



Quetico Foundation Submission

Proposed OPEG Namakan River Hydro Development Project Draft Environmental Report

INTRODUCTION

The following report sets out the submissions of The Quetico Foundation to the Ojibway Power and Energy Group (OPEG), Ontario Ministry of Natural Resources and the Canadian Environmental Assessment Agency on the Draft Environmental Report on the proposed hydroelectric generating facility at High Falls along the Namakan River. The Environmental Report was prepared on behalf of OPEG in order to meet the requirements of the Class Environmental Assessment Process for Water Power Projects (OWA EA), the Class Environmental Assessment Process for Resource Stewardship and Facility Development Projects (MNR EA), and the Canadian Environmental Assessment Act (CEAA) Screening Process. The submission presents the findings and specific recommendations of The Quetico Foundation on the Report based on a technical, planning and legal review of the Environmental Report by the Foundation.

The Quetico Foundation

The Quetico Foundation is a registered charity that is dedicated to the protection of wilderness class parks, and particularly Quetico Park, Ontario, Canada. The Foundation was formed as part of the joint American-Canadian effort to protect the unique wilderness areas in the borderlands, west of Lake Superior.

Since its founding in 1954, The Quetico Foundation has been dedicated to the protection of wilderness, with particular focus on Quetico Wilderness Provincial Park. Established in 1913, Quetico is one of Ontario's oldest parks, and its second largest wilderness class park. A haven for kayakers and canoeists, the Park hugs the northern edge of the Boundary Waters Canoe Area Wilderness in Minnesota, forming a unique international natural landscape. The Quetico Foundation's mandate and central focus is to protect wilderness values in Ontario and especially in Quetico Park and the surrounding region.

The Namakan River

The Namakan River is approximately 30 km long. It originates at Lac La Croix, and flows north along the western boundary of the Neguaquon Lake Reserve and Quetico Provincial Park where it is joined by the Quetico River. Myrtle Falls is located 6 km along this north flowing branch of the River. After the Quetico River joins the Namakan River, the Namakan continues west through the Quetico Rapids into Bill Lake. The Namakan divides as it empties out of Bill Lake. One branch goes over High Falls and the other goes through Back Channel. Both empty into Little Eva Lake, which in turn empties into Hay Rapids. The Namakan River then continues west and discharges into the Namakan Lake. The Namakan Lake and Lac La Croix are

intersected by the international boundary with the USA with the Namakan River entirely within the Canadian boundary.

The River is critically important to terrestrial and aquatic wildlife in the area. It provides crucial habitat and spawning grounds for Lake Sturgeon, a provincially and nationally threatened species as well as a number of other aquatic species. The area which could be impacted by the proposed projects also provides habitat for other threatened or endangered species. The River is also a crucial passageway for the users of Quetico Park and is symbolic of the untouched but accessible wilderness environment offered by the Park. The River is the last free-flowing river in the region, the last un-dammed historic waterway in Eastern North America and part of a famous fur trade route.

Project History

In 2005, OPEG was awarded “Applicant of Record” status for three hydroelectric sites along the Namakan River: High Falls, Hay Rapids, and Myrtle Falls.

Two of the three proposed hydroelectric sites (“High Falls” and “Hay Rapids”) were combined by the MNR due to their close proximity and interrelated hydraulic effects.

The draft Report focuses solely on one of these three related projects: the hydroelectric project at High Falls. The Draft Report recommends revisiting the potential for a hydroelectric project at Hay Rapids within the decade but concludes that such a project is not economical at this time. The Myrtle Falls project is still moving forward. Preliminary studies have been done but OPEG does not intend to do any concrete planning or study for the project until High Falls is under construction. The Myrtle Falls project is not considered in the draft Environmental Report for the High Falls project.

The High Falls proposal is for a ‘run-of-river’ hydroelectric generating station with a nameplate capacity of 6.4 MW. The High Falls hydro-electric development will directly impact 8 km of the Namakan River, with the potential to destroy its wilderness character, irreversibly damage its fragile ecosystem, threaten critical Lake Sturgeon habitat and migration patterns, and negatively affect the ecological integrity and wilderness values of Quetico Park and the Quetico-Superior wilderness area.

Quetico Foundation Study Process

The Quetico Foundation has taken the following steps to review the draft Environmental Report: (1) the circulation of the draft Environmental Report to Quetico Foundation supporters and volunteers for comment; (2) circulation of the Environmental Report to independent experts for review and comment in the fields of aquatic and terrestrial biology, as well as legal specialists in the areas of US (Katherine Donald) and Canadian (Garrod Pickfield LLP.) environmental law; (3) compilation and review of the comments received; (4) based on this, determination of Quetico Foundation’s position with respect to the project and draft Environmental Report; and (5) preparation of these submissions.

Technical/Legal comments received by the Quetico Foundation have been incorporated into the body of these submissions. Curriculum vitae of the contributing experts are attached. A series of reports on the crucial issue of fisheries impacts are attached as appendices to the submissions.

Appendices

These submissions should be read together with the following Appendices which support the findings set out below:

Appendix 1: Fisheries Impact Review, together with summary of the implications of applicable US law, conducted by Katherine Donald, M.Sc.

Appendix 2: Fisheries Impact Review, conducted by Dr. David Caroffino, Ph.D.

Appendix 3: Fisheries Impact Review, conducted by Larry Kallemeyn, M. Sc.

Appendix 4: Genetics and Telemetry Study: Welsh, A. and McLeod, D. *Detection of Natural Barriers to Lake Sturgeon Movement within the Namakan River, Ontario*

FINDINGS

The specific findings reached in the Foundation review are organized into two categories:

- General deficiencies in approach which undermine the Environmental Report and its conclusions.
- Discipline-by-Discipline deficiencies, and issues of concern, in the key areas of fisheries impacts, terrestrial ecology, hydrology and socio-economic impacts.

General Deficiencies

1. The Environmental Report does not assess environmental impacts: The Environmental Report has one central failing that overrides all others: the proponents have failed to carry out an assessment of the impacts of the project as required by the governing provincial and federal regulatory requirements. The technical studies appended to the report provide only an inventory of the existing environment. These inventories provide a picture of the pristine and delicate nature of the natural environment that would be impacted by the project but the impacts are not assessed. Reports appended to the document identify the habitat of threatened and endangered species, including the nationally threatened Lake Sturgeon. The information provided makes it clear that there is crucially important habitat in this area that could be critically imperilled by this project. Missing from the Environmental Report is an assessment of the impacts that the establishment of this hydroelectric generation facility is predicted to have on this existing environment. Instead, the Report lists general potential effects that would apply to any proposed hydroelectric project with no analysis of how likely

those effects are or how significant they will be in this situation. OPEG has tried to replace an impact assessment with a promise to mitigate any impacts that occur.

This approach does not comply with the regulatory requirements of a class environmental assessment. Specifically, section 4.4.1 of the Class Environmental Assessment for Waterpower Projects (Ontario Waterpower Association, 2008) sets out the component requirements of an Environmental Report. The core requirements include a “description of potential effects” of the proposed undertaking and the “results of the analysis, evaluation and assessment conducted for the subject effects concerns or issues”. These core requirements are entirely absent from the work presented by the proponent. The draft Environmental Report submitted by OPEG provides no evidence that any such analysis, evaluation or assessment of impacts was ever completed.

Other component requirements that flow from this work are also not presented and cannot be presented until the assessment work has been completed. Specifically, section 4.4.1 identifies the following crucial elements of the ER that cannot be completed unless the evaluation and assessment of impacts are complete:

- Changes to the original proposal, if any, resulting from the environmental evaluation
- Description of the net effect(s) (after mitigation), if any, including the identification of the significance of the net effects(s);
- Planned avoidance/prevention/mitigation and or other impact management measures for any potential negative effects;
- A review of the overall advantages and disadvantages of the project, including a discussion of any benefits that might offset disadvantages.

Since the proponent has not carried out the prerequisite requirement of an assessment of impacts of the project on the potentially effected environment it is not possible to address the above bulleted additional components. Unless and until the potential severity of the impacts is analysed, it is not possible to conclude, as OPEG has done, that there will be no negative effects after mitigation, or that mitigation to an acceptable level is even possible,.

The proponent has presented generic statements to respond to the above listed required elements of the ER. For example, the proponent makes a promise to mitigate impacts on fish habitat but is not able to provide any specifics on how this will be achieved. Consistently the mitigation measures presented offer only a statement that impacts will be mitigated.

Overall, it is not possible for the reader to determine the overall advantages or disadvantages of the project, or whether it is even feasible to construct the proposed dam without devastating impacts on fish and wildlife habitat. This entirely undermines the conclusions of the Environmental Report and places the feasibility of the project in doubt.

2. The Study Area for the Environmental Report is inadequate: The study area chosen for this Report studies the effects on the river between Quetico Rapids and Hay Rapids. By studying only this segment of the River, the ER fails to assess the impacts of the project on the Namakan River as a single functioning ecosystem. The overall impacts of the project are therefore not fully understood or presented. The Report's conclusions are premised entirely on the assumption that impacts will not extend outside the arbitrarily segmented study area. Without considering how impacts in one part of the ecosystem may impact the rest of the ecosystem, these claims are unsubstantiated. The impacts on the Namakan River system as a whole, and not just an arbitrarily chosen segment of it, need to be understood before conclusions can be reached not only on the proposed undertaking's design and mitigation measures, but on whether or not the project can proceed without unacceptable impacts.
3. The Environmental Report fails to consider cumulative environmental effects: The CEEA requires that an environmental screening include a study of the "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" (CEEA, s. 16(1)(a)). In section 6.3 of the Report, OPEG acknowledges that this would include the proposed hydroelectric facility at Myrtle Falls, 15 km up-river of the proposed High Falls project. On page 6.3 of the Report, OPEG states that the effects of the Myrtle Falls project are unknown and "outside the scope" of the High Falls project. If the River was treated as a single functioning ecosystem (see item 2 above), a second hydroelectric facility, located only 15 km up the same river, would not have been considered outside the scope of the assessment.

OPEG also states on page 6.3 of the ER, that the cumulative effects for the High Falls project do not need to be assessed because they will be studied in the Environmental Assessment process for the Myrtle Falls project. The CEEA requires future projects to be considered in the environmental screening process. The environmental screening process is intended to prevent projects from developing through "incremental creep" whereby proponents are able to avoid assessing overall impacts of a series of planned projects by studying the first project in isolation of the subsequent projects. The Myrtle Falls project is located a mere 15 km up-river of the High Falls project and the cumulative effects of both projects should be studied before either of them moves forward. Without such a study, the Report is out of compliance with the CEEA.

4. The Environmental Report provides insufficient detail on all mitigation plans: Section 8 of the Report concludes that there will be no significant environmental effects from the project because they all can be mitigated. Before this conclusion can be reached, the efficacy of the mitigation plans must be studied. Under the OWA EA, this must be included in the Environmental Report. A review of Section 5 of the Report shows a paucity of detail regarding any possible mitigation measures. Throughout Section 5, OPEG uses language such as "minimize where practicable", "develop a Best Management Practice Plan", "develop a compensation plan", etc. The Report assumes that mitigation measures are possible and that, if implemented, the mitigation measures will minimize environmental effects to the point where they are insignificant. To allow a proponent to assume that all negative environmental effects can be mitigated, without any substantive mitigation plans and analysis, would defeat the purpose of the Environmental Assessment process.

The proponent also puts emphasis on monitoring as part of the mitigation measures. Monitoring for negative impacts after the fact is not a substitute for proper analysis of potential negative impacts and a review of possible mitigation plans. OPEG needs to develop their mitigation plans before the completion of the Environmental Assessment process so that the impact on the environment from the project can be properly assessed. Specific examples of the paucity of mitigation measures are included in the discipline specific sections below. A list of the missing studies and plans are included in the conclusions of these submissions.

Discipline Specific Deficiencies

Fisheries

1. Failure to identify fish habitat: The only studies presented by OPEG and appended to the Environmental Report are surveys of the existing condition of the fisheries in the Namakan River between Hay Rapids and Quetico Rapids. Insufficient information is presented to identify the existing spawning grounds for Sturgeon and other fish species. Quetico Foundation circulated the work to fisheries experts for review. The reviewers have identified the following deficiencies in the OPEG studies:
 - The acreage of spawning habitat reported by the spawning habitat survey do not appear to have been accurately estimated: a substantially higher area of spawning habitat is likely given the complexity of the river and lake basins in the study area (Kallemeyn, Appendix 3).
 - No accurate estimate of spawning habitat quality has been presented. OPEG's consultants attempted to address the quality of spawning habitat by comparing the relative numbers of fry/larvae captured during drift netting. However, larvae captured cannot be assigned to a specific spawning site as they may have come from further upriver (Caroffino, Appendix 2).
 - Nursery habitat is also important to Lake Sturgeon (Caroffino, Appendix 2). The Environmental Report does not identify any areas of nursery habitat. More study is required to adequately assess the amount and location of spawning and nursery habitat for Lake Sturgeon.
2. Failure to Assess Impacts on Fish Habitat: Most significantly, no scientific assessment of the impacts the proposed development will have on these fish populations and fish habitat is presented. This deficiency is glaring given that this project would represent the first hydroelectric project on a pristine, unmanaged river that provides unique habitat to threatened and endangered species. In particular, Lake Sturgeon are a threatened species that are especially vulnerable to ecological changes due to the longevity, large size and late sexual maturity of the species (Donald, Appendix 1).

This project will impact both spawning habitat and nursery habitat. Both spawning habitat and nursery habitat have specific substrate and flow requirements (Donald, Appendix 1; Caroffino, Appendix 2) and any alteration to flow and sedimentation in these habitats could potentially create serious negative impacts on the Lake Sturgeon population. The Environmental Report contains no analysis of the change of flow in the river or any estimate of the amount of sedimentation that may occur as a result of the altered flow and the construction activities. This lack of information, combined with the failure of the Environmental Report to accurately define spawning and nursery habitat, makes it impossible to predict potential impacts of the project on fish habitat. This paucity of information must be remedied in order for the Environmental Report to meet its obligations under the OWA EA.

3. Failure to identify and assess impacts on fish migration: Based on the information provided, the impacts to migration are likely to be significant and permanent. Genetic and telemetry studies show that the Lake Sturgeon population along the Namakan River belong to one population, indicating that movement is occurring both upstream and downstream (Welsh, Appendix 4). Currently, adult Lake Sturgeon move downstream over High Falls and upstream through Back Channel (Caroffino, Appendix 2). Barriers such as dams and weirs can potentially isolate populations along a river into several smaller populations (Welsh, Appendix 4). Fragmentation of the population is a potential negative impact on the Lake Sturgeon. Fragmentation would erode the genetic diversity of the species along the Namakan River as has happened elsewhere in Ontario and the United States (Welsh, Appendix 4). No impact analysis of this change is presented.

The report also fails to consider impact to Lake Sturgeon at all stages of life, particularly the juvenile stage. It can take up to 25 years for a sturgeon to reach maturity (Donald, Appendix 1). Passing through the weir could cause significant mortality in Age-0 juvenile lake sturgeon (Caroffino, Appendix 2). Early life mortality of Lake Sturgeon is already high and if this additional source of mortality is added, it will negatively influence the population (Caroffino, Appendix 2). The Environmental Report only discussed adults and larval Lake Sturgeon. To fully assess the impacts to Lake Sturgeon as required in the OWA EA, studies must be completed on the potential impacts to the Lake Sturgeon at all stages of life.

4. Inaccurate representation of Species at Risk: In the ER, OPEG acknowledges that the Namakan River is the home of Lake Sturgeon, listed as a species at risk. However, OPEG incorrectly stated that the classification of the Lake Sturgeon is “Special Concern” in Ontario and under review by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) (p. 3.28). The Lake Sturgeon in North-western Ontario is “Threatened” under the Committee on the Status of Species at Risk in Ontario (COSSARO) classification and “Special Concern” under the federal COSEWIC system.
5. Non-compliance with *Endangered Species Act*: As noted under item 2 above, the Lake Sturgeon is a “Threatened” species in Ontario. The proponents of this project have failed to demonstrate that the project would comply with Section 10(1)(a) of Ontario’s Endangered Species Act (ESA): “No person shall damage or destroy the habitat

of a species that is listed on the Species at Risk in Ontario List as an endangered or threatened species”.

6. No analysis to demonstrate mitigation measures will be effective: Given the potentially devastating impact of the blockage of the Back Channel migration route, the project will rely almost entirely on a single mitigation measure identified by the proponent to ensure no adverse impacts on fish habitat: the establishment of a fish passage structure to accommodate fish migration. Despite the critical role that the fish passage structure would play in ensuring the feasibility of the undertaking, no details are provided on the fish passage structure. No studies of the effectiveness of this mitigation measure in other similar settings are presented. No evidence is provided to demonstrate that this type of structure will work for Lake Sturgeon. Traditional fish ladders and fish passage systems have not been widely used for Lake Sturgeon due to their body size and poor leaping ability (Caroffino, Appendix 2).

The project also has the potential to damage spawning habitat. OPEG proposes to mitigate any damage by creating new spawning habitat. This will be difficult to carry out due to the specific substrate and flow conditions needed for habitat as well as the site loyalty juvenile sturgeon show for nursery habitat (Caroffino, Appendix 2; Donald, Appendix 1). Before this method is relied upon, it should be tested with the construction of new spawning habitat and monitoring the effectiveness of that habitat to evaluate whether it will be sufficient for reproduction and be used by Lake Sturgeon (Caroffino, Appendix 2).

OPEG also relies on monitoring as a mitigation measure. The reliance on mitigation ignores the longevity of Lake Sturgeon. It is possible that negative impacts on the genetic diversity or population numbers will not be noticeable for generations, decades after the facility is constructed. Rehabilitation and stabilization of the population is a slow process (Donald). By the time monitoring reveals a negative impact on the species, it may already be too late to reverse the effects.

In summary, no assessment is provided on mitigation measures to address impacts on fish habitat. Some of the key unanswered questions include:

- Whether construction can avoid spawning grounds;
- How much water is required to maintain fish movement and how that will be achieved;
- Whether it is possible to create new spawning grounds and habitat to replace the habitat that will be impacted by the project; and
- How monitoring will be carried out and what steps can be taken if monitoring shows negative impacts to the Lake Sturgeon,

Terrestrial Ecology

1. An assessment of impacts on wildlife has not been completed: The Environmental Report provides the conclusion that this project will have no significant impact on wildlife in the study area. The technical studies appended to the ER provide no support for such a conclusion. The studies in the appendix are only surveys of existing wildlife and do not evaluate the potential impacts of a hydroelectric generating station being constructed in the habitat of those species. The Environmental Report requires a full analysis by an ecologist of the potential impacts on wildlife from this project.
2. Wildlife surveys are incomplete: The wildlife survey at Tab D.20 has been reviewed by the MNR. The comments on this report from the MNR are found starting at p. 45 of Table C.7. The only response from OPEG is that its ecological consultant has received the MNR comments and will be remitting an updated wildlife survey. Since the wildlife survey is not yet complete, it is premature to draw even limited conclusions regarding the types of wildlife that could be impacted by the project and the extent of impacts on wildlife and wildlife habitat.
3. Impacts on Endangered Species have not been studied: The comments from the MNR regarding the wildlife survey reveal that only a cursory effort was made to identify and study species in the area that are on the Species at Risk List for Canada and Ontario. The Lake Sturgeon, discussed above, is only one example. The whip-poor-will, listed as ‘Threatened’ by both COSEWIC and COSSARO, is identified in this area. As a Threatened species, the ESA does not allow any damage to the habitat. In the Environmental Report, there is no consideration of the habitat of the whip-poor-will. No studies on the activities of the whip-poor-will have been conducted. It is therefore impossible to conclude that there will be no damage to the habitat of the whip-poor-will. The Environmental Report must include specific studies on species at risk and their habitat to ensure the species and their habitat are protected.

The Pygmy Snaketail Dragonfly has also been identified in this area. This Dragonfly is a globally rare species classified as G3 (vulnerable to extirpation or extinction). In Canada, the species is classified as “Special Concern”. In Ontario, the species is on the priority list to be studied by COSSARO. There is only one known site for the Pygmy Snaketail Dragonfly in Ontario and that is this site along the Namakan River. At Tab D.19, the proponent appended a report to the draft Environmental Report concerning the Pygmy Snaketail Dragonfly. This study recommends that more research be conducted regarding this species, including expanding the study area to include areas downstream, upstream, and in adjacent watersheds (Tab D.19, p. 3). The Pygmy Snaketail Dragonfly is sensitive to impacts on the riverbed including sedimentation and scouring. The Environmental Report does not include a Water Management Plan making it impossible to determine how much scouring or sedimentation will occur along the River. The Report also fails to include any information on the location of habitat for the Pygmy Snaketail Dragonfly. These studies have to be completed before any conclusion can be made about the feasibility of proceeding with the project without an adverse impact on, and/or loss of habitat of, this endangered species.

4. Impacts of Construction have not been analyzed: The Environmental Report has only one technical study appended to it that deals with the construction impacts: a summary of considerations when building the access road. There is no analysis of potential impacts or the significance of those impacts. In particular, the Environmental Report acknowledges that the construction will cause dust but that the dust can be mitigated with a Best Management Practices Plan. This conclusion is reached with no air quality study to determine the significance of dust impacts or whether it is possible to create a BMPP that can mitigate the effects. This study is needed before any conclusion can be reached regarding impacts of dust on the surrounding environment.

The shoreline alteration will require blasting, however no assessment of the potentially significant impacts has been conducted. Rather than assessing impacts, the proponent has simply promised that in its Environmental Report that mechanical fracturing, the proposed mitigation measure, will be used as much as possible to minimize impacts. This statement is not a substitute for quantifying the extent of blasting and assessing potential impacts.

The construction of the access road will require the removal of trees. There is no estimate of how many trees are required to be cleared, no description of existing wildlife and their use of/reliance on existing treed areas to be removed, and no assessment of the potential impacts of their removal. The Environmental Report mentions that the trees are in use by migratory birds but no assessment of the impact of the tree removal on migratory birds and their habitat has been presented. The creation of the access road will also divide what is now uninterrupted wildlife habitat. There is no analysis of the potential impacts of reducing the connectivity of the current ecosystem.

The construction of the access road will also result in increased motorized access to this wilderness area. This will introduce vehicles such as ATV's, snowmobiles, and motorboats, thereby dramatically diminishing the wilderness character of the Namakan River valley and neighbouring wilderness areas. The Environmental Report contains no analysis of the impact this increased access will have on the area and ignores the difficulty of enforcing access regulations.

5. Inadequate mitigation measures: Because the Environmental Report fails to adequately describe the potential impacts on the ecosystem within the study area, it is not possible to determine whether mitigation measures are possible. The mitigation measures suggested in the Report are lacking in detail and cannot be analyzed for their potential effectiveness. Examples include:

- “Avoiding habitat” of threatened species without any study determining where that habitat is located.
- Only removing trees when the migratory birds are not present without any analysis of the importance of those trees to the birds in subsequent migration seasons.
- Assuming all impacts on wildlife can be mitigated without proper studies on the wildlife that is present and that wildlife makes use of the current habitat.

Significantly more ecological study and assessment must be completed before supportable conclusions can be made regarding potential impacts on the natural environment. These studies are included in the list at the end of these submissions. In the absence of these studies, the only conclusion to draw is that the risks of impacts to aquatic and terrestrial life are not acceptable and the project should not proceed.

Hydrology

Altering the hydrological flow of this river system will alter the ecosystems that depend on it. In the Environmental Report and the studies attached, little time is given to analyzing the changes to the aquatic and coastal ecosystems arising from the alteration of the River.

1. Flooding upriver: OPEG has acknowledged that the weirs will create substantial water level increases and ponding in Bill Lake and the Quetico Rapids. The Report claims that there will be no increased water depth in the Quetico River, however, since the Quetico River is not within the study area, there is no analysis to support this claim. The Report includes discussion of increased water levels but arbitrarily stops its assessment at the confluence of the Namakan and Quetico Rivers. There is no information provided to support a conclusion that impacts will not extent far beyond this point or that water levels will not increase on the Quetico River within Quetico Park.

These upriver impacts beyond the study area must be determined and analyzed, as they have the potential to impose significant adverse impacts on Quetico Provincial Park in violation of provincial parks legislation. Section 16 (1) of the Provincial Parks and Conservation Reserves Act, 2006, prohibits the generation of electricity on lands that are part of a provincial park. Section 16 (2) defines generation of electricity as including reservoirs. There is no analysis of current, or potential changes to, water levels within Quetico Provincial Park. The hydrology and hydraulic report concludes that the impacts on Quetico Rapids, located immediately outside of the park, will not be significant but does not define what is meant by significant. The legislation prohibits all impoundments and reservoirs, and the proponents have failed to demonstrate that there will be no alteration to water levels and flow in Quetico Provincial Park.

2. Flooding Bill Lake: The draft Environmental Report claims that the impacts to Bill Lake will be insignificant because the increase in water level does not exceed the current high water level for 1- and 2-year flood events. This ignores the fact that increasing the mean water level creates a new high water level for 1- and 2-year flood events. There is no analysis evaluating the impacts and extent of an increased floodplain around Bill Lake, including the impacts on the coastal ecosystem and potential increased water level fluctuation in neighbouring wetlands. The project will also result in seasonal stabilization for water levels in Bill Lake as levels will no longer fall at times of the year where flow is lowest. There is no analysis of the impact the absence of seasonal water fluctuations will have on the surrounding ecosystem or the seasonal water fluctuations upriver.

3. Altered flow down river: The Environmental Report lacks a Water Management Plan (WMP), which would include both a Water Level Management Plan and a Dam Operations Plan. Without a WMP it is impossible to predict and analyze the change in flow patterns caused by the weirs and shoreline excavation. Increasing the rate of flow can cause scouring and damage current habitat, and decreasing the rate of flow can cause sedimentation and damage to the current habitat.
4. Impacts on shoreline vegetation: The Environmental Report and the vegetation surveys that are appended to it, recognize four rare plant species that exist on the shoreline of the entire study area. There is no analysis of the potential negative impacts that excavation of the River edge and flooding of Bill Lake will have on these species. This is a significant Report deficiency, given that two of the four species are sensitive to water fluctuations. The Environmental Report says OPEG will mitigate any impacts to these species and the shoreline ecosystem as a whole but there is no analysis regarding what those mitigation measures would be or whether mitigation is even possible in this situation. OPEG plans to monitor the shoreline ecosystem with a goal of stabilization. This assumes that stabilization is possible after the planned alteration. It is therefore impossible to conclude there will be no net negative impact after mitigation. Study is required to determine the potential effects shoreline construction, water level change and water flow change will have on the shoreline ecosystems and what, if any, measures are likely to mitigate those impacts.
5. Failure to consider a “No-head” option: Although presented by OPEG as such, the project is not a true “run-of-the-river” project. The Back Channel, the pivotal migration route for Lake Sturgeon, is proposed to be controlled through the use of a weir. The OWA EA process requires an Environmental Report to include other impact management measures for any potential negative effects. For this project, OPEG has not considered the option of operating the generating plant as a true run-of-river generating facility. OPEG proposes using a “low-head” option that still causes flooding upriver of the facility and relies on unevaluated mitigation to prevent blockages of fish migration. A “no-head” option would remove these impacts and risks and maintain the natural flow of the River. The feasibility of this option should be considered as part of any decision making regarding this project.

Socio-economic Impacts

The Environmental Report contains a section discussing the overall advantages and disadvantages of the project including benefits that might offset disadvantages. Throughout the Report, OPEG discusses generic benefits of this project, including clean energy for Ontario and economic opportunities for the Lac La Croix First Nation (LLCFN). Conversely, the draft Report fails to identify and properly assess the potentially significant socio-economic disadvantages of the proposed project. Specific findings are set out below.

1. The Environmental Report overstates socio-economic benefits of the project: The benefits of the project, according to the Environmental Report, are economic advantages

for the LLCFN and benefits to Ontario by providing for future energy needs through renewable energy (p. 1.12).

In assessing the benefits of the project to the LLCFN, the Report fails to differentiate between short-term and long-term opportunities. This project will only create jobs during the construction of the facility. Once the facility is built, there will only be 2 or 3 long-term jobs created for maintenance of the facility. The Report also overstates the revenue benefit from the project. To date, OPEG has not developed a Water Management Plan. OPEG has not conducted any studies to determine the minimum flow of water needed in the Back Channel in order to protect the fish populations. Without this information, the amount of water that can be used to generate electricity is uncertain. The revenue that can be generated by the facility is dependant on the amount of electricity the facility can produce. Without any analysis of how much water will be available to produce electricity, no reliable estimate of revenue can be calculated. The Quetico Foundation supports the Lac La Croix First Nation in its efforts to overcome the community's economic difficulties and believes that there are opportunities to do so in a more lasting and sustainable way than the project proposed by OPEG.

In assessing the benefits of the project to Ontario, the Report fails to consider the need for the project in fulfilling Ontario's future energy need. This project is located in North-western Ontario, far away from the population centres of Southern Ontario where the energy is needed. The energy generated at the proposed facility would have to be transmitted in order to meet the energy needs of Ontario because the energy is not needed in North-western Ontario. The Northwest region of Ontario already has a surplus energy capacity of 450-500 MW. Adding an additional 6.4 MW to this surplus does nothing to "assist Ontario in meeting its future energy needs". Currently, all transmission lines into and out of the region in which the project is proposed are all at full load capacity, making it difficult to transmit the energy generated at the proposed facility to the population centres in Southern Ontario, Minnesota, or Manitoba. Because of the distance, there are also problems with inefficiency in transmitting the power to where it is needed.

2. The Environmental Report understates the socio-economic disadvantages of the project: By not acknowledging the difference between short-term and long-term impacts of this project, OPEG has understated the socio-economic disadvantages associated with it. The region is currently in active recreational use. The Namakan River is a strategic geographic linkage between three different protected areas in two countries. In evaluating the effect of the project on recreational users, the Environmental Report classified the net result as uncertain because it is a matter of 'personal feeling' (p. 5.30). This casual dismissal of the wilderness experience offered by this area ignores the crucial change that the project would usher in: imposing on-going engineered management operations on a previously unmanaged natural waterway. The effect of this action on the wilderness experience is much greater than just the aesthetic concerns that are identified in the Report. The unmanaged waters of this region are one of its main attractions for canoeists and park users. There are managed waterways all over the province. These three protected wilderness areas and the unmanaged waterways that connect them, draw people to this region. One of the potential long-term negative impacts of this project that

is not identified or assessed in the Report is the decline of park users in this area once the river becomes managed. This would also impact opportunities in this region for eco-tourism and similar long-term, sustainable economic endeavours once the pristine conditions of the environment are gone. OPEG's assertion that there will be no impact on any recreational fishing in the area is dependant on their unsubstantiated assertion that there will be no impact on the fisheries. Our comments regarding the fisheries are set out above.

Before any conclusions can be drawn regarding impacts to the current recreation and tourism industries in the region, an economic impact study should be completed to establish how many people visit the area now, why they visit, and how they use the area. Without this information, it is impossible to determine the negative impacts this project will have on these industries.

CONCLUSIONS AND RECOMMENDATIONS

The Quetico Foundation's technical, planning and legal review of the draft OPEG Environmental Report on the proposed Namakan River Hydro Development Project has identified a fundamental set of deficiencies with respect to the Environmental Report which lead to the conclusion that the proponent is only beginning to understand the nature of the potential long term impacts of the project and that more study needs to be done. The Report fails to respond to the fundamental assessment requirements: an appropriately detailed description of the project and its mitigation measures and an assessment of the net impacts on the physical, natural and socio-economic environment. The minimum regulatory requirements of the Class Environmental Assessment and Environmental Screening process requirements under both the Federal and Provincial environmental assessment legislation which is required for this project have not been met.

This conclusion leads to three recommended options for OPEG:

1. The Project should be abandoned at this stage: Balancing the marginal, short-term economic benefits against the significant costs to an internationally shared wilderness area in terms of the environmental and socio-economic impacts, this project represents a net detriment to the province of Ontario. Recognizing the absence of need or significant economic benefits and the long term, permanent environmental damage leads to the conclusion that the project is ill-conceived, represents poor environment planning and resource management, and does not meet the purpose of the Environmental Assessment Act: "the conservation and wise management of the environment in Ontario".
2. Part 2 Order Request: At minimum, the Project should be subject to a Part 2 Order. This would provide an opportunity for a full assessment of the range of potential impacts before a decision is made on whether or not to proceed with the project. Given the unique nature of the area, the identified threatened and endangered species, and in particular the potentially devastating adverse impacts that the project will likely have on the migratory habitat of the Lake Sturgeon population, the project falls outside the

standard class of undertaking for which the Class EA process is appropriate. Full Environmental Assessment is warranted.

3. Specific Additional Studies Required: A third option is to postpone the project in order to allow sufficient time to complete further study. Specifically, in order to meet the requirements of the OWA EA, the MNR EA, and the CEAA Screening Report, and ensure that the project can be completed with out imposing unacceptable impacts on the natural environment the following additional work is required:

- Establishment of an appropriate study area that is co-extensive with the area of potential change due to the establishment of the proposed project
- Adequate surveys and identification:
 - Four-season wildlife and botanical survey
 - Full study for habitat of Lake Sturgeon, including improved locational analysis for spawning habitat, identification of nursery habitat, and analysis of how Lake Sturgeon use the River at all stages of life
 - Full ecological study of the Pygmy Snaketail Dragonfly in this region including identification of habitat
 - Identification of habitat of any other endangered species, including migratory birds and rare plant species
- Impact analysis of project on existing environment:
 - Cumulative effects analysis for all planned hydroelectric projects on the Namakan River
 - Impact analysis for Lake Sturgeon and habitat including effects on connectivity
 - Assessment of potential impacts of proposed development on common wildlife in the area
 - Impacts on shoreline flora of increased water levels in Bill Lake
 - Impacts of altered flow for flora and fauna downriver
 - Impact of eliminated natural water fluctuations at Bill Lake
 - Analysis on impacts for existing users of the area
 - Geological survey and estimate of amount of blasting required together with an assessment of impacts expected from blasting
 - Dust Impact Study

- Assessment of alternative method: “no-head” option for the electrical generating.
- Economic Studies:
 - Economic study demonstrating benefits to LLCFN, the region, and Ontario from this project
 - Economic study of the effects on the current tourism industry and impacts for future tourism
 - Profitability analysis of the generating station based water flows available after the Water Level Management and Fish Compensation Plans are developed
- Development and assessment to ensure viability and effectiveness of Mitigation plans measures:
 - Fish compensation plan
 - Water Level Management Plan
 - Dam Operations Plan
 - Protection plan for spawning habitat of Lake Sturgeon including appropriate buffers
 - Plans for creating new spawning habitat including locations
 - Prototype of new spawning habitat to ensure efficacy
 - Engineering plan for fish passage structure
 - Protection plan for the Pygmy Snaketail Dragonfly including buffers from habitat
 - Protection plan for other identified endangered species including rare plants
 - Best Management Practices Plan for dust.

All of which is respectfully submitted,

The Quetico Foundation