaoretta
NRSI: Rob Steele, Lisa Keable

Rob Steele of NRSI began with a welcome and introductions around the table.

Mark Holmes of Xeneca Power gave a brief overview of the project concept and of progress to date. He described the two sites under discussion (McCarthy Chute and Four Slide Falls). In response to a question from Erin Nixon, Mark provided additional detail on their consultation with First Nations:

- The 180 day First Nations Consultation period has ended. Three First Nations were consulted: Serpent River, Sagamok, and Mississauga.
- Serpent River FN did not have any direct opposition to the project; instead feel that they have issues to work out with the government.
- Sagamok FN has been supportive of the projects. Open-ended consultation will continue with Sagamok.
- Mississauga FN has a peripheral interest only
- Xeneca has developed a Code of Conduct, provided to the FN communities, which describes how consultation will occur. *Mark will send a copy of the Code of Conduct to all meeting attendees ~~— provide STATUS —~~ Ceode has~~als~~ been distributed to all paa~~p~~rticipants (July 13/09)~~since the meeting~~.*
- *Carrie will send Mark MOE's recommendations for FN consultation for additional reference.*

Rob gave a summary of field work to date at the two sites.

- Field work has been more intensive at McCarthy Chute due to access challenges at Four Slide Falls.
- Walleye spawning surveys have not found much to date. Suspect that Four Slide Falls may be more trout than walleye – TBD.
- Noted that access challenges will impact the size/type of boat which can be used at the sites, which impacts the type of equipment which can be used. Discussed further later in meeting.

Agency requirements for field work were then discussed. Rob began by explaining what NRSI and Xeneca are hoping to achieve at this meeting – verbal agreement of what will be included in field work program, including level of effort (bearing in mind the access challenges) and methodologies.

Each agency was then given the opportunity to discuss their requirements.

MNR:

- Erin Nixon began the MNR's discussion with the disclaimer that this meeting is occurring earlier in the process than set by procedure and policy (EA meeting typically occurs after Applicant of Record has been issued), and emphasized that the MNR is not prepared at this time to provide the proponent with a comprehensive list of what will be required. The MNR can provide an overview of what may be required, but this is subject to future changes/additions. Any work undertaken by the proponent at this time is at the proponent's own risk, as the requirements may change.
- Jim Trottier then presented some initial thoughts on the field work program. Explained that the MNR basically wants two questions answered, for both aquatic and terrestrial environments:
  - What exists now?
  - What will be changed/impacted?
- ~~Little work has been done to date in either area. Species introductions have occurred in McCarthy Lake – not sure what is there now, so inventory work will need to be done. Also, McCarthy Lake is a lake trout lake, so spawning area work will be important.~~ Formatted: Font: Bold
- **HERE –WE NEED TO SAY WHAT WORK WAS DONE IN 2009, NOT WHAT WAS NOT DONE**
- Four Slide Falls – 75ha impoundment is significant from Jim's perspective. Will require terrestrial surveys of areas that will be inundated (will be required for McCarthy Chute as well). Formatted: Bullets and Numbering
- Mark responded, explaining that Pecors Lake levels will be unaffected – flooding will stop short of the lake. Also, the level of fluctuation in McCarthy Lake will be insignificant (+/-5cm). Rob felt that level of fluctuation will not impact lake trout spawning and didn't think much fisheries work will be needed in lake.
- Rob provided an overview of fisheries work he anticipates for McCarthy Chute:
  - Will cover an area 4 ha upstream and downstream of dam
  - Will use canoe or small run-a-bout
  - Short duration gill netting
  - Electroshocking boat, if access permits use of electroshocking boat
  - Angling
  - Small fish population – seining shallow areas; backpack electrofishing; minnow trapping
  - Habitat studies - General approach proposed is to first understand the fish species using the area, and from there develop more detailed habitat work
- Rob provided an overview of fisheries work he anticipates for Four Slide Falls:
  - Use a raft

- Short duration gill netting
- Trap nets
- Small fish sampling same as McCarthy
- Electroshocking boat, if access permits use of electroshocking boat (require reconnaissance mission to determine this)
- If access only permits a canoe to be used, gillnets but not trap nets will be used

- Jim did not have any major comments on the proposed program at this time.
- Rob extended an offer to all present to join NRSI in their reconnaissance field work
- Jim offered to fly over the sites the following day while flying for moose values and take some pictures if available. Lisa Keable to join him, if space available in helicopter.
- Jim informed NRSI that aerial photos are available from 1994. Ernie is going to check on the photos available, as there may be some more recent, site specific photos available taken for logging, etc.
- Ed Snucins asked about the likelihood of trout. Jim thought that brook trout would be unlikely, but maybe rainbow trout coming in from stocked areas (one has been caught). Ed suggested taking a closer look at trout – temperature, groundwater upwelling areas, coldwater areas, etc. Rob responded saying that that work is a standard part of their field program. They will be putting data loggers in as well.
- Rob described NRSI's approach to SAR. He proposed a habitat-based approach. If there are two areas of equal habitat, will only study one intensively, under the assumption that the other one will contain similar species. Jim thought that this sounds reasonable.
- Jim made the point that some initial work can be done just using topo maps. For example, potential peregrine falcon habitat can be identified initially by looking on a map for cliffs next to water.

MOE:

- Carrie began by re-iterating Erin's cautionary comments. While they can provide an initial idea of requirements to the proponent at this meeting, things will be changing and any field work undertaken at this time is at the risk of the proponent.
- Ed Snucins began by talking about water quality. Said that while there is quite a bit of data for these outlets, most of it is mine-related data, and wonders if it includes the general chemistry info MOE likes to see. Suggested that additional data may be required to expand parameter list. Standard parameters include (list may not be comprehensive):
  - pH
  - Conductivity
  - Alkalinity
  - Solids (dissolved, suspended)
  - Cations
  - Anions
  - Nutrients

    - Metals
    - Temperatures
- Ed asked if existing data is up-to-date. Mark and Rob responded that yes, the data is up-to-date. Reports were published in 1995, 2005, and a new report will be coming out next year.
- NRSI will review studies for completeness and get back to MOE.
- Ed asked whether any dewatering will occur. Mark explained that operation is run-of-the-river, with a consistent flow, and maybe some intermediate peaking. Generally there should not be significant dewatering. Mark could not give a definitive answer on the water diverted into penstock vs. the water flowing through the natural river, but stated that it will not be bone dry.
- Ed asked about other users and impacts on them. Mark responded that the area of impact will only be ~100m. Ed questioned why the map in the briefing notes showed a 3km penstock. Mark explained that there are two design options, and the 3km option is the least preferred option.
- Mercury contamination in fish was discussed. Ed said that MOE will be looking for monitoring of levels in fish before and after flooding, and in reference areas. Will want 20< of each species, covering all size ranges – following guidelines of the "Sportfish Contaminant Monitoring Program." Rob responded that there will not be a lot of flooding, so there will be minimal mercury increases. However, tissue samples and analysis are easily ~~accommodate~~accommodated within the program. Carrie added that samples from the water column should be collected as well. Ed added that the samples should be sent to Flett Research, a low level mercury lab in Manitoba. There was agreement among all that some increases in mercury are to be expected. The goal of this monitoring is to document the changes and ensure that users are aware.
- Blasting was discussed briefly. Some work will be required, but MOE needs for info before outlining any requirements.

DFO:

- Jennifer Hallett began with the same disclaimer as Erin and Carrie. The requirements presented here are not a final list, and are subject to change.
- At this point, can assume that the federal EA process will be triggered (at minimum, because of the scope/footprint of the dam, destruction of habitat, requirement of an authorization)
- Will work to coordinate provincial and federal EAs, but scoping requirements will likely be different
- DFO will require:
    - Hydrology of impacted waterways
    - Bathymetry
    - Expected H2O level fluctuations
    - Potential erosion/sedimentation from dam construction
    - Species mapping (see maps created for MNR); spawning areas, feeding, etc.
    - Invertebrate sampling
    - Proposed design and construction plans

- Mapping tributaries as far as extent of flooding
- Mapping downstream areas impacted (changes in flow, dewatering)
- Expected depth of flooding
- Testing blasting rocks (e.g., acid rock drainage)
- Access roads – e.g., locations, waterway crossings

- Rob asked about the level of preciseness required for habitat mapping at the EA stage. Is identification and good area estimates (to ~80%) sufficient, or is full quantification required (which will be coming later, as per DFO requirements)? Jim's preliminary answer is that good area estimates will fulfill MNR requirements at the EA stage.
- Jennifer explained the key difference between provincial and federal EAs. A provincial EA is a living document, but in a federal EA when a decision is made the document is closed. This is where there are coordination challenges. Will require the more precise mapping for the federal EA.
- Ed Snucins added that actual monitoring at the lake (of levels) would be good. Mark INDICATED THAT ~~thinks~~ there IS ~~may~~ already be a LAKE LEVEL monitoring station. HE WILL LOOK INTO THIS AND REVIEW/PROVIDE THE DATA. ~~will look into this.~~

- Jim asked about breeding bird work. Rob responded that this work is to be done in 2010. Made note of the Ontario Breeding Bird Atlas protocol.

- Rob finished up confirming that NRSI will be in touch with the agencies regarding their field work plan. He extended an invitation to all interested staff to participate in field work/site visits. NRSI will be sending a draft scoping document to all agencies. HERE WE NEED TO TELL MNR/MOE WHEN THEY WILL GET THE SCOPING DOCUMENT AND WHEN WE NEED THEIR REVIEW. IT IS IMPORTANT WE MAKE MORE PROGRESS ON FIELD PROGRAMS IN THE SUMMER AND FALL OF 2009 AND THEIR INPUT IS ESSENTIAL.

Meeting adjourned at 4 pm.

MINUTES OF EA COORDINATION MEETING
McCarthy Chute & Four Slide Falls Hydro Electricity Project

Date: Monday, January 24th, 2011, 9:30am	
Meeting Location:	Delta Waterfront Hotel, 208 St. Mary's River Drive, Sault Ste. Marie, Ontario and via Teleconference Call
Prepared By:	Kai Markvorsen

Attendees:

Ministry of Natural Resources:

- Kim Mihell, Renewable Energy Planner, Sault Ste Marie District (KM)
- Emily Green, Renewable Energy Biologist, Sault Ste Marie District
- Lisa Keable, Renewable Energy Biologist, Sault Ste Marie District (LK)
- Adam Dyck, Renewable Energy Planning Intern, Sault Ste Marie District
- Sheila Walsh, Resource Liaison Specialist, Sault Ste Marie District
- Kirk Dillabough, Blind River Area Supervisor, Sault Ste Marie District

Fisheries and Oceans Canada

- Jennifer Hallet, Fish Habitat Biologist (JH)

Ministry of the Environment

- Ron Dorscht, Senior Environmental Officer
- Tymothy Garside, Investigator, Area Supervisor

<u>Via Teleconference</u>

Ministry of Natural Resources:

- Sandra Dosser, Renewable Energy Coordinator, Northeast Region (SD)
- Jim Trottier, Blind River Area Biologist, Sault Ste Marie District
- Rich Pyrce, Hydrologist, Northeast Region (RP)

Ministry of the Environment

- Carrie Hutchison, Environmental Planner (CH)
- Todd Kondrat, Surface Water Specialist (TK)
- Rod Sein, Surface Water Specialist

Ministry of Energy and Infrastructure

- Helen Kwan, Senior Policy Advisor REA Office (HK)

Transport Canada

- Haya Finan, Environmental Officer (HF)

Canadian Environmental Assessment Agency

- Dave Bell, Project Manager (DB)

Ministry of Aboriginal Affairs

- Dave Pickles, Consultation Unit Team Lead

	Ministry of Northern Development Mines and Forestry • Daw-Ann Metsaranta, Regional Land Use Geologist Natural Resources Canada • Caitlin Scott, Junior Policy Analyst (CS) Environment Canada • Mike Shaw, Environmental Assessment Officer (MS) Xeneca Power (by Teleconference) • Mark Holmes (MH) • Dean Assinewe (DA) OEL-HydroSys Inc. (Environmental Approvals Consultants): • Tami Sugarman, Environmental Approvals Senior Advisor (TS) • Kai Markvorsen Natural Resource Solutions Inc. (Biological Consultants) • Rob Steele
Regrets:	Ministry of Transportation • Paul Marleau, Corridor Management Planner Ministry of Northern Development and Mines • Jennifer Lillie-Paetz, Environmental Assessment Coordinator Ministry of Energy and Infrastructure • Brett Smith, Senior Advisor Indian and Northern Affairs Canada • Mei Ling Chen, Environment Officer
Attachments	Project Description for Four Slide Falls and McCarthy Chutes Waterpower Developments

The following Meeting Minutes were recorded by Kai Markvorsen of OEL-HydroSys Inc. The notes reflect the understanding of discussions held at the meeting and should any of those present have different interpretations or recollections, they should advise of necessary revisions.

Note: Following the EA coordination meeting on Jan 24th, 2011, Laurie Brownlee, Environmental Planner /EA Coordinator Northern Region, assumed the role primary contact for the MOE from Paula Allen. As a result, comments on the meeting minutes were made by Laurie Brownlee working from Paula Allen's notes from the meeting.

Distribution of these meeting minutes to anyone other than a participant, or an invited participant requires prior approval by all those on the distribution list.

Item	Item Description	Action by
1.0	Introductions and acceptance of meeting agenda. Meeting objectives (TS) • to initiate the discussion surrounding information that has been distributed to regulators for both Four Slide Falls and McCarthy Chute projects; • to identify applicable legislation and permitting requirements early in process; • to identify any gaps in data analysis; • to open dialogue with ministries and agencies OEL (TS) introduced the Four Slide Falls and McCarthy Chutes projects and outlined that the proponent would separately assess each project through the Class Environmental Assessment for Waterpower Projects. Additionally, it is expected that the projects will trigger the requirement for a Federal Environmental Screening due to law list triggers (*Navigable Waters Protection Act* and the *Fisheries Act*). As a result it was the intent of the proponent to harmonize the Provincial and Federal processes into one environmental assessment planning process for each site and to produce a single environmental report for each project which would address the requirements of both the provincial and federal processes. MOE (CH) and MNR (SD) advised that, because the Waterpower Class EA classifies power lines under 115kV capacity to be exempt from assessment under the Waterpower Class EA, the MNR Class EA for Resource Stewardship and Facility Development (RSFD) process is required to assess the transmission line component for both projects. It was agreed that the RSFD and Waterpower Class EA processes can be harmonized. MOE stated that, when harmonizing these processes, all public notices must mention the RSFD Class EA. Xeneca stated that notices referenced the transmission line, but MOE clarified that the RSFD Class EA must be specifically listed. OEL agreed to look at past public notices, to determine if any notices will need to be re-issued. MNR noted that if notices are reissued there is an opportunity to coordinate the EA notices with the Site Release notices for Four Slide Falls. The MNR requested that a Part 1 Work Permit Application be submitted with a map showing the proposed location of the transmission line corridor so that scoping of the projects through the Class EA-RSFD could be initiated. MNR conducts the screening and categorization of the project under the RSFD Class EA, and this is triggered by the work permit application submission.	**Complete and submit Part 1 Work Permit Application on behalf of Xeneca.** **OEL to review past notices and determine need for re-issuance to fulfill RSFD requirements**

	CEAA (DB): Provided an overview of the federal Screening process as it pertained to the two projects. And confirmed that, because of the triggers under the *Navigable Waters Protection Act* and the *Fisheries Act* that Transport Canada and Fisheries and Oceans Canada would be acting as Responsible Authorities (RAs) for the project. DB also indicated that a short follow-up meeting between CEAA and the RAs would be scheduled to determine project specific responsibilities.	
2.0	Project/Waterway Classification OEL (TS) explained that, as indicated in the project descriptions issued for both projects, Xeneca was proceeding with the assessment of both facilities with the understanding that they would be classified as "new projects on a managed waterway" as defined in the Waterpower Class EA document, citing the presence of existing water control structures downstream of the project sites. According to this definition, a formal Notice of Completion to all stakeholders identified through the assessment process would be issued but the projects would forgo the requirement for the issuance of a Notice of Inspection (and associated 30 day review period) required for projects located on unmanaged waterways. However, Xeneca is willing to submit the draft report for agency review and comment prior to issuing a Notice of Completion for the projects. The classification of the reach of the Serpent River where the proposed projects would be located as a managed or unmanaged was debated by the regulators present. The MOE and MNR disagreed with the determination that the projects were located on a managed waterway as the existing water control structures were located a significant distance downstream from the proposed projects. Furthermore, both proposed projects are located upstream of the Zone of Influence delineated in the existing Water Management Plan. Following discussions a focus group meeting was suggested between MOE, MNR, Xeneca, OEL and the MEI renewable energy facilitation office (REFO) once additional hydraulic modeling information and the proposed operating strategy for the projects was available to properly determine the classification of the waterway as unmanaged or managed for the projects. MOE advised Xeneca that proceeding with the process under a managed waterway designation is at the risk of the proponent.	**Focus meeting to be arranged between MOE/MNR/ MEI: REFO/Xeneca/ OEL to determine managed/ unmanaged status**
3.0	Project Timelines and Scheduling OEL (TS) explained that, in order to meet the FIT contract deadlines for the projects, Xeneca will have to construct and commission both the McCarthy Chute and Four Slide Falls facilities by early 2015. In order to meet that deadline it is Xeneca's intention to have a draft ER document submitted to regulators for review by June 2011. Therefore, in order to address any	

	outstanding informational requirements required for the EA it is Xeneca's intention to provide all baseline information collected over the past two field seasons along with updated hydrological modeling and the operational plans for the facilities to regulators over the following weeks for their review. This information would be used to scope the remaining informational gaps to be addressed over the course of the 2011 field season. Because the information gathered through 2011 would not be ready in time for inclusion in the ER, Xeneca would address any identified issues through commitments for follow-up data collection or monitoring in support of project permitting. TS added that Xeneca fully recognizes that this approach deviates from the typical EA planning process but noted that Xeneca feels that it is required in order to meet project deadlines. NRSI (RS) provided a hard copy of the baseline biological reports detailing work completed to date to the MNR representatives and explained that further copies would be available for distribution to all interested agencies following the meeting. RS also outlined that Xeneca was committed to addressing and eliminating information gaps (e.g. assessment of transmission line and access road routes which were not determined in time for assessment in 2010) in the baseline data through the 2011 field season. MOE (CH) responded with their concerns and indicated that, by taking this approach Xeneca would be increasing their risk with regard to the potential for a Part II Order following the issuance of the projects Notice of Completion. DFO (JH) indicated that they would be unable to sign off on the EA for the project or give any approvals until the assessment of all identified issues/effects related to the project had been completed. CEAA (AL) followed up on this statement and noted that federal scoping of the projects has yet to be completed (expected early March), and that all federal information requirements would have to be met in the document before any agency would be able to sign off on it. MNR (SD) indicated that the Ministry was not comfortable with the proposed approach and would need to review all work completed to date. Any disposition of Crown lands would require the completion of an EA process which would directly conflict with Xeneca's proposed timelines especially considering field study permits for the upcoming 2011 field season had not yet been received. MNR (LK) added that this approach will likely not satisfy permitting requirements under the *Endangered Species Act*. Additionally, the Ministry indicated that it would be losing its' contract staff at the end of the fiscal end of year (March 11th) which may hamper the agency's ability to review and provide feedback to Xeneca in the turnaround times requested. MNR requested that Xeneca provide planning schedules to assist MNR in coordinating staff time.	**Proponent to coordinate document review with regulators** **OEL and Xeneca to coordinate the**

	NRSI (RS) indicated that field study permit applications were due to be submitted imminently and that, in order to assist scoping and information gap identification, the following reports would be provided to regulatory Agencies/Ministries as soon as they became available: • 2010 Existing Conditions Report, NRSI • Stage 1 Archaeological Assessment Report, Woodland Heritage • McCarthy Lake Lake Trout Report, Niblett • 2010 Surface Water Quality Report, WESA • Hydrology and Dam Operations Plan, Xeneca Rob Steele mentioned that he anticipates that upon agency review of the Natural Environment Characterization Reports further field work requirements may be identified. Xeneca (MH) noted that in other Districts (Kirkland Lake for example),similar concerns were addressed through the creation of a technical committee involving all relevant agencies that could review available data, identify gaps and then work with Xeneca to complete information gathering during permitting and approval phases. Note: MOE (LB) commented that MOE's position that all data needed to complete the Class EA Assessment phase should be collected as soon as possible It was acknowledged that Xeneca accepts the risk that project design may change if new information comes to light. A meeting in early to mid-March was proposed as a reasonable point at which the relevant agencies and Xeneca could meet to discuss the forthcoming hydrology and operations report. SD clarified that the proposed incremental field work approach had not been accepted by any other Districts. Crown land dispositions cannot be issued without coverage through the EA process. Rob Steele acknowledged that for this incremental approach to be accepted it would need to be presented at higher levels. He offered to propose the approach in writing, so agencies could provide formal written responses, which could be used to initiate discussions at higher levels.	**distribution of baseline study reports to regulators as they become available** **RS to propose incremental field work approach to agencies in writing.**
4.0	Public and First Nation Consultation Planning OEL (TS) and Xeneca (MH) outlined consultation efforts to date with regard to the McCarthy Chute and Four Slide Falls sites. A Public Information Center (PIC) was held on December 1st in Elliot Lake Ontario. Xeneca has and will continue to distribute project information via its website (www.xeneca.ca) which is currently undergoing revisions to increase its capacity. All communications with stakeholders are being logged for inclusion in the ER and identified issues will be addressed through the EA	

	process. TS requested agency input on the consultation process to date and assistance in the identification of any gaps. MOE (RD) indicated that the local MOE office had not received notification of the Dec 1st PIC and requested that the office be directly notified of any upcoming events. Following discussion it was determined that an internal communication issue within the MOE had resulted in the PIC notice not being forwarded appropriately. OEL (TS) confirmed that any further notifications would also be addressed to the local MOE technical review office. MOE indicated that because of the issuance of the Notice of Commencement in mid 2010 prior to the EA coordination meeting and with a long lag in follow-up consultation efforts there is a general perception that the assessment process is not proceeding in a transparent manner. Xeneca (MH) responded that it is aware of the issues with the consultation process to date and that Xeneca is working to address those issues though no specific conflicts have been encountered to date. MNDMF indicated that the Four Slide Falls project was within an active mining claim owned by Pele Mountain Resources and inquired if communications had been initiated. Xeneca (MH) responded that Xeneca was in communication with Pele Mountain Resources though a signed agreement had yet to be reached. Xeneca (DA) explained Xeneca's approach and efforts to date in regards to Aboriginal consultation. Xeneca has identified and liaised with the following First Nations: • Mississauga First Nation • Sagamok First Nation • Serpent River First Nation In addition, Xeneca has contacted the Metis Nation of Ontario at a council level regarding ongoing consultation efforts. Xeneca is currently in ongoing business to business discussions with the identified First Nations in which the Serpent River First Nation is taking the lead. Other than the identified First Nations, no other Aboriginal or First Nations groups have come forward though Xeneca maintains an open door policy should other First Nations or Aboriginal community come forward. TC (HF) requested if Xeneca could provide a written summary of their First Nations consultation plan to TC's Aboriginal Consultation Unit for their review and in order to determine if it adequately addressed consultation requirements under the federal assessment process.	**OEL to add Ron Dorscht to Serpent River contact lists for MOE and include in further notifications** **Xeneca to forward FN and Public consultation plan to regulators for review.**

	Xeneca (DA) indicated that First Nations and Public consultation plans would be formalized and forwarded to agencies for review over the coming months. MOE (CH) indicated that, moving forward, if any other First Nations or Aboriginal community are identified then the MOE should be notified in order to assist their determination concerning whether additional consultation is required and whether the Crown has a duty to consult.	
5.0	Transport Canada TC (HF) outlined that, based on a review of the project description documents that approvals under the *NWPA* will be required and that the NWPA is working to create a comprehensive list of informational requirements which would need to be addressed before the agency would be able to sign off on the EA. It is not expected that detailed engineering drawings will be required at this time; however, the NWPA will advise Xeneca when the list is ready and is prepared to work with Xeneca in order to meet those requirements.	
6.0	Environment Canada MS began by outlining Environment Canada's areas of concern and responsibility pertaining to the project. Specifically, the agency is concerned with: • potential impacts to air quality and water quality, • toxic substances, • species at risk (under the *Species at Risk Act*) • migratory birds MS indicated that Environment Canada would be requiring analysis of low level methyl-mercury and the potential for acid rock drainage (ARD) as a result of clearing and excavation activities related to the projects. MS indicated that he would have to review the water quality assessment work done in 2010, but noted that, while similar, Environment Canada's requirements may not align completely with those of the Ministry of the Environment (Provincial Water Quality Objectives) to which the completed work had been compared to. RS committed to circulating the background reports as SAR and migratory birds were dealt with fairly extensively. Xeneca (MH) responded by saying that core sampling was scheduled to be completed through the 2011 field season and that Xeneca would like to coordinate core analysis requirements with all concerned agencies.	**OEL and Xeneca to coordinate the distribution of baseline study reports to regulators as they become available** **RS to circulate background reports.** **NRCan agreed to coordinate**

	NRCan (CS) and Environment Canada (MS) will coordinate analytical and mitigation requirements with provincial requirements. NRCan agreed to coordinate the distribution of federal requirements and documents for discussion.	**the distribution of federal requirements**
7.0	NRCan and CEAA Neither NRCan nor CEARR indicated that they had any specific comments which could be provided. NRCan (CS) indicated that they would provide advice or documentation at the request of the other Responsible Authorities. CEAA (DB) tentatively indicated that federal scoping documents for the projects would be available by April/May 2011.	
8.0	Fisheries and Oceans Canada (DFO) DFO (JH) outlined their agencies concerns and responsibilities with regard to the two projects including impacts to fisheries and fish habitat around the project sites and at any proposed water crossings as well as provisions for fish migration and passage. NRSI (RS) requested to know how DFO would be approaching habitat compensation requirements citing that, given the scale of the inundation areas proposed for the projects and the specific habitats that may be impacted, Xeneca would likely be unable to meet one to one habitat compensation/restoration requirements, especially within the project area. RS requested to know if DFO would be willing to consider alternative compensation/mitigation arrangements. DFO (JH) responded that the projects had yet to be scoped and that the DFO would be unable to comment specifically until that exercise had been completed. At this time it would be the agencies preferred approach for the project to conform to standard compensation hierarchy practices but that following review of the available information they would keep the potential for alternative compensation strategies in mind. It should be noted that a meeting was held between Senior DFO Fish Habitat staff and Xeneca on Feb 11, 2011 to investigate possibilities related to larger scale fish habitat compensation being used to replace site specific compensation. Several action items arose and negotiations are ongoing.	
9.0	Ministry of the Environment The MOE (CH) requested to know if the two projects were in some way connected or would have cumulative impacts (hydrological, biological impacts, etc.)	

OEL (TS) responded by saying that, at this time, the projects are considered as separate by Xeneca. This is both a strategic and practical decision on Xeneca's part as Four Slide Falls has not yet been granted Applicant of Record (AoR) status while McCarthy Chute has and if one of the projects is held up through the EA or permitting and approvals phase there is the chance that the other may be able to proceed. At this time, baseline studies have shown that the two projects are essentially separate. TS requested to know if any of the meeting participants knew of any other projects or facilities on the system which may result in the potential for cumulative impacts. The MNR identified a facility at Lizard Creek downstream of Camp Lake which may be affected. TS responded by saying that the zone of influence (ZOI) would not likely extend that far downstream from the projects but that the ZOI and operations plans would be forthcoming and used as the basis from which cumulative impacts could be determined and assessed.

CH requested to know if ground-truthing of the hydrological investigations and calculations had been completed and if the transmission line was a shared component for the projects.

NRSI (RS) responded by saying that ground truthing had not yet been completed but studies were either planned or underway. Site specific bathymetry had been conducted and would be included in the upcoming hydrology reports. The transmission line, for at least a part of its length would be a shared component between the projects.

MOE outlined the permitting requirements for the project as follows

- Permits to take water for both construction and operation
- Permit for the discharge of waste water from excavations or behind coffer dams. Permits for sewage discharge will be required if greater than 50,000L/day
- May require Section 9 approvals for diesel generators used during construction or to provide black start capability during operation.
- Waste generator permits for construction waste depending on the amount produced.

Furthermore, reporting of any spills (fuel, lubricants, etc) during construction or operation should be made to the Spills Action Center as well as to the Township of the North Shore which has a water intake downstream of the proposed projects.

Xeneca acknowledged the permitting requirements would work to ensure that all would be obtained by either Xeneca or their contractor(s) as

	appropriate. MOE (TK) indicated that the preliminary operations and management plans should incorporate biological input to help determine minimum flows. The plans should also address flows, quantities and backflow. In order to address any future communications issues with regards to scheduling of public events or meetings, Ron Dorscht requested that he be added as a point of contact for the MOE for all future mail outs and notifications.	**OEL to add Ron Dorscht to Serpent River contact lists for MOE and include in further notifications**
10.0	Ministry of Natural Resources The MNR began by outlining their regulatory responsibilities with regard to the project especially those pertaining to the *Lakes and Rivers Improvement Act* and the *Species at Risk Act*. Noted that, with respect to the LRIA, minimum flows need to be considered, NRSI (RS) mentioned that the engineers have been involving biologists to identify any constraints. Additionally, the MNR also noted that the list of potential approvals is not comprehensive. For example, projects may require permits/licenses for aggregates under the *Aggregate Resources Act*. Forest Fire management planning and mitigation may also be a concern under the *Forest Fire Prevention Act* with regard to the projects especially with regard to clearing for transmission lines and access roads, operation of heavy machinery and numbers of personnel. With regard to the hydrology and operations planning, the MNR requested to know if SAS modeling had been used. Xeneca responded by saying that HECRAS modeling was currently being used which was also acceptable to the MNR and DFO. Information required for approvals under the LRIA can largely be met through the Class EA for Waterpower Projects. *LRIA* approvals requirements include construction and post construction monitoring, a preliminary operating plan, a clear and defensible Zone of Influence, and decommissioning plans. Without a clear ZOI MNR can't confirm the adequacy of the field work completed to date. Complete LRIA requirements are detailed in the LRIA and the *Guidelines and Criteria for Approvals under the Lakes and Rivers Improvement Act*. The MNR also emphasized that the AoR status for McCarthy Chute was	**OEL to follow up with the MNR regarding fire management requirements and the Serpent River Water Management Plan** **Xeneca engineers to review calculations and confer with Rich Pyrce – MNR and collect available information/**

	dependant on being able to demonstrate that the McCarthy Chute project would be hydrologically isolated from McCarthy Lake. Similarly, obtaining AoR status for Four Slide Falls would be dependent on being able to show hydrological isolation from Pecors Lake MNR (RP) indicated that the MNR Sudbury office had installed transducers and two geodetically accurate benchmarks at McCarthy Chute and the McCarthy Lake boat launch. Summary reports were available at the Sudbury office and could be obtained from Kim Mihell. Additionally, the MNR would be able to forward a summary of the fisheries management objectives shortly. DFO (JH) requested that, when the objectives became available, that the DFO receive a copy. RP expressed concerns that the preliminary calculations for power potential and head for the sites may be based on inaccurate data and he would like Xeneca to review their calculations. OEL stated that they will coordinate a meeting to review the hydraulic modeling and the associated ZOI. MNR explained that it is expected that a proponent of a Greenfield waterpower project will meet the intent of water management planning through preparation of their Environmental Report. As such, MNR will not require that a separate, sequential water management planning process be undertaken for these projects in a manner and steps specified in the Water Management Planning Guidelines for Waterpower (MNR 2002). It is advised that proponents identify water management planning on all public notices, be it the intent to develop a plan or where a project requires an amendment to an existing plan.	**reports** **MNR (KM) to provide Summary reports of transducer records to Xeneca.** **MNR to provide Fisheries Management Objectives.**
11.0	Methodologies for 2011 Field Studies The MNR requested that, along with the baseline environmental study reports Xeneca provide their methodologies for species at risk assessments as well as the assessments of the transmission routes and access roads. MNR emphasized that 2010 was a low flow year and therefore the data collected may not be representative. This needs to be taken into account when considering the results. MNR also expressed the importance of addressing cumulative impacts within the EA. NRSI (RS) responded by noting that an ESA species monitoring protocol	

	had been proposed to the MNR and that NRSI was conferring with Ministry staff to work out the details (Blanding's Turtle protocol, etc) and then went on to outline the tentative approach to the assessment of the transmission corridors. Transmission Corridor and Road Alignment Study Methodology • A desktop review of the proposed route/alignment would be conducted and would include NHIC and Biodiversity Explorer Database searches. • Shorter routes (less than 5km) would be walked and ground-truthed along their entire length • For longer routes, especially those passing through difficult terrain, a fly-over of the entire route would be conducted and used, in conjunction with the information from the desktop review, to identify critical habitat or areas of specific interest ("hot spots"). Ground truthing efforts and field investigations would then be focused on the "hot spot" areas in order to determine their significance and what mitigation measures would need to be employed. It would be Xeneca's preference to mitigate impacts to identified "hot spots" through avoidance. RS indicated that NRSI would be willing to provide written methodologies/protocols for the work which would be undertaken in the upcoming field season to regulators for their review. However, he cautioned regulators that due to time constraints, any review comments or suggestions would need to be returned very quickly. RS also noted that NRSI would be willing to notify DFO/MNR as to when field crews would be going into the field but would be unable to schedule around the availability of agency staff. DFO (JH) responded by saying that the approach was reasonable with regard to water crossings as long as an appropriate distance upstream and downstream was investigated at each crossing. The MNR (SD) and DFO (JH) both expressed interest in receiving copies of any field protocols as soon as they are available. MNR Sault Ste Marie District also advised NRSI to provide them with the field protocols.	**NRSI to develop and forward field methodologies /protocols to MNR/DFO/MOE as they become available**
12.0	Decommissioning Both the MNR and the MOE requested that the ER address what will be planned for facility at the time of decommissioning or in the case of abandonment. MNR noted that decommissioning plans are required for	

	LRIA approvals. Xeneca responded that the FIT contract for the facility would be in effect for 40 years and the facility could be in operation for over a century so specific decommissioning practices would be difficult to predict. However, Xeneca would include a tentative decommissioning and/or abandonment approach in the environmental report.	
13.0	Meeting concluded at 1:45 PM	

NOTES OF MEETING

April 29, 2011

PROJECT	Xeneca – FIT Projects
LOCATION	Radisson Hotel – Sudbury, ON
WRITTEN BY	Zach Vorvis / Tami Sugarman
PRESENT	See attached
PURPOSE	Present and discuss 18 Xeneca Waterpower FIT Projects

Item	**Action By**
Uwe - started introductory presentation at 9:00. Uwe asked that **documents shared with agencies in pre-consultation not be shared with public as they are not final and subject to change**. MNR - would Xeneca consider marking the documents confidential? Uwe - considering this given that in the last few days a document was released that should not have been.	Agencies
MOE(Sajjad) – regarding minimum flow identified in the operating reports presented to date - what was the rationale and can this be explained in the reports. Uwe - numbers had to be picked for unsteady flow modeling, etc. Not considered final but were meant to be discussed and finalized. Discussed seasons that flows were based on (hydrograph instead of calendar seasons). Want to look at wetted perimeter calculations with MNR and calculations to review water depths, flow velocities, seasons flow is required, etc. Sajjad - **data needs to consider hourly fluctuations in Modified Run-of-River** (MROR) sites because flow will be changing at that frequency. Uwe agreed.	Xeneca
MNR(Rich) - need to provide details to district staff on what kind of flows would be available downstream on an hourly basis. MOE(Sajjad) - added that daily flow data has been shown so far, not hourly flow data. Rich - graph of Misema fluctuations presented. Uwe agreed that flows will look similar with a daily fluctuation between Q_{ea} and Q_{max} that are to be discussed with MNR/MOE/DFO. Uwe - **need to agree what numbers to use for analysis** (for unsteady flow, MROR operation).	Xeneca

Item	Action By
MNR(Steve) added that numbers will be different for each site.	
MOE(Todd) - no starting point to know what wetted perimeter/flow requirements are. Conditions that are not measured and data that we don't know are the issues.	
How many sites are ROR vs. MROR? Uwe – 1 vs. 17, but not quite that clear. Downstream projects that have no storage can't be run as MROR on their own, can only be run this way if upstream projects are MROR.	
Question about MROR sites and operating band. All projects are designed for 20% exceedance flow. MOE(Sajjad) - based on experience, ROR turbines are designed for 50% exceedance, MROR is less. Uwe - these are designed lower because gives more range for modified operation and because projects are small and can only afford single unit. Difference in cost between 3 to 3.5 MW single unit not much.	
How much are other users, operating plants considered in the operating regimes? Uwe - OPG on Ottawa river has been approached, discussing these issues. They are concerned with low water levels on the Ottawa river. Have several projects that are on rivers with water management plans. Dealt with in three places - Stakeholder consultation, land stakeholder consultation and EA process. McGraw project is on a managed waterway and will be incorporated into WMP when it is revised in next 1-2 years.	
Can inundation be mapped at highest level and lowest level and downstream water levels? Uwe, yes, inundation has been done in HEC-RAS modeling. MNR Kirkland advised they have **not received HEC-RAS report yet**. Nava - downstream inundation mapping has not been done. Have hydraulic information downstream. Mapping downstream could be done. MNR - concern is what areas might be dry with extended ponding as well as, connected wetland areas that might be affected. MNR(Steve) added issues with ramping rates, substrate movement/effect from pulsing of flow is a concern. Would like to see this mapping, more examination of the downstream area. Ground truthing plans. Uwe - this exercise has been undertaken with the bathymetry.	Xeneca
MOE(Sajjad) - regarding calibrating of unsteady flow, need to measure hourly to calibrate. Uwe agrees, but no facility there to monitor the flow. Sajjad added that natural hourly flow data could be assessed to calibrate, although this could not be monitored over the same range.	

Item	Action By
10:20 Nava started engineering presentation on Larder Raven.	
Larder Raven - 1.25 MW, 12.5 m head, 7 cms, lake connected	
Does MNR headpond affect tailwater of project? MNR advised that the Upper Raven dam is scheduled to be decommissioned in the future. The Xeneca dam will replace it and it will have to be removed. The headpond therefore will effectively be 30 km because it will be the length between Xeneca dam and MNR dam + existing headpond behind MNR dam. **Old dam downstream of planned Xeneca dam (wood structure) needs to be removed but concrete can stay** because of historic value.	Xeneca
MNR - 75% of contributing water to park comes from this river, concern about MROR operating and effect downstream in park and to other MNR weirs downstream.	
Nava - water balance has been done, can be looked at again. Currently do not show any effect on lake downstream. MNR(Rob) - concern is that weirs downstream may become the controlling structures if levels dropped too far. Uwe added that there has been a lot of stakeholder feedback from cottagers on the lake, concerned about water level fluctuations and affect from manual stoplog operation where flows affected for days at a time. Hourly fluctuations from automatic operation at the project could actually improve water balance.	
MNR - stoplogs are operated 1 or 2 times/year. Daily operating will have more affect on biology. Uwe - Xeneca's position is that daily operation will be better for downstream. MNR(Rob) - stoplog structure is never dry. Concern downstream is mostly in spring freshet when cottagers get flooded. In summer flows are less than they would like but never dry. What has been proposed is Monday to Friday operation at this site, concern is weekend non-operating period. Uwe - automatic operation must be better than manual management with stoplogs. **Will work with MNR to agree on an operating regime and lake management.**	Xeneca
MNR - concerned that operating plan is too generic, no specific details to comment on. Uwe - agrees that specifics need to be agreed on, understand that it is a sensitive system with all of the users, a lot of conflicting requirements/priorities. **Want dialogue with MNR to discuss release flows. Bigger questions are seasonal operation and lake level management.** MNR jurisdiction to control this. MNR understanding is that Xeneca will not be affecting lake water levels. Uwe - there will be changes up to 10 cm. MNR - concerned that no biology work has been done downstream of the plant, only	Xeneca

Item	Action By
between two lakes. Uwe - yes, but only needs to be done if evidence that there will be an effect. Sajjad added that another proponent modeled 200 km downstream to see what the effect would be. Nava said that depends on size of project/effects. MNR(Rob) added that Xeneca needs to show what are the limits of the effects before agencies can comment on the effects. Uwe clarified that weekly inflow will equal weekly outflow. MNR(Rob) added that operational limits are legal once agreed to and proponent can operate within this limit as they see fit, that is why there is need to put a lot of thought into these limits. Uwe - lakes, for example, have natural level range of 1 m, Xeneca plans to work within this limit. The intent is not to draw down 10 cm incrementally drawing down to a very low level. Uwe – Regarding dam removal, Xeneca is only planning on removing stoplogs. MNR - do not agree with this. Dam removal was a condition of the site release. **Dam removal needs to be part of the EA.** Cost of removal is by proponent.	Xeneca
10:55 Kristi starting biological presentation on Larder Raven.	
Question about sturgeon at Wendigo Kristi - another proponent has project below Teddy's Falls (MoCreebec FN). WESA and Kristi are working with them on this. Temperature logging is going in this year.	
11:30 Nava starting engineering presentation on Half Mile & Big Eddy	
Half Mile - Nava presented PD layout and proposed alternate with upstream dam and tailrace channel.	
Big Eddy - ROR, 5.3 MW, 9 m, 68 cms, 2.7 km headpond reach	
MNR(Henry) - question about 1:100 yr flood HEC-RAS modelling and what weir elevation was used. Nava - based on lowered obermeyer.	
Question about effects from Half Mile MROR upstream of Big Eddy which is ROR. Should the projects be linked together w.r.t. hydrology? Nava - downstream of Half Mile is Black Bay and another river with more flow. Based on these, expect that effects are minimal on Big Eddy but will confirm with modeling.	
MNR(Tania) - Regarding the bypass reach flows and habitat management. How much of this is up for debate still? Uwe - this is to be resolved still. Two types of bypass flows required at Big Eddy -	

Item	Action By
habitat/fish passage flows and kayaking flows.	
MNR(Joanna) - Concern that weir flows are geared towards kayakers and fish passage is secondary. Also concerned about TC approval of weir and allowing kayakers to use. Uwe - stakeholders at Big Eddy have been very vocal, kayakers have been vocal. Their concerns are being addressed. MNR has provided some direction on the fish passage but this discussion is just starting. On kayak passage, working with Northwest Hydraulics to design a weir that can pass kayakers safely. Modeled on Calgary weir. Working on channelling flows for sturgeon access to weir. Still have to figure out how to get them over the weir.	
MOE (Peter) on phone about stakeholder consultation - has this been done at all projects or only at Big Eddy? Uwe - summarized stakeholder consultation steps so far, PIC coming up. A lot of communication going back and forth with kayakers. Concerned that public has received report that was issued as a pre-consultation draft document and not meant for public release. Also asked about private land, stakeholders, more than what was identified in operating plan. Uwe - these issues will be addressed in the final document. Elaborated that stakeholder consultation has come a long way at Big Eddy. Political rhetoric is still there, but behind the public consultation. Xeneca and kayakers are talking about "how" now instead of "if". Other discussion is with ex-president of Black Bay rate payers association (Al Hepburn).	
MNR(Joanna) - Question about inundation elevation to high water mark and mapping to represent this is not shown. Uwe – HEC-RAS modeling/report is to cover this issue exactly.	
MOE (Peter) on phone on previous public engagement sessions. MNR confirmed they have been invited to all meetings.	
Low flows, management of Ottawa river and OPG discussed.	
MNR(Tania) - concerned about fish habitat and passage at Half Mile. Question about Algonquin Park effect will be an issue to watch. Uwe - discussed Willie creek, known turtle habitat and road upstream that Xeneca will be ensuring not to effect. Discussed that option presented at Half Mile will make fish passage easier if it is required.	
Question about Big Eddy downstream modeling to assess sedimentation and affect on downstream beach area. Kristi – substrate survey was done down to confluence with Ottawa river. Uwe - Big Eddy is ROR and will not affect flows, so should not be affecting sediment.	

Item	Action By
Can pass sediment if necessary with design of weir. Kristi - delta and turn upstream may be the concern and increasing delta size. Some affect from town work with gabions, etc. MNR – also concerned project does not increase erosion due to tailrace orientation.	
MNR(Tania) - Fresh water sponges found? Kristi - have not seen any in 5 years of work on river.	
13:20 Nava presented engineering details of Marter TWP. **2.1MW, 12.5 m head, 16 m^3/s, 1.7 km headpond reach**	
MNR - issue about sturgeon spawning area at confluence with Misema/Blanch rivers. Raised issue of cumulative effects with Misema. Need to coordinate with water management plan. Mentioned possibility of requiring an ESA waterpower agreement to deal with species at risk. Have to deal with riparian rights. Uwe - regarding land process in EA context, in Xeneca's opinion property process is part of LRIA, not EA. Negotiations with landowners is ongoing. Site release status is known, letter received. MNR - riparian owners are a stakeholder, disagree with Xeneca assessment. Uwe suggested this be dealt with separately, have been in discussion with MOE about how this fits into process.	
Question regarding zone of influence downstream of project. Have to take other projects into account. Uwe – Misema is 2km downstream and was taken into account as a ROR plant. Understand now that it is authorized to operate as a peaking facility. **Was not aware of the WMP on this river and would like a copy.**	MNR
MOE(Sajjad) - asked about biologist involvement. Are they involved up to EA stage? Want to know if there is coordination between biologists and engineers. Ramping rates are critical, etc. Uwe - even when approvals have been received, owner is still liable if there is an adverse affect on the environment. Aware of this and that is why Xeneca wants to build appropriate projects. Uwe - there has been biologist input to the operating plans, but not wholly defined yet and has not been detailed discussion. Example is that Larder now has zero proposed minimum flow because preliminary indication is that 200 m rock channel downstream has no habitat. Will be discussed/reviewed in detail.	
MNR(Lauren) - sediment issues at Marter - important because of sturgeon, brook trout, etc. Ice scour is another big issue.	
13:50 - presentation started by KBM on transmission line/access roads	
Question/comment on using same roads as forest operators (SFLs) where they have	

Item	Action By
access rights through private property. Xeneca will make their own agreements to access through private property.	
Question about when FN consultation would be done. Not by KBM, Xeneca is doing now.	
Question about primary vs. tertiary roads. KBM - following existing roads as much as possible and are aware of long term access routes. Tertiary roads are shorter term, expected to be decommissioned in short term and do not want to be following them.	
Wetlands considered but vernal pooling, snake fernacula, etc. need to be considered beyond wetlands. Will consult with district staff to resolve this.	
MNR Sudbury – were information packages provided to Xeneca in site release process provided to KBM? KBM(Dave) – not yet, have not asked for that information.	
Regarding ground-truthing - have information from SFLs on primary, secondary, tertiary. Need to assess for condition. MNR suggested that MTO does a lot of work on transmission line routing and KBM should talk to an MTO official about their ground-truthing.	
14:10 - Nava started engineering presentation on Wabageshik **3.4 MW, 6 m head, 64 cms, 1 km headpond reach**	
MNR(Pat) – What geotechnical information is driving the option revisions? Uwe - move was based on identification of a spawning bed and large gravel esker identified at current location. Geology can vary over small differences – this gravel bar esker needs to be protected and that is not a stable basis for construction so we need to avoid it.	
MNR(Wayne) – Did the shift upstream make this a lake-coupled project? Uwe - project was supposed to be coupled before and after, no change to elevation. Agreed that if this has changed will have to go back to the public. MNR Eric Cobb - Is it lake-coupled? Because the PD did not include this design. Uwe - Was it not? Well **we will have to go out to correct that information.**	Xeneca
MNR(Rob) – Scour/erosion effect with upstream move? Uwe - this has to be studied further but in general not too concerned about scour because sand has been transported and only gravel/cobble remain. Outflow velocities – will you be looking at this for erosion issues of the gravel bed? Uwe - Flows will be slower in the tailrace than they would have been naturally. The	

Item	Action By
scour is possibly reduced but we will need to look at the velocities over the spawning bed.	
14:40 Robert started environmental presentation on Wabageshik.	
Sturgeon task team discussion. Should be general for all projects. **Bob (Sudbury) will discuss with Sandra to set up.**	MNR
MNR(Pat) - how will minimum flow be released, has this been considered? How will these minimum flows be provided for fisheries purpose? Uwe – not yet. It will be determined when we have detail design. Could be low flow tube, through plant or allowed to crest over the spillway. MNR has advised other proponents that compensation flows can't be run through turbines because they can be turned off.	
Uwe - clarification – with Option 2 there is a variable flow reach so those discussions need to be had with the regulators.	Xeneca
MNR – need to ensure that you have discussions with other users and operators on the river – Vale Uwe – we have had some discussions with Vale regarding their upstream water intake. – we **will get together and share information with them and any data gap issues can be resolved.** Domtar is another stakeholder with area downstream. I will check with communications group, and Nava need to follow up on this discussion.	Xeneca
MNR(Wayne) - Upstream option was the most fish friendly which is the option that is not really being considered now. Can it be reconsidered? Uwe - Coupling with lake is a concern including peaking flows. Expect that project will affect quite a bit of reach downstream beyond plunge pool and that this should be looked at. Also concerned about possible effect on walleye spawning when running continuously. Regardless of which option, the confirmed spawning habitat is important to be protected and need to discuss. NRSI(Rob) - when meeting with Wayne will try to have an engineer in meeting.	
MNR - will inundation of the lake be impacted? Uwe - No.	
MNR - Coupling with the lake – is a concern – zone of influence will stop at the plunge point in the lake – I believe it extends to confluences with the Spanish. This is substantial flow fluctuations and is a huge issue to be discussed. MNR(Wayne) - General concern is the issue of downstream zone of influence. If operation between 0.5 and 40 cm/s in 24 hour, Intermittent operations with large flow	

Item	Action By
fluctuations is a major issue that needs to be really looked at in detail. It will be significant for anything downstream. **Walleye and sturgeon spawning and incubation periods needs also to be protected**. MOE Sajjad –Those numbers have to be looked up. How much is the minimum flow? Uwe – **committed to look at this issue together with our bios and the regulators**. - agree that intermittent operation can be a big impact. MNR – concern that season flows may not be what you think and that the design of your turbine may not be accurate. Fluctuations in the river are great and extend longer than you think. Uwe – the number of generators are not on table yet but size is a discussion. Usually one generator is for small projects. - we will sit down and discuss the natural river fluctuations with you to ensure our understanding is accurate - we will look at biology downstream but not all the way to the Spanish. MNR – you will need to go further than the plunge. **Studies must cover the zone of influence or variable flow reach which surely extends beyond the plunge pool as suggested by Xeneca**. My position without additional analysis by Xeneca to demonstrate otherwise is that the fluctuation signal will only be softened by confluence with Spanish given larger discharge. Uwe – **we will discuss with the biologists and MNR to agree where to stop the studies**. Uwe – benthic habitat is an issue for every project due to an impact from footprint. Unfortunately, all projects will lose some benthic habitat. But we need to mitigate as much as possible and we should negotiate the acceptable loss.	Xeneca Xeneca/NRSI /MNR
MOE Sajjad – if natural flow is between min and max flow, lake coupled operation gives 20 cm/s at night and 60 cm/s at daytime. I am not clear between turbine min and max – how intermittent operation will happen. Can you explain more? Uwe – it is not a big deal. We have models to simulate the flow operation. It is not big issue as you think. They are low storage areas – not such a difference on levels but does affect flows so need to be cautious of min flow capability and baseline flows for the variable reach. We need to have this discussion.	
Engineering - Allen and Struthers: 2.8 MW, 5.5 m head, 57 cms	
MNR - What was the inundation area illustrated at the PIC event? Andrew – maps showed 5 km of inundation upstream. Xeneca is now proposing 7 km.	
MNR – Rainbow trout or salmon – have you had any discussions on these species? Andrew – not yet I anticipate getting some clarity on this for the habitat present. I would like to **discuss this with you prior to field work**.	

Item	Action By
Uwe – we have a general understanding of spawning area upstream and downstream. We will keep eyes open and keep in mind. MNR - **Mike Hall needs to be consulted**. Andrew – yes we have talked to him in the past and **will do so again**. MNR - Concerns raised by Wayne on Vermillion will be an issue here as well and needs to be discussed. Gaps around lake sturgeon passage: has there been discussion to modeling 1 in 100 year flow rate? as they only need one to two opportunities over lifespan for passage. NAVA – have done 100 year, 2 year, and 5 year flood analyses to see if passage would exist under these flow events using the model.	NRSI
MNR – Transmission line and roads are 20 km, and there are a lot of species at risk in this area but no data (Blinding turtles) roads, rattler, spotted turtle. What will be the approach to assess these? Uwe - We do not have roads to access. A lot of survey is required. We will look in detail on aerial photos, but we won't look into detail on corridor because options may change.	
Who is doing that Screening for EA? At EA level – desktop and aerial photos Nava – we can provide that information. For permits – we will do ground truthing once routes are absolutely firmed up. MNR – if there are more options – you need to consider that one area may have higher incidence of impacting SAR than another. Yes – we agree – KBM is conducting the analysis for the routes options – **KBM and Xeneca and NRSI will have to decide who is doing final level of analysis for the EA to decide on the preferred option** MNR – environmental degradation around these areas – analysis of soil or water what has been done or are there discussions to be had on this? Uwe – Yes, we do surface water only, not soil. This has been identified and we will sit down and talk about how to address this.	KBM and Xeneca and NRSI
MNR – does first nation realize lake sturgeon is there? FN consultation will notify FN ahead if they are to tag species. Nava - **Xeneca has a FN person on staff for such notification**	Xeneca
MNR - French River is Federal Designated Heritage Waterway – is this a consideration or a barrier for this project or in general for waterpower? Unknown – **OEL will check into this question**?	OEL
Presentations From upstream to downstream:	

Item	Action By
Vermilion – McPherson Falls **Vermilion - Cascade Falls – two options being considered.** **Vermilion – At soo Crossing.**	
Highway 17 and a railway line are close to site. We input data and run the model. It won't impact the highway. MNR - Is the railway a big deal? Is it possible for building construction on rail? **Need to consult with Canadian Transportation Agency due to the active railway line crossing.** **CN – railway line needs to be consulted.** **MTO – effect on bridge needs to be consulted.** Land agreement with Vale in process	Xeneca
MOE – Sudbury intake pump house – Where is the intake? Is the lake deep and how wide is it? How much will be released when shut down? Nava – 400 m wide and 500 m long. Xeneca has limited information of the depth around intake area from the bathymetry survey. **Need to consult with them about intake details and operations. Need to have MOE provide information on the PTTW**. Xeneca – agree we need to **consult with Greater Sudbury about this intake and our operation regime.**	Xeneca MOE
Xeneca intends to meet with regional level MNR and other agencies on an on-going basis. Biologists are meeting to fine tune the workplan that has been developed and approved by Xeneca for the variable reach. Sandra – remind **Xeneca to notify agencies when new data is available**. Paula – to add **– please indicate what the change has been.**	Xeneca
Closing Ed, Grant, Sandra, Mary Ellen and Paula should sit down to narrow out next steps. Thank You- our meeting these two days was very helpful and successful and we look forward to meeting with MNR districts starting next week to conduct scoping reviews for the proposed 2011 field programs.	

NOTES OF MEETING

April 28, 2011

PROJECT	Xeneca – FIT Projects
LOCATION	Radisson Hotel – Sudbury, ON
WRITTEN BY	Zach Vorvis
PRESENT	See attached
PURPOSE	Present and discuss 18 Xeneca Waterpower FIT Projects

Item	Action By
10:15 Uwe welcomed attendees, introduced the purpose of the meeting and the approach for the day. All attendees introduced themselves.	
Question on stakeholder concerns (from MNR Chapleau) - Ivanhoe stakeholders advised they aren't hearing back from Xeneca. **Requested information from Xeneca on Third Falls inundation, etc**. Also concerned about last minute data submittals from Xeneca. Uwe - will follow up with their stakeholder group on responses. That is their task/focus. On information to agencies - realizes that large volumes of information are being distributed all at once and not all the information has been posted on the ftp site. Xeneca is trying to prioritize and post information accordingly. MOE(Paula) - **when information in documents is being updated, Xeneca should be advising agencies so they are aware and able to work from the most current version**.	Xeneca Xeneca
Question on mean lake levels - based on monthly or annual data? Uwe - it is up for discussion, can simulate seasonal lake levels if necessary. Listening to stakeholder concerns on cottage lakes although there are some disagreements between cottagers and biologists. MNR needs to help resolve.	
MNR(Steve) - how is lake level max/min determined? What is period of record? If transducers only recently installed, concerned that have had very dry years and likely atypical conditions. Uwe - Have installed transducers on lakes over last year. Doing hydraulic HEC-RAS modeling to try to simulate how lakes should behave. Also have bathymetry data. Nava answered that we have 30-40 years of inflow/outflow data from river transducers and can model what the lake level should have been (daily) based on these flows.	
Greg - Question about McCarthy, contrary to MNR policy and objectives for trout lakes. Concerned that it is contrary to MNR policy: difficult to defend a decision to change that. Uwe - have had discussions on this already, and can discuss more during project specific presentation.	
11:00 - Uwe finished introductory presentation on all projects and methodology of data collection/stakeholder consultation/ FN. Nava started presentation on Ivanhoe	

Item	Action By
river projects (The Chute and Third Falls)	
The Chute - 3.6 MW, 9.5 m head, 38 m3/sec, 2.8 km head pond, close coupled.	
MOE(Sajjad) - How has Xeneca confirmed upstream extent of inundation? Nava – Initially projected static inundation for the plan presented NOL (Normal Operating Level). Have now done HEC-RAS modelling to confirm the upstream extent of inundation which is where the normal water level meets the inundated water level. Sajjad - Inundation that MNR looks at is flood condition, not NOL. Has this been looked at? Nava - Xeneca has plotted NOL, high water mark, 1:2 yr, and 1:100 yr inundations. Used long term average flow for the inundation area. Will be asked to lower dam if a house would be inundated in the 1:100 year flood scenario. Nava - private land is considered in 1:100 yr inundation. Downstream dam break analysis is not done until detailed design stage. Need to look at IDF (inflow design flood) level at this stage to look at impacts. Uwe answered that Xeneca is aware of new guidelines from LRIA and new MOE guidelines. Xeneca sees the EA stage as a conceptual design stage, where plans/specs approval is the more detailed stage and need to deal with detailed issues at that time.	
MNR - for location approval, it will be best to have a more conservative approach in EA stage so that location approval falls inside of EA envelope. From a process perspective, if it is an impact at location approval stage, need to be considered at EA stage to avoid potential of having to open up the addendum provision. Uwe - Kapuskasing example discussed where two different concepts are being considered, presenting both through the EA process, will decide which to proceed on based on negotiations with Tembec, stakeholders, etc. Treating land stakeholders very consciously because they will be involved at all stages. Uwe - **confirmed that two different inundation areas will be carried through on multi-concept projects if inundation areas vary and effects on wildlife will be considered for both options at the EA stage**.	Xeneca
MNR asked about earthen embankment accessory dam for the Chute mentioned in project description. Nava - dyke wouldn't be required if a creek is coming into the head pond, only if it is flowing out to prevent head pond spill into a secondary area.	
Third Falls - 5 MW, 10 m head, 46 m3/sec, 5.6 km head pond (option 1)	
Nava explained issues with conservation area (Clay Belt Forest Complex Conservation Area), powerhouse originally designed within the area. If powerhouse is moved upstream, lose significant head and want to build head pond 1.5 m higher and head pond would extend up to tailrace of The Chute project, resulting in 30 km inundation area.	
MNR - why Xeneca is continuing to consider option 1 when MNR has advised that by legislation it is not an option because of the conservation area. With option 2, is it not considered one project (with The Chute) in terms of impact because of extent of inundation? Uwe - option 1 is still on the table because it has small footprint/impact, while option 2 has significant footprint. Since Receiving some conflicting advice on process, we	

Item	Action By
want to consider it until absolutely removed as possibility. Xeneca is producing EAs for multi projects as one EA where they are in series and can revise the approach for The Chute/Third Falls if necessary.	
MNR - when will they receive **updated PD** to show option 2 and the 30 km of inundation? Uwe - **will be sent out when complete**. Xeneca wants to forward information as soon as possible. There are a lot of projects and a lot of data, Will make it available as soon as possible.	Xeneca
MNR - what is conflicting advice? Uwe - order in council decision is a possible way forward. Would do this if Xeneca had MNR backing that it was a better option. Lawyers are looking at options but may not proceed if it is too complicated and no backing from MNR.	
MNR - why is Xeneca proceeding with the project with greater inundation, less head? Why not stop the project given changed conditions? Uwe - Xeneca builds hydro projects, will continue working on this project if it is at all possible. MNR - timelines for approvals with an order in council decision likely 1-2 years including land use amendment change for Crown Land. Sandra – Would Xeneca like some **process information from MNR**? Uwe - yes that would be helpful. Xeneca has prioritized projects based on issues and Third Falls is lower down on priorities because of some of these issues.	MNR
MNR - raised requirement for baseline data for full inundation length if option 2 is being followed up with. Uwe - that work has been started and is underway. MNR – Is Xeneca looking for a FIT extension? Uwe - it is being considered, but comes with some conditions that are not favourable. MNR - can provide some support for this if required. MNR is concerned that timelines are short, not enough time to collect/provide baseline data. Inundation affects down to Groundhog River, potential affect to sturgeon that spawn at 6 Mile Rapids. A mining company that has requirement to compensate. Mercury methylation and fish contamination issues discussed as well as recreational fishing, etc. MNR concerned that timeline does not allow for all of this data collection. Need to get baseline data collection done to date submitted and what is planned. Uwe/NRSI - following presentation on the river is to discuss this. The purpose of the meeting is to get the process started. There is more work and consultation required. Xeneca is electing to do this as a staged approach to deal with issues as they are raised instead of trying to provide all the information at the end of the process. Projects will have impacts, but want to make smart solutions and not miss the obvious fixes.	
MNR - does The Chute get moved into medium priority if projects are addressed in a single EA? Uwe – yes, potentially. MNR – What is the erosion potential downstream of projects? Did not see discussion on this in the operating plan. How does Xeneca plan to baseline the sediment regime of the river downstream of the projects?	

Item	Action By
Uwe - this will have to be studied but need to make sure we are discussing the same issue. Projects will not increase flow downstream, will potential cause effects from modified run-of-river pulsing. Steve - orientation of project is very important based on past experience where operating project is on eroding bank.	
11:50 Dave Green presentation started on Ivanhoe River.	
MNR (Kris) - Glad to see that invertebrate work is starting this year. Want to make sure that local outfitters are covered by maintaining fish populations. Yields need to be maintained post project. There is a major feeding bed near the site. In June 10, 2010 (letter) and at Jan 26, 2011 (meeting) 80% exceedance flows downstream of the sites discussed where 0.5 m^3/sec shown in operating plan. Need to discuss/agree on flows. Depending on level will adjust the baseline data requirements. 80% exceedance was an educated guess on the flows required to maintain downstream habitat. **Need to discuss flows/habitats** because MNR is concerned that earlier discussions may not have been reflected in operating plans. Uwe – also **need to have discussion around seasonal requirements**. How do we make the best of the conditions we have. Want to know what is there, what is area being used for, what is impact on benthic invertebrates, etc., what will happen to it. **Need that data for location approval**. Sajjad added that scientific background supports this flow for maintaining habitat. Sajjad mentioned unsteady flow modeling, share with biologists to help with minimum flow questions and negotiations.	Xeneca
MNR – Was a bottom draw dam considered for temperature management? Uwe - no. Consider that to be more of a detailed design or later stage decision. MNR - Need to have design engineers at table to discuss options at these meetings. Uwe agreed.	
13:25 Nava started engineering presentation on Wanatango.	
Wanatango - 4.6 MW, 9 m, 50 m^3/s. Carrying forward two options with different headpond levels because of private land concerns/impacts. Have a smaller head option in case land concerns can't be resolved.	
MNR (Rich) - mentioned that OPG released zero flow downstream of Fredrickhouse Dam last year for approximately 3-4 months. Uwe – have had discussions with OPG. Power line for project may be run past Fredrickhouse Dam so that they can power the dam for control. Currently no power and only stop log management. MNR – There was no water for fishing or recreation in the impoundment area and had to cut off flow. Uwe added that Larder had the same issue last year.	
13:35 Dave started environmental presentation on Wanatango.	
MNR – what is scope of terrestrial investigations? Dave - Initial study done in 2010, no change to inundation area. Study considered complete.	
MNR - confirming that fish flesh will be tested for mercury. Dave - yes, mortalities from 2011 program will be used and will harvest more if required.	

Item	Action By
Uwe – is there a database of mercury impacts of past facilities? MNR/MOE (Steve/Todd) - Districts receive information and do a comparison, not aware of regional repository of data. Todd added that there is no central database. Currently working on linking sport fish contaminant data and incorporating existing data into screening level model provided by another proponent. Just starting out. Uwe and Todd agreed that data should be used for larger benefit. Todd added that small scale hydro projects have not been analyzed as much as large projects. **Want to have the data available for public for mercury.** Also added that prior project where MOE was on record saying mercury would not be an issue and it became a problem. Dealing with FN concerns on this issue. One objective of the program is due diligence to be able to answer to groups coming forward later on saying that mercury levels increasing. Will have data/tracking to refute if untrue.	MNR/MOE
13:50 KBM (Dave Thomson/Stephane Audet) transmission line/access route presentation	
MNR(Greg) - in NE region have guidelines for road construction. An example is no road construction within 1 km of lake trout lakes. Added that same sort of restrictions w.r.t. remote fly-in recreational lakes. **Uwe asked for guidelines to make sure we are aware of all the issues.** Dave – agreed and added that Sustainable Forest Licenced (SFL) companies will be approached to build some roads because it can be easier for them to proceed on these.	MNR
Do roads follow all transmission line routes? Stephane - No, will not have road along entire transmission line. Overland sections will likely be tracked vehicle type construction. MNR – Question on transmission line priorities w.r.t. project priorities. Kapuskasing projects are lower down in priority than Ivanhoe projects, but Kapuskasing transmission lines are required to connect Ivanhoe projects.	
MNR - will Xeneca be contacting MNR districts for values layers? Dave - yes, do have values, NRVS layers now, being updated monthly though and **will be contacting MNR for this data. SAR species, significant habitat, etc.** MNR - cultural heritage, FN data might not be with Land Information Ontario (LIO). Also, following roads that were built before any values planning had to be done could be a concern. Dave discussed new guidelines w.r.t. Provincially Significant Wetlands (PSWs) and rapid assessment technique. Came out of wind/solar work, technique has been revised. Sandra added that desktop exercise can be done to assess candidate significant wildlife areas. **Will provide the program reference information to KBM.**	KBM MNR
14:10 Nava started upper Kapuskasing engineering presentation	
Outlet Kap - 2.5 MW, 6.5 m, 48 m^3/s, lake connected, currently a bypass project, may be close-coupled with long tailrace canal. **Lapinigam - 8 MW, 20 m, 49 m^3/s, two options due to lack of geotechnical data, currently close-coupled. Second option is canal bypass.**	
MNR - what is difference between option 2 and new raised inundation? Nava - 29.9 ha is option 2, increased to 149 ha if dam is raised.	

Item	Action By
MNR concerned about late presentation of options, changes from project descriptions. Uwe - discussed mixed feedback initially. Xeneca was told not to table the raised option earlier if land deal not resolved with Tembec. Likely should have been tabled anyway.	
MNR – **found that terrestrial information provided to date was vague w.r.t. species.** Cannot identify if regional/provincial/federal species affected. Also concerned about upstream/downstream concentration of field work.	
MNR - Want to understand how whole system functions. With one project in Kapuskasing, 4 Hydromega projects being added and Xeneca projects being added MNR **wants to assess whole system instead of just isolated projects/areas.** Uwe - discussed general timeline constraints. **Will work to get data to agencies as it comes in**. Regarding dealing with Kapuskasing river as a whole – it is considered a general use river. Need to resolve conflicting priorities in province w.r.t. conservation, protection and development.	Xeneca
MNR - Kapuskasing Outlet - concern expressed regarding access to Kapuskasing Lake. Remote outpost site, tourism, has to remain remote. Also have significant cultural sites on Kapuskasing Lake with burial areas, etc. Issues in past with increased erosion and will need to show how erosion on the lake has been assessed/ addressed. Uwe - received letter from MNR discussing **wetland on Kapuskasing** Lake that will have to be addressed. Stakeholders have raised **issue of access to lake**. **These issues will be discussed in the EA.**	Xeneca
MNR - would like to see longitudinal section of inundation area once preferred option has been selected to see if there are any areas that are not regulated still. Uwe – Xeneca has this from LiDAR and HEC-RAS and using to assess if rapids are left for benthics, etc. HEC-RAS can show surface and subsurface profile so water depths can be assessed. Profiles will be shared with agencies.	
MOE(Paula) - asked for walk through of how an option will be assessed. Will need to assess whether or not it will be viable to go ahead with multiple options in EA. If not making a decision on a preferred alternative pre-EA, have to make sure that issues and mitigation have been assessed for all of the options. Asked why options are still on the table at this stage? Uwe - OWA class EA process allows for options. Two reasons to change a layout; environmental constraints or geotechnical information. Access is another issue and do not have all the data needed to decide on a final design. This is why EA process allows for options.	
MNR - What is assessment of how Xeneca will affect Hydromega since they are all run-of-river (not modified)? MNR has to protect their interest now that they have permits. Nava – with 30 km between proponents there is a lot of room for attenuation and do not expect to have much effect. **Xeneca will do modeling work to confirm**. By regulating flows it may actually help Hydromega's operations. Sajjad – Hydromega has already selected turbines and operating flows. Xeneca may not really help their operation unless flows fit into their operating range. Uwe - unsteady flow models were generated for exactly this reason. Can resolve	Xeneca

Item	Action By
once minimum flows have been addressed. MNR - From a biology perspective, have negotiated with proponent downstream (Hydromega) to assess flows when Xeneca projects were not in consideration. LRIA permits provided based on non-peaked or modified flows. Frustrating that flows will now be different. Uwe – **understands the frustration and recommended this issue be resolved later.** Again, do not think there will be much effect from the projects given 30 km of attenuation.	Xeneca
14:45 Noel started presentation on Kapuskasing River projects.	
MNR(Dave) – Would like to have an answer as to why walleye are using Buchan Falls (Lapinigam). Numbers seem to be too large. **Fragmentation of habitat is a concern with projects considered downstream**. Is it a food source and what is the productivity of the food source. Concerned that these questions need to be answered before location approval can be addressed. Also concerned about agencies dealing with consultants and not aware if proponent (Xeneca) has bought into the process. **Management goals will be provided to Xeneca**.	MNR
MNR – question on fish migration. Uwe - unless fish migration is discussed, assumption is that the project is a barrier to migration. The only site where passage is being considered right now is Big Eddy due to eel, sturgeon, etc. In general fish passage hasn't been provided on waterpower projects. Inquiry into MNR for Thornbury project and other passage designs that have been approved by MNR. No response yet. Fish passage will be discussed, but there has to be real merit to the results. If fish are moving along a long reach to access a specific spawning area, this could be the driver, but if there are a lot of spawning areas along a reach and projects are isolating sections but there are still spawning opportunities the issue could become more of a genetic diversity issue. MNR - EA process is for proponent to advise whether or not passage is happening by tagging and assessing to see if this is an impact that needs to be addressed in report. Kristi - Petawawa discussed as an example and trying to prove a negative does not work very well. By tagging sturgeon and having none pass does not prove they will not ever pass. MNR - last year was lowest recorded flows on record at Kapuskasing Lake Outlet. Reviewing fisheries data from this year is critical to review how applicable the data is.	
MNR – Current fish habitat protocol between MNR and DFO is that passage is upstream and downstream. DFO added that they rely heavily on fisheries management objectives of fisheries manager, in this case MNR. If fisheries manager says that passage is critical to maintain the viability of the stock/habitat, DFO will follow up with this requirement as required by federal regulations. Will be practical though when considering projects on a waterfall or old/existing facility where there clearly is not passage. Will not ask for passage in future.	
MOE(Sajjad) - asked about experience with fish passage in past, any data summarizing effectiveness. DFO - some research has been done to assess, report (provided to Uwe) that showed less than positive data on how well they operate. Sturgeon passage upstream/downstream became an issue on Namaken project, dealt with in a workshop approach. Fishways can be successful in moving sturgeon.	

Item	Action By
Not concrete channels, but more natural rocky ramps. Steve(MNR) - natural channel design requires enough flow that is likely above and beyond what has been discussed to date on minimum release for these projects.	
15:55 **Nava started Middle Twp. engineering presentation**	
Middle Twp. - 5 MW, 13.5 m head, 50 m^3/s, 7.2 km headpond reach.	
MNR (Pat) - question on pre vs. post inundation areas. Increase of 18 ha to 50 ha. Nava – based on natural vs. added inundation area shown on mapping. Pat added that inundation area changed between November 2010 report and now (12 ha to 50 ha). Nava - initially used static inundation, now using HEC-RAS modeling to refine the areas. Uwe – added that changes in areas seem too large and could be due to a difference in terminology between what engineering is considering to be new inundation and what biologist/consultants define as inundation. **Will take this concern back to resolve.**	Xeneca
MNR(Rob) – Suggested that Xeneca start looking at cascading effects of multiple projects. Changes in inundation areas may have larger implications. Discussed cascading effects w.r.t. dam break. Have to look at lower project first and design for higher hazard if other projects cascade down. Affects zone of influence of EA. If end up outside of this area during EA process, have to start over again. Design flows would change if projects become cascading. Nava - IDF/dam break/downstream effects are assessed later on when design becomes more detailed. Rob added that if plans/specs were tabled in approval stage and were not right, it will get sent back to EA stage. MNR advised to classify sites at this stage so classification does not have to be revised later on. Sajjad asked what MNR opinion is for flow consideration to assess zone of influence at EA stage. **MNR answered that Xeneca should use the flow that captures the worst case scenario for the site. Biology and land ownership issues have to be addressed at EA.** Nava - 1:100 is design flood used for EA process. Rob - If IDF is 1:500 yr for a site, should work up to these higher levels, carry that through. Nava agreed that this would be valuable to assess now.	Xeneca
MNR(Dave) - Regarding location of powerhouse and tailrace orientation, why not in middle of river. Uwe/Zach - for access, not only during construction but long term for operations and maintenance as well. Reduction of concrete/construction cost for smaller projects is also a factor.	
MNR(Pat) - question about construction method/materials. Rolled Compacted Concrete (RCC) identified in PD. Is this still the plan? Uwe – Don't want to specify at EA stage. Would be more at the plans/specs stage. The concept designer thought RCC was most likely when considering project at the concept stage.	
Near North Boundary - 3.75 MW, 9 m, 60 m^3/s	

Item	Action By
MNR(Dave) – Is Xeneca trying to maximize peaking ability at this site given the capacity/ minimum flow numbers? Uwe – Modified Run-of-River (MROR) is the chosen operating mode for permitting but with 5 ha of storage area there is very little storage (1-3 hours potentially at Q_{min}). Dave – in summer operation will likely have 2-3 months where flows are always below Q_{min} of 18 m^3/s. Can Xeneca use multiple smaller units instead? Uwe - multiple units are being considered, but it is a cost impact. Also considering that single higher flow unit is largest impact and if Xeneca decides to change to multiple smaller units later it will be less impact and should be an easier amendment than amending the other way.	
MNR – How have the units been sized? Uwe - sizing assessments have been done and multiple unit scenarios were ruled out initially. Will be going out for turbine-generator pricing this summer and will determine whether or not multiple units are viable.	
MNR - has bathymetry been done? Uwe - above ground topography done with LiDAR, below surface by boat with depth sounders. Seven cross sections done upstream/downstream. Data used to calibrate HEC-RAS models.	
MNR(Dave) - regarding fragmentation of rivers, can bathymetry be used to assess habitat areas in headponds and isolated reaches? Uwe - yes, bringing habitat data and engineering data together. DFO – how were seven cross section locations chosen? Uwe - done primarily as calibration sections. Interpolated other cross sections from HEC-RAS model. DFO - seven sections are known, but other/interpolated sections likely don't have enough detail to identify riffles/pools left behind after inundation. **Suggested that riffles/pools be targeted for cross-sectioning in next phase.**	Xeneca
MNR(Steve) is substrate material assessment part of the plan? Have flows/depths but to move to habitat modeling need to know the substrate and how it might change with inundation. Hatch – substrate testing has been done throughout inundation area. Steve - Brown bullheads encountered in netting? Hatch - no.	
16:45 - **Nava started engineering presentation on Four Slide/McCarthy**	
Four Slide - 7.3 MW, 29 m head, 23 m^3/s, 6.8 km headpond reach, large inundation area (150 ha) will not affect upstream lake **McCarthy Chute - 2 MW, 7 m head, 36 m^3/s, lake connected.**	
MNR(Rob) - Question about lake effect on McCarthy. Understanding from early on was that there would be no connection/no effect on lake levels. Currently showing connectivity of lake and river and this is in contravention of policy and applicant of record award. Do not have leeway to mitigate or minimize, **need to neutralize the impact showing that there is no connection to the lake. MNR added that IDF has to be used for modeling.**	Xeneca

Item	Action By
(NRSI)Rob - From biologist perspective, talking about a zone of fluctuation of 4 inches, equivalent to wind set-up on a windy day. Cannot see how that will affect trout if that is the purpose of the policy. MNR(Greg) - given loss of lake trout, policy is no disposition of MNR land on lake trout lakes. Precautionary policy/approach because the resource is stressed. Regarding biological perspective, understandable that effect is minimal. Problem is the precedence that would be set. This project may not be an issue, but precedence is the concern. Uwe - asked for confirmation of what makes a lake trout lake. MNR - water temperature, depth, oxygen levels, low nutrient levels, etc. MOE(Paula) – summarized that for this site to proceed, needs to be designed not to connect into lake up to IDF. Uwe - adherence to policy and "no impact" approach will be taken back. Xeneca has been working towards a no impact principle with a hydraulic scheme and operating scheme that would not impact the lake.	
MNR - Question about Four Slide dam location, output, inundation. Also concerned about connection with Pecor Lake which is another lake trout lake. Difficult to review with changes in data between reports. MOE(Paula) added that Xeneca is working on many different projects and trying to get data out. Important to communicate updates to everyone. There is also a concern with public perception when data changes. Uwe - PDs were submitted early on to give agencies an early look at projects and in some case draft information was provided and expectation that some changes would occur. Will look into some of the changed numbers that seem very drastic between earlier reports and current design. Based on LiDAR data very confident that Pecor lake is not affected by Four Slide inundation. Nava added that flows and information are being refined. Uwe - since hydrology was done 1 year ago, another round has been done with daily average flows instead of using instantaneous flows. Other change has been turbine/output assessment refinement.	
Paula - **need to communicate which documents/information have changed in a summary format.** Inundation map on presentation is the same that was used for field program. Discussed the 1 km move of project site. MOE(Paula) asked about consultation plans for projects. Some initial consultations done. Does Xeneca plan to re-present changes? Explained their dual role of technical review as well as advisory role to public. Uwe – yes, Xeneca is going to a second round of PICs. There is a 3 person team in the office that deals only with stakeholder consultation. **Will make sure that information that was given to public was accurate and not significantly changing and will go out to public again if that is the case.**	Xeneca
17:35 Rob presenting on environmental aspects of McCarthy.	
MNR - suggested that Xeneca should be **using the Significant Wildlife Habitat: Technical Guide for this work.**	NRSI

Item	Action By
Rob - have not used yet but starting to review it now.	
MNR(Steve) – asked regarding natural fluctuations of lake and trying to assess this. Rob - based on observations of lake trout spawning. Want to assess elevations of these areas and report on this with the operating fluctuations. Steve – raised issue of data from last year that may not be as applicable in long term. Robert - shoals are known, including main shoal. Will be surveying grades, depths, substrate again this year.	
MNR(Greg) asked about observation methods Rob - did not do depth transects. Did gill netting/observations. Do not know the depths that eggs were placed on. Greg - has seen on lakes in Muskoka where egg transects done that showed eggs at much different location than expected.	
15:50 Robert presented on environmental aspects of Four Slide.	
Question about walleye spawning assessment Rob - will include egg mats this year.	
MNR(Steve) – Regarding brook trout populations in tributaries, are there plans to visually investigate tributaries, reds, substrate size? Robert – yes, once limits of inundation provided by engineering side. Substrate, size of tributaries, etc. are not in the plan right now. Steve - this is typically missed in most EAs. NRSI(Dave) - brook trout was 1% of catch, and although angling only is not typical sampling method, water was so clear that could see bugs and everything. Fairly confident that not much was getting through un-observed.	
MNR(Greg) - observation on size of impoundment vs. size of watershed. May want to think more about overall ecosystem downstream regarding relative impacts. Measured oxygen is lower than predicted, close to 7 mg/l.	
Rob - added issue of changing habitat from riverine to lacustrine and potential species changes. Can it be compensated for in the normal way? DFO answered that there are precedents for compensating for this.	
18:10 Uwe and Paula closed.	

NOTES OF MEETING

PROJECT	Xeneca – FIT Projects	**DATE**	20/04/11
DATE OF MEETING	15/04/11	**FILE NO.**	
LOCATION	MNR Office – Timmins, ON	**PAGE**	1 of 5
TIME	9:00 to 15:00	**WRITTEN BY**	Z. Vorvis
PRESENT	See attached		
DISTRIBUTION	Those present and		
PURPOSE	Present approach used for Operations Plan, clarify MNR/MOE requirements, and briefly present the eighteen projects.		

Item	**Action By**
Introduction	
Mary Ellen - all in one room to share info and large team involved. A large task to do this many projects at the same time. Uwe - presentation introduction. To discuss hydraulics/hydrology and engineering in this meeting. End of April is meeting on biology, etc. Started presentation at 9:30.	
Questions	
Patrick Morash inquired why the OWRA Permit To Take Water (PTTW) was not listed on one of the presentation slides. Uwe answered that Xeneca is aware of this requirement and are currently applying for PTTW for McGraw Falls. Working to cover draft guidelines from January. Presentation slide was not meant to be a complete process description.	
Bob Metcalf asked for clarification of the "run-of-river" definition being "no man-made downstream effects". Uwe answered that essentially the definition Xeneca is using means water in equals water out. Nava added comments regarding the routing effect that will have short term effects on flowrate downstream compared to upstream flowrate. Richard added that the headponds were generally small and that little to no attenuation would occur as the plants would adjust to compensate and generally maintain headpond levels. If headpond levels are not rising or falling then inflow equals outflow. Mary Ellen added that it is important to have clarity of terms/definitions because terms have different inherent meanings to engineers, hydrologists, biologists, etc.	
Sajjad questioned how the LiDAR survey and bathymetry were tied-in. Uwe answered that LiDAR was done by air, bathymetry done on ground and tied in to LiDAR beyond bank line.	
Sajjad asked how long Xeneca will hold water when flowrate is below $Q_{Tmin.}$ Uwe answered that the storage capacity varies and has been calculated at each site. Examples are Big Eddy and Chutes have no storage where others such as Four Slide have more.	
Bob Metcalf asked about the selection of the definition/boundaries of the seasons. Why is boundary between winter and spring on falling limb of spring melt? Richard answered that dividing line is somewhat subjective and can be revised if necessary, but by moving either way one of the other seasons (summer or spring) becomes very short or is lost. Steve McGovern added that the boundaries work well from a biologist point of view from a spawning window perspective.	
Bob Metcalf asked about the variability shown in the hydrograph. Uwe answered that natural variations are represented. Sajjad added that plotting with linear scale can be more useful sometimes than the logarithmic scale Xeneca has plotted however acknowledged the benefit	

Item	Action By
of presenting the results in the manner shown. Uwe advised that data is available for MNR use and plotting as required.	
Sajjad asked how flow data was reduced/used. Nava answered that daily flow data is used, not averaged to monthly, etc. **Sajjad asked for daily data. Nava will provide.**	Xeneca
Sajjad asked how Xeneca is determining natural lake level fluctuations. Uwe answered that Xeneca is doing some modeling as there is very little data available. Sajjad asked about installing transducers. Nava answered that transducers were installed at lake connected projects last fall and a flow measurement was taken at the same time.	
Bob Metcalf asked what modeling is being done and how is the field data being used to validate. Nava answered that have not reached the modeling stage yet but currently collecting data. With inflow, lake and outflow it is a simple reservoir calculation. Will use synthesized flow and WSC gauges for inflow. Bob advised there is a PHD thesis paper written on lake level modeling, etc. Uwe asked for paper. (Note: Steve McGovern provided a copy of the paper to Richard during a meeting intermission).	
Bob Metcalf asked what the split was between close coupled and bypass arrangements for the eighteen projects. Questioning the differences in habitat effects/loss when riffles become ponds, etc. Uwe answered there is approximately a 50/50 split between close coupled and bypass arrangements but that this can be confirmed. Uwe also indicated that Xeneca is not debating that either arrangement will need to be assessed for impacts on habitat. EA process is for determining what these are. Uwe noted that there were some projects where the decision between close-coupled and bypass arrangements had not been finalized yet. Brian Grantham asked how many sites will have both the close coupled and the bypass concepts brought through the EA process and whether sufficient biological information would be provided for both. Uwe explained that options are being kept open where necessary for engineering reasons. Preference is to settle on one, but will carry options through the EA process if necessary. In that case there would be the need to consider mitigation through the EA for both. Uwe discussed Wabageshik case study where both options existing however indicated that due to the gravel beds upstream of the layout proposed in the original submissions which provide valuable spawning habitat it was likely that a close-coupled arrangement located upstream of the gravel beds would be selected and brought forward.	
Sajjad asked what method was used to map flow affected areas downstream of the projects. Uwe answered that a qualitative assessment was made based on whether the projects discharged in lakes or had lakes within a short reach downstream, The secondary assessment was to assess downstream tributary and river profiles. Qualitative measures used, tributaries need to provide 10% or more of flow, if grades level off the effects above are expected to be negligible. Not necessarily zero effect, but negligible.	
Sajjad asked whether Xeneca had discussions with Hydromega on Kapuskasing River regarding modification of flows, etc. Uwe answered there has been communication back and forth but details have not been discussed yet. This is an ongoing stakeholder engagement.	
Finished presentation at 11.	
Todd Kondrat asked how inundation areas were calculated pre/post construction. Uwe/Nava answered that detailed topography was used and inundation areas were mapped for 1 in 2 year, 1 in 100 year, and long term average flow cases.	
Bob Metcalf asked about minimum turbine flow, when/how will it be determined, and how is habitat considered. Uwe answered that Q_{Tlimit} flow is determined partially in discussion with MNR, from 65% up and that habitat is one of the considerations for minimum turbine flow. Richard added that unit selection and number of units is partially based on these constraints.	
Bob Metcalf asked about "zone of influence" and terminology standardization was again discussed. Agreed that MNR zone of influence is same as Xeneca's "variable flow reach".	

Item	Action By
Bob indicated that, to him, "modified run of river" seems to be the same as 'peaking'. Uwe said that Xeneca's definition for modified run of river was borrowed from another source. Xeneca to provide source for definition (terminology standardization required). In Xeneca's opinion, "peaking" is a much longer term storage.	
Steve McGovern asked if Xeneca plans to field truth simulations, confirm model and gather pictorial representation of the actual condition for given lines on a plan? Uwe related experience at McGraw where this was done, will look to do this year for these projects as well.	
Mark Orton (Hatch) provided an overview of approach to synthesize flows for all of the sites.	
Questions for Hatch from Bob Metcalf, answers by Mark Orton: – Spatial interpolation approach used? Yes. – Discriminate function analysis done? Yes, only to see that land use and water flow are properly represented. – Flow record periods used? Shortest was approximately 20 years, longest over 80 years. Lardner Raven 14 year period available, extended to 38 years using flows from a nearby gauge. – Were older flow records looked at from a climate change/different flow regime perspective? Regional flow records were subjected to statistical screening. Records were rejected if they were more than a specific percentage from the mean. – Were rainfall runoff models run to fit into data and account for possible uncertainty of river flow records? Where there are fewer flow stations, can use other stations at same longitude. Flows vary laterally but don't vary as much longitudinally. – Were flows monitored at site used in models? Yes where gauge installed several years ago. Other gauges are too recent, likely would not have correlation on a day to day record because of isolated rainfall, etc. Nava added that we do plan to use data from level monitors installed last fall to confirm synthesized hydrologic flows. Mark added that there is a need to correlate shorter term flows with longer term flows and this could be difficult. 3 year or 50 year data used for flow synthesis will have different results. Uwe closed that Xeneca's intention is to use data that is available to the best of our abilities.	
Richard mentioned that Wes Dick (Canadian Projects Hydrological Engineer) on phone for any HEC-RAS questions if necessary. None asked.	
Sajjad is satisfied with the methodology of the hydrology work done to date.	
Sajjad asked about storage capacity of projects beyond one day. Uwe answered that there are no benefits from OPA for extended storage, only benefit from daily storage. Hours of peaked operation shown in graphs in project operating plans. Range from 2-10 hours depending on site.	
Sajjad asked whether the instantaneous flow data was used to determine return period flood flows. Richard indicated that the instantaneous peak flow data from the WSC gauging stations was used and transferred to the project sites similar to the approach used for determining the synthetic flow series.	
Sajjad asked how the extent of inundation was modeled. Uwe answered that LiDAR data was used to model inundation level accurately. Learned from past experience using standard topography data wasn't accurate enough.	
Sajjad discussed LiDAR water penetrating technology as option to bathymetric surveys that were carried out. Nava indicated that Xeneca had discussions with suppliers regarding this technology, however costs were prohibitive and the availability of this equipment was an issue	

Item	Action By
(i.e. booked all over the world). Xeneca indicate that they would share the cost estimates provided for this technology with MNR if they were interested. Potential concerns regarding this technology were also noted as turbidity can impact the effectiveness of the system.	
Bob Metcalf how the LiDAR data was tied in to geodetic. Uwe/Nava responded that work to tie to geodetic is critical step and has been done. Otherwise LiDAR is just a relative survey.	
Sajjad asked about the use of Google Earth to assess river profiles. Nava returned to slide showing a Google Earth image of one of the project sites and answered that the flow rate was known for the date that the image was flown. The Google Earth image was essentially used to help delineate the river banks at the time. River bed elevation of the river may be higher/lower but good calibration to flood flows was achieved.	
Bob Metcalf asked whether the estimated HEC-RAS river cross section data used upstream of project could be used for downstream erosion modeling, etc. Uwe answered that Xeneca has detailed topography downstream as well and will use actual cross sections were available. Synthesized cross sections are only used for upstream inundation mapping. Richard added that downstream water levels won't be outside of natural fluctuations, just timing changes. Bob added that extent of time of pulses can affect loading, etc.	
Sediment trapping/starvation issues were discussed. Uwe talked about Kapuskasing fine sediments and mobility of fine silts. Serpent river discussed where it is basically a rock channel but there are a lot of sand backs on edges and in meanders.	
Project summary sheets were discussed. Ed suggested that summary tables could be prepared that show the information for all the projects in one location. Xeneca will do this through correspondence, building on existing proposed downstream parameters table. Uwe added that Xeneca is aware of issues from the work carried out and can summarize issues at each site based on stakeholder consultation, environmental work, etc. Patrick added that they would like to see summary of FN consultation/engagement as well.	Xeneca
Sandra Dosse mentioned EA, LRIA Section 14 requirements. Expectation is that flows and levels are being reviewed/discussed during the EA process. EA flow/level discussions will form the basis for LRIA/location approval/WMP discussion. Also, Operating Plans are meant to be dropped into WMPs. Patrick added that MOE involvement at same time will be helpful because MOE is involved later in PTTW/OWRA and will want to make sure that MOE is in agreement with MNR agreed flows/levels. It was noted that information required for PTTW is more than in the past. Information submitted through MNR is meant to be flipped over to MOE nearing end of that process. Patrick advised that there are two permits required - short term for construction and another for operating. Sajjad advised that the EA should be used as a technical appendix to the PTTW application.	
Jim Beal (thru Mary) discussed MNR triage/review time process and wanted to know from Xeneca which projects/timing is required to get workload and process resolved. Ed Laratta will send priority list next week with other deliverable. The priorities will be based on where there are less public and environmental issues. List will have priorities and ideal timelines. Current priority list involves 3 phases of projects with 2 months between each phase.	
Closing Comments	
Patrick – helpful, have many other projects on table besides these 18, will do everything possible to adhere to timelines, but there is a lot of work to do. Denis - developing a MOU between both ministries to reduce duplication of permitting. Working towards that in concert with OWA. Ed - helpful, question on eastern region representation. MNR will be at 28th/29th meetings (Mary Ellen indicated that the eastern region would rely on the western region to cover their concerns) and MOE has eastern representation on call. Steve - impressed with data presented and meeting was useful, helpful. Richard/Zach - good to get issues on table at start.	

Item	Action By
Todd - helpful information, hopes that there will be the same amount of data on biological side. MOE Timmins - helpful to see the information. MOE Thunder Bay – Flagged that O.Reg 387/04 was major change in 2005 on PTTW process. Sajjad - helpful, answered questions on baseline data collection and modeling methods used. Rich - hydrology information looks good, raw data later for own assessment. Bob - no comment. Nava - helpful, any data/reports that regulators require we are happy to provide. Uwe - tight timeline, know 18 projects is an imposition, open door policy appreciated. EA dialogue is often on perception of lack of information or process, Xeneca is trying to alleviate this. Sandra - next challenge will be 2-day meeting at end of April and bringing district staff up to speed. Talking early and often is the key. Brian - helpful/informative, no comment. Jim - no additional comment beyond triage. Peter - (water supervisor eastern region) would like list of people at table. Good to identify issues up front. Suggested Xeneca look over environmental bill of rights for Mississippi water region regarding a decision that could have gone better at EA stage instead of PTTW stage. Paula – questioned whether bringing options through an EA was acceptable. Uwe advised that there are some that we want to keep alternatives. Paula has not seen a project that did this in the past, public loses opportunity to comment after the EA process. Sandra added that location approval could be difficult if design not finalized. Sandra also added that Paula will be the designated "one window" access person for Xeneca at MOE for all 18 projects.	

NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists

Biological Scoping Meeting for

Xeneca Power Hydroelectric Developments on the

Serpent River (Four Slide Falls & McCarthy Chute)

DRAFT Meeting Minutes

June 9, 2011

Date: June 9th, 2011

Location: Water Tower Hotel, Sault Ste. Marie, ON

Attendees:

In Person

Robert Steele (NRSI)
Brett Woodman (NRSI)
Valerie Stevenson (NRSI)
Uwe Roeper (Xeneca)
Nava Pokharel (Xeneca)
Ed Laratta (Xeneca)
Dave Thompson (KBM)
Neil Hutchinson (Hutchinson Environmental)
Nathan Haines (MNR – SAR Biologist)
Al Rowlinson (DFO)
Adam Dyck (MNR)
Emily Green MNR
Erin Nixon (MNR)
Greg Deyne (MNR)
Lisa Keable (MNR)
Kim Mihell (MNR)
Rich Pyrce (MNR)
Jim Trottier (MNR)
Jessica Sicoly (MNR – SAR Biologist)
Ilsa Langis (MNR)

On Phone
Hya Finanan (Transport Canada)
Sandra Dosser (MNR)
Laurie Brownlee (Moe)
Tami Sugarman (OEL)
Rod Seine (MOE)

Not in Attendance
XXX

Meeting Chair: Brett Woodman (NRSI)

Meeting Scribe: Valerie Stevenson (NRSI)

Resulting Action Items

#	Delegate	Action Item
1	Xeneca	Provide maps showing facility locations and layouts in relation to waterbodies to MNR
2	Xeneca	Meet with MNR regarding their Lake Trout policy and McCarthy Lake.
3	MNR (Erin Nixon)	Pull together water management comments and forward to Xeneca.
4	NRSI	Continue wildlife (including SAR) investigations in 2011. Identify breeding species and habitat. Continue fish surveys.
5	NRSI	Discuss the use of ELC vs OWES for the wetlands with Sandra Dosser and John Booth at MNR to determine which protocol to use when assessing the wetlands
6	MNR (Sandra Dosser)	To follow up on the status of tables converting ELC codes to FRI and FOR codes
7	MNR/Xeneca	Discussion with policy staff regarding marrying the two EA's
8	NRSI	Remove Pike as a VEC in EA
9	MNR	To provide all available fisheries data for McCarthy Lake and Serpent River.
10	NRSI	To provide rainbow trout catch data to MNR
11	MNR	To provide a clear statement regarding fisheries management objectives on the Serpent River.
12	NRSI	Confirm wetted width at the boulder garden, provide to MNR (Rich Pyrce)
13	Xeneca, Hutchinson Env., NRSI	Meet with MOE to determine work plans regarding water quality. This would include NRSI, Rod (MOE), Todd Conrad (MOE), Lisa (MNR), Tami Sugarman (OES), Neil Hutchinson and occur next week. Awaiting approval from Xeneca to proceed with discussions with MOE.
14	Xeneca	Confirm soils present on-site to identify any issues with sediment transport as it relates to construction.
15	NRSI	Note during field surveys areas of existing erosion
16	Xeneca/NRSI	Collect sediment samples for grain size analysis to characterize sediment present.
17	Xeneca	Historical air photo review to determine natural movement of the river
18	Xeneca/MNR	MNR (Rich) to discuss megawatt usage with Xeneca
19	NRSI	Provide detailed field study plans to MNR
20	Xeneca	Provide updated project descriptions to MNR.
21	Hutchinson Env.	Neil to track down water quality reports at the Bracebridge library.

Meeting Commences at 9:15am

Brett Woodman (NRSI) - provided introduction, housekeeping notes.

All - Roundtable introductions.

Uwe Roeper (Xeneca) - provided introduction of project, overview of previous meetings and process. Provided overview of what will be covered in this meeting. Proposed to first provide an overview of the study sites and recap what modified operation is.

Nava Pokharel (Xeneca) - shows Google earth image of two site locations (Four Slide Falls and McCarthy Chute). The projects are located in Serpent River, Four Slide Falls is located upstream and McCarthy Chute downstream. McCarthy Lake is located in between these projects. Presented proposed project layout, locations of dam and station for four slide falls. Showed longitudinal profile of project. Pecor's Lake is isolated from the Four Slide operation. Presented figure of McCarthy Chute project layout. Dam structure is proposed at the outlet of McCarthy Lake. Presented the longitudinal profile, this project (McCarthy) has been proposed to be lake coupled. Uwe will discuss this later. Any questions?

Rich Pyrce (MNR) - can you please go over the megawatt potential of both sites?

Nava Pokharel (Xeneca) - I will get back to you with that information

MNR – do you have a ball Park??

Uwe Roeper (Xeneca) - 4 and 7MW

Erin Nixon (MNR) - requested the locations of the facility in relation to the water bodies present

Uwe Roeper (Xeneca) - MacCarthy 2MW, 7.3 MW for Four Falls

Nava Pokharel (Xeneca) - so you would like to see the facility layouts in relation to the waterbodies?

Erin Nixon (MNR) - yes

Nava Pokharel (Xeneca) - presented slide again

Rob Steele (NRSI) - confirmed that important rapids habitat will not be affected

Uwe Roeper (Xeneca) - downstream ~6km of stream reach could be affected from development. Presented overview of operations. An issue is the creation of a by-pass reach. Proceeded to present details of this approach. The other issue is the modified run-of-river operation. Water power has ability to shift production times of use. Lower environmental impact predicted due to lower reservoirs. Modified operation is more difficult and complicated that run of river. Highlighted that modified run-of the river is not peaking. Provided explanation of differences of operation between the two operational types. Provided graph showing operation flow rates during different flow. Intermittent operation, occurs during low flow periods. Options to operate is to let it flow or to hold back water, this can result in significant effects to flow downstream. Frequent question that comes up regarding this is what is the minimum flow that must be maintained for environmental protection. Displayed monthly hydrographs. Certain times of the year the facility is at capacity and water spills will occur (spring) this typically considers with sensitive periods such as walleye spawning. Big issues are related to late summer and late winter. Would like discussions to focus on these time frames. When designing operation plans we selected seasons based on the hydrograph. Looked for inflection points to define the seasons. Happy to have dialog regarding changes to the selection of these season, (i.e. based on spawning periods). Showed a superimposed hydrograph that overlays each annual hydrograph over a long period of time (years). Open to suggestions for defining operational periods, as mentioned before

Any questions? no response

Uwe Roeper (Xeneca) - wanted to raise question brought up previously, we have 4 projects that are lake coupled. This means that the backwater pond created from the dam is hydrologically connected to the lake. This is the situation that occurs at McCarthy. This operation has potential to affect lake levels. The operation plan currently identifies that the normal operation will affect lake levels by 10 cm. Normal Lake levels were shown to fluctuate by 1 to 2 m. Hopes not to change the lake levels within Lake McCarthy. There likely will be some backwater effect. We are looking into the issue that this may cause biologically.

Brett Woodman (NRSI) - suggested that we follow meeting agenda

Kim Mihell (MNR) - regarding the lake being coupled. MNR has made their position clear. This project is a non-starter. The proposed operational plan is in contradiction to MNR policy regarding lake trout lakes. We won't engage in discussions regarding impacts to the lake. We will discuss downstream effects on the river.

Uwe Roeper (Xeneca) - it is simple, there will be no impact on lake. Regardless this meeting will not focus on the impacts of McCarthy Lake.

Kim Mihell (MNR) - We will not engage in those discussions on impacts to the lake as MNR does not support the project.

Rob Steele (NRSI) - what is problematic is that we will proceed with the EA process without MNR and will not have MNR engaged.

Uwe Roeper (Xeneca) - we are aware and understand the issues regarding policy. Asked what policy MNR are referring to as there is clearly a different interpretation of policy. We are looking at the EA process and not in regard to LRIA. We have requested information previously and not have received. The policy discussions are outside of this meeting. We will focus our discussions on impacts to downstream and upstream but will not discuss effects to the lake as it is not supported.

Rob Steele (NRSI) - not sure we can get into downstream discussions as it is directly related .
You do not want to speak to the McCarthy lake coupled project at all?

Kim Mihell (MNR) - We will not engage in those discussions on impacts to the lake as MNR does not support the project.

Uwe Roeper (Xeneca) - part of EA process is to engage MNR in discussions for the process. We want to discuss. If you say you don't want to discuss then we can't make you. It is unfortunate that we can't get that valuable information. It has been very valuable on other projects. But it is understood we can't force you to discuss.

Kim Mihell (MNR) - We are happy to discuss projects that are not in direct contradiction to our policy. We have not seen any changes to the operation plan or design that suggest it wouldn't be.

Uwe Roeper (Xeneca) - we have reviewed the policy and will work to meet those requirements. Believe that there is not an agreement on the interpretation on policy. We fully support the objective of the Lake Trout policy, we think it is great policy we are on board with that.

Erin Nixon (MNR) - we are hoping this (our position) doesn't come as a surprise to anyone, this was identified early on we hadn't received a WSS. Comments provided previously to the proponent were detailed. Many discussions have occurred regarding this policy and the MNR's position has been upheld for a period of time. It is MNR's stand that they will not engage in these discuses at this time.

Uwe Roeper (Xeneca) - we agree with the Lake Trout policy, we seem to have some differences in policy interpretation. We did request from MNR what policies occur and don't occur, we received no response.

Made several attempts at getting this response. We support the Lake Trout policy, we are doing everything we can not to affect the lake, the project is not on the lake itself, it is downsteam of the lake. We want to engage on dialog on this. If it doesn't occur today it needs to occur in later policy discussions. Other things can be discussed today (i.e.) SAR, lake coupling, downstream effects on McCarthy, and temperature effects at Four Slides. There is no backwater effect on Pecor's Lake. We will set the policy issue aside and hope that we can address it at another time.

Erin Nixon (MNR) - may pull out waterpower management comments. She can look into pulling these together for Xeneca.

Uwe Roeper (Xeneca) - yes I have heard reference to these several times as well as policy documents. We will have to have the policy discussions at a later time. Do we want to get into Species at Risk?

Brett Woodman (NRSI) - yes we can provide SAR updates on each site. Jessica Grealey has been working to address SAR on both sites. She provided a summary for Brett to present at todays meeting. The SAR scoping meeting was held Nov 10, 2010 for both sites. Four Slide Chutes- It was brought to attention that Blandings turtles might be present and surveys would need to be undertaken. A detailed work plan was submitted to Jessica Haynes at MNR for 2011 work, it was approved April 28, 2011 by MNR. NRSI has conducted initial effort at Four Slide Falls. Were unsuccessful in trapping turtles. Observed turtles basking. Only painted turtles were observed. The painted turtles we observed in Wetland 1. Hope to have greater success in capturing turtles in 2011 surveys. Wetland 4, 3 Chimney Shifts were observed, only migration but if stay could be evidence of breeding. Rusty Black Birds and Spring Chorus frogs also observed in early spring, again too early to confirm breeding.

Jessica Sicoly (MNR – SAR Biologist) - where is wetland 4?

Nathan Hayines (MNR – SAR Biologist) - can jess provide a summary of findings to date?

Brett Woodman (NRSI) – yes, I can provide you with a hard copy today

Brett Woodman (NRSI) - with the McCarthy Chutes there are not multiple wetlands, rather only one area to look at (showed on slide). Similar level of effort as displayed for other site was displayed here. Painted turtles and Snapping turtles were captured in traps. Bears also got into traps. Other species noted, Common Nighthawks, Canada Warbler, Bald Eagle, Olive Sided Flycatcher, Chorus frog. This is early breeding bird evidence. Any questions?

Nathan Haines (MNR – SAR Biologist) - can we receive a summary?

Uwe Roeper (Xeneca) - what do we do with this information?

Nathan Haines (MNR – SAR Biologist) – there is a lack of evidence of Blandings prescence, we need to continue to investigate for these species. If we see presence of Blandings turtles than we will have to discuss mitigation. Other species mentioned by Brett will have to be continued to be surveyed to identify their presence.

Uwe Roeper (Xeneca) - are these other species, Species at Risk?

Brett Woodman (NRSI) - yes, SAR and species of concern. We need to continue to search and identify habitats of these species.

Nathan Haines (MNR – SAR Biologist) - species of concern noted don't receive protection and see them falling by the wayside.

Brett Woodman (NRSI) - where they do get picked up is under significant wildlife habitat determination.

Uwe Roeper (Xeneca) - to Brett W., have you looked at the wetland area and how the water levels will be affected in these areas? There may be an opportunity to change operation to mitigate impacts.

Brett Woodman (NRSI) - going back to the Sudbury meeting, we discussed collaborating NRSI with Xeneca to review these water level fluctuations. We don't anticipate that the water level fluctuations will impact the wetland. We are hoping to work together to review the data to determine what impact would occur, if any, on water levels within the wetlands.

Lisa Keable (MNR) - will Whip-poor-whil surveys be conducted?

Brett Woodman (NRSI) - yes, tonight on Serpent River. They are targeting Whip-poor-whil but will be gathering all other species information encountered.

Sandra Dosser (MNR) - regarding the wetlands, have you done an evaluation of OWES (Ontario Wetland Evaluation System)?

Brett Woodman (NRSI) - we have that tasked for later discussion

Sandra Dosser (MNR) - in order to develop a mitigation strategy we need to have a good understanding of the wetland. We do strongly recommended that you evaluate any unevaluated wetlands.

Brett Woodman (NRSI) - why not use the provincial ELC?

Sandra Dosser (MNR) - ELC does not address the hydrological component of the wetland. With the inundation it would need to be addressed. There are specific criteria under OWES that evaluates the components of the wetland.

Rob Steele (NRSI) - wetland evaluation scores and ranks the wetland. I am trying to understand how this evaluation would help determine impact.

Sandra Dosser (MNR) - it would help focus the mitigation to the components that are affected (i.e.) hydrologic function.

Brett Woodman (NRSI) - I have no problem with the wetland being evaluated with OWES. I have taken the ELC course and it was expressed at the course that ELC was the one system approach that the Ministry would like to move to using. But if MNR does not want this approach then we will modify.

Sandra Dosser (MNR) - I can talk to John Booth and we should have a discussion with John. John deals with OWES and ELC.

Lisa Keable (MNR) - is NRSI conducting the hydro corridor work?

Uwe Roeper (Xeneca) - we have conducted the desktop work. Deferred to Dave Thompson.

Dave Thompson (KBM) - we have not conducted the field surveys. We have the desktop evaluation completed. Looking at the route plans, these layouts have changed and adjusted around sensitive features. We have not been tasked with completing significant habitat determination.

Lisa Keable (MNR) - the technical guide for the significant wildlife should be followed. Identified features should be ground-truthed.

Dave Thompson (KBM) - we are working to provide input on layout based on our mapping.

Ed Laratta (Xeneca) - we are still working to finalize the layout.

Kim Mihell (MNR) - if the transmission crosses crown land, MNR needs to be engaged on the EA process for MNR's disposition.

Sandra Dosser (MNR) - EA applies on transmission lines. The is opportunity is there to integrate both waterpower and transmission line EA processes

Tami Sugarman (OES) - in EA coordination process meeting, asking for more detail

Sandra Dosser (MNR) - once finalized, there needs to be an EA co-ordination meeting. MNR needs complete data set for EA.

Rob Steele (NRSI) – the MNR RSFDEA applies to ~115km. To complete RSFDA will need more complete detailed information. It is Xeneca's position that they are not going to complete detailed surveys. There is risk associated with this decision.

Al Rowlinson (DFO) – there is danger in that, what happens if there is a watercourse present? If it is missed that we have to open up later. It will hold up the process down the line.

Ed Laratta (Xeneca) - we are doing everything we can up to know. The transmission line is still moving. Does not want to complete detailed work over and over.

Al Rowlinson (DFO) - just trying to highlight that it may avoid hold ups down the line.

Erin Nixon (MNR) - what I am hearing is that for the transmission line that no detailed field work will not be conducted.

Rob Steele (NRSI) - yes, no field work will be completed. Desktop evaluation has been conducted.

Erin Nixon (MNR) - when identifying significant wildlife habitat what tools will be used

Rob Steele (NRSI) - it won't happen

Ed Laratta (Xeneca) - it will happen once the final transmission route has been selected. There will be a ground truthing once that has been determined.

Erin Nixon (MNR) - so at that time you will be talking with NRSI to conduct the same level of field work?

Ed Laratta (Xeneca) - yes, we will discuss

Rob Steele (NRSI) - dependent of timing of the release of the report. It is still a question whether this data will be included in the EA document.

Ed Laratta (Xeneca) - yes that is correct, it will not be included in the EA document.

Uwe Roeper (Xeneca) - overview of process for identifying significant features. Taking a water crossing as an example, we are trying to avoid watercourses through design. Once we have identified that there is a water crossing, then it will be addressed at that time.

Dave Thompson (KBM) - we are using line crossings with an existing crossings to minimize. To DFO, were you thinking of a line crossing or water crossing?

Al Rowlinson (DFO) - yes, both. Just would like to see things dealt with up front.

Dave Thompson (KBM) - for new road construction, partnerships with SFL as a partner under the FMB process.

Greg Deyne (MNR) - consider secondary roads as well within 1km of a watercourse

Dave Thompson (KBM) - yes. Approach is to use existing roads as much as possible.

Lisa Keable (MNR) - noted a heronry in a report that may be present on the transmission route (within the area)

Dave Thompson (KBM) - have noted nesting sites on Serpent River.

Erin Nixon (MNR) - when completing desktop do you have access to ELC?

Dave Thompson (KBM) - we have access to the SFL folder and MNR NRVIS layers, have requests out to many MNR bios for values mapping. Can show you the mapping.

Erin Nixon (MNR) - our values mapping is not exhausting my any means. Typically you would look at the foot print and conduct ELC as well as use of the technical wildlife guide. This is the level of information that would be received for wind power projects.

Brett Woodman (NRSI) - when completing ELC they were looking at converting FRI and FOR codes and be able to convert them to ELC codes, does anyone know what the status is?

Dave Thompson (KBM) - we have all the FRI codes.

Brett Woodman (NRSI) - to MNR, has there been any movement on the conversion codes? To conduct detailed ELC would include over 200km.

Sandra Dosser (MNR) - MNR are working on cross walk tables. She will follow up.

Erin Nixon (MNR) - question...MNR class RSFD and use of waterpower class EA and the potential to harmonize EA. My thoughts are that this would happen at the beginning. Has there been discussion of how these documents will be married?

Rob Steele (NRSI) - typically when you submit you notice of commencement is there a requirement to mention all planning processes that you are addressing in your EA.

Tami Sugarman (OES) - you need to integrate processes. The OWA has text around the processes of marrying the 2 EA's.

Erin Nixon (MNR) - as MNR likely will need to provide a disposition. It was thought that the transmission will be covered under which EA?

Sandra Dosser (MNR) - need to have discussion with the policy folks.

11:20am Meeting Break (15 min.)

Brett Woodman (NRSI) - notes that Jessica and Nathan (MNR SAR bios) have left the meeting Reiterated that it was original intent to follow the MNR data requests as an agenda.

Brett Woodman (NRSI) - existing conditions characterization. Fish community, fish community matrix.

Lisa Keable (MNR) - we had requested the field methods to be provided and they have not yet been submitted.

Rob Steele (NRSI) – we will provide field methods. Provided summary of field work at McCarthy Downstream of McCarthy Lake which included 2 years of Walleye spawning surveys. Believe that species is not spawning and believe they may not be present. This year the zone of influence has been

expanded. Efforts included electrofishing and gill net sets. Immediately downstream of the chutes, the habitat is very shallow through the 6km downstream reach. Planned to conduct more fishing in 2011. Community is dominated by Smallmouth Bass with some Northern Pike. Tributaries contain centrarcids (i.e.) pumpkinseed other baitfish included common shiner etc. 2011 level of effort will be increased within the 6km reach. SAR- from an abundance perspective we are not applying a standardized approach due to the habitat present. Contaminant levels will be dealt with the MOE guidelines for total and methyl mercury. What is MNR looking for more in terms of the age structure, funductivity etc.?

Lisa Keable (MNR) - looking for age structure in terms of habitat. Funductivity- spawning surveys

Emily Green (MNR) - the list were provided for your review to decide if it is appropriate to include or not.

Rob Steele (NRSI) - would like to know what MNR would like to see specifically.
Species- covered. Abundance- will be difficult to standardize approach, electrofishing could be implementing to standardize from year to year. Growth- small mouth bass is the only species that we would be able to obtain some growth measurements. It is understood that this species is not of interest for MNR. MNR- correct? Funductivity- no fish have been identified as spawning

Greg Deyne (MNR) - if only electrofishing may only pick up small fish.

Rob Steele (NRSI) - looking at off shore wetlands for potential for Pike spawning habitat. Not a lot of off shore opportunity. What more would be suggested to get an idea of the adult Pike.

Greg Deyne (MNR) - need to find where the adult Pike are.

Rob Steele (NRSI) - suspect that they are located downstream on the 6km zone of influence

Al Rowlinson (DFO) - we need to know where the adults are located, upstream or downstream. To see how they are connected to the juveniles.

Rob Steele (NRSI) - could look outside of ZOI further upstream or downstream

Greg Deyne (MNR) - need to understand connectivity of species

Jim Trottier (MNR) - Pike were not native to the lake, they were introduced.

Greg Deyne (MNR) - some concerns with access roads developed to the lake, tends to invite possibility of introductions of fish species.

Rob Steele (NRSI) - can have a look at downstream sites to see if the adults are present. Still having issues of drawing connectivity between juveniles and adults.

Jim Trottier (MNR) - we don't know the details of the introduction.

Uwe Roeper (Xeneca) - in regard to the headpond, would we be creating pike habitat.

Greg Deyne (MNR) - if pike and bass are not native what is the target management species.

Jim Trottier (MNR) - highly degraded from mining in 70's. Likely Walleye present. Lower reaches possibly Lake Sturgeon.

Lisa Keable (MNR) - is there Pike habitat spawning in the area?

Rob Steele (NRSI) - yes there is a location that has been identified. Pike are very difficult to observe spawning as they spawn at ice out. It is almost certain we saw within the 6km reach that there was potential pike spawning.

Uwe Roeper (Xeneca) – what does this mean for the EA? Looking at impacts to Pike?

Brett Woodman (NRSI) - if these species are introduced then what are we looking for
To be clear do you want us to do more pike work or not?

Greg Deyne (MNR) - not concerned with Pike. It terms of walleye, the habitat sounds to shallow to support. Walleye is likely the historical species present.

Brett Woodman (NRSI) - Pike was previously identified as a VEC. What my understanding is that is that it isn't and we do not need to continue to focus on.

Greg Deyne (MNR) – doesn't not sound like a significant sport fish system.

Jim Trottier (MNR) - not sure of Brook Trout in tributaries, unlikely that they would move into the river due to habitat present.

Uwe Roeper (Xeneca) – to Jim(MNR) – yes, historical mining has greatly impacted the river system. Since operations have stopped the fish in the lakes have recuperated. Included stocking by MNR. Fish communities have been altered because of the historical impacts. Is water quality is good today?

Jim Trottier (MNR) - yes water quality in the river now meets PWQO, there is a Serpent River WQ monitoring program. McCarthy WQ was not affected as much. Lake Trout in Pecor's Lake has been diminished considerably. Abundance is improving slightly over the decade.

Uwe Roeper (Xeneca) – how to you determine the population now the lake?

Jim Trottier (MNR) - yes in Pecor's Lake. McCarthy lake not as much, lake trout population in McCarthy Lake is very high.

Uwe Roeper (Xeneca) - what is that attributed to?

Jim Trottier (MNR) - a variety of conditions, habitat, access etc. McCarthy was stocked in 80's.

Uwe Roeper (Xeneca) - is there signs of reproduction in the lake?

Greg Deyne (MNR) - yes,

Jim Trottier (MNR) - has creole data available for lake. It is a popular lake for fishing.

Rob Steele (NRSI) - not sure if we received fisheries data. Requested again.

Jim Trottier (MNR) - fisheries management website link has all this available data.

Brett Woodman (NRSI) - leave fisheries discussions. We are going to continue with fishing efforts 6km downstream.

Greg Deyne (MNR) - conduct electrofishing in a manner that it can be replicated.

Brett Woodman (NRSI) – let's discuss the aquatic community.

Rob Steele (NRSI) - Benthos will be collected in habitats downstream of the lake. Quantitative sampling device will be used. Details will be supplied in field plan. Consulted with Chris Jones on methods. Previous discussions on predicting hydraulic response and changes to habitat. This could be modeled but would require the collection of site specific information (i.e. cross section). This model would be run with monthly Q80 to determine a monthly minimum flow that is ecologically appropriate. Presented graphs

from calculations conducted to see where there are breaking points. These are generated for depth and wetted width. An annual Q80 was used. Used as a predictive tool. Issues with use for flows. Idea is to have these graphs generated for each cross section along the creek. The goal of deriving a minimum ecologically appropriate flow. This is a model used as a starting point. Once facility was developed, flow rates could be adjusted by visual testing with experienced biologists.

Uwe Roeper (Xeneca) - we can't predict every outcome. The approach is to identify reasonable minimum flow values with modeling. It will be ground truthed and refined after operation through adaptive management.

Rob Steele (NRSI) - we recognize that MNR' starting point is Q80. We are looking to refine this. We provided this approach to meeting in Sudbury and it was reasonably received. Invite any comments on this approacch.

Rich Pyrce (MNR) - in Sudbury we have looked at this data previously. From those discussions Rob mentioned use of Q90 or Q95. This is a low flow condition which may cause issues. These values are on the table in other projects. Just wanted to note that some cross sections appear to assume the channel bottom is flat. Site tests with visually observation with all agencies are valuable.

Nava Pokharel (Xeneca) - level loggers could be installed ta cross section locations to calibrate model.

Rich Pyrce (MNR) - certain times of the year are not of concern (i.e. due to spawning). A temperature trigger has been mentioned and could be implemented as part of adaptive management.

Uwe Roeper (Xeneca) - operational plans for

Rich Pyrce (MNR) - each site is unique to its issues. It is good to have these discussions on a site by site basis for the needs of the fish present.

Rob Steele (NRSI) - as part of the EA process you have to use tools to predict.

Kim Mihell (MNR) - whatever flows are agreed upon now in terms of flows must be defensible now.

Rob Steele (NRSI) - further discussion on process to obtaining that number (min. ecological flows).

Rich Pyrce (MNR) - provided an example of another project that the cross sections were selected over top of key habitat features.

Rob Steele (NRSI) - could we co-ordinate with MNR in the selection of cross sections.

Uwe Roeper (Xeneca) - surveying of the habitat features is important (cross sections)

Rob Steele (NRSI) - this is not a small exercise, given the timing of the EA submission, having a hard time seeing the results of this modeling will be incorporated in the EA document.

Uwe Roeper (Xeneca) - it is information that it is critical in determining the minimum ecological flows

Kim Mihell (MNR) - to issue LRIA act approval we need data up front

Uwe Roeper (Xeneca) - we can work on this

Kim Mihell (MNR) - we strongly recommend that all information is collected and included in the EA process. We can't issue approval if there are gaps.

Uwe Roeper (Xeneca) - We have constraints with working within the FIT program in terms of collecting all information and answering all questions.

Kim Mihell (MNR) - there are risks with that approach

Uwe Roeper (Xeneca) - we are looking to incorporate all post EA plans into the EA document.

Laurie Brownlee (Moe) - what impacts will you be able to address in the EA.

Uwe Roeper (Xeneca) - I fail to see what impacts could result to the downstream habitat.

Laurie Brownlee (Moe) - difficulty is that the EA should be driven by results. Reviewed EA process. Identify impacts and mitigation. Understood we are under a tight deadline, but should not dismiss the inclusion of the result material.

Meeting Break (lunch) 1:00 - 1:30pm

Brett Woodman (NRSI) – let's switch gears to 4 slide falls. Already covered off SAR. Is there any specific studies that MNR would like to see?

Rob Steele (NRSI) - when starting the project very little was known about the study site. We have looked for Walleye throughout the site. Have not been able to confirm walleye spawning. With the exception of one observation of three small males within the rapid area during the spawning periods. It is thought that these fish come from the lake and cannot navigate back due to the low water levels. Conducting critical habitat mapping. Habitat from Pecor's to downstream it is riffle rapid run, very shallow, clear water. Fishing has been restricted to backpack fishing and angling. It is determined that it is likely a Rainbow Trout fishery. To get a sense of abundance in an afternoon employing 7 hours of fishing effort, 20 rainbow trout were angled. One brook trout was angled. Have angled and electrofished Smallmouth Bass. In tributaries are typical Cyprinids, White Sucker, Smallmouth Bass. Downstream of 4 Slide Falls, marked change in habitat. The falls is a break in habitat. Immediately downstream is what is dubbed as a boulder garden. Instant change to deep, slow moving river. That section is dominated by Bass. Looked at potential for spawning. Asked Jim's (MNR) input.

Jim Trottier (MNR) - there has been stocking upstream of McCarthy of Rainbow Trout.

Uwe Roeper (Xeneca) - sounds like the boulder garden may be potential walleye spawning?

Rob Steele (NRSI) - walleye are not in the system. We are not sure what use this habitat has. Need to look at cross sections and determining minimum ecological flows at this location.

Uwe Roeper (Xeneca) - what about the Bass spawning?

Rob Steele (NRSI) - no is not bass spawning habitat

Greg Deyne (MNR) - the boulder garden sounds like a productive zone for benthos providing foods supply to downstream fishery. The biggest concern would be having a loss of production at this location. The most important fishery is the McCarthy Lake fishery which includes Lake Trout and Walleye.

Rob Steele (NRSI) - if you are protecting the benthos habitat you need to meet minimum flow at all times of the year.

Lisa Keable (MNR) - I assume there will be focused surveys this year? Rob- yes

Rob Steele (NRSI) - sooner or later we need to have a discussion of the 6km upstream of 4 slide falls. This habitat will change significantly. This habitat won't be Rainbow Trout habitat anymore, it would support something else. This change is significant and how would we compensate. Have had some initial discussions with DFO, haven't got down to the specifics.

Al Rowlinson (DFO) - lots of productivity above dam but a large shift in species compensation.

Rob Steele (NRSI) - is that is acceptable to loss of fish habitat?

Al Rowlinson (DFO) - directs comment back to MNR and what they want.

Rob Steele (NRSI) - comes down to fundamentally that DFO supports MNR's decision. If we are being told it is a nonstarter we need to have that discussion now. The section of river will not be Rainbow trout habitat anymore.

Jim Trottier (MNR) - lots of questions here. Need details of sizes of species captured.

Brett Woodman (NRSI) - we got Lake Trout in the lake and upstream. We are converting riverine habitat to lacustrine. Would the lake not be used by the Lake Trout?

Jim Trottier (MNR) - no

Lisa Keable (MNR) - were there yoy Rainbow Trout captured?

Rob Steele (NRSI) - DFO's determination is depended on MNR's management objectives?

Jim Trottier (MNR) - small area of natural Smallmouth Bass, this area is managed Smallmouth Bass. Smallmouth bass has a huge impact on Lake Trout. MNR wants to discourage Smallmouth Bass. MNR does say that where we do have big bass then it is worth it.

Uwe Roeper (Xeneca) - will the headwater pond really become Bass habitat, is there anything we could do to discourage this?

Rob Steele (NRSI) - not really

Rob Steele (NRSI) - are you telling us that approach is that decisions will be made based on fisheries management objectives?

Jim Trottier (MNR) - give us detail on your rainbow trout information (I.e. sizes).

Rob Steele (NRSI) - the council is not excited about having Bass.

Jim Trottier (MNR) - it will come down to fisheries management decisions.

Lisa Keable (MNR) - raised before to look at

Jim Trottier (MNR) - we need to look at the Rainbow data

Rob Steele (NRSI) - objectives say that Bass should be discouraged, we are creating bass habitat. Xeneca needs an answer from MNR weather the project could proceed. I encourage MNR come out with a clear statement. Like the lake Trout policy this could be a potential show stopper, need answers. Doesn't feel that the rainbow data would be enough to answer questions.

Jim Trottier (MNR) - the bigger show stopper is McCarthy and lake level fluctuations. This issue is related to MNR fisheries management objectives. The committee will have to review the issue.

Uwe Roeper (Xeneca) - very useful input.

Rob Steele (NRSI) - leave that issue for the time being for discussions with MNR. Any data available will be provided,

Jim Trottier (MNR) - we will have a look at this

Brett Woodman (NRSI) – let's discuss the benthic community

Rob Steele (NRSI) - benthos habitat has potential to be affected with flow variation. Of the same methodology employed for the McCarthy site. Need to have further discussion with Xeneca regarding modeling.

Uwe Roeper (Xeneca) - the channel is deep and unlike to change the wetted perimeter with the varying changes in levels. Discussions regarding habitat present.

Rich Pyrce (MNR) - in by-pass reaches. 75% flow of baseflow is required. Sass software would need to be used to determine this.

Rob Steele (NRSI) - there may be possibility to improve habitat present with the flow to get the most benefit. (i.e. moving boulders).

Rich Pyrce (MNR) - what is the channel width at the boulder garden?

Rob Steele (NRSI) - not sure, measured on Google Earth (3m). Will confirm this with field crews.

Brett Woodman (NRSI) – item C, aquatic plant community

Rob Steele (NRSI) - part of what is planned is to go back to the habitats previously sampled and take detailed aquatic plant assemblages and estimations of area covered.

Brett Woodman (NRSI) – any questions?

Rob Steele (NRSI) - may be isolated locations of plants

Brett Woodman (NRSI) – primary productivity-s

Neil Hutchinson (H.Env.) - hoping Greg will add to this discussion. Change in nutrient status at 4 Slides. It is a very low productivity system. Reservoir creation will alter nutrient status upstream, also water coming downstream to fish habitat. Referred to McCarthy lake water quality studies. Can model how the Lake with respond to the changes. We do want to know what the existing nutrient status is through water quality sampling. Regarding algae it is an interesting this to measure but is not a valuable measure.

Uwe Roeper (Xeneca) - At outflow of Pecor's is lower in nutrients that McCarthy

Neil Hutchinson (H.Env.) - yes, it is picking up some nutrients along the way.

Rob Steele (NRSI) - there are tributaries and a small wetland area that may add to the nutrient loading as well

Uwe Roeper (Xeneca) - is the issue is from newly inundation of terrestrial habitat?

Neil Hutchinson (H.Env.) - it would, but would be a huge undertaking. What you see with nutrient loading is temporary from the initial flush then stabilizing. The effect on downstream oxygen status will likely be MNR's big concern. Would want to know phytoplanknton in Lakes. Proposes nutrient water quality sampling and phytoplankton sampling the lakes if MNR is ok with that.

Rob Steele (NRSI) - need to have discussions with MOE to determine work plans regarding water quality. Would like discuss with Rod (MOE) Todd Conrad (MOE) and Lisa (MNR) next week. Awaiting approval from Xeneca to proceed with discussions with MOE. Tami will also attend. Only be able to track down watershed report cards. Neil will look into a loan from the Bracebridge library.

Neil Hutchinson (H.Env.) - it is important to know where the river is in terms of the effects from historical impacts, need to review the reports that have.

Greg Deyne (MNR) – there is a high risk to downstream habitat during construction due to the presence of Lake Trout. If you do go ahead and create the reservoir how will you fill it? What would the effects be from the initial filling of the reservoir on downstream trout habitat. Huge changes are going to occur, need to be looked at.

Rob Steele (NRSI) - Xeneca has retained someone to draft construction mitigation plans.

Neil Hutchinson (H.Env.) - you are always looking at avoiding sediment into a watercourse

Greg Deyne (MNR) - this is more complicated than

Lisa Keable (MNR) - where soil surveys conducted

Uwe Roeper (Xeneca) - desktop surveys were conducted, identified potential areas of slumping. Aware of need for sediment protection in watercourse. It is apparent that it is at more sensitive

Greg Deyne (MNR) - whatever gets in will deposit downstream and contribute to nutrient loading

Uwe Roeper (Xeneca) - fines are of most concern. Could look at conducting sediment analysis on site to determine where soils present to identify

Rob Steele (NRSI) - big issue on site is access. No way to get equipment in.

Neil Hutchinson (H.Env.) - another thing to consider is the soils upstream within the impoundment area and what could be transported.

Uwe Roeper (Xeneca) - we completed this by desktop. We could verify this desktop information prior to construction. We could try to avoid areas identified as having soft soils. Can use some mitigation measure to avoid. Downstream would need to be considered.

Neil Hutchinson (H.Env.) - thinks MOE may be developing construction related BMP's for lake nutrient loading

Greg Deyne (MNR) - what sort of fluctuations are we expecting to see?

Uwe Roeper (Xeneca) - 1 m to the impoundment

Nava Pokharel (Xeneca) - it will take approximately 15 days to fill the reservoir according to estimations.

Rob Steele (NRSI) - timing will influence the duration

Brett Woodman (NRSI) – item G, channel characteristics

Rob Steele (NRSI) - in terms of the characterization of aquatic habitat it does include substrates, this task may lead more toward more fluvial issues

Lisa Keable (MNR) - yes

Uwe Roeper (Xeneca) - described channel substrates, highlighted change in channel characteristics as Rob previously mentioned. A question may be how will operation change movement of sediments. Don't see an issue upstream, not likely to change sediment deposition characteristic downstream. Highlights that sediment movement occurs 95% of the time during the spring runoff. Confident if operation stays

within long terms average flows or below, with the caveat that bank stability downstream does not change. Highlighted that Dave and Rob should look into the existing conditions a bit more in terms of existing erosion issues.

Rich Pyrce (MNR) - could do some simple calculations based on sediment particle size

Uwe Roeper (Xeneca) - could collect some sediment samples from within the river.

Rob Steele (NRSI) - would we want MNR to be engaged in the collection of sediment samples with a fluvial representation from Xeneca? Rich – yes.

Rich Pyrce (MNR) – could do a review of historical air photos to determine characteristic of the channel in terms of sediment movement.

Rob Steele (NRSI) - the interesting look at the historical photos to understand how the river has moved. May be good to pick out if the change is natural.

Brett Woodman (NRSI) – flow characteristics

5 minute break

Brett Woodman (NRSI) – item H flow characteristics, Ed and Uwe (Xeneca) to discuss.

Uwe Roeper (Xeneca) - a fair amount of work conducted on levels and flows. A hydrology study was completed on the Serpent. This study is available on the website. A bathymetry survey was also conducted. This was used to extent the cross-section below the water. Flow measurements were also collected. Water level transducers were also installed. This includes McCarthy Lake. Haven't really dealt with the data yet but will be shortly. HecRas modeling was also conducted for pre and post conditions. The project description showed static inundation level. The inundation level was used in HecRas to determine the dynamic inundations. This was used to create the operational plan. The HecRaz modeling will look at changes in levels of inundations. Any questions

Rich Pyrce (MNR) - comments. He has printed everything off (all available material). We don't have existing gauge stations so available information has to be modeled. There was an existing historical data. Annual mean flows calculated appear to be consistent with that MNR calculated. There was a bit of difference when using the 100 year flood levels. That can be revisited in the LIRA phase.

Uwe Roeper (Xeneca) - have completed a preliminary rubbing analysis, created a hydrograph for McCarthy Lake.

Nava Pokharel (Xeneca) - overview of McCarthy modeling

Rich Pyrce (MNR) - would like to sit down with Xeneca to discuss calculations of megawatt usage

Uwe Roeper (Xeneca) - we are pretty happy in terms of the level of data collected

Brett Woodman (NRSI) – fish habitat

Rob Steele (NRSI) - above Four Slides, the necessity to measure all habitat above can be done, but is hesitant until MNR comes up with a decision regarding the fisheries management objectives. When looking at DFO's policy it would result in an increase in productivity, would not result in a harmful alteration. Does feel that measure the details of all the habitat is useful. I would like to reiterate how important it is to get the answer from MNR.

MNR- yes, will try to get a meeting for this Monday

Rob Steele (NRSI) - in regard to habitat conditions, i.e. woody debris will be characterized at a coarse level. Not a whole lot will be completed for the upstream, reaches.

Brett Woodman (NRSI) – wetland evaluations, think it was been addressed earlier. Discussions will occur offline to determine if owes or ELC will be conducted. Riparian Habitat- need clarification, it is specifically asking for the delineation, species…etc. Species does get picked up in vegetation surveys. In terms of the shoreline, it is difficult to delineate as it is a thin strip. If there is clarification that could be provided?

Lisa Keable (MNR) - just address the impacts and changes to riparian habitat.

Emily Green (MNR)- primary concern is presence of SAR within the

Brett Woodman (NRSI) – there have been no vegetation species documented to date, they could be found later through other investigations. Wildlife has greater potential for occurring.

Brett Woodman (NRSI) – species abundance. ELC does pick this up to some degree. The abundance is ranked.

Lisa Keable (MNR) - abundance was more related to SAR

Emily Green (MNR)- similar approach to XX rapids??

Brett Woodman (NRSI) – wildlife. Breeding bird surveys competed last year. Amphibians in 2009. Incidental wildlife is ongoing. Detailed discussions with SAR staff to complete Blandings turtle surveys. During this survey will also result in a more detailed list of all species present. Regarding methods to consider. Specifically river index sampling does not support it. Fish mark and recapture is not being conducted.

Rob Steele (NRSI) - we are not conducting bio mass study or fish passage study. For benthos we are implementing OBBN and we will be consistent with these methods. MOE protocol's will be followed for tissue. Benthos power analysis will be conducted.

Lisa Keable (MNR) - provide detail on levels of effort in fishing

Brett Woodman (NRSI) – give people on the call the opportunity to provide comments

Tami Sugarman (OES) - can conduct air photo search in person. Regarding sediment suspension and water quality wanted clarification that samples will be collected?

Neil Hutchinson (H.Env.) - this comment was to determine what sediments were suspended. Chemical analysis need will be discussed with the meeting with MOE.

Uwe Roeper (Xeneca) - appreciate that the meeting came together. Feel it was a very productive and important day. Thanks.

Kim Mihell (MNR) - good discussion, good points to follow up on.

Erin Nixon (MNR) - would like to see the updated project descriptions. Had issues with FTP issues. If changes are made. Notification would be helpful.

Kim Mihell (MNR) - another issue was access to another internal link within Xeneca.

Brett Woodman (NRSI) – can provide any documents needed aside from the ftp

Al Rowlinson (DFO) - needs hard copies of records

Erin Nixon (MNR) – provision of field protocols?

Rob Steele (NRSI) - MNR has requested that they receive draft field protocols. They will be provided in a week.

Meeting Adjourned at 4:30pm