

Appendix C

Agency Consultation

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Meeting Notes

ESA Agency Discussions Xeneca Power Hydro Electric Projects

To: MNR Sudbury District

From: NRSI on Behalf of Xeneca Power

Date: September 2, 2010

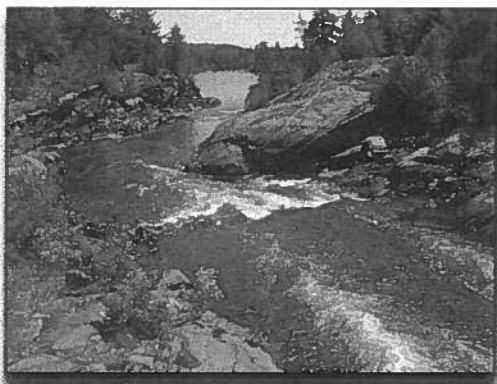
Re: ESA Briefing Package

Please find attached an ESA briefing document to serve as a backgrounder for our discussions planned for September 17, 2010. This briefing memorandum is intended to summarize the known and potential ESA occurrences and intersections with the following proposed waterpower facilities within Sudbury District MNR:

- 1) Allan and Struthers Site – Wanapitei River
- 2) McPherson Falls Site – Vermillion River
- 3) Cascade Falls Site – Vermillion River
- 4) Soo Crossing Site – Vermillion River
- 5) Wabageshik Falls Site – Vermillion River

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

1.0 Allan and Struthers – Wanapitei River



Project Site - Spring 2010

1.1. Review of EA/ESA Data Collected to Date

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

- 1) April 2010 Walleye spawning surveys for two days of observations. Walleye were observed using spotlights, and egg mats captured Walleye eggs.
- 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 July 2010.
 - a. Habitat was mapped at a coarse scale,
 - b. fish sampling included minnow traps set in 18 locations, and
 - c. electrofishing of 4 sites, and angling.
 - d. Fourteen species of fish were documented with no ESA Species occurrences.
- 4) Summer water quality samples were taken in August 2010.

Note - One additional site visit is planned for September 2010 to conduct gill netting in the inundation area and below Sturgeon Chutes.

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 Allan and Struthers generating station:

- "MNR Site #2DB14 intersects an occurrence from 1950 and 1973 for Massasauga Rattlesnake. This overlap has the potential to impact the species and/or its habitat during the development of the site.
- "It is also worth noting that the French River, south of the project has been identified as a Lake Sturgeon river, although there are no element occurrences observed intersecting the Allen & Struthers project."

Based on NRSI's internal review of significant species using the NHIC's Biodiversity Explorer, the following species were noted:

- Massasauga Rattler Snake (*Sistrurus catenatus*) COSEWIC: Threatened SARO List: Threatened (S3)

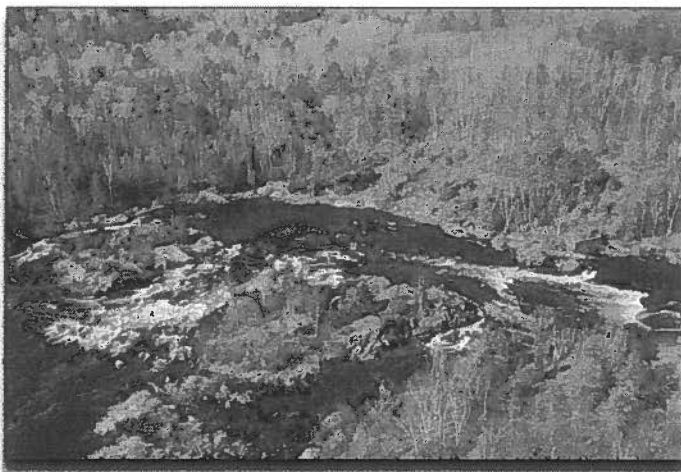
The Massasauga Rattler Snake requires habitat with protection from predators and the elements, and also access to spots where they can get warm enough to effectively digest their food and reproduce, such as granite rock tables in the Georgian Bay area. Sufficient moisture is important for surviving the winter, and the hibernacula (overwintering sites) are often associated with wetlands or small, wet depressions in the terrain. From our NHIC and Biodiversity Explorer database searches, occurrences are known from south of the Allan and Struthers study area. Suitable habitat for this species may be found within the study area.

Based on our discussions with Bob Robinson, Renewable Energy Planner at the MNR Sudbury District Office, Lake Sturgeon (*Acipenser fulvescens*) is known from the vicinity of Sturgeon Chutes, immediately downstream of the proposed dam location. Bob has this knowledge through other MNR staff, and speaking with locals at Hartley Bay Marina. The local knowledge is from June of 2010, when locals said they sighted Lake Sturgeon in the bay at the base of Sturgeon Chutes earlier that month.

During NRSI's field programs, observations of SAR included:

- 1) A Lake Sturgeon was observed breaking the surface of the water during Walleye spawning surveys in April of 2010.
- 2) A Blanding's Turtle carcass was observed on a tributary stream during June surveys.

2.0 McPherson Falls Site – Vermillion River



Project Site – Spring 2010

2.1 Review of EA/ESA Data Collected to Date

As part of the ongoing Class Environmental Assessment for the McPherson Falls development project, NRSI field program undertaken in 2010 consisted of 4 separate site visits, listed as follows:

- 1) Attempted walleye spawning surveys but access restrictions and difficulties did not allow us to sample at appropriate temperatures. Since water temperature was higher than spawning range, NRSI spent one day angling with no walleye captured (two post spawn pike were captured).
- 2) Two site visits were undertaken in June for vegetation mapping and breeding bird surveys.
 - a. species inventories were made of breeding birds, butterflies, herps and mammals
 - b. Vegetation Polygons in the inundation area were delineated as per Forest ecosystem Classification system
 - c. spring water quality samples were taken
- 3) Fish sampling and habitat mapping in August.
 - a. Aquatic habitat was mapped at a coarse scale,
 - b. fish sampling included 5 short duration RIN sets, 5 18 hour RIN sets, 2 short duration index gillnets, 2 Minnow traps, 3 incoming tributaries electroshocked
 - c. Sixteen 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

The 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 McPherson Falls Hydroelectric Project area.

Based on our internal review of significant species using the NHIC's Biodiversity Explorer, we found the following species records:

- 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. Suitable habitat for this species may be found within the study area. No peregrine falcons were noted during our 2010 field work. I spoke with two biologists, both of whom have accessed the site independent of each other. They confirm that there is no suitable nesting habitat in the McPherson Falls Study area.

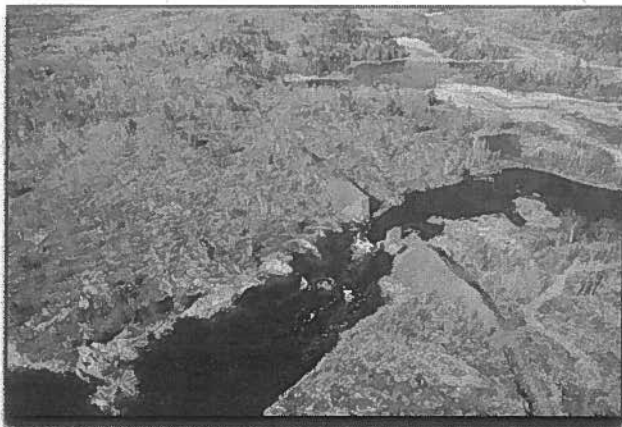
BioDiversity Explore was also used to search for natural areas, significant plant communities, wildlife concentration area, ANSI's and Provincial Parks. This search was done in a 10 km square grid surrounding the site of the proposed dam and powerhouse. No such occurrences were found within the general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

The Vermillion River Delta PSW was located approx. 8km northwest of our project area but will not be impacted by this project.

Based on NRSI staff discussions with Bob Robinson, Renewable Energy Planner at the MNR Sudbury District Office, he has not discovered any local information or anecdotal evidence that would suggest that Lake Sturgeon (*Acipenser fulvescens*) are resident in and around the Vermilion River, although he is still talking to people about this.

If sturgeon could access the Vermilion River, McPherson falls is not considered an impassable barrier. However, the closest known population of this species is on the Spanish River, downstream of the Domtar Generating station at Espanola. This dam and hydro station is the first impassable barrier that Lake Huron sturgeon would encounter moving upstream from the Lake. Since the Vermilion flows into the Spanish, the impassable barrier at Espanola means that we do not expect to have sturgeon at any of our Vermillion River sites.

3.0 Cascade Falls Site – Vermillion River



Project Site – Spring 2010

3.1 Review of EA/ESA Data Collected to Date

As part of the ongoing Class Environmental Assessment for the Cascade Falls development project, NRSI field programs to date have consisted of 4 separate site visits, listed as follows:



- 1) Attempted walleye spawning surveys but access restrictions and difficulties did not allow us to sample at appropriate temperatures. Since it was already 10 degrees by the time we reached site, we spent one day angling. No returns.
- 2) Two site visits were undertaken in June for vegetation mapping and breeding bird surveys.
 - a. species inventories were made of breeding birds, butterflies, herps and mammals
 - b. Vegetation Polygons in the inundation area were delineated as per Forest ecosystem Classification system
 - c. spring water quality samples were taken
- 3) Fish sampling and habitat mapping in August.
 - a. Aquatic habitat was mapped at a coarse scale,
 - b. fish sampling included 3 short duration RIN sets, 3 18 hour RIN sets, 3 short duration index gillnets, 2 Minnow traps, 3 incoming tributaries electroshocked
 - c. Fourteen species of fish were documented with no ESA Species occurrences.
- 4) Summer water quality samples were taken in August

ESA Primary and Secondary Data Collections/Review

The 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 Casacade Falls Hydroelectric Project area.

Based on our internal review of significant species using the NHIC's Biodiversity Explorer, we found the following species records:

- 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. Suitable habitat for this species may be found within the study area. No peregrine falcons were noted during our 2010 field work.

Note - the Vermillion River Delta PSW is located approx. 8km northwest of the project area but will not be impacted by this project.

Note - Same as McPherson Falls regarding Lake Sturgeon.

4.0 Soo Crossing Site – Vermillion River



Project Site – Spring 2010

4.1 Review of EA/ESA Data Collected to Date

As part of the ongoing Class Environmental Assessment for the Soo Crossing development project, NRSI field programs in 2010 have consisted of 4 separate site visits, listed as follows:

- 1) Walleye spawning activity confirmed in spring 2010. Sixteen walleye spotlighted with an abundance of available habitat observed.
- 2) Two site visits were undertaken in June 2010 for vegetation mapping and breeding bird surveys.
 - a. species inventories were made of breeding birds, butterflies, herps and mammals
 - b. Vegetation Polygons in the inundation area were delineated as per Forest ecosystem Classification system
 - c. spring water quality samples were taken
- 3) Fish sampling and habitat mapping in August 2010.
 - a. Aquatic habitat was mapped at a coarse scale,
 - b. fish sampling included 8 short duration RIN sets, 2 18 hour RIN sets, 2 short duration index gillnets, 2 incoming tributaries electroshocked
 - c. Nine 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

The 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 Soo Crossing Hydroelectric Project area.

Furthermore, NRSI's internal review of significant species using the NHIC's Biodiversity Explorer, did not identify any known/listed (i.e. Threatened or Endangered) ESA species.

BioDiversity Explorer 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.

Note - The Vermillion River Delta PSW was located approx. 16km northwest of our project area but will not be impacted by this project.

Note - Same as McPherson Falls regarding Lake Sturgeon.

5.0 Wabageshik Falls Site – Vermillion River



Project Site – Spring 2010

5.1 Review of EA/ESA Data Collected to Date

As part of the ongoing Class Environmental Assessment for the Wabageshik Falls development project, NRSI field programs in 2010 have consisted of 4 separate site visits, listed as follows:

- 1) Walleye spawning surveys in the spring 2010 yielded eggs in egg mat and one ripe male was angled. Spawning therefore confirmed at this site. There is an abundance of potential spawning habitat associated with falls and rapids.

- 2) Two site visits were undertaken in June, 2010 for vegetation mapping and breeding bird surveys.
 - a. species inventories were made of breeding birds, butterflies, herps and mammals
 - b. Vegetation Polygons in the inundation area were delineated as per Forest ecosystem Classification system
 - c. spring water quality samples were taken
- 3) Fish sampling and habitat mapping in August 2010.
 - a. Aquatic habitat was mapped at a coarse scale,
 - b. Fish sampling opportunities limited due to shallow nature of habitat. Included 3 short duration RIN sets in widened reach downstream of site and 4 electroshocking locations in shallow water in main channel.
 - c. Seven 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

The 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 Wabageshik Falls Hydroelectric Project area.

Furthermore, NRSI's internal review of significant species using the NHIC's Biodiversity Explorer, did not identify any known/listed (i.e. Threatened or Endangered) ESA species.

BioDiversity Explorer 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.

Note - Same as McPherson Falls regarding Lake Sturgeon.

Agenda

Re: ESA Agency Meeting for Xeneca Projects - MNR Sudbury District

Date/Time: September 17, 2010 at 9:00am

**Location: MNR Sudbury District Office
3767 Hwy. 69 South, Suite 5,
Sudbury, ON P3G 1E7
(705) 564-7823**

**Attendees: Bob Robinson – MNR
Wayne Selinger – MNR
Eric Cob – MNR
Rob Steele – Natural Resource Solutions Inc
Don Chubbuck – Xeneca Power
Tammy Sugarman – OEL- HydroSys
Dan Gibson – Natural Resource Solutions Inc**

**Dial-in Attendees: Ed Laratta – Xeneca Power
Philippa McPhee – OEL- HydroSys**

Items:

- 1. Introductions**
- 2. Review of Goals and Objectives**
 - 1. Common Understanding**
 - 2. ESA Permits and Agreements**
- 3. Project Scheduling – Critical Path**
- 4. Review of NRSI Briefing Document**
- 5. Focused Discussion**
 - 1. Vermillion River Sites**
 - 2. Wanapitei River Site**
- 6. Summarize/Identify Knowledge Gaps Related to SAR for Projects**
- 7. Open Discussions**



Final Meeting Minutes

Re: ESA Agency Meeting for Xeneca Projects - MNR Sudbury District

Date/Time: September 17, 2010 at 9:00am -2:45pm

Location: MNR Sudbury District Office, Sudbury, Ontario

Attendees:

Eric Cobb, MNR, SAR Biologist (EC)
Carla Riche, MNR, SAR Biologist Assistant (CR)
Bob Robinson, MNR, Water Resource Coordinator/Renewable Energy Planner (BR)
Wayne Selinger, MNR, Area Biologist (Espanola area, Vermilion River - Wabageshik Site) (WS)
Rob Steele, NRSI (RS)
Dan Gibson, NRSI (DG)
Tami Sugarman, OEL-HydroSys Inc., EA Manager (TS)
Don Chubbuck, Xeneca EA Department, Biologist (DC)

Dial-in Attendees:

Philippa McPhee, WESA Inc., EA Manager (PM)
Ed Laratta, Xeneca EA Department, EA Planner (EL)

Regrets:

Mike Hall, MNR Area Biologist (Sudbury area, Vermilion River – 3 sites; and Wanapitei River - Allen and Struthers site) (MH)

Hand-out Material:

1. Sudbury District Meeting Agenda (Sept 17) (attached)
2. Sudbury District briefing – ESA Agency Discussions (attached)
3. Xeneca Site Layout Drawings Options

Meeting Minutes:

The purpose of this meeting was to discuss the proposed waterpower facilities on the Vermilion River and the Wanapitei River within MNR Sudbury District;

- the projects' schedule
- common understanding of the knowledge of each of the FIT contracted sites
- the known and potential ESA occurrences and intersections

Introductions

Each attendee introduced themselves followed by a brief discussion on the project schedule.

The project critical path timeline was also discussed in adherence with the Feed in Tariff (FIT) Contract. Xeneca has received FIT contracts for all 5 sites in the Sudbury District requiring:

- FIT Commissioning date - April 29, 2015
- Pre-commissioning to start – Fall 2014 and Winter 2015
- Construction Start – Fall/Winter 2011 (dry); 2012 (wet)
- *Endangered Species Act* (ESA) permits, if required, will be needed in fall 2011 in order to construct

Therefore, a June 2011 date for completion of the Class EA is critical for adherence to the schedule.

ESA Discussions

A review of the briefing notes based on field collections conducted in 2010 (see attachment) and through the background review (NHIC and Diversity Explorer) was undertaken for the five sites. A summary of the findings and discussion are noted in the following sections.

Wabageshik

- walleye spawning confirmed at the site (no need for further surveys)
- RIN stats were not met in surveys as the purpose was to present a baseline for the system therefore presence/absence level of detail was collected
- no ESA species noted at placed snake boards to date
- Lake Sturgeon are confirmed (juvenile <5 years in 2008) at Espanola (no formal report) and numbers are greater at Nairn (MNR netting program) –

fish movement up to Wabageshik rapids is possible therefore assume presence at project site at base of rapids – this is a concern for MNR (WS comment).

- Lake Sturgeon surveys were missed in the 2010 field program, yet habitat survey results suggest suitable habitat exists at Wabageshik rapids.
- There is not strong evidence of where they come from as MNR suspect that walleye and other species can move from the Spanish River right up to the base of the Wabageshik rapids.
- MNR comments that for the ESA species (Lake Sturgeon) this is not a conversation of restoring the populations to historical areas but addressing the recovery or enhancement of the population in areas they are currently present/marginal.
- MNR (WS comment) would require more than 1 or 2 years of data to verify that Lake sturgeon were not using the habitat at the base of the Wabageshik falls.
- NRSI confirmed that the proponent will therefore assume that there is presence of Lake Sturgeon and Walleye at this site
- MNR stated that since presence is not confirmed then ESA permit will not be required yet.
- However since the permitting process takes one year and at the minimum one more field season is required it is recommended that an application be started now in the event presence is confirmed next year.
- An agreement under the Act can be reflected on later.
- Xeneca confirmed that the operating strategy for this site would be peaking (modified).
- Area of impact would therefore involve the upstream inundation area as well as a distance downstream of the plant where peaking effects would be noticed.
- MNR (Tim Haxton) crews will be out in 2011 to conduct Lake Sturgeon surveys.
- NRSI requested that there be some cooperation between the two efforts.
- MNR agreed that a cooperative effort would have the most benefit overall.

For Wabageshik we need to verify if the rapids are a natural impediment to the species. What grade, morphology and distance of rapids would impede fish movement? Stream gradients steeper than 3.3% over a distance were discussed as potential barriers to migration.

- MNR reviewed the Site layout options being considered and their preference would be Option 2.

Transmission line and access road routes

Blandings Turtle – in wetland habitats which are abundant within 250 meters from the site

MNR and proponent will have to agree on a protocol – avoidance, prevention and mitigation – when sighting the routes.

Whippoorwill and Chimney Swift – are common/abundant in this area. Surveys will be required to confirm presence or potential to be present.

Power lines may benefit Whippoorwill as they prefer semi-open areas for nesting. LOA – may recommend a survey ahead of the construction crews.

Mitigation strategies of timing rationale and protocols for construction and maintenance will be required.

Given the time constraints of the FIT Contract the consulting team proposed an adaptive management approach for natural heritage issues at the site in which the proponent will commit to surveys and a monitoring plan to be conducted after EA and before construction (2011 field season);

MNR agrees to this strategy for the power corridors with regards to ESA species (EC). This approach may be acceptable for other species however MNR (WS) will confer with MNR lands department and planning department and get back to proponent in regards to this matter.

Aerial photos will be flown this fall <update: this has been delayed until the spring of 2010> along the proposed power lines and access road routes (+/- 100m) and used to assist in the mapping of potential sensitive habitats. If other routes are discovered in the future the proponent will try to negotiate an agreement for additional options in the EA

At Soo Crossing

- MNR have no incidental accounts of ESA species at this site on record from local anglers
- MNR does not anticipate presence at this site so agree that there are no ESA aquatic species.
- Other species – apply the same argument for height of fall through rapids and velocity/length for fish movement over chutes.

Power line and Access Road routes

Whippoorwill and Blanding Turtles are a consideration – *please refer to Wabageshik section for direction.*



MNR will require an explanation/rationale for the selected route of the power line. Proponent should be aware that there is private land involved in the project.

Cascade Falls

Mike Hall is not present at this discussion. He will have to be consulted on the scope and timing as well as management strategies for sites in his area.

Walleye documented by Conservation Authority and anglers in the area of the falls. White sucker is also present.

Issue - fish movement upstream and downstream through the chute – can they navigate this feature?

Issue - fish mortality of Kaplan turbine. MNR needs analysis and interpretation in the ER.

- NRSI will address this through literature discussion, intake velocity and critical lifecycle period timing.

ESA – no species identified at this site for aquatic and terrestrial areas.

McPherson Falls

ESA species – No nesting for Peregrine Falcon at site itself and the site is located >1 km from known nesting areas therefore not a species of concern at the facility site. However, for all options of power line and access routes this species may be a concern – MNR (EC) will need this addressed.

No other species of special concern for this site.

Wanapitei River – Allan and Struthers Site

ESA Species:

Massasaugua Rattler – unconfirmed yet habitat (hummocky wetland and bedrock outcrops) exists in the area.

Occurrence protocol

- If sensitive habitat is found a radius around this feature would have to be assessed in detail (i.e. females move 400m and males 1-2 kilometers from key habitats).
- An ESA permit is required to handle rattlers for relocation as part of a mitigation strategy
- For access roads and power line ROW proponent will have to consider the direct impact of the footprint and areas of additional concern (i.e. migration routes) will have to apply mitigation measures (i.e. signage to slow down and watch for rattlers, etc.).

MNR (EC) agrees that the approach discussed for the Vermilion River sites (*Aerial photos will be flown along power line and access road routes (+/- 100m) and used to assist in the mapping of potential sensitive habitats. 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) is suitable at this site for the ESA species, therefore:*

- Required to conduct desk-top survey for key habitat (i.e. outcrops or wetland areas, hibernacula) in inundation area, power line routes or access roads.
- Where key habitat exist a detailed ground survey is required (see above for radius of movement).
- To mitigate for outcrops use timing strategies (flood prior to June 30)
- Hibernacula will have to be avoided completely as an overall benefit to the species must be demonstrated and hibernacula are difficult to fabricate (Jeremy Rouse, Parry Sound MNR).
- Preference will be given to localized benefits rather than overall benefit in the province or a combination of both strategies.

MNR (EC) – need confirmation from Mike Hall (Area Biologist) that this approach is acceptable for all other species.

Other ESA species in the area proponent needs to consider and address;

- Blanding's Turtle
- Lake Sturgeon
 - Sightings of Lake Sturgeon during the spring spawn of 2010 however, no specimens caught (Gill netting is planned for September 2010 and may catch Lake Sturgeon then).
 - MNR (Ed Charette, Parks Enforcement) may have records – NRSI requests sharing of information/data between MNR and NRSI.
 - Eric Cobb commented that the Natural Heritage Information Centre database revealed that there are no records of occurrence on ESA at the site.
 - Need to address the passage of Sturgeon through the Chutes.

NRSI (DG) requested the level of detail that would be required (i.e. scope of work for 2011 field season).

MNR (EC) responded below only in relation to ESA Section 17.2 c and 17.2(b) requirements. Mike Hall is required to participate in scope of work for LRIA /FWCA considerations.

ESA requirements as agreed on this date:

- Required to demonstrate whether US/DS migration occurs in order to answer if the Sturgeon Chute is a barrier to fish movement.
- Required to demonstrate if post-construction flows/velocities have an effect on life cycle of aquatic species.
- Required to determine a flushing flow to keep downstream substrates clean for potential spawning (post construction). This may also be referred to as an ecological flow requirement.

Lake Sturgeon - MNR has a Wawa District – Pik River Sturgeon Task Team (Sandra Dosser, Tim Haxton, Charles Hendry, James Fitzpatrick and Eric Cobb) who will work with the proponent consulting team to scope an ESA Section 17.2 (c) work plan as soon as possible.

NRSI requested that the Task Team and NRSI work together through the fall of 2010 to discuss a proposed work plan and come to an agreement on scope to address ESA permitting issues for Lake Sturgeon in time for the 2011 season.

Summary

General for all waterpower sites:

NRSI (RS) - Aquatic Ecosystem Guidelines are incorporated into the LRIA is this the same for the ESA?

MNR Response (EC): The Guidelines are not standards therefore they need to be considered in the EA report to address the economics of the project and the EA report is a supporting document for the ESA application. MNR and the proponent team can debate the RETScreen results in determining the ecological flows. Once the economics are determined the sensitivity and importance of impacted species can then be considered.

MNR (EC) - The MNR regional hydrologist (Richard Pyrcce) will undertake a hydrological analysis and review.

NRSI (RS) – Caution that a number such as 80% is not economical and could stop the project.

Ramping rates discussion:

- There is a study in place to determine appropriate ramping rates. However, one study is not much to go on.
- Only two (OPG) facilities have ramping rates in place.
- MNR will require that the Xeneca engineering and biology team will cooperate to address the ability to respond to demand (i.e. ramping rates) in the report.

Vermilion River - Wabageshik site:

- Lake Sturgeon – assume presence and initiate ESA permit application to construct as soon as possible this fall.
 - Field season required in 2011
 - Evaluation of alternatives
 - mitigation and design
 - aerial images to assess habitat at EA level and 2011 field survey methodology



Vermilion River - At Soo Crossing, Cascade and McPherson sites:

No ESA species confirmed. For due diligence will have to have monitoring surveys at detailed level in inundation area and along access roads and power line routes where aerial imaging or other mapping indicate key habitats exist.

Wanapitei River - Allan and Struthers

- Massassaugua Rattler – consider basic life habitats (foraging/eating/basking) and address mitigation in the EA report.
- Lake Sturgeon
 - movement US/DS at Sturgeon Chute
 - ESA permit to construct should be applied for now
 - lower base flows (ecological and flushing flows based on site observations and on-going dialogue with Rich Pyrcie
 - Lake Sturgeon Task Team – NRSI team dialogue on work plan for 2011 field season to support ESA application.

Meeting adjourned at 2 pm.

Stephanie Hodsoll

From: Vanesa Enskaitis
nt: Tuesday, February 22, 2011 11:35 AM
o: Stephanie Hodsoll
Subject: FW: meeting

Categories: Logged, Public

From: Mark Holmes
Sent: Tuesday, September 21, 2010 10:51 AM
To: Mark Simeoni
Cc: Vanesa Enskaitis; Judy Leavitt
Subject: RE: meeting

Mark:

I'm looking forward to meeting with you and your City of Sudbury colleagues on Thursday at 1 p.m. I have a Power Point presentation as well as some maps for everyone to review. If there is anything else you'd like me to bring, or matters I should be aware of, I can be reached via this e-mail or my cell at 416-705-4283.

Best regards,

Mark Holmes
Vice President
Corporate Affairs
Xeneca Power Development

5160 Yonge St.
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416-590-9362
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From: Mark Holmes
Sent: September 3, 2010 8:55 AM
To: 'Mark Simeoni'
Cc: Judy Leavitt; Vanesa Enskaitis
Subject: RE: meeting

Thanks Mark:

Looking forward to meeting you there.

Judy pls put in my calendar

Vanesa, you can book my flight out of Sudbury for late afternoon on the 23rd.

Mark Holmes
Vice President
Corporate Affairs
Xeneca Power Development

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mholmes@xeneca.com

www.xeneca.com

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From: Mark Simeoni [mailto:mark.simeoni@city.greatersudbury.on.ca]
Sent: September 3, 2010 8:53 AM
To: Mark Holmes
Subject: RE: meeting

Hi mark we have reserved September 23 from 1:00 pm to 3:00 pm for a meeting. The location will be room C-13 a at City hall in sudbury (Tom davis square)

regards, mar

Mark H. Simeoni, MCIP, RPP
Acting Manager of Community and Strategic Planning
Planning Services Division
Growth and Development Department
P.O. Box 5000, Station "A"
200 Brady Street
Sudbury ON P3A 5P3
674-4455 ext.4292
690-7765 cell

k
>>> "Mark Holmes" <mholmes@xeneca.com> 8/30/2010 9:27 AM >>>
Good morning Mark:

Just following up regarding our waterpower projects on the Vermilion River and recent expressions of interest from local Council members, City staff and Conservation Authority.

I will be in the Sudbury Region September 23/24 and would be pleased to provide a briefing to interested parties regarding our proposed projects. If amenable to the various schedules, the afternoon of September 23 would work best for me, but I can also try for late morning on the 23rd or morning of the 24th.

Kindly advise on what date and time works best.

Thanks and best regards,

Mark Holmes
Vice President
Corporate Affairs
Xeneca Power Development

5160 Yonge St.
North York
M2N 6L9

416-590-9362
416-590-9955 (fax)
416-705-4283 (cell)

mholmes@xeneca.com

www.xeneca.com

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-----Original Message-----

From: Mark Simeoni [mailto:mark.simeoni@city.greatersudbury.on.ca]
Sent: August 13, 2010 3:05 PM
To: Mark Holmes
Subject: Re: meeting

Thanks mark we will rely on the website in the interim to understand the project. I will forward the link to the community partners

Regards, mark
Sent from blackberry

-----Original Message-----

From: "Mark Holmes" <mholmes@xeneca.com>
To: Mark Simeoni <Mark.Simeoni@city.greatersudbury.on.ca>
Cc: Patrick Gillette <pgillette@xeneca.com>

Sent: 8/13/2010 2:49:05 PM
Subject: RE: meeting

Mark:

Thanks for the advance notice of interest expressed by local councilors and the Conservation Authority.

Our apologies but the workload has been extremely heavy this month and shows no signs of abating. We do very much want to get to Sudbury in the near future to meet with you and other stakeholders and will do so as soon as we can coordinate.

Will keep you posted and please note that we have recently uploaded considerable information about our projects on our website at www.xeneca.com (just click on projects and follow the prompts to view the Vermillion River sites.)

Best regards,

Mark Holmes

Vice President

Corporate Affairs

Xeneca Power Development

5160 Yonge St.

North York

M2N 6L9

416-590-9362

416-590-9955 (fax)

416-705-4283 (cell)

mholmes@xeneca.com <<mailto:mholmes@xeneca.com>>

www.xeneca.com <<http://www.xeneca.com>>

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From: Mark Simeoni [mailto:mark.simeoni@city.greatersudbury.on.ca]
Sent: August 13, 2010 9:56 AM
To: Mark Holmes
Subject: meeting

Mark, I have been contacted by the local Councillor as well as the local Conservation Authority with respect to the proposed internal stakeholder meeting that we have been discussing.

They are asking when this meeting might occur as they are aware that this project is underway and ads have appeared in the local papers.

I am being asked to advise them if they should wait for a meeting or should they simply respond to your proposal individually. At this time it does appear that a meeting is not forthcoming as we have not heard back from you.

If we do not hear from you in the near term we will advise our community partners to deal directly with Xeneca and we would anticipate that you will co-ordinate these meetings as required.

Please advise us of any public meetings that you are planning so that we may attend.

regards, mark

Stephanie Hodsoll

From: Vanesa Enskaitis
Sent: Tuesday, February 22, 2011 1:46 PM
To: Stephanie Hodsoll
Subject: FW: thanks and follow up

Categories: Logged, Public

From: Mark Holmes
Sent: Friday, September 24, 2010 12:08 PM
To: Mark Simeoni; jacques.barbeau@greatersudbury.ca
Cc: bill.lautenbach@greatersudbury.ca; dennis.lenzi@city.greatersudbury.on.ca; judy.sewell@greatersudbury.ca; paul.sajatovic@sudbury.ca; Vanesa Enskaitis; Ed Laratta
Subject: thanks and follow up

Mark:

Once again, thank you for your time and professionalism in setting up yesterday's meeting with your City of Sudbury Colleagues. I felt it a very productive introductory meeting and look forward to our subsequent exchanges as we move forward with our Vermilion R. projects.

Please extend my thanks to Jacques, Bill, Dennis, Judy and Paul for their invaluable input and offers of assistance.

Also wondering if I could get a copy of the City's official plan, specifically any elements related to our projects. This could be helpful to our planning.

Thanks and very best regards,

Mark Holmes
Vice President
Corporate Affairs
Xeneca Power Development

5160 Yonge St.
North York
M2N 6L9

416-590-9362
416-590-9955 (fax)
416-705-4283 (cell)

mholmes@xeneca.com

www.xeneca.com

Danielle Dempsey

From: Tami Sugarman
Sent: November-19-10 2:20 PM
To: amy.liu@ceaa-acee.gc.ca; ellen.cramm@ontario.ca; 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; john.woodward@cta-otc.gc.ca; Bob.L.Robinson@ontario.ca; gerry.webber@ontario.ca; murray.morello@ontario.ca; dan.tovey@ontario.ca; amy.gibson@ontario.ca; David.Pickles@ontario.ca; greg.godin@ontario.ca; paul.sajatovic@sudbury.ca; jmackenzie@town.espanola.on.ca; mark.simeoni@city.greatersudbury.on.ca; doug.nadorozny@greatersudbury.ca; information@nairncentre.ca
Cc: Ed Laratta; Vanesa Enskaitis; Philippa McPhee; pnorris@owa.ca; Rob Steele
Subject: Xeneca Power Development Inc. proposed Wabageshik Rapids waterpower project on the Vermilion River - Project Description Document Notice
Attachments: Xeneca Project Description Cover Let Nov 2010.pdf; Wesa FTP service.doc
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 document for the proposed Xeneca Power Corporation Inc. waterpower development at the Wabageshik Rapids Project site located on the Vermilion River in northeastern Ontario. Xeneca has been awarded a Feed-in Tariff (FIT) contract for this site 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 the 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 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 this document in electronic format for environmental reasons. You may access our FTP site by completing the following instructions:

Site: _____
Username: _____
Password: _____

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 the project description document will be issued shortly to federal agencies and Aboriginal communities.

Other Parties: If you require a paper and/or CD Rom copy in addition to this electronic copy please notify us at EAinfo@oel-hydrosys.ca otherwise we will assume that this electronic version is adequate.

We are pursuing an Ontario Class Environmental Assessment for Waterpower Projects planning process for this site. A federal screening may also be triggered at the site. The proposed Wabageshik Rapids GS development site is located downstream from three other proposed waterpower projects; Xeneca's At Soo Crossing, Cascade Falls and McPherson Falls Hydroelectric Generating Stations. The proposed Wabageshik Falls GS development site is located approximately 30 km downstream of the location of the other three sites and is therefore interpreted to be independent based on hydrology and biology. We have therefore decided to pursue a separate Class Environmental Assessment for Waterpower Projects planning process for the Wabageshik Falls GS site. The At Soo Crossing, Cascade Falls and McPherson Falls GS sites are located close together and will be assessed under one Class EA planning process.

The project description is intended to provide an overview of the project components, general information on the project 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 project. It will also allow a federal authority to determine if there is potential for the *Canadian Environmental Assessment Act (CEAA)* to be triggered by the project proposal and whether the agency will be a Responsible Authority (RA) under *CEA Act* or whether it is able to provide technical expertise as an expert advisor (FA).

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, the purpose of which is to discuss the following items 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.

November 2010

Dear Government Agency or Municipal Official:

Welcome to the start-up activities on development of the Class Environmental Assessment for Waterpower Projects (Class EA) for the proposed Xeneca Power Development Inc. proposed GS project in your jurisdiction. This first step of the EA process is intended to establish the initial conceptual design, start a dialogue on regulatory approval requirements and initiate public consultation and Aboriginal engagement in the Class EA process. To this purpose, Xeneca and its consultants from OEL-HydroSys Inc. are pleased to present you with the Project Description for this proposed project.

This Project Description is provided 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. This document attempts to delineate the 'footprint' of the project within the environmental context of the study area and initially identify features of the environment that may be affected (directly and indirectly) by the proposed project. Xeneca acknowledges that additional potential effects may be identified throughout subsequent phases of the Class EA process as input is received from all stakeholders.

In the early stages of this engagement process, a proponent-led EA coordination meeting will be undertaken with key government agencies and interested Aboriginal communities to coordinate an integrated planning process and to identify environmental concerns and diverse regulatory and management planning requirements that may be associated with the proposed project. This document is intended to assist you in preparing for this engagement process. A detailed list of the federal and provincial regulatory agencies, municipalities, and Aboriginal communities which are receiving a copy of this document directly is included within the document. We will be contacting this distribution group shortly to inquire as to their availability for participation in a Class EA Coordination meeting for this proposed small waterpower development project.

The general public and other groups are also invited to review this document. The document will be provided to these parties through postings on the Xeneca website or, upon request, by direct mail.

If you have any questions or comments in relation to the Class EA for Waterpower Projects planning process or environmental impact assessment related matters, please do not hesitate to contact the OEL-HydroSys Inc. Environmental Assessment Manager, Ms. Tami Sugarman at (613) 839-1453 ext. 229 and tsugarman@oel-hydrosys.ca or Xeneca's Manager of Environmental Studies and Assessment, Edmond Laratta, at (416) 590-9362 ext. 106 and elaratta@xeneca.com.

For questions or comments in relation to all other aspects of the development proposal please contact Xeneca's President, Mr. Patrick Gillette at pgillette@xeneca.com or Xeneca's First Nation and Aboriginal Relations Liaison, Mr. Dean Assinewe at dassinewe@xeneca.ca.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Patrick W. Gillette", with a stylized flourish at the end.

Patrick Gillette
President
Xeneca Power Development Inc.

Ref: Xeneca Project Description Cover Let Nov 2010.doc

Natalie St-Pierre

From: Rob Steele [rsteele@nrsl.on.ca]
Sent: March 21, 2011 2:36 PM
To: stephanie.davis@ceaa-acee.gc.ca
Cc: Ed Laratta; Tami Sugarman; Philippa McPhee
Subject: Draft Natural Environment Existing Conditions Reports

Stephanie

As a follow up to our EA Coordination meeting for the Wabagishik (Vermilion River) and Allan and Struthers (Wanapitei River) Hydroelectric Developments, I am pleased to provide you with the DRAFT Natural Environment Existing Conditions Reports for these projects. Simply follow the instructions below to download the reports from our ftp site.

Regards, Rob Steele

Please go to the following FTP site

or this one if the first does not work

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

Stephanie Hodsoll

From: Stephanie Hodsoll
Sent: Monday, April 11, 2011 4:57 PM
To: cortney@sudburychamber.ca
Subject: RE: Proposed waterpower project on the Vermilion River (Wabagishik Rapids)
Attachments: image001.jpg; image002.jpg; image003.png; image004.jpg

Categories: Public, Logged

That's great, thank you Cortney! We'll be in touch.

Cheers,
Steph

Stephanie Hodsoll
Public Affairs Liaison
Xeneca Power Development
5160 Yonge St., Suite 520
North York, ON M2N 6L9
T: 416-590-9362 X 112
F: 416-590-9955
www.xeneca.com

From: Cortney Lanteigne [mailto:cortney@sudburychamber.ca]
Sent: Monday, April 11, 2011 2:38 PM
To: Stephanie Hodsoll
Subject: RE: Proposed waterpower project on the Vermilion River (Wabagishik Rapids)

Stephanie,

I have penciled that into our events agenda for the fall. Once membership has been processed we will be able to start working on the promotional material.

Thanks
Cortney

Cortney Lanteigne
Special Events Coordinator
Greater Sudbury Chamber of Commerce
40 Elm Street, Suite 1, Sudbury, ON P3C 1S8
T: (705) 673-7133 e. 224
F: (705) 673-1951
cortney@sudburychamber.ca
www.sudburychamber.ca

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du Grand Sudbury



From: Stephanie Hodsoll [mailto:SHodsoll@xeneca.com]
Sent: April-11-11 11:58 AM
To: cortney@sudburychamber.ca
Subject: RE: Proposed waterpower project on the Vermillion River (Wabagishik Rapids)

Great, thanks Cortney. Thursday November 17 would be best for Mark.
Please confirm.

Thanks,
Steph

Stephanie Hodsoll
Public Affairs Liaison
Xeneca Power Development
5160 Yonge St., Suite 520
North York, ON M2N 6L9
T: 416-590-9362 X 112
F: 416-590-9955
www.xeneca.com

From: Cortney Lanteigne [mailto:cortney@sudburychamber.ca]
Sent: Monday, April 11, 2011 11:02 AM
To: Stephanie Hodsoll
Subject: RE: Proposed waterpower project on the Vermillion River (Wabagishik Rapids)

Good Morning Stephanie,

After speaking with Debbi we have come up with the following potential dates. November 17, 18, 22.

Please let me know if any of these work with you.

Thanks
Cortney
Cortney Lanteigne
Special Events Coordinator
Greater Sudbury Chamber of Commerce
40 Elm Street, Suite 1, Sudbury, ON P3C 1S8
T: (705) 673-7133 e. 224
F: (705) 673-1951
cortney@sudburychamber.ca
www.sudburychamber.ca

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du Grand Sudbury



We want to hear from you! Membership Survey 2011

From: Stephanie Hodsoll [mailto:SHodsoll@xeneca.com]
Sent: April-11-11 10:52 AM
To: debbi@sudburychamber.ca
Cc: cortney@sudburychamber.ca; barbara@sudburychamber.ca
Subject: RE: Proposed waterpower project on the Vermillion River (Wabagishik Rapids)

April 11, 2011

Good morning everyone,

Debbi, thanks for your response. Of course we understand that your calendar gets booked far in advance. Cortney, please let us know what dates this fall would work and Mark & I will figure it out on our end!

Cheers,
Steph

Stephanie Hodsoll
Public Affairs Liaison
Xeneca Power Development
5160 Yonge St., Suite 520
North York, ON M2N 6L9
T: 416-590-9362 X 112
F: 416-590-9955
www.xeneca.com

From: Debbi M Nicholson [mailto:debbi@sudburychamber.ca]
Sent: Tuesday, April 05, 2011 4:50 PM
To: Stephanie Hodsoll
Cc: cortney@sudburychamber.ca; barbara@sudburychamber.ca
Subject: RE: Proposed waterpower project on the Vermillion River (Wabagishik Rapids)

Hi Stephanie

Thank you for your latest email. I have asked my Special Events Coordinator, Cortney Lanteigne, to contact you about potential dates. You should hear from her within the next few days.

If we are to host Mark as a speaker to discuss the project we trust that your plans will be far enough along so that he can share any business opportunities that some of our members may be able to consider. We likely can't consider a date until later this fall as our calendar is fully booked until that time. I hope this timing works for Mark.

All the best.

Debbi

Debbi M Nicholson
President & CEO
Greater Sudbury Chamber of Commerce
40 Elm Street, Suite 1, Sudbury, ON P3C 1S8
T: (705) 673-7133 e. 225
F: (705) 673-1951
debbi@sudburychamber.ca
www.sudburychamber.ca

Your Business Network



From: Stephanie Hodson [mailto:SHodson@xeneca.com]
Sent: April 5, 2011 4:31 PM
To: debbi@sudburychamber.ca
Subject: RE: Proposed waterpower project on the Vermilion River (Wabagishik Rapids)

April 5, 2011

Hi Debbi,

Thanks for your email. We're sorry that you were unable to make our Public Information Centre but look forward to another opportunity to meet with you.

We'd like to take you up on your offer for Mark to come and present to your membership about our projects. Could you kindly provide some potential dates over the next while when Mark could present?

Thank you!

Yours truly,
Steph

Stephanie Hodson
Public Affairs Liaison
Xeneca Power Development
5160 Yonge St., Suite 520
North York, ON M2N 6L9
T: 416-590-9362 X 112
F: 416-590-9955
www.xeneca.com

From: Debbi M Nicholson [mailto:debbi@sudburychamber.ca]
Sent: Monday, March 21, 2011 10:06 AM
To: Stephanie Hodson
Cc: cortney@sudburychamber.ca; 'Jonathan Laderoute'; melanie@sudburychamber.ca; barbara@sudburychamber.ca
Subject: RE: Proposed waterpower project on the Vermilion River (Wabagishik Rapids)

Hello Mark

Thank you for your email and letter about the potential of your waterpower development on the Vermillion River. I appreciate you sharing this information with us. I will not be able to attend your public meeting in Espanola tomorrow evening due to other commitments.

I would encourage you to stay in touch with this office as your plans progress. Our members will be interested in any business opportunities they may be able to partner in with your company. Perhaps at some point in the future, as your plans progress, we could have you or another representative from your company address our membership. For the time being you can forward any additional information through me.

Best of luck with your development.

Thanks and all the best.

Debbi

Debbi M Nicholson
President & CEO
Greater Sudbury Chamber of Commerce
40 Elm Street, Suite 1, Sudbury, ON P3C 1S8
T: (705) 673-7133 e. 225
F: (705) 673-1951
debbi@sudburychamber.ca
www.sudburychamber.ca

Our Business Network



From: Stephanie Hodsoll [<mailto:SHodsoll@xeneca.com>]
Sent: March 18, 2011 10:24 AM
To: debbi@sudburychamber.ca
Subject: Proposed waterpower project on the Vermilion River (Wabagishik Rapids)

March 18, 2011

Good morning Ms. Nicholson,

By way of introduction, Xeneca Limited Partnership is the holder of a Feed-In-Tariff contract from the Ontario Power Authority for the potential waterpower development of the Wabagishik Rapids site on the Vermilion River located in proximity to your business interests located in the Sudbury area.

As a responsible developer of renewable energy (waterpower) Xeneca is contacting you to, first and foremost, inform you of our intentions to develop the above note site(s) and to invite you to:

(a) Submit any questions, comments or observations directly to Stephanie Hodson from Xeneca at shodson@xeneca.com.

(b) Attend our public information centre at the Espanola Recreation Centre from 4 to 8 p.m. on March 22, 2011.

Xeneca's intention is to work with local businesses as it is our company policy -- to the greatest extent possible -- procure locally the goods and services required to develop our projects. Average cost to build waterpower in Ontario is \$5 million per MW, about half of which is spent locally where goods and services are available. In addition, through royalties and taxes waterpower provides a significant return to taxpayers of approximately \$5 million per MW over a 40 year period.

Further Xeneca wishes to avoid any negative impacts to business, and, where possible enhance business opportunities.

If you have questions or concerns about Xeneca and/or our projects, please do not hesitate to contact Mark Holmes, Vice President Corporate Affairs, as follows:

Mark Holmes
Vice President
Corporate Affairs
Xeneca Power Development
mholmes@xeneca.com
416-590-9362 (office)
416-705-4283 (cell)

Please distribute this email and attached letter as appropriate.

Thank you!

Yours truly,
Steph

Stephanie Hodson
Public Affairs Liaison
Xeneca Power Development
5160 Yonge St., Suite 520
North York, ON M2N 6L9
T: 416-590-9362 X 112
F: 416-590-9955
www.xeneca.com

Danielle Dempsey

From: Environmental Assessment Information
Sent: April-18-11 4:40 PM
To: 'kelly.eggars@dfo-mpo.gc.ca'; 'stephanie.davis@ceaa-acee.gc.ca'; 'lisa.mcdonald@tc.gc.ca'; 'EACoordination_ON@inac-ainc.gc.ca'; 'katherine.hess@hc-sc.gc.ca'; 'sheryl.lusk@ec.gc.ca'; 'Caitlin.Scott@NRCan.gc.ca'; 'john.woodward@cta-otc.gc.ca'; 'narren.santos@ontario.ca'; 'mohammad.khan@ontario.ca'; 'laurie.brownlee@ontario.ca'; 'phil.landry@ontario.ca'; 'bob.l.robinson@ontario.ca'; 'gerry.webber@ontario.ca'; 'simon.spooner@ontario.ca'; 'Katherine.Kirzati@ontario.ca'; 'jennifer.lillie-paetz@ontario.ca'; 'helen.l.kwan@ontario.ca'; 'brett.smith@ontario.ca'; 'David.Pickles@ontario.ca'; 'pnorris@owa.ca'; 'choag@owa.ca'; 'paul.marleau@ontario.ca'; 'paul.sajatovic@sudbury.ca'; 'jmackenzie@town.espanola.on.ca'; 'mark.simeoni@city.greatersudbury.on.ca'; 'doug.nadorozny@greatersudbury.ca'; 'information@nairncentre.ca'; 'bob.l.robinson@ontario.ca'; 'narren.santos@ontario.ca'; 'laurie.brownlee@ontario.ca'; 'Moggy, Steven (ENE)'; 'rod.sein@ontario.ca'; 'bob.l.robinson@ontario.ca'; 'ed.tear@ontario.ca'; 'chuck.miller@ontario.ca'; 'gerry.webber@ontario.ca'; 'simon.spooner@ontario.ca'; 'Katherine.Kirzati@ontario.ca'; 'jennifer.lillie-paetz@ontario.ca'; 'wendy.kaufman@ontario.ca'; 'helen.l.kwan@ontario.ca'; 'brett.smith@ontario.ca'; 'David.Pickles@ontario.ca'; 'pnorris@owa.ca'; 'choag@owa.ca'; 'paul.marleau@ontario.ca'; 'Carl.Jorgensen@dfo-mpo.gc.ca'; 'stephanie.davis@ceaa-acee.gc.ca'; 'lisa.mcdonald@tc.gc.ca'; 'EACoordination_ON@inac-ainc.gc.ca'; 'katherine.hess@hc-sc.gc.ca'; 'sheryl.lusk@ec.gc.ca'; 'Caitlin.Scott@NRCan.gc.ca'; 'townkill@vianet.on.ca'
Cc: Tami Sugarman; mholmes@xeneca.com; Ed Laratta
Subject: FINAL Meeting Minutes: EA Coordination Meeting for proposed Xeneca projects; Allen and Struthers, Wabagishik Rapids
Attachments: 20110418 EA Coordination Meeting A&S and Wabagishik Final Minutes.pdf

Hello;

The FINAL Meeting Minutes from the EA Coordination meeting for the proposed developments at Allen & Struthers (Wanapitei River) and Wabagishik Rapids (Vermillion River) held at the Quality Inn, Sudbury on February 8th are attached for your records. All of the review comments received have been incorporated into the document. Please distribute internally to those from your organization that participated in 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.

Thank you for your participation,

Kai

MINUTES OF EA COORDINATION MEETING

Allen & Struthers and Wabagishik Rapids Hydro Electricity Projects

Date: Tuesday, February 8th, 2011, 9:30am

Meeting Location: Quality Inn, 390 Elgin St., Sudbury, Ontario and via Teleconference Call

Prepared By: Kai Markvorsen

Attendees:

Ministry of Natural Resources:

- Bob Robinson, Renewable Energy Planner (BR)
- Eric Cobb, Species at Risk Biologist (EC)
- Mike Hall, Biologist (MH)
- Rick Reyan, (RR)
- Bruce Richard, Planning and Information Management Supervisor (BR)

Ontario Parks

- Ed Morris, Northeast Zone Ecologist (EM)

Fisheries and Oceans Canada

- Carl Jorgensen, Fish Habitat Biologist (CJ)

Ministry of the Environment

- Laurie Brownlee, Environmental Planner/EA Coordinator (LB)
- Paula Allen, Supervisor Environmental Planning (PA)
- Steve Moggy, Senior Environmental Officer (SM)
- Rod, Sein, Surface Water Specialist (RSe)

City of Greater Sudbury

- Mark Simeoni, Manager of Community and Strategic Planning (MS)

Xeneca Power

- Mark Holmes, VP Corporate Affairs (MH)
- Rosanna Barbutsi

OEL-HydroSys Inc. (Environmental Approvals Consultants):

- Tami Sugarman, Environmental Approvals Senior Advisor (TS)
- Kai Markvorsen

Natural Resource Solutions Inc. (Biological Consultants)

- Rob Steele (RS)
- Andrew Schiedel

Via Teleconference

Ministry of Natural Resources:

- Sandra Dossier, Renewable Energy Coordinator (SD)
- Todd Copeland
- Rich Pyrce, Hydrologist (RP)

Ministry of Energy and Infrastructure

- Helen Kwan, Senior Policy Advisor REA Office (HK)

Ministry of Tourism and Culture

- Katherine Kirzati, Heritage Planner (KK)
- Dr. Simon Spooner, Marine Heritage Advisor (SS)

Transport Canada

	<ul style="list-style-type: none"> • Lisa McDonald, Environmental Officer (LM) Canadian Environmental Assessment Agency • Dave Bell, Project Manager (DB) • Stephanie Davis, Environmental Assessment Analyst (SD) Natural Resources Canada • Caitlin Scott, Junior Policy Analyst (CS) Xeneca Power • Patrick Gillette (PG) • Nava Pokharel
Regrets	Municipality of Killarney <ul style="list-style-type: none"> • Morgan Pitfield, Mayor Ontario Parks - Killarney Provincial Park <ul style="list-style-type: none"> • Chuck Miller, Superintendant Environment Canada <ul style="list-style-type: none"> • Sheryl Lusk, Environmental Assessment Officer
Attachments	Project Description for Allen & Struthers and Wabagishik Rapids Waterpower Developments

The following Meeting Minutes were recorded by Kai Markvorsen of OEL-HydroSys. 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. The revisions will be documented and redistributed.

NOTE: Transport due to teleconferencing problems that limited the ability of those participating by phone to hear and engage in the conversation. As a result, many participants, including Transport Canada, left the call at about 11:30.

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	<p>Introductions and acceptance of meeting agenda.</p> <p>Meeting objectives (TS)</p> <ul style="list-style-type: none"> • to initiate the discussion surrounding information that has been distributed to regulators for both Allen & Struthers and Wabagishik Rapids 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 <p>OEL (TS) introduced the Allen & Struthers and Wabagishik projects and</p>	

	<p>outlined that the proponent would separately assess each project through the Class Environmental Assessment for Waterpower Projects.</p> <p>Additionally, it is expected that the projects will trigger the requirement for a Federal Environmental Screening due to law list triggers (<i>Navigable Waters Protection Act</i> and the <i>Fisheries Act</i>). As a result it was the intent of the proponent to harmonize the Provincial and Federal processes and to produce a single environmental report for each project which would address the requirements of both the provincial and federal processes.</p> <p>MNR (SD) advised that, because the Waterpower Class EA classifies power lines under 115kV capacity to be exempt from assessment under the Class EA, the MNR Class EA for Resource Stewardship and Facility Development (RSFD) process be initiated to assess the transmission line component on crown land for both projects. The MNR will screen and categorize the project per S 3.2 of the RSFD Class EA based on the information provided in the project description. SD indicated that further guidance on the specific requirements of the RSFD Class EA process were available in Section 3.2 (p. 19) of the RSFD. In addition, Xeneca was advised that any further public consultation items (i.e. notifications/meeting materials/etc) should include reference to all EA processes so as to avoid confusion in the future.</p> <p>Following discussions, it was agreed that the Waterpower Class EA planning process would be followed which would incorporate all requirements for provincial and federal EAs, including the RSFD Class EA based on the categorization of the transmission line by MNR. A single environmental report would then be produced which would address the requirements of all of the identified EA processes. Essentially, the assessment of the project under the Waterpower Class EA would be expanded to incorporate the assessment of the transmission line, access roads etc according to the classification of the project through the MNR RSFD Class EA and federal screening processes. Assessment and notification requirements of both processes would be met, however the EA would remain a proponent driven process. Furthermore, this harmonization approach would be understood to apply to all proposed Xeneca projects. Xeneca will submit a Part 1 Work Permit application and provide updated transmission line and access road mapping to support the MNR screening and assessment of the projects.</p> <p>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 <i>NWP Act</i> and the <i>Fisheries Act</i> that Transport Canada and Fisheries and Oceans Canada would be acting as Responsible Authorities (RAs) for the project. Natural Resources Canada, Environment Canada and Health Canada would act as expert authorities and provide advice and information as required. The posting on the Canadian Environmental</p>	<p>Proponent to submit Part 1 Work Permit Application</p> <p>Proponent to submit NWPA applications for project review</p>
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	<p>Assessment Registry would be posted following a federal agency coordination meeting.</p> <p>TC (LM) requested that Xeneca submit applications for project review under the <i>Navigable Waters Protection Act</i> in order to facilitate their review of the proposed projects.</p>	
2.0	<p>Project/Waterway Classification</p> <p>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 upstream of the proposed projects on the Vermillion and Wanapitei Rivers. 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.</p> <p>The MNR and the MOE accepted the classification of both projects as being on managed waterways.</p>	
3.0	<p>Project Timelines and Scheduling</p> <p>OEL (TS) explained that, in order to meet the FIT contract deadlines for the projects, Xeneca will have to construct and commission both the Allen & Struthers and Wabagishik Rapids 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, with the aim to finalise the environmental assessment by the end of 2011. Therefore, in order to address any informational requirements required for the EA it is Xeneca’s intention to provide all baseline information collected over the past field season 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 provide a list of commitments in the ER which would be completed in support of project permitting and prior to the start of construction. Xeneca fully recognizes that this approach deviates from the typical EA planning process but Xeneca feels that it is required in order to meet FIT contract deadlines.</p> <p>NRSI (RS) explained that the baseline biological work completed to date</p>	

	<p>would be forthcoming in early February, 2011. 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.</p> <p>DFO (CJ) and MOE (PA) cautioned that they would be unable to comment on the appropriateness of this approach until after they had had the chance to review the studies and data collected to date.</p> <p>MOE (LB and PA) cautioned that Xeneca's approach to make commitments in the EA to fill in informational gaps later on in the regulatory permitting stage of development may result in a situation where an addendum to the EA must be issued to address any major changes to the undertaking (components or activities) that may be required due to unforeseen issues identified during the 2011 or later study results. Any impacts that would be dealt with at the permitting/approvals stage would need to be reflected in the ESR in order to meet the intent of the Class EA. Any impacts and mitigation that is addressed in the ESR relies heavily on the quality and sufficiency of the data. The new or addendum EA document would need to be finalised prior to permits being issued which may result in delays later in the process. MOE (PA) also cautioned the proponent to remember the intent of the EA process and make sure it is fulfilled.</p> <p>MNR (SD) cautioned that Xeneca's approach to make commitments in the EA to fill in informational gaps later on in the regulatory permitting stage of development will likely result in a situation where MNR is unable to issue Location Approval.</p> <p>City of Greater Sudbury (MS) advised that, because this approach appeared to differ from what is described in the Waterpower Class EA that Xeneca make it clear to public and other stakeholder groups what Xeneca is proposing in order to clear up any misunderstandings and to ensure that consultation events are productive.</p>	
4.0	<p>Methodologies for 2011 Field Studies</p> <p>NRSI (RS) indicated 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:</p> <ul style="list-style-type: none"> • 2010 Baseline conditions Report, NRSI • Stage 1 Archaeological Assessment Report, Woodland Heritage • 2010 Surface Water Letter Report, WESA • Hydrologic modeling report and Dam Operations Plan, Xeneca <p>Additionally, RS outlined the approach NRSI would be taking with regard to</p>	<p>Proponent to coordinate the distribution of reports as they become available</p>

	<p>the assessment of transmission corridors and road alignments.</p> <ul style="list-style-type: none"> • 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. <p>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.</p>	<p>NRSI to provide field assessment protocols to all meeting participants</p>
5.0	<p>Public and First Nation Consultation Planning</p> <p>Xeneca (MH) outlined Xeneca's public consultation efforts to date with regard to the Allen & Struthers and Wabagishik Rapids sites. A Public Information Center (PIC) was held on Jan 17st at the French River Inn in French River Ontario for the Allen and Struthers project and further PICs and public consultation events are planned. A PIC for the Wabagishik Rapids project is planned though no definitive date has yet been determined.</p> <p>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.</p> <p>Public and First Nation Consultation Plans are being developed and will be circulated to interested agencies for review and comment when ready. Xeneca has identified and entered into communications with the Sagamok and Whitefish Lake First Nations.</p> <p>Xeneca (MH) indicated that at the Allen & Struthers PIC everyone had their questions answered.</p> <p>MOE(PA) and City of Greater Sudbury (MS) advised that, based on</p>	<p>Xeneca to forward FN and Public consultation plan to regulators for review.</p>

	<p>feedback they've received from members of the public and other stakeholders, that the amount and quality of the information presented by Xeneca at future consultation events be improved. MOE (PA) also indicated that the Ministry has also received communications indicating several concerns with the projects from the French River Delta Association and the Vermillion Stewardship Committee. Xeneca (MH) requested that the City of Greater Sudbury and the MOE forward copies of communications for their records and that all stakeholders be directed contact to Xeneca (Vanessa Enskaitis, 416-590-9362 Ext 104, venskaitis@xeneca.com) and so that they could to identify and address issues. The City of Greater Sudbury (MS) requested that Xeneca provide them with further information for the Wabagishik project which would the City to provide at least summary descriptions of the proposed project.</p> <p>MNR (RR) requested to know if Xeneca has followed up with the Henvey Inlet First Nation which had identified itself at the Allen and Struthers PIC as having concerns with the A&S project. Xeneca (MH) responded by saying that they had and communications were ongoing.</p> <p>Note: Dean Assinewe, Xeneca's First Nations consultation was to be connected but due to technical problems it was difficult to communicate. As a result, Dean, Patrick Gillete and Rick Reynan were to communicate later to discuss Aboriginal consultation and the Draft Consultation Plan. MNR also noted that clarification was provided on the First Nation communities associated with these projects (ie. Sagamok only on Wabageshik and not on Allen & Struthers project). Xeneca had recently provided "Correction Notice" on this subject.</p>	<p>MOE/City of Greater Sudbury to forward communications for EA record in compliance with Freedom of Information provisions</p> <p>Mark Holmes to liaise with City of Sudbury to provide further project info and facilitate the exchange of information</p>
6.0	<p>Ministry of Tourism and Culture Archaeological Study Requirements</p> <p>MTC (SS) acknowledged the work done by Xeneca to date with regard to terrestrial archaeology and then outlined the requirement for marine archaeological studies to be done. Because of the location of both projects, there is the potential for archaeological resources to be present within the waterway. MTC (SS) also suggested that, given Xeneca's proposed timelines, that applications for 2011 site licences needed for field work be made as soon as possible.</p> <p>OEL (TS) responded by saying that, to date, the assessment of marine archaeological resources was not a typical requirement for waterpower development within inland waterways within the province which is why licence applications had not been made.</p> <p>Xeneca (PG) requested that Dr. Spooner and Dr. John Pollock of Woodland Heritage Services, the archaeological consultant for Xeneca,</p>	<p>John Pollock to contact Dr. Spooner regarding</p>

	<p>speak and discuss the scope and specific requirements of the marine archaeological assessment</p>	<p>aquatic archaeological study requirements</p>
<p>7.0</p>	<p>Establishment of Project Technical Committees</p> <p>OEL (TS) proposed that, in order to effectively address the numerous concerns raised so far through the meeting and others which may arise when the technical data is released during the assessment process that a technical committee (or committees) be formed with representatives from the consulting team and relevant agencies. The goal of the technical committees would be to identify, discuss and address any identified unresolved issues with specific aspects (biology, hydrology/operation, etc) of the proposed developments.</p> <p>MOE (PA) indicated that the Ministry would have issues with the perception that they would be acting in an advisory role as opposed to a regulatory role with regard to the proposed projects. Meetings would need to be formally scheduled and recorded (agendas, meeting minutes, review periods, etc). The MNR (SD) also indicated that the agencies would need to be given time to appropriately review materials and prepare for focused meetings.</p> <p>The MOE (PA) requested to know if the Xeneca could provide a tentative schedule for the proposed technical committee meetings in order to facilitate scheduling. OEL(TS) and NRSI(RS) responded by saying that, based on conversations at the coordination meeting, it seemed likely that between two to three discipline-specific meetings would be required:</p> <ul style="list-style-type: none"> • An initial meeting to discuss hydrology, inundation and flows following the issuance of the hydrological modeling report and dam operations plan for each site • One to two follow-up meetings to discuss biological impacts, minimum flow requirements as well as potential impacts to water quality. <p>The relevant agencies and topics of discussion will be coordinated following this EA coordination meeting and will be, in part, contingent on the release and content of the technical reports.</p>	<p>Proponent to coordinate the distribution of reports as they become available</p> <p>Agencies to forward contacts for technical committees to OEL (TS)</p> <p>Proponent to coordinate the establishment of technical committee(s) following distribution of reports</p>

8.0	<p>NRCan and CEAA</p> <p>CEAA (DB) indicated that they did not have any specific comments which could be provided at this time. A Federal Coordination Meeting would take place soon. Following the meeting, federal scoping documents for the projects would be prepared and would be tentatively available by March/April 2011. CEAA also indicated that they will require that assessment of transmission lines and access roads be included at the same time as the generating station.</p> <p>NRCan (CS) indicated that they would not require a blasting questionnaire as the project did not require the onsite manufacturing of explosives. NRCAN indicated that hydrology and mercury would be issues and that appropriate experts at their agency would be assigned and that they would continue to provide advice or documentation at the request of the other Responsible Authorities.</p>	
9.0	<p>Fisheries and Oceans Canada (DFO)</p> <p>DFO (CJ) outlined their agencies' concerns and responsibilities with regard to the two projects under the <i>Fisheries Act</i> and the <i>Species at Risk Act</i> 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. Prior to being able to review the baseline conditions reports DFO (CJ) noted that he would be unable to provide specific comments but he indicated that Lake Sturgeon would be a concern for the projects and, while not listed a protected species federally, a recovery plan is being prepared and would likely become protected during the construction phase of the project. Regardless, the species is protected provincially so the proponent should proceed according to the requirements of the provincial <i>Endangered Species Act</i>.</p> <p>DFO (CJ) also indicated that he would be the DFO contact for the Allen and Struthers project while his colleague Kelly Eggers would be the agency contact for the Wabagishik project. He also referred Xeneca to reference documents available through the DFO website (e.g. DFO position statement on the Application of the Habitat Protection Provisions of the <i>Fisheries Act</i> to Existing Facilities and Structures) which referenced specific approved impact mitigation strategies which may be referenced in the EA document.</p>	
10.0	<p>Ministry of the Environment</p> <p>Representatives from the MOE (PA and RSe) outlined a list of informational requirements and permitting requirements which should be addressed in the EA including:</p>	

	<ul style="list-style-type: none"> • CofA requirements for diesel generators and construction work/equipment (CofA applications should be directed to Environmental Assessment and Approvals Branch of the MOE (ATTN: Narren Santos) with a note that they relate to an electricity project - this will expedite the approval process) • Permit(s) to Take Water for construction and operation • Low level methyl-mercury sampling in order to identify background levels including fish tissue sampling and an ongoing monitoring program (primarily at Allen and Struthers, may be less of an issue at Wabagishik Rapids due to difference in substrate and smaller area of inundation) • Identification of potential impacts to surface and ground water quality from sedimentation and acid rock drainage (ARD). • Sport fishery is important in both these areas. Not all sampling could have been done in one season – spatial and temporal. RS from NRSI confirmed that spatial and temporal not done, and no methyl mercury sampling done in 2010 • PA also indicated that minimum flows will also need to be addressed and that MNR, DFO and MOE will all need to be included in all meetings/discussions on this issue. <p>The MOE (LB) also advised that all public consultation efforts would need to be properly documented and that all further notices should indicate all of the EA planning processes being incorporated into the assessment of the project.</p> <p>MOE (LB) also requested to be CC'd on all communications to Rod Sein at the MOE regarding surface water quality discussions</p> <p>PA advised that the sketches in the Notices and the Project Descriptions are vague, particularly with respect to zones of influence. RS indicated that more engineering work was done since. TS stated that although Project Descriptions are available to the public they are not meant for public as they are produced early in process and information changes.</p>	<p>Include Laurie Brownlee in surface water discussions and correspondence</p>
11.0	<p>Ministry of Natural Resources</p> <p>The MNR began by outlining their regulatory responsibilities with regard to the project pertaining to the following Acts:</p> <ul style="list-style-type: none"> • Public Lands Act, <ul style="list-style-type: none"> ○ Waterpower Lease Agreement ○ License of Occupation 	

	<p>Steadman (MNR) is the Aggregates Officer for Sudbury District.</p> <ul style="list-style-type: none"> • <i>Crown Forest Sustainability Act</i> <p>Clearing of crown forest for transmission lines and access roads likely require a Forest Resource Licence (FRL), and should be consistent with the Sudbury and North Shore Forest Management Plans. An exemption can be obtained for clearing Crown forest outside the approved harvest area in the FMP. FRLs will apply to transmission corridors, road corridors, flooded areas and any other clearing of Crown land. The process will have notification and consultation requirements with public and First Nations for the MNR which the MNR would like to coordinate with Xeneca's consultation plan and efforts in order to minimise duplication of effort. It was stated at the meeting that all permits/approvals for which the Province makes a Decision may trigger the duty to consult.</p> <ul style="list-style-type: none"> • <i>Forest Fire Prevention Act.</i> <p>MNR recommends that applicable measures identified in existing best management practice documents be included in the EA report. Bob R will provide BMP documentation to proponent. Construction, operation & maintenance of facility must comply with <i>Forest Fire Prevention Act (FFPA)</i>.</p> <p>MNR (BR) also stated that site releases were being prepared and may be ready at the end of February.</p>	
12.0	<p>Ontario Parks</p> <p>Ontario Parks (EM) quickly highlighted that any "overall benefit" requirements (for SAR permitting, etc) or other compensation or mitigation measures would not be allowed to occur on provincial park lands. EM also indicated that application permits for research would be required for the upcoming field season and that, while turnaround time would be short, applications should be made shortly. NRSI (RS) responded by saying that all permit applications would be imminent. Dependant on the scope of work there is potential for a requirement to amend the Park Management Plan.</p>	<p>NRSI to apply for research permits for investigations on provincial park lands.</p>
13.0	<p>City of Greater Sudbury</p> <p>City of Greater Sudbury (MS) quickly clarified that the Town of Walden and Onaping Falls no longer officially exist and have been amalgamated into the City of Greater Sudbury. City of Sudbury (MS) also indicated that it was only concerned with the proposed Wabagishik project as this fell within its jurisdiction. City staff are already receiving comments and questions from members of the public regarding the project and would like to facilitate the flow of accurate information between Xeneca and stakeholders. City of Sudbury (MS) outlined concerns that there is a certain amount of inaccurate information circulating about the projects, which is leading to</p>	<p>Mark Holmes to liaise with City of Sudbury to provide further</p>

	<p>unnecessary confusion and advised that Xeneca address this issue as soon as possible to avoid future problems.</p> <p>It was recommended that Xeneca provide/distribute materials which would indicate to the lay person exactly where in the assessment process each project was and at which point specific information or requirements would be met. MS also advised that Xeneca could improve its presentation materials (site plans, conceptual layouts, mapping, etc) by including more site specific information, local names, etc. He indicated that the City would be willing to provide orthomapping information from 2007-2009 if that would be of assistance.</p> <p>City of Greater Sudbury (MS) also stated that if the project is within municipal boundaries, it would require a Building Permit.</p>	<p>project info and facilitate the exchange of information</p>
14.0	Meeting concluded at 1:30pm	

Natalie St-Pierre

From: Robert Steele [rsteele@nrsl.on.ca]
Sent: May 3, 2011 1:30 PM
To: Robinson, Bob L. (MNR)
Cc: Andrew Schiedel; Tami Sugarman; Ed Laratta; Brett Woodman
Subject: Biological Scoping Meeting

Bob

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 various Xeneca projects in your district 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 Sudbury 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.

I'm thinking that we may want to delay talking about sturgeon for another meeting since the Sturgeon Task team will be involved and I know that Sandra is looking at a more comprehensive sturgeon meeting involving more than just Sudbury District.

Please check with your bios and then throw out some possible dates for the meeting.

Given that we will be taking about three projects, involving five sites on two different rivers I'm not sure that we can finish this in a day. 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

Bob Robinson
Mike Hall (Upper Vermilion Project and Wanipitae)
Wayne Selinger (Wabagishik only)
Erik Cobb

DFO

Carl Jorgensen and/or Kelly Eggert

NRSl

Rob Steele, Andrew Schiedel, Brett Woodman

Xeneca

Ed Laratta

OEL HydroSys

Tami Sugarman or designate



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Stephanie Hodson

From: Arnold Chan
Sent: Tuesday, May 24, 2011 12:23 AM
To: tanya.rossman-gibson@greatersudbury.ca
Cc: Mark Holmes; Judy Leavitt; Patrick Gillette
Subject: Meeting regarding Lands and Impacts from Xeneca's Projects
Attachments: All Landowners Vermillion River may 24 2011.pdf; At Soo Crossing - Inundation Map may 24 2011.pdf; City of Sudbury Affected Lands jan 31 2011.pdf; List of City of Sudbury Properties with potential impacts on the Vermillion River draft 2 December 21 2010.docx

Categories: Public, Logged

Hi Tanya:

My colleague, Mark Holmes has left me your email to follow up regarding a potential discussion with you on lands as it relates to Xeneca's proposed waterpower projects on the Vermillion River. I had previously sent some information to Mark Simeoni but am not sure if the documentation made it to you.

In any event, I was hoping for your assistance and to set up an opportunity for potential discussion of some of the potential impacts on our project on lands that are in the control (or may be in the control) of the City.

Can you let me know if you ever received the original documentation? In any event, I enclose the following attachments that were part of an email sent several months ago.

I was also hoping for your assistance in clarifying a few parcels which I believe have reverted to City control as a result of tax forfeitures but would appreciate clarification regarding these parcels.

Anyways, I would like to set up a protocol to see if we can enter into discussions about compensation for any proposed impacts from Xeneca's proposed projects.

I will be in Sudbury tomorrow (for a meeting with Vale) and return Thursday. My colleague, Mark Holmes is meeting with Mark Simeoni on Friday morning. If there is a possibility of meeting this week, I would be more than happy to rearrange my schedule and stay longer to meet with you, if that is at all possible.

I look forward to hearing from you at your kind convenience.

Yours truly,

Arnold G. Chan
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NATURAL RESOURCE SOLUTIONS INC.

Aquatic, Terrestrial and Wetland Biologists

Xeneca Biological Scoping Meeting – Meeting Minutes

Wabagishik Rapids (Wabagishik River)

Date: May 26th, 2011

Location: Radisson Hotel, Sudbury ON

Attendees:

In Person

Rich Pyrcce – MNR Hydrologist
Chuck Miller – MNR Parks
Wayne Selinger – MNR Biologist for Wabagishik
Mike Hall – MNR Biologist for Allen & Struthers
Eric Cobb – MNR Species at Risk Bio
Richard Bruce – MNR Information Supervisor
Bob Robinson – MNR Planner
Charles Hendry – MNR Regional Fisheries Biologist
Nava Pokharel – Xeneca Engineer
Uwe Roeper – Xeneca CEO & Engineer
Ed Laratta – Xeneca EA Co-ordinator

Brett Woodman – NRSI Terrestrial Biologist
Valerie Stevenson – NRSI Aquatic Ecologist
Rob Steele – NRSI Aquatic Biologist
Andrew Schiedel – NRSI Aquatic Biologist
Jessica Grealey – NRSI Terrestrial Biologist
Carl Jorgensen – DFO
Kelly Eggers – DFO
Paula Allan – MOE District Supervisor
Laura Brownlee – MOE EA Co-ordinator
Ed Snucins – MOE
Sajjad Khan – MOE

By Phone

Bob Wilson – MNR Regional Engineer
Muhammad Khan – MNR District Engineer
Tami Sugarman – OEA Hydrosis EA Planner
Kai Markvorsen – WESA EA Planner
Sandra Dosser – MNR

Meeting Chair: Rob Steele – NRSI Aquatic Biologist

Scribe: Valerie Stevenson – NRSI Aquatic Ecologist



NATURAL RESOURCE SOLUTIONS INC.

Aquatic, Terrestrial and Wetland Biologists

Resulting Action Items

Wabagishik Facility

#	Delegate	Action Item
1	Xeneca	Distribute map showing the current preferred facility location
2	Xeneca/NRSI	Meet with MOE to discuss issues related to surface water quality sampling and monitoring and use of the new SW guidance document
3	Xeneca	Model available data to determine trends on natural lake and river levels.
4	Xeneca	Obtain flow and level data from Vale Inco
5	Xeneca	Installation of level logger at the downstream rapids
6	MNR (Wayne Selinger)	Provide information regarding walleye spawning in Wabagishik Lake
7	Xeneca/NRSI	Conduct spring spawning surveys for walleye in Wabagishik Lake (and upstream to Vale dam?)
8	Xeneca/NRSI	Conduct shoreline erosion susceptibility surveys
9	Xeneca/NRSI	Quantify and qualify littoral habitat (littoral habitat surveys) and identify potential impacts to the littoral zone in EA
10	Xeneca	Determine extent of impact on flows and water levels spatially (upstream and downstream) through modeling
11	Xeneca/NRSI	Field survey of additional cross sections of 2 nd set of rapids to input into model to see how these rapids will be affected. Should have biological input in selection of these locations
12	Xeneca/NRSI	Biological studies to include the 2 nd set of rapids in river (up to ~3km downstream) this would include detailed habitat mapping
13	Xeneca	Provide example of a river hydrograph during operation
14	Xeneca	Define the area of inundation
15	Xeneca/NRSI	Determine the minimum amount of littoral and riparian habitat that will be impacted
16	Xeneca/NRSI	Determine ecologically appropriate flows (levels) by use of the method Rob Steele presented. Q80 flow should be used to model baseflow. Should be shown monthly (preferred) or by season. Conduct modeling at a variety of flow changes and how the habitat will respond (i.e. at high flow and at low flow).
17	NRSI	Identify impacts from the variation in flow in EA
18	Xeneca	Adjust operating schedule to run as a true run of the river from April 1 st to June 15 th .
19	Xeneca	Conduct economic analysis based on revised operation plan, address in EA
20	Xeneca/NRSI	Develop a draft detailed plan for the adaptive management of operation in response to environmental issues. Circulate to agencies
21	Xeneca/NRSI	The Domtar Mill discharges their effluent into the Spanish River continuously. For adequate dilution of the effluent an appropriate minimum flow must be maintained in the river all time. Xeneca should consider a minimum flow requirement in the river for an acceptable dilution of effluent coming from Domtar



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#	Delegate	Action Item
		facility at Espanola. This is an important issue that should be addressed in the EA.
22	Xeneca/NRSI	Consider the technical input provided by Ed Snucins (MOE) regarding the benthic sampling program. Consider including collection of 5 samples from each set of rapids, further downstream, as well as a reference site. Sampling could also be stratified to sample the centre of the channel separately from the margins to facilitate comparison during monitoring.
23	Xeneca	Address issues related to erosion, scouring and sediment transport (additional studies?)
24	Xeneca/NRSI	Continued surveys for sturgeon (i.e. gill netting, trot lines)
25	Xeneca/NRSI	Quantify and qualify lost/affected fish habitat (detailed field surveys) in river/lake up to and including the rapids below the dam upstream of Wabigashik lake
26	MNR (Wayne Selinger)	To provide NRSI with mapping of known walleye spawning habitat as well as highlight potential areas for compensation.
27	NRSI	Include mitigation for potential breeding SAR in EA. (i.e.) propose to conduct works outside of breeding habitat and timing window
28	MNR (Eric Cobb)	To provide NRSI with standard mitigation text for avoidance of SAR habitat

Meeting Commenced at 9:10am

- Rob Steele (NRSI) provided introduction including housekeeping notes (i.e.) emergency exits, washroom locations, highlighted main purpose of meeting which is to scope the biological field studies for the two projects at hand. Upper vermilion will be discussed May 27th.
 - Wabagishik Rapids Development – WabagishikRiver
 - Allen and Struthers Development – WanapiteiRiver
- Roundtable introductions (all), see attendee list
- Rob Steele (NRSI) comments that the Xeneca engineers are present to provide information regarding design and operation of the facilities as well as answer any specific questions. Highlighted that the goal of the meeting is to scope the biological field programs for each of the site. Stalemate issues that arise will be shelved for later discussions. Provided overview of agenda (see attached).
- Eric Cobb(MNR) asked if the agenda will include discussion on transmission line and access road routes.
- Rob Steele (NRSI) yes, it will be discussed briefly today but will be addressed separately from the facility discussions.

Wabagishik Rapids Project – WabagishikRiver

- Rob Steele (NRSI) provided a summary of findings from field studies conducted in 2010, this included



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- Walleye spawning surveys, yes spawning was confirmed in 2010, it is occurring in the rapids from the base all the way up to the snow mobile bridge (entire length of rapids).
- Electrofishing surveys and gill net sets were conducted in 2010, identifying the presence of a variety of species.
- Surveys for Sturgeon spawning in 2010 were not conducted as the window for spawning was missed due to seasonal conditions
- Locations of survey as well as the proposed facility location were highlighted on map. It was identified that the facility location is the preferred and there is currently only one option being evaluated
- Wayne Selinger (MNR) posed question regarding the preferred location of the facility, there are not three options? Or two? Is it down to one? Rob Steele (NRSI), yes.
- Wayne Selinger (MNR) requested that a map be provided showing the current preferred facility location.
- Rob Steele (NRSI) provided an overview of field surveys being conducted in 2011. These include breeding birds, ELC, wildlife surveys, amphibians, and snakes.
- Brett Woodman (NRSI) highlighted that no Species at Risk have been identified.
- Rob Steele (NRSI) discussed the proposed 2011 workplan, this included the following studies
 - More detailed fish habitat assessments to quantify impacted habitat within the rapids (in m²)
 - Wildlife cameras installed along the rapids. The rapids have been previously identified as a significant wildlife crossing (deer). Cameras have confirmed this.
 - Benthos sample collection within the rapids, quantitative sampling
 - Fish tissue sampling for total mercury that will follow the MNR guideline
 - Water quality needs to be addressed and should be sorted out in a meeting with MOE
 - Fish sampling is geared to identify the presence of Sturgeon. Ten days of effort have already been conducted. This included the use of eggs mats and gill netting. To date no sturgeons have been found. The focus of effort has now shifted downstream (~3km downstream of rapids) to another set of rapids, additional egg mats and gill net sets will be set here.
- Rob Steele (NRSI) any questions?
- Wayne Selinger (MNR) requested clarification where the benthos samples will be collected. Just in the rapids area? Rob Steele (NRSI), yes.
- Rob Steele (NRSI) brought up topic of what will be the extent of the new area of inundation. Introduced Uwe Roeper (Xeneca) to provide a summary of the predicted area of inundation
- Uwe Roeper (Xeneca) brought up slide presentation to describe coupled lake facilities. A headwall structure will be installed that will create a head pond. This pond is used to create storage for controlling the lake levels in Wabagishik Lake. Modelling shows that the normal lake level range will not change. Lakes fluctuate naturally and operation will stay within this range. The mean lake level is used as the mean operational level. Daily operation is expected to result in a fluctuation of the lake levels by 10 cm (above the mean lake level).
- Question. Is this the annual mean or seasonal mean?



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- Uwe Roeper (Xeneca) it is the annual mean, not the seasonal mean. Monthly means could be looked at. Operational levels are targeting to follow natural fluctuations in the lake.
- Question. Will lake levels be monitored and measured on a daily basis?
- Uwe Roeper (Xeneca) yes, natural flow will be mimicked as much as possible. During low flow periods, they are targeting to maintain a higher than normal lake level. This was in request of local cottagers. They are expecting that the 10 cm daily lake level fluctuation will not result in a significant impact or even be noticed visually. Noted that the Vale Inco hydro facility located on the upstream end of the lake currently controls flows to the lake. They also discharge into the lake.
- Rob Steele (NRSI) any questions?
- Rich Pyrce (MNR) do we know what the natural lake fluctuation is right now?
- Uwe Roeper (Xeneca) no, we do know Vale controls the inflow to the lake. They will be providing this data, it will then be modelled. There currently are no level loggers installed. Installation of loggers and flow monitoring could be considered.
- Rich Pyrce (MNR) highlighted that there are several pinch points on the lake, how will they be affected?
- Uwe Roeper (Xeneca) is confident they will be able to model this.
- Rich Pyrce (MNR) commented that natural level lakes in northern Ontario could fluctuate from 0.75 m to 0.85m a day and up to 1m in some locations.
- Uwe Roeper (Xeneca) operation will include daily peaking, no long term storage only daily storage. If the natural level change in the lake is 1m, they will operate within this range.
- Question, where has surveying been completed?
- Uwe Roeper (Xeneca) transects and bathymetry have been completed. These will be built into the model.
- Rob Steele (NRSI) commented that surveying included the lake and river. Vale Inco has also completed surveying.
- Phone question, was surveying completed at the outflow? Uwe Roeper (Xeneca) yes.
- Wayne Selinger (MNR) are we going to talk about issues now? Feels that the proposal to track flows/levels over time is reasonable. Greater impacts are likely to occur downstream more than upstream. A change of level of 10 cm a day has potential to cause social impacts and impacts to fish habitat. Littoral habitat has potential to be written off due to things like erosion. Could also possibly affect upstream walleye populations. Potential to affect upstream of inlet to dam. Not saying they are show stoppers.
- Uwe Roeper (Xeneca) a 10cm variation was selected to not result in impact. Current wave action would currently exceed this.
- Wayne Selinger (MNR) may very well be right, but needs to be addressed. Need to look at vertical sloping of shoreline for erosion potential. Does not believe that the 10 cm daily fluctuation has been vetted with the public. Downstream fishery has greatest potential for impact also the littoral zone.
- Rob Steele (NRSI) would it suffice to conduct field surveys of the littoral zone to determine erosion potential?



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- Wayne Selinger (MNR) yes, would like to see field surveys conducted. Feels that the 10 cm drop is a loss of habitat in the littoral zone.
- Rob Steele (NRSI) not sure what field studies could be conducted.
- Wayne Selinger (MNR) could quantify littoral habitat. Not saying the loss of habitat is significant but need you to acknowledge that you are affecting the lake.
- Uwe Roeper (Xeneca) appreciates concern
- Rob Steele (NRSI) believes that Wayne Selinger would just like to see that the littoral zone will be altered. Monitoring will also be part of this process. Vale has agreed to maintain 6-7 cm variation during walleye spawning. Overall as part of the fisheries management plan there is an adaptive management process. Any issue that arises will be discussed and addressed.
- Rob Steele (NRSI) targets discussion on the Lorne Falls Vale Inco facility.
- Uwe Roeper (Xeneca) identified that Walleye spawning is present. Minimum flows for walleye spawning need to be provided by the Vale Inco facility.
- Rob Steele (NRSI) is there spawning occurring at the top end of the lake?
- Wayne Selinger (MNR) not sure
- Eric Cobb (MNR) the Vale Inco facility is a run of the river so no flow values are set by Vale. The project was not lake coupled.
- Uwe Roeper (Xeneca) there is walleye spawning below the Vale Inco facility
- Rob Steele (NRSI) is there walleye spawning on shoals in lake? Asking MNR (Eric Cobb). Has concerns, requested further information regarding walleye spawning in the lake. Commented that they have missed the window to survey this.
- Wayne Selinger (MNR) & Uwe Roeper (Xeneca) commented that spawning occurs during spring flow so as the plant will be operating as a run of the river for that period, it will be natural flow as it would occur during spring freshet.
- Rob Steele (NRSI) requests to park the shoal spawning issue. We now have an understanding that the facility will operate within the natural fluctuation range. If no more questions regarding upstream, would like to focus on downstream effects.
- Mike Hall (MNR) you are putting a dam in the middle of a riffle that is walleye spawning grounds. How will you compensate for the loss of habitat?
- Rob Steele (NRSI) yes, we will address this later in the meeting. Wayne Selinger (MNR) commented that the change in preferred facility location aids in the reduction of impacts.
- Nava Pokharel (Xeneca) the proposed facility is located ~400m upstream of the deer crossing.
- Wayne Selinger (MNR) feels the primary fishery issue is the daily fluctuations of water levels. Wants to know what habitat is affected, how much. Flows in the river could significantly change. It is of his opinion that this is a major impact on downstream habitat. Significant fisheries and social issues. Feels that the fluctuation proposed are completely unacceptable. May argue that at ~3km downstream the impact is dissipated. Will be hard to convince that an impact is reduced at any distance shorter than that.
- Rob Steele (NRSI) it appears there are two main issues, you don't like the proposed flow rates and level of daily fluctuation and that the range of impact does not end at the bottom plunge pool or at the first rapids (less than ~3km). Requested to park the issue of the range of influence for now.



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- Uwe Roeper (Xeneca) presented overview of operating plan (Agenda item #4), referred to presentation again. Explained that the plant will run as modified run of the river during spring freshet and walleye spawning season. Overall there are 4 operating. Referred to hydrographs. Intermittent flows will occur during natural low flow periods, primarily late summer and late winter. Highlighted that during the spring (walleye spawning) water levels will be high and the plant will be operating as a run of the river facility. The plant will not be operating on intermittent operation during this period. There are options to mitigate and minimize impacts through operation. Xeneca is open to working with MNR. Operating seasons were determined by hydrographs looking at long term trends.
- Wayne Selinger (MNR) may request that the run of the river operating period extend to June 15th to include full range of the walleye season.
- Rob Steele (NRSI) offered another example of defining the spawning period that includes monitoring of water temperatures. This is a more accurate approach and allows for the run of the river operation period to be tightened.
- Wayne Selinger (MNR) temperature cues are not always on par. Discussions regarding the use of temperature monitoring are not unreasonable.
- Uwe Roeper (Xeneca) expressed that walleye spawning shows variation in terms of timing from year to year, expressed that rather focus on conditions present than a broad prescribed operating period.
- Wayne Selinger (MNR) it has been identified that there will be no intermittent operation during the walleye spawning period, but still has concerns with the modified run of the river operation that is being proposed.
- Rob Steele (NRSI) say if we agree that the 2nd set of rapids is being affected, we need to understand how it will be affected. Need to collect detailed data (i.e.) wetted width, depth and velocity. HEC RAS model can be used to determine this.
- Wayne Selinger (MNR) should be able to ground truth to confirm things like wetted width etc.
- Rob Steele (NRSI) thresholds can be determined to limit impacts and provide recommendations for operation. To determine how far the extent of impact goes will require detailed surveys and modelling. Are there other areas requiring survey?
- Wayne Selinger (MNR) the area of impact absolutely should include ~3km downstream to include the 2nd set of rapids. It is anticipated that effects would be drowned out when the river meets the Spanish River. Can't say if it would impact the Spanish River or not.
- Uwe Roeper (Xeneca) we have mapped out a significant spawning bed immediately downstream of the proposed dam. Flows have been designed to meet requirements of this area, would we not meet the requirements for downstream?
- Wayne Selinger (MNR) no, you may not due to site specific channel morphology.
- Rob Steele (NRSI) agreed
- Uwe Roeper (Xeneca) if we operated as true run of the river during spawning there would be no issues.
- Rich Pyrce (MNR) how far is it to the Spanish River? 6km. By default thinks that the study area would end at the downstream dam. Provided example of the Magpie River and the erosion that is occurring there. That facility is operating as peaking as well.



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- Uwe Roeper (Xeneca) clarified that peaking will only occur during limited periods of operation so this facility is not a direct comparison.
- Rich Pyrcz (MNR) would like to see an example of what the hydrograph would look like during operation.
- Wayne Selinger (MNR) if Sturgeon are found that will impact operation. Can work to come to a resolution during the modified period. Has concerns over the peaking operation, impacts could be astounding. Impacts to productivity (inverts/veg) will be major; you will never get him to say that this project is biologically acceptable.
- Rob Steele (NRSI) area of inundation needs to be defined. Need to determine the minimum amount of habitat that can be affected. Highlighted need to determine ecologically appropriate flows.
- Question, if inflow is between the mean minimum and maximum flow, will inflow equal outflow?
- Uwe Roeper (Xeneca) yes on a daily basis.
- Paula (MOE) when you have variability in flows, you need to address potential impacts in the EA.
- Eric Cobb (MNR) would like to see a consistent flow during spring, not the up and down in levels.
- Rob Steele (NRSI) stable or rising, not constant.
- Eric Cobb (MNR) rates that are proposed are not comparable with natural conditions. An organism can adapt to natural rates of change but can't adjust to the proposed daily rate of change.
- Wayne Selinger (MNR) highlighted that there is a natural success rate for recruitment of walleye.
- Uwe Roeper (Xeneca) related to hydrographs to show natural magnitude of change in the river related to the modified operational rate, as it is within.
- Rob Steele (NRSI) highlighted that the rate of flow different than natural conditions (i.e. daily). When relating to walleye spawning we can look at a variety of flow changes and how the habitat will respond (i.e. at high flow and at low flow). At a minimum would include habitat including ~3km downstream. This would include conducting detailed habitat surveys and surveys of habitat under low and high flow conditions. Modelling would be utilized as well. Monitoring would be conducted as a follow up to confirm. Through adaptive management, if an issue was identified Xeneca could operate as a run of the river facility during spawning period. What route do we want to go? Further studies or just operate as a run of the river facility during spawning.
- Uwe Roeper (Xeneca) somewhere in between. Let's pick something that will ensure protection of the environment. Flows could be set after operation is occurring to see how it actually works.
- Wayne Selinger (MNR) adaptive management is good. Recommends that data be collected this year to determine existing flow conditions.
- Nava Pokharel (Xeneca) explained limitations with model.
- Mike Hall (MNR) have Vale Inco (upstream) identified that they will be able to provide us with their data?
- Rob Steele (NRSI) provided an example of another project where they observed in the field habitat under a range of flow conditions. Would almost have to camp on river to capture all flow events. Agrees with MNR that there is a need to collect real values in combination with the



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model. In addition to field measurements, an experienced biologist judgement visually in the field by DFO/MNR/Consultant. True way to determine best rates in the field.

- Uwe Roeper (Xeneca) we will commit to operate as a run of the river facility during the spring spawning period until we have further studies completed. Observations during operation are the only way to see how the river will respond. Indicated that there are issues with the model.
- Wayne Selinger (MNR) it is worth conducting modelling to determine extent of impacts in terms of length.
- Uwe Roeper (Xeneca) modeling can tell you projected wetted width, depth and flow, can be very useful.
- Rich Pyrce (MNR) to get a clear understanding of flows, a transducer installed. We can correlate flows to available data.
- Uwe Roeper (Xeneca) using estimates of flow from station data can create issues with produced data. Recommends operating as true run of the river during spring spawning. Further studies will be conducted in the meantime to achieve some form of modified operation.
- Rob Steele (NRSI) asked Wayne Selinger what time frame would be appropriate for the true run of the river operation.
- Wayne Selinger (MNR) April 1st to June 15th. Not comfortable with anything earlier than June 1st.
- Rob Steele (NRSI) if we set it now, we can refine later through targeted studies (i.e. temps)
- Wayne Selinger (MNR) likely won't be any less than June 1st
- Uwe Roeper (Xeneca) asked specific questions regarding walleye spawning
- Wayne Selinger (MNR) an adaptive management approach sound reasonable, but is concerned that the facility can be ran appropriately as a run of the river within the spawning window. Doesn't want to run into issues down the road that for economic reasons that have to operate during the spawning reason, wants this addressed in the EA.
- Paula (MOE) if operational changes are made after the EA, an addendum to the EA would be required.
- Uwe Roeper (Xeneca) we are trying to reach a balance of operation and protection of the environment
- Wayne Selinger (MNR) without available data for downstream, defer to operation as a run of the river facility
- Rich Pyrce(MNR) reviewed flow metric sheets, found to have similar results. Highlights that there is a significant volume of flow during the spring period.
- Rob Steele (NRSI) as an recap, will operate as a true run of the river facility from April 1st to June 15th and develop a draft detailed plan for adaptive management of operation
- Rob Steele (NRSI) what about times of the year when walleye are not spawning? Any issues?
- Wayne Selinger (MNR) can't see how 100 fold changes to flows will not affect downstream habitat. How far down will be impacted? At end of 2nd rapids or all the way down to the Espanola Dam?
- Rob Steele (NRSI) how would you like to see the study area extent determined? (to Wayne Selinger – MNR)
- Wayne Selinger (MNR) if modelling showed the extent of impacts he would be ok with that.
- Rob Steele (NRSI) can we model the additional reaches to determine the extent of impact?



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- Nava Pokharel (Xeneca) we would need collection of additional cross sections
- Discussions (all) regarding appropriateness of data provided. Can impacts on flow changes be modeled considering the unique situation in flow at the confluence with the Spanish. Difficulties associated with back flow are present.
- Sajjad Khan (MOE) The Domtar mill at Espanola discharges their effluent into the Spanish River continuously. For adequate dilution of the effluent an appropriate minimum flow must be maintained in the river all time. Last year during summer time when flow in the river was very low, the dissolved oxygen level in the river depressed downstream of the effluent discharge point. Domtar had to inject artificial liquid oxygen into the river for few weeks via special equipment. Xeneca should consider a minimum flow requirement in the river for an acceptable dilution of effluent coming from Domtar facility at Espanola. This could be discussed with Domtar as well. This is an important issue that should be addressed in the EA. Have to demonstrate that you will not have an effect Also need to demonstrate that you are not going to significantly alter flows at the inlet to lake.
- Rob Steele (NRSI) we can model conditions under low flow, we haven't figured out how we can model downstream reaches
- Sajjad Khan (MOE) we may not see change in wetted width but flow rates may change
- Rob Steele (NRSI) can't imagine that the modeling results will not show anything that they already show. Discussions today should focus on what studies need to be completed to answer these questions.
- Charles Hendry (MNR) here at the meeting to get an idea of the scope of the project. Directed DFO to provide input into the discussion.
- Carl Jorgensen (DFO) will add to the discussion when the topic reaches compensation. The project is a HADD. Interested in section 22 subsection 3 of the Fisheries Act regarding maintaining safety of eggs. This is rarely used. In regard to mitigation, run of the river operation would be an example. Adaptive management referred to as 'adaptive mitigation'. Agree to operating as a runoff the river facility and work on scoping down the time frame of operation. What ideas have been identified for compensation? Riparian habitat impacts were covered by MNR. Littoral zone needs to be addressed in the EA if there is an impact or not.
- Ed Snucins (MOE) noted that benthic sampling was proposed, recommended that the program could be improved. Especially if it is going to help determine productive capacity. Recommended to stratify sampling through rapids, 5 samples collected from each set of rapids, further downstream. Sample locations should include the main channel as well as the riparian areas (areas of inundation).
- Rob Steele (NRSI) benthic sampling will focus on the center of channel. Areas within the zone of inundation are limited in productivity. Channel width is determined by average summer flow.
- Ed Snucins (MOE) need to have a reference location, need to standardize sampling by season
- Rob Steele (NRSI) having issue determining a reference location, would like to speak further with MOE.
- Wayne Selinger (MNR) identified that there may be issues related to erosion, scouring and sediment transport.



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Lunch Break 12:15 pm

Meeting Reconvenes at 12:50 pm

- Rob Steele (NRSI) we will continue on working through Wabagishik.
- Uwe Roeper (Xeneca) in regard to low flows, we will conduct modeling to determine the extent of impacts. Feels that it is hard to believe it would go any further than the Spanish River due to the lake like characteristics observed there. Needs to complete modeling of the downstream reach, this would need to include surveying the reach (cross sections and habitat). Feels that the level of information available for the immediate chute area is reasonable (modelled info, cross sections). Can evaluate the model to see where on the wetted perimeter curve the hydraulics would crash to help determine the minimum flow requirement.
- Wayne Selinger & Rich Pyrce (MNR) referred to previous discussions of how to determine the minimum ecologically acceptable flow. Suggested could possibly use the 25 percentile of monthly mean flow to determine minimum flow.
- Rob Steele (NRSI) presented data generated by Nava Pokharel (Xeneca) to determine ecologically appropriate minimum flow. Looked at the long term average (low flow). Vales plotted included wetted perimeter, depth and flow rate. Presented graph showing that there is a break in wetted width when a particular flow is reached. This would reflect a minimum flow that we would target to stay above. The second graph presented showed a relationship to depth, again it generates a target flow. The third graph related flow to flow. The presented approach could be employed to determine minimum ecological flow. Is this approach an acceptable approach? As an example long terms average flows would be looked at for August (low flow period).
- Rich Pyrce (MNR) a Q80 flow is typically used and is well documented. A Q95 flow would be considered an extreme low flow condition. February or other winter months can be as low as summer months. January, February, March and August are typical low flow months in northern Ontario.
- Rob Steele (NRSI) we would run two different months. Does see value in doing this.
- Eric Cobb (MNR) if we target to use Q95 it is the most conservative flow.
- Rich Pyrce (MNR) monthly Q80 used to be the value used by MNR.
- Charles Hendry (MNR) has seen in literature that the inflection point in a riffle is used in determining minimum flow requirements. Has seen this used before. This approach is frequently used in the US (Oregon).
- Rob Steele (NRSI) expressed challenges in plotting velocities when used the presented method to determine minimum flows.
- Carl Jorgensen (DFO) commented on importance of seeing the site. If the numbers couldn't be nailed down, trials could be completed in the field. Highlighted that the modelled flows have to be able to be related to what is appropriate in reality.
- Rob Steele (NRSI) commented that there is a need to select flow rates based on the presented methodology.
- Wayne Selinger (MNR) is the starting point Q80 flow?



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- Rich Pyrce (MNR) yes. A Q80 flow is close to baseflow, a generous baseflow. Monthly Q80's should be looked at for use.
- Nava Pokharel (Xeneca) requested clarification of what to use for model, Q80, Q90 monthly or annual?
- Uwe Roeper (Xeneca) would this mean using a different flow value for every month
- Rich Pyrce (MNR) yes. Flows should be determined on a site by site basis.
- Wayne Selinger (MNR) in regard to operational flows during low flows, are there any issues with icing?
- Uwe Roeper (Xeneca) this would happen naturally
- Wayne Selinger (MNR) Use of the monthly Q80 seems most appropriate
- Rob Steele (NRSI) potentially we could look at lows with a seasonal approach
- Rich Pyrce (MNR) typical seasons, winter Jan – Mar, Apr- Jun is spring, then you have summer and fall. These are typical seasons. Recommends finding true 'seasons' by issue. (i.e.) low flow.
- Rob Steele (NRSI) so will we be looking at flows seasonally or monthly?
- Uwe Roeper (Xeneca) let's look at both and whatever works better for operation.
- Rich Pyrce (MNR) we prefer monthly. Again highlights the issue with not having an understanding of existing flows within the river. Comments that flow trials in the field are very beneficial.
- Rob Steele (NRSI) referred to the velocity graph. Can we recognise that velocities are difficult to derive?
- Charles Hendry (MNR) velocities many not be an appropriate value to assess. Shear stress on benthic organisms relates to embeddedness. Recommended field trials of flows.
- Rob Steele (NRSI) will still run flow velocities in a general capacity to flag issues.
- Rich Pyrce(MNR) the determination of shear stress does not require a flow value
- Sajjad Khan (MOE) highlighted importance of where transects are selected for the model
- Charles Hendry (MNR) sheer stress relates to the ability to dislodge a benthic organism from substrates.
- Rob Steele (NRSI) recommends that there is bio input. Likely going to represent worst case scenario.
- Rob Steele (NRSI) regarding Sturgeon in the river, requested interpretation on ESA and how it is applied here.
- Eric Cobb (MNR) onus is on the proponent not to contravene the Act. There is a good chance there may be Lake Sturgeon present. Will require ESA permitting if they are in fact found. If the species is not there they don't want to issue a permit. Confirming presence is easy, absence is more difficult.
- Rob Steele (NRSI) we will have looked for them for one year. Could an approach be that we continue to intensively look for them this year, if not found for the purposes of the EA we will assume they are not there with the agreement that we will continue to look for them.
- Eric Cobb (MNR) you haven't found any this year, but if perhaps they are found next year you have 3 years to enter into an agreement under ESA. If we find them in the rapids that is worse case scenario for the development.



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- Wayne Selinger (MNR) would be required to compensate/mitigate operations (i.e.) operate as a run of the river during extended periods of time (i.e.) Sturgeon spawning.
- Charles Hendry (MNR) new ESA information has been posted on the EBR, may provide additional information.
- Rob Steele (NRSI) we haven't found them in one year. Assuming that they are there is not palatable to NRSI or the client.
- Charles Hendry (MNR) agreed.
- Wayne Selinger (MNR) don't say in the EA that they are not present as they may be present in the 2nd rapids downstream.
- Charles Hendry (MNR) suggests focusing on level of effort. Focused efforts over a short period of time.
- Rob Steele (NRSI) yes, that is what has been conducted. Are there any other methods other than gill nets, trot lines that could be used? Perhaps could take that discussion offline with Charlie.
- Eric Cobb (MNR) what happened in terms of the proposal for the telemetry work?
- Rob Steele (NRSI) we were not able to execute telemetry program due to timing. Expectations from MNR for this work were too great and therefore was shelved.
- Rob Steele (NRSI) provided an overview regarding the Walleye. Walleye habitat will be lost including spawning habitat, this has been identified and confirmed by locals as well. The dam will result in splitting this habitat in half, 600m upstream and 600m downstream. Work conducted this summer will quantify lost habitat. It is understood that lost habitat is sizeable. It is felt that there isn't sufficient land available to compensate. Some recommendations identified by locals included a Walleye hatchery, thinks that this would not suffice and is not appropriate. MNR/DFO- no. Also acknowledge that there are benthos and other fish species using this habitat.
- Mike Hall (MNR) what about fish migrating up river to the lake and beyond? Note: point seems to have been lost that fish (e.g. walleye) below the proposed dam location could be relying on suitable spawning habitat anywhere above that location including the lake and the rapids just below the existing Vale dam. So far this possibility has not been assessed – it needs to be since the loss of this habitat (if fish passage provisions are not intended for the new facility) would constitute a HADD (need to be able to quantify what will be lost in order to determine 1) if the loss would be acceptable to DFO, and 2) what compensation would be appropriate).
- Wayne Selinger (MNR) we do not believe that Sturgeon are in the lake.
- Rob Steele (NRSI) doesn't believe that Walleye would move into the lake.
- Wayne Selinger (MNR) Walleye will swim all the way upstream, as far as they can get for whatever reason
- Rob Steele (NRSI) are we putting fish migration as a significant issue? If so, we need to conduct a telemetry study.
- Wayne Selinger (MNR) feels that it is not likely to be able to catch enough fish for a telemetry study
- Mike Hall (MNR) there is the possibility of catching fish in the lake and monitoring from that point.



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- Uwe Roeper (Xeneca) sometimes OPG stocks fish from one and to the other. Could we look at moving fish from downstream to upstream of dam as a mitigative measure?
- Rob Steele (NRSI) can't mix species unless we know there is a connection, could result in introducing genetic change.
- Wayne Selinger (MNR) would be surprised if there is movement up into the lake by Walleye
- Rob Steele (NRSI) gut feeling is that they are moving, but would need to confirm via telemetry, not sure enough time is available to conduct this survey.
- Wayne Selinger (MNR) we can't answer this today, DFO/MNR to discuss later.
- Carl Jorgensen (DFO) referred to the session held on the 28th and 29th as he spoke to this issue then. In regard to fish passage he defers to the MNR's fisheries management plan. DFO won't question the MNR's position. There is a section in the Fisheries Act regarding maintaining fish passage. Is maintaining fish passage critical? We need MNR's stand on need for fishway.
- Wayne Selinger (MNR) we support that Sturgeon don't move into the lake.
- Rob Steele (NRSI) 600m of Walleye habitat will now be lost upstream as it will now be a lake. We are having difficulty identifying compensation measures. We may be able to work in some compensation measures within the downstream habitat.
- Uwe Roeper (Xeneca) we know that Walleye are spawning upstream of the Vale plant. Commented that the lost spawning habitat upstream of the dam may not be a complete loss and may actually end up comparable to the spawning habitat.
- Rob Steele (NRSI) perhaps modeling could be conducted to determine what the habitat would look like during operation. This would give us a sense if it could still be considered spawning habitat.
- Wayne Selinger (MNR) lost recruitment to the lake could be a possibility if no fish passage of the downstream population.
- Charles Hendry (MNR) suitable compensation needs to be implemented if passage is an issue (i.e. newly created side channel. A thoughtful discussion around what is doable.
- Wayne Selinger (MNR) would like to see the benefit go to a target species.
- Eric Cobb (MNR) is there opportunity to compensate in another area?
- Kelly Eggers (DFO) yes, as long as it is in the same system
- Carl Jorgensen (DFO) describes the no net loss principle, the project should target for a net gain in productive capacity.
- Uwe Roeper (Xeneca) at what point does the loss become constraints as there is an abundant area of spawning habitat available.
- Wayne Selinger (MNR) may have issues if compensation cannot be employed.
- Rob Steele (NRSI) can we split the habitat compensation with the site and another site?
- Carl Jorgensen (DFO) yes, as long as the habitat lost to Walleye is replaced for Walleye. Compensation plans must meet fisheries management plan objectives.
- Rob Steele (NRSI) it would be helpful to organize a field trip with MNR/DFO to discuss potential compensation locations? Detailed habitat survey completed will allow for a better idea of lost habitat.
- Wayne Selinger (MNR) yes, can scope out potential compensation locations in advance. Will provide known spawning habitat locations on the river to NRSI in advance.



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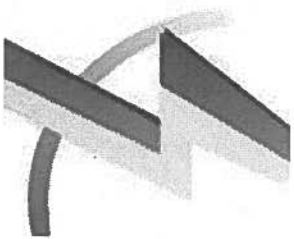
- Rob Steele (NRSI) what about the Walleye hatchery idea?
- Carl Jorgensen (DFO) it would be very low on the compensation options list
- Eric Cobb (MNR) was there not a report produced for the area that highlights potential compensation options?
- Rob Steele (NRSI) yes
- Wayne Selinger (MNR) yes, it does highlight potential compensation options.
- Brett Woodman (NRSI) do we have an idea of the extent of suitable habitat? If some lost how much does that impact spawning as a whole.
- Charles Hendry (MNR) you would have a hard time relating available habitat and populations. Do we need to have an idea of the numbers of fish spawning in that reach (i.e. 10's, 100's). We should have an understanding of the numbers affected. This will give us a sense of value of habitat.
- Rob Steele (NRSI) how would you go about determining that? Can't be done visually.
- Charles Hendry (MNR) acoustics?
- Rob Steele (MNR) how important is this?
- Wayne Selinger (MNR) not likely worth the effort, know that they aren't spawning in great numbers.
- Carl Jorgensen (DFO) the DFO risk management framework (RMF) uses habitat abundance as one of its measuring values of determining risk. The habitat has been identified as limited, therefore is not abundant and increases in risk. Non spawning habitat will still be highlighted by DFO/MNR as fish habitat.
- Rob Steele (NRSI) would like to direct the SAR discussion to Eric Cobb. It appears that most important issues regarding SAR are related to the corridors and transmission lines.
- Eric Cobb (MNR) we have already addressed the Sturgeon. Other species may be present that need to be considered. A couple species have been identified in the area, the Blandings Turtle and the Whip-poor-will. The Blanding's turtle is afforded protection. In general, cautions that when the transmission lines get put in breeding habitat needs to be considered. Issues can be mitigated through timing of construction as to not occur during breeding season. If followed there would be no need for permitting under ESA. Cautions beaver dam removal as it may kill turtles that need that habitat. Construction staff need to be informed of SAR and what to look out for. Construction fencing should be installed to keep wildlife out. Should think of ways to mitigate impacts to SAR so permitting is not needed.
- Rob Steele (NRSI) what would you like to see for surveys for the transmission lines etc.?
- Eric Cobb (MNR) survey suitable habitat within range of the layout is typical. Should target to commit to doing work outside of the breeding season. Roads will result in a permanent loss of habitat that needs to be considered. After June 30th 2013 you will need a permit.
- Rob Steele (NRSI) could you provide a list of recommendations for mitigation (to Eric Cobb)
- Eric Cobb (MNR) will provide
- Brett Woodman (NRSI) referred to a comment made by Eric Cobb regarding avoiding Whip-poor-will habitat, would this be specific to wetlands and nest sites?
- Eric Cobb (MNR) yes, nest sites and wetlands. Mitigation should be employed for these areas.



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**Meeting continues on and discusses the Allen & Struthers Facility
(see May 27 2011 meeting notes)**

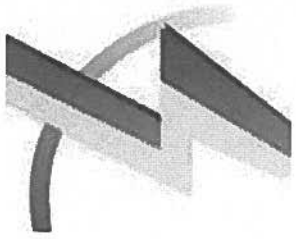


Agency Meeting Wabagishik GS



Thursday, July 19, 2012
Sudbury, ON

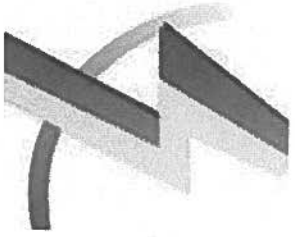




**Thank you for your time and for
your valuable input to this
project.**

**Today's meeting will be focused
on Natural Heritage and
primary concerns.**

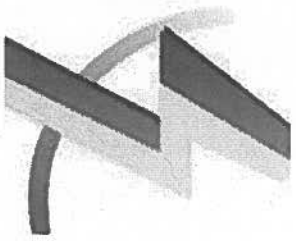




Purpose of Meeting

1. Update on Wabagishik GS
 - Studies
 - EA progress
2. Identify key issues of concern for agencies
3. Discuss possible mitigation options and strategies

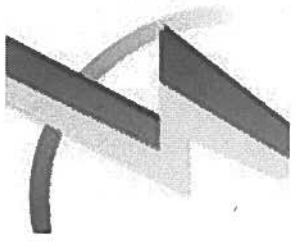




Update on Studies

- Main data gaps identified in 2011
 - Additional habitat studies
 - Downstream Zone of Influence
 - Water quality/water quantity

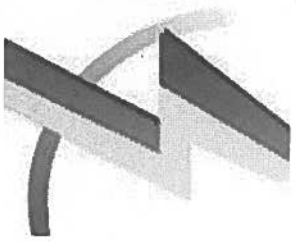




Update on 2011/2012 Studies

- Additional habitat studies conducted 2011
- Data Sharing with Vale on Spanish Vermillion
- Downstream Bathymetry/Hydraulic Modeling
- Operating scenario graphs
- Downstream features Identification maps
- Update of Draft Operating Plan
- Water quality monitoring program

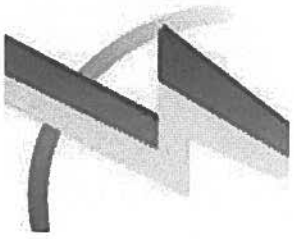




Update on 2011/2012 Studies

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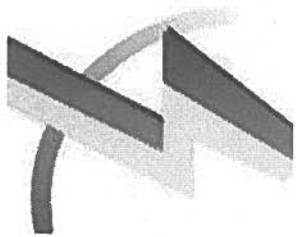




Update on 2011/2012 Habitat Studies

- Quantification of critical aquatic habitat areas
- Fish community sampling on main river
- Deer crossing investigations
- Invertebrate sampling in fast water habitat
- Fish tissue sampling for mercury
- Data exchange with Vale on walleye and sturgeon habitat – Vermillion/
Spanish River
- Downstream features maps prepared





Wabagishik Rapids 2010 and 2011 Ecological Field Studies

Ecological Study		2010	2011
Aquatic	Summer Fish Community Surveys	✓	✓
	Walleye Spawning Surveys	✓	
	General Aquatic Habitat Characterization	✓	
	Invertebrate Sampling		✓
	Detailed Aquatic Habitat Characterization and Quantification		✓
	Fish Tissue Sampling for Mercury		✓
	Fish Sampling Targeting Sturgeon		✓
	Sturgeon Spawning Survey		✓
	Breeding Bird Surveys	✓	
	Deer Monitoring Surveys		✓
Terrestrial	Incidental Wildlife Surveys	✓	✓
	Vegetation Community Assessments	✓	

- No field studies completed in 2012



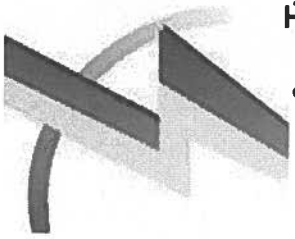
Wabagishik Rapids Fish Community

Scientific Name	Common Name	S-Rank	SARA (Federal Status)	ESA (Provincial Status)
<i>Acipenser fulvescens</i>	Lake Sturgeon	S2	NAR	THR
<i>Sander vitreus</i>	Walleye	S5	NAR	NAR
<i>Esox lucius</i>	Northern Pike	S5	NAR	NAR
<i>Catostomus commersoni</i>	White Sucker	S5	NAR	NAR
<i>Amelurus nebulosus</i>	Brown Bullhead	S5	NAR	NAR
<i>Lota lota</i>	Burbot	S5	NAR	NAR
<i>Moxostoma macrolepidotum</i>	Shorthead Redhorse	S5	NAR	NAR
<i>Moxostoma erythrum</i>	Golden Redhorse	S4	NAR	NAR
<i>Micropterus dolomieu</i>	Smallmouth Bass	S5	NAR	NAR
<i>Ambloplites rupestris</i>	Rock Bass	S5	NAR	NAR
<i>Percina caprodes</i>	Logperch	S5	NAR	NAR
<i>Rhinichthys cataractae</i>	Longnose Dace	S5	NAR	NAR
<i>Phoxinus eos</i>	Northern Redbelly Dace	S5	NAR	NAR
<i>Etheostoma nigrum</i>	Johnny Darter	S5	NAR	NAR
<i>Perca flavescens</i>	Yellow Perch	S5	NAR	NAR
<i>Lepomis gibbosus</i>	Pumpkinseed	S5	NAR	NAR
<i>Umbra limi</i>	Central Mudminnow	S5	NAR	NAR
<i>Pimephales notatus</i>	Bluntnose Minnow	S5	NAR	NAR
<i>Pimephales promelas</i>	Fathead Minnow	S5	NAR	NAR
<i>Notropis atherinoides</i>	Emerald Shiner	S5	NAR	NAR
<i>Culaea inconstans</i>	Brook Stickleback	S5	NAR	NAR
<i>Coregonus sp.</i>	Cisco sp.	N/A	NAR	NAR

• 22 fish species identified in study area

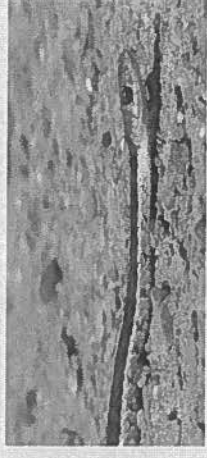
• Walleye spawning confirmed within Wabagishik Rapids



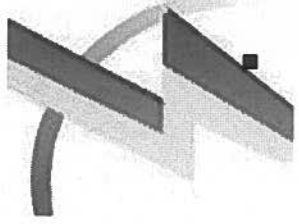


Wabagishik Rapids: Terrestrial Survey Results

- Two vegetation communities types identified, as per Ecological Land Classification, within the inundation area.
 - Aspen-Birch Hardwood and Mixedwood are common communities within Northern Ontario.
- Forty-nine bird species observed, two of which demonstrated confirmed breeding evidence (spotted sandpiper, common grackle).
- Ten common mammal species observed.
- Three species of frogs and toads, and one salamander species observed.
- One snake species (northern red-bellied snake) observed through cover board surveys.



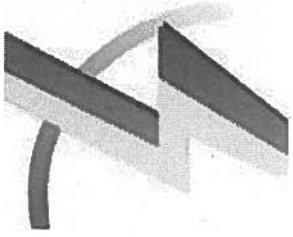
Xeneca



Species at Risk at Wabagishik Rapids

- Background review indicated the potential for 6 Species at Risk (SAR) to be in the study. These include: 3 birds, 1 snake, 1 turtle and 1 fish.
- Background review indicated potential for 4 species of conservation concern. These include: 1 bird, 1 snake, 1 turtle and 1 bat.
- No regulated SAR species (Threatened or Endangered) observed by NRSI Staff. Lake Sturgeon, listed Threatened under the provincial Endangered Species Act (ESA), was confirmed by others within the Vermillion River, and suitable habitat is present in the study area.
- Potential habitat is present for Blanding's Turtle, which is listed as Threatened under the provincial ESA and the federal Species at Risk Act.
- NRSI confirmed Bald Eagle and Osprey Nesting, Foraging and Perching Habitat: Observed both bald eagle and osprey within the project area.
- Candidate Significant Wildlife Habitat was identified within the project location including:
 - Reptile Hibernaculum
 - Denning Sites for Mink, Otter, Marten, Fisher and Eastern Gray Wolf
 - Eastern Milksnake Habitat
 - Northern Long-eared Bat Habitat
 - Turtle Wintering Areas

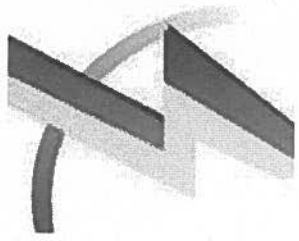




Update on 2011/2012 Hydraulics

- Developed operating scenarios on a monthly basis
- Bathymetry depth studies in key areas to compliment 2010 data
- Steady state hydraulic modeling to calculate velocities, wetted perimeter and water depth at various flows
- Unsteady state hydraulic modeling to calculate water level fluctuations associated with operations
- Operations Plan updated draft to include spawning and other restrictions

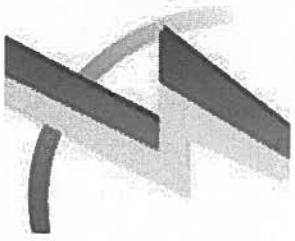




Update on 2011/2012 Water Quality

- Coordinated with MOE on new permit to take water (PTTW)
- Developed an ongoing water quality monitoring program (location/ sampling frequency and Parameters)
- First round of data collection in 2012
- Water quality information will be combined with downstream hydraulic modeling to better inform the PTTW process (Post EA)

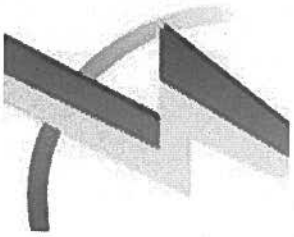




Update on Stakeholder Issues

- Working with downstream land owners to address concerns and have provided solutions to most issues
- Reached solution with Vale to ensure no impact on Lorne Falls GS
- Developed solution with Domtar to ensure effluent treatment and generating facility are not impacted
- Engineering will work with snowmobile community to ensure bridge piers will not be adversely affected by higher water levels

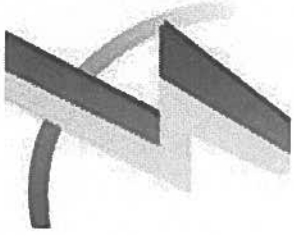




Agency Concerns

- Out of all of the information received what are the issues remaining to be addressed?

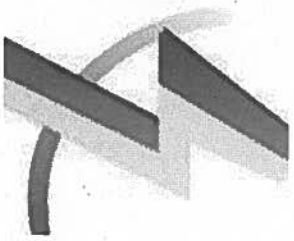




Possible Mitigation Options & Strategies

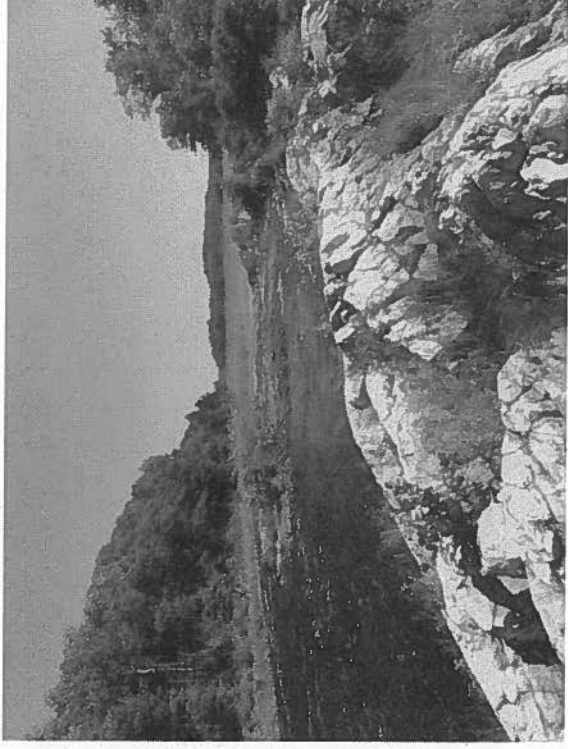
- Special operations restrictions:
 - for walleye spawning
 - sturgeon spawning
 - downstream water levels
 - Lorne Falls GS
 - Domtar Espanola





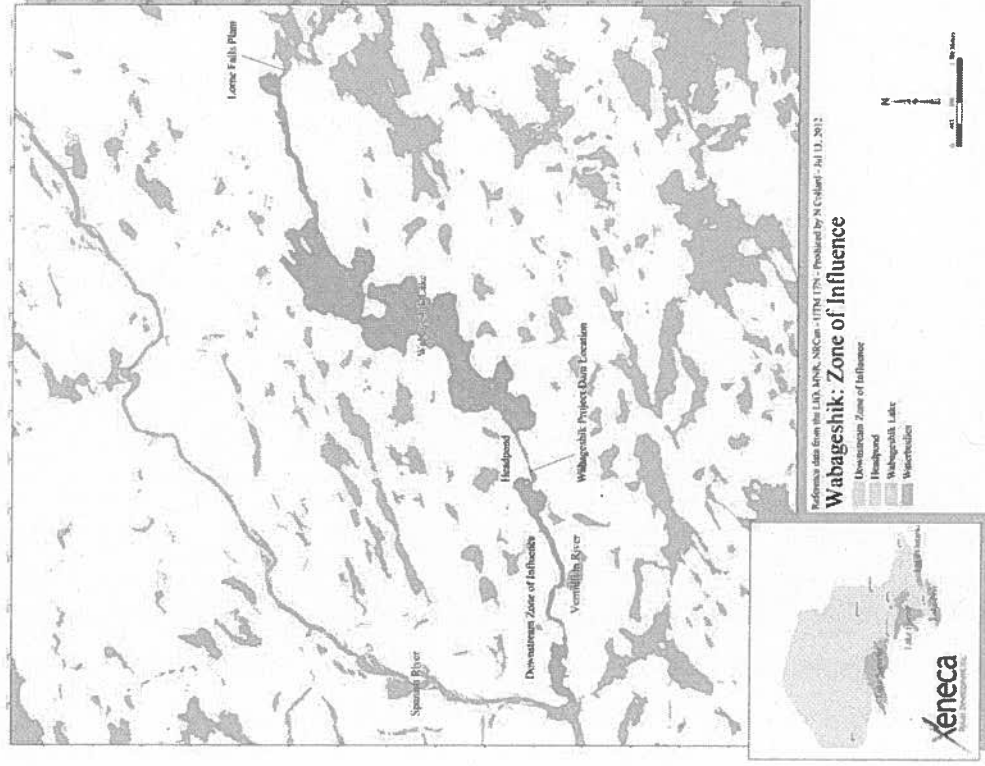
Lake Wabagishik

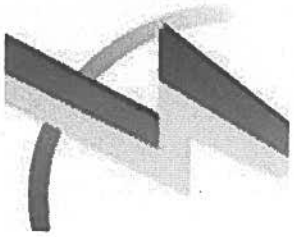
- What will be the maximum hourly/daily fluctuation of water levels on Wabagishik Lake - especially during the low flow summer months from mid-July to end of October?



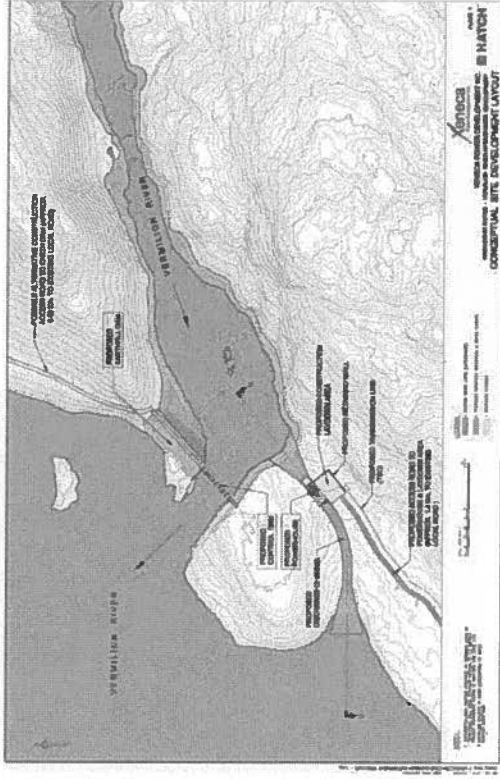


- Downstream Zone of Influence to the Spanish River & beyond



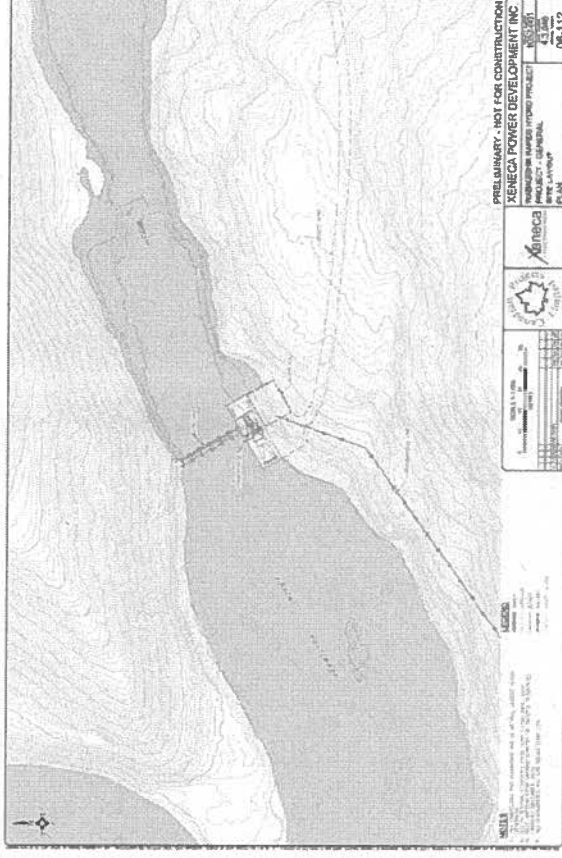


Wabagishik Update: Old & New Layouts

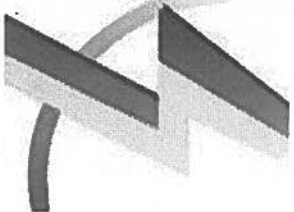


Old concept: March 2011

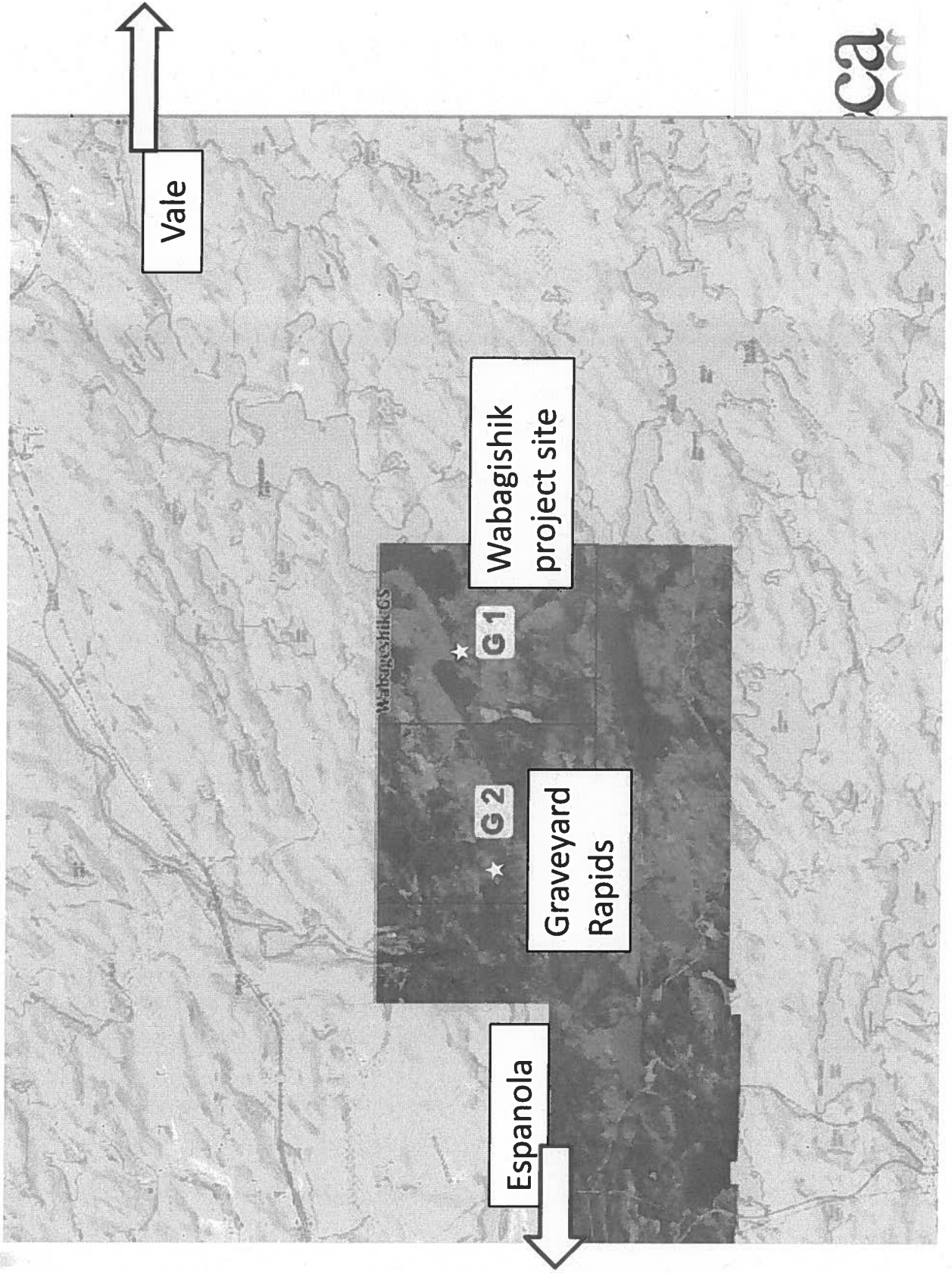
New concept: October 2011



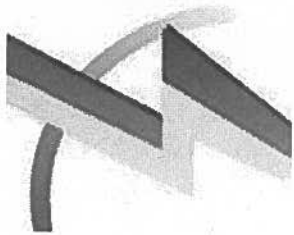




Map of key areas: Wabagishik



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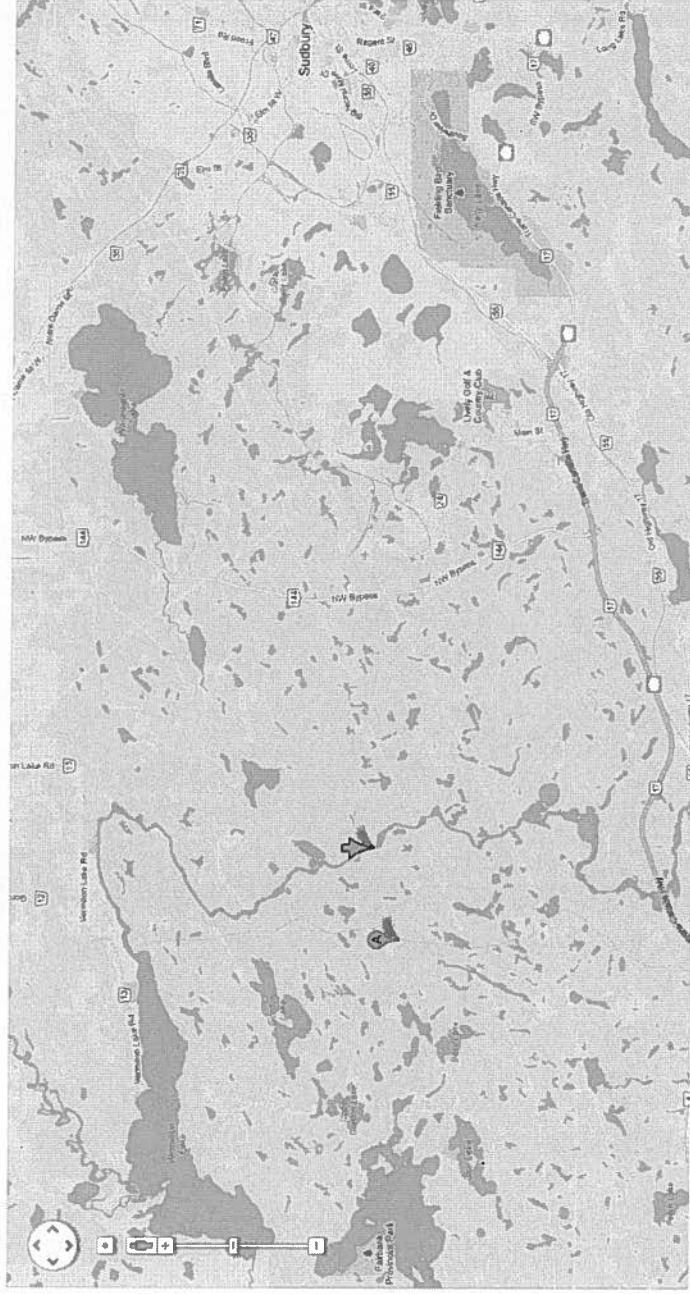


Graveyard Rapids





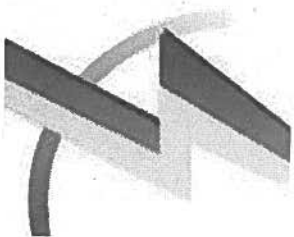
- Cascade Falls site



Espanola

- Domtar Mill





Thank you!



MEETING MINUTES
Proposed Wabageshik Rapids Project on the Vermilion River

Meeting Date: July 19, 2012
Location: Radisson Hotel, Sudbury, Ontario
Chair: Uwe Roeper (Xeneca)
Recorder: Jessica Walker (NRSI)
Finalized by: Grace Yu (Xeneca)

Present:

Christine Greenaway (MNR Renewable Energy Coordinator - Northeast Region)
Bruce Richard (MNR Planning & Info. Management Supervisor - Sudbury District)
Bob Robinson (MNR Water Resource Coordinator/Renewable Energy Planner)
Brendan O'Farrell (MNR Protected Area Planner - Sudbury District)
Brian Riche (MNR Area Supervisor - Espanola)
Eric Cobb (MNR SAR Biologist)
Wayne Selinger (MNR Area Biologist - Espanola)
Rod Sein (MOE Surface Water Specialist - Northern Region)
Kelly Eggers (DFO Habitat Biologist)
Brian Turnbull (MNR Hydrologist)
Parise Drolet (MOE Senior Environmental Officer - Sudbury District)
Uwe Roeper (Xeneca CEO)
Mark Holmes (Xeneca Vice President of Corporate Affairs)
Andrew Schiedel (NRSI Aquatic Biologist)
Jessica Walker (NRSI Terrestrial and Wetland Biologist)

Present Via Telephone:

Ellen Cramm (MOE Environmental Planner/EA Coordinator - Northern Region)
Christine Selinger (MNR)
Tami Sugerman (WESA)
Kai Markvorsen (WESA)
Nava Pokharel (Xeneca Senior Project Manager)
Grace Yu (Xeneca)
Adam Waters (Xeneca)

Note: Telephone participants had difficulty hearing all of the conversation, and most or all participated for only part of the total meeting time.

Purpose

- Update on studies done in 2011 and EA progress
- Identify key issues of concern for agencies
- Discuss possible mitigation options and approaches.

Presentation

Mark Holmes provided a summary of the field work conducted to date:

- Additional field work was conducted to fill data gaps from 2010 inventories.
- Additional habitat studies in the downstream (d/s) zone of influence (ZOI) conducted
- Water quality studies are underway
- Hydraulic models have been developed
- Data sharing with Vale

Andrew provided a summary on aquatic and terrestrial field studies completed in 2011. Aquatic surveying 5 km d/s of Wabageshik rapids was conducted including: gill netting, electrofishing, minnow trapping and benthic sampling. Results of field surveys confirm Walleye spawning and 20 other non-SAR species. No Lake Sturgeon observed by NRSI during 2011 field work completed at the end of the spawning period, however, data sharing with Vale has provided confirmation of Lake Sturgeon presence and spawning activity within the Vermillion River in the d/s ZOI.

Christine and Parise recommended providing maps and locations of surveys at meetings to further engage agency staff and recommended putting a map with study area and extent of survey locations for the Public Information Consultation (PIC).

Mark acknowledged the recommendation.

Andrew noted that additional terrestrial surveys conducted in 2011 included: breeding bird surveys, Ecological Land Classification (ELC) of vegetation communities, herpetofauna surveys, deer monitoring and incidental observations. Noted the potential for Blanding's turtle habitat within tributaries feeding into the downstream pool. Unknown if changes in water levels in the pool would affect water levels in the tributaries. (Cross sections and water levels were studied for the tributaries and the results showed no impacts on water levels in the tributaries.)

Wayne Selinger: Commented on deer movement studies – The Natural Environment Report (April 2012) provides a good assessment of conditions and establishes use / importance of deer crossing; however, report currently dismisses significance. Recommended re-evaluation of the impacts on deer crossings. Even though the best crossing location may be downstream of the proposed dam site, the magnitude of daily discharge / flow fluctuation currently proposed is of concern.

*****ACTION: Xeneca will include a discussion in the EA on these potential effects and mitigations measures to maintain winter migration in fall, winter, and early spring.**

Discussion

ITEM 1: Addressing the Operating Plan (OP)

Uwe addressed the recent changes made to the OP:

- Changed base flow numbers, provided graphs of flows to reflect these changes.
- Showed typical operations for 3-4 worse operation scenarios to conduct the modeling.
- The second edition of the OP Plan contains a section on special operation restrictions. These include constraints related to walleye spawning, sturgeon spawning, stakeholder concerns and maximum fluctuations at the end of the DS ZOI and Wabageshik Lake.

ITEM 2: Routing and Access Road Construction

Christine inquired about terrestrial studies locations and whether access roads/routing construction has been considered in field surveys. Delays will occur if SAR is present and not addressed within the access footprint.

Andrew - No field surveys were conducted pertaining to roads/routing construction by NRSI. NRSI conducted a desktop analysis of the original access and transmission routes in 2010. Xeneca has continued to assess and develop lines since that time.

Uwe added that KBM Forestry has been refining the access roads and has been identifying major eco-sensitive areas (including potentially significant wetlands). Uwe added that MNR provided known natural resource values to avoid for routing. Xeneca has used habitat maps, aerial flyovers and wet land assessments to develop a preferred route and intends to do ground verification in selected sensitive areas to refine the routes this fall and next spring. This is before the permit stage. This is consistent with EA requirements.

*****ACTION: Xeneca to provide MNR with written documentation of the initiatives being taken on access footprint. MNR would like to know what studies have been conducted on route/access footprint impacts and mitigation. Xeneca will undertake a ground-truthing program this fall and next spring to assist in finalizing the preferred routes.**

Brian Riche has concerns about routing/road access and construction of new roads. Suggests following present road as opposed to creating new one. Settlement road should be available for use.

Xeneca believes that part of the road crosses private land and owner does not want road there. BR believes that it has been a settlement road for 75 years and is not private. It was noted that the road is also used by snowmobilers. Two options for road and power line corridors would be presented at the upcoming PIC and these options will be discussed in the EA. Maximizing use of existing roads, as best practical, is one of the prime considerations.

*****ACTION: Xeneca to show and discuss these two options in the upcoming PIC and EA. (Alternate option was presented at the PIC on July 25th)**

Eric expressed concern on behalf of MNR regarding potential delays in the process if construction and use of access roads and routing intersect with SAR habitat such as Blanding's turtle and Whip-poor-will habitat. So far no context for these species has been included in the report. Some activities may benefit some species like whip-poor-will by creating more habitat in densely forested areas. If Blanding's turtles are present surveys will be required to determine overwintering habitat/use. Eric stressed that permit process involving SAR may take up to 6 months or longer and therefore any impacts and mitigation should be looked into now to limit delays later on. This is important information which Xeneca is developing in the next 6-9 months, well before construction is planned to begin. As this work reaches completion, it will be presented to MNR for input and for processing any required permitting.

Andrew summarized the SAR findings with surveys conducted to date.

- Lake Sturgeon confirmed by studies conducted by Vale.
- Tributaries may provide habitat for Blanding's turtle and Snapping turtles.
- Confirmed Bald eagle foraging habitat.

Christine asked whether the Significant Wildlife Habitat Technical Guide was used for the evaluation of significant wildlife habitat.

Jessica confirmed that the newest version of the Significant Wildlife Habitat Technical Guide Ecoregion Criteria was used in the assessment of habitat for species of special concern.

Wayne reiterated need to reconsider the deer movement corridor as Significant Wildlife Habitat given it is the best place for deer to cross the system for many miles up or downstream (as acknowledged by NRSI in the NE report). The magnitude of daily fluctuation of flows is of concern.

ITEM3: Modeling parameters and context.

Uwe and Mark handed out hydraulics updates and answered MNR questions about bathymetry methods

- Conducted by boat and GPS
- Mark indicated that lots of work was done in the embayment area because of private land owner concerns.
- Christine clarified that some of the cross-section transect information was presented as "interpolated" instead of measured. Uwe confirmed that not all cross-sections were actually measured in the field and suggested watching for this..

Summary of Presentation regarding Modeling:

- Xeneca has conducted steady and unsteady state modeling
- Coordinating with MOE on permit to take water (PTTW)
- Stakeholder issues – working with private land owners. Response with solutions for mitigation land owner concerns.
- Xeneca is working with Domtar to ensure effluent treatment and generating facility are not impacted.

- Xeneca has had several meetings with Vale and has developed pragmatic solutions for minimizing effects on upstream Dam (Lorne Falls GS). Xeneca intends to pursue MOUs with the two stakeholders, Vale and Domtar.

ITEM4: PIC and water management planning to be addressed.

Christine referred to the LRIA Amendment (Bill 55) wherein water management planning will come into effect before facility is commissioned. Changes have been made to the LRIA which enable the MNR to order a proponent to prepare a WMP in conjunction with Location and Plans & Specs approvals, in advance of the dam actually existing. New LRIA guidance is in preparation.

Mark indicated that they are inquiring through Ontario Waterpower Association as to whether existing projects may be grandfathered.

Christine emphasized the importance of transparency to public on proposed hydrology changes in order to achieve the intent of addressing water management planning through EA and Location Approval.

Wayne commented on the PIC and how the agencies are yet to agree on the Operating Plan and conditions. Suggests that there is need to post-pone PIC or have another one.

Uwe said he understands the issue but raised concerns about deadlines that need to be met.

Mark indicated that they will present the current information which is believed to be accurate and complete, and if things change greatly through additional stakeholder and Agency input then they will hold another PIC. He reiterated that lake levels in the Wabageshik OP vary only minimally relative to natural processes and that while the lake is within the Zone of Influence, there is NO impact socially, environmentally or economically.

Brendan commented that there is lack of correlation between what the model shows and what is being indicated by Xeneca for OP and lake levels maintained.

Uwe noted that Xeneca had taken a number of steps to address WMP consultation process, including posters in PIC meetings, special consultation with other industrial water users (Vale and Domtar) and regulatory references in the OP Plan. However, not clear on how Bill 55 affects process. UR noted that Xeneca did NOT consult specifically with Spanish-Vermillion River Stakeholder Advisor Committee (SAC) (i.e. only with general public) because it had received input to wait until the SAC has finished the existing WMP for the two rivers. Xeneca has also consulted with Vale and Domtar, both actively involved in SAC.

*****ACTION: XENECA to review language in OP plan with Christine to be consistent with revised WMP process.**

Christine stressed that the intention of showing the ZOI is to attract any members of the public that may potentially be affected and get them involved in the decision-making process. There is a need to

show all details to get the full response from the public. The map at the open house needs to show the full revised map (including Wabageshik Lake). She recommends another notice.

Ellen Cramm (on the phone) stressed the importance of including Wabageshik Lake in the PIC Notice (Map of ZOI) to ensure that the public is aware of the full extent of the ZOI. She also recommended, given the timing of the PIC, that Xeneca consider whether they need to reschedule the PIC or plan another subsequent one in order to meet the intent of the Class EA.

Brendan suggested displaying the notice at the boat launch at Wabageshik Lake.

Xeneca noted that stakeholders are aware that project is lake-coupled and of proposed +/- 5 cm (10 cm total) daily fluctuation. Various comments were received on this at previous PIC. Latest OP Plan commits to "following natural lake level" subject only to small daily fluctuation. Map at PIC clearly shows info on this topic and identifies that Wabageshik Lake is coupled. Various questions have been received on this topic and numerous cottagers have signed up for and are on our consultation e-mail list. Vale has also been actively consulted on lake levels.

*****ACTION:**

1. **Xeneca to reissue notice to all known stakeholders that Wabageshik Lake is within the project Zone of Influence.**
2. **Xeneca will produce a poster that describes Wabageshik Lake as being within the ZOI and the poster will be disseminated in the vicinity of the Wabageshik Lake boat launch.**

(The above actions were completed on July 20th and information presented at the PIC held on July 25.)

Uwe stressed that the goal is to follow natural lake levels. Xeneca is committed to releasing natural levels/Outflow. They are working with Vale, they understand lake levels and have committed to flux of (+/- 5 cm)

Eric asks if these levels will increase rates of erosion, or have an impact on walleye eggs/spawning at Lorne Falls.

Uwe: wind set up and waves are greater than 10cm and unlikely to have any significant negative impacts on processes.

ITEM5: Concerns on Models and Analysis

Uwe introduced the use of models and explained that the analysis can be used to gain better understanding of how the system works and to inform decision making. It is not intended that they be used as compliance values or measures.

Review of Steady State modeling:

- Brian commented on Figure 4 in *Section 4.5 Modelling Error* shows the increase of Wabageshik Lake (upstream) at 30 cm increase.
- Uwe said that this is a modeling artifact. Xeneca is aware of the model and the difference. After the model results became apparent, the issue has been fixed. This has also been at the center of discussion with Vale (re. tailrace levels at upstream hydro plant). UR reiterated that Xeneca is firmly committed to following natural lake level. UR circulated graph showing large natural variation of lake levels with a line showing the proposed operation following the lake level throughout the year, subject only to the small daily fluctuation. Same graph will be shown at PIC next week.
- Uwe explained the effectiveness of the models in informing decisions referring to table 4 in the Operating Plan. It shows the minimal operating target and explains the intended change from 205 mMSL to 204.5 mMSL for the weir height. Uwe stressed that the OP will become the compliance document and will be provided formally after discussions on impacts and mitigations.

*****ACTION:**

1. **Xeneca to follow up with hydrology staff at MNR and MOE to discuss model approach and results and any questions on discrepancies or model uncertainties.**

(Nava had a follow up meeting with Sajjad Khan, Brian Turnbull and Rich Pyrcce on August 7th. On this meeting Nava agreed to collect some additional bathymetry survey information on the Key controlled sections of the river and compare the HEC RAS unsteady state results with the present results which is based on the FRI DSM information in the river reach where the LiDAR information is not available. It was agreed that a pilot project be run using Marter FRI-DSM data in comparison to river cross-sections to verify this is an appropriate methodology to use for unsteady state modelling. If verified then this methodology would be applied to other sites using their site specific data. This will provide everyone confidence that this approach is reliable and accurate and that a verification exercise would not be needed for other sites. This approach may be useful in evaluating relative changes in flows and levels and approximately determining the extent of the downstream zone of influence in terms of flows and levels. However, in the situations where absolute changes in flows and levels will be required to correctly assess effects of the project on the valued ecosystem components, surveyed river transects will be required.)

Impacts on Natural Features:

- Discussion occurred on the potential impacts on the u/s portion of the project area.
- Andrew summarized the information that was provided to NRSI and through surveys to determine the potential impacts to u/s area and Wabageshik Lake. NRSI is analyzing general areas for potential impacts including the littoral zone and riparian vegetation. Taking into account current natural variations, it was decided that +/- 5cm would have very minimal impacts on the lake.
 - Christine Selinger raised concern that +/- 5 cm (10cm) is in addition to waves and advises caution in dismissing impacts of these changes. She had concerns about erosion on the lake and how this might impact public on the Lake.

- Andrew indicated that, even with potential for wave action or seiche effect in addition to the increase, the determination remains the same. While it may be possible to take a more detailed and sophisticated approach to analyzing the potential for effect, the resulting determination is unlikely to change.
- Uwe Indicated that public concern has been addressed with correspondence with the public.
- Parise asked if in fact that public have been made aware of the potential for erosion to cause water line intake problems. She suggested correspondence with public to prevent backlash.
- Mark and Uwe said they will put out another notice for the PIC and send out an email.

(Notice was reissued to all known stakeholders that Wabageshik Lake is within the project Zone of Influence and presented at the PIC July 25, 2012)

ITEM6: Downstream effects of project.

Uwe explained that previous concerns regarding lack of information downstream lead to 2011 field studies and unsteady state modeling. Terrestrial and Aquatic surveys were conducted. The Operating Plan provided flow scenarios for season. This resulted in the Operating Plan changing to run-of-the-river (R.O.R) operation during Walleye Spawning Season.

Andrew provided information on the Wabageshik Rapids feature:

- The rapids function as Lake Sturgeon habitat. This is based on the fact that habitat characteristics are suitable and Lake Sturgeon is known to occur in the Vermillion River downstream. It is too difficult to confirm actual spawning in a short time due to long life history of the sturgeon (i.e. females may only spawn once every 5 – 7 years), and annual variability in spawning times and spring freshet flows.
- R.O.R will be provided for spawning – however, values/flows are still to be determined for maintaining eggs and larval drift (i.e. what operating flexibility can occur while maintaining suitable conditions for egg incubation?)
- Walleye Spawning 6 degrees to 12 degrees; these temperatures determine the spawning period as the basis for the R.O.R operation. Temperature would be monitored with temperature logs and information transmitted automatically.
- Lake Sturgeon spawning normally occurs in May, or in June when flows are decreasing significantly. Egg incubation and larval drift may even extend into July in some years, but the decreasing flows also make it desirable to gain efficiency through the peaking operation.
- Considering the minimum depth for Lake Sturgeon spawning may provide opportunity to carry out some peaking operation while still incubating the eggs. A minimum depth of 0.1m is found in the literature but only recorded originally in one source. A depth of 0.3m seems to be a more reasonable conclusion from the literature. This may allow for some fluctuation of water levels provided the flows are not decreasing too much.
- Telemetry studies are a potential way to assess lake sturgeon presence/spawning. Vale is reporting very small Lake Sturgeon populations (13 individuals captured). By tagging all

of these known individuals with sufficient confidence that it represents the spawning population, it may be possible to provide R.O.R. operation only when the operators know that the Lake Sturgeon are present in the Vermillion River or Wabageshik Rapids, plus a predetermined time period provided for special operations to facilitate egg incubation and larval drift. The technology must be investigated further for factors such as battery life of the tags, and there are a lot of details to be worked out. As a result, this approach will not be detailed in the EA, but the EA will indicate that other suitable methods will be investigated to refine the approach to determining the Lake Sturgeon spawning, incubation and larval drift period.

Uwe described walleye and lake sturgeon as the biggest potential impacts of the project.

Wayne commented on the Operating Plan and its limitations on impacts:

- Run-of-river operations need to continue through incubation and drift (which for sturgeon would extend at least until the end of June)
- Cannot just focus on selected species or habitats. A wide range of fish, amphibian, and invertebrate species are involved with ecological systems and are dependent on system conditions. Goal should be to stay within reasonable natural range – the amplitude of proposed fluctuation needs to be reduced.
- The Operating Plan is far from addressing all impacts; he stressed the proposed environmental flow is far too low essentially representing extreme drought conditions (i.e. less than Q99). At biological scoping meeting in May, MNR suggested use of a monthly Q80 as low flow parameter. We maintain that this would be an appropriate operating constraint to address a range of aquatic ecosystem values. A similar limit on daily high flows would need to be established (perhaps monthly Q20) – essentially remain between 20th and 80th percentiles of long term monthly datasets.
- Suggested picking one ramping condition for “8 hours” instead of two ramps with large releases for a short period of time.
- Suggested need to modify proposed operation and potentially consider another small turbine to utilize Q_{EA}.
- Christine Selinger added that impact of proposed peaking ops on effluent dilution at Domtar plant downstream also needs to be considered as it is our understanding that Domtar has little storage capacity and normal pass what they receive.

Christine emphasized that decisions will need to be made under the LRIA and will require an understanding of proposed changes to ecosystem condition and how they will affect ability to meet the purposes of the LRIA, not just focus on impacts to SAR.

Parise noted that potential impacts on flows available to the Domtar facility downstream must be addressed. Low flows have been a concern for this facility in the past under current conditions (e.g. prior to the addition of a peaking facility upstream).

Uwe commented that the OP doesn't affect the river level greatly +/- 20 cm from 20cms to 60cms.

- Wayne and Brendan stressed that this will still have high impacts and softening the changes to aquatic conditions is necessary. The minimum (cms) plays a large role and needs to be brought up.
 - Flow (cms) affects egg/fry dispersal and opening to predation
 - Flow conditions also play a role in aeration of eggs for a range of fish and invertebrate species.
 - Daily water level / velocity fluctuation will impact wetted habitat; alter substrate through erosion & sediment transport; negatively affect aquatic vegetation; dewater, strand, and dislodge benthic invertebrates; reduce cyprinid production etc. etc.)

Andrew commented on the potential impacts to species.

- Many fish species will likely be covered by the Walleye and Lake Sturgeon Spawning. There is a need to determine what species will not be covered.
- There is habitat evident for Walleye and Lake Sturgeon.
- Ecology is being addressed by describing the loss of permanently wetted habitat at Wabageshik Rapids.
- Chances for fish stranding need to be addressed and adaptive framework/monitoring is required to reduce any future stranding issues.
- There are mitigation measures available for fish stranding – reduced habitat availability. Some of this might be achieved through operations, and fish stranding might be addressed through small-scale habitat modifications to address specific problem areas.

Uwe reminded the group that due to private landowner concerns in the bay downstream of Wabageshik Rapids, the constraints on operation include +/- 15cm at that location. This can be translated into flow conditions.

Wayne stressed that regardless the Q_{EA} is too low and needs to be brought up and reflected in the Operating Plan. An upper limit to daily fluctuation also needs to be established. These measures will reduce the amplitude of daily fluctuation and thereby reduce degree of impact.

Christine – the Chutes as a pilot review of the modeling and the general conclusion was that there was a need for better understanding of error/certainty/calibration. She raised questions about applicability of the model.

Uwe – re-iterated that the model reports are not to be used as compliance but to get an idea of river conditions.

- Stressed concerns/ frustrations in modeling effort vs. what is required.
- Commented on the fact that past dams have not required such vigorous checking of modeling
- Stressed that models are predictive and can only be so accurate.
- Xeneca is committed to doing sensitivity analysis and confirmations.
- Would like to focus on the suitable range (max/min) for water levels and flows.

Eric recommended providing a map/visual display of how this affects the d/s. Can there be cross-sections made of specific areas?

Discussions on what can be done to help MNR analyze potential downstream impacts.

- Pick locations for variations in flow levels
- Pick locations that demonstrate variation in habitats
- Q_{80} was used early-on to demonstrate differences.
- Table in SAAS was produced to show different effect levels at different locations and Q levels.

Uwe wants to know how they determine appropriate levels. There is an understanding of water levels but wonders what specifically they should be focusing on. Requires context for reasoning levels/flows.

There was general agreement that there is a need for consensus on what flow regime/water levels will have the least impact on the system.

*****ACTION: Regarding operational water flows and levels it was determined that an off line discussion should occur between Xeneca's consultants at NRSI and Wayne Selinger of MNR, Kelly Eggers of DFO and Mohammed Sajjad Khan of MOE.**

Andrew stressed the importance of focusing on the greatest impacts and Valued Ecosystem Components (VEC) because otherwise the study becomes too large for time/expense available.

Kelly: Does MNR provide a list of things to measure for total ecological condition?

Christine: Yes, 2010 document prepared by MNR with list.

Eric – brought up importance of maintaining flow to move invertebrates from the lake to the Spanish River (importance of energy/nutrient transfer). For example, the modeling results indicate that some water movement or velocity is maintained downstream through the pool under a discharge of 5 cms. Recommended 5 cms as a starting point for investigating minimum flows.

Brendan – suggested that MNR pick sites and display levels and velocities at varying flows. Cross-sections to look at will help focus impact mitigation for the report.

Rod - suggests that 5-10 cms has been the minimum flow range mentioned in discussions thus far and that the cross sections could display model output for flows within this range.

Uwe– Agreed to provide cross sections as per MNR's suggestions. For low flows, model analysis has been done and results could be reviewed and discussed with MNR in more detail.

*****ACTION: MNR (Brendan and Wayne) to provide Xeneca with areas of focus to provide cross-sections with varying base flows.**

*****ACTION: XENECA to provide work ups with model info and discuss with MNR.**

(MNR provided interested areas. Xeneca is working on putting these cross sections information together for discussion to achieve consensus on flows and levels.)

Christine – recommended to Xeneca that they fill out hydrological assessment table with information produced by SAAS, which includes various aspects of flow, and use it to inform discussions on the proposed degree of system alteration and to determine suitable environmental flow requirements..

Uwe– agreed to review and consider the SAAS table.

*****ACTION: Xeneca to review the SAAS table and respond to MNR's suggestion.**

(Received the SAAS table from MNR)

ITEM7: Fish Passage and Habitat Compensation

Andrew provided summary:

- CPL prepared memo with analysis of fish passage potential
- Picked 3 cross-sections to assess water velocities
- Temperature of 4°C was used for Walleye pre-spawning timing. This happens to occur just before peak in hydrograph
- If Walleye wanted to pass Wabageshik Rapids, they could get over in a low to moderate scenario, but perhaps not in a year with particularly high spring flows. Although we have no evidence that Walleye do in fact pass upstream, it's going to be assumed that it is passable by Walleye and that they do pass upstream on some occasions.

Uwe – providing fish passage is not possible for the project proposed.

- Not a threatened species. Walleye are being managed for recreational fishing purposes.
- An effect on the spawning of Walleye that may move upstream through Wabageshik Rapids is not likely to be detrimental to the Walleye population within the system.

Wayne – for the record MNR identified potential fish passage concern early on in the process (well over a year ago). The same analysis referenced by Andrew needs to be provided for Lake Sturgeon.

The LRIA requires that we provide for the perpetuation, management and use of fish, which may require maintenance of fish passage for more than just those species that are SAR.

Andrew – Sturgeon are not likely found in Wabageshik Lake as there have been no previous reports of occurrence.

Eric – sturgeon have now been observed and therefore it is possible that they may pass Wabageshik rapids to access the lake.

- Suggested that the lake is not likely suitable habitat
- Suggested emphasis on restoring habitat d/s
- There is still a need to review the velocity information to see whether or not Lake Sturgeon access the lake can be ruled out.

Uwe mentioned same modeling that was done for walleye passage could also be used to assess Sturgeon passage potential. However, Xeneca has been advised that there is no evidence of Sturgeon upstream of site. An upstream fish passage structure would be challenging given the site layout. Xeneca is not contemplating fish passage for Walleye. Good spawning sites and other habitat exist both upstream and downstream of the site.

Habitat Compensation:

Andrew – habitat compensation will be recommended in the report to maintain the amount of habitat within the system.

- Fish passage will not be provided but that habitat creation will be conducted to maintain d/s populations
- Xeneca will work with Vale to inform the habitat creation.

Wayne said that compensation should be directed to the Spanish River or lower Vermillion River (downstream of Wabageshik Rapids). He thinks the Wabageshik Lake Walleye population will be fine in the absence of upstream fish passage at Wabageshik Rapids.

Further discussion ensued on the possibility of using Nairn as a potentially good candidate for habitat creation. Flows at the location are good but substrate is poor. Salvage of cobble from the project location was suggested to relocate habitat. To fulfill requirement of fish passage, DFO requires MNR direction on whether fish passage is required to meet fisheries management objectives before DFO makes a determination on whether fish passage at the dam will be required per the *Fisheries Act*. MNR suggests that fish passage is of some concern but may be willing to accept lack of fish passage provided there is adequate habitat compensation elsewhere in the same system downstream of Wabageshik Rapids and that an ecologically defensible operating plan can be agreed upon.

Xeneca is prepared to supply and place substrate at Nairn to support the plan. Xeneca is to identify which parts of Wabageshik rapids are being lost to spawning Sturgeon and the overall impact to spawning sturgeon that will occur during construction and post construction/operation. Effects should be minimized and plans for habitat compensation (benefit) need to be discussed.

*****ACTION: MNR, DFO and XENECA to discuss compensation at Nairn as part of post EA permit process.**

Wayne indicated that while MNR may support some of the compensation occurring at Nairn, Vale would need to be consulted / in support of such work in their tailrace area.

ITEM 8: Fish Mortality

Kelly raised concerns over fish mortality as related to entrainment and impingement. DFO issues an authorization and requires mortality numbers. MNR and DFO will then need to make a decision

based on the estimated numbers and will require comments on mitigation to reduce mortality from entrainment and impingement.

MOE (Rod/Parise) also raised concerns about methyl- mercury in regards to inundation. Uwe commented that NRSI has covered fish sampling, and water quality monitoring is underway.

Xeneca is committed to providing necessary information on entrance velocities, fish grate sizing, turbine types and projected mortality statistics in support of DFO permit process. Xeneca is committed to best practices to minimize the risk of fish mortality.

ITEM 9: Total Zone of Influence

Uwe asked if there are other concerns to be discussed.

Christine noted that the proponent and agencies still have to come to a consensus on the downstream ZOI.

Uwe expressed Xeneca's frustration with the varying definitions of the ZOI and having to re-establish this zone. The ZOI was set to the confluence of the Spanish River as was established at a meeting with the MNR. This was determined due to effects of Domtar dam d/s.

MNR agreed that there were discussions towards consensus on ZOI last year, but the need for additional discussion remained.

Christine discerned that +/- 5cm is still an influence and that needs to be reflected in the report. MOE has conditions for definition of the ZOI in the class EA that should be followed. It is her understanding that the entire ZOI has to be shown to the public for full transparency, as part of the EA process.

Eric – suggested that it is fair to mention that the confluence with Spanish River should be considered end of influence because it would be too hard to differentiate from the operational impacts of the Domtar facility downstream in Espanola and the Vale facilities upstream on the Spanish River.

Christine agreed that for MNR's purposes as a regulator under the LRIA the extent of the ZOI may be determined to be a confluence, large lake or existing facility if a consensus is met with all agencies. Christine referred to MNR's response to a previous document submitted by Xeneca regarding its proposed approach to the downstream ZOI, in which this is detailed further. A rationalization should be provided in the report that stresses the reasoning for identifying that feature as the limit. However, she understands that hydraulic modeling is a requirement for MOE's PTTW process and also to confirm ZOI for the EA – Xeneca should consult with the MOE further on this. An explanation of the Domtar dam influences and the confluence of the Spanish River should be included.

Christine Selinger – Domtar concerns re: effluent treatment during periods of low flow would also need to be factored in.

Christine recommended to Uwe that he discuss this with MOE to hear their view of the ZOI and modelling.

Uwe indicated that Xeneca's proposal is to leave the DS ZOI extend as is, but to constrain the operations sufficiently that the amount of water level fluctuation at the downstream end of the DS ZOI is deemed to be of no concern or risk to cause a significant environmental effect. The minimum level currently proposed in the OP Plan at the confluence of the Spanish River is +/- 5 cm.

CG noted that it is important from a stakeholder consultation perspective and a habitat assessment perspective that the entire ZOI be recognized.

*****ACTION: Xeneca to follow up with MOE and MNR to reach consensus on acceptable definition of DS ZOI and any residual fluctuation beyond that point.**

Eric summarized that there is potential for Lake Sturgeon spawning habitat in Wabageshik rapids. This will determine whether an Endangered Species Act (ESA) authorization is required in the form of an overall benefit permit (in the case of the direct, physical footprint or zone of inundation on the habitat) or whether an ESA exemption agreement is required (for harm to individuals and/or to habitats negatively affected by operations), or both. Agreements require that there be no additional negative effect on the species, with no requirement for overall benefit. There is a need to start the dialogue on ESA authorizations in the near future.

*****ACTION: NRSI (Andrew) to analyze water velocity data for amount of habitat for L. Sturgeon.**

Eric noted that post EA, the ESA process authorization process will take some time. Eric noted that it would be advisable for Xeneca to start the process as soon as possible, possibly in parallel to the EA process. Uwe appreciated the suggestion and will follow up during the EA process.

*****ACTION: MNR to direct XENECA to the link for these applications forms links on the internet. (Completed)**

Christine noted that additional concerns or topics for discussion might be raised through more detailed review of material presented and through review of draft ER. Timelines provided for review of material in advance of meeting were not sufficient for complete review.

**MNR/OFAH Meeting
November 6, 2012**

Attending:

Wayne Selinger (WS)
Felix Delongchamp (FD)
Bruce Richard (BR)
Rollie Frappier (RF)
Mark Holmes (MH)

Via teleconference:

Chris Selinger (CS)
Kelly Eggers (KE)
Andrew Schiedel (AS)

The meeting focused on habitat compensation for the Wabagishik Rapids project.

Acknowledging that some spawning habitat may be lost during construction, Xeneca reiterated its commitment to replace the lost habitat. A site just below Vale's Nairn Centre dam was put forward as the best location for the habitat replacement as the area has flow regimes consistent with good walleye spawning sites but lacks the cobble substrate needed to attract the fish and provide shelter for fertilized eggs and small fry.

WS agreed that the habitat creation site makes good biological sense, but he noted that concerns have been raised by Vale. Vale has compensation work required by DFO/MNR for habitat losses associated with the retrofit of their Nairn facility and to compensation for operational effects at Agnew and Lorne Falls. Compensation is specific to achieving a net benefit for sturgeon.

Vale has spent sizable sums collecting data for the last 3 -5 years and may be reluctant to give up the site to another company needed to undertake habitat work.

MNR/DFO agreed there is no problem with Xeneca partnering with Vale on habitat work, although there will need to be an agreement in place between Vale and Xeneca and accounting of what work is being done by whom; i.e. Vale has ESA requirements for sturgeon and Xeneca has fisheries requirements.

Although access is difficult and may create an undesirable environmental foot print, it was noted Xeneca could contemplate habitat work in the embayment area immediately downstream from Wabagishik Rapids. OFAH and MNR agree the area holds good potential for habitat creation.

R F commented the embayment area appears to be a very good place for egg and fry collection.

AS observed that, with respect to habitat work in the embayment area, it will be a question of proper design to create spawning habitat that needs a combination of adequate flow, substrate conditions and water depth.

Responding to questions from AS, WS said habitat replacement should consider more than just spawning. Feeding habitat and riffles and runs that support benthic communities are also important.

WS reiterated that his major concern is minimum water flow and determination of the extent of Xeneca's ZOI. Both components are related and will ultimately determine the level of compensation work that needs to occur.

It was acknowledged that progress is being made toward consensus on these issues.

MH noted that a meeting to land consensus on ZOI and minimum compensatory flows should be held soon and suggested that dates prior to the end of November are preferable.

AS stated that, when Xeneca creates habitat, consideration will be given to both spawning and feeding areas

Discussion ensued regarding Graveyard Rapids and its suitability for habitat creation or restorative work. Based on environmental reports from Great Lakes Environmental, Graveyard Rapids has limited spawning habitat. Water velocities are a bit low in some sections and toward the upper end there is a lot of bedrock substrate which precludes spawning habitat. It is unknown if Xeneca can rectify some of this habitat parameters; i.e. can cobble be placed on bedrock without being washed away.

WS/FL/AS and MH concurred that Graveyard Rapids would be worth considering as a habitat creation site, however, RF, noted that below the Wabagishik Rapids there is a lot of clay on the shoreline and potential for erosion poses concern that siltation could cover any spawning beds created at Graveyard Rapids.

RF and FD noted OFAH is very interested in doing work on both sturgeon and walleye. A mix of male and female sturgeon have been pit tagged and are being re-caught frequently which indicates low numbers. Some juvenile fish are being caught so recruitment is occurring, but it is likely very limited.

WS, said there have been no creel surveys, but MNR recognizes walleye harvest is quite low in the section of river bounded by Xeneca's proposed operation, Nairn Centre and Domtar's head pond.

Fishing pressure is not seen as the main fisheries issue on the lower Vermilion. The long standing issue is seen as lack of habitat. Lack of habitat is seen as the primary reason for the declining fishery problem and both DFO and MNR will focus on habitat, however, MNR has no fundamental objection to stocking programs in this section of river.

RF said OFAH wants to make the Vermilion a major egg collection site and to develop educational opportunities for youth, university and college students.

MH asked RF for the type of financial commitment that would be required of Xeneca. He indicated that his experience in construction industry will be helpful. He said a simple 24X30 foot building for teaching and a hatchery set up will be required. Cost for materials would be in the range of _____ OFAH is committed to supplying the labor to build and set up the hatchery and water supply lines.

MH cautioned that the cost of program is critical. Project economics won't allow huge expenses. He suggested that, if Xeneca were to consider the hatchery/education centre, it would need to be built in close proximity to the Wabagishik site, and that it would probably have to wait until the plant is operational. RF and FD indicated the post operational development would be acceptable

Noting that Xeneca has two other developments proposed upstream At Soo Crossing and Cascade Falls, he asked if there would be consideration for habitat work in those areas.

KE said DFO's hierarchy for habitat work places the strong preference on work in proximity to the project and for direct effect on resident fish populations. However, she noted work further up the Vermilion River system could be considered.

WS said the 100 percent show stopper for MNR is sturgeon and, given sturgeon are not present in the upstream areas around Soo Crossing or Cascade Falls, upstream compensation in those areas won't address MNR's main issue.

AS noted that MNR Endangered Species Biologist Eric Cobb had comments regarding unconfirmed reports of sturgeon in Wabagishik Lake. WS said the Wabagishik sturgeon catch is still considered anecdotal and relates to one elderly angler stating sturgeon were once caught in the lake.

WS reiterated that he needs to see the entire package including operating plans, habitat loss/creation assessment, flows and levels and then base compensation decisions on that information.

ACTION: OFAH (RF) to provide cost estimates on developing a fish hatchery and education system in proximity to Wabagishik GS (building materials cost only. Construction would be volunteer by OFAH)

ACTION: MH set up meeting to land ZOI and flows and levels. MOE / DFO need to be included in the meeting to provide input regarding minimum flows for effluent dilution. Mark to send out tentative dates for critical meeting.

ACTION: MH to circulate wetted perimeter information/ X sections, depths, flows and velocities to DFO



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Xeneca/MNR Discussion Regarding Deer Crossing at Wabagishik Rapids

Date: Monday, January 21, 2013

Attendees: Bob Robinson (MNR), Wayne Selinger (MNR), Chris Selinger (MNR), Jessica Walker (NRSI), Andrew Schiedel (NRSI), Grace Yu (Xeneca), Uwe Roeper (Xeneca), Mark Holmes (Xeneca), Nava Pokharel (Xeneca), Stephanie Hodsoll (Xeneca)

Andrew Schiedel at NRSI has undertaken a study to combine flow data and deer crossing data. The camera monitoring results show that deer cross at flows between 51 cms – 100 cms from December to April (Initially, one deer crossing was stated to have happened at 123 cms, but this number was from an upstream camera location.) It has been determined that deer have no problem crossing with flows of 50 to 60 cms.

There is no need to change Xeneca's current proposed operation strategy. Xeneca's proposed maximum turbine flow of 64 cms (with any excess routed over the spillway) seems reasonable. MNR was also satisfied with this proposed flow regime.

MNR asked whether the flow data provided by Vale is hourly or daily average flow. Nava confirmed the information given to us is daily average flow.

Xeneca asked MNR if there were any specific restrictions that MNR would like to impose, but MNR staff expressed that they were happy with the flow levels that Xeneca proposed in the January to April flow level tables. Whereas MNR might have otherwise asked for intermittent operating levels, Xeneca's chart satisfied MNR concerns. It was confirmed that the Wabagishik GS will produce hourly data.

Action Item: Xeneca's engineering team will put together flow level data for the remaining eight months of the year and add it to the Operations Plan document.

Action Item: Andrew Schiedel will write a section for the EA document outlining the monitoring strategy for the deer migration concern and potential mitigation strategies should monitoring reveal any future limitations to/issue with deer crossings.

Wabagishik Agency Closure Discussions Meeting - Action Items and Commitments

February 27, 2013
Radisson Sudbury

Attending:

Bob Robinson (MNR)
Brian Riche (MNR)
Wayne Selinger (MNR)
Christine Greenaway (MNR)
Ellen Cramm (MOE) (telecom)
Brian Turnbull (MOE)
Ryan Stainton (MNR)
Grace Yu (Xeneca) (telecom)
Kelly Eggers (DFO)

Uwe Roeper (Xeneca) (telecom)
Mark Holmes (Xeneca)
Nava Pokharel (Xeneca)
Stephanie Hodsoll (Xeneca)
Andrew Schiedel (NRSI) (telecom)
Lynn Moreau (WESA)
Ciara DeJong (Ortech) (telecom)
Ken Henson (MNR)
Drew Brennan (MOE - first part of
meeting)

Introductions

MNR Presentation:

Bob Robinson provided a short overview of issues list.

21 items, condensed from over 300 comments on Draft ER. Some of the items require multi agency approach.

Suggest focus on smaller issues and attempt to resolve at these meetings

Upstream & Downstream Effects on Operators (Domtar/Vale):

MNR's overview presentation mentioned the draft agreements (February, 2013) provided by Xeneca.

EC noted that, although MOE had recently received copies of the draft agreements from MNR, staff had not yet had a chance to review them. With respect to the proposed agreement with Domtar, MOE's position is that any agreement with Domtar will need to identify the specific parameters that would trigger the shift from intermittent operating mode to run-of-river operating mode. The Permit to Take Water issued by MOE will need to refer to the agreement with Domtar, and the final executed agreement will be attached to the Permit. She also recommended that both the Final ER and any further consultations undertaken before the EA is finalized should provide the public, agencies, and Aboriginal communities with information on the proposed agreements, their intent, and general requirements.

Responding to EC, MH pointed out that some elements of an agreement with Domtar may have commercial implications and would not necessarily be released for public review. However, where an agreement with Domtar would substantively change what has been presented to the public and Aboriginal Communities, Xeneca would provide informational updates and the opportunity for further consultation.

Species at Risk:

Lake Sturgeon/Blandings Turtle.

MNR wants information gathering forms submitted as soon as possible. MH notes that consultants have been instructed to complete forms as soon as possible.

AS said NRSI has begun info gathering process...Jessica should get in touch Nikki Boucher at Sudbury District MNR (she replaces Eric Cobb)

CG said that with respect to ESA Xeneca may need an agreement in principle for LRIA process. Within the ER, Xeneca will need to identify potential effects and proposed mitigation.

Final reports from NRSI include natural heritage, Species-at-Risk, effects tables etc. are awaiting a finalized operating plan.

Use of Aggregate Resources:

Xeneca will not open its own pit. Xeneca intends to source aggregate locally from existing pits and operators.

WS asked if there is process to ascertain if aggregate is suitable for use in water.

NP advised that testing of blast rock and excavation materials is done during geotechnical studies which will determine characteristics of locally sourced rock. The same is usually done by aggregate operators.

EC added that, as indicated in the MOE comments on the draft ER, acid rock drainage is a potential effect that should be addressed during the Class EA process.

UR offered that in the EA Xeneca can state its procedures for dealing with acid rock.

EC said MOE will have MOE technical staff review Xeneca's procedures.

ACTION: Xeneca will outline the proposed procedures for dealing with acid rock and will provide the procedures to MOE for review and comment prior to the ER being finalized. Xeneca will also provide MOE a copy of the construction management plan.

Water Management Planning:

MNR has not yet finalized changes to Water Management Planning (WMP) but recommends that intent of WMP be met through EA to avoid further process. MNR advises Xeneca has not completed WMP, and because it has not finalized its policy, they cannot advise on what may still be required. MNR advises that some public consultation may be required post EA

Xeneca commits to post ER consultation if it is required. MNR will provide advice and expectations on meeting WMP requirements.

Erosion Potential and Monitoring:

UR notes there are no erosion issues on this project. A more detailed report requested by MNR is being prepared as part of engineering design. Information provided to public and agencies is not changing. The new report just confirms that there is no erosion or sedimentation issue on this river. Xeneca agreed that when they provide this more detailed report to MNR for review, it will also be shared with MOE.

CG said the sedimentation concerns have been raised by regional engineering and hydrologists who say they are not sure the Geomorphology is as thorough as it should be.

Public Consultation:

MNR will require evidence of adequate public consultation for permits/approvals and WMP process. Xeneca is prepared to consider additional post-EA consultation if required.

EC advised Xeneca refer back to comments on the draft ER re: informing agencies, the public, and Aboriginal Communities of any information that has changed or is new since the draft ER. Xeneca should keep in mind that the Class EA requires that all impacts of a project be assessed as part of the Class EA process, and presented to the public, agencies, and Aboriginal communities for review and comment. At a minimum any new or different information should be clearly presented in the final ER. However, the more consultation the better, and MOE strongly recommends that Xeneca make any new or changed information available to the public, Aboriginal communities and agencies prior to issuing the Notice of Completion.

Aboriginal Consultation:

Xeneca was advised that B2 B efforts and record of consultation is required for permits/ approvals.

Regular call-ins for Xeneca to brief MNR have been very helpful and should continue.

EC advised Xeneca to refer to MOE's September 20, 2012 letter which provided some general guidance on Aboriginal consultation and confirms the procedural aspects of consultation that Xeneca is expected to undertake for its projects.

UR noted Xeneca is working very hard with FN communities to avoid PTO being filed on the final ER. By informing and advising communities and developing consensus the risk of a PTO is greatly reduced.

Significant Wildlife Habitat:

BR advised that Sudbury District would prefer to amalgamate the Significant Wildlife Habitat (SWH) discussion with roads and lines discussion.

AS said SWH comes into play with downstream riverine changes... Snapping turtle, deer crossing Amphibians are all considered in the SWH reports. NRSI is addressing MNR comments. Most MNR comments will be addressed through the effects report.

WS observed that as Xeneca evaluates terrestrial areas transected by through roads and transmission line it should be noted that deer yarding occurs in areas between Wabagishik site and Elizabeth Lake.

ACTION: Wayne Selinger to provide details on deer yarding areas to Andrew Schiedel.

Cumulative Effects:

It is MNR's perspective that cumulative effects can be addressed to some extent via post-construction monitoring plans and commitments.

WS observed that the river system is already significantly altered and the question on whether Xeneca exacerbates those changes needs to be answered – further discussion is required under effects and monitoring in the final ER.

It was recognized that there are many elements of the project that feed into the discussion on cumulative effects; and that various aspects of this issue would be discussed over the next two days.

Deer Crossing:

Issue addressed... need to reflect final resolution and monitoring in the final ER.

Biology issues:

KE observed that Section 35 Fisheries Act Authorization will be required for the HADDs.

The meeting heard that Compensation plans are underway. Two sites in Vermillion River are being considered for compensation work; the mouth of the embayment below project and at Graveyard Rapids.

Operating Plan (Operations During Spawn):

KE remarked that commitment to operate strictly run-of-river (R of R) during the spawning is fantastic, and the only element of the plan that is not known is the end period of R of R for Lake Sturgeon. Using temp cues to define the R of R period could be used. Possible use of Cumulative Thermal Unit could also define the R of R period. KE was unaware that a June 30 date had been discussed with MNR.

WS said MNR will accept Xeneca's prior commitment to leave the R of R restriction at the June 30 date but MNR would also consider using a temperature-based formula that, depending on seasonal conditions, could end the R of R period earlier/later than June 30, providing that fisheries objectives are being met.

WS said he would also consider using a temperature based formula that, depending on seasonal conditions, could end the R of R period earlier or later than June 30.

ACTION: Andrew Schiedel to work with Scott Manser at Ortech to prepare spawning tables and provide to Wayne Selinger at earliest junction

Section 32 Fisheries Act Authorization:

KE advised that information regarding type of turbines being used and associated fish mortality is required for Federal authorization.

Monitoring Plans:

Monitoring will be required in both Section 35 and 32 Fisheries Act Authorizations. Monitoring of effectiveness of mitigation required during construction, monitoring of habitat compensation required post-construction, and monitoring of fish mortality required during operation.

KE read meeting attendees her February 21 email to Xeneca, noting that prior to issuing Authorizations DFO will need to ensure Aboriginal groups have no fisheries related concerns. Will require records of consultation showing that Aboriginal groups have been made aware of the potential impacts to fisheries and fish habitat, what concerns they had and how these were addressed.

Core Operating Plan Discussion – Hydrology:

BT: Uncertainty of the model has been relieved through validation of results.

Hydraulic modeling results were consistent with real time measurements.

For the downstream reach the model is useful as an informative tool. Accuracy is no longer a matter of concern.

However there are some questions over inundation with respect to flood flows under 100-year event, and MNR will be addressing this. EC added that, for the purposes of the Class EA and public consultation, there is a need to accurately characterize current conditions on the river prior to development of the project.

RS indicated that there are some questions being posed to MNR's Regional Engineer regarding flood flows under the 1:100-year flood.

WS/ RS suggested that Xeneca use the 1981 to 2011 dataset put together by Sajjad Khan to re-run some of the key analysis for the ER.

NP noted initial hydrology done by Hatch in 2009. The MOE's draft Permit to Take Water guidelines came out in 2010-11 and additional studies were undertaken. Analysis of data from for 1954 to 1993 from Canada Water Gauge is very reliable and valid for modeling.

Subsequently, Xeneca received Vale data from 1994 to 2010 but there is no certainty in the accuracy of the Vale data. Data used for analysis but not required to update existing data.

For EA Flood flows are used for flood mapping. Hydrology is used to rationalize environmental flows.

With respect to NP's comments on accuracy of the Vale data, BT clarified that Sajjad Khan, MOE Hydrologist, had completed further analysis on the data provided by Vale, and found it to be reliable.

CG confirmed that a re-do of modeling is not required and a note coming from MNR/MOE can be expected shortly. BT and EC both suggested that further discussion on this issue be deferred pending receipt of the joint MNR/MOE response to Xeneca on this matter. WS said MNR wants to ensure that the best available data is used for the design phase of the project.

UR stated that the core issue is reasonable representation of current condition. Xeneca has compared the CWG and Vale data and results and didn't reveal any significant difference despite the use of two very different data sets. Results show slightly lower flows but greater water level fluctuation. MH pointed out that climate change may not be a factor as Vale reports evidence that water use between its Stobie Dam and Lorne Falls shows a loss of 2 CMS.

BR said MNR has asked for clarification on 1 -100 year flood calculations to determine if it is based on daily average or instantaneous. NP responded stating it is instantaneous because that is more reflective of actual events ... Report shows instantaneous numbers.

WS said MNR wants to ensure that the best data is available for design phase of the project.

Lunch

Downstream Minimum Flows:

MH: Xeneca has undertaken considerable effort and expended resource to provide modeling that provides rationalization for minimum flows. Lots of back and forth discussion has occurred to arrive at consensus. Xeneca's original proposal of 2 cms was upped to 5 cms, approaching MOE's number of 6.5 cms, but, where it has been left is at 5 cms in summer months, MNR now wants 8 cms in winter.

CG explained base flow concept that provides condition for perpetuation of ecological function and reviewed the HRAT tables. MNR can use other means to make decisions but the agency would be hard pressed to deviate from base flow approach. Formerly MNR used Q 80 as a surrogate until there was an ability to calculate base flow.

RS says base flow calculations support decision-making on a statistic approach (not field data) and are intended to be used in conjunction with modeling results.

UR said that by looking at transects he would have conclude there is very little difference in wetted perimeter.

RS looked at transect data for Hec-Ras modeling and he can see a substantive decrease in wetted perimeter in the horseshoe area immediately below the project site.

UR agreed the base flow approach is very useful as a screening tool, but it does not provide insight into habitat alteration and effects. He observed that effects of temporary alteration of flow and level have no effect on temperature, oxygenation etc. Operation Plan and river profiles address duration and effects much more clearly than straight statistical analysis.

Focus of the discussion turned to sensitive ecological habitat and natural flow regimes on a monthly basis. Nov, Dec, Jan and Feb have been identified as high-risk months using HRAT tables.

RS said he has looked at a transect from the tailrace down through embayment area. In the 300 meter section below dam there is some benthic production and potential impacts during wintertime

Meeting focus zeroed in on winter months Dec. /Jan. Feb/March in the 300 metre section below tailrace and discussion ensued regarding the difference between 6.5 cms flowed agreed to by Xeneca and 8 CMS flows required by MNR. February was identified as a critical month for Xeneca and tentative agreement was reached as follows:

Xeneca steps from 5 CMS to 6.5 CMS in November, then to 8 cms in December and January and then step back to 6.5 CMS in February and March.

WS said the minimum flows would then be above Q99 and are more defensible.

ACTION: MNR to confirm that minimum flows are acceptable as follows: Xeneca steps from 5 CMS to 6.5 CMS in November then to 8 cms in December and January and then step back to 6.5 CMS in February and March.

CG stated that the ability to move away from base flow is specific to each river system and requires robust hydrological and bathymetric info which reduces risk in assessing ecological effects.

Upstream Operations:

UR originally proposed to follow lake levels but maintain a minimum lake level, but Vale expressed concern about effect on tailrace. Modified OP to follow natural lake levels at all times with level fluctuation of plus or minus 5 cm

More detail will be in final ER outlining how lake levels will be maintained.

BT requested that more detail be included in the Operating Plan to address this issue.

Headpond linked to lake and Xeneca will not drain headpond.

ACTION: Xeneca to provide a summary of operations to maintain upstream water levels to natural lake levels on Wabagishik Lake.

ACTION: Xeneca to provide a summary of changes to Operating Plan in a cover letter sent out to agencies.

Ramping Rates:

Discussion turned to ramping rates and effect on habitat/public safety

Need to ensure that public understands the speed with which turbine operation increases flow.

UR/MH explained that ramping rates will be adjusted to 60 minutes or 1 hour time constraints (from the original proposal of 20 minutes,) although increase from minimum environmental flow to minimum turbine flow will be essentially instantaneous.

Commitment: Xeneca also commits to no intermittent operation when flows are above 19cms.

Spillway vs. Tailrace for Minimum Flow:

WS noted that there is habitat value in the pool immediately downstream of the proposed dam, and if minimum flow is passed through the tailrace it may bypass this habitat. KE commented that if fish habitat is harmfully altered or disrupted from flow bypassing it due to tailrace orientation, that would be part of the HADD.

WS suggested that decisions on minimum flows occurring in the spillway and or tailrace may wait until detailed design.

ACTION: Need wording into final ER to reflect approach to passing minimum flow through turbine or spillway, or both. If both options are still being considered when the final ER is issued, then potential impacts and proposed mitigation for both options would be presented in the final ER.

Downstream Effect Below Domtar:

WS observed that Vale operations on the Spanish are peaking and causes modified flows below Domtar Dam. MNR needs to know if Xeneca's operations will exacerbate downstream pulses and some language in ER regarding offsetting pulse effect and/or mitigation at Espanola is needed.

UR noted that in Xeneca's commitment letter to Domtar it has been requested that Domtar continue to operate consistent with its current patterns, but there is no mechanism for Xeneca to control how Domtar operates.

ACTION: MNR to explore available data re: flow fluctuations below Domtar and what the maximum effect of Xeneca's operation will be and show variance in the downstream signal.

**Wabagishik Agency Closure Discussions Meeting
Action Items and Commitments**

February 27, 2013
Radisson Sudbury

***Commitment:** Final ER must reflect that there are agreements with upstream and downstream operators Domtar and Vale.*

ACTION: With respect to ESA Info Gathering Forms, NRSI (Jessica) should get in touch Nikki Boucher at Sudbury District MNR (she replaces Eric Cobb.)

ACTION: Xeneca will outline the proposed procedures for dealing with acid rock and will provide the procedures to MOE for review and comment prior to the ER being finalized. Xeneca will also provide MOE a copy of the construction management plan.

***Commitment:** Xeneca commits to post-ER consultation if it is required. MNR will provide advice and expectations on meeting WMP requirements.*

ACTION: Wayne Selinger to provide details on deer yarding areas to Andrew Schiedel.

ACTION: Andrew Schiedel to work with Scott Manser at Ortech to prepare spawning tables and provide to Wayne Selinger at earliest junction

ACTION: MNR to confirm that minimum flows are acceptable as follows: Xeneca steps from 5 CMS to 6.5 CMS in November then to 8 cms in December and January and then step back to 6.5 CMS in February and March.

ACTION: Xeneca to provide a summary of operations to maintain upstream water levels to natural lake levels on Wabagishik Lake.

ACTION: Xeneca to provide a summary of changes to Operating Plan in a cover letter sent out to agencies.

***Commitment:** Xeneca also commits to no intermittent operation when flows are above 19cms.*

ACTION: Need wording into final ER to reflect approach to passing minimum flow through turbine or spillway, or both. If both options are still being considered when the final ER is issued, then potential impacts and proposed mitigation for both options would be presented in the final ER.

ACTION: MNR to explore available data re: flow fluctuations below Domtar and what the maximum effect of Xeneca's operation will be and show variance in the downstream signal.

**Wabagishik Agency Closure Discussions Meeting -
Action Items and Commitments**

February 28, 2013
Radisson Sudbury

Attending:

Bob Robinson (MNR)
Brian Riche (MNR)
Wayne Selinger (MNR)
Christine Greenaway (MNR)
Ellen Cramm (MOE) (telecom)
Brian Turnbull (MOE)
Ryan Stainton (MNR)
Grace Yu (Xeneca) (telecom)
Kelly Eggers (DFO) (for second half of meeting)

Uwe Roeper (Xeneca) (telecom)
Mark Holmes (Xeneca)
Nava Pokharel (Xeneca)
Stephanie Hodsoll (Xeneca)
Andrew Schiedel (NRSI)
Kai Markvorsen (WESA)
Ciara DeJong (Ortech)
Ken Henson (MNR)

DZOI:

CG explained history of DZOI and the requirement to identify zone of influence early in the EA process. DZOI was identified as issue by MOE through its draft regulations and guideline for PTTW.

Xeneca undertook hydraulic modeling to understand effects, but new questions were raised on where hydraulic effect ends. Initial efforts attempting to define the DZOI were based on where significant effect ends, but no consensus could be reached.

In December 2012 work done between Xeneca and MOE/MNR technical team led to a statistical formula that measures against current/existing conditions in river.

Addendum produced to address issue that Xeneca was not in a position to change the point at which they established DZOI and conducted related studies and modeling work. The addendum provided guidance on how to close DZOI discussion by using the DZOI approach to quantify and endpoint but provide a measure of effect that could be used to assess if significant habitat alteration is occurring.

Subsequently, the addendum was been removed which leaves almost all projects unable to meet the background variance and DZOI will be set where the effect is essentially zero.

MH explained that neither Xeneca nor the industry can support the approach to DZOI without the addendum

WS noted that Domtar has no restriction on flows downstream of Espanola beyond what might be required to meet effluent dilution (i.e. they operate based on headpond levels). He expressed concern about how additional water will affect fluctuations downstream of the Domtar facility. He asserted that Domtar will have to process the water coming from Xeneca and this will increase the level fluctuations downstream.

CG asked RS to assess Domtar operating data and determine if Xeneca operations will have any significant effect downstream of Espanola.

ACTION: Nava to send RS Domtar discharge data.

Spawning Tables:

Spawning time lines will be put into ER with the June 30 date and will note that discussion on temperature based approach may lead to an alternative approach to operations during the spawning period.

Power Lines and Roads:

MH explained that power lines will not form part of EA and reference to power line corridors is included as information to inform stakeholders.

BR raised question over separate road and power line routing noting that it is MNR's preference that both power line and road follow the same corridor. MNR does not want increased access to area and the tandem approach also makes sense from a maintenance perspective.

ACTION: M. Vance to provide an assessment of combining road and power line corridor along Xeneca's preferred north/south road leading to Panache Lake Road.

WS flagged the challenge of locating a road between Elizabeth and Augusta Lakes given required setbacks and rugged topography. He also advised re: existing of deer yarding habitat N / NE of Elizabeth.

R.B asked question about temporary road access to both sides of project site. Mike Vance acknowledged that in the construction plan that temporary access was proposed however it now appears that the temporary access may not be required.

Roads Environmental Assessment and Archaeology:

UR briefly summarized Xeneca's proposed approach to the assessment of road corridors, which would involve completing detailed field assessment work after the Notice of Completion is issued.

EC outlined guidance provided to Ed Laratta via E-mail on February 25. The Class EA requires that all impacts of a project be assessed as part of the Class EA process, and presented to the public, agencies, and Aboriginal communities for review and comment. As a result, it is MOE's expectation that any further analysis/field verification needed to assess potential impacts and identify related avoidance, prevention or mitigation strategies be completed during the EA process and reflected in the final ER.

It was agreed to take roads discussion offline to have discussion with the right people in the room.

ACTION: MH to circulate the tentative dates of EA submissions to MOE through Ellen Cramm.

Archaeology:

Avoidance approach is being taken. Xeneca will undertake strategies in construction plan to ensure the archaeological site is not impacted option being exercised.

EC raised Issues over monitoring of the site, since the Ministry of Tourism Culture and Sport's (MTCS) avoidance strategy approach requires that the site be monitored by a licensed archaeologist, and there is no mention of monitoring in the information provided by Xeneca. She recommended that MTCS be consulted on this point, and that their requirements should be reflected in the final ER.

EC also noted that the archaeological site appears to be very close to the water's edge. The MTCS avoidance strategy requires the implementation of a 20 metre undisturbed buffer area around the perimeter of the site, with no portion of the buffer encroaching into the Zone of Influence.

UR pointed out that the buffer distance is measured against the physical location of the project. MH added that water level impacts from the project are well within the normal river channel and will not affect the site any more than nature has for the past millennia.

EC recommended that Xeneca check again with MTCS to ensure that their avoidance strategy will be implemented correctly.

MNR raised questions asked whether Aboriginal communities had been provided with the archaeological information and proposed avoidance strategy.

ACTION: Xeneca to ensure that avoidance strategy for archeological values is shared with Aboriginal Communities.

ACTION: Xeneca to seek clarification from MTC and archeologist if buffer includes river's edge and monitoring by archeologist.

Monitoring:

Deer crossing monitoring proposal is being developed by AS and will be based on a protocol that provides one more year pre-construction monitoring and three years' post-construction monitoring with two reports focused on downstream crossing.

ACTION: NRSI and Xeneca will provide draft report on deer crossing and will advance an informal review of proposed operations if they are required to facilitate deer crossing to and from yarding areas in the fall and spring

Cumulative Effects:

WS MNR has provided comments on draft ER to which Xeneca has responded.

WS asserted the greatest cumulative effect is downstream of the Domtar Dam. Additional analysis downstream of Domtar is required.

Monitoring plans are major piece of the ER yet to be responded to.

RB encouraged as much consultation with Aboriginal Communities as possible.

Post-Construction Monitoring:

Plans are in development.

Refer to February 27th minutes for DFO monitoring requirements.

WS advised that in addition to mitigation / biological monitoring, the proponent needs to confirm that actual fluctuations do not exceed predicted and that unexpected erosion, sedimentation, and substrate modification does not occur.

AS provided a summary of the proposed approach to the monitoring plan. This was followed by a general discussion on monitoring.

EC advised that section 4.5.3 of OWA class EA provides good guidance regarding monitoring plans. This section of the Class EA outlines various aspects of effects monitoring that will need to be addressed in the final ER.

Wrap-Up:

EC reminded Xeneca to refer to MOE's comments on the draft ER and ensure that all comments are addressed in the final ER.

**Wabagishik Agency Closure Discussions Meeting -
Action Items and Commitments**

February 28, 2013
Radisson Sudbury

ACTION: Nava to send RS Domtar discharge data.

Commitment: Spawning time lines will be put into ER with the June 30 date and will note that discussion on temperature-based approach lead to an alternative approach to operations during the spawning period.

ACTION: M. Vance to provide an assessment of combining road and power line corridor along Xeneca's preferred north/south road leading to Panache Lake Road.

ACTION: MH to circulate the tentative dates of EA submissions to MOE through Ellen Cramm.

ACTION: Xeneca to ensure that avoidance strategy for archeological values is shared with Aboriginal Communities.

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ACTION: NRSI and Xeneca will provide draft report on deer crossing and will advance an informal review of proposed operations if they are required to facilitate deer crossing to and from yarding areas in the fall and spring

agenda

Wabagishik Issues Consensus Meeting

3/21/2013

9 a.m. – 4:15 p.m.

Holiday Inn Sudbury, Suite 251

Meeting called by: Xeneca

Attendees: Brendan O'Farrell, MNR; Bob Robinson, MNR; Brian Riche, MNR; Wayne Selinger, MNR; Ken Henson, MNR; Lynn Moreau, WESA; Mark Holmes, Xeneca; Trevor Griffin, MNR; Drew Brennan, MOE (TBC); Christine Greenaway, MNR (TBC)

Via Telephone: Kelly Eggers, DFO; Ellen Cramm, MOE; Ryan Stainton, MNR; Kai Markvorsen, WESA; Andrew Schiedel, NRSl; Nava Pokharel, Xeneca; Stephanie Hodsoll, Xeneca; Uwe Roeper, Xeneca; Ed Laratta, Xeneca; Al Harris, Northern BioScience; Dave Thomson, Dowland

Discussion Items

9 am Introductions (Mark)

9:05 am Finalized Operating Plan (Nava/Mark) ·
9:20 am Fish habitat compensation (Andrew Schiedel)
10 am Monitoring Plan (Andrew Schiedel)

10:45 am Break

10:55 am Archaeology (Mark)
11:30 am Downstream effects below Domtar dam (Nava/Mark)

12:30 pm Lunch

1:15 pm Roads (Al Harris, Dave Thomson)
2:15 pm Debrief with Trevor Griffin

4:15 pm Meeting adjourned

**Wabagishik Agency Meeting Minutes
Closure Discussions
March 21, 2013**

Attending:

Bob Robinson (RR)
Brian Riche (BR)
Wayne Selinger (WS)
Christine Greenaway (CG) (telecom)
Ellen Cramm (EC) (telecom)
Brendan O'Farrell (BO)
Andrew Hinshelwood (MCTS) (AHI) (telecom)
Trevor Griffin (TG)
Dave Thomson (DT) (telecom)
Al Harris (AH) (telecom)
Grace Yu (GY) (telecom)

Uwe Roeper (UR) (telecom)
Mark Holmes (MH)
Nava Pokharel (NP) (telecom)
Stephanie Hodsoll (SH) (telecom)
Andrew Schiedel (AS) (telecom)
Kai Markvorsen (KM) (telecom)
Ciara DeJong (CDJ) (telecom)
Lynn Moreau (LM)
Luke Dalla Bona (LDB) (telecom)
Kelly Eggers (KE)

Introductions:

Operating Plan:

MH described the changes that have been made to the Operating Plan by Xeneca, incorporating minimum flow numbers that were tentatively agreed to in the February 27-28 agency meeting.

MNR/MOE intend to have internal review and dialogue around the minimum flow numbers before advising if they will be acceptable.

NP explained how flow numbers translate into water levels.

EC remarked that MOE staff are currently reviewing the revised Operating Plan just provided, and will be providing more detailed comments following this review. MOE is reviewing proposed minimum flows in conjunction with draft agreements with Domtar and Vale. The proposed agreement with Domtar is a critical element of the minimum flow proposal, and should include specific parameters that would trigger the shift from intermittent to run-of-river operating mode. When this project gets to the permitting stage, MOE will require that the final agreement with Domtar be appended to the PTTW. More detailed information about the minimum flow proposal may be required.

CG brought forward comments made by MNR hydrologist Ryan Stainton after his review of Operating Plan. He noted daily numbers max and min flow, numbers do not correspond between some tables (Table 7 and Appendix 1 and in Table 2 in NP's memo.)

ACTION: Xeneca to provide update on the most accurate numbers to be used in Operating Plan

ACTION: MNR to provide consolidated comments on minimum flow

ACTION: MOE to provide comments on minimum flow

Fish Compensation Plan:

AS described a reassessment of lost habitat and has refined numbers down from what turned out to be excessively high numbers. AS explained how numbers were revised.

ACTION: Copy of the habitat compensation plan to be sent by AS to BO.

The meeting heard that habitat loss of just over 14,000 sq m has been refined to 7,000 sq m and proposed location for compensation is downstream in the embayment area and at Graveyard Rapids.

Xeneca was advised that navigation must be maintained at Graveyard Rapids. Mostly bedrock, the area slated for compensation needs to be lined with cobble substrate suitable for spawning. Some design elements still need to be worked out. [Added in after the meeting: Please note that the cross-section velocities, which can be used to determine habitat suitability, are available in the Hec-Ras Steady State Report.]

UR said there is need to agree on what work is actually required for EA and he suggested the compensation plan can be approved in concept and details worked out at a later date.

Hec-Ras cross sections for each location have been provided. Velocities/ flows are available. Habitat suitability information has been provided to NRSI. It is now understood that .5 mps to 1.5 mps velocity is the minimum/maximum range and there is consensus between Xeneca and its consultants at Ortech and NRSI. The draft fish habitat compensation plan indicates a water velocity range of 0.6 to 1.1m/s, to ensure suitability for both walleye and lake sturgeon.

WS agreed some elements of compensation can wait until detailed design, but there is need in the EA to quantify habitat loss and proposed replacement.

ACTION: MNR/DFO to review compensation plan and discuss on a follow up phone call including KE, WS, AS and NP during the second week of April.

Biological Monitoring Plan:

AS described effort to create a comprehensive monitoring plan that has the right amount of rigour and meets the standards similar to those set out on other projects.

Including in the monitoring plan are:

- Deer crossing
- Turtle overwintering habitat (ESA)
- Vegetation in the embayment area
- Wildlife habitat function in downstream wetlands
- Benthic invertebrates
- Fish community
- Compensation fish habitat

Monitoring can be undertaken as a “package” with a number of field trips in the study years. For example, a trip in June would include several monitoring items.

Benthic invertebrate monitoring will use artificial substrates (Hester-Dendy Plates) at 10 stations downstream of Wabagishik Rapids and 5 stations at Graveyard Rapids.

Fish community sampling will utilize riverine sampling nets set every 200-300 metres.

Studies can be timed to coincide with water quality and mercury testing in years 1, 3, 6 and 9.

Some pre-construction study will also be undertaken to compliment work already done for the EA. The pre-construction studies will include additional deer camera monitoring for deer crossing, turtles and vegetation.

WS advised there may be requirement for monitoring of downstream erosion and there may also be some ESA requirements for sturgeon.

Noting the habitat value of the pool just below the project's spillway, WS suggested monitoring of conditions there is also warranted.

AS noted he did not include sturgeon in the monitoring report as there are a lot of different approaches to establishing net benefit for the species.

WS agreed that sturgeon netting component can be left out of ongoing monitoring. The known population of 25 fish may not benefit from continued handling for studies. He advised that Xeneca should include some acknowledgement that sturgeon monitoring will be part of ESA permitting.

UR noted that, aside from the biological monitoring program, there is a water quality monitoring program being developed through MOE. Biological monitoring, archaeological and any other monitoring will be brought into overarching monitoring plan

ACTION: At same time as the compensation plan is being discussed in three weeks' time, biological monitoring plans can also be discussed with a view to reaching consensus on the plans.

Spillway flow vs. tailrace flow.

WS said he has reviewed the turnover rate in pool and a turnover time of 8.5 hours is acceptable, but testing of the pool should be included in the biological monitoring plan. Dissolved oxygen, sediment deposition etc. should be tracked and data gathering probes can be installed pre construction.

ACTION: GY to add monitoring of pool to water quality monitoring program.

WS further observed that spillway flows can be adjusted between .5 cms and 2 cms and asked how the structure would be designed to pass variable flows.

UR will have to look at this in detailed design and he suggested a 2 cms pipe with a variable adjustment valve.

Archaeology:

MH described the archaeology monitoring plan as proposed by Xeneca's consultants from Woodland Heritage.

AHI noted that MTCS is satisfied with reports filed by Woodland Heritage, noting they are based on 1993 technical guidelines which were updated in 2011. New guidelines are more prescriptive on monitoring and he complemented the work that has been done as a nice mix of 1993 guidelines and following direction of new guidelines.

LDB elaborated on construction plan and monitoring protocols.

AHI observed that in the Stage 1 archaeology report, a control dam is shown immediate adjacent to the site. He noted that revised plans move the structure away from archaeology site. The only additional information that he noted would be helpful is to use contour mapping and project overlays to clearly demonstrate the project does not encroach on the site.

MH noted that there may be some confusion over how ZOI is being interpreted. There is more than one type of ZOI. The construction ZOI which relevant to the archaeology sites is being confused with downstream ZOI which refers to water level fluctuations that do not affect the archaeology site.

ACTION: Xeneca to put its archaeology protocols in a letter to MTCS.

ACTION: Xeneca to use contour maps that denotes construction areas and location of archaeology test pits. (Luke will send UTM coordinates that can be super imposed on topographic maps showing archaeology sites.)

ACTION: Xeneca to forward the monitoring plan for archaeology for construction to MTCS.

Downstream effects below Domtar:

WS informed the meeting that he has spoken to Domtar representative Sharon Semeniuk, and Ryan Stainton has spoken to Domtar's dam operator.

MH recapped action items from February 27-28 agency meeting including MNR review of Domtar flow data and assessment of downstream impacts. MH observed that Xeneca also analyzed flow data and concluded that impacts on Domtar are not substantial and that, unless Domtar chooses to operate its facility differently, there is no additional downstream impact.

Further, it was observed that Xeneca has provided a draft MOU to Domtar. The MOU clearly states Xeneca will do no harm to Domtar and if harm is inadvertently caused, Xeneca will compensate the company.

WS said that he and RS have reviewed NP's calculations, noting that it is a good analysis, but that they disagree with the conclusion that there is no concern on effects on Domtar and further downstream. The numbers would suggest that there is potential for increased range of daily flows below Domtar. RS has informed WS that there is a great deal of uncertainty in numbers.

UR acknowledged Domtar's concern is at low flows and potential difficulty in effluent treatment. Similar concerns have been raised by MOE, but the issues are resolvable and have been included in the MOU provided to Domtar.

WS noted that Domtar's other concern is that, at high flows, a pulse of water from Xeneca could merge with a pulse from Vale. This scenario could be highly problematic because Domtar has to operate their dam manually and would have to spill water. At flows above 85 cms Domtar has to pass water.

WS added his concern that, if Domtar has to increase the range of flows and spill water, it will affect the range of flows below Espanola as well. He cited need for a hydraulic model to show what will happen at Espanola and/or below Espanola.

CG informed the meeting that RS has outlined specific needs to reduce risk:

- timing of each pulse of water,
- routing analysis model,
- hourly data from Vale operations on the Spanish River,
- detailed information on the Domtar headpond,
- operational limits of Domtar's operation, and
- details on timing of flows from Wabagishik.

WS said an agreement between Xeneca and Domtar on how to mitigate flow variation below Espanola would be ideal.

ACTION: CG to send list of required information to Xeneca.

UR noted that low-flow concerns expressed by Domtar have been recognized by Xeneca and addressed in a draft MOU but to date Xeneca has not received a response from Domtar. It was suggested MNR could encourage Domtar to engage on the issue.

With respect to high flow periods, Xeneca was not aware of concerns and did not contemplate the issue in the MOU but Xeneca firmly believe it can be addressed in a very thorough manner. Domtar has a substantial operating range. When they reach 198 m, Xeneca can adjust its operation to run-of-river with no more pulses.

NP observed that Xeneca has already requested flow data from Vale, but Vale has not yet responded. It is unknown how much and what quality of data is available, but, if all three operators on the river system work together, it would be relatively easy to synchronize operations to avoid multiple pulses converging at Domtar.

MH pointed out that Xeneca's analysis clearly shows that operations have been modified in a manner that effects are well within existing conditions on the river and will prevent Domtar from being forced to spill or process additional water. If Xeneca is not forcing a downstream operation, then Xeneca's downstream influence can only be assessed as ending at that point. If downstream effects are changed by another operator, the issue becomes one that needs to be addressed through water management planning (WMP.)

MH concluded that convergence of multiple pulses of water at Domtar has been problematic in the past and could be problematic in the future unless dealt with through water management planning, which occurs post-EA. For EA purposes, commitment to cause no harm should suffice and be accepted along with commitment to work with other operators on the river system.

UR added that routing studies requested by RS and CG require info that has proven difficult to obtain outside of the WMP process. Communications between Vale and Domtar may be lacking under current

structures. Existing operators on the river have been working on a WMP for eight years and Xeneca cannot be expected to resolve long-standing issues through its ER.

Commitment: Xeneca operations will not exceed Domtar headpond range and if it is expected flows will exceed headpond capacity, Xeneca to revert to run of river operation.

ACTION: MNR to request flow data from Vale.

ACTION: NP and RS to meet to discuss interpretation and keep BT/MOE informed regarding downstream effects being kept within Domtar headpond limits.

ACTION: CG to ask Policy Branch about downstream entities/facilities/owners that will not engage in the EA process.

Roads assessment for ER

DT explained the process involved in determining and assessing road corridors. The process was initiated with studies to understand best options for routing based economic, social and environmental criteria.

Social, economic and environmental values were identified values and roads were routed to avoid impacts.

A year ago, rapid assessment screening for provincially significant wetlands was introduced to the process. KBM did ELC assessment and mapping to focus field work where it is needed i.e. areas identified as having significant habitat.

A plan developed that requires MNR input and MOE acceptance. On projects where there are significant time constraints, spring and early summer assessments will take place to verify desktop analysis and identify any values not known.

It was noted that the Wabagishik project is under time constraints.

AH informed the meeting that his field crews will be on site in late April /early May. Crews will cover a 500 metre wide corridor. The thinking behind studying such a wide corridor is that, if any significant values are identified the road can be routed around them. In total the Wabagishik road is about 4 km in length and the entire stretch will be covered in order to describe:

- vegetation
- landform
- presence of ESA species such as Blanding's turtles, eagles, falcons and, in particular whippoorwill

In addition, photos and notes and research will be provided as well as plant and animal species lists.

AH acknowledged his field visit will be a bit early for whippoorwill and some other later-breeding birds, but he will be looking for suitable habitat and recorders put in place to observe bird calls and identify the presence of specific bird species.

Special attention will also be paid to SWH around stream crossings, moose aquatic feeding areas, etc.

DT observed that the roads plan is considered to meet all requirements, but MNR input and comment from MOE are request before the work begins in order to ensure consensus on the approach.

MNR can provide input on known values, survey protocols, etc.

CG noted that roads and power lines should be done at the same time. DT responded that work on both road and power line corridors is intended to occur simultaneously but because roads are being included in the EA and power lines are not, roads may, in some cases, take priority.

Previous Commitment (from February 27/28 Meeting): As is MNR's preference, Xeneca will ensure that the road and power line follow the same corridor for the Wabagishik project.

UR informed the meeting that when presenting the project to the public, alternative routes were presented and Xeneca intends to keep the alternatives open as the company continue to work with landowners to reach agreements.

BO suggested that the alternative routing also be included in the spring study and UR agreed, but, because the alternative route already has an existing road, the swath of study area would be substantially less than 500 metres.

Responding to questions from EC regarding the information that will be included in the final ER, DT explained that, where initial verification is confirmed by the desktop analysis, there is no need to go further. If questions remain then candidate habitat would be listed as affected and mitigation strategies that deal effectively in avoidance would be in place. We have confidence that it will be a full and complete effects assessment with mitigation.

AH noted that Xeneca may be forced to take a more precautionary approach. The mitigation table would have to recognize potential habitat.

EC said she was pleased to hear of the revised plan for assessment of the road corridors, noting that Xeneca has clearly given a great deal of thought to developing the process and providing additional analysis and field assessment prior to completing the ER. She noted that MOE views this as a very positive step.

She went on to clarify that MOE's previous comments and guidance regarding the requirements of the Class EA with respect to the assessment of roads still applies (E-mail of February 25, 2013). As previously indicated, the Class EA requires that proponents assess potential effects of their projects, as well as any net effects after mitigation, and also requires consultation during the process. As described in the Class EA, all impacts of a project need to be assessed as part of the Class EA process, and presented to the public, agencies and aboriginal communities for comments. She urged that any further analysis or field verification needed to assess potential impacts and identify related avoidance, prevention and/or mitigation strategies be completed during the EA process and reflected in the ER. Additional information should be communicated to stakeholders and Xeneca can use a variety of mechanisms to communicate. I.e. newsletter, website, emails, etc.

In response to comments from other meeting participants that suggested MOE's approval of the proposed approach to road assessment was required, she clarified that because the Class EA process is proponent-driven, MOE does not need to approve the approach to road assessment. One of MOE's roles is to provide guidance on the requirements of the Class EA process. Proponents can choose to act on that advice or not; however, if they choose not to, they should do so recognizing the potential risk for

Part II Order requests. Regardless of the approach taken, proponents should document and provide rationale for the process they have followed, and be prepared to defend their decisions in the event that Part II Order requests are received.

CG cautioned that the approach to do desktop analysis to determine where to put boots on the ground is a risk based approach and what Wabagishik requires may not be the same as other projects.

The meeting heard that Wabagishik is the most difficult project to assess for roads because of the small knowledge base, and presence of ESA species. The furthest west power line option has been eliminated due to private land issues, and that the eastern option is Xeneca's preference.

ACTION: WS to provide deer yarding info to Xeneca (Grace Yu)

ACTION: AH will provide survey protocols to MNR/ MOE for comment. Will be provided in three weeks' time (week of April 8th.)

Wabagishik Agency Meeting: Action Items & Commitments
Closure Discussions
March 21, 2013

ACTION: Xeneca to provide update on the most accurate numbers to be used in Operating Plan

ACTION: MNR to provide consolidated comments on minimum flow

ACTION: MOE to provide comments on minimum flow

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ACTION: MNR/DFO to review compensation plan and discuss on a follow up phone call including KE, WS, AS and NP during the second week of April.

ACTION: At same time as the compensation plan is being discussed in three weeks' time, biological monitoring plans can also be discussed with a view to reaching consensus on the plans.

ACTION: GY to add monitoring of pool to water quality monitoring program.

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MOE / Xeneca / OWA Teleconference Meeting Minutes
Road Assessment under the OWA Waterpower Class EA
April 3, 2013

Attendees:

Paula Allen (PA), MOE
Carrie Hutchison (CH), MOE
Laurie Brownlee (LB), MOE
Rosanna White (RW), MOE
Kevin Hosler (KH), MOE
AnnaMaria Cross (AC), MOE
Ross Lashbrook (RL), MOE
Paul Norris (PN), OWA
Colin Hoag (CH), OWA

Mark Holmes (MH), Xeneca
Mike Vance (MV), Xeneca
Arnold Chan (AC), Xeneca
Grace Yu (GY), Xeneca
Dave Thomson (DT), Dowland
Karen Sounders (KS), KBM
Al Harris (AH), Northern Bioscience
Tami Sugarman (TS), WESA

Meeting Purpose: To clarify the requirements for roads assessment under the OWA Waterpower Class EA

CH provided a short overview of the purpose of the call which was to determine what the requirements are for roads assessment under the OWA Waterpower Class EA. She indicated that MOE had internally reviewed the Class EA and indicated that roads are within the project components and also under the Glossary of Terms. She further noted that she was not entirely current on Xeneca's approach.

MH mentioned the OWA Class EA does not clearly say what is required for roads assessment. There may be different interpretations of the requirements. Xeneca had discussed different approaches with consultants. He updated Xeneca's approach by noting that Xeneca is currently undergoing a very robust desktop review incorporating ELC, GIS information, MNR's input values, and also forestry resource inventories with an intention to avoid any sensitive areas or private properties. If any roads were transecting private property, Xeneca would engage in discussions with those parties. The next phase would involve a ground assessment to confirm the desktop review. He noted ground assessment would be in the EA. MH also mentioned the routes information was presented to the Public and FNs.

MH noted that there were two tracks: those that were on a fast-track process because of timeline constraints and those that have greater flexibility on deadlines. For projects requiring fast tracking MH noted that Xeneca would assess within a 500 m wide swath and that if sensitive values were identified in the desktop review, Xeneca would re-route the roads around the feature to avoid it, or otherwise address, assess and mitigate any impacts all of which will be included in the final ER. This approach was under development by Dowland Inc. and Northern Biosciences and KBM since last October and is intended specifically to meet the requirements of the OWA Class EA.

DT noted that Northern Bioscience (Al Harris) and KBM have been engaged to conduct a detailed desktop review followed by spring field work to identify areas of significant habitat and potential impacts. DT indicated that this activity would like occur based upon appropriate weather during mid-spring, which was likely to occur in late April or the first two weeks of May of this year. DT further indicated that KBM Forestry was compiling an assessment of the GIS database in order to focus the assessment. With assistance of new ELC data, GIS information and MNR input, new roads will be fully

sampled. Through verification of significant habitat, if any candidate significant habitat exists, mitigation and follow-up monitoring will be implemented. The process would be applied differently site by site.

CH indicated her appreciation that Xeneca was getting on the ground assessment information. She then raised concerns about archaeology assessment for roads as well. DT indicated that Woodland Heritage would be conducting Stage 1 and Stage 2 on the ground assessments, and that in one case Wanatango, there would be a Stage 3 assessment. DT indicated that Woodland was of the view that all of the fieldwork could be completed by the end of June with reports following shortly thereafter. MH indicated that for the roads, there was unlikely to be many areas of high potential, but they would focus on obvious areas such as water crossings and known portage trails. MH reconfirmed however, that on-the-ground assessment work would occur for archaeology.

MH also noted three Stage 3 sites are known within Wanatango project footprint. One could be avoided and mitigation measures would occur. The other two sites, he noted that Stage 3 and 4s were likely to be conducted. Aboriginal consultation was occurring for archaeological work on this site. CH reiterated that avoidance strategies should be employed for Wabagishik Rapids and the appropriate protocols would need to be put in place in consultation with the MTCS. MH told CH that Xeneca's archaeology consultant will provide written confirmation of avoidance and monitoring protocols to MTCS.

Commenting on Xeneca's proposed assessment plans CH said that from what she had heard, this was much more detailed than she had previously understood and that the approach through a robust desktop study to help field assessment looked good and appeared to be sound. She then asked whether LB or MM were in a position to speak to specific projects. They indicated that for the purposes of this call, they were not in a position to speak to these issues. LB did note that Marter Twp. was scheduled for discussion next week. CH reiterated that, notwithstanding today's discussions, there was no final decision of assessment on any of Xeneca's projects. She noted however, that if the discussed process was being followed, this would appear to meet the intent of the Class EA.

PA noted that these discussions with MOE were intended to provide advice to proponents about the requirements to meet the Class EA and good process has been made. She noted that the appropriate staff appeared to be on the call. She reminded Xeneca that it was important, notwithstanding the discussion, to adequately and properly document in the Environmental Reports all work that is being undertaken

MH then asked about the adequacy of the assessment process proposed for projects that were on the fast track. CH indicated Xeneca's approach appeared sound.

MH observed that the roads assessment requirements for OWA Class EA are different than what is required for the forestry industry and it would be helpful to understand why there is such a substantive difference. At some future point, the waterpower industry might ask why it is being required to adopt a more rigorous approach than the forestry industry.

He noted it is good to have confirmation on the approach to construction of new roads, but questions remain regarding upgrades to existing roads, how much assessment was required? CH responded by indicating that the proponent was required to fully describe the project area and its potential impact, but indicated that MOE was always open to discussion and clarification on whether a particular approach would be appropriate. MH noted that the purpose of these calls in these instances is to get clarification, so as to ensure that we can properly scope the necessary work, and avoid receiving future comments that "the assessment was inadequate and did not meet the requirements of the Class EA".

MH then turned to PN for an industry perspective. PN noted that he has been invited to join the call to speak to industry issues and indicated his appreciation to participate. He noted that there is never a single way to approach a problem and that the creativity of the parties is an important feature of the design of the Class EA. He went on to note that this was part of a planning process and that the purpose of these assessments was to lead to the issuance of interim tenure to the proponents so that they could proceed with their projects. He then noted that on the broader challenge of policy interpretation, the OWA would continue to work with MOE's policy shop to address these issues.

In wrapping up the call, PA noted that, while the MNR had been invited to participate, it appeared that they could not send a representative today. PA reminded Xeneca that MNR should be looped into the same discussions as today's. She noted MNR is ultimately required to provide a disposition of the Crown Resource, and that any disposition must be consistent with Crown Stewardship EA requirements. MH responded that while MNR was not on the call today, KBM and Dowland had been in discussion with MNR for several months in the course of developing this approach. In previous discussions with Sudbury and Chapleau Districts, MNR had indicated they were comfortable with the proposed approach; the requirements of the Lands and Rivers Improvement Act (LRIA) are met.

Wabagishik – Fish Habitat Compensation Call April 25, 2013

Attendees

Andrew Schiedel (NRSI), Lynn Moreau (WESA), Scott Finucan (MNR), Brendan O'Farrell (MNR), Kelly Eggers (DFO), Ciara DeJong (Ortech), Steph Hodsoll (Xeneca), Grace Yu (Xeneca), Wayne Selinger (MNR), Nikki Boucher (MNR)

Introductions

Andrew introduced the fish habitat compensation plan as a preliminary document as not all design details are in it. It is intended to accompany the EA to indicate the plan for fish habitat compensation, without all design details included.

Discussion

1) Fish Habitat Compensation Plan

MNR and DFO have had a discussion about this document, and have similar feedback.

Firstly, agencies would like more detail to be added to the document. They would like to see this detail added prior to reaching the authorization stage. Kelly discussed adding more detail to the Harmful Alteration or disruption, or the destruction of fish habitat (HADD) to quantify it, using available modeling information to better delineate where habitat suitability is, and under what flows.

Kelly suggested that it may be partly a matter of writing more about what was done to arrive at the area of habitat to be impacted, as well as using modelling output.

Andrew confirmed that more could be written about the methods for determining the area to be impacted. There may also be potential to use additional modelling information, and this could be explored.

ACTION: Andrew to put more detail around quantifying the HADD.

ACTION: Andrew to provide more information about where HADD number came from, using available cross-sections to better refine calculations of habitat loss if possible.

ACTION: Xeneca should consider differentiating between species for determining loss of habitat.

These actions should all be undertaken prior to submitting the EA.

Nikki stated that compensation is not the same as preventing habitat loss or overall benefit for ESA permitting. They usually request a 2:1 ratio of habitat loss for species at risk.

Scott suggests that it would be helpful to get better definition of existing habitat loss. In particular, it would facilitate discerning between lake sturgeon and walleye spawning habitat.

Agencies agree that Andrew should expand the suitable range of velocities to include 0.3m/s as the minimum velocity. The combined walleye and lake sturgeon velocity should also include this minimum.

ACTION: Andrew to update Table 1 – change walleye and combined velocity ranges to be 0.3 to 1.1m/s. This new range of flows to be considered in quantification of HADD and in design of compensation areas.

Compensation plan needs to show exactly what is presently suitable and will be suitable under proposed design. There may be areas within the existing habitat that could be enhanced to offset productivity loss. Need some way to show where in the stretch of river suitable habitat exists. Two-dimensional (2D) modelling would facilitate this.

Wayne Selinger suggests that outlet to embayment may be an option for compensation, and that Graveyard Rapids probably isn't the best option. Tailrace area, which was largely ignored in Nava's evaluation of different compensation sites, may be the best bet for compensation.

ACTION: Xeneca/Andrew to consider prioritizing sites for where to do fish habitat compensation:

1. tailrace (although, no road access)
2. embayment
3. Graveyard Rapids

Brendan stated that MNR would like to see more concentration on outlet section at tailrace through to the embayment. Kelly stated that the goal is to offset loss of productivity, so aiming for a square metre count is acceptable but we can also aim to increase productivity in existing productive areas (e.g. tailrace.) Would require some discussion of how exactly to measure this.

ACTION: Xeneca to consider recommendation from MNR/DFO to conduct 2D modeling after the EA is completed. There could be a written commitment in EA about the method to be used for design [more detail on what this commitment would look like below.]

Kelly explained that DFO looks for a high compensation ration when the confidence in its function is low. The compensation ratio could be closer to 1:1 if methods such as 2D modelling are used to increase the confidence in the compensation habitat. Also, a lag time between the HADD and then the functioning of the compensatory habitat can necessitate a higher compensation ratio.

Kelly indicated that the remaining upstream habitat should not be considered in accounting for the HADD, as at this time it is not possible to demonstrate the contribution of this habitat to the productivity of the downstream population post-dam construction.

Going to need more than a Bobcat to move boulders around and create habitat – diversified structure is the key, simply dumping rock of suitable size will no suffice. Logistically this will present an issue as there is no road. There are some archaeological concerns on north side, so would have to come in from the south.

Wayne expressed concern that the bulk of energy during freshet flows/walleye spawning period would be absorbed into plunge pool and then routed back around south. His understanding from design & proposed flows of up to 64 cms that flows will be directed into tailrace area. The whole flow regime may be altered, and this needs to be factored in. Again, 2D modelling would help examine future condition and habitat suitability.

Kelly indicated that, while benthic invertebrates are not the primary design criteria, the harmful alteration of feeding habitat/food production area is an impact that has been identified by DFO, so the compensation plan should discuss the benefits of the compensatory habitat to benthics.

ACTION: Andrew to update report to discuss benthics as part of design.

Monitoring

Kelly stated that sampling larval drift would show hatching success. Egg mats show use of the habitat, but also need to show the success of spawning habitat creation. For sturgeon, may only need to sample larval drift if sturgeon eggs captured by mats.

Again, Brendan stated that more detail would be appreciated/very helpful in understanding the compensation document and monitoring plan.

Going back to 2D modeling approach -- Wayne said that if we can move towards river 2D modeling approach to take into account velocity etc. -- that would also be a monitoring strategy (to see if at the end of the day those projected flows are realized). Would like this 2D modeling to focus on priority site (tailrace being preference #1 of agencies.) Suggested upstream limit -- around dam, downstream limit -- extent of habitat creation within edge of the embayment

Scott said that the better the DEM & mesh layer, the better the model will come out. Would be comfortable with above upstream/downstream limits. Could also offer Andrew some suggestions about egg mats etc.

Wayne provided some clarification re: Nava's evaluation of potential compensation areas. Specifically, there is a heavy sand load at Nairn whereas Nava reported no concern re: siltation at Nairn.

ACTION: Steph to send Nava an email stating that there is siltation at Nairn Falls site (just an informative email -- site is no longer being considered for compensation habitat)

Regarding process, Kelly advised that DFO will be requiring a letter of credit to cover cost of creating compensatory habitat. This will be required under legislation by the time we reach that point. This is a standard practice becoming regulation.

ACTION: Agencies to provide comments regarding Habitat Compensation Plan to Andrew & Steph within the next week if possible (by May 2.)

2) Monitoring Plan

Wayne has not had time to review this document, but Brendan took a look at it and doesn't think that feedback will require another call. MNR/DFO can submit written comments on the Monitoring Plan.

ACTION: Kelly recommended adding fish mortality monitoring (i.e. will be required for a Fisheries Act Section 32 Authorization).

ACTION: MNR to provide comments once all reviewers have had a chance to review the document -- target May 10th.

Wabagishik – Fish Habitat Compensation Call: Action Items

April 25, 2013

ACTION: Andrew to put more detail around quantifying the HADD.

ACTION: Andrew to provide more information about where HADD number came from, using available cross-sections to better refine calculations of habitat loss if possible.

ACTION: Xeneca should consider differentiating between species for determining loss of habitat.

ACTION: Andrew to update Table 1 – change walleye and combined velocity ranges to be 0.3 to 1.1m/s. This new range of flows to be considered in quantification of HADD and in design of compensation areas.

ACTION: Xeneca/Andrew to consider prioritizing sites for where to do fish habitat compensation:

1. tailrace (although, no road access)
2. embayment
3. Graveyard Rapids

ACTION: Xeneca to consider recommendation from MNR/DFO to conduct 2D modeling after the EA is completed. There could be a written commitment in EA about the method to be used for design [more detail on what this commitment would look like below.]

ACTION: Andrew to update report to discuss benthics as part of design.

ACTION: Steph to send Nava an email stating that there is siltation at Nairn Falls site (just an informative email – site is no longer being considered for compensation habitat)

ACTION: Agencies to provide comments regarding Habitat Compensation Plan to Andrew & Steph within the next week if possible (by May 2.)

ACTION: Kelly recommended adding fish mortality monitoring (i.e. will be required for a Fisheries Act Section 32 Authorization).

ACTION: MNR to provide comments once all reviewers have had a chance to review the document – target May 10th.

Xeneca/MOE Call – August 7, 2013
MOE Comments on Draft Wabagishik CMP & Operations Plan

Attendees:

Todd Kondrat (TK) (MOE)
Don Hamilton (DH) (MOE)
Ellen Cramm (EC) (MOE)
Brian Turnbull (BT) (MOE)
Ciara DeJong (CDJ) (ORTECH)

Muriel Kim (MK) (OEL)
Uwe Roeper (UR) (Xeneca)
Stephanie Hodsohl (SH) (Xeneca)
Mark Holmes (MH) (Xeneca)

Joined late: Nava Pokharel (NP) (Xeneca)

Call started at 2:10 p.m.

1. Introductions

SH explained that the purpose of the call was to discuss MOE's July 18, 2013 review comments on the Operations Plan (March 2013) and the Construction Management Plan (March 2013), and Xeneca's responses to these comments.

2. Discussion:

A. Construction Management Plan (CMP) Comments

Section 1.4 – Public Access During Construction

Xeneca will revise the CMP as requested.

Section 1.7 – Fuels, Oils & Lubricants

Xeneca will revise the CMP as requested.

Section 1.8 – Solid Waste

UR asked if Xeneca should actually identify the Waste Disposal Site (WDS) by name.

EC said it would be good to identify the location as there may be concerns over truck traffic to/from the WDS, or other related effects.

TK says the most important things are to identify how many loads will be going through, how it will be transported, and recognized that not identifying a specific WDS would allow Xeneca to keep their options open. EC later clarified that, as the decision to use one WDS over another may lead to different effects, MOE recommends, as indicated in the letter of July 18, that the final ER should identify which WDS will be accepting waste from the project. The WDS can be identified by name. If the proponent wants to allow for some flexibility on implementation of the project, they may want to consider also identifying an alternate or backup WDS in the Environmental Report.

Section 1.10 – Dust Control

Xeneca will revise the CMP as requested, and address as necessary when submitting the application for PTTW.

Section 2.1 – Vegetation Clearing

UR says that Xeneca is not proposing to remove roots. The sidewalls on the embankment are very steep and Xeneca believes that bringing in heavy machinery would be damaging. Xeneca will clear the slash and loose debris. Text has been added to CMP to reflect this approach.

TK and EC said MOE is fine with that approach.

Section 2.4 Rock Blasting

UR says that Xeneca will reference the procedure for how we will manage acid rock drainage (ARD) if it occurs. Clarification about the rock sampling analysis & Mine Environmental Neutral Drainage (MEND) analysis.

MOE also suggested getting a geologist's opinion – this is achievable.

TK: If CMP is updated to reflect July 18 comments, will be adequate. ARD is somewhat of a minor issue, but needs to be covered off in term of potential risk.

Section 2.5 Concrete Construction

Xeneca does not plan to do on-site concrete construction, but rather to bring in pre-mixed concrete from Espanola. Will clarify the text – there will NO on-site concrete construction.

EC advised that Xeneca take comments into consideration for its other projects. The CMP seems general & not very project specific. SH advised that in the CMP there are two parts: a general section, and a site-specific section.

UR says that Xeneca will consider these comments for its other projects.

Section 3.6 Changes During Construction

UR says that Xeneca is aware that any significant project change requires an addendum.

EC suggests referring to Class EA Addendum Provisions (suggestion for OEL.) MK can follow up with EC if clarification is necessary.

Section 4.3 Water Flow Monitoring

Xeneca already has monitoring in place already, and this will continue during construction.

MOE's concern seems to relate to low-flow conditions, and Xeneca is thinking of adding in some text around if construction is occurring during low-flow conditions, we will ensure no withdrawals are done OR leave less than 6.5 cms.

UR says that the detail is probably best dealt with in Permit to Take Water (PTTW) application, but Xeneca will add in comment to CMP if flows in the river are below 6.5 cms and will monitor flows accordingly.

TK asked what monitoring we have, and UR explained Xeneca's data points (upstream & downstream.) In addition, Vale has been providing us with daily flow data from upstream upon request. Xeneca has also been using the flow data to develop a rating curve for Wabagishik Lake. Xeneca has two good data sources to tell us how much flow is coming down the river.

B. Memo Report: Vermilion River Site #6

1st paragraph

Xeneca has completed hydraulic modeling to show what water level fluctuations would be during intermittent operations day. Showed that if you varied flow between daytime and nighttimes too much, caused fluctuations greater than what Xeneca is committing to. Xeneca then changed Operating Plan (OP) to say that Wabagishik GS will not have greater variability in daytime to night-time flows than what the modeling shows will keep the GS within said limits.

BT says that he recalls a document in which Xeneca referenced 30 cm fluctuations 400 metres downstream, but has never seen modeling with 30cm fluctuations. The latest unsteady model result shows 37 cm fluctuation in the embayment area.

NP has committed to provide a modeling scenario showing only 30 cm fluctuation.

UR said that Xeneca's main compliance approach is to continue water level monitoring in pool 400 metres downstream. Estimates have been on the conservative side. Xeneca would adjust daytime flow rate so that fluctuations downstream will not exceed commitment made of 30 cm maximum.

BT: Looking to see what flows would be to achieve that 30 cm fluctuation.

UR: If Xeneca can't achieve it with 25 cms, will run the plant at 20 cms.

BT: Has never seen the modeling analysis at 20 cms, so don't know what the fluctuations will be.

UR: Suggests that NP give BT a call to discuss this. Would give this as a standalone piece of data, rather than revise previous documentation/reports. Xeneca has distributed Canadian Project Limited memo, November 29, 2012.

2nd paragraph

UR requested clarification on what exactly that meant.

BT: 10 cm of fluctuation suggested at Domtar headpond in a Xeneca document. With Vale and Domtar operating, how exactly is Xeneca going to meet its commitments?

UR says that Domtar has 20 cm headpond operating band, and it would be hard to identify whose operations (Vale's, Wabagishik's, or other) are causing a change in level at Domtar headpond.

Wabagishik GS will go to run-of-river (ROR) if Domtar headpond reaches outside its operating band, and this is going into our agreement with Domtar. This has been updated in the operating plan. Originally, Xeneca had committed not to exceed level fluctuations at Domtar headpond (Vermilion-Spanish confluence) +/- 5 cm but this has been removed as it will be difficult to monitor this compliance as the Domtar facility headpond could fluctuate due to three different reasons (i.e., Domtar operations, Wabagishik Rapids operations or Vale's GS operations in Spanish River.)

C. Operating Plan Comments

Upstream Headpond Extent/Hydrologic ZOI

Rating curve that Xeneca developed for Wabagishik Lake already reflects water level fluctuations resulting from wind effects. The effects are quite small.

Xeneca has committed to installing two monitoring stations to deal with wind effects, and will use an average of the 2 stations to get an accurate number

When Xeneca prepared the rating curve, we used over a year of data. Xeneca has the monitoring station data and will continue to superimpose data onto the existing data curve, to refine and update it continuously until construction.

Downstream ZOI

First Paragraph

[Added in post-meeting by MOE for clarification: To further clarify our comments of July 18, 2013, MOE note that, as indicated in the Class EA (Section 4.2.2, Table 3, and Appendix A) and as previously noted in MOE's comments on the draft ER, in identifying and assessing potential effects, proponents are to consider environmental, social, cultural, and economic effects. All potential impacts of the project should be identified and assessed through the EA process.]

UR: We strongly believe that the DZOI ends at Domtar dam. We are in deep discussions and negotiations with Domtar. We just issued response to Domtar's concern letter from July 25 2013. We have updated the OP to include specific commitments towards Domtar regarding mitigation. Asks what MOE (specifically) is still looking for?

BT: Questions as to how Domtar would be able to handle the amount of water coming downstream. (Impact on Domtar operation.)

UR: Have been trying to cover it off with direct discussions with Domtar. Have included a number of commitments that should cover off most concerns. Plus a Memorandum of Understanding (MOU) with Domtar is being prepared.

Second Paragraph

UR: If issues have not been adequately addressed in EA, Xeneca will have to address them in permitting – we are aware of this.

UR explained the steps being taken to address Domtar's concerns – MOU, HATCH review of operating plan (paid by Xeneca) -- but does not think the MOU will be signed before the final ER is submitted. Will be complete before PTTW application.

Upstream Operation Parameters

UR says he thinks there is some confusion between the terms 'inundation' and 'ZOI.' We've said we plan to follow natural lake levels on an annual basis. Xeneca doesn't consider the lake to be inundated if operations are following natural rating curve. Lake is not considered new inundation, it is considered existing conditions.

We have tried in the OP to clarify – have added a graph showing Lake Wabagishik lake levels and with the +/- 5 cm fluctuation.

Confusion may have occurred before Xeneca committed to following natural lake levels according to rating curve.

Monitoring still underway, and Xeneca will be downloading that data again several times before construction to help refine the accuracy of rating curve. NP says Xeneca has found that the Vale data is quite reliable for Wabagishik site.

ACTION: Brian & Nava to have a conversation about updates to OP.

Downstream Operating Parameters

1st paragraph: Information has been added to Table 6.

2nd paragraph: Agreement with Domtar is underway, as previously discussed.

Xeneca will be monitoring flow discharges from GS on an hourly basis. Information will be available to Domtar & Xeneca can make it available to agencies online as well if they would like. Access to data will be simple as plant will be automated.

3rd paragraph: Will be clarified in the text. Negotiation is underway. When agreement is achieved, it can only be made public if Domtar also wants it to be public as it's a bi-lateral agreement. We can tell agencies about it, but we can't force Domtar to make the agreement public.

DH: Given high potential for compliance issues at Domtar dam, important that agreement is in place. What is contingency if agreement cannot be reached?

UR: Addressed in latest version of OP. If there's a question about meeting compliance, Xeneca will be providing at least 6.5 cms at all times (if no agreement with Domtar can be reached), which will enable Domtar to meet effluence dilution compliance downstream. Have also provided for legal indemnification. Fail-safes are built into agreement.

Additional Operating Constraints

Item 2 – Daily water level fluctuation due to operation not to exceed +/- 5 cm of daily average downstream of Spanish River Confluence – Clarification as to how the +/- 5 cm will be met as a commitment - Has been revised as previously mentioned, so have changed OP to say we'll live within operating limits that Domtar has & monitoring as well.

Item 3 – Facility to go into run-of-river operation when drought declared by Province - Text will be added to OP to clarify

Item 5 – Daily water level fluctuations due to operations not to exceed +/- 15 cm of daily average in pool 400 m downstream of facility – Xeneca has done modeling to ensure that can meet targets, installed monitoring stations, and come up with strategies to address these items.

Item 6 –Clarification should be provided as to how “daily facility releases equal to pre-project rating curve” will ensure that lake levels will not be affected on a higher frequency –

UR asks for clarification over “higher frequency”

BT says it was unclear description in OP.

UR explains that all operations will be planned a day in advance. We have tried to clarify in the OP, and will make an effort to clarify it even more. Domtar carries out “reactive operations” (operators check flows/levels and then adjust operations as needed), but that it not how the Wabagishik Rapids GS will operate. We will plan in advance so there's only one operating profile per day. Can explain this further in OP.

Summary Discussion on Operations

In new OP, Xeneca will very clearly explain how we will follow natural lake levels.

Regarding statement that "Downstream effects on Domtar's operations, as well as the timing of water release with respect to Vale's operation on the Spanish River will need to be considered during the EA process and addressed in the final ER" -- Vale refuses to share their operations data with Xeneca, or with Domtar. This is also one of the reasons we cannot address MNR's request for a routing study. We'd like you to understand that we cannot fully address MOE's comment.

Domtar tried very hard to stay within compliance band in headpond. Also tried to deal with variable inflows they receive from Vale upstream. Domtar also operates facility on daily basis to pass more water during peak electricity consumption/price hours. These are the existing conditions. Xeneca cannot be penalized for being the newest user on the river. UR would like to defer some of these discussions to WMP discussion, which has been underway for 8 years.

Xeneca has taken reasonable steps with Vale's Lorne Falls plant and Domtar dam, which are the 2 facilities that we might affect. We cannot deal with what's going on in the Spanish River, which is a river that we are not located on.

EC: In response to a question about cumulative effects, EC recommended that cumulative effects be addressed in the final EA document. (As noted in MOE's letter of July 18, matters considered at the permitting stage of the project will include the potential for cumulative effects, among other matters. It would therefore be in the proponent's interest to demonstrate in the EA document how cumulative effects have been addressed.)

Proposed Agreement with Domtar

Xeneca understands and acknowledges MOE's concerns.

The agreement with Domtar doesn't specify as many parameters as the OP, but it does specify key ones (minimum flows etc.) We can share the draft agreement with MOE before it is signed with Domtar. We will share the document with Ellen Cramm and she can have someone review it if MOE would like. DH said that MOE does not need to see a draft of the document, but just wants to see in the final MOU that MOE concerns have been addressed.

It is not Xeneca's intent to put the Domtar agreement out in the public. EA talks about commitments that we plan to make, but we do not want public interest groups commenting on a business agreement.

EC says that maybe wording of MOE's July 18, 2013 comments isn't clear. Not intent that Xeneca put agreement out there. Because the Class EA requires proponents to identify mitigation measures, and since Xeneca is proposing the agreement with Domtar as mitigation measure, the proponent should provide enough information in the final ER to allow the public, agencies, and Aboriginal communities to understand how the agreement will mitigate potential impacts. The final ER should also include specific commitments to the execution and implementation of the agreement with Domtar.

UR: PTTW requires monitoring, yes. We plan to do this. Xeneca plans to do that itself.
Committed to 6.5 cms in absence of agreement with Domtar.

UR says Xeneca has discussed minimum flow requirements with MNR. Xeneca has discussed and negotiated to ensure our minimum flow requirements meet whatever requirements MNR has set out for Xeneca.

Closing Statements.

Meeting concluded at 3:40 p.m.

Canadian Environmental Assessment Agency



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
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M4T 1M2

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.

Danielle Dempsey

From: Tami Sugarman
Sent: October-08-10 12:11 PM
To: Tami Sugarman
Subject: FW: Xeneca Hydro Development Project - Comments on the Draft PDs

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

From: Ed Laratta
Sent: September 28, 2010 5:37 PM
To: Liu,Amy [CEAA]; Moggy, Derrick; Don Chubbuck
Cc: McDonald, Lisa; Islam,Manirul [CEAA]; Hughes, Jennifer; Ed Laratta
Subject: RE: Xeneca Hydro Development Project - Comments on the Draft PDs

Thank You Amy,

I have prepared an email to assign all the actions from today's meeting (20 items) to our staff or consultants. The MNR REA people from Peterborough were: Jim Beal and Ken Cain. Our Vanesa will send you the PIC schedule for November.

The meeting was very helpful and I was glad I had a chance to join you and Munirul.

Regards,

Edmond.

From: Liu,Amy [CEAA] [mailto:Amy.Liu@ceaa-acee.gc.ca]
Sent: September 28, 2010 4:33 PM
To: Ed Laratta; Moggy, Derrick; Don Chubbuck
Cc: McDonald, Lisa; Islam,Manirul [CEAA]; Hughes, Jennifer
Subject: Xeneca Hydro Development Project - Comments on the Draft PDs

Hi Ed.

Thank you for coming to the CEAA office today to discuss the draft project descriptions regarding the hydro development projects proposed by Xeneca Power Development Inc. As discussed, I am forwarding you CEA Agency comments (attached) as well as the comments from Transport Canada (see below).

Some action items and things to note from the meeting include:

- DFO to send comments on draft project description to Xeneca (Ed Laratta and Don Chubbuck) with cc to CEAA
- Xeneca to provide the MNR Renewable Energy Coordinator (Peterborough) contacts to CEAA
- Xeneca to provide CEAA with a copy of the Public Information Centre schedule.
- CEAA to solicit federal authorities on number of CD and hard copies required for review of project description. CEAA to email Xeneca on results.

- Xeneca plans to finalize the project descriptions by mid-October 2010 and will distribute for review.

Don: Ed mentioned that the CEA Agency can contact you in his two week absence so I am copying you on this email.

Please feel free to contact me if you have any questions. If you have any questions regarding Transport Canada comments, please contact Jennifer Hughes.

Thank you.

Amy Liu

Project Manager | Gestionnaire de projects

Ontario Region | Agence canadienne d'évaluation environnementale, Région de l'Ontario

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From: Hughes, Jennifer [mailto:jennifer.hughes@tc.gc.ca]

Sent: September 28, 2010 8:08 AM

To: Liu, Amy [CEAA]

Cc: McDonald, Lisa

Subject: FW: Xeneca Hydro Development Project - Vermillion PD

Hi Amy,

Lisa and I have reviewed the draft PD for the Vermillion River project, and offer the following comments.

For the TC EA Branch to determine its CEAA role for a given project with respect to the NWPA in the absence of an application having been made, it is most straightforward when there is a former "named work" involved (i.e. bridge, boom, dam or causeway). This is the case for this hydro project, so as long as the waterway is navigable then we have a trigger. The question remains mainly whether or not there is enough information in the PD to: a) identify all the works that could require NWPA approval, and b) to determine if a waterway is navigable at the location of the proposed work(s).

a) Proposed Works:

The current draft PD identifies proposed dam structures at all four locations. Since dams are former "named works" under the NWPA, then we know an EA is required as long as the waterway is navigable at those locations.

However, there may be other proposed works associated with this project that also require approval under the NWPA. For example, reference is made to access road development. New road construction or road upgrades may have associated water crossings that may or may not require approval under the NWPA. I did not notice any mention of additional water crossings in this draft PD; however, if there will be any additional works potentially affecting navigable waters, they should be identified in the final version. Please see general guidance provided below in Section C for additional comments.

b) Navigability Assessment:

The submission of a full NWPA application at the project description stage typically allows the TC EA Branch to confirm with certainty our CEAA responsibilities; however, we recognize that in some circumstances that may be difficult. Where TC is being asked to confirm its CEAA role in advance of the proponent submitting an NWPA application, it would be helpful for the proponent to consider submitting a navigability inquiry to the Navigable Waters Protection Office

(NWPO) in advance of submitting the PD. The NWPO is authorized to provide an opinion of navigability for the purposes of determining if the NWPA will apply to a project and its location. If the results are known in time, the proponent should include them in the PD; if not, a note to the effect that "navigability assessment pending" could be included instead.

In order to initiate a navigability assessment, the NWPO will require the following information be submitted in hardcopy by mail to 100 Front Street South, Sarnia, ON N7T 2M4:

1. a letter formally requesting a navigability assessment,
2. a brief description of your proposed works (specific to works in, on, over, under, through or across the potentially navigable waters),
3. photos of the waterway,
4. a site map clearly showing the location of your proposed works, and
5. the name of the waterway for which you are requesting an assessment.

c) General Guidance on Information Requirements for PDs:

Overall, here is some general guidance on questions that should be answered in the PD to assist TC in determining potential NWPA requirements and its CEEA role:

- Are new works or undertakings proposed to take place in, on, over, under, through or across any navigable water?
- Are existing works that were not previously authorized under the NWPA to be modified on a watercourse or water body?
- If "Yes", to either of the above questions, indicate and/or provide to the best extent that it is known at this time:
 - Description of work (e.g., bridge, boom, dam, culvert, causeway, wharf, pier, jetty, docking/trans-shipment facility, water intake, pipeline crossing) including approximate dimensions
 - Description of any associated activities (e.g., dredging, alteration of water bed and/or water banks)
 - Description of any ancillary and temporary works (e.g., cofferdams, detours, fencing, or temporary bridges) including approximate dimensions
 - Name of watercourse or water body
 - How water flow and level will be altered
 - Measures being contemplated to avoid affecting navigation
 - Contingency plans for Horizontal Direct Drilling
 - Any known navigational use of the watercourse or water body
 - Photos taken upstream, downstream, and across the watercourse or water body of proposed crossings

Thanks for the opportunity to review the draft. Let me know if you have any questions or wish to discuss further.

Take care,
Jennifer

Jennifer Hughes
Supervisor, Environmental Assessment
Transport Canada - Ontario Region
4900 Yonge Street, 4th Floor
Toronto, ON M2N 6A5
Tel.: (416) 952-0469
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No virus found in this incoming message.

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Version: 9.0.856 / Virus Database: 271.1.1/3164 - Release Date: 09/28/10 02:34:00

Natalie St-Pierre

From: Tami Sugarman
Sent: November 22, 2010 12:03 PM
To: Blajchman,Amiel [CEAA]
Subject: RE: Xeneca Power Development Inc. proposed Wabageshik Rapids waterpower project on the Vermilion River - Project Description Document Notice
Attachments: Final Project Description Vermilion River Wabageshik Rapids Nov 2010 Part 1.pdf

Hi Amiel

Here is Part 1 of the Vermilion Wabageshik PD. Part 2 (Figures) will follow. This document was uploaded to our ftp at 1:51 pm on Friday afternoon so not too sure why you could not see it on Friday later in the afternoon.

Tami

From: Blajchman,Amiel [CEAA] [mailto:Amiel.Blajchman@ceaa-acee.gc.ca]
Sent: November 19, 2010 4:40 PM
To: Tami Sugarman
Subject: RE: Xeneca Power Development Inc. proposed Wabageshik Rapids waterpower project on the Vermilion River - Project Description Document Notice

Hi Tami,

I'm having trouble: when I log into .wesa.ca, these are the only files that pop up:

11/19/2010 10:02AM	Directory <u>Ivanhoe</u>
11/18/2010 03:21PM	Directory <u>Larder</u>
11/17/2010 01:29PM	Directory <u>Petawawa</u>
11/17/2010 01:31PM	Directory <u>Serpent</u>

Am I doing something wrong that I don't see the Vermillion/Wabageshik file?

Thanks,
Amiel

Amiel Blajchman
Project Manager | Gestionnaire de projets
Telephone | Téléphone 416-954-7357

From: Liu,Amy [CEAA]
Sent: November 19, 2010 4:10 PM
To: Blajchman,Amiel [CEAA]; 'Tami Sugarman'
Cc: Ed Laratta; Cameron,Darla [CEAA]
Subject: FW: Xeneca Power Development Inc. proposed Wabageshik Rapids waterpower project on the Vermilion River - Project Description Document Notice
Importance: High

Hi Tami.

Amiel Blajchman at the Canadian Environmental Assessment Agency will be the main contact for this file.

Thank you.

Amy Liu

Project Manager | Gestionnaire de projets

Ontario Region | Agence canadienne d'évaluation environnementale, Région de l'Ontario

55 St. Clair Avenue East, Suite 907 Toronto ON M4T 1M2 | 55 avenue St. Clair Est pièce 907 Toronto ON M4T 1M2

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Facsimile | Télécopieur 416-952-1573

Government of Canada | Gouvernement du Canada

From: Tami Sugarman [mailto:tsugarman@oel-hydrosys.ca]

Sent: November 19, 2010 2:20 PM

To: Liu, Amy [CEAA]; ellen.cramm@ontario.ca; rich.rudolph@dfo-mpo.gc.ca; EnviroOnt@tc.gc.ca; EACoordination_ON@inac-ainc.gc.ca; melanie_lalani@hc-sc.gc.ca; Dobos, Rob [Burlington]; Caitlin.Scott@NRCan.gc.ca; john.woodward@cta-otc.gc.ca; Bob.L.Robinson@ontario.ca; gerry.webber@ontario.ca; murray.morello@ontario.ca; dan.tovey@ontario.ca; amy.gibson@ontario.ca; David.Pickles@ontario.ca; greg.godin@ontario.ca; paul.sajatovic@sudbury.ca; jmackenzie@town.espanola.on.ca; mark.simeoni@city.greatersudbury.on.ca; doug.nadorozny@greatersudbury.ca; information@nairncentre.ca

Cc: Ed Laratta; Vanesa Enskaitis; Philippa McPhee; pnorris@owa.ca; Rob Steele

Subject: Xeneca Power Development Inc. proposed Wabageshik Rapids waterpower project on the Vermilion River - Project Description Document 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 document for the proposed Xeneca Power Corporation Inc. waterpower development at the Wabageshik Rapids Project site located on the Vermilion River in northeastern Ontario. Xeneca has been awarded a Feed-in Tariff (FIT) contract for this site 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 the 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 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 this document in electronic format for environmental reasons. You may access our FTP site by completing the following instructions:

Site: _____
Username: _____
Password: _____

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 the project description document will be issued shortly to federal agencies and Aboriginal communities.

Other Parties: If you require a paper and/or CD Rom copy in addition to this electronic copy please notify us at EAinfo@oel-hydrosys.ca otherwise we will assume that this electronic version is adequate.

We are pursuing an Ontario Class Environmental Assessment for Waterpower Projects planning process for this site. A federal screening may also be triggered at the site. The proposed Wabageshik Rapids GS development site is located downstream from three other proposed waterpower projects; Xeneca's At Soo Crossing, Cascade Falls and McPherson Falls Hydroelectric Generating Stations. The proposed Wabageshik Falls GS development site is located approximately 30 km downstream of the location of the other three sites and is therefore interpreted to be independent based on hydrology and biology. We have therefore decided to pursue a separate Class Environmental Assessment for Waterpower Projects planning process for the Wabageshik Falls GS site. The At Soo Crossing, Cascade Falls and McPherson Falls GS sites are located close together and will be assessed under one Class EA planning process.

The project description is intended to provide an overview of the project components, general information on the project 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 project. It will also allow a federal authority to determine if there is potential for the *Canadian Environmental Assessment Act (CEAA)* to be triggered by the project proposal and whether the agency will be a Responsible Authority (RA) under *CEA Act* or whether it is able to provide technical expertise as an expert advisor (FA).

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, the purpose of which is to discuss the following items 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
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OEL-HydroSys, WESA Envir-Eau, WESA, WESA Technologies, members of WESA Group Inc.

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Pensez à l'environnement avant l'impression de ce courriel

Natalie St-Pierre

From: Davis, Stephanie [CEAA] [Stephanie.Davis@ceaa-acee.gc.ca]
Sent: February 17, 2011 10:01 AM
To: Karen Fortin
Cc: Bell, Dave [CEAA]
Subject: RE: CEAA not represented at the Xeneca Larder and Raven EA Coordination Meeting held on January 20th
Attachments: img-217090952-0001.pdf; NWPA APPLICATION GUIDE.pdf

Hi Karen,

Did Amiel get a chance to update you before he left on the status of the Federal EA? If not, I'll provide a summary. The federal coordination request is complete. Like a lot of the Xeneca projects we are coordinating, the identified RAs are Department of Fisheries and Oceans and Transport Canada. The expert FAs are Natural Resources Canada, Environment Canada and Health Canada.

Transport Canada has requested that a NWPA application be submitted to their Navigable Waters Protection Office (NWPO). I've attached their response to this email along with an NWPA application guide which gives further details.

They also requested this application at two other Xeneca sites (Wabegishik and Allen & Struthers). I think your colleague Tami Sugarman was going to get in touch with the NWPA office to learn further details. It might be worth chatting with her to see what she has learned.

Feel free to get in touch should you need further info. Have the meeting minutes been released yet?

Kind Regards,

Stephanie

Contact details

Navigable Waters Protection Office
phone: 1-866-821-6631
e-mail: NWPOntario-PENOntario@tc.gc.ca

RAs

Carl Jorgensen (DFO) Carl.Jorgensen@dfo-mpo.gc.ca
Lisa McDonald (TC) Lisa.McDonald@tc.gc.ca

Expert FAs

Caitlin Scott (NRCan) Caitlin.Scott@nrcan-rncan.gc.ca
Sheryl Lusk (EC) Sheryl.Lusk@ec.gc.ca
Katherine Hess (HC) Katherine.Hess@hc-sc.gc.ca

<<NWPA APPLICATION GUIDE.pdf>> <<img-214134502-0001.pdf>>

Stephanie Davis, B.Eng

Environmental Assessment Analyst | Analyste d'évaluation environnementale
Canadian Environmental Assessment Agency | Agence canadienne d'évaluation environnementale
Ontario Region | Région de l'Ontario
55 St. Clair Avenue East, Suite 907, Toronto, ON M4T 1M2 | 55, avenue St-Clair Est, pièce 907, Toronto, ON M4T 1M2
stephanie.davis@ceaa-acee.gc.ca
<http://www.ceaa-acee.gc.ca>
Telephone | Téléphone 416-954-7334

From: Karen Fortin [mailto:kfortin@oel-hydrosys.ca]
Sent: January 31, 2011 12:02 PM
To: Davis,Stephanie [CEAA]
Subject: RE: CEAA not represented at the Xeneca Larder and Raven EA Coordination Meeting held on January 20th

Hi Stephanie

I just checked and haven't yet received a response from Xeneca on draft minutes before I issue to the participants.
I'll forward to you when I do.

Thanks

karen



Karen Fortin, A.Sc.T. — Environmental Approvals Coordinator

OEL-HydroSys Inc. — 3108 Carp Road - P.O. Box 430, Carp Ontario K0A 1L0
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OEL-HydroSys, WESA Envir-Eau, WESA, WESA Technologies, membres de/members of WESA Group Inc.

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Pensez à l'environnement avant l'impression de ce courriel

From: Davis,Stephanie [CEAA] [mailto:Stephanie.Davis@ceaa-acee.gc.ca]
Sent: Monday, January 31, 2011 11:39 AM
To: Karen Fortin
Cc: Liu,Amy [CEAA]; Cameron,Darla [CEAA]
Subject: RE: CEAA not represented at the Xeneca Larder and Raven EA Coordination Meeting held on January 20th
Hi Karen,
I will be involved in the following projects:

1. Allen and Struthers (Wanapitei River) hydroelectric generating station
2. Wabageshik Rapids (Vermillion River) waterpower project
3. At Soo Crossing, Cascade Falls and McPherson Falls (Vermillion River) water power projects
4. Wantango Falls waterpower project
5. Larder & Raven hydroelectric generating station
6. Marter Township hydroelectric generating station

Would you be able to update me on the status of the projects where no project description has been received? My understanding is this applies to projects 3, 4 and 6.

Also, could we schedule a time to talk about Larder and Raven? It would help me get up to speed if I can find out what happened during the conference call. Again, apologies that CEAA was not able to participate.

Kind Regards,
Stephanie

Stephanie Davis, B.Eng

Environmental Assessment Analyst | Analyste d'évaluation environnementale
Canadian Environmental Assessment Agency | Agence canadienne d'évaluation environnementale
Ontario Region | Région de l'Ontario
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stephanie.davis@ceaa-acee.gc.ca
t: 416-954-7334
f/t: 613-952-1573

From: Karen Fortin [mailto:kfortin@oel-hydrosys.ca]

Sent: January 28, 2011 8:28 AM

To: Cameron,Darla [CEAA]

Cc: Davis,Stephanie [CEAA]; Liu,Amy [CEAA]

Subject: RE: CEAA not represented at the Xeneca Larder and Raven EA Coordination Meeting held on January 20th

Thanks for letting us know.

If Stephanie can please confirm which projects she will be involved with when she contacts us, we'll be sure to update our contact list.

Regards,

Karen



Karen Fortin, A.Sc.T. — Environmental Approvals Coordinator

OEL-HydroSys Inc. — 3108 Carp Road - P.O. Box 430, Carp Ontario K0A 1L0
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Pensez à l'environnement avant l'impression de ce courriel

From: Cameron,Darla [CEAA] [mailto:Darla.Cameron@ceaa-acee.gc.ca]

Sent: Thursday, January 27, 2011 7:08 PM

To: Karen Fortin

Cc: Davis,Stephanie [CEAA]; Liu,Amy [CEAA]

Subject: FW: CEAA not represented at the Xeneca Larder and Raven EA Coordination Meeting held on January 20th

Hello Karen, I've received word about your meeting last week. I apologize if there was an unintentional miscommunication. Amiel Blajchman was not able to attend last Thursday and I thought he had informed you.

Amiel is now on parental leave, and your Agency representative is Stephanie Davis who I've copied on this e-mail. Stephanie comes to us with over 5 years of international environmental assessment consulting experience. She'll be in touch with you early next week.

Best Regards, Darla

Darla Cameron

Section Leader | Chef d'équipe

Canadian Environmental Assessment Agency,

Ontario Region | Agence canadienne d'évaluation environnementale, Région de l'Ontario

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darla.cameron@ceaa-acee.gc.ca
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Government of Canada | Gouvernement du Canada

From: Karen Fortin [mailto:kfortin@oel-hydrosys.ca]
Sent: January 24, 2011 3:25 PM
To: Blajchman,Amiel [CEAA]
Cc: Tami Sugarman; Liu,Amy [CEAA]
Subject: CEAA not represented at the Xeneca Larder and Raven EA Coordination Meeting held on January 20th

Hello

We are not aware of anyone from CEA Agency participating in the meeting. Information about the meeting was forwarded to you electronically on January 5, 6, 12, 14, and 17th. Please advise if someone from your agency did in fact join us via teleconference.

Karen



Karen Fortin, A.Sc.T. — Environmental Approvals Coordinator

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Pensez à l'environnement avant l'impression de ce courriel

Natalie St-Pierre

From: Rob Steele [rsteele@nrsl.on.ca]
Sent: March 21, 2011 2:36 PM
To: stephanie.davis@ceaa-acee.gc.ca
Cc: Ed Laratta; Tami Sugarman; Philippa McPhee
Subject: Draft Natural Environment Existing Conditions Reports


Stephanie

As a follow up to our EA Coordination meeting for the Wabagishik (Vermilion River) and Allan and Struthers (Wanapitei River) Hydroelectric Developments, I am pleased to provide you with the DRAFT Natural Environment Existing Conditions Reports for these projects. Simply follow the instructions below to download the reports from our ftp site.

Regards, Rob Steele

Please go to the following FTP site

 or this one if the first does not work


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

**Scoping Document for the Federal Screening of the
Wabagishik Rapids Hydroelectric Generating Station
Project on the Vermilion River**

**Prepared by the
Federal Environmental Assessment Team
May 2011**

1.0 INTRODUCTION

1.1. PROJECT SUMMARY

Based on the information provided in the November 23, 2010 *Project Description: Wabageshik Rapids (Vermilion River) Hydroelectric Generating Station*, the project consists of the following:

Xeneca Power Development Inc. is proposing to construct and operate a hydroelectric generating station on the Vermilion River at Wabagishik Rapids, located approximately 600 m downstream of Wabagishik Lake in the Township of Foster, west of the City of Sudbury. The proposed development would be operated as a run-of-river facility with some daily flow modifications and will have a generating capacity of 3.4 MW.

The project would involve the construction of a 132 m long dam, including a 43 m long concrete control spillway. A conveyance system consisting of a 40 m long open approach channel and a 130 m long open tailrace channel would be required to divert flows from the Vermilion River to the powerhouse. The facility would capture 6.1 m of surveyed gross head and would result in the flooding of approximately 1.6 ha of riparian lands up to 1 km upstream of the dam. The extent of area downstream of the facility influenced by changing water flows associated with operation is yet to be determined, pending results of hydrologic modeling.

The proposed project would connect to the electrical grid via a new 44 kV power line, supported by wooden poles, approximately 10.4 km in length. The required right-of-way for the power line corridor would extend to 10m and one pad mount transformer would be required. Access to the proposed site would require upgrading 7.3 km of existing road and construction of 1 km of new road on the south side of the river.

1.2. FEDERAL REGULATORY REQUIREMENTS

The *Navigable Waters Protection Act (NWP)*, administered by Transport Canada (TC), prohibits the construction or placement of any "works" in navigable waters without first obtaining approval. The proposed dam and related infrastructure may cause a significant interference to navigation and therefore requires an approval under section 5(1)(2) of the *NWPA*.

Fisheries and Oceans Canada (DFO) is responsible for the administration of the habitat provisions of the *Fisheries Act*. This act prohibits the harmful alteration, disruption or destruction of fish habitat (Section 35), the destruction of fish by means other than fishing (Section 32), and requires sufficient flow of water over and below an obstruction for the safety of fish (Section 22). The dam itself will result in the destruction of fish habitat and, without properly installed measures, obstruction of safe upstream and downstream fish migration. Dam operation may also result in the alteration of flows and therefore has the potential to impact spawning, nursery and rearing fish habitats both upstream and downstream. As such, an authorization(s) under subsection 35(2) of the *Fisheries Act* will be required. Furthermore, the possible use of explosives and other construction-related impacts, as well as the ability of fish to enter turbines during operation, can potentially destroy fish by means other than fishing and therefore an authorization(s) under Section 32 of the *Fisheries Act* may be required.

Regarding the alteration of flows, it is a requirement of the *Fisheries Act* subsection 22(1) that sufficient flow of water be provided over the dam spillway or crest, with connecting sluices into the river below, to permit the safe and unimpeded descent of fish. It is also a requirement under subsection 22(3) that water be permitted to escape to the river-bed below the dam for the safety of fish and the flooding of spawning grounds to such depth as necessary for the safety of ova deposited thereon. In addition, Section 20 addresses obstructions and requires, where necessary, that a fish-pass be provided and maintained by the owner of the obstruction, to permit the free passage of fish through it.

1.3. CANADIAN ENVIRONMENTAL ASSESSMENT ACT

The *Canadian Environmental Assessment Act* (CEAA) applies when federal authorities contemplate certain actions or decisions in relation to a project that would enable the project to proceed in whole or in part. An environmental assessment (EA) pursuant to CEAA may be required when a federal authority:

- a. is the proponent of a project;
- b. provides financial assistance to the proponent;
- c. sells, leases or otherwise disposes of federal lands; or
- d. issues a permit, license or any other approval as prescribed in the *Law List Regulation*

The aforementioned regulatory approvals required under the NWP and *Fisheries Act* are *Law List Regulation* triggers under CEAA. As such, TC and DFO have confirmed that they will require a screening-level EA be completed for the project.

The federal review team (FRT) for the Wabagishik Rapids Hydroelectric Generating Station project is as follows:

Responsible Authorities (RAs)

Federal authorities requiring an EA of the project

- Transport Canada
- Fisheries and Oceans Canada

Expert Federal Authorities (FAs)

Federal authorities in possession of specialist or expert information that may assist in the EA

- Environment Canada
- Health Canada
- Natural Resources Canada

Federal Environmental Assessment Coordinator (FEAC)

Responsible for coordinating review activities of RAs and FAs in accordance with Section 12 of CEAA

- Canadian Environmental Assessment Agency (the Agency)

Contact information for the FRT is provided in Appendix A.

Based on the authority provided in subsection 17(1) of CEAA, the RAs for the Wabagishik Rapids Hydroelectric Generating Station project are delegating the responsibility of preparing the EA screening report, including technical studies required to support the report, to Xeneca Power Development Inc. and/or their qualified consultant(s). In order to complete the CEAA process, the EA screening report must be submitted for review and approval by the RAs. The screening report must contain enough information to be clear and understandable as a stand-alone document and which will constitute the basis for the RAs decision under section 20 of CEAA.

The proponent is requested to submit the screening report and all supporting technical studies to the Agency in its capacity as FEAC. The Agency will distribute the screening report and supporting documentation to the FRT for review and comment. Based on content received, the RAs may request revisions to the screening report. Once the screening report is complete to the satisfaction of the RAs, the RAs will use the information contained in the screening report to make a determination on the significance of environmental effects.

1.4. FEDERAL/PROVINCIAL COORDINATION

The Wabagishik Rapids Hydroelectric Generating Station proposal is also subject to an environmental screening process in accordance with the Ontario Waterpower Association Class Environmental Assessment (Class EA) for Waterpower Projects. As such, in accordance with the *Canada-Ontario Agreement on Environmental Assessment Coordination (November 2004)*, the proponent should aim towards preparing a single EA screening report that meets both federal and provincial EA requirements.

The proponent should ensure that they understand the differences between the provincial and federal EA processes, and should ensure that all CEAA requirements are fulfilled prior to releasing the screening report for final review as part of the provincial EA process. Should the proponent decide to proceed to the Notice of Completion stage of the provincial EA process prior to satisfying CEAA requirements, it could result in significant delays to the EA process. Questions regarding the coordination of the federal and provincial processes should be directed to the Canadian Environmental Assessment Agency.

2.0 SCOPE OF ASSESSMENT

When an EA is triggered under CEAA, RAs are required to establish the scope of project and scope of factors to be taken into consideration pursuant to sections 15 and 16 of CEAA. Scoping establishes the boundaries of an EA and focuses the assessment on relevant issues and concerns.

The RAs have prepared this Scoping Document to provide direction to the proponent on the issues that must be addressed in the screening report. Please note, however, that the information contained in this document does not limit the RAs from requesting additional information or details as they see fit.

The RAs understand that the proposed project description, as described in Section 1.1 above, may be refined following the results of additional field investigations and consultations by Xeneca. Updated project description information must be provided to the FRT by Xeneca as it becomes available and prior to the RAs making a s.20 CEAA determination. Changes to the project description could result in changes to the scope of assessment required by the RAs and changes to the guidance provided in this document. In order to prevent unnecessary delays, it is imperative that Xeneca advise the FRT of any changes to the project description as soon as possible.

2.1. SCOPE OF PROJECT

In accordance with section 15(1) of CEAA, the scope of project for the Wabagishik Rapids Hydroelectric Generating Station project has been identified as: *all physical works and activities associated with the construction and operation of the proposed hydroelectric generating facility, including a new dam and spillway, conveyance system, powerhouse and tailrace, storage sites, working areas, platforms, new transmission line and associated structures, new access roads, upgrades to existing access roads and any other works or undertakings directly associated with the hydroelectric project, including those that are temporary.*

The RAs have not included "decommissioning" as part of the scope of the project since the proponent has not proposed any decommissioning works. It is anticipated that the structure will have an approximate life span of 50 to 100 years and, as such, details regarding decommissioning works are not available at this time. If and when decommissioning is required, such works will be subject to an EA as per regulations current to that time.

The screening report must provide a complete description of all proposed project components, and the associated physical works and activities, with an approximate schedule (timing, frequency, duration). The report must also clearly state who is responsible for the ownership, construction and operation of each work or activity. The level of detail should be appropriate to the scale and complexity of the project and to the sensitivity of its location. Reference maps and/or site plans should be attached to indicate the project location and/or its key features.

2.2. SCOPE OF FACTORS

CEAA defines "environment" as the components of the Earth, including:

- a) land, water and air, including all layers of the atmosphere;
- b) all organic and inorganic matter and living organisms; and
- c) the interacting natural systems that include components referred to in paragraphs (a) and (b).

In respect of a project, pursuant to CEAA "environmental effect" means:

- a) any change that the project may cause in the environment, including any change it may cause to a listed wildlife species, its critical habitat or the residences of individuals of that species, as those terms are defined in subsection 2(1) of the *Species at Risk Act*,
- b) any effect of any such change referred to in paragraph (a) on
 - i. human health and socio-economic conditions,
 - ii. physical and cultural heritage,
 - iii. the current use of lands and resources for traditional purposes by aboriginal persons, or
 - iv. any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, or
- c) any change to the project that may be caused by the environment.

Section 16 (1) of CEAA requires the following factors be considered in a screening-level EA:

- a) the environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;
- b) the significance of the effects referred to in paragraph (a);
- c) comments from the public that are received in accordance with the Act and the regulations;
- d) measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project; and
- e) any other matter relevant to the screening that the responsible authority may require be considered.

In accordance with section 16(3) of CEAA, sections 2.2.1 – 2.2.10 of this Scoping Document outline the scope of factors that will be taken into consideration pursuant to CEAA section 16(1) requirements. Consistent with the overall scoping guidance provided in this document, the RAs may revise the scope of factors and/or identify additional factors as the EA progresses.

2.2.1. Spatial and Temporal Boundaries

The spatial boundaries of the EA are the geographical area within which an environmental component is likely to be affected by the project during construction and/or the operational phases (i.e. zone of influence), and for each component where a measurable effect is predicted for the cumulative effects assessment. The temporal boundaries of the EA are the timeframe over which an environmental component could be impacted by the project.

2.2.2. Environmental Components

Potential interactions between project components and environmental components must be identified and considered as part of the screening. The scope of factors to be considered in the assessment should include, but may not necessarily be limited to, potential effects (including cumulative effects) on the following environmental components:

- surface geology and soils
- surface water quality and quantity
- ground water quality and quantity
- air quality and climate change
- fish and fish habitat
- vegetation and wetlands
- wildlife and wildlife habitat – including migratory birds
- species at risk – including those species listed under the *Species at Risk Act*

In keeping with the definition of “environmental effect” as defined by CEAA, the scope of factors to be considered should also include the effect of any change that the project may cause in the environment on:

- human health and socio-economic conditions, including effects to navigation
- physical and cultural heritage

- the current use of lands and resources for traditional purposes by Aboriginal persons
- any structure site or thing that is of historical, archaeological, paleontological or architectural significance

Appendix B provides additional information regarding environmental components and how they should be addressed for this project.

For each environmental component that has the potential to interact with the project, a description of the existing conditions must be provided in the screening report. Consideration should be given to details that are relevant for each environmental component. The level of detail should be appropriate to the scale and complexity of the project and to the sensitivity of its location.

2.2.3. Environmental Effects

The definition of environmental effect according to CEAA is provided in section 2.2 above, and a listing of "Environmental Components to be Assessed" is included in Appendix B. The environmental components considered in the CEAA screening should include, but not be limited to, those identified in Appendix B. For each environmental component identified as having the potential to interact with project components, the screening report must analyze and describe the likely and potential environmental effects, including cumulative effects and the effects of accidents and malfunctions.

Likely and potential environmental effects should be considered and described using the following criteria in order to facilitate significance determinations: magnitude, geographic extent, duration, frequency of occurrence, permanence or reversibility of the effects, and ecological context. Effects must be identified for all project phases that were identified in the scope of project.

2.2.4. Accidents and Malfunctions

The screening report should identify any accidents and malfunctions that may occur in connection with the project. This should include the assessment of potential environmental effects associated with accidental spills (e.g. fuel, oils, hydraulic fluids, etc.), debris clogging or icing up of flow control gates or outlet structures, dam failure, etc., as well as other accidents and malfunctions that could be expected to occur, such as power failures and pump failures. Emphasis should be placed on accidents and malfunctions that are reasonably plausible. The effects of accidents and malfunctions on each environmental component should be considered as well as the contribution to cumulative effects.

2.2.5. Cumulative Effects

The screening must consider the net (residual) environmental effects associated with the project in combination with the environmental effects of other past, present or reasonably foreseeable future projects or activities, to determine the potential for cumulative environmental effects. "Reasonably foreseeable" activities are defined as projects that have already been proposed, approved, or that are advancing through the regulatory approvals process.

Cumulative effects are to be considered for those projects and activities that have residual effects that have the potential to overlap in time and space with the environmental effects of the proposed project (construction and operation phases). Cumulative environmental effects considered must be related to a direct environmental effect of the project, but the direct effect need not be significant on its own. In conducting the analysis, consideration should be given the length of time over which the environmental effects of the project will occur, not just the period of time during which the project will be constructed.

2.2.6. Effects of the Environment on the Project

The screening should assess the environmental effects of geological, climatic and other natural phenomena on the project, including effects associated with:

- extreme drought, flooding, or rainfall, including that associated with climate change, and any associated geophysical effects (e.g. increase erosion potential, changes to bank stability in reservoir areas, abnormally elevated/depressed groundwater levels, etc.); and,
- other extreme events (e.g. ice storms, river ice formation and jamming, forest fires, tornados or earthquakes, etc.).

The proponent must demonstrate that the project design is sufficiently robust to accommodate any expected changes in extreme flows, precipitation and temperature without potential failure. Emphasis should be on environmental conditions that are reasonably plausible, but should not be limited to events that occur on a regular basis.

2.2.7. Mitigation Measures

For each potential adverse environmental effect, including cumulative effects, technically and economically feasible mitigation measures must be identified. The screening report should identify any residual effects that will persist after the implementation of mitigation measures, and those effects must be carried forward to the cumulative environmental effects assessment (CEA). Any measurable net (residual) likely adverse environmental effect that potentially affects a valued ecosystem component, or valued socio-economic component must be carried forward to the CEA. The screening report should also identify compensation measures to offset the loss of fish habitat and its monitoring program. Where mitigation cannot be fully described until the detailed design stage, the principles and criteria upon which such mitigation will be developed should be provided. The screening report must clearly state who is responsible for implementing each mitigation measure proposed.

2.2.8. Significance of Effects

CEAA requires that RAs determine whether the project is likely to cause significant adverse environmental effects, including cumulative effects. In other words, only environmental effects that are both likely and adverse must be considered in determining significance. The conclusions that are reached in this regard must be systematically documented.

While the final determination of significance rests with RAs, the information provided by the proponent in the screening report will be used to help make this decision. Conclusions on significance must be clearly supported by and traceable from the description of the existing environment, the description of project activities, the potential interactions (environmental effects) and the predicted effectiveness of the mitigation measures to be applied.

The prediction of significance should be based on such factors as: magnitude, geographic extent, duration, permanence/reversibility, and ecological context. When drawing conclusions about the significance of impacts, reference should be made to applicable federal or provincial guidelines.

2.2.9. Public Comments

The screening report must clearly describe any public and aboriginal consultation that was completed related to the proposed project. Concerns raised with respect to the proposal, including any impacts to current and traditional activities being practiced by any aboriginal peoples near the project site, must be identified. Actions taken by the proponent to address concerns raised must be discussed in detail.

Should it be determined at any stage during the screening that additional public participation is required that has not been adequately addressed through the public consultation periods conducted by the proponent, the RAs may initiate a formal public participation process according to section 18(3) of CEAA.

2.2.10. Monitoring and Follow-up

Pursuant to section 38(1) of CEAA, consideration must be given to the need for a follow-up program. The purpose of a follow-up program is to confirm predictions made during the assessment and to ensure the effectiveness of mitigation measures considered. The RAs will not be in a position to consider the need for a

follow-up program until it has examined the proponent's draft screening report. In the event that an adaptive management approach is proposed as a component of mitigation to address unresolved concerns, the need for implementing a follow up program should also be identified by the proponent in consultation with the RAs. Nevertheless, the requirement for a follow-up program will be determined as the screening proceeds.

Regardless of the requirement to complete a follow-up program pursuant to section 38(1) of CEAA, the screening should address the need for a monitoring program to ensure compliance with identified mitigation measures. In order to ensure effective implementation of the mitigation measures identified in the screening report, plans and procedures proposed for quality control and assurance should be described, including technical specifications for mitigation works, inspection activities during construction and operation; and, procedures for resolving issues and addressing unforeseen effects that may arise during construction or operation. These plans and procedures should also include, but not be limited to, environmental protection plans, emergency/contingency plans, construction environmental specifications, construction special provisions, operational maintenance plans, etc.

APPENDIX A – FEDERAL REVIEW TEAM CONTACT INFORMATION

Agency	Contact Information
Canadian Environmental Assessment Agency	<p>Stephanie Davis, Environmental Assessment Analyst</p> <p>M: 55 St. Clair Avenue East, Suite 907 Toronto, ON M4T 1M2</p> <p>P: 416.954.7334</p> <p>E: stephanie.davis@ceaa-acee.gc.ca</p>
Transport Canada	<p>Lisa McDonald, Environmental Officer</p> <p>M: 4900 Yonge Street, 4th Floor (PHE) North York, ON M2N 6A5</p> <p>P: 416.952.0475</p> <p>E: lisa.mcdonald@tc.gc.ca</p>
Fisheries and Oceans Canada	<p>Kelly Eggers, Habitat Biologist</p> <p>M: 28 Waubeek Street Parry Sound, ON P2A 1B9</p> <p>P: 705.746.2196 ext. 287</p> <p>E: kelly.eggers@dfo-mpo.gc.ca</p>
Environment Canada	<p>Sheryl Lusk, Environmental Assessment Officer</p> <p>M: 4905 Dufferin Street Toronto, ON M3H 5T4</p> <p>P: 416.739.5962</p> <p>E: sheryl.lusk@ec.gc.ca</p>
Health Canada	<p>Katherine Hess, Environmental Assessment Officer</p> <p>M: 99 Metcalfe Street, 11th Floor (4111A) Ottawa, ON K1A 0K9</p> <p>P: 613.960.2948</p> <p>E: katherine.hess@hc-sc.gc.ca</p>
Natural Resources Canada	<p>Caitlin Scott, Junior Policy Analyst</p> <p>M: 580 Booth Street, 3rd Floor, Room A9-2 Ottawa, ON K1A 0E4</p> <p>P: 613.995.7609</p> <p>E: caitlin.scott@nrcan-rncan.gc.ca</p>

APPENDIX B - ENVIRONMENTAL COMPONENTS TO BE ASSESSED

Surface Geology and Soils

The screening report should describe surface geology and soils in the study area, and should identify any impacts the project may have on the following factors:

- contaminated sites
- terrain and topography (e.g. excavation and fill requirements, excess/waste rock/soil transportation and disposal, proposed temporary and permanent disposal sites, site restoration, etc.)
- soil quality, including contaminated sites and spills
- sedimentation, soil erosion, shoreline or riverbank erosion processes
- hazard lands or unstable lands subject to erosion
- soil types and potential for acid rock drainage (ARD) and metal leaching (ML)

If and where the project will involve the confinement, removal or remediation of contaminated soils or sediments, information on the containment, disposal or treatment method, including the potential environmental effects and risks associated with the method, should be provided.

Surface Water Quality and Quantity

The screening report should identify the name, location and characteristics of any water bodies in the project area, and should describe the potential impact of the project on these watercourses, including impacts associated with:

- potable water uses
- recreational water uses
- head pond creation and subsequent flooding of both river and lake environments¹
- predicted changes to normal/extreme water levels, flows and movement
- predicted changes to the normal/extreme thermal/ice regime
- installation, modification or removal of watercourse crossing structures
- accidental spills, erosion and sedimentation, concreting works² and repairs³, locally generated contaminants entering waterbodies (for example fugitive dust, engine emissions, smoke, ash), etc.
- siting and management of temporary and permanent waste rock/soil disposal areas and management of excess materials from excavations
- acid rock drainage (ARD) from exposed and/or excavated bedrock (identified as having a net acid generating potential), including specific management/disposal options of any materials having a potential for ARD
- methyl mercury generated in created head pond reservoirs⁴

The analysis should describe potential effects on the water quality and quantity of receiving water bodies during both the construction and operation phases. The screening report should also indicate whether any of these watercourses are navigable, and whether approval under the *Navigable Waters Protection Act* is required.

¹ A head pond would be created by raising water levels upstream of the proposed dam, possibly flooding shorelines and increasing the normal depth of the river, potentially impacting existing aquatic and shoreline ecosystems. Any existing near shore wetlands and adjacent terrestrial habitat affected by water level changes are potentially impacted.

² Best practices pertinent to concreting near or in waterbodies should be adopted. When setting water quality targets, please refer to an applicable standards set by Ontario's Provincial Water Quality Objectives (PWQOs) and the CCME's Canadian Water Quality Objectives regarding TSS, turbidity and pH.

³ Operation and maintenance phase only

⁴ Methyl mercury formation depends on a number of factors, but is primarily related to the change in headpond water level and volume, amount of organic material present on/in flooded soils, oxygen levels and temperature. The proponent should fully characterize mercury levels in sediments, the water column (low level analysis), and fish tissue; and, evaluate potential changes in mercury levels due to the project and proposed mitigation and monitoring.

Hydrogeology, Ground Water Quality and Quantity

The screening report should provide a description of groundwater resources in the study area (including the depth of the water table), and should indicate whether the groundwater is a source of potable water. The report should identify potential impacts of the project during construction and operation phases on groundwater quality and quantity, including impacts associated with:

- potable water uses
- accidental spills and other project effluents
- acid rock drainage and methyl mercury formation
- changes to normal/extreme groundwater levels, flux and movement
- changes to normal infiltration/recharge and seepage/upwelling zones
- fluctuating water levels on groundwater elevation and resultant impacts on surrounding areas, including any potential for contaminant migration

Air Quality and Climate

The screening report should provide a description of air quality in the vicinity of the project, and should indicate the potential impact of the project on air quality. The discussion of potential effects should address the local and regional impacts associated with the construction and operation phases, such as:

- emissions of toxic substances including engine exhaust emissions
- dust and smoke emissions
- greenhouse gas emissions
- contributions to formation of local and regional smog, fog, thermal effects, icing and micro climate

The assessment of air quality effects should consider potential adverse impacts on sensitive local receptors.

Fish and Fish Habitat

In conjunction with the section on surface water, the screening report should indicate the presence of fish and fish habitat in the study area, and should identify any impacts the project may have, including impacts associated with:

- aquatic species at risk listed under the federal *Species at Risk Act* (SARA)
- changes in surface water, groundwater and surface geology and soils (see above components) that could result in effects to fish and/or fish habitat (including uptake of mercury in fish and effects on humans consuming these resources)
- barriers to safe upstream and downstream fish passage
- fish injury or mortality associated with blasting, impingement, entrainment, etc.

When drawing conclusion about the significance of impacts, consideration should be given to DFO's *Policy for the Management of Fish Habitat* (1986).

Vegetation and Wetlands

The screening report should provide a description of vegetation communities and wetlands in the study area, including any designations of importance (e.g. Environmentally Significant Areas, Areas of Natural and Scientific Interest, Provincial or locally significant wetlands, etc.). The screening report should identify any impacts the project may have on vegetation and wetlands during construction and operation phases, including impacts associated with:

- removal of vegetation

- noxious weed and vegetation control (e.g. chemical spray, mechanical)
- infilling, flooding, or de-watering of vegetation/wetland communities
- changes to wetland ecosystem and function, including changes to hydrology and hydrogeology due to head pond creation and modifications to surface drainage patterns
- effects on soils, terrestrial vegetation and wetlands due to disposal of waste rock/soils (and viability of site rehabilitation), including any effects of acid rock drainage
- plant species at risk listed under SARA

The ecological functions of any vegetation and wetland communities and wetland hydrology potentially impacted by the project should be described, and potential impacts on those functions should be noted. The screening report should indicate whether the project is located within an area where wetland loss has reached critical levels.

Wildlife and Wildlife Habitat (including Migratory Birds)

In conjunction with the section on vegetation and wetlands, the screening report should provide a description of wildlife species and their habitat that are present in the study area at any time during their life cycle, including species that may only use the study area on a seasonal basis. In particular, the proponent should consider potential impacts of the project on migratory birds. The screening report should identify any impacts the project may have on wildlife communities or their habitats during construction and operation phases, including:

- species diversity, abundance and movement
- terrestrial species at risk listed under SARA (including those species observed in the zone of influence of the project and those species with habitats ranging into the project area)
- wildlife habitat abundance, availability, diversity and function (e.g. corridors, breeding, staging and foraging areas), including seasonal uses and specialized habitats used by species at risk

Species at Risk

In conjunction with the sections on vegetation, wildlife and fish, the screening report should indicate any federally and/or provincially listed species at risk that are known to or may be expected to use the site or adjacent lands due to the presence of suitable habitat. This includes those species listed under the *Species at Risk Act* (SARA). At a minimum, the Natural Heritage Information Centre database maintained by the Ontario Ministry of Natural Resources in Peterborough should be consulted for known occurrences of species at risk. Environment Canada - Canadian Wildlife Service should also be consulted to determine if occurrences or ranges of any endangered, threatened, and special concern species⁵ overlap with the project's zone of influence.

If there is potential for species at risk to occur at a project site (i.e. previous known occurrence, species range overlap and/or known habitat preference exists), a qualified biologist should conduct a thorough biological inventory of all areas of natural habitat that may be affected by the project and have the potential to support species at risk. The screening report should indicate whether the project activities may have an adverse effect on any species at risk, and also include a substantiated professional opinion on the likelihood of the occurrence of such effects. A strategy should be developed to protect any identified species at risk, with a primary focus on avoidance.

When a federal EA is carried out on a project that may affect a listed species or its critical habitat, SARA requires that adverse environmental effects be identified, mitigation measures be taken to avoid or lessen adverse effects, and environmental effects monitoring be conducted.

⁵ A useful source of information is the Natural Heritage Information Centre database maintained by the Ontario Ministry of Natural Resources in Peterborough which should be consulted for known occurrences of species at risk. The species currently listed under SARA can be found at the following web sites: http://www.sararegistry.gc.ca/default_e.cfm and http://www.sararegistry.gc.ca/species/default_e.cfm

Environmental Changes Resulting in Effects on Other Environmental Components

The screening report should identify and address any effects of any change that the project may cause in the environment on:

- Human health and socio-economic conditions – including impacts to navigation, noise and vibrations, drinking water quality and quantity, country foods (including those harvested by hunting, trapping, fishing, gathering or small-scale farming), air quality, recreation, cottaging and tourism, game and fishery resources, electric and magnetic fields emitted by transmission lines, property flooding/flood risk to residential structures
- physical and cultural heritage
- the current use of lands and resources for traditional purposes by Aboriginal persons, including traditional food, water (potable and recreational) and medicines
- any structure site or thing that is of historical, archaeological, paleontological or architectural significance

Muriel Kim

Subject: FW: Wabageshik Rapids - Vermilion River draft environmental report available for review
Attachments: Xeneca - Proponent Notification of Terminated Screenings.pdf

From: Liu, Amy [CEAA] [<mailto:Amy.Liu@ceaa-acee.gc.ca>]
Sent: Friday, August 10, 2012 3:26 PM
To: Grace Yu; Allen, Paula (ENE); Angela.Donato@nrcan.gc.ca; Selinger, Wayne (MNR); Cobb, Eric (MNR)
Cc: Ed Laratta; Eggers, Kelly; Davis, Stephanie [CEAA]; Blajchman, Amiel [CEAA]
Subject: RE: Wabageshik Rapids - Vermilion River draft environmental report available for review

Hi Grace.

In light of the new Canadian Environmental Assessment Act 2012, the Canadian Environmental Assessment Agency is no longer involved with the hydro projects, proposed by Xeneca Power Development Inc., that are listed in DFO's attached July 12, 2012 letter. Can you please take the CEA Agency contacts off your distribution lists for these projects?

Thank you.

Amy Liu

Project Manager | Gestionnaire de projets
Ontario Region | Agence canadienne d'évaluation environnementale, Région de l'Ontario
55 St. Clair Avenue East, Suite 907 Toronto ON M4T 1M2 | 55 avenue St. Clair Est pièce 907 Toronto ON M4T 1M2
amy.liu@ceaa-acee.gc.ca
<http://www.ceaa-acee.gc.ca>
Telephone | Téléphone 416-952-1585
Facsimile | Télécopieur 416-952-1573
Government of Canada | Gouvernement du Canada

From: Grace Yu [<mailto:GYu@xeneca.com>]
Sent: August 10, 2012 2:14 PM
To: Allen, Paula (ENE); Liu, Amy [CEAA]; Angela.Donato@nrcan.gc.ca; Selinger, Wayne (MNR); Cobb, Eric (MNR)
Cc: Ed Laratta
Subject: FW: Wabageshik Rapids - Vermilion River draft environmental report available for review

Hello everyone,

FYI. The draft Wabageshik ER is available for agency review for a 30 days review period.

Apologies for you were not copied to on the distribution list below.

Thank you.

Best regards,
Grace

Grace Yu (M. Env. Sc., EPT) | Environmental Assessment/Approvals Officer | **Xeneca Power Development Inc.**
5255 Yonge Street, Suite 1200, North York, ON M2N 6P4
Tel: 416 590 3064 | **Fax:** 416 590 9955 | **Email:** gyu@xeneca.com

From: Kai Markvorsen [<mailto:kmarkvorsen@wesa.ca>]

Sent: Friday, August 10, 2012 11:41 AM

To: kelly.eggars@dfo-mpo.gc.ca; sheryl.lusk@ec.gc.ca; ellen.cramm@ontario.ca; mohammad.khan@ontario.ca; rod.sein@ontario.ca; Robinson, Bob (MTO); parise.drolet@ontario.ca; stephanie.davis@ceaa-acee.gc.ca

Cc: Ed Laratta; Grace Yu; Stephanie Hodsoll; Tami Sugarman

Subject: Wabageshik Rapids - Vermilion River draft environmental report available for review

Good morning,

On behalf of Xeneca Power Development Inc., please be advised that the draft environmental report for the Wabageshik Rapids Generating Station on the Vermilion River is now available for review.

Xeneca is providing this document for discussion purposes as part of a 30-calendar day draft review period scheduled to end on September 11th, 2012. This review period is intended to allow regulatory agencies a preliminary opportunity to identify issues and concerns prior to the document being finalised and shared with the public for the formal thirty-day public and agency review.

The report can be downloaded from our FTP site using Internet Explorer and the following access information:

Site: _____

Username: _____

Password: _____

Hard copies and/or digital copies on CD have been distributed via courier to those who have requested the report in those formats.

If you have any questions or have difficulty accessing the FTP site please feel free to contact me.

Respectfully,

Kai



Kai Markvorsen B.Sc.

Environmental Consultant

(T) (613) 839-1453 x 248 (C) (613) 277-1164 kmarkvorsen@wesa.ca www.wesa.ca

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Department of Fisheries and Oceans

Natalie St-Pierre

From: Eggers, Kelly [Kelly.Eggers@dfo-mpo.gc.ca]
Sent: September 22, 2011 2:13 PM
To: pgillette@xeneca.com
Cc: elaratta@xeneca.com; Tami Sugarman; Davis, Stephanie [CEAA]
Subject: Request via Canadian Environmental Assessment Registry for documents related to EA for Wabagishik Rapids project
Attachments: 20110418 EA Coordination Meeting AS and Wabagishik Final Minutes Feb 8 2011 mtg.pdf; Important Note CEAA.pdf; Section 55 CEAA.pdf; Registry Exclusion Form CEAA.pdf

Dear Mr. Gillette,

As you are aware, a federal Environmental Assessment is being undertaken for the Wabagishik Rapids project, therefore a Notice of Commencement was posted on the Canadian Environmental Assessment Registry (CEAR) reference number **11-01-62573**, <http://www.ceaa.gc.ca/050/details-eng.cfm?evaluation=62573>). As communicated to you in DFO's letter dated July 7th, 2011:

"Before a *Fisheries Act* authorization can be issued, DFO must ensure that an environmental assessment is conducted which meets the requirements of the *Canadian Environmental Assessment Act*. This process may involve circulating your proposal to other relevant federal departments and making information about your proposal available to the public through the Canadian Environmental Registry (CEAR). For more information about the CEAR please visit www.ceaa-acee.gc.ca.

IMPORTANT NOTE: Information provided by you related to the Environmental Assessment for this project will be part of the Canadian Environment Assessment Registry and will be made available to members of the public, if requested. A package with additional information about these requirements is attached. Please ensure that you review and understand these requirements. Please be aware that release of documents to the public may be part of the CEAA process. Should you provide any documents that contain confidential or sensitive information that you believe could 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 Environment Assessment Registry and the rationale for the exclusion."

DFO has received a request through the CEAR for documents related to the Environmental Assessment for the Wabagishik Rapids project. An Exclusion Form has not been received for any of the documents pertaining to Wabagishik Rapids to which DFO staff have access (including those documents provided via emails from Xeneca's consultants, or obtained via FTP sites where the documents are hosted online).

Two documents which I have received, one from Xeneca's EA consultant OEL-Hydrosys (the meeting minutes of February 8th EA Coordination Meeting - attached) and one from Xeneca's FTP site (titled "Hydrology Review for Vermilion River Hydropower Project", dated October 6, 2009, by Hatch) have disclaimers on them indicating they are not to be distributed without permission, etc. Any document that is relevant and related to the federal Environmental Assessment of your project must be included in the Registry project file and made available upon request. Prior to making these two documents available via the Registry, we wanted to give Xeneca an opportunity to review them and either remove the references to confidentiality and return them to me so that they can be used in the Environmental Assessment of your project, or complete the Exclusion Form (attached) indicating how the information meets the criteria for exclusion as set out in paragraphs 55.5 (1) and (2) of CEAA (the Important Note CEAA and Section 55 of CEAA are attached for your reference). If the criteria in Section 55 of CEAA are not met, the documents will be available for distribution to the public via the Registry despite any disclaimers of confidentiality.

Please be advised that it is DFO's service standard to respond to Registry requests within 10 days.

Therefore, I request a response from Xeneca on this matter by **September 30th, 2011**. As indicated above, if no response is received the documents will be released.

If you have any questions, please give me a call.

Thanks.

Sincerely,

Kelly Eggers

Fish Habitat Biologist | Biologiste de l'habitat du poisson

Fisheries and Oceans Canada | Pêches et Océans Canada
Northern Ontario District | Nord de l'Ontario
Ontario – Great Lakes Area | Secteur de l'Ontario et des Grands Lacs

28 Waubeek Street | 28 rue Waubeek
Parry Sound, ON P2A 1B9

Tel | Tél: 705-746-2196 ext. 287
Fax | Téléc: 705-746-4820

Kelly.Eggers@dfo-mpo.gc.ca



Fisheries and Oceans Canada
401 King Street West
Prescott, Ontario
K0E 1T0

Our file Notre référence

July 12, 2012

Uwe Roeper,
Chief Executive Officer
Xeneca Power Development Inc.
5255 Yonge Street,
Suite 1200, Toronto, ON
M2N 6P4

Subject: Ivanhoe River: Third Falls and The Chute; Frederick House River: Wanatango Falls; Serpent River: Four Slide Falls and McCarthy Chute; Petawawa River: Big Eddy and Half-Mile; Kapuskasing River: Kapuskasing Lake Outlet, Lapinagam Rapids, Middle Township Buchan and Near North Boundary; Larder River: Larder & Raven; Blanche River: Marter Township; Wanapitei River: Allen & Struthers; Vermillion River: Wabagishik Rapids ("the Projects") - The *Canadian Environmental Assessment Act, 2012*.

Mr. Roeper,

As part of the Government's plan for Responsible Resource Development, which seeks to modernize the regulatory system for project reviews, the *Canadian Environmental Assessment Act* (S.C. 1992, c. 37) was repealed when the *Canadian Environmental Assessment Act, 2012 (CEAA 2012)* came into force.

Please be advised that environmental assessments for the hydro projects listed in the subject line are no longer required as a result of *CEAA 2012*. All other applicable legislative, regulatory and constitutional requirements still must be fulfilled.

While federal environmental assessments are no longer required in relation to the projects, *CEAA 2012* does include provisions and requirements for projects that involve federal lands (e.g. Big Eddy). Transport Canada, Fisheries and Oceans Canada, Department of National Defense and/or Aboriginal Affairs and Northern Development may contact you should we require information in order to fulfill our requirements.

The information related to the projects that was available on the Canadian Environmental Assessment Registry can be accessed through the Canadian Environmental Assessment Archives (<http://www.ceaa.gc.ca/052/index-eng.cfm>).

For further information concerning *CEAA 2012*, please refer to information on the Canadian Environmental Assessment Agency's Internet site at www.ceaa-acee.gc.ca.

Canada

If you have any questions please contact me at (613) 925-2865 ext. 117, by fax at (613) 925-2445, or by email at Rich.Rudolph@dfo-mpo.gc.ca.

Sincerely,



Rich Rudolph
Environmental Assessment Analyst
Eastern Ontario District

cc: eainfo@oel-hydrosis.ca
 Lisa McDonald, Transport Canada
 Michelle Perry, Department of National Defense
 Christopher Morton, Aboriginal Affairs and Northern Development Canada
 John Woodward, Canadian Transportation Agency
 Angela Donato, Natural Resources Canada
 Caitlin Scott, Natural Resources Canada
 Sheryl Lusk, Environment Canada
 Karen Blackburn, Parks Canada
 Kitty Ma, Health Canada
 Katherine Hess, Health Canada
 Melanie Lalani, Health Canada
 Darla Cameron, Canadian Environmental Assessment Agency
 Paula Allen, Ministry of Environment
 Christine Greenaway, Ministry of Natural Resources
 Joanna Samson, Ministry of Natural Resources

Natalie St-Pierre

From: Eggers, Kelly [Kelly.Eggers@dfo-mpo.gc.ca]
Sent: July 24, 2012 12:03 PM
To: Muriel Kim
Subject: RE: Proposed Wabageshik Rapids waterpower project - Upcoming distribution of the DRAFT Environmental Report

Hi Muriel,

I am still the appropriate DFO contact for the Wabagishik project. For the draft ER, I only require a CD-ROM copy.

thanks

Kelly

Kelly Eggers

Senior Habitat Biologist | Biologiste principal de l'Habitat

Fisheries and Oceans Canada | Pêches et Océans Canada
Northern Ontario District | Nord de l'Ontario
Ontario – Great Lakes Area | Secteur de l'Ontario et des Grands Lacs

28 Waubeek Street | 28 rue Waubeek
Parry Sound, ON P2A 1B9

Tel | Tél: 705-746-2196 ext. 287
Fax | Téléc: 705-746-4820

Kelly.Eggers@dfo-mpo.gc.ca

From: Muriel Kim [<mailto:mkim@wesa.ca>]

Sent: July 24, 2012 10:53 AM

To: Eggers, Kelly; stephanie.davis@ceaa-acee.gc.ca; lisa.mcdonald@tc.gc.ca; EACoordination_ON@inac-ainc.gc.ca; sheryl.lusk@ec.gc.ca; Caitlin.Scott@NRCan.gc.ca; john.woodward@cta-otc.gc.ca; ellen.cramm@ontario.ca; bob.l.robinson@ontario.ca; gerry.webber@ontario.ca; jennifer.lillie-paetz@ontario.ca; brett.smith@ontario.ca; David.Pickles@ontario.ca; paul.marleau@ontario.ca; paul.sajatovic@sudbury.ca

Cc: Tami Sugarman; Kai Markvorsen

Subject: Proposed Wabageshik Rapids waterpower project - Upcoming distribution of the DRAFT Environmental Report

Good afternoon,

We will soon be distributing the DRAFT Environmental Report (ER) for the proposed Xeneca Power Corporation Inc. waterpower development at the Wabageshik Rapids Project site located on the Vermilion River.

The proposed undertaking is subject to the Class Environmental Assessment for Waterpower Projects as a new project on a managed waterway. While there is no formal requirement for a draft ER in the

Class EA for Waterpower Projects, this document will be circulated to key parties in order to facilitate an efficient regulatory review of the final document.

We would like to confirm that you continue to be the appropriate one-window contact at your organization, and whether there are additional individuals within your organization whom you believe should also receive a copy of the draft ER. We are planning to distribute one hard copy and one CD-ROM to each regulator on our contact list; please let us know if you would like to receive additional copies, or if only one form of the report (hard copy or CD-ROM) would suffice.

I will follow up this message with a phone call within the next couple of days to confirm your participation in the review process.

Best regards,
Muriel Kim



Muriel Kim M.Sc.
Environmental Scientist

(T) (613) 839-3053 x261 (C) (613) 294-3886 mkim@wesa.ca www.wesa.ca

NOTE: If you are not the intended recipient of this e-mail, please delete it immediately. Unauthorized transmission of this e-mail is prohibited.



Fisheries and Oceans
Canada

Pêches et Océans
Canada

28 Waubeek Street
Parry Sound, Ontario
P2A 1B9

September 11, 2012

Your file Votre référence

Our file Notre référence
PS-10-2502

via E-MAIL

Xeneca Power Development Inc.
Attn: Stephanie Hodson
5255 Yonge Street
Suite 1200
North York, Ontario
M2N 6P4

Dear Ms. Hodson:

Subject: Review of Wabagishik Rapids Draft Environmental Report, August 2012

Thank you for providing Fisheries and Oceans Canada (DFO) the opportunity to comment on the Draft Environmental Report (ER) for the Wabagishik Rapids hydroelectric development project.

We recognize that the ER has been prepared as a proponent-led document to satisfy the provincial Environmental Assessment process, and does not aim to specifically address regulatory requirements such as those under the federal *Fisheries Act*. However DFO focused our review of the document on information related to fish, fish habitat, the *Fisheries Act*, and other areas related to DFO regulatory requirements.

The page numbers below reference the PDF page numbers.

Page 18, under "Conclusions", second paragraph:

In addition to *Fisheries Act* Authorizations under Sections 32 and 35, there may also be a requirement under Section 20 to provide fish passage. As referenced in the minutes of our meeting July 19th, 2012, a final determination on the need for fish passage per fisheries management objectives has not yet been made by the Ministry of Natural Resources (MNR) who have the responsibility for fisheries management in the province of Ontario. Upon consultation with MNR, Section 20 of the *Fisheries Act* may be applied to protect the species and life stages that require fish passage to meet the management objectives.

Page 27, last paragraph:

No federal environmental assessment under the *Canadian Environmental Assessment Act* was triggered for the "At Soo Crossing" project.

Page 42, Section 2.9 Ecology, "Fish and Fish Habitat":

Limiting this section to only what is on the "*Values Resource Map*" is misleading in describing fish and fish habitat in the project area. Spawning habitat at Wabagishik Rapids should be mentioned in this section, as it is important fish habitat that will be directly impacted by the hydropower development. This habitat is thoroughly described in the Natural Environment Report and the ER should be updated to reflect this.

Pages 70 & 74, under "3.4.3 Access Roads" and "3.5.9 Water Crossings":

The term "water crossings" is used to include crossings for both roads in 3.4.3, and transmission lines in 3.5.9. However Section 3.5.9 is titled "Water Crossings" but includes only transmission line water crossing. As DFO's *Operational Statement for Overhead Line Construction* is referenced in the "3.5.9 Water Crossings" section, the implication is that this Operational Statement applies to water crossings in general. We recommend that for clarity, section 3.5.9 be combined with section "3.5.7 Connection Line", as DFO does not at this time have Operational Statements for all types of water crossings. Currently, in addition to the Operational Statement that applies to overhead transmission lines, DFO has Operational Statements for *Clear-Span Bridges*, *Ice Bridges and Snow Fills*, and *Temporary Stream Crossing*. For culverts or other types of water crossings, DFO will review the proposals and provide advice on mitigation that should be applied to protect fish and fish habitat.

Pages 74 to 85, section "3.6 Operation Strategy":

There is no mention in section 3.6 of facility operation during fish spawning and nursery periods. It is mentioned in the "*Commitments*" section of the Executive Summary, but should be discussed in the body of the ER document with reference to the appropriate sections of "*Annex I: Proposed Operating Plan*" as this is an important consideration in the protection of fish and fish habitat.

Page 91, under "Fisheries and Oceans Canada":

Please change the reference to DFO to a Department, as DFO is not an Agency. Also, detailed engineering drawings are not the only requirement for DFO to make a *Fisheries Act* determination; detailed habitat information, compensation plan and operating plan are also required.

Page 120, in the "Fish Habitat" Environmental Component, and

Page 122, in the "Fish Migration" Environmental Component under "Mitigation", and "Resolution/Result":

Information in these sections states that habitat compensation is being provided downstream in part because fish passage is not being provided at Wabagishik GS, and that "*Fisheries Management Objectives can be achieved without providing upstream fish passage*". At this time, this concept is proposed, because (as in our earlier comment on Page 18) a determination on the need for fish passage has not yet been made by the fisheries manager (i.e. MNR). However, these sections are written as if the decision has already been made.

Recognizing that this is a proponent-led document, we nevertheless recommend that it be made clear that not providing upstream fish passage and the associated rationale is being proposed by Xeneca, and that ultimate decision-making rests with regulators.

Pages 122 and 149, under the "Issue" of cofferdams:

These tables indicate fish habitat will be harmfully altered or disrupted, or destroyed due to cofferdam construction and de-watering. If so, this habitat should be included in the fish habitat compensation plan.

Timing of construction of habitat compensation should be considered in the compensation plan. Compensatory habitat should be constructed so that it is functional prior to the loss, alteration or disruption of the original habitat. If spawning or nursery habitat will be disrupted or destroyed, it is important that compensatory habitat be functional prior to the disruption or destruction to avoid the loss of a year-class of fish. Therefore if cofferdam construction will alter, disrupt or destroy fish habitat, the appropriate compensatory habitat should be functional prior to construction of cofferdams, rather than prior to completion of dam construction or operation of the facility.

Page 160, Table 7:

This table should include *Fisheries Act* Section 20, provision of fish passage. As mentioned above, fish passage is still a potential requirement for this location, pending further discussion with MNR.

Page 167, third paragraph:

The ER states "*Based on the assessment it is anticipated that the impacts associated with the dam, spillway have a high potential to result in the harmful alteration, disruption or destruction (HADD) of holding and refuges habitat for Walleye, Lake Sturgeon and White sucker.*" Our understanding of the biological information provided (e.g. in the Natural Environment Report) is that the HADD includes spawning habitat for these species. This should be indicated.

Also please note that the new *Fisheries Act* subsection 35(1) states "*No person shall carry on any work, undertaking or activity that results in the harmful alteration or disruption, or the destruction, of fish habitat.*" Please update the HADD description to reflect the current wording.

Should you have any questions or comments, please contact me directly by telephone at (705) 746-2196 ext. 287, by fax at (705) 746-4820, or by e-mail at Kelly.Eggers@dfo-mpo.gc.ca.

Sincerely,



Kelly Eggers
Senior Habitat Biologist

Copy: Ontario Ministry of Natural Resources
Ontario Ministry of the Environment
WESA

Christine Greenaway, Bob Robinson,
Wayne Selinger
Ellen Cramm
Kai Markvorsen



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September 18, 2012

Ms. Kelly Eggers
Senior Habitat Biologist
Fisheries and Oceans Canada
Northern Ontario District
28 Waubeek Street
Parry Sound, ON P2A 1B9

Dear Kelly,

Thank you for your letter dated September 11, 2012 regarding Xeneca Power Development's Draft Environmental Assessment Report (Draft ER) for Wabagishik Rapids GS on the Vermillion River.

Xeneca greatly appreciates DFO's input and comments on information in the Draft ER related to fish, fish habitat, the Fisheries Act, and other DFO regulatory requirements. We are sharing your letter with our prime biological consultant (NRSI) and our EA consultant (OEL-Hydro-Sys) to address your suggestions in the final EA.

The following are responses in reference to your letter dated September 11, 2012:

Page 18, "under conclusions", Xeneca understands that the final determination on fish passage is yet to be made by MNR per Fisheries management objective or by DFO under the *Fisheries Act*.

Page 27, last paragraph: Thank You for clarifying that a federal EA was not triggered for At Soo crossing.

Page 42, Section 2.9: Thank You, fish habitat should be mentioned in this section. The summary information will be taken from the Natural Environment Report.

Pages 70 and 74, under Access Roads and Water Crossings: your suggestion to clarify Sections 3.5.9 and 3.5.7 will be done.

Pages 74 to 85, Section 3.6: Thank you, discussion of facility operation during fish spawning and nursery periods will be added to this section in the Final EA.

Page 91, Section 3.6: The requested change in referencing DFO will be made.



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Page 120 and 122, in Fish Habitat and Fish Migration: Thank you, the phrasing will be updated to be clear Xeneca is stating its own position. We do understand that a determination on the need for fish passage has not been made yet by DFO under Section 20 of the *Fisheries Act* or under the Fisheries Management Objectives by MNR.

Pages 122 and 149, under Issue of cofferdams: please note that the effects of the cofferdam are temporary (only during the construction period) and no residual long-term effects are anticipated. Also, Xeneca did not expect that compensation could be required by DFO before the cofferdam is built. Xeneca and NRSI would like to have a conference call with you to discuss this issue before finalizing the EA.

Page 160, Table 7: Thank you, the requested change will be made. Please advise when you expect the decision on passage to be made by DFO/MNR and if Xeneca will have opportunity to input to this.

Page 167, third paragraph: Thank you, spawning habitat will be added to this section.

General: elements of the new *Fisheries Act* subsection 35(1) will be added to the HADD description.

Again, thank you for your letter and we are working on incorporating your input into the final EA. If any questions arise while doing so, I will call at the number you provide.

Sincerely,

A handwritten signature in black ink, appearing to read 'Edmond Laratta', with a stylized flourish at the end.

Edmond Laratta
Environment Department
Xeneca Power Development Inc.

Cc Christine Greenaway – MNR
Wayne Selinger – MNR
Bob Robinson – MNR
Sandra Dosser – MNR
Ellen Cramm – MOE
Paula Allen - MOE
Kai Markvorsen – OEL HydroSys
Uwe Roeper – Xeneca

Danielle Dempsey

From: Eggers, Kelly <Kelly.Eggers@dfo-mpo.gc.ca>
Sent: September-28-12 1:06 PM
To: Ed Laratta
Cc: Greenaway, Christine (MNR); Selinger, Wayne (MNR); Robinson, Bob L. (MNR); Dosser, Sandra (MNR); ellen.cramm@ontario.ca; Allen, Paula (ENE); Kai Markvorsen; Tami Sugarman; Uwe Roeper; Stephanie Hodsoll
Subject: RE: DFO comments on draft Wabagishik ER

Hello Ed,

Thank you for your September 18th, 2012 letter responding to DFO's comments on the draft ER for Wabagishik Rapids. We note your comments regarding cofferdam construction, compensatory fish habitat and fish passage, and hope the details below provide further explanation or information.

Table 5 of the draft ER for Wabagishik Rapids indicates that inundation of 14,800m² of lake sturgeon, walleye, and sucker spawning habitat has no residual impact, yet construction of temporary cofferdams is identified as having a residual impact.

If inundation of 14,800m² of spawning habitat has no residual impact after constructing the compensatory habitat, it is assumed the compensatory habitat is functioning in time to offset the loss of the habitat due to inundation. But if in the proposed plans there is a lag between construction of the dam, and construction of the spawning habitat, then a residual impact should be identified.

If construction of cofferdams has a residual impact, and if that impact is harmful disruption of spawning habitat, this is part of the definition of a HADD under the current *Fisheries Act* (ie. the harmful alteration or disruption, or destruction of fish habitat) and compensation would be required.

To achieve the goal of no net loss of the productive capacity of fish habitat (DFO's *Policy for the Management of Fish Habitat (1986)*, available at <http://www.dfo-mpo.gc.ca/habitat/role/141/1415/14155/fhm-policy/index-eng.asp>), compensation habitat should be constructed and functioning at the time when the original habitat will be harmfully altered or disrupted, or destroyed. If this is not possible, then, if appropriate for the fishery, to offset the loss of that habitat over the lag time between when the HADD occurs and the compensatory habitat is functioning, more compensatory habitat will be required than if the compensatory habitat was built and functioning at the time of the HADD. My understanding of the limited discussions to date regarding potential fish habitat compensation is that there may not be a suitable location(s) to build enough compensatory habitat to cover the HADD, let alone build additional habitat to cover the lag time where there is a loss of productive capacity, therefore having the compensatory habitat functioning prior to the HADD occurring may be a more effective strategy.

Regarding when to expect the decision on fish passage by MNR/DFO, MNR indicated in our meeting July 19th, 2012 that this decision relates to the plans for fish habitat compensation.

Hopefully this helps clarify DFO's comments on the draft ER. I am available for a conference call with NRSI and Xeneca to discuss further as you requested - please also invite MNR as the subject of fish passage and habitat compensation relates to their concerns as well. I look forward to hearing more details of Xeneca's plans for fish habitat compensation.

Kelly

Kelly Eggers

Senior Habitat Biologist | Biologiste principal de l'Habitat

Fisheries and Oceans Canada | Pêches et Océans Canada

Northern Ontario District | Nord de l'Ontario
Ontario – Great Lakes Area | Secteur de l'Ontario et des Grands Lacs

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Kelly.Eggers@dfo-mpo.gc.ca

From: Ed Laratta [<mailto:elaratta@xeneca.com>]

Sent: September 24, 2012 3:18 PM

To: Eggers, Kelly

Cc: Greenaway, Christine (MNR); Selinger, Wayne (MNR); Robinson, Bob L. (MNR); Dosser, Sandra (MNR); ellen.cramm@ontario.ca; Allen, Paula (ENE); Kai Markvorsen; Tami Sugarman; Uwe Roeper; Stephanie Hodsoil

Subject: Letter to Kelly Eggers - FOC

Hello Kelly,

Thank you for comments on the Wabageshik Draft EA you provided on September 11, 2012.

Please see attached our response letter to your comments. These will be addressed in the final EA.

Regards,

Ed.

Edmond M. Laratta | Environment Department| **Xeneca Power Development Inc.**
5255 Yonge Street, Suite 1200, Toronto, ON, M2N 6P4; **Xeneca Tel:** 416 590 9362

Tel Direct: 416 590 3069| **Cell:** 416 856 3253| **Fax:** 416 590 9955 | **Email:** elaratta@xeneca.com

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Fisheries and Oceans
Canada

Pêches et Océans
Canada

28 Waubeek Street
Parry Sound, Ontario
P2A 1B9

January 2, 2013

Your file

Votre référence

Our file

Notre référence

PS-10-2502

via E-MAIL

Xeneca Power Development Inc.
Attn: Uwe Roeper
5255 Yonge Street
Suite 1200
North York, Ontario
M2N 6P4

Dear Mr. Roeper:

Subject: Wabagishik Rapids, Vermilion River, proposed minimum flow value,
and compensatory fish habitat

Fisheries and Oceans Canada (DFO) has reviewed the information provided regarding Xeneca's proposed minimum flow value of $5\text{m}^3/\text{s}$ for the Vermilion River through the Wabagishik Rapids proposed hydroelectric site.

DFO is mandated to conserve and protect fish and fish habitat through the fisheries protection provisions of the federal *Fisheries Act*. Therefore, concerning facility operation, we are interested in the impacts that a minimum flow of $5\text{m}^3/\text{s}$ and regularly fluctuating flows during operation would have on fish and fish habitat in the Vermilion River. The information provided shows that the fish habitat affected by daily flow changes during intermittent operation of the facility (i.e. fluctuating from the minimum flow of $5\text{m}^3/\text{s}$ to the turbine flow of $25\text{m}^3/\text{s}$) is a horseshoe-shaped area within Wabagishik Rapids. This area will be de-watered at the minimum flow, and wetted at the turbine flow (see Figure 1: Wabagishik Tailrace Area Various Flow Wetted Surface, dated November 23, 2012, in Xeneca's document titled "*Wabagishik Rapid – Area Just Downstream of Tailrace, Photographs at Various Flow Conditions*").

In addition to providing walleye, sturgeon and sucker spawning habitat, this area provides habitat for benthic invertebrates which are an important food source for fish in the Vermilion River. Studies have demonstrated that intermittent or peaking hydroelectric generation facility operations negatively change the assemblage and density of benthic invertebrates in areas subject to de-watering. Therefore, while the spawning function of this habitat is expected to be maintained with the proposed operating plan (i.e. run-of-river operation during spawning and egg incubation periods), the negative impacts to benthic invertebrate production in the horseshoe-shaped area of Wabagishik Rapids represent a harmful alteration of feeding and food production habitat for fish.

As you are aware, the harmful alteration or disruption, or destruction (HADD) of fish habitat is prohibited under Section 35 of the *Fisheries Act*. In order to be in compliance with Section 35 of the *Fisheries Act*, you must obtain an authorization from DFO. In most cases authorization is conditional on developing habitat compensation and monitoring plans to ensure there will be no net loss in the productive capacity of fish habitat.

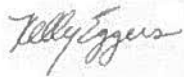
For the proposed Wabagishik Rapids hydroelectric development, the HADD of 14,800m² of walleye, sturgeon and sucker spawning habitat which will be inundated by the proposed dam has been previously identified. That habitat also functions as benthic invertebrate habitat. Compensatory habitat constructed for the purposes of replacing the spawning habitat would likely also provide habitat for benthic invertebrates.

The HADD of the horseshoe-shaped benthic invertebrate production area within Wabagishik Rapids will also require habitat compensation.

It is our understanding, following discussions between Xeneca, the Ontario Ministry of Natural Resources and DFO, that plans for spawning habitat compensation are currently being developed. For consideration in planning for benthic invertebrate habitat compensation, we offer the following comments. Benthic invertebrate production areas benefit fish both at the site and downstream, therefore to maintain that function, compensation for benthic invertebrate habitat at Wabagishik Rapids needs to occur at the site rather than at a downstream location. Should there be not enough suitable area for installation of compensation habitat, another option for the horseshoe-shaped area within Wabagishik Rapids could be to lower the river bed to a point where the invertebrate production site would remain wetted at the proposed minimum flow value, provided that this would not impact the spawning function of the habitat. Alternatively, the HADD of the horseshoe-shaped area within the rapids could be avoided by increasing the minimum flow value so that this area remains sufficiently wetted for invertebrate production.

Should you have any questions or comments, please contact me directly by telephone at (705) 746-2196 ext. 287, by fax at (705) 746-4820, or by e-mail at Kelly.Eggers@dfo-mpo.gc.ca.

Sincerely,



Kelly Eggers
Senior Habitat Biologist

Copy: Ontario Ministry of Natural Resources
Ontario Ministry of the Environment

Christine Greenaway, Bob Robinson,
Wayne Selinger
Ellen Cramm

Danielle Dempsey

From: Humera Khan <HKhan@xeneca.com>
Sent: January-09-13 2:27 PM
To: Kelly.Eggers@dfo-mpo.gc.ca
Cc: Ed Laratta; ellen.cramm@ontario.ca; Greenaway, Christine (MNR); Bob.L.Robinson@ontario.ca; wayne.selinger@ontario.ca; Laurie.Brownlee@ontario.ca; URoeper@ortech.ca
Subject: RE: Minimum flow issue - Wabageshik
Attachments: FOC-01.09.13_20130109135423.pdf

Hi Kelly,

Please see attached letter from Mr. Uwe Roeper in response to your January 2nd letter re: Wabagishik Rapids, Vermillion River.

Best Regards,

- Humera

Humera Khan
Xeneca Power Development Inc.
5255 Yonge St. Suite 1200
North York, ON M2N6P4
(416) 590-3075

From: Eggers, Kelly [<mailto:Kelly.Eggers@dfo-mpo.gc.ca>]
Sent: January 2, 2013 2:22 PM
To: Uwe Roeper
Cc: ellen.cramm@ontario.ca; Christine Greenaway (MNR); Bob L. Robinson (MNR); Wayne Selinger (MNR)
Subject: RE: Minimum flow issue - Wabageshik

Hello Uwe,

DFO has reviewed the information provided related to the proposed minimum flow, and our comments are attached.

Please give me a call if there are any questions.

Thanks.

Kelly

Kelly Eggers

Senior Habitat Biologist | Biologiste principal de l'Habitat

Fisheries and Oceans Canada | Pêches et Océans Canada
Northern Ontario District | Nord de l'Ontario
Ontario – Great Lakes Area | Secteur de l'Ontario et des Grands Lacs

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Kelly.Eggers@dfo-mpo.gc.ca

From: Uwe Roeper [<mailto:URoeper@ortech.ca>]

Sent: December 3, 2012 9:03 PM

To: Bob L. Robinson (MNR); Wayne Selinger (MNR)

Cc: Mark Holmes; Nava Pokharel; ellen.cramm@ontario.ca; Paula Allen (ENE); Eggers, Kelly; Christine Greenaway (MNR) Ed Laratta; Kai Markvorsen; Tami Sugarman; Andrew Schiedel

Subject: Fwd: Minimum flow issue - Wabageshik

Dear Bob and Wayne,

Further to our conference call the other day, we have completed the additional analysis discussed and would like to propose a minimum flow of 5 m³/s. The number is based on the following underlying rationale:

- The number of 5 m³/s is significantly higher than the number originally proposed by Xeneca and close to the number of 6.5 m³/s suggested by MNR and MOE staff. The number is within the range of the base flow numbers calculated by MNR but allows a bit better utilization of the available water resource.
- Hydraulic analysis shows that the channel parameters (velocity, wetted perimeter and water depth) are nearly the same in the range of 4 to 7 m³/s. A summary table is attached.
- Hydraulic analysis shows that more than 10 m³/s flow is required to keep the gravel bed between the two islands wet all the time.
- The river experiences flow of under 10 m³/s fairly regularly in August / September (40 % of the time), causing the gravel bed between the two islands to drain under existing conditions. As such, the use of 5 or 6.5 makes no significant difference to the draining of the gravel bed between the two islands and is not inconsistent with what occurs in the existing conditions in this habitat.
- The minimum flow number applies only at times when the plant is in intermittent operation mode and when the plant is not subject to Walleye and Sturgeon spawning flow restrictions.
- To address MOE's concern that 6.5 m³/s is available at all times to Domtar, we would ensure that the total daily volume provided downstream is always 6.5 m³/s (provided that inflow from Lorne Falls is 6.5 m³/s or greater).

We would like to discuss the above with you at your convenience.

Uwe.



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tel 416-590-9362 fax 416-590-9955 www.xeneca.com

January 9, 2013

Fisheries and Oceans Canada
28 Waubeek Street
Parry Sound, ON
P2A 1B9

Attn: Kelly Eggers, Sr. Habitat Biologist

Dear Ms. Eggers:

Subject: Your letter of January 2, 2013 regarding Wabagishik Rapids, Vermillion River.

Thank you for taking the time to review the information on minimum flows and for the comment letter.

We concur with your interpretation of Figure 1. The operation of the project would cause a small horseshoe-shaped area to be de-watered at minimum flows (at night) and wetted at the turbine flow. It might be useful to note that this intermittent dewatering would occur when flows in the river drop below 19.2 m³/s. This flow condition typically occurs in mid-Winter and late summer. Xeneca has committed in the provincial EA not to carry out intermittent operation during the habitat sensitive spring spawning period. It should also be recognized that under certain low flow conditions in late summer, this area dewateres naturally. However, the proposed intermittent operation would increase the dewatering events.

We also concur with your interpretation that spawning function of the habitat will be maintained in the horseshoe-shaped area but that benthic production would be affected in the dewatered area.

We are cognizant of the requirements for a DFO authorization and the possible conditions for habitat compensation, both for the inundated areas upstream of the dam and the small horseshoe-shaped area. We would like to discuss with DFO the habitat compensation plan that is currently being considered.

We agree that it is typically preferable to compensate at the site. We also believe that it is conceptually possible to lower the small horseshoe-shaped area as suggested. We note that it should be considered that this area goes dry naturally during flow rates under 10 m³/s which occur about 10% of the time, mostly in late summer and winter. We also note that it is not economically viable to provide minimum flows of 10 m³/s at all times to keep this area wet during intermittent operation. However, we believe that there are compensation options that are workable and meet the goal of no net loss in productive capacity. We would be interested to discuss those.

The triangular segment of river bound by Nairn Dam, Domtar Dam and Wabagishik Rapids has an excellent spawning and gravel bed located at Wabagishik Rapids. During spawning, fish in this

(cont.)

triangle swim upstream from Domtar Dam and either end up at Nairn Dam or Wabageshik Rapids. Those fish that end up at Nairn dam find no suitable habitat conditions. Those fish that end up at Wabagishik Rapids find an over-abundance of suitable habitat. It would seem that a well-planned compensation effort at Nairn Dam would provide the greatest overall benefit to productive capacity within this segment of the river system by providing suitable habitat no matter which upstream direction the fish end up in.

Our biological consultants, NRSI, are preparing a conceptual compensation plan for the final EA.

We would like to present and discuss this plan and the other issues raised in your letter.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Uwe Roeper', with a stylized flourish at the end.

Uwe Roeper, C.E.O.

Danielle Dempsey

From: Stephanie Hodson <SHodson@xeneca.com>
Sent: February-21-13 2:58 PM
To: Mark Holmes; Nava Pokharel; Andrew Schiedel; Arnold Chan; Dean Assinewe; Lynn Moreau; Kai Markvorsen; Tami Sugarman
Subject: DFO's Wabagishik Outstanding Issues

Hey guys, here are Kelly's "outstanding issues" for Wabagishik.

I will be putting together the agenda tomorrow/Monday (depending on when I hear back from Bob Robinson re. MNR issues) and these will be included.

Steph

Stephanie Hodson
Stakeholder Relations
Xeneca Power Development
5255 Yonge St., Suite 1200
North York, ON M2N 6P4
(416) 590-3077

From: Eggers, Kelly [<mailto:Kelly.Eggers@dfo-mpo.gc.ca>]
Sent: Thursday, February 21, 2013 1:13 PM
To: Stephanie Hodson
Cc: Bob L. Robinson (MNR); Wayne Selinger (MNR)
Subject: RE: Wabagishik Draft ER - MNR's Outstanding Issues

Hi Steph,

I've reviewed the previous comments and correspondence that DFO has provided to Xeneca regarding the Wabagishik project. DFO has no new issues to add. As an overview of our previous comments, what DFO still requires before we can complete our regulatory review are:

- Fish Habitat Compensation plans, considering the amount and type of habitat to be created as compensation for habitat harmfully altered or disrupted, or destroyed by the construction or operation of the project, the location of the compensation habitat, and the timing of its construction. Note that the issue of the need for fish passage upstream at Wabagishik Rapids is also linked to compensation, as it has been discussed that upstream fish passage may not be required at Wabagishik Rapids to maintain fisheries management objectives provided that compensation habitat is suitable.
- Finalized Operating Plan, which details operations that will not impact Walleye and Lake Sturgeon throughout the combined spawning, egg incubation and larval drift period, for which the end date, or end signal, to this period has not yet been agreed upon.
- Fish Mortality estimates and mitigation measures proposed to limit fish mortality during operation of the facility,
- Plans for Monitoring, which will be required in both the Section 35 (Habitat) and Section 32 (killing of fish) *Fisheries Act* Authorizations. Monitoring will be required during construction, post-construction to assess whether habitat compensation is functioning, and during operation to assess fish mortality.
- Records of the Aboriginal Consultation that I understand has been conducted, showing that Aboriginal groups whose potential or established Aboriginal or treaty rights may be adversely affected by the projects have been adequately consulted, that they have been made aware of the potential impacts to fisheries and fish habitat, whether they had no concerns with, or if they raised issues pertaining to, fisheries or fish habitat, and if there were concerns, how these concerns have been addressed. If there are outstanding concerns or if Aboriginal groups have not been made aware of the potential impacts to fisheries and fish habitat, further consultation will be required before DFO can make a regulatory decision.

- Application for *Fisheries Act* Authorization(s).

Hope that helps.
Thanks

Kelly

Kelly Eggers

Senior Habitat Biologist | Biologiste principal de l'Habitat

Fisheries and Oceans Canada | Pêches et Océans Canada
Northern Ontario District | Nord de l'Ontario
Ontario – Great Lakes Area | Secteur de l'Ontario et des Grands Lacs

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Kelly.Eggers@dfo-mpo.gc.ca

From: Stephanie Hodson [mailto:SHodson@xeneca.com]
Sent: February 20, 2013 3:16 PM
To: Eggers, Kelly
Subject: Wabageshik Draft ER - MNR's Outstanding Issues

Hi Kelly, here's the chart from MNR that I was referring to. You identified to me on the telephone that DFO still has concerns over Aboriginal Consultation and whether or not there were comments regarding the fisheries aspects of the proposal. If there are any other outstanding issues/you'd like to comment on this MNR document, please let me know in advance of the meeting next week.

Thanks,
Steph

Stephanie Hodson
Stakeholder Relations
Xeneca Power Development
5255 Yonge St., Suite 1200
North York, ON M2N 6P4
(416) 590-3077

Danielle Dempsey

From: Eggers, Kelly <Kelly.Eggers@dfo-mpo.gc.ca>
Sent: April-25-13 2:26 PM
To: Andrew Schiedel; Mark Holmes
Cc: Selinger, Wayne (MNR); Lynn Moreau; Kai Markvorsen; O'Farrell, Brendan (MNR); Stephanie Hodsoll; Grace Yu; CDeJong@ortech.ca; scott.d.finucan@ontario.ca; nikki.boucher@ontario.ca
Subject: Wabagishik Fish Habitat Compensation Preliminary Draft Plan - DFO comments

Hi Andrew, Mark, et al,

Thanks for the discussion this morning on the Compensation Plan for Wabagishik. As promised, the following are DFO's comments on the preliminary draft plan (note that these comments are being made in the context of working towards a plan that will be acceptable for DFO to issue an Authorization). Apologies that I wasn't able to get these to you prior to this morning's call.

In general, the concept has merit and is a good start, though as you had acknowledged, it is lean on details. DFO is supportive of focussing firstly on habitat at Wabagishik Rapids as well as of the general methodology used to determine suitable locations for creating the compensation habitat (i.e. based on velocity, depth and substrate).

- More details are needed regarding the HADD quantification - e.g. what parameters were used and how (i.e. should be the same habitat suitability indices based on velocity, depth, and substrate that are used to focus on locating and creating compensatory habitat); at what flows were the parameters applied (e.g. the document indicates moderate spring flow - what does that mean?).
- The habitat suitability parameters (i.e. depth, velocity, substrate) used to quantify the HADD and used as design criteria for compensatory habitat have been based on values from the literature which is good, but from a quick scan of the literature as well as discussion with MNR on walleye spawning in Ontario, it appears that walleye use lower velocities than indicated in Table 1 for spawning (i.e. starting at 0.3 m/s). Table 1 should be revised accordingly.
- The plan will need to demonstrate rigour around the locations chosen for compensatory habitat, focussing in on specific rather than general areas. One of the factors in determining the appropriate compensation ratio is confidence in the functioning of the habitat to be created. This confidence could be increased by use of modelling such as River 2D to show that the appropriate habitat suitability indices can be met.
- Focussing compensation efforts primarily on Wabagishik Rapids makes sense as fish will likely bypass Graveyard Rapids as they head upstream to spawn. In addition to installing new habitat at the embayment at the lower end of Wabagishik Rapids there may be opportunities to enhance habitat within Wabagishik Rapids as well, which could count towards offsetting the loss of production from the loss of the habitat upstream of the proposed dam.
- Comments in the appendix to the plan (January 9th letter from Nava) indicate under item 3 that there may be impacts to habitat due to construction of the tailrace. Will these impacts result in a loss of habitat, or will the same amount and type of habitat be re-created within the tailrace?
- Timing of the compensatory habitat functioning relative to timing of the HADD of the habitat should be addressed. Should compensatory habitat not be functioning before the HADD occurs, then there is a lag period where there is a loss of productive capacity of the habitat. The ratio of HADD to compensatory habitat would need to be higher than 1:1 to offset this loss of production.

- DFO identified the dewatering of a horseshoe shaped area within the rapids as a harmful alteration of feeding habitat (January 2, 2013). While the focus of this plan is on spawning habitat, and it is recognized that the creation of walleye spawning habitat will offset the alteration of the feeding habitat and the associated loss of productive capacity of this habitat, this should be better articulated in the Plan (along with any benefits to other life stages or species from the habitat creation).
- In considering the riffle upstream of the snowmobile bridge as still providing some spawning habitat under inundation - while this area may continue to provide some spawning function for the lake-dwelling population (provided that conditions under inundation will flush accumulating sediment from this habitat) which may support the downstream population by providing some recruitment to that population, the weighted value of this is likely impossible to determine prior to dam construction because we currently can't differentiate whether its lake dwelling or river dwelling fish using it. Monitoring following dam construction may show that it is still being used as spawning habitat which would mean by lake-dwelling fish, and then estimations could perhaps be made about how much of the recruitment goes over the dam and becomes part of the lower Vermilion population. What is known for sure is that spawning habitat for fish in the lower Vermilion is being lost and is needed to meet the management objectives, and they will not be able to access the riffle upstream of the dam. In this context, whether this habitat still provides spawning function for the lake-dwelling population or not should not be considered as rationale in support of a 1:1 compensation ratio for the compensation plan.
- Monitoring of the compensation habitat should show that the habitat is suitable, fish are using it, and spawning is successful, so in addition to what is described we suggest adding sampling larval drift, so it can be determined that the conditions in the compensatory habitat are appropriate for a successful spawn.

In addition, I would like to bring to Xeneca's attention that a Letter of Credit will be required upon application for a *Fisheries Act* Authorization as financial security for ensuring construction of the compensatory habitat is completed. Information on what can be required when applying for an Authorization is available at <http://www.dfo-mpo.gc.ca/habitat/what-quoi/3-info-eng.htm>.

If there are any questions or if anything is unclear, please contact me.

Thanks.

Sincerely,

Kelly Eggers

Fisheries Protection Biologist | Biologiste de protection des pêches

Fisheries and Oceans Canada | Pêches et Océans Canada
Ontario – Great Lakes Area | Secteur de l'Ontario et des Grands Lacs

28 Waubeek Street | 28 rue Waubeek
Parry Sound, ON P2A 1B9

Tel | Tél: 705-773-4316
Fax | Téléc: 705-746-4820

Kelly.Eggers@dfo-mpo.gc.ca

Danielle Dempsey

From: Eggers, Kelly <Kelly.Eggers@dfo-mpo.gc.ca>
Sent: April-26-13 11:06 AM
To: Andrew Schiedel; Mark Holmes
Cc: Selinger, Wayne (MNR); Lynn Moreau; Kai Markvorsen; O'Farrell, Brendan (MNR); Stephanie Hodsoll; Grace Yu; CDeJong@ortech.ca
Subject: Draft Preliminary Biological Monitoring Plan - DFO comments

Hi Andrew, Hi Mark,

Here are DFO's comments regarding the Draft Preliminary Biological Monitoring Plan for post-construction monitoring:

- This monitoring plan may be a good place to include fish mortality monitoring (as discussed in the April 25th meeting), since this monitoring plan is for post-construction/operation, and if DFO is to issue an Authorization for the destruction of fish (Fisheries Act Section 32), monitoring will be a requirement of the Authorization.
- Monitoring of the compensation habitat should include monitoring to determine if the created habitat provided for a successful spawn, and monitoring larval drift is suggested as a way to do that (also as discussed in the April 25th meeting).
- Considering our discussion around the habitat to be inundated which the draft preliminary compensation habitat plan indicates may still provide suitable conditions for walleye spawning post-construction - as mentioned in my written comments on the compensation plan, you may want to monitor the conditions, use, and success of this habitat post-construction. While at this time we are unable to quantify what the contribution of this habitat to the downstream population will be post-construction, we may be able to once the dam is in place.

If you have any questions or if something is unclear, please contact me.

Sincerely,

Kelly Eggers

Fisheries Protection Biologist | Biologiste de protection des pêches

Fisheries and Oceans Canada | Pêches et Océans Canada
Ontario – Great Lakes Area | Secteur de l'Ontario et des Grands Lacs

28 Waubeek Street | 28 rue Waubeek
Parry Sound, ON P2A 1B9

Tel | Tél: 705-773-4316
Fax | Téléc: 705-746-4820

Kelly.Eggers@dfo-mpo.gc.ca

Environment Canada

Natalie St-Pierre

From: Muriel Kim
Sent: July 25, 2012 11:59 AM
To: 'Lusk, Sheryl [Ontario]'
Cc: Dobos, Rob [Burlington]
Subject: RE: Proposed Blanche River waterpower project - Upcoming distribution of the DRAFT Environmental Report

Hello Sheryl,

At the moment, it would be more practical to send you a CD of the draft report, since some agencies have had trouble accessing and downloading files from our (and our client's) FTP sites, particularly when file sizes are very large. We will send you 1 CD for each of the draft reports for Wabageshik Rapids and Blanche River; please let me know if you need additional copies.

Regards,
Muriel

Muriel Kim - Environmental Scientist - (613) 839-3053 x261

From: Lusk, Sheryl [Ontario] [<mailto:Sheryl.Lusk@ec.gc.ca>]
Sent: July-25-12 10:10 AM
To: Muriel Kim
Cc: Dobos, Rob [Burlington]
Subject: RE: Proposed Blanche River waterpower project - Upcoming distribution of the DRAFT Environmental Report

Hi Muriel,

Yes, I am the coordinator for Environment Canada's review of this project. Would it be possible to obtain the report via an ftp site? If not, a CD (no hard copy, please) would be my next preference.

Thanks,
Sheryl

Sheryl Lusk
Environmental Assessment Officer
Environmental Assessment Section
Environmental Protection Operations Division - Ontario
Environmental Stewardship Branch
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Sheryl Lusk
Agent d'évaluation environnementale
Section de programme d'évaluation environnementale

Division des opérations de protection de l'environnement de l'Ontario
Direction générale de l'intendance environnementale
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Télécopieur 416-739-4405
Gouvernement du Canada
Site Web www.ec.gc.ca

From: Muriel Kim [<mailto:mkim@wesa.ca>]

Sent: July 24, 2012 10:55 AM

To: kelly.eggars@dfo-mpo.gc.ca; Davis, Stephanie [CEAA]; lisa.mcdonald@tc.gc.ca; EACoordination_ON@inac-ainc.gc.ca; katherine.hess@hc-sc.gc.ca; Lusk, Sheryl [Ontario]; Caitlin.Scott@NRCan.gc.ca; tina.webb@ontario.ca; shaun.walker@ontario.ca; gerry.webber@ontario.ca; jennifer.lillie-paetz@ontario.ca; brett.smith@ontario.ca; David.Pickles@ontario.ca; paul.marleau@ontario.ca

Cc: Tami Sugarman; Kai Markvorsen

Subject: Proposed Blanche River waterpower project - Upcoming distribution of the DRAFT Environmental Report

Good afternoon,

We will soon be distributing the DRAFT Environmental Report (ER) for the proposed Xeneca Power Corporation Inc. waterpower development on the Blanche River (Marter Township).

The proposed undertaking is subject to the Class Environmental Assessment for Waterpower Projects as a new project on a managed waterway. While there is no formal requirement for a draft ER in the Class EA for Waterpower Projects, this document will be circulated to key parties in order to facilitate an efficient regulatory review of the final document.

We would like to confirm that you continue to be the appropriate one-window contact at your organization, and whether there are additional individuals within your organization whom you believe should also receive a copy of the draft ER. We are planning to distribute one hard copy and one CD-ROM to each regulator on our contact list; please let us know if you would like to receive additional copies, or if only one form of the report (hard copy or CD-ROM) would suffice.

I will follow up this message with a phone call within the next couple of days to confirm your participation in the review process.

Best regards,
Muriel Kim



Muriel Kim M.Sc.
Environmental Scientist

(T) (613) 839-3053 x261 (C) (613) 294-3886 mkim@wesa.ca www.wesa.ca

NOTE: If you are not the intended recipient of this e-mail, please delete it immediately. Unauthorized transmission of this e-mail is prohibited.

Muriel Kim

Subject: FW: Wabageshik Rapids - Vermilion River draft environmental report available for review
Attachments: 2010-061 EC Comments on Draft Class EA Report.doc; 2010-061 EC Comments on Draft Class EA Report.pdf

From: Lusk, Sheryl [Ontario] [<mailto:Sheryl.Lusk@ec.gc.ca>]
Sent: Friday, September 07, 2012 2:55 PM
To: Stephanie Hodsoll
Cc: Dobos, Rob [Burlington]
Subject: RE: Wabageshik Rapids - Vermilion River draft environmental report available for review

Hi Stephanie,

Please find attached our comments on the draft Environmental Report (dated August 2012) for the proposed Wabageshik Rapids Generating Station near Espanola, Ontario. If you have any questions, please let me know.

Best regards,
Sheryl

Sheryl Lusk
Environmental Assessment Officer
Environmental Assessment Section
Environmental Protection Operations Division - Ontario
Environmental Stewardship Branch
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Sheryl Lusk
Agent d'évaluation environnementale
Section de programme d'évaluation environnementale
Division des opérations de protection de l'environnement de l'Ontario
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Téléphone 416-739-5962
Télécopieur 416-739-4405
Gouvernement du Canada
Site Web www.ec.gc.ca

From: Kai Markvorsen [<mailto:kmarkvorsen@wesa.ca>]
Sent: August 10, 2012 11:41 AM
To: kelly.eggars@dfo-mpo.gc.ca; Lusk, Sheryl [Ontario]; ellen.cramm@ontario.ca; mohammad.khan@ontario.ca;

rod.sein@ontario.ca; Robinson, Bob (MTO); parise.drolet@ontario.ca; Davis, Stephanie [CEAA]
Cc: Ed Laratta; Grace Yu; Stephanie Hodsoll; Tami Sugarman
Subject: Wabageshik Rapids - Vermilion River draft environmental report available for review

Good morning,

On behalf of Xeneca Power Development Inc., please be advised that the draft environmental report for the Wabageshik Rapids Generating Station on the Vermilion River is now available for review.

Xeneca is providing this document for discussion purposes as part of a 30-calendar day draft review period scheduled to end on September 11th, 2012. This review period is intended to allow regulatory agencies a preliminary opportunity to identify issues and concerns prior to the document being finalised and shared with the public for the formal thirty-day public and agency review.

The report can be downloaded from our FTP site using Internet Explorer and the following access information:

Site: 
Username: 
Password: 

Hard copies and/or digital copies on CD have been distributed via courier to those who have requested the report in those formats.

If you have any questions or have difficulty accessing the FTP site please feel free to contact me.

Respectfully,

Kai



Kai Markvorsen B.Sc.

Environmental Consultant

(T) (613) 839-1453 x 248 (C) (613) 277-1164 kmarkvorsen@wesa.ca www.wesa.ca

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Environment
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Environnement
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Environmental Protection Operations Division - Ontario
Environment Canada
4905 Dufferin Street
Toronto, Ontario M3H 5T4

Our File No.: 2010-061

September 7, 2012

Ms. Stephanie Hodsoll
Public Affairs Liaison
Xeneca Power Development Inc.
5255 Yonge Street, Suite 1200
North York, Ontario
M2N 6P4

Dear Ms. Hodsoll,

**Re: Draft Environmental Report for the proposed Wabageshik Rapids Hydroelectric
Generating Station near Espanola, Ontario**

Thank you for the opportunity to review and provide comments on the draft Environmental Report (ER) (dated August 2012) for the provincial Class EA for Waterpower Projects for the proposed Wabageshik Rapids Hydroelectric Generating Station near Espanola, Ontario. The following comments are provided within the context of Environment Canada's (EC's) mandates in our role as a government review agency, and are specifically limited to the project's potential effects, and associated matters, related to migratory birds, species at risk, and surface water quality. EC has an interest in these issues due to its role as administrator of the *Migratory Birds Convention Act, 1994* (MBCA), the *Species at Risk Act* (SARA), and section 36 of the *Fisheries Act*.

Migratory Birds

The "incidental take" of migratory bird nests or the disturbance, destruction or taking of the nest of a migratory bird are prohibited under section 6 of the *Migratory Bird Regulations* (MBRs), under the authority of the MBCA. "Incidental take" is the harming of migratory bird nests due to actions, such as economic development, which are not primarily focused on taking nests. No permit can be issued for the incidental take of migratory birds, migratory bird species at risk, or their nests as a result of economic activities.

Project construction, operation or maintenance activities such as vegetation clearing, site grubbing, site access, excavation and piling of soil/fill could result in the incidental take of migratory birds or their nests if conducted in migratory bird habitat, especially during the breeding season. Additionally, construction activities (such as blasting) could disturb nearby breeding birds and disrupt breeding. For more information on incidental take, please consult EC's website at: <http://ec.gc.ca/paom-itmb/default.asp?lang=En&n=FA4AC736-1>.

EC is pleased to see that Xeneca Power Development Inc. (Xeneca) is committed to conducting vegetation clearing outside of the core breeding period for migratory birds, which is May 9th - July 31st in this region.

Canada

www.ec.gc.ca

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This timing should also be suitable to avoid the breeding period for Canada Warbler, which is listed as Threatened under Schedule 1 of the federal SARA.¹

EC recommends, however, that Xeneca should take a precautionary approach to any vegetation clearing that may occur close to the core breeding season. It should be noted that some bird species may nest outside of this timeframe, and if an active migratory bird nest is discovered at any time during project activities, work in the area should cease and EC should be contacted to develop a mitigation plan which may include establishing appropriate buffers around active nests.

Surface Water Quality

On page 15 of the Construction Management Plan of the draft ER, it is stated that "[b]rush will be disposed of by burning or chipping." As open burning has the potential to adversely impact local air quality, EC recommends that burning be avoided to the maximum extent possible. EC recommends that the chipping of waste wood be adopted as an alternate disposal option, and that the resulting wood chips be used on the project site to stabilize loose surfaces and to help enhance site restoration works (e.g., vegetation/wildlife habitat reclamation work). If some slash and other timber waste must be burned, Xeneca should give due consideration to the potential for effects on sensitive receptors/biota and to prevailing environmental conditions, such as wind direction and strength. In addition, if burn sites are not appropriately located, the large amounts of ash residue derived from burnt slash/timber waste may also impact receiving water quality during rainfall events due to the transport of ash into drainage courses. EC recommends that the potential effect on water quality due to ash residue be included in the assessment and mitigation proposed (if applicable).

Closing

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.

I trust that these comments and recommendations will assist you in completing the provincial Class EA for Waterpower Projects for the proposed Wabageshik Rapids Hydroelectric Generating Station. If you have any questions regarding these comments, please do not hesitate to contact me at (416) 739-5962 or by e-mail at Sheryl.Lusk@ec.gc.ca.

Sincerely,



Sheryl Lusk
Environmental Assessment Officer

cc: R. Dobos, EC

¹ It should be noted that, as Canada Warbler is a migratory bird species at risk, EC has jurisdiction over this species under both the *Migratory Birds Convention Act, 1994* and the *Species at Risk Act*.



5255 Yonge St., Suite 1200, North York, ON M2N 6P4
tel 416-590-9362 fax 416-590-9955 www.xeneca.com

September 10, 2012

Ms. Sheryl Lusk
Environmental Assessment Officer
Environmental Protection Operations Division - Ontario
Environment Canada
4905 Dufferin Street
Toronto, Ontario, M3H 5T4

Dear Sheryl,

Thank you for your September 7 correspondence and comments regarding Xeneca Power Development's Draft Environmental Assessment Report (Draft ER) for Wabagishik Rapids GS on the Vermillion River.

Xeneca greatly appreciates Environment Canada's input and the agency's comment supporting Xeneca's approach to mitigating impact on nesting migratory birds and other avian species.

We also acknowledge EC's preference to chip any woody debris as opposed to burning material left over from vegetation clearing of construction or inundation areas. Xeneca has accepted this advice and will proceed accordingly wherever possible.

Again, thank you for your valuable input and should any further questions arise please do not hesitate to contact us at any of the number listed on our letterhead.

Best regards,

A handwritten signature in black ink, appearing to read 'Shodsoll', is written in a cursive style.

Stephanie Hodsoll
Stakeholder Relations & Public Affairs
Xeneca Power Development
shodsoll@xeneca.com
416-590-3077

Cc: Paula Allen - MOE
Sandra Dosser - MNR
Bob Robinson - MNR

Natural Resources Canada

Muriel Kim

Subject: FW: Wabageshik Rapids - Vermilion River draft environmental report available for review
Attachments: Xeneca - Proponent Notification of Terminated Screenings.pdf

From: Donato, Angela [<mailto:Angela.Donato@NRCan-RNCan.gc.ca>]
Sent: Monday, August 13, 2012 2:36 PM
To: Grace Yu
Subject: RE: Wabageshik Rapids - Vermilion River draft environmental report available for review

Hi Grace,

Along with Amy's response below, NRCan will no longer be reviewing the Xeneca projects stated in DFO's July 12, 2012 letter and can be removed from correspondence.

Thank you,

Angela Donato

613-947-5861

From: Grace Yu [<mailto:GYu@xeneca.com>]
Sent: August 10, 2012 15:35
To: Liu, Amy [CEAA]; Allen, Paula (ENE); Donato, Angela
Cc: Ed Laratta; Eggers, Kelly; Davis, Stephanie [CEAA]; Blajchman, Amiel [CEAA]
Subject: RE: Wabageshik Rapids - Vermilion River draft environmental report available for review

Thank you Amy for the confirmation. We will remove CEAA contacts from the list.

Best regards,
Grace

Grace Yu (M. Env. Sc., EPT) | Environmental Assessment/Approvals Officer | Xeneca Power Development Inc.
5255 Yonge Street, Suite 1200, North York, ON M2N 6P4
Tel: 416 590 3064 | **Fax:** 416 590 9955 | **Email:** gyu@xeneca.com

From: Liu, Amy [CEAA] [<mailto:Amy.Liu@ceaa-acee.gc.ca>]
Sent: Friday, August 10, 2012 3:26 PM
To: Grace Yu; Allen, Paula (ENE); Angela.Donato@nrcan.gc.ca; Selinger, Wayne (MNR); Cobb, Eric (MNR)
Cc: Ed Laratta; Eggers, Kelly; Davis, Stephanie [CEAA]; Blajchman, Amiel [CEAA]
Subject: RE: Wabageshik Rapids - Vermilion River draft environmental report available for review

Hi Grace.

In light of the new Canadian Environmental Assessment Act 2012, the Canadian Environmental Assessment Agency is no longer involved with the hydro projects, proposed by Xeneca Power Development Inc., that are listed in DFO's attached July 12, 2012 letter. Can you please take the CEA Agency contacts off your distribution lists for these projects?

Thank you.

Amy Liu

Project Manager | Gestionnaire de projets

Ontario Region | Agence canadienne d'évaluation environnementale, Région de l'Ontario

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From: Grace Yu [<mailto:GYu@xeneca.com>]

Sent: August 10, 2012 2:14 PM

To: Allen, Paula (ENE); Liu, Amy [CEAA]; Angela.Donato@nrcan.gc.ca; Selinger, Wayne (MNR); Cobb, Eric (MNR)

Cc: Ed Laratta

Subject: FW: Wabageshik Rapids - Vermilion River draft environmental report available for review

Hello everyone,

FYI. The draft Wabageshik ER is available for agency review for a 30 days review period.

Apologies for you were not copied to on the distribution list below.

Thank you.

Best regards,

Grace

Grace Yu (M. Env. Sc., EPt) | Environmental Assessment/Approvals Officer | **Xeneca Power Development Inc.**

5255 Yonge Street, Suite 1200, North York, ON M2N 6P4

Tel: 416 590 3064 | **Fax:** 416 590 9955 | **Email:** gyu@xeneca.com

From: Kai Markvorsen [<mailto:kmarkvorsen@wesa.ca>]

Sent: Friday, August 10, 2012 11:41 AM

To: kelly.eggars@dfo-mpo.gc.ca; sheryl.lusk@ec.gc.ca; ellen.cramm@ontario.ca; mohammad.khan@ontario.ca; rod.sein@ontario.ca; Robinson, Bob (MTO); parise.drolet@ontario.ca; stephanie.davis@ceaa-acee.gc.ca

Cc: Ed Laratta; Grace Yu; Stephanie Hodsoll; Tami Sugarman

Subject: Wabageshik Rapids - Vermilion River draft environmental report available for review

Good morning,

On behalf of Xeneca Power Development Inc., please be advised that the draft environmental report for the Wabageshik Rapids Generating Station on the Vermilion River is now available for review.

Xeneca is providing this document for discussion purposes as part of a 30-calendar day draft review period scheduled to end on September 11th, 2012. This review period is intended to allow regulatory agencies a preliminary opportunity to

identify issues and concerns prior to the document being finalised and shared with the public for the formal thirty-day public and agency review.

The report can be downloaded from our FTP site using Internet Explorer and the following access information:

Site: [REDACTED]

Username: [REDACTED]

Password: [REDACTED]

Hard copies and/or digital copies on CD have been distributed via courier to those who have requested the report in those formats.

If you have any questions or have difficulty accessing the FTP site please feel free to contact me.

Respectfully,

Kai



Kai Markvorsen B.Sc.

Environmental Consultant

(T) (613) 839-1453 x 248 (C) (613) 277-1164 kmarkvorsen@wesa.ca www.wesa.ca

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Transport Canada

Danielle Dempsey

From: Tami Sugarman
Sent: October-08-10 12:11 PM
To: Tami Sugarman
Subject: FW: Xeneca Hydro Development Project - Comments on the Draft PDs

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

From: Ed Laratta
Sent: September 28, 2010 5:37 PM
To: Liu, Amy [CEAA]; Moggy, Derrick; Don Chubbuck
Cc: McDonald, Lisa; Islam, Manirul [CEAA]; Hughes, Jennifer; Ed Laratta
Subject: RE: Xeneca Hydro Development Project - Comments on the Draft PDs

Thank You Amy,

I have prepared an email to assign all the actions from today's meeting (20 items) to our staff or consultants. The MNR REA people from Peterborough were: Jim Beal and Ken Cain. Our Vanesa will send you the PIC schedule for November.

The meeting was very helpful and I was glad I had a chance to join you and Munirul.

Regards,

Edmond.

From: Liu, Amy [CEAA] [mailto: Amy.Liu@ceaa-acee.gc.ca]
Sent: September 28, 2010 4:33 PM
To: Ed Laratta; Moggy, Derrick; Don Chubbuck
Cc: McDonald, Lisa; Islam, Manirul [CEAA]; Hughes, Jennifer
Subject: Xeneca Hydro Development Project - Comments on the Draft PDs

Hi Ed.

Thank you for coming to the CEAA office today to discuss the draft project descriptions regarding the hydro development projects proposed by Xeneca Power Development Inc. As discussed, I am forwarding you CEA Agency comments (attached) as well as the comments from Transport Canada (see below).

Some action items and things to note from the meeting include:

- DFO to send comments on draft project description to Xeneca (Ed Laratta and Don Chubbuck) with cc to CEAA
- Xeneca to provide the MNR Renewable Energy Coordinator (Peterborough) contacts to CEAA
- Xeneca to provide CEAA with a copy of the Public Information Centre schedule.
- CEAA to solicit federal authorities on number of CD and hard copies required for review of project description. CEAA to email Xeneca on results.

- Xeneca plans to finalize the project descriptions by mid-October 2010 and will distribute for review.

Don: Ed mentioned that the CEA Agency can contact you in his two week absence so I am copying you on this email.

Please feel free to contact me if you have any questions. If you have any questions regarding Transport Canada comments, please contact Jennifer Hughes.

Thank you.

Amy Liu

Project Manager | Gestionnaire de projects

Ontario Region | Agence canadienne d'évaluation environnementale, Région de l'Ontario

55 St. Clair Avenue East, Suite 907 Toronto ON M4T 1M2 | 55 avenue St. Clair Est pièce 907 Toronto ON M4T 1M2

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<http://www.ceaa-acee.gc.ca>

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Facsimile | Télécopieur 416-952-1573

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From: Hughes, Jennifer [mailto:jennifer.hughes@tc.gc.ca]

Sent: September 28, 2010 8:08 AM

To: Liu, Amy [CEAA]

Cc: McDonald, Lisa

Subject: FW: Xeneca Hydro Development Project - Vermillion PD

Hi Amy,

Lisa and I have reviewed the draft PD for the Vermillion River project, and offer the following comments.

For the TC EA Branch to determine its CEAA role for a given project with respect to the NWPA in the absence of an application having been made, it is most straightforward when there is a former "named work" involved (i.e. bridge, boom, dam or causeway). This is the case for this hydro project, so as long as the waterway is navigable then we have a trigger. The question remains mainly whether or not there is enough information in the PD to: a) identify all the works that could require NWPA approval, and b) to determine if a waterway is navigable at the location of the proposed work(s).

a) Proposed Works:

The current draft PD identifies proposed dam structures at all four locations. Since dams are former "named works" under the NWPA, then we know an EA is required as long as the waterway is navigable at those locations.

However, there may be other proposed works associated with this project that also require approval under the NWPA. For example, reference is made to access road development. New road construction or road upgrades may have associated water crossings that may or may not require approval under the NWPA. I did not notice any mention of additional water crossings in this draft PD; however, if there will be any additional works potentially affecting navigable waters, they should be identified in the final version. Please see general guidance provided below in Section C for additional comments.

b) Navigability Assessment:

The submission of a full NWPA application at the project description stage typically allows the TC EA Branch to confirm with certainty our CEAA responsibilities; however, we recognize that in some circumstances that may be difficult. Where TC is being asked to confirm its CEAA role in advance of the proponent submitting an NWPA application, it would be helpful for the proponent to consider submitting a navigability inquiry to the Navigable Waters Protection Office

(NWPO) in advance of submitting the PD. The NWPO is authorized to provide an opinion of navigability for the purposes of determining if the NWPA will apply to a project and its location. If the results are known in time, the proponent should include them in the PD; if not, a note to the effect that "navigability assessment pending" could be included instead.

In order to initiate a navigability assessment, the NWPO will require the following information be submitted in hardcopy by mail to 100 Front Street South, Sarnia, ON N7T 2M4:

1. a letter formally requesting a navigability assessment,
2. a brief description of your proposed works (specific to works in, on, over, under, through or across the potentially navigable waters),
3. photos of the waterway,
4. a site map clearly showing the location of your proposed works, and
5. the name of the waterway for which you are requesting an assessment.

c) General Guidance on Information Requirements for PDs:

Overall, here is some general guidance on questions that should be answered in the PD to assist TC in determining potential NWPA requirements and its CEAA role:

- Are new works or undertakings proposed to take place in, on, over, under, through or across any navigable water?
- Are existing works that were not previously authorized under the NWPA to be modified on a watercourse or water body?
- If "Yes", to either of the above questions, indicate and/or provide to the best extent that it is known at this time:
 - Description of work (e.g., bridge, boom, dam, culvert, causeway, wharf, pier, jetty, docking/trans-shipment facility, water intake, pipeline crossing) including approximate dimensions
 - Description of any associated activities (e.g., dredging, alteration of water bed and/or water banks)
 - Description of any ancillary and temporary works (e.g., cofferdams, detours, fencing, or temporary bridges) including approximate dimensions
 - Name of watercourse or water body
 - How water flow and level will be altered
 - Measures being contemplated to avoid affecting navigation
 - Contingency plans for Horizontal Direct Drilling
 - Any known navigational use of the watercourse or water body
 - Photos taken upstream, downstream, and across the watercourse or water body of proposed crossings

Thanks for the opportunity to review the draft. Let me know if you have any questions or wish to discuss further.

Take care,
Jennifer

Jennifer Hughes
Supervisor, Environmental Assessment
Transport Canada - Ontario Region,
4900 Yonge Street, 4th Floor
Toronto, ON M2N 6A5
Tel.: (416) 952-0469
Fax: (416) 952-0514
Email: jennifer.hughes@tc.gc.ca

No virus found in this incoming message.

Checked by AVG - www.avg.com

Version: 9.0.856 / Virus Database: 271.1.1/3164 - Release Date: 09/28/10 02:34:00

Danielle Dempsey

From: Thompson, Kelly <kelly.thompson@tc.gc.ca>
Sent: February-21-11 9:38 AM
To: Tami Sugarman; NWP Website - Site internet PEN
Cc: McDonald, Lisa; Davis, Stephanie [CEAA]; Kai Markvorsen
Subject: RE: Xeneca Allen & Struthers and Wabagishik Rapids

Good Morning

You may submit 1 application for the entire project (no need for 1 per "work" as we have the ability to consider related works as 1). Also, you may submit your application with conceptual layouts and profiles however, just keep in mind that the approval process will not be able to be completed until the final design and construction methods are determined. We encourage early submission for larger projects such as these so that we can be involved at an early stage and therefore any comments or requirements from this office can be considered as the projects progresses.

Regards

Kelly Thompson

Navigable Waters Protection Officer
Navigable Waters Protection / Protection des eaux navigables
TransportCanada / Transports Canada
519) 333-6330 / Fax (519) 383-1989
100 Front Street South / 100 rue Front S.,
Sarnia, Ontario, N7T 2M4 *kelly.thompson@tc.gc.ca
<[mailto: kelly.thompson@tc.gc.ca](mailto:kelly.thompson@tc.gc.ca)>
www.tc.gc.ca/navigablewaters-eauxnavigables

From: Tami Sugarman [<mailto:tsugarman@oel-hydrosys.ca>]
Sent: Thursday, February 17, 2011 10:59 AM
To: NWP Website - Site internet PEN; Thompson, Kelly
Cc: McDonald, Lisa; Davis, Stephanie [CEAA]; Kai Markvorsen
Subject: FW: Xeneca Allen & Struthers and Wabagishik Rapids

Hello TC NWPO and Kelly

Will NWPO require a separate permit application to be made for each navigable obstruction (across, above, below any navigable waterway) forming the parts of a project? For instance, at a waterpower site proposal on an inland waterway has proposed a dam structure across the waterway and there is also a road bridge being proposed upstream over the waterway – do these two works need separate applications or can they be included in one "site/project" application?

In addition, the TC EA planning division is instructing waterpower project proponents to make an application to the NWPO as soon as possible. We have reviewed your NWPA Request for Project Review application form and have determined that parts of this application will be incomplete and that supporting information requirements for the application is yet unavailable (detailed engineering drawings (conceptual layout and profiles only available at this time); completed EA document; water lot leases or permits from MNR or other landowners; detailed description of work including detailed construction methods) if we are to submit this application at this time. Can your office please advise us on completing this application form and acceptable drawings level of detail and format to be submitted, etc.?

My client has 18 waterpower development projects currently engaged in the EA planning process at this time, clear directions from your office on the most efficient and proper manner to move forward with the TC determination process, given the above information, would be appreciated.

Best regards,
Tami Sugarman



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

(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.

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Please consider the environment before printing this e-mail

From: McDonald, Lisa [mailto:lisa.mcdonald@tc.gc.ca]

Sent: February 15, 2011 7:18 AM

To: Tami Sugarman; Davis, Stephanie [CEAA]

Cc: Philippa McPhee; Kai Markvorsen

Subject: RE: Xeneca Allen & Struthers and Wabagishik Rapids

Tami,

Please contact the Navigable Waters Protection Office regarding your *Navigable Waters Protection Act* questions. Their contact information is as follows:

phone: 1-866-821-6631

e-mail: NWPOntario-PENOntario@tc.gc.ca

Sincerely,

Lisa McDonald

Environmental Officer

Transport Canada - Ontario Region

4900 Yonge Street, 4th Floor (PHE)

North York, ON M2N 6A5

phone: 416.952.0475

e-mail: lisa.mcdonald@tc.gc.ca

From: Tami Sugarman [mailto:tsugarman@oel-hydrosys.ca]

Sent: Monday, February 14, 2011 5:19 PM

To: Davis, Stephanie [CEAA]; McDonald, Lisa

Cc: Philippa McPhee; Kai Markvorsen

Subject: RE: Xeneca Allen & Struthers and Wabagishik Rapids

Hi Stephanie and Lisa

Will TC require a separate permit application to be made for each navigable obstruction (across, above, below any navigable waterway) forming the parts of a project? For instance, at Allen and Struthers site on the Wanapitei River there is the dam structure proposed across the waterway and there is also a road bridge being proposed upstream over the waterway – do these two works need separate applications or can they be included in one “site/project” application?

Best regards,
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

(T) (613) 839-1453 x229 (C) (613) 894-3509 (F) (613) 839-5376

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From: Davis, Stephanie [CEAA] [mailto:Stephanie.Davis@ceaa-acee.gc.ca]

Sent: February 14, 2011 2:19 PM

To: Tami Sugarman

Cc: Bell, Dave [CEAA]

Subject: Xeneca Allen & Struthers and Wabagishik Rapids

Hi Tami,

Further to last weeks teleconference, I wanted to update you on CEAA's activities with respect to these two Xeneca projects. I thought it best to follow up with an email as it was difficult to hear each other in the meeting.

The Federal Coordination Request is complete. The identified RAs for both of the projects are the Department of Fisheries and Oceans and Transport Canada. The expert FAs are Natural Resources Canada, Environment Canada and Health Canada. The relevant contacts for each project vary slightly. I've listed their details below.

We will shortly be having a federal only meeting for the two projects to sort out roles and responsibilities. Specifically, we will decide who is taking care of the CEAR and the scoping document.

Transport Canada has requested that a NWPA application be submitted to their Navigable Waters Protection Office (NWPO). I've attached one of their responses (the text is the same for both projects) to this email along with an NWPA application guide which gives further details.

Feel free to get in touch should you need further info.

Kind Regards,
Stephanie

Xeneca Vermillion Wabagishik

RAs

Kelly Eggers (DFO) Kelly.Eggers@dfo-mpo.gc.ca
Lisa McDonald (TC) Lisa.McDonald@tc.gc.ca

Expert FAs

Caitlin Scott (NRCan) Caitlin.Scott@nrcan-rncan.gc.ca
Sheryl Lusk (EC) Sheryl.Lusk@ec.gc.ca
Katherine Hess (HC) Katherine.Hess@hc-sc.gc.ca

Allen & Struthers

RAs

Carl Jorgensen (DFO) Carl.Jorgensen@dfo-mpo.gc.ca
Lisa McDonald (TC) Lisa.McDonald@tc.gc.ca

Expert FAs

Caitlin Scott (NRCan) Caitlin.Scott@nrcan-rncan.gc.ca
Sheryl Lusk (EC) Sheryl.Lusk@ec.gc.ca
Katherine Hess (HC) Katherine.Hess@hc-sc.gc.ca

<<NWPA APPLICATION GUIDE.pdf>> <<img-214134502-0001.pdf>>

Stephanie Davis, B.Eng

Environmental Assessment Analyst | Analyste d'évaluation environnementale
Canadian Environmental Assessment Agency | Agence canadienne d'évaluation environnementale
Ontario Region | Région de l'Ontario
55 St. Clair Avenue East, Suite 907, Toronto, ON M4T 1M2 | 55, avenue St-Clair Est, pièce 907, Toronto, ON M4T 1M2
stephanie.davis@ceaa-acee.gc.ca
<http://www.ceaa-acee.gc.ca>
Telephone | Téléphone 416-954-7334
Facsimile | Télécopieur 416-952-1573
Government of Canada | Gouvernement du Canada

Danielle Dempsey

From: McDonald, Lisa <lisa.mcdonald@tc.gc.ca>
Sent: March-14-11 8:07 AM
To: Environmental Assessment Information
Subject: RE: Draft EA Coordination Meeting Minutes - Allen and Struthers, Wanapitei River and Wabagishik, Vermillion River - For Participant Review

Good morning OEL,

Thank you for forwarding the draft minutes for the Allen and Struthers and Wabageshik Rapids EA coordination meetings to Transport Canada for review and comment.

Transport Canada recommends that a note be added to the minutes indicating that there were teleconferencing problems that limited the ability of those participating by phone to hear and engage in the conversation, and, as a result, many participants, including Transport Canada, left the call at about 11:30.

Sincerely,
Lisa McDonald

From: Environmental Assessment Information [mailto:eainfo@oel-hydrosys.ca]
Sent: Wednesday, March 09, 2011 9:18 AM
To: McDonald, Lisa
Subject: RE: Draft EA Coordination Meeting Minutes - Allen and Struthers, Wanapitei River and Wabagishik, Vermillion River - For Participant Review

Hello Ms. McDonald,

Thank you for the update, I will amend our project contact and distribution lists.

Cheers,

Kai



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

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From: McDonald, Lisa [mailto:lisa.mcdonald@tc.gc.ca]
Sent: March 9, 2011 8:24 AM

To: Environmental Assessment Information

Subject: RE: Draft EA Coordination Meeting Minutes - Allen and Struthers, Wanapitei River and Wabagishik, Vermillion River - For Participant Review

Good morning OEL,

I have been assigned to the subject files on behalf of Transport Canada's EA office. Please remove EnviroOnt@tc.gc.ca from your distribution list and send all future EA correspondence regarding these files directly to my attention (contact information in signature block below).

Sincerely,

Lisa McDonald

Environmental Officer

Transport Canada - Ontario Region

4900 Yonge Street, 4th Floor (PHE)

North York, ON M2N 6A5

phone: 416.952.0475

e-mail: lisa.mcdonald@tc.gc.ca

From: Jaramillo, Ana

Sent: Tuesday, March 08, 2011 10:15 AM

To: McDonald, Lisa

Subject: FW: Draft EA Coordination Meeting Minutes - Allen and Struthers, Wanapitei River and Wabagishik, Vermillion River - For Participant Review

Fyi.

From: Environmental Assessment Information [<mailto:eainfo@oel-hydrosys.ca>]

Sent: Monday, March 07, 2011 3:39 PM

To: 'Bob Robinson'; 'Brett Smith'; 'Caitlin Scott'; 'Candy Beavais'; 'Carl Jorgensen'; 'Chuck Miller'; 'David Pickles'; 'Gerry Webber'; 'Helen Kwan'; 'Jennifer Lillie Paetz'; 'Katherine Kirzati'; 'Laurie Brownlee'; 'Mei Ling Chen'; 'Narren Santos'; 'Paul Marleau'; 'Rob Dobos'; 'Rod Sein'; 'Simon Spooner'; 'Stephanie Davis'; 'Steve Moggy'; 'EnviroOnt'; 'Colin Hoag'; 'Doug Nadorozny'; 'Joel Mackenzie'; 'John Woodward'; 'Mark Simeoni'; 'Mohammad Sajjad Khan'; 'Paul Norris'; 'Paul Sajatovic'; 'Phil Landry'; 'Robert Deschene'

Cc: Tami Sugarman; Philippa McPhee; elaratta@xeneca.com; rsteale@nrsl.on.ca; mholmes@xeneca.com; aschiedel@nrsl.on.ca

Subject: Draft EA Coordination Meeting Minutes - Allen and Struthers, Wanapitei River and Wabagishik, Vermillion River - For Participant Review

Good afternoon;

Draft meeting minutes of the EA Coordination meeting for the proposed Allen & Struthers waterpower project on the Wanapitei River and Wabagishik Rapids waterpower project on the Vermillion River, held at the Quality Inn in Sudbury on February 8th are attached for review by meeting participants.

We would ask that you distribute internally to anyone else who from your organization that may have participated in 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.

The final minutes from this meeting will be included as a component of the environmental report. At this time there have been several requests for copies of the meeting minutes to be made available to non meeting

participants. Accordingly, we would request that, when providing comments back on the minutes, that participants identify if they have an objection to the general distribution of the minutes prior to their inclusion in the environmental report.

Please note that all review comments are requested no later than noon on March 14th.

Best regards,

Kai Markvorsen



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

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Ministry of Municipal Affairs and Housing

**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**

**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 Young 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

Natalie St-Pierre

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;

townkill@vianet.on.ca

Cc: Ed Laratta; Vanesa Enskaitis; Philippa McPhee; pnorris@owa.ca; Rob.Steele

Subject: Xeneca Power Development Inc. proposed Allen and Struthers waterpower project on the Wanapitei River - Project Description Document 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 document for the proposed Xeneca Power Corporation Inc. waterpower development at the Allen and Struthers Project site located on the Wanapitei River in northeastern Ontario. Xeneca has been awarded a Feed-in Tariff (FIT) contract for this site 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 the 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 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 this document in electronic format for environmental reasons. You may access our FTP site by completing the following instructions:

Site:

Username:

Password: _____

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 the project description document will be issued shortly to federal agencies and Aboriginal communities.

Other Parties: If you require a paper and/or CD Rom copy in addition to this electronic copy please notify us at EAinfo@oel-hydrosys.ca otherwise we will assume that this electronic version is adequate.

We are pursuing an Ontario Class Environmental Assessment for Waterpower Projects planning process for this site. A federal screening may also be triggered at the site.

The project description is intended to provide an overview of the project components, general information on the project 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 project. It will also allow a federal authority to determine if there is potential for the *Canadian Environmental Assessment Act (CEAA)* to be triggered by the project proposal and whether the agency will be a Responsible Authority (RA) under *CEA Act* or whether it is able to provide technical expertise as an expert advisor (FA).

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, the purpose of which is to discuss the following items 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.

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Pensez à l'environnement avant l'impression de ce courriel

Ministry of Natural Resources & Xeneca
Downstream Zone of Influence discussions

Muriel Kim

Subject: FW: Randy Pickering letter from June 6 2013
Attachments: I: Proposed ZOI approach / Steps moving forward; OWA Communication of MNR Field Data Collection Guidelines; MNR Message on Zone of Influence.docx

From: Pickering, Randy (MNR) [<mailto:randy.pickering@ontario.ca>]
Sent: Thursday, June 06, 2013 2:51 PM
To: Uwe Roeper
Cc: Arnold Chan; Vanesa Enskaitis; Stephanie Hodsoll; Brindle, Ginette (MNR); Mark Holmes; Dosser, Sandra (MNR); Greenaway, Christine (MNR); Beaudin, Sheri (MNR)
Subject: RE: DZOI - Ivanhoe and other rivers

Uwe,

Thank you for providing the information below which was discussed on our call yesterday. It will certainly form part of the context as we move forward with our review of the draft ER for The Chute/Third Falls and seek to resolve any outstanding ZOI issues for this and other Xeneca projects. I do believe we continue to make progress and am confident that workable solutions can be found to resolve outstanding issues.

I have attached a copy of our communication on ZOI referenced on yesterday's call. In response to Arnold and Mark's comments/concerns on the use of the term "no effect" in the last bullet, we have modified the wording slightly to provide what I think is more clarify of intent. As noted, this information will also be communicated to District staff to help facilitate a common understanding of approach. It should also be noted that this represents MNR's approach to ZOI as it will inform our participation as a review agency in the Class EA. MNR cannot speak for other agencies in this regard.

With regard to the reference to the 2010 interim guidelines for "Field Data Collection for Waterpower Projects", I would refer you back to a June 29, 2012 e-mail (attached) from Christine Greenaway to Xeneca which included reference to and a copy of the document (2nd attachment in the e-mail). In addition to the June 29, 2012 e-mail from Christine, the OWA provided a June 7, 2010 communication update to members specifically referencing the Guidelines (also attached).

I understand that our next meeting has now been scheduled for June 24th from 11 to 12. I look forward to our discussion.

Randy Pickering MCIP, RPP
A/Manager, Regional Resources Section
Northeast Region
Regional Operations Division
Ministry of Natural Resources
A Wing, Ontario Government Complex
5520 Hwy. 101 E., South Porcupine ON P0N 1H0
Ph. (705) 235-1151
Fax (705) 235-1246
Cell (705) 363-7418

From: Uwe Roeper [<mailto:uroeper@xeneca.com>]
Sent: June-06-13 10:34 AM
To: Pickering, Randy (MNR)
Cc: Arnold Chan; Vanesa Enskaitis; Stephanie Hodsoll; Brindle, Ginette (MNR); Mark Holmes; Dosser, Sandra (MNR);

Greenaway, Christine (MNR); Beaudin, Sheri (MNR)

Subject: DZOI - Ivanhoe and other rivers

Randy:

Further to the conference call yesterday, I appreciate that you have agreed to follow up with Xeneca and the MNR Districts on resolving the outstanding discussions on ZOI and DZOI for the Ivanhoe River as well as the other rivers.

Regarding the Ivanhoe River, attached are the most recent agency review comments (attached Word file) and Xeneca's responses (attached PDF file). It would be helpful if you could read the comments and responses related to DZOI. We would then appreciate specific advice from MNR whether Xeneca has provided sufficient information to agencies to put the DZOI matter to rest on the Ivanhoe River.

Here some background on what has transpired over the last two years:

- 2011: On two Ivanhoe sites (The Chute/Third Falls) Xeneca proposes modified run-of-river (all water released each day, but flow varies from day to night).
- 2011: Agencies express strong preference for ~~true~~ run-of-river and request, at minimum, Monthly Q80 Base Flows be provided at all times to maintain ecological integrity. Xeneca agrees to Monthly Q80 Base Flows.
- 2011: Agencies request that the hydraulic analysis on the daily variation be extended to the Groundhog River to better understand attenuation of daily variability with distance. Xeneca agrees to extended hydraulic study to the Groundhog River.
- 2012: Results of extended hydraulic analysis are provided to agencies. Agencies request matching habitat study be done. Xeneca agrees to extend habitat study to Groundhog confluence.
- 2012: Agencies put forth interpretation of DZOI endpoint – where effect no longer discernable from background variation. Xeneca rejects concept as it requires the DZOI to be extended beyond what was agreed to in 2011 (Groundhog confluence) and far more onerous than environmental assessment in other industry sectors. Further discussion occurs but no consensus or compromise is found.
- 2013: Agencies provide advice that Xeneca habitat studies are insufficient to address questions around "Ecological Integrity" in the Conservation Reserve that is located within the DZOI. Agencies advise that significantly more detailed studies will be required. Xeneca capitulates and agrees to retract its proposal for modified run-of-river and proposes true run-of-river at Third Falls (outflow equals existing conditions at all times with no modification throughout the day).
- 2013: Agencies request confirmation in writing. Xeneca submits confirmation e-mail, follow-up letter and revised operating plan.
- 2013: Agencies provide comments on revised operating plan (i.e. the May 6 comments attached) stating that just because Xeneca has agreed to run-of-river does not mean that the DZOI have been resolved and that "Xeneca must develop and present clear rationale for the asserted ZOI." Xeneca provides responses in an attempt to resolve issue (i.e. the June 4 responses attached).

I appreciate your offer to help seek resolution on ZOI and DZOI on the Ivanhoe River and look forward to a speedy and constructive resolution. It is our view that the offer to go to true run-of-river operation at Third Falls, combined with the environmental effects studies already completed and submitted, is sufficient to close the discussion on ZOI and DZOI for the Ivanhoe River.

As the Ivanhoe ER is presently under the draft review period, it is our hope that you can give us some sense of where we sit on the ZOI and DZOI as it relates to the points you discussed yesterday. This will help inform us on how to deal with our other pending sites in the schedule we had outlined. With respect to the other sites, I will provide you with a separate e-mail(s) as to the status and background.

In the meanwhile, we look forward to receiving the copy of the direction from your office shortly. As well, I recall you mentioning on the second point of the direction that the MNR will follow section 2.5 of the OWA Class EA and something about "Interim Guidelines" on the appropriate delineation of the appropriate ZOI? Do you have a copy of that document as well? Is this part of some document that has been issued publicly? We would appreciate understanding reviewing that as well.

I look forward to hearing back from you shortly. Would it be possible to have a status update call in about two weeks after you have had the opportunity to discuss the ZOI guidance document with Chapleau District?

Best regards,
Uwe.

Danielle Dempsey

From: Greenaway, Christine (MNR) <Christine.Greenaway@ontario.ca>
Sent: June-29-12 6:03 PM
To: Uwe Roeper
Cc: Mark Holmes; Achan@xeneca.ca; Ed Laratta; Tami Sugarman; Dosser, Sandra (MNR)
Subject: I: Proposed ZOI approach / Steps moving forward
Attachments: ZOI Proposed Approach v2.docx; 2010 field Data Collection for Waterpower projects_May 22 2010.doc; MNR response to Xeneca proposed ZOI approach 29-06-2012.doc

Importance: High

Hi Uwe,

Thank you for submitting the document entitled "*Proposed Approach – Assessment of Downstream Zone of Influence for Small Waterpower Projects with Variable Flow due to Modified Run-of-River Operation*" (attachment #1). Staff at MNR and MOE have reviewed it collectively. This response from MNR is intended to build upon a separate response that you can expect to receive from the MOE. The MOE's response will focus on requirements to satisfy the OWA Class EA for Waterpower Projects.

In the attached response (attachment #2) the MNR provides:

- 1) an overview of MNR's mandate as it pertains to the scope of this proposal,
- 2) a suggested approach to articulating the ZOI boundary that will support MNR's decision making process, and
- 3) how Xeneca's proposed approach to impact assessment and mitigation within the ZOI compares to MNR's requirements for review of projects in accordance with its mandates.

For reference I have also attached an interim guidance document entitled "*OMNR Field Data Collection Requirements for Waterpower Projects* (draft, May 2010)" (attachment #3) which I understand has already been shared.

I trust that this information is helpful. Please let me know if you have any questions or would like to discuss our comments further.

Moving forward:

I have outlined below some recommended next steps (milestones) for Xeneca to consider as it moves through the EA process for its 11 high priority sites, starting with Wabageshik and Marter. These are recommendations recognizing the EA process is proponent-driven. Please feel free to comment and provide additional ideas about steps that should be added or additional material that can be provided in advance of meetings. We recognize the tight timelines and the need to get your staff talking with district staff in the very near future, while also providing time for district staff to review material and prepare comments so that meetings are functional and effective. I suggest we discuss in a small group a proposed timeline for all project meetings and distribution of materials. The purpose of this exercise is to be able to communicate clear meeting objectives and timelines to staff.

It might be possible to tackle the first two items in a single multi-agency face-to-face, though I can not predict the outcome of each meeting. During initial meeting the planning team could scope out whether there is a need for additional small group teleconferences to complete discussions. The next large meeting we recommend would focus on impact assessment and mitigation (step 3), recognizing that this may require a series of small working group follow-up meetings by teleconference as issues are resolved. As projects progress there may be need for topic-specific meetings so we should keep things flexible.

1a) Consensus on ZOI – Our recommended next step is for you to aim to reach consensus on the anticipated ZOI, based on best available information for each site to date, including hydraulic modelling and other considerations, and recognizing that it is an iterative process. Could start with a presentation of all of relevant material and work done to date. To inform these discussions, districts will require sufficient time to review the following in advance:

- Confirmation of scope of project and EA (e.g., 1, 2, or multiple EAs, decisions made on any uncertainties)

- Preliminary Dam Operating Plan(s) (recognizing that it may be tweaked during impact assessment and mitigation discussions)
- Seasonal and monthly operational flow graphs demonstrating typical flow ranges for each month,
- Hydraulic modelling output (maps and data) along with sensitivity analysis and a description of uncertainty with output
- existing condition compilation reports of all information collected to date (districts might have these – 2012 if possible), and
- Overlay maps showing extent of Xeneca's preliminary anticipated ZOI (based on hydrology and other considerations) along with features identified from the existing condition reports or any other existing information collected to date
- Rationale for scope of site investigation to date within ZOI boundary

1b) Questions about existing conditions – Districts can identify and communicate any remaining or additional questions about existing conditions. New questions might arise based on new information collected in 2011 & 2012 and/or the extension of the ZOI relative to previous project descriptions. To inform these discussions, districts will require all of the material required for Step 1.

2) Site Investigation – Information collection is completed if required to fill in the potential effects matrix, assess impacts, and develop mitigation options.

- 3) Impact assessment and mitigation – Xeneca to present additional work completed to date and staff to comment on assessment of impacts and proposed mitigation. To inform these discussions, districts will require in advance:
- Updated existing condition reports, updated overlay maps of anticipated ZOI and existing features
 - A table in advance summarizing potential effects identified and Xeneca's assessment of impacts and proposed mitigation
 - Rationale for scope of site investigation to date within ZOI boundary

4) Draft environmental report – Districts have opportunity to review and provide comment before finalizing

Please let me know what you think. I'd be happy to have a teleconference on Wednesday to discuss. Have a nice long weekend.

Regards,
Christine

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DRAFT-DRAFT-DRAFT v2

Proposed Approach – Assessment of Downstream Zone of Influence for Small Waterpower Projects with Variable Flow due to Modified Run-of-River Operation

April 16, 2012

Purpose:

This document outlines a proposed approach for assessing the downstream Zone of Influence (ZOI) related to variable flow.

Background:

The FIT program strongly encourages facilities to provide more power when demand by electricity customers is high, weekdays from 11 am to 7 pm eastern standard time. Facilities that can provide this electricity system benefit receive a financial incentive and additional score points for priority access to the FIT program. Most of Xeneca's projects are proposed to operate in this manner. Xeneca refers to this type of operation as "Modified Run-of-River".

Modified Run-of-River operation tries to shift some of the daily production to the 11 am to 7 pm timeframe on weekdays. To the extent possible, some water is stored in the headpond and then used for additional production from 11 am to 7 pm. The total water volume released from the facility each 24 hour period equals the natural inflow to the headpond during the 24 hour period.

During high and moderate flows, the facility runs continuously but some output is "shifted" to the preferred hours. During lower flows, when there is not enough water to operate continuously in an efficient manner, operation becomes "intermittent". Intermittent operation involves shutting off the turbine for several hours each day to permit partial operation each day. While the facility is shut off, environmental flows are released to mitigate habitat impacts downstream.

Modified and intermittent operation causes the downstream flows and levels to vary throughout the day. The variability in flow migrates down the river and affects downstream flows from this point forward in the river system. The amount of variability attenuates (ie. becomes less noticeable) the further away it migrates. Depending on the river morphology encountered downstream, the variability will eventually attenuate back to the average inflow upstream. Any downstream tributaries and confluences with other rivers will further attenuate the variability.

MNR and MOE have requested that Xeneca assess the downstream “ZOI” for each project resulting from variable flows related to Modified Run-of-River operation. This document outlines the proposed approach to define and assess the downstream ZOI.

Proposed Approach:

It should be recognized that the downstream ZOI differs from the upstream ZOI in several important ways:

- Downstream impacts can typically be mitigated through facility operation, whereas upstream impacts are tied to the project footprint (eg. inundation and change of habitat in the headpond area is inherent to the project). Assessment should therefore focus on mitigation of potential impacts on downstream features while preserving the benefits to the electric system to the greatest extent possible.
- The variability in flow will attenuate with distance away from the facility. It can be safely assumed that the greatest variability in flows and levels occurs immediately downstream of the facility. Hence, an operations strategy used to mitigate an impact on a feature (e.g. minimum flow provided to a fast water area with potential for spawning habitat) should address not only the closest fast water feature, but all subsequent features of the same type.
- The type of mitigation corresponds in time and duration to the feature. For example, minimum flows provided to mitigate potential impacts on spawning activity would be provided when the activity is most likely to occur, thereby allowing the water to be used for electricity generation the rest of the time.

Based on the above, the overall approach to downstream ZOI should focus on mitigation related to specific downstream features using flows and levels. To achieve this, features of potential impact need to be identified and specific mitigation strategies need to be developed.

To assist in the assessment process and to inform the meaningful calculation of flows and levels, hydraulic modeling can be used. Purpose of the modeling should be to inform how velocity, wetted perimeter and water depth might change at specific downstream features due to variability in flows and levels.

Assessment Process:

The following steps are proposed to assess the downstream ZOI and to develop mitigation strategies in a way that is specific to the downstream features:

- 1) Feature Identification: A desktop review of Google Maps for a distance of 30 km downstream to identify important features, including potential fast water habitat, wetland habitat, major water users, land owners and/or tributaries/confluences.

- 2) Feature Assessment: A preliminary qualitative assessment of each feature to assess if it might be significantly negatively affected by variability in flows and levels, and if this affect would occur at specific times or under specific conditions.
- 3) Feature Confirmation (optional): An optional field study to confirm or deny the existence of the feature. Where no field study is done, it shall be assumed that the feature identified in the desktop review exists (worst case assumption).
- 4) Effects Calculation (if required): A hydraulic analysis shall be carried out to determine the approximate range of flows and levels expected at the feature are likely to cause a significant negative effect. A screening analysis can be carried out with a 1-D HEC-RAS model in steady state mode for this purpose (worst case).
- 5) Additional Effects Analysis (optional): Optionally, a more detailed hydraulic analysis to determine if the variability effect is sufficiently attenuated by the time it reaches the feature to make further mitigation unnecessary.
- 6) Mitigation Strategy: A mitigation strategy shall be proposed where the above steps show that the feature would be significantly negatively affected.
- 7) Consultation: Where a significant negative effect is expected on a feature, the feature, the expected effect and the proposed mitigation shall be included in the Environmental Report (ER).

Discussion:

The above approach is intended to be conservative by assuming that a feature or an effect exists unless it is determined otherwise. The approach is also intended to be pragmatic by being cost effective to execute. The user has the option to minimize the amount of study and analysis if it is determined that the mitigation is more cost effective than the study.

The desktop study is limited to 30 km to reflect the following rationale:

- 1) Small waterpower projects (under 10 MW) have limited economic potential and must be executed cost effectively. It is more cost effective to start the analysis with a desk top assessment than to start with an unsteady state hydraulic model covering an initially unknown distance. It is assumed that significant attenuation occurs within 30 km as the rivers under study are typically flat (except for short fast water sections identified in the features assessment).
- 2) A full aquatic or terrestrial baseline assessment of the downstream ZOI is not required. The maximum flows involved in modified operation are near the long term average flows, occur within the existing channel, and never involve overtopping river banks. The minimum flows are set as part of the mitigation strategy depending on the features identified in the assessment. The fluctuations from minimum to maximum occur in a range (i.e. low end of flows) that is not a concern of river bed erosion (i.e. lower end of river flow range, transport energy and erosion effect). Aquatic assessment is needed only where mitigation strategies are not possible.

Ontario Ministry of Natural Resources

Field Data Collection for Waterpower Projects

DRAFT - June 3 2010

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1.0 Introduction

This document is intended to provide interim technical guidance from the Ministry of Natural Resources (MNR) to MNR District offices and project proponents regarding potential field baseline ecological data collection related to waterpower projects for the 2010 field season. This guidance applies to those elements of a waterpower project that are subject to environmental assessment (EA) and will require approval under the Lakes and Rivers Improvement Act (LRIA).

The guideline has been prepared considerate of the fact that many waterpower projects are now or may soon be participating in the Feed-in Tariff program (FIT). In addition, the guidance recognizes the OWA Class Environmental Assessment for Waterpower Projects (Class EA) as the primary planning and public engagement framework for waterpower proposals. Importantly, both the FIT commercial operation dates and the Class EA target timelines provide for a data and information collection program premised on one (1) or two (2) field seasons. As such, it is imperative that the information collected is directly relevant to the individual project, as scoped by the proponent in consultation with the regulatory agencies involved.

Consistent with the Class EA, proponents are ultimately responsible for determining the required ecological data collection requirements with consideration being given to available existing information and advice provided by the MNR. Proponents should expect to receive such information in the form of a site information package (SIP) provided by MNR during the site release process. Proponents are also responsible for scoping the data collection requirements to suit the project, and the needs of a specific site (ie. data and information gaps).

This document provides a summary of the types of study that are available to address project specific requirements. Not all projects will require the same level of data collection, and therefore it is not envisioned that all of the studies described in this document would be needed for every project. Rather, this document provides a checklist of sorts to aid the reviewer in ascertaining the specific study needs on a site by site basis. This document does not provide guidance regarding data collection methodologies, data assessment, effects assessment, specific requirements of approval, and/or effectiveness monitoring stages of a project, however it is recognized that sufficient baseline information needs to be collected to enable meaningful assessment of environmental effects and mitigation success. In addition, this document has been scoped to the mandate of the Ministry of Natural Resources, and does not necessarily represent all of the data and information collection that may be undertaken by the proponent to address other agency requirements.

Finally, this guidance is not intended to be retroactively applied to projects that have already undertaken project-specific data collection through the Environmental Assessment process.

2.0 Coordination

The planning and development of a waterpower project in Ontario can involve multiple legislative requirements. In many cases, such legislation has similar objectives and process requirements, providing for the consideration of the effects of the proposed project on the environment and ensuring that interested parties have an opportunity to participate. A key objective of coordinating information/data collection and approval processes is to achieve an efficient process where required information is identified at the beginning of a project, so that one program of data and information collection can be designed and carried out. To the extent possible, this guidance has been designed to allow for proponents to coordinate common data and information collection elements, as relevant to the specific project. Proponents should refer to the Class Environmental Assessment for Waterpower Projects, OWA, Oct 2008, in addition to this guidance. Figure 1 illustrates the potential relationship between the OWA Class EA and decision-making pursuant to the LRIA.

3.0 LRIA Approvals

All new or redeveloped waterpower facilities that involve construction of a dam, or modification to a dam require approval under Section 14 (construction of a new dam) or Section 16 (alterations, improvements, or repairs to an existing dam) of the LRIA. Projects which require approval under Section 14, are subject to a two-part review and approval process. The first part is the Location Approval, which is issued under the Lakes and Rivers Improvement Act for a new dam or a change to the footprint of an existing dam. Where a project is subject to environmental assessment, Location Approval will not be granted until the EA has been successfully completed (ie. statement of completion). In keeping with a coordinated approach, it is recommended that all requirements of the LRIA be considered prior to and throughout the EA process.

Once a project receives Location Approval, or where a project does not require Location Approval, the second part is the review and approval of Plans and Specifications for the design, construction, operation and maintenance of the waterpower facility (i.e. engineering detail). Construction cannot begin until the plans and specifications approval has been granted by the Ministry. The guidance herein is primarily focused on the incorporation of Location Approval considerations through the EA process. Given that the Class EA positions the proponent for Location Approval, the extent of engineering required for Location Approval is considered conceptual with design details being advanced only to the level required to properly predict impacts and develop mitigation for those impacts. Additional information with respect to subsequent Plans and Specifications approvals is contained in the Lakes and Rivers Improvement Act , Guidelines and Criteria for Approvals and supporting procedures.

Proponents should note that there are instances (ie. where a Fisheries Act authorization is required) where the Ministry cannot issue Location Approval and/or Plans and Specifications Approval until approvals have been received from relevant Federal agencies. Early consultation with potentially affected federal agencies is encouraged in the Class EA.

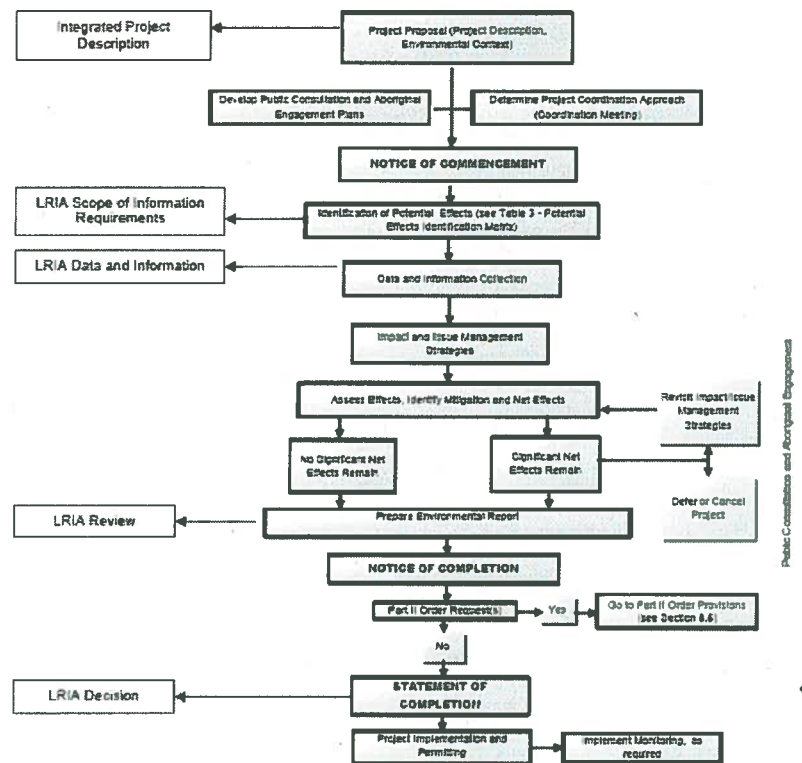


Figure 1. The graphic outlines the potential relationship between the OWA Class EA and Location Approval decision-making pursuant to the LRIA

4.0 Ecological information

Both the environmental assessment and LRIA review and approval processes will require the collection of ecological information and data. The Ministry has responsibilities under the *Lakes and Rivers Improvement Act* (LRIA), the *Public Lands Act* (PLA), the *Endangered Species Act* (ESA), the *Environmental Bill of Rights* (EBR), and the Ministry's *Statement of Environmental Values* (SEV), when reviewing and approving waterpower projects. Among these is the requirement to consider the purposes of the LRIA which provide for;

- (a) the management, protection, preservation and use of the waters of the lakes and rivers of Ontario and the land under them;
- (b) the protection and equitable exercise of public rights in or over the waters of the lakes and rivers of Ontario;
- (c) the protection of the interests of riparian owners;
- (d) the management, perpetuation and use of the fish, wildlife and other natural resources dependent on the lakes and rivers;
- (e) the protection of the natural amenities of the lakes and rivers and their shores and banks; and
- (f) the protection of persons and of property by ensuring that dams are suitably located, constructed, operated and maintained and are of an appropriate nature with regard to the purposes of clauses (a) to (e).

Ecological information that may be relevant to a project proposal includes:

- flows and levels required to support the perpetuation of fish and wildlife and other natural resources dependent on the water course;
- existence or maintenance for fish passage and fish habitat;
- riparian wildlife habitat
- the presence of any species or habitat protected under the Endangered Species Act, 2007
- wetlands
- hydrology
- sediment
- thermal regime
- water quality
- biological characteristics
- zone of influence of the proposed facility
- cumulative impacts analysis/assessment (if proposed dam is on a regulated system) or if multiple new projects are proposed on a river system

Table 3 of the Class EA provides an analytical framework through which the proponent may scope the potential project impacts thereby defining the determination of the ecological information requirements.

In some cases a two-stage information/data collection process may be applied by the proponent, consisting of a coarse screening, which may consist of 'desktop' analysis, secondary data sources or field sampling, followed by a fine screening which may involve additional, or more detailed field sampling and monitoring.

It is the proponent's responsibility to scope the data and information collection appropriately, considering the best information available. The extent of field work should be scoped appropriately, in order to collect sufficient information about the existing potentially impacted values at the site (and the potential zone of influence) and to allow for impact analysis or future monitoring. The proponent will also consider in their scoping the agency coordination meeting, the site information package, response to the Notice of Commencement, and initial advice from the public. Data collection is often specific to seasons and may occur over several months, and extend throughout the environmental assessment process. The identification of those environmental components that could be affected either directly or indirectly by the project should drive both the data to be collected and the seasonality of its collection. This identification of potential effects is facilitated by the Potential Effects Identification Matrix from the Class Environmental Assessment for Waterpower Projects, an excerpt of which is provided below.

Criteria	Potential Level of Effect						Comments, Rationale
	-H	-L	Nil	Unk	+L	+H	
General Natural Environment Considerations							
Air quality, including GHG Offsets							
Water quality or quantity (surface water)							
Water quality or quantity (groundwater)							
Species at risk and their habitat							
Significant earth or life science features							
Land subject to natural or human-made hazards							
Terrestrial wildlife (including numbers, diversity and movement of resident or migratory species)							
Natural vegetation and terrestrial habitat linkages							
Soils and sediment quality							
Significant natural heritage features and areas							
Other (specify)							

Figure 2. Natural Environment portion of the Potential Effects Identification Matrix under the Class Environmental Assessment for Waterpower Projects; Each criterion should be prefaced with the phrase: *"This project has the potential to affect..."*

4.1 Detailed Descriptions of Key Ecological Information

The following sub-sections are intended to provide additional, more detailed, advice to proponents regarding baseline data and information collection, subject to scoping as previously described.

Data collection should focus on the zone of influence, the area where the proposed alteration in physical criteria is discernible from natural conditions. Professional judgement is required by the proponent to select the suite of key components that encompass the diversity of habitat and biota at the site and reflect other social and economic values (e.g. sport fish, species at risk).

4.2 Zone of Influence

The geographic range for the collection of field data should consider the zone of influence for the proposed development as well as the specific guidance provided in the following sub-sections. It should also be noted that geographic range may vary for each potential effect of the project.

In the context of water power development, the zone of influence can be defined as the area which will vary spatially and temporally in response to the dynamic processes and lag times associated with any hydro project. The extent of the zone of influence could include both upstream and downstream lengths of river and could include connected lakes and rivers, wetlands and the riparian lands and would therefore be the areas on the landscape and watershed where a significant measurable effect can be detected as a result of a dam and its operations. Typically, these considerations include, but are not necessarily limited to: inundated areas (headponds/reservoirs), downstream areas affected by flow alterations, the dam footprint itself (e.g., dam infrastructure), associated transmission corridors and areas required for supporting infrastructure (eg. Access roads), etc.

Predicting the zone of influence for a new development can be very difficult and subjective. The zone will vary spatially and temporally depending upon the degree of alteration (e.g. peaking facility with a hypolimnetic draw versus run-of-the-river with a metalimnetic draw), river type (e.g., large versus small river), river characteristics (e.g., many tributaries downstream versus few) and geomorphology (e.g., bedrock versus alluvial). An assessment should be conducted based on the proposed degree of alteration from the natural condition. Regulated rivers may no longer experience the infrequent flood, such as the Regulatory flood, therefore the boundary for the Regulatory flood may also be considered in determining the zone of influence. Upstream zone of influence may consider the proposed level of flooding, areas accessed by migratory fish including upstream tributaries, or an existing dam. It is the proponents's responsibility to determine the potential zone of influence (i.e. project scope) under the Class EA.

4.3 Biological Characteristics

To assess the effects of waterpower development on the existing biological characteristics, an approach is needed which incorporates assessment of project – relevant components of the biological community, which may include primary production, benthic invertebrates, and vertebrates including fish and other wildlife.

As appropriate to the project scope, the field data collection program should consider collection of the following information;

Fish Community

- Fish Community - survey of all fish species present at the site
- Species at Risk (SAR) – presence and abundance of any SAR and their habitats within the zone of influence
- Fish Migration and Spawning – survey of the location, extent and quality of spawning areas, including migration routes to and from spawning areas
- Fish Habitat Composition – survey and assessment of the existing aquatic habitats represented, with consideration to the structural characteristics of the habitat, species usage, and sensitivity to any proposed change in water levels and/or flows
- Fish Species of Interest (i.e. determined indicator species) – relative abundance for each species of interest (not limited to managed sport fish or known SAR)
- Fish Age Class Structure – relative abundance and proportion of age classes for each species of interest
- Fish Condition – Condition Factor (CF) of all species of interest sampled, and a small number of mature fish lethally sampled for Gonadosomatic Index (GSI) and Hepatosomatic Index (HIS) (may only be applicable where project timelines provide an opportunity for multiple years (ie. >2 yrs) sampling)
- Fish Contaminant levels – existing fish total mercury levels, and existing MeHg, PCB, dioxin, heavy metal concentrations in fish tissue (may apply where a new reservoir is being developed, or existing reservoir expanded)

Benthic Invertebrates

- Invertebrate Community Composition – identification and abundance of invertebrate families present at the site
- Species at Risk – identification and abundance of any SAR (ie. mollusc) at the site
- Invertebrate Predators – current proportion at the site

Riparian Vegetation Community

- Riparian Ecosite type – determine existing riparian ecosite type

- Riparian Vegetation community composition – determine riparian vegetation community (species and relative abundance of counts of percent cover) at the site
- Riparian Condition – proportions and species of flood intolerant and wetland obligate species present at the site

Primary Production

- Chlorophyll a – concentration of Chlorophyll a present at the site (may apply where a new reservoir is being developed, or existing reservoir expanded)
- Aquatic Macrophytes – major types of macrophytes present, relative amount of cover at the site

4.4 Thermal

Subject to the scoping previously described, it may be necessary to characterize the existing thermal regime through undertaking a continuous log of water temperature monitoring upstream and downstream of the proposed facility to allow for the examination of seasonal trends as well as the frequency and duration of temperature extremes.

4.5 Sediment

This section discusses some of the important components of the sediment regime, focusing on the field data collection components fluvial geomorphology, suspended sediment, and the bed –material load of the river on which the proposed waterpower site is located. As appropriate to the project scope, the field data collection program should consider the following;

- a fluvial geomorphology investigation/survey including; channel sinuosity, entrenchment, planform width-depth ratio, in channel features (bedforms, riffles, cascades/falls, large woody debris), bankfull stage/width/depth, sediment sampling/sizing upstream and downstream of the proposed site , and channel bank conditions
- Collect suspended sediment at the proposed site, during a spring freshet, capturing the high annual flows (only relevant if an erosion problem is anticipated or the project is located in an erosion sensitive area). A minimum of two (2) measurements is recommended during the freshet. In addition, collect suspended sediment seasonally, at least four (4) times is recommended.
- Investigate bedload sediment transport downstream of the proposed site, and at the upstream end of the zone of influence.

4.6 Hydrology

In many waterpower projects, the range of water levels and flows associated with a proposal may be utilized in the context of impact and/or issue mitigation. For example, fish species may require the provision of certain flows at certain times to support spawning. Similarly, there may be social and/or economic considerations that could be addressed through water levels. At a project level, the determination of the relevance of flows and levels will be made considerate of the identified potential impacts.

Key components of a river's flow regime that may be relevant to impact and issue management include;

- baseflow,
- bankfull flow,
- riparian flow,
- and the rate of change of flow.

The proponent may use a variety of tools to characterize these key components and analyse the degree of impact on the potentially impacted values that may be addressed through the proposed water levels and flows. As relevant to the project, characterisation of the variability in these indicators can be achieved by analysing their magnitude, duration, frequency, timing, and rate of change. A similar characterisation of the variability in water level regimes is used to understand and evaluate alteration to water level regimes in lacustrine environments related to reservoirs.

Proposed Approach to Assessing the Downstream Zone of Influence: MNR Response to Xeneca

June 29, 2012

Background

The following comments and advice were prepared by MNR staff in response to Xeneca's submission of the document entitled "*Proposed Approach – Assessment of Downstream Zone of Influence for Small Waterpower Projects with Variable Flow due to Modified Run-of-River Operation*".

Xeneca's submission of this document followed an April, 2012, meeting with MNR and MOE regarding the Chutes project. At this meeting an action item was identified for Xeneca to propose an approach to articulating the downstream Zone of Influence (ZOI) for all of its projects. The proposal received from Xeneca focuses on an approach to assessing and mitigating impacts within an arbitrary distance of each dam without articulating a total ZOI. Both articulating the boundary and assessing impacts within the boundary are valid topics to be addressed.

In this response the MNR provides comments on:

1. MNR's mandate as it pertains to the scope of this proposal;
2. a suggested approach to articulating the ZOI boundary that will support MNR's decision making process; and
3. how Xeneca's proposed approach to impact assessment and mitigation within the ZOI compares to MNR's requirements for review of projects in accordance with its mandates.

General Comments

During the joint agency review it was observed that Xeneca's submission proposes a general approach to completing an environmental assessment within a downstream zone of influence (ZOI), but with a focus on the identification and impact assessment of a few selected features, most of which fall within MNR's mandate. It was interpreted that the proposed approach was not designed to address the interests and mandates of all permitting and approving agencies and the full suite of potential effects identified for consideration in the Ontario Waterpower Association's Class Environmental Assessment for Waterpower Projects (Class EA).

This response from MNR specifically addresses Xeneca's proposed approach as it relates to MNR's mandate under the Lakes and Rivers Improvement Act (LRIA), the Endangered Species Act (ESA) and some other pertinent legislation. The MOE is preparing a separate response to the proposal as it relates to the Class EA process. Although they are separate responses, the MNR response builds off of the MOE response, and they are intended to be considered together.

We have several high-level considerations that we would like to identify up front:

- The MNR will require an understanding of the total anticipated ZOI boundary, the proposed system alterations within that boundary relative to reference conditions, and the associated impact assessment, when making decisions in accordance with its legislation.
- It is also necessary that the above information be used as the basis for conducting Aboriginal consultation and any public consultation that is completed to satisfy MNR's requirements.
- Key components including flow, biology (fish, wildlife and their habitats), sediment, temperature and water quality are used to delineate the ZOI and guide sampling and monitoring activities.
- Quantitative models should be used as tools to help characterize the downstream ZOI and are not the sole determinants of the downstream ZOI boundary.
- Any uncertainty around the extent of the anticipated ZOI due to modelling constraints at Greenfield sites during the planning phase should be addressed through a commitment to post-construction effects monitoring.
- By limiting the scope of the potential effects and impact assessment to the first 30 km downstream of a proposed dam you may not acquire sufficient information for MNR to make decisions under its legislation. Some zones will extend beyond 30 km.
- Similarly, by limiting the scope of the assessment to potential fast water habitat, wetland habitat, major water users, land owners, and/or tributaries/confluences, or simply to any features observed from Google Earth imagery, you will likely not acquire sufficient information for MNR to make decisions under its legislation.
- Sufficient baseline information needs to be collected to enable meaningful assessment of environmental effects and mitigation success.
- At a minimum, a qualified consultant should complete a reconnaissance of the total anticipated ZOI to assess habitat features and determine where additional site investigation may be required to confirm species presence, habitat use, ecological condition or geometry and to provide the information required for an assessment of effects and the development of mitigation opportunities.
- With respect to mitigation, hydraulic modelling is but one piece to be considered within a more comprehensive decision process. Sound field data are still required to characterize the features that are proposed to be altered and to assess impacts.

1.0 MNR's Mandate as it Pertains to the Scope of Xeneca's Proposal

When reviewing applications for approval of dam location, design or operations, the MNR will ensure that decisions are consistent with the purposes of the Lakes and Rivers Improvement Act (LRIA), and will consider other legislation including, but not limited to, the Endangered Species Act (ESA), Fish and Wildlife Conservation Act (FWCA), Public Lands Act (PLA) federal Fisheries Act, Migratory Birds Convention Act (MBCA) and Navigable Waters Protection Act (NWPA). Site-specific fisheries management and other management objectives will also be considered and incorporated into the decision-making process.

The purposes of the LRIA are to provide for,

- (a) the management, protection, preservation and use of the waters of the lakes and rivers of Ontario and the land under them;
- (b) the protection and equitable exercise of public rights in or over the waters of the lakes and rivers of Ontario;
- (c) the protection of the interests of riparian owners;
- (d) the management, perpetuation and use of the fish, wildlife and other natural resources dependent on the lakes and rivers;
- (e) the protection of the natural amenities of the lakes and rivers and their shores and banks; and
- (f) the protection of persons and of property by ensuring that dams are suitably located, constructed, operated and maintained and are of an appropriate nature with regard to (a) to (e) above.

The MNR is also accountable for ensuring that its Statement of Environmental Values (SEVs) under the Environmental Bill of Rights is considered when making decisions on instruments that may significantly affect the environment.

The MNR will require an understanding of the total anticipated ZOI boundary, as well as proposed system alterations within that boundary, when making decisions in accordance with its legislation. It is also necessary that this information be used as the basis for conducting Aboriginal consultation and any public consultation that is completed to satisfy MNR's requirements.

2. Articulating the Downstream ZOI : A Suggested Approach that will Support the MNR Decision-Making Process

Xeneca's proposal focuses on the use of hydraulic modelling to assess impacts on selected features within 30 km downstream of each proposed site, and does not appear to focus on articulating the full downstream ZOI boundary. The total ZOI may in fact extend greater than or less than 30 km downstream, depending on the river and the proposal.

If information about the full extent to which the system will be altered is not made available for agency review and/or public and Aboriginal consultation it will be difficult for MNR staff to determine if the project is consistent with the purposes of the various pieces of legislation we are responsible for. For example, when considering applications under the LRIA, MNR staff will need to understand whether the post-development conditions will continue to provide for the protection of public rights and the interests of riparian owners. Therefore, it is expected that the public and riparian owners will have the opportunity to observe and consider the implications of the project within the entire ZOI. The MNR will also have to meet the Crown's duty to consult with and/or accommodate Aboriginal communities. We review applications for ecosystem-based water level and flow objectives that will support the ecological sustainability of aquatic systems for the perpetuation of fish, wildlife and other natural resources dependent on the aquatic system, and consider whether the project will require an authorization under the ESA. All of these considerations require full clarity from Xeneca on the total extent to which the river system is proposed to be altered.

Below we clarify our view on the scope of the term "total ZOI" and describe a suggested approach to articulating the downstream portion of the total ZOI that will help support MNR in the decision-making process for Xeneca projects.

2.1 Zone of Influence Definition

The Class EA defines the ZOI as the *"immediate area beyond the site directly affected by the project"*.

Consistent with the MOE, it is our view that the total ZOI is comprised of any area which is subject to potential impacts if the project is developed and operated as planned.

The total ZOI includes the upstream and downstream boundaries of hydrologic influence, as well as areas outside of the hydrologic boundary that could be impacted by factors such as thermal, water quality and sediment regimes, and biological considerations such as barriers to fish migration. The total ZOI also includes all areas on land that would be impacted due to such things as the project component footprints, new roads, laydown and stockpiling areas, and construction camps.

This is consistent with previous messaging on the ZOI provided through various EA Coordination meetings and a joint MNR/MOE Director's letter to Xeneca dated July 22, 2011. This letter noted that key components including flow, biology (fish, wildlife and their habitats), sediment, temperature and water quality are used to delineate the ZOI and guide sampling and monitoring activities.

In the aquatic environment, the MNR considers the ZOI to extend to where the alterations in physical, chemical and biological processes are not discernable from natural variability. This may include connected lakes and rivers, wetlands, and riparian lands where a significant measurable effect can be detected as a result of a dam and its

operations. Specific indicators can be selected to assess how the proposed future state compares to the reference state to confirm the anticipated geographic extent of influence, as part of a proponent's field program.

2.2 Determining the Anticipated Downstream Zone of Influence

There is no single formula for determining the anticipated total ZOI that can be ascribed to all situations.

In some cases, it might be possible for the proponent and all agencies to reach a consensus on the extent of hydrologic influence (often referred to as the downstream hydrologic ZOI or variable flow reach) based on an overall assessment of the watershed. An example would be if the downstream ZOI is expected by all parties to end at a receiving large river or lake, or an existing dam. For the purpose of articulating and communicating the anticipated boundary to satisfy MNR's needs with respect to the LRIA, this approach to articulating the hydrologic component of the downstream ZOI will likely suffice, if consensus has been reached. Proponents should consult with the MOE to confirm an approach that satisfies the Class EA and other agency considerations.

Quantitative models can be used to help predict the downstream zone of influence based on a dam's design and operation. Many of these models require knowledge of physical and chemical processes e.g., flow and thermal regime, to generate predictions about the ZOI.

Hydraulic modelling in the unsteady flow state can be a useful tool to predict the geographic extent of potential downstream changes to flows and water levels where peaking operations are proposed (i.e., the downstream hydrologic ZOI). Though there may be some uncertainty with data output, it provides a new set of predicted information that can be combined with other considerations to help inform our understanding of the total downstream ZOI. Hydraulic modelling will also be useful for the impact assessment phase of planning a waterpower project.

Recognizing that all models have some degree of uncertainty and that there are specific challenges associated with modelling proposed peaking conditions at Greenfield sites that may result in additional uncertainty, output should be accompanied by the results of calibration and validation, a sensitivity analysis, full disclosure of the model limitations, and a commitment to post-construction effects monitoring. We suggest that MNR and MOE hydrology staff should be engaged in model review.

After modelling downstream hydraulics, the predicted downstream hydrologic ZOI and its potential uncertainty should be considered along with potential changes to the temperature, sediment, and water quality regimes. If these extend beyond the hydrologic ZOI then the total anticipated ZOI boundary should be extended accordingly. The anticipated ZOI should be further refined to consider the other biological effects such as the potential for the dam to block fish movement. MNR biologists and other MNR and

MOE technical staff should be engaged in these discussions and will consider information on existing conditions. As the project is further defined and new information about existing conditions is acquired, the extent of the anticipated ZOI may be readdressed.

Any uncertainty around the extent of the anticipated ZOI due to modelling constraints at Greenfield sites during the planning phase should be addressed through a commitment to post-construction effects monitoring.

2.3 Seeking Early Consensus on the ZOI

Seeking agreement on the total anticipated ZOI with all agencies early in the EA and regulatory process is important to ensure that impacts are evaluated, mitigated and consulted on within an appropriate geographic extent and within a suitable timeframe. Any comments received from the MNR regarding permit and approval requirements, including the identification of information gaps and potential effects that need to be explored to inform the LRIA application, may be scoped to the anticipated ZOI identified by the proponent at that time. If the ZOI changes as the project is further defined, the MNR may identify additional information or consultation requirements to support its decision-making. This can result in project delays for the proponent.

3. Assessment of Features Within the Downstream ZOI

When making decisions in accordance with the LRIA , MNR staff will generally seek to understand:

- what the reference system looks like within the total anticipated ZOI (physical, chemical, biological characteristics);
- how those characteristics will change with the planned development;
- whether and how the expected changes can be mitigated;
- what the system looks like after the alteration; and
- whether approval of the final project proposal will be consistent with the purposes of the LRIA and other interests as described in Section 1.

Similarly, as part of the Class EA process to satisfy MOE, proponents are required to identify potential effects and fill outstanding information gaps (Project Definition phase), and then ensure that all potential impacts are identified, assessed and mitigated (Project Assessment phase) prior to finalizing the Environmental Report and posting the Notice of Completion (Project Documentation phase).

It is expected that a proponent of a Greenfield waterpower project will collect and assess information through preparation of its Environmental Report that will meet the needs for MNR's subsequent review and approval of the project under applicable legislation. Data and information collection can be designed and carried out in a coordinated manner within the EA process. The findings can be presented in a single body of documentation

that supports decision-making under relevant legislation and minimizes delays for proponents at the permits and approvals stage.

Xeneca's downstream ZOI assessment proposal identified several steps that can indirectly be related back to the Class EA process. We recommend that the full Class EA process be followed for any area that may be affected by a proposed waterpower project, including the downstream ZOI and extensions to the downstream ZOI. For clarity and ease of reference we have framed our response to your proposal within the context of the Project Definition and Project Assessment phases of the Class EA process, while identifying considerations specific to MNR's mandate.

3.1 Project Definition Phase

The first three steps in Xeneca's proposal can be related back to the "Project Definition Phase" of the Class EA process. In these steps Xeneca proposed to: 1) complete a desktop review of Google Maps for a distance of 30 km downstream from each site to identify specific features; 2) complete a qualitative assessment of potential impacts to these features, and 3) complete an optional field study to confirm or deny the existence of the feature.

With respect to MNR's permitting and approval requirements, we have identified a few concerns around the geographic scope and the selection of features for assessment.

3.1.1 Geographic scope of assessment

By limiting the scope of the assessment to the first 30 km downstream of a proposed dam you may not acquire sufficient information for MNR staff to make decisions under its legislation. The MNR will require an understanding of proposed system alteration within the total anticipated ZOI boundary when making decisions on permits and approvals. The ZOI may be greater than or less than 30 km downstream, depending on the river and the proposal.

A desktop exercise can not be relied on to adequately scope information gaps, potential effects, and areas that require additional field investigation to satisfy the LRIA and ESA. At a minimum, a qualified consultant should complete a reconnaissance of the total anticipated ZOI to observe features of relevance and to determine where more intensive site investigation may be required to understand ecological condition, confirm species presence and habitat use, assess the sensitivity of features, and gather other information required to inform impact assessment and mitigation discussions. A records review should also be undertaken by the proponent for the entire ZOI.

It is expected that proponents will provide rationale where it determines that detailed site investigations are not required. We suggest this be discussed with district staff early in the EA and regulatory process in case assessment is considered insufficient to support decision-making.

3.1.2 Selection of Features for Assessment

The proposed approach identified the following features of interest: potential fast water habitat, wetland habitat, major water users, land owners, and/or tributaries/confluences. By limiting the scope of the assessment to these features or any features that can be observed from Google Earth imagery, you are unlikely to acquire sufficient information for MNR to make decisions under its legislation.

When considering applications for approval under the LRIA, MNR will require an understanding of the degree to which the system is proposed to be altered relative to a reference condition. MNR will consider the potential effects on the hydrologic, thermal and sediment regimes, as well as the biology. Flow is generally considered the dominant variable that determines form and function of a river. MNR will consider how the pattern of flow is proposed to change, including the magnitude, frequency, duration and timing (seasonality) of occurrence of various environmental flows, as well as the rate of change from one flow magnitude to another. We suggest that proponents consider all of these components when assessing potential impacts of their projects and preparing their application for LRIA approvals. How these alterations affect our ability to meet the purposes of the LRIA and other interests identified in Sections 1 will be considered.

From an ecosystem perspective, MNR will review LRIA applications associated with dams to ensure applicants provide for ecosystem-based water level and flow objectives that will support the ecological sustainability and biodiversity of aquatic systems for the perpetuation of fish, wildlife and other natural resources dependent on the system. This requires an understanding of the current ecological condition. MNR will also consider effects to existing fish passage, wetlands, species at risk or their habitat, wildlife habitat, and cumulative effects.

The attached document entitled “*OMNR Field Data Collection Requirements for Waterpower Projects* (draft, May 2010)” provides interim technical guidance to MNR District offices and project proponents regarding potential field baseline ecological data collection related to waterpower projects. Section 4 provides detailed advice to proponents regarding the types of study that are available to address project specific requirements.

The attached document recognizes that not all projects will require the same level of data collection, and therefore it is not envisioned that all of the studies described in this document would be needed for every project. Rather, this document provides a checklist of sorts to aid the reviewer in ascertaining the specific study needs on a site by site basis. It is recognized that sufficient baseline information needs to be collected to enable meaningful assessment of environmental effects and mitigation success.

The attached document also recognizes that to assess the effects of waterpower development on the existing biological characteristics, an approach is needed that incorporates assessment of project-relevant components of the biological community,

which may include primary production, benthic invertebrates, and vertebrates including fish and other wildlife.

To satisfy the ESA when considering an application for approval under the LRIA, the MNR will expect that the total anticipated ZOI has been surveyed and assessed to determine if protected species or habitat are present, associated impacts and management strategies have been considered, and the appropriate steps have been taken to avoid a contravention of the ESA.

There are a number of tools available for evaluating the significance of wetland and wildlife habitat that can be provided upon request. While identification of significance is not a regulatory requirement for waterpower projects, the tools may still be useful for understanding existing form and function which will help to predict sensitivity to impacts. The Ontario Wetland Evaluation System provides an approach to identifying the important structure, composition and functional components of a wetland that may be impacted by dam operations or construction. The Significant Wildlife Habitat Technical Guide provides an approach to assessing the significance of wildlife habitat identified through the field investigation. Draft significance criteria schedules for Eco-Regions 3E, 5E, 6E and 7E are now available for interim use.

MNR must also protect natural amenities when making decisions under the LRIA. To satisfy this purpose, an inventory and assessment of natural amenities should be conducted within the total anticipated ZOI. Natural amenities are areas of streams, rivers, and lakes that can be used and enjoyed by the public and riparian owners and include beaches, vegetation, trees, unique physical features, scenic areas, areas for swimming, areas for canoeing and boating, and areas for fishing. The natural amenities may be a feature of the water, the bed, or the shores and the banks. Natural amenities on shores of lakes and rivers should not be destroyed or altered without a full evaluation of the trade-offs involved with evaluation of options for mitigation.

It is the proponent's responsibility to scope the data and information collection appropriately, considering the best information available. The extent of field work should be scoped appropriately, in order to collect sufficient information about the existing ecological condition and specific values within the anticipated ZOI and to allow for impact assessment or future monitoring. The proponent will also consider in their scoping the agency coordination meeting, the site information package, response to the Notice of Commencement, and initial advice from the public. MNR district staff will have shared available data as well as fisheries management objectives and any other site-specific management objectives.

Table 3 of the Class EA provides an analytical framework through which the proponent may scope the potential project impacts thereby defining the determination of the ecological information requirements. This can help inform the proponent's requirements for pursuing an LRIA approval. The Class EA states that where information is unavailable for the proposal it should be noted and, where the information is of significance to the proposal, the gap will need to be addressed. It is recommended that

the proponent consult with relevant federal and provincial agencies and municipal authorities, appropriately qualified persons, potentially affected and interested individuals and the public when completing the potential effects identification matrix.

3.3 Project Assessment Phase

The next three steps in Xeneca's proposal resemble steps in the "Project Assessment" phase of the Class EA process. In these steps Xeneca proposes to: 4) calculate effects by modelling hydraulics in the steady state mode to determine the approximate range of flows and levels expected at each feature; 5) optionally complete a more detailed hydraulic analysis to determine if the fluctuations are sufficiently attenuated, and 6) propose a mitigation strategy where required.

MNR's main concern with respect to this proposed approach as it relates to MNR's permitting and approval requirements is the sole use of modelling to assess impacts and consider mitigation.

3.3.1 Modelling approach to impact assessment and mitigation

We agree with your observations that the downstream ZOI differs from the upstream ZOI in several ways and that many downstream impacts can be mitigated through facility operations. While hydraulic modelling can be useful to inform and to perhaps illustrate potential effects under varying scenarios, model output still comes with some degree of uncertainty, particularly at Greenfield sites.

To assess how flow and level fluctuations might affect a feature or alter the system, biologists will need to understand the degree of uncertainty associated with the model output. Any report of model output should be accompanied by the results of calibration and validation, a sensitivity analysis, and full disclosure of the model limitations. The author's confidence in the model and rationale for its confidence should be stated, as well as an assessment of output uncertainty and how it relates to decision-making.

Steady flow analysis will not provide information on the range of flows and levels changed with distance and time. The preferred option is the more detailed hydraulic analysis to determine if the variability effect is attenuated (unsteady flow analysis).

With respect to impact assessment and mitigation, hydraulic modelling is but one piece to be considered within a more comprehensive decision process. Sound field data are still required to characterize the features that are proposed to be altered, comprehend their sensitivity, and assess impacts. Mitigation strategies should be considered in consultation with hydrologists, biologists, and other stakeholders. Modeling may not be the sole determinant for all mitigation options, and detailed site-specific information may be required to provide quality data input to the model.

Most features will require more than just high-level identification to properly assess how peaking will affect them and to have confidence in the effectiveness of proposed mitigation. For example, a fast-flowing riffle area or wetland may be observed from Google Earth, but how the proposed water volume fluctuations will modify the site-specific water levels and velocities will depend on the site-specific geometry and hydraulics.

It is agreeable that the variability in flow will attenuate with distance from the facility. Xeneca's proposal suggests that an operations strategy used to mitigate an impact on a feature (e.g. minimum flow provided to a fast water area with potential for spawning habitat) should address not only the closest fast water feature, but all subsequent features of the same type. This will likely be true in some cases, but not all. The extent to which spawning habitat suitability at a fast flowing riffle area will be affected by water volume fluctuations will depend on the feature-specific geometry and layout of suitable substrate. A minimum flow designed for the most upstream section of potential spawning habitat may not be as effective for another section of potential spawning habitat further downstream. If we knew which fast water features had the highest density of spawning activity, we could ensure that the operational mitigation strategy optimized habitat suitability at that feature.

Finally, any remaining uncertainty around the extent of impacts (e.g., anticipated water level fluctuations) during the planning phase should be addressed through a commitment to post-construction effects monitoring.

3.4 Project Documentation and Implementation Phases

In the final step Xeneca proposed that it would include significant negative effects and proposed mitigation in the ER.

We suggest that for transparency with respect to public and Aboriginal consultation requirements that satisfy MNR's needs under the LRIA, all potential effects (positive, negative, significant or not) be included in documentation that supports the LRIA application. MNR staff may use this information when reviewing applications and considering whether the project is consistent with the purposes of the LRIA. This is consistent with the information requirements for the Class EA Environmental Report.

The MNR acknowledges that the Class EA is proponent-led and the level of technical detail and precision proponents present in their Environmental Reports (ER) involves, in part, business decisions. Where proponents choose not to fully integrate their data and information collection that is required to make decisions on subsequent authorizations, the MNR decisions on these authorizations will be deferred until proponents provide the necessary data and information and any necessary additional consultation is completed.

Danielle Dempsey

Sent: June-06-13 2:51 PM
Subject: OWA Communication of MNR Field Data Collection Guidelines

From: Janelle Bates [<mailto:jbates@owa.ca>]
Sent: Monday, June 07, 2010 3:56 PM
To: 'Undisclosed Recipient'
Subject: OWA Members Communication Update

Ministry of Natural Resources Field Data Collection Guidelines

In early April, the MNR provided the Association with an opportunity to review and provide comment on a draft version of their *Field Data Collection Guidelines*. As such, the OWA developed an internal Field Data Collection Guidelines Task Team, comprised of subject matter experts, to review the guidelines and provide comment for consideration. Thank you to all for your contributions. Several key improvements have been made to the document which can now be viewed on the members only section of the OWA website www.owa.ca/members. It is our understanding that MNR will be formally approving this document later this month but in the meantime will be using this as interim guidance.

Renew Spring/Summer 2010

The Spring/Summer 2010 issue of Renew is now available for your reading pleasure on-line at www.owa.ca. This issue focuses on education, effective and efficient facility management, and the new era of waterpower development and redevelopment.

Endangered Species Act Framework Agreements Workshop

The OWA will be hosting an Endangered Species Act Framework Agreements workshop on June 29, 2010 at the Novotel Toronto Centre, 45 Esplanade, Toronto, ON. The OWA has planned this one-day workshop to provide the industry with additional information and a greater understanding of the requirements and opportunities associated with implementing the ESA.

Registration includes all workshop materials, continental breakfast, breaks and networking lunch.

Non-Member Registration

Registration: \$209.00 + GST

Member Registration

Registration: \$179.00 + GST

Deadline for registration is **June 24**. Don't miss out!

Register now! www.owa.ca

OWA Members Exchange Teleconference

The next OWA Members Exchange teleconference will be held on **June 8th**. This monthly call allows members to exchange advice and/or input regarding some of the key issues they are facing. Suggested items for discussion can be sent to jbates@owa.ca in advance to be added to the agenda. The agenda and dial in

coordinates can be found on the [OWA Members Forum](#), located on the members only section of the website under Members Exchange.

OWA Power of Water Conference and Annual General Meeting

Registration is now open for the 10th annual Power of Water Conference. Members are encouraged to register early to take advantage of the early booking discounts.

Early registration is open until July 1st. Members **save \$100.00** and pay only the GST. Register now at <http://www.owa.ca/conferences/conf2010.html>.

New Waterpower and Wind Power Atlas

The Ontario Ministry of Natural Resources, Renewable Energy Program (REP) has released the new Renewable Energy Atlas. The new atlas was created by merging the Water and Wind Power atlases into a single web based application. The new Renewable Energy Atlas can be found at the following link:

http://www.lio.ontario.ca/imf-ows/imf.jsp?site=renew_en

For more information please contact Janelle Bates at jbates@owa.ca or 1-866-743-1500.

[Unsubscribe](#)

**MNR Communication on Zone of Influence for Projects Planned under the
OWA Class EA for Waterpower Projects**

- MNR respects the Zone of Influence (ZOI) definition contained in the OWA Class EA for Waterpower Projects (the Class EA). MNR encourages proponents to discuss with/seek clarification from OWA, if required, on how to apply the definition either generally or within the context of a particular project.
- MNR will continue to use this definition, the general guidance contained in Section 2.5 of the Class EA ("The Environment Affected and the Expected Range of Effects") and MNR's 2010 interim guidance for "Field Data Collection for Waterpower Projects" to inform our discussion with proponents on how to delineate for each waterpower project an appropriate ZOI to enable the proponent to adequately describe the environment affected and the range of effects for the purposes of the Class EA
- MNR will continue to use the above guidance in conjunction with the broad purposes as set out in Section 2 of the Lakes and Rivers Improvement Act to ensure that in approving the location of the project/facility the operational requirements/constraints, flooding rights, mitigation to reduce impacts, compensation measures to address impacts and monitoring requirements have been adequately identified.
- MNR will continue to work collaboratively with proponents to meet the intent of Section 5.0 of the Class EA to identify opportunities to create a process that facilitates coordination with and integration of other legislative and regulatory requirements. In keeping with a coordinated approach, MNR recommends that all requirements of the LRIA, ESA and PLA be considered prior to and throughout the EA process.
- MNR recognizes that the Class EA is the primary planning and public engagement framework for waterpower proposals. Consistent with the Class EA, proponents are ultimately responsible for determining the required ecological data collection requirements with consideration being given to advice provided by MNR. It is the proponent's responsibility to determine the potential ZOI (i.e. project scope) under the Class EA.
- If MNR and a proponent cannot come to a consensus on a final ZOI during the EA process, MNR would expect a proponent to clearly describe in the final Environmental Report (ER) the methodology used to delineate the ZOI boundary and, in situations where the ZOI does not cover the entire extent of hydrologic alteration resulting from the proposed development, rationalize why a stretch of river was not assessed or consulted on and how it came to its determination that the change to the hydrological regime does not cause an impact to any of the features or values of interest within MNR's mandate. Inclusion of this rationale within the ER will help MNR make a determination as to whether or not sufficient information has been collected to allow MNR to make informed permitting decisions.