

Project Update

The Little Jackfish River Hydroelectric Project is in the second year of a three year study to assess its technical feasibility and environmental acceptability. The proposed Project involves development of two new generating stations on the Little Jackfish River that flows into the north end of Lake Nipigon, about 250 km north of Thunder Bay (Figure 1). The recently released Long Term Energy Plan identifies the Little Jackfish development as a project "under consideration" for meeting the future electricity needs of Ontario.

The Project has the potential to provide about 100 MW of clean, renewable energy to the Ontario electricity grid, producing enough annual energy to supply approximately 50,000 households. Development of the Project supports government environmental, energy and economic development objectives.

While the Project is categorized as a greenfield development (there is no existing hydroelectric generation on the river), much of the area within the river watershed has been intensively logged. Cleared areas and a remnant road

infrastructure provide an opportunity for OPG to minimize the need to develop new corridors for access roads, transmission lines and related infrastructure.

The river itself is the product of a man-made diversion in 1943 which created the Ogoki Reservoir. This existing reservoir provides the opportunity for considerable storage of water upstream of the proposed generating stations and minimizes the need to create significant new reservoirs above each proposed dam. The Ogoki Reservoir can be used to shift energy production to times of the day and year when there is higher demand on the electricity system. Downstream, it is possible to better manage flows on the river.

Building on the success of previous partnerships with First Nations, OPG is optimistic that discussions with the Lake Nipigon First Nations will result in a similar arrangement for the Little Jackfish Project. OPG is also committed to consulting and engaging Métis and other Aboriginal People that are interested in the Project throughout the EA process. OPG values the consultation process and believes it will contribute to informed decision making and help us to build a better project.

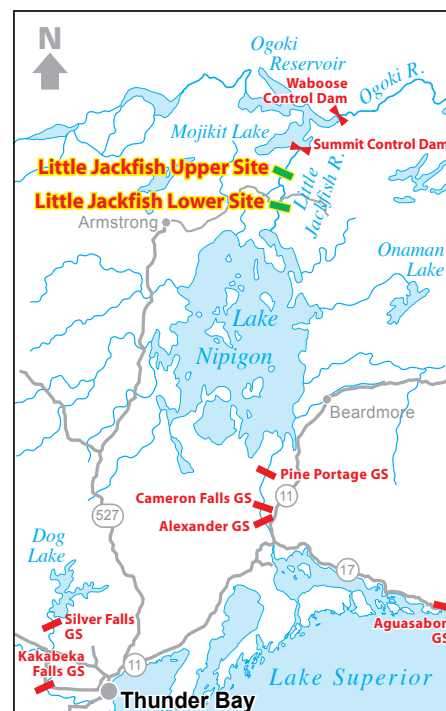


Figure 1: Map of the proposed Little Jackfish River Hydroelectric Project

Environmental Assessment Update

As part of the environmental assessment (EA) process, Ontario Power Generation (OPG), with the assistance of SENES Consultants Limited and the Lake Nipigon First Nations, has spent several field seasons actively studying the existing environment of the Little Jackfish River. OPG will now be working to interpret the findings of these field studies as we move forward in the EA process to predict how the proposed generating stations might affect the people, fish and animals that use the river system so that impact management strategies can be developed. OPG will use the Class EA process as a basis for coordinating all future consultation required for the planning stage of the Project.

A Brook Trout tagging program was initiated in October, 2010 to assess their current use of the river.



Little Jackfish River HYDROELECTRIC PROJECT

Aquatic Environment

OPG, with the assistance of local community members familiar with the Little Jackfish area and its resources, has conducted fish movement and habitat assessments related to key species that use the river including: walleye, brook trout, lake sturgeon and lake whitefish. OPG believes that the Project provides a number of potential benefits for fish management in the river system. Firstly, the Project will create a physical barrier at the Upper Site which will prevent species such as rainbow smelt from getting into the Arctic Watershed which presently do not exist there. Secondly, OPG has identified at least two existing barriers to fish movement that currently prevent fish from moving upstream during moderate and high flows. As a result, OPG is assessing whether the proposed generating stations can be operated to create better flow conditions for fish to move up the river during spawning season and at other times of the year. OPG will consider replacing critical fish habitat that is lost due to the Project. Thirdly, the proposed operating regime for the generating stations is expected to decrease extreme high flow events in the system which may lead to improved ecological health in the watershed. These topics will be explored in more detail in the final Environmental Report.

Mercury

Mercury in the environment is also a focus of the EA. It is well known that mercury levels in fish increase with the creation of new reservoirs. OPG is currently assessing the impact of the Project on mercury levels in fish upstream and downstream of the proposed development sites, as well as on the Lake Nipigon fishery. An extensive sampling program has been carried-out to study mercury in the water, sediment, plankton, soil and fish, from Lake Nipigon to Mojikit

Lake. SENES Consultants Limited is using this data to predict how these levels are expected to increase based on the design and operation of the proposed generating stations. The preliminary results will be ready to share in 2011. A thorough review of the final mercury study will be conducted by government agencies to ensure that potential impacts are addressed in the final Environmental Report through a variety of mitigation, monitoring and management strategies. Consultation on these strategies will occur in 2011.

Erosion

The Ogoki Diversion, in 1943, caused significant erosion along the river. Most of that erosion occurred in the first decade following the diversion and the rate of erosion has decreased ever since (Figure 2).

According to the preliminary engineering study results, the annual erosion rate on the lower stretch of the river is now considered to be average for similar sized rivers on the Canadian Shield. It is anticipated that erosion in the Little Jackfish River will continue



Field technicians worked in tough conditions in June 2010 to support a larval Lake Sturgeon drift net study to determine whether this species is using the river for spawning in areas that are potentially impacted by the Project.



Ministry of Natural Resources biologists and OPG consultants at the Little Jackfish River, Fall 2010.

in the foreseeable future, but will gradually reduce with time. If the Project proceeds, erosion could decrease in the lower Little Jackfish River due to the ability to control the frequency of extreme high flows in the river and sediment being trapped behind the two dams. An erosion assessment will be included in the Environmental Report.

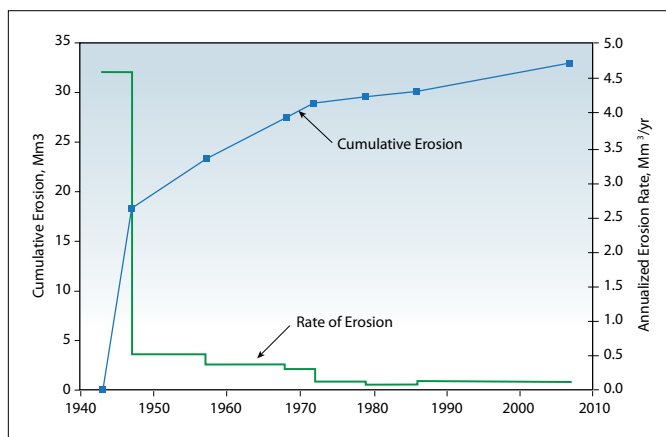


Figure 2: Historic erosion in the lower stretch of the river following the Ogoki Diversion of 1943.

Socio-Economic, Land Use and Terrestrial Environment

The proposed Lower Site of the Project is currently accessible by the existing Jackfish Road while the proposed Upper Site is in a remote area with public access restrictions under the *Public Lands Act*. The proposed Project is compatible with the existing land use direction in the area and OPG is working with local Aboriginal People, businesses, recreationalists and government agencies to preserve the remoteness of the upper part of the river system (Zigzag Lake to Ogoki Reservoir).

The Project is expected to produce a significant local and regional economic benefit during construction and create a benefit to the Province throughout its lifecycle. For example, approximately 300 person-years of employment will be created during each of the three years of construction. The Project is also likely to enhance the viability of other local resource development projects. Efforts would be made to coordinate clearing and road building activities required for the Project with similar activities of other companies.

The area around the river was opened up to forest harvesting in the mid 1990s and much of the area has been substantially harvested. As a result, additional impact on wildlife populations and forest resources is expected to be minor as every effort is being made to utilize existing roads and cleared areas for infrastructure. Approximately 1,000 hectares of land



OPG is working with local First Nations and consulting and engaging Métis and other Aboriginal People, businesses, recreationalists and government agencies to preserve the remoteness of the upper part of the river system.

Whitesand First Nation community members enjoy using a trap cabin on Zigzag Lake, located between the two proposed generating stations. OPG and Lake Nipigon First Nations are working together to determine how the project could affect their use of the Little Jackfish River area.

is expected to be cleared for the flooded area, with approximately an additional 1,000 hectares cleared for generating stations, site construction, transmission lines, roads and other associated infrastructure.

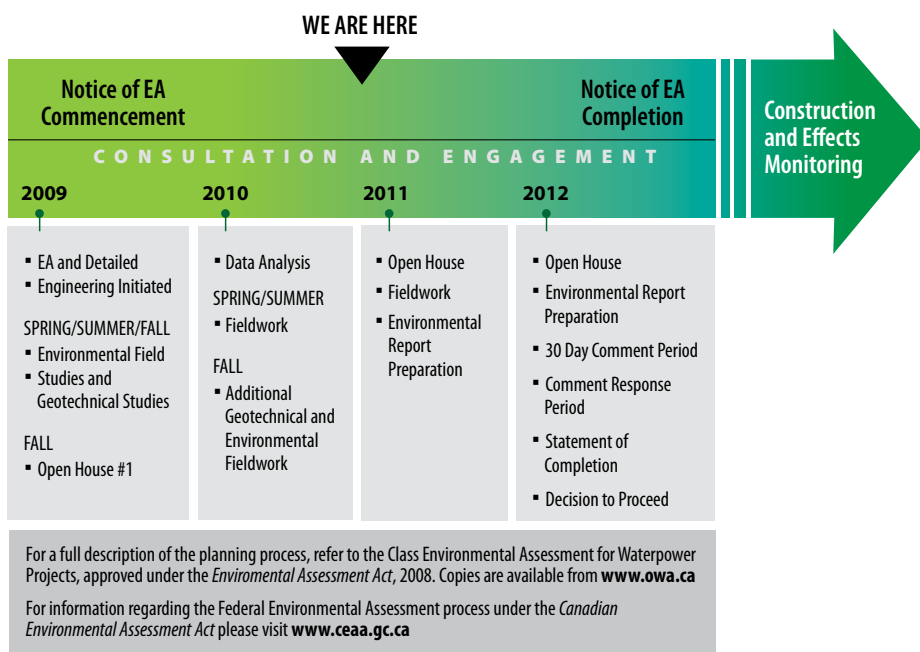


Harvested forest near the river shows that the study area has already been extensively disturbed by forestry activities.



OPG is exploring ways to ensure the existing roads in the Study Area are used during construction and for access to the Upper Generating Station.

Where are we in the Environmental Assessment Planning Process?



Open Houses

will be scheduled for Winter/ Spring 2011 in order to update the Project's status, share findings from the environmental studies and provide an opportunity for feedback and discussion. In the meantime, if you have questions about the Project, please do not hesitate to contact us.

For Information

or to be put on our mailing list, please contact:

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Additional information, including the Project Description can be found at:
www.littlejackfish.com.