

## **PUBLIC CONSULTATION AND ABORIGINAL ENGAGEMENT PLAN**

# Public Consultation and Aboriginal Engagement Plan

## Lizard Creek Small Hydro Project

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### 1. Introduction

Lizard Creek Power Inc. is proposing to construct a 1MW hydroelectric power plant along Lizard Creek in the Township of North Shore. As part of the process the proponent is required to complete an environmental assessment (EA) prior to construction.

Public consultation and an invitation for Aboriginal engagement are requirements of the Class Environmental Assessment for Waterpower Projects pursuant to the *Environmental Assessment Act (EA Act)*, and are an integral component of the EA process.

As part of the process, this plan details the public consultation process as follows:

- Components and schedule
- Scope of information to be provided and messages to be conveyed
- Contingency Plan
- Integration of comments and concerns into the EA

### 2. Letter to Agencies and Commencement Meeting

A letter was sent to all relevant agencies to inform them of the project and schedule a commencement meeting where any concerns, procedures, requirements, etc. could be discussed. The meeting was held on July 28, 2009 at the Ministry of Natural Resources' office in Blind River, Ontario.

At the meeting the following was discussed:

- introductions between the agencies, proponent, and the proponent's consultants;
- the outline of the class EA process for this project;
- an overview of the project;
- the roles and responsibilities of the agencies;
- the approach to data collection, public consultation and aboriginal interests; and
- the next steps in the process.

Invitees included:

- Ministry of Natural Resources
- Ministry of Environment
- Fisheries and Oceans Canada
- Lizard Creek Power Inc. (proponent)
- IBI Group (proponent's consultant)

To accommodate the various schedules and availabilities of invitees an option to call into the meeting was also offered. Further to that all invitees were sent the agenda package and minutes from the meeting, and those who were unable to attend were contacted to discuss their input.

All formal questions and comments will be documented within the Environmental Screening Report (ESR). Requests made by the agencies will be incorporated into the EA process. If there are any questions or concerns from the agencies that have already been considered by the proponent and/or its consultant, a reply will be given with the known information, and if necessary, the EA can be revised to include or better highlight this information. If there are any questions or concerns that have not been considered or are not satisfied by the known information, it will be further investigated and integrated into the EA if necessary.

The meeting notice, agenda package and minutes are all attached in Attachment A.

### **3. Notice of Commencement**

A copy of the Notice of Commencement is located in Attachment B. This notice was published on September 2, 2009 in the following local newspapers:

- The Elliot Lake Standard
- The Mid North Monitor
- The North Shore Sentinel
- The Sault Star

The notice includes the following information:

- project title
- name of proponent
- brief description of project and tentative schedule
- map showing project location and anticipated zone of influence
- statement that project is subject to defined process under Class EA for Waterpower Projects
- invitation to participate in the process
- contact name, address, fax and telephone number and/or email address to whom questions or requests for additional info should be directed or comments can be sent
- for projects associated with existing infrastructure, an explicit statement that subsequent direct notices will be provided to those who express an interest in the project
- an indication of additional opportunities to be informed and/or involved in the project.
- Notice of a Public Information Centre #1 (PIC#1), as described in the next section, to be held at a date to be determined

The notice was published in local newspapers so as to reach as many people as possible within the local area. Members of the public have been invited to ask questions, voice concerns, or request further information about the project via phone, fax, email or mail at anytime over the course of the project. Again, all questions and comments will be documented within the ESR. If there are any questions or concerns from the public that have already been considered by the proponent and/or its consultant, a reply will be given with the known information, and if necessary, the EA can be revised to include or better highlight this information. If there are any questions or concerns that have not been considered or are not satisfied by the known information, it will be further investigated and integrated into the EA if necessary.

### **4. Public Information Centres**

At least one Public Information Centre (PIC) will be held. PIC #1 will be held on October 13, 2009 from 5:30pm to 8:30pm at Township of North Shore's Office. A second newspaper publication will be made with the scheduled date for PIC#1, to provide a hard copy of the notice that can be retained as a reminder.

All PICs will be held at a venue that is easy to access for all interested parties. Depending on the attendance of PIC#1, the feedback received, the information requested, and changes that may occur over the course of the project, additional PICs may be scheduled, with notice given via newspaper and mailing list. All PICs will have notices issued 3 weeks prior.

At PIC#1 the proponent and proponent's consultant host an open house and the following information will be provided on large boards:

- introductions of the proponent and the proponent's consultants,
- an overview of the project,
- the outline of the class EA process for this project,
- the next steps in the process, and
- how to submit a question or comment.

Questions and comments will be treated in same manner as those collected through the NOC, and will be included in the ESR. Comment cards will be supplied with the proponent's mailing address, so that attendees can submit at the conclusion of the meeting or I preferred, take them home and submit at a later date. Attendees will also be able to ask questions or make comments to the proponent and the proponent's consultants directly. In the event there are questions that cannot be answered at the time, the question, the individual asking and their contact information will be documented and then followed up with.

If additional PICs are required, a brief review of PIC#1 will be given along with any updates on the project, and questions submitted or asked at the previous PIC(s). Attendees will once again be able to ask questions or make comments as outlined above. All PICs will likely be held at the same location, unless for some reason there is a need to hold them elsewhere (i.e. location not available, accessibility for interested parties, etc).

## **5. Notice of Completion**

The notice of completion will be issued upon the completion of the ESR to notify interested parties, via newspaper and mailing list, and allow time for their review. The notice will include the information contained within the NOC as well as the conclusions of the ESR and information on how to access and review the ESR. Deadline for comment will be 30 days after the issue of the notice. The notice will also make clear that concerns should be addressed with the proponent, and if an issue should remain unresolved, that a written request can be made to the Minister of the Environment (or delegate) for a Part II Order. Lastly, the notice will contain the address of the Minister of the Environment (or delegate) and the last date that Part II Order requests will be accepted.

If there are any outstanding issues that have not already been addressed, a response will be issued and/or the ESR will be revised accordingly.

## **6. Statement of Completion**

Once the Notice of Completion has been submitted, 30 days have passed and any outstanding issues have been resolved, the Statement of Completion will be issued in local newspapers. The Statement will include the following:

- Proponent information
  - Proponent name
  - Contact name
  - Proponent mailing address, telephone and fax numbers, and email address

- Site information
  - Site mailing address
  - Site survey address
- Project information
  - Project name
  - Nameplate capacity of facility (MW/kW)
  - Category of Class EA completed
- Document Availability Information
  - Details of where records are kept and can be accessed
- Part II Order Request Information
  - Describe how many Part II Order Requests were received and basis of concern
  - If any received, a description of how they were addressed
- Statement of Proponent
  - A statement that the information contained in the Statement of Completion is complete and accurate and that it has complied with the requirements of the Class EA
- Conclusion of Class EA
  - Conclusion of the final Environmental Report
- Documentation of Aboriginal engagement (as appropriate)
  - A summary of key points of engagement, issues and outcomes
- Documentation of public and agency consultation
  - A summary of key points of consultation, issues and outcomes

## **7. Aboriginal Engagement**

The proponent's consultant has contacted the Ministry of Natural Resources. Based on the Ministry's advice, there are three aboriginal nations within the area of the project that have been contacted by the proponent:

- Serpent River First Nation
- Sagamok Anishnawbek
- Mississauga First Nation

A Notice of Commencement along with a cover letter has been sent to these three nations with the goal of encouraging dialogue. A copy of the covering letter for the N.O.C. can be found in Attachment C. The proponent made efforts to contact the local First Nations prior to the start of the Environmental Assessment process and some dialogue has occurred with the Serpent River First Nations through the Ministry of Natural Resources.

Notices will be sent by mail, however some communications can also be made via phone and email. The aboriginal community is welcome to attend public meetings, and in addition, if preferred, separate meetings can be held. Notices have been sent to the Chief's of each nation contacted. A meeting can be arranged at anytime during the process, and additional meetings can be scheduled as required.

The methods employed and scope of discussion will be the same as that for public consultation as discussed in previous sections in addition to the above. The scope of consultation will also have a greater focus on the impacts on the First Nations communities.

# Attachment A

## Commencement Meeting - Notice, Agenda Package and Minutes

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## **Notice of Meeting**

### **Lizard Creek Hydro Project** **Commencement of Class EA**

#### **All Agency Meeting**

**Tuesday July 28<sup>th</sup>, 2009**

Pursuant to the Class Environmental Assessment for Waterpower Projects, and in accordance with the notice of Applicant of Record Status DSR-01-05 a meeting will be held to discuss the above noted project and to design a coordinated approach to meet all federal, provincial, municipal, environmental assessment and consultation requirements.

The meeting will be held at the Ministry of Natural Resources office in Blind River Ontario, in the main boardroom. The address for the office and time of the meeting is as follows:

Ministry of Natural Resources  
62 Queen Avenue  
Blind River, ON  
P0R1B0  
(705) 356-2234

Meeting:  
Tuesday, July 28<sup>th</sup>, 2009  
10:00 am  
Main boardroom

If unable to attend, there is also the option to call into the meeting using the following:

Dial-in Numbers:  
1-866-596-5280 or  
416-406-5763

I.D. Number:  
1498887#

Please find enclosed with this notice the following documents:

- Agenda
- Project Description
- Draft Notice of Commencement Under the Class EA for Waterpower Projects

If you require any further information please contact the following:

Patrick Garel  
IBI Group  
Richmond Hill, ON  
L4B 4N1  
w) 905 763 2322 x 2234  
f) 905 763 9983  
[pgarel@ibigroup.com](mailto:pgarel@ibigroup.com)



## **Agenda**

### **Lizard Creek Small Hydro Project**

### **Kick-off Meeting with Agencies**

### **Class EA for Waterpower Projects**

July 28, 2009

#### **Items to discuss:**

1. Introduction
2. Class EA Process and possible transition to the Renewable Energy Approvals/Complete Submission Policy
3. Overview of project concept:
  - i. Purpose of project
  - ii. Proposed concept
  - iii. Location, watercourse, duration of project
  - iv. Zone of influence
  - v. Known project-specific environmental, social and economic values and potential effects
  - vi. Summary of field work (to date and ongoing)
4. Roles and responsibilities of each agency
5. Approach to:
  - i. Data and information collection
  - ii. Public consultation
  - iii. Aboriginal interests and relative roles and responsibilities
6. Expectations for further communication (e.g. when, who) and expected tasks and timelines
7. Other potential permitting and approval requirements

\*See attached for purpose of project, project concept, and concept drawing.



## **Lizard Creek Small Hydro Project**

### **Purpose:**

For well over a century hydroelectric power has been produced in Ontario. Still recognized as a vital source of energy, waterpower contributes approximately 26% (7,800 MW) of all electricity used in the province. Since waterpower is a renewable and green source of energy, it has been given much attention over recent years. Global climate change, fossil fuel dependency, and increased greenhouse gas emissions have become the most important issues in Canada today. Waterpower helps to resolve each of these problems since it uses very little fossil fuels and emits minimal greenhouse gases when compared to the amount of hydroelectric power it produces.

Canadian leaders have struggled with finding a solution that would allow Canada to meet the Kyoto Protocol target of reducing greenhouse gas emissions to a level 5% lower than what was produced in 1990 by 2012. In order to meet this goal, increased hydroelectric power would make significant advances in relieving Canada's dependency on energy sources such as coal and nuclear power that emit high levels of greenhouse gases.

Ontario also faces the issue of refurbishing or replacing approximately 25,000 MW of older, less environmentally friendly generating equipment. This is a huge undertaking as the province presently has 31,000 MW of installed generating capacity in total. With Coal producing only approximately 6,500 MW, and peak demand around 27,000 MW, Ontario must turn to newer sources such as hydroelectric power in order to meet provincial energy demands.

### **Proposed Concept:**

Lizard Creek Power Inc. is proposing a small hydroelectric power plant which would produce 4.5GWh of energy annually. Lizard Creek is a tributary to the Serpent River, located in the North Shore Township, 20 km southeast of the City of Elliot Lake, Ontario. The plant would be located approximately 300m upstream of the Lizard Creek/Serpent River junction point. The entire project would consist of a flow conveyance channel, water control structure, penstock, powerhouse (or power plant), and new transmission line. The channel would divert water from Lizard Creek at 2.66 cms into the control structure, regulating flows into the 300m penstock. The penstock would be connected to a power plant, housing a 1.0 MW horizontal Francis double runner turbine which operates a synchronous generator. The generator will produce electricity conveyed by a new transmission line to the nearest existing Hydro One transmission line 1 km away.

Proposed Concept Drawing:

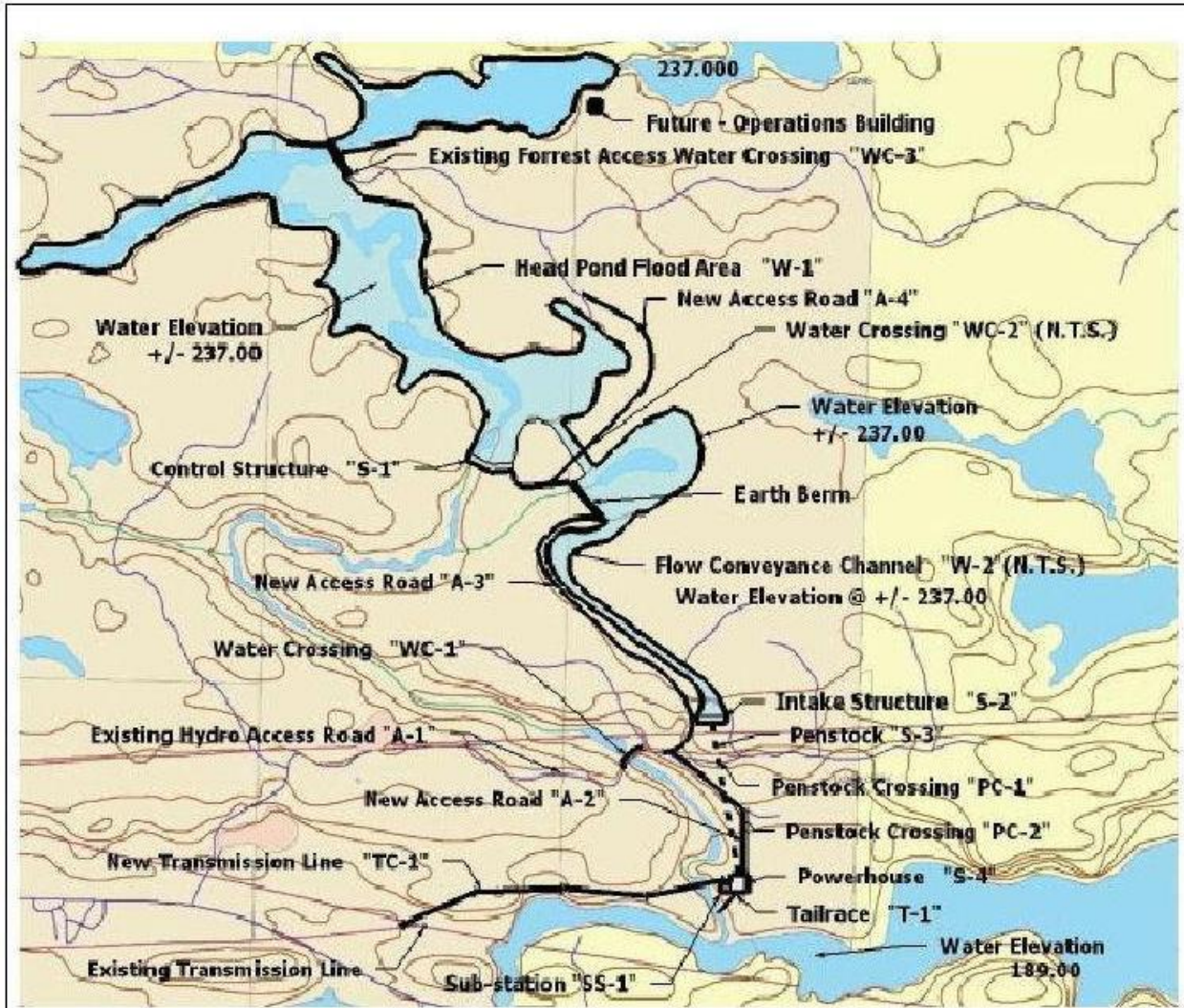


Figure 4

Map PD 3 Lizard Creek Small Hydro Project Site Layout

not to scale

# Lizard Creek – 1 MW Hydro Power Generation Station

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As per Ontario Waterpower Association's Class *Environmental Assessment for Waterpower Projects*, October 2008

## Project Categorization

**Project Type:** TYPE B (subject to class EA), New Project on Managed Waterways

**Rationale for categorization:** Potential for localized effects and concern

**Mandatory Notification Requirements:**

- Notice of Commencement
- Notice of Completion
- Statement of Completion

**Key Environmental Themes:** often involve the relationship between the “zone of influence” for the new proposal and the existing water management regime

**Involvement:** Agencies, Interested Parties, Aboriginal Communities, as appropriate

**Documentation:** Environmental Report

**General Level of Detail Expected:** Broader local concern/impacts and potential for expanded scope

**Target Timeline for Completion:** 12-18 months

## Planning Requirements

### Phase 1 – Project Concept

1. Project Description and Environmental Context
  - purpose
  - rationale, location, duration
  - watercourse identification
  - anticipated zone of influence
  - potential effects to the environment (environmental, cultural, socio-economic)
  - early avoidance/prevention/mitigation concepts
  - proposed project phasing
2. Project Coordination
  - follow requirements of the various relevant acts
    - i. Fisheries Act,
    - ii. Navigable Waters Protection Act,
    - iii. Lakes and Rivers Improvement Act,

- iv. Public Lands Act/Provincial Parks and Conservation Reserves Act
- Agency Meeting to discuss
  - i. Overview of project concept
  - ii. Agency mandates and how the proposed project relates to the statutes and policies administered by each agency
  - iii. Roles and responsibilities of the proponent, Federal Environmental Assessment Coordinator (FEAC), Responsible Authorities (RAs), expert Federal Authorities (expert FAs) and provincial ministries
  - iv. Known project-specific environmental, social and economic values
  - v. The approach to data and information collection
  - vi. The approach to public consultation
  - vii. The approach to involving Aboriginal interests and relative roles and responsibilities
  - viii. Expectations for future communication (e.g., when, who) and expected timelines and tasks associated with the stages of the process
  - ix. Other potential permitting and approval requirements.
- 3. Developing Public Consultation and Aboriginal Engagement Plans
  - i. Provide those who may have an interest in the project, or those who may wish to participate with the opportunity to contribute to and inform decisions relating to a project
  - ii. Provide proponent with opportunity to gain information and knowledge related to social, cultural, economic and environmental considerations of relevance to project

## **Phase 2 – Project Definition**

- 1. Notice of Commencement
  - provide to
    - i. adjacent and potentially affected riparian landowners/tenants
    - ii. potentially affected Aboriginal communities
    - iii. MOE Regional Coordinator
    - iv. Ontario Regional Office of the Canadian Environmental Assessment Agency
    - v. Local MNR office or park zone office (for projects within provincial park or conservation reserve)
    - vi. Other potentially interested government agencies (e.g. Municipal Affairs and Housing, Culture, Parks Canada, etc.) as appropriate
    - vii. Potentially interested municipalities, including those hosting project project-related infrastructure
    - viii. Other potentially directly affected water management infrastructure owners/operators
    - ix. Other directly interested or affected parties (e.g. local interest groups, businesses, resource licensees, members of the public that may be directly affected by some aspect of the project)
    - x. President of the Ontario Waterpower Association
  - include:
    - i. project title
    - ii. name of proponent
    - iii. brief description of project and tentative schedule
    - iv. map showing project location and anticipated zone of influence
    - v. statement that project is subject to defined process under Class EA for Waterpower Projects
    - vi. invitation to participate in the process

- vii. contact name, address, fax and telephone number and/or email address to whom questions or requests for additional info should be directed or comments can be sent
  - viii. for projects associated with existing infrastructure, an explicit statement that subsequent direct notices will be provided to those who express an interest in the project
  - ix. an indication of additional opportunities to be informed and/or involved in the project.
2. Identification of potential effects
    - See Table 3 – Potential Effects Identification Matrix
  3. Public Consultation and Aboriginal Engagement
    - Discuss and identify potential issues
    - Incorporate concerns into scope of assessment
  4. Gap Analysis, Data and Information Collection/Acquisition
    - Use the Potential Effects Identification Matrix as basis for required information to contribute to design and implementation of the data acquisition strategy

### **Phase 3 – Project Assessment**

1. Assessment of Effects
  - Summarize
    - Potential negative effects
    - Relative level of effect
    - Mitigation or impact management measures that will be used
    - Any individual net effects (after mitigation) and their significance
    - The overall positive, neutral and negative effects of the project
  - Consider
    - The importance of the value affected
      - Some values may be given higher priority (e.g. public safety)
    - Duration and frequency
      - Longer term or more frequent effects may be greater
    - Geographic extent
    - Irreversibility of the effect
      - Some effects cannot be easily be remedied or mitigated
      - Some can be reversed over a period of time
    - Ecological/Social Context
      - Impacts in areas that are ecologically fragile and have little resilience may be of particular importance
      - Similarly, benefits to local communities may be beyond electricity production (e.g. flood/drought mitigation)
2. Impact and Issue Management Strategies
  - Mitigation can include
    - Reducing magnitude, duration, etc. of impact
    - Repairing the situation post-impact to achieve (more of a) pre-impact state
    - Offsetting the impact through other means, not necessarily directly related to that impact
    - Enhancing positive effects where possible

### **Phase 4 – Documentation**

1. Environmental Report Must Contain
  - Background information;

- Map of project location and study area;
- Description of the study area and the existing environmental context;
- A completed potential effects identification matrix;
- A description of potential effects (positive and negative);
- The results of the analysis, evaluation, and assessment conducted for the subject effects, concerns or issues;
- Information on public and agency consultation, including a description of the public and agency consultation program and consultation activities/events, a list of agencies contacted, summary of public and agency concerns or issues and how they have been or have attempted to be addressed;
- Information on Aboriginal community involvement, including a description of the engagement program and activities/events, a list of communities contacted, summary of community concerns or issues and how they have been or have attempted to be addressed;
- Changes to the original proposal, if any, resulting from the environmental evaluation and/or consultation and engagement processes;
- Description of the net effect(s) (after mitigation), if any, including an identification of the significance of the net effect(s);
- Planned avoidance/prevention/mitigation and/or other impact management measures for any potential negative effects;
- A review of overall advantages and disadvantages of the project, including a discussion of any benefits that might offset disadvantages;
- A summary of planned construction and post construction monitoring programs, as required, including mechanisms for their implementation and reporting;
- Technical reports supporting the findings, as appropriate;
- Anticipated timelines for project implementation; and
- A listing of any other known required approvals and permits.

## 2. Notice of Completion

- Notice of Completion should include:
  - The information required for the Notice of Commencement;
  - The conclusions of the ER;
  - Information regarding how the ER may be accessed and reviewed;
  - Deadline for comment (30 days);
  - A stipulation that concerns should be addressed with the proponent, and if the issue should remain unresolved, that a written request can be made to the Minister of the Environment (or delegate) for a Part II Order;
  - The address of the Minister of the Environment (or delegate); and
  - The last date when Part II Order requests will be received.

## Phase 5 – Project Implementation

### 1. Statement of Completion

- a. Include:
  - Proponent information
    - Proponent name
    - Contact name
    - Proponent mailing address, telephone and fax numbers, and email address
  - Site information
    - Site mailing address
    - Site survey address
  - Project information
    - Project name

- Nameplate capacity of facility (MW/kW)
      - Category of Class EA completed
    - Document Availability Information
      - Details of where records are kept and can be accessed
    - Part II Order Request Information
      - Describe how many Part II Order Requests were received and basis of concern
      - If any received, a description of how they were addressed
    - Statement of Proponent
      - A statement that the information contained in the Statement of Completion is complete and accurate and that it has complied with the requirements of the Class EA
    - Conclusion of Class EA
      - Conclusion of the final Environmental Report
    - Documentation of Aboriginal engagement (as appropriate)
      - A summary of key points of engagement, issues and outcomes
    - Documentation of public and agency consultation
      - A summary of key points of consultation, issues and outcomes
2. Subsequent Permits and Approvals
- b. Most likely to be approvals for:
    - i. fish and fish habitat (*Fisheries Act*),
    - ii. navigation (*Navigable Waters Protection Act*),
    - iii. infrastructure (*Lakes and Rivers Improvement Act*), and
    - iv. land disposition (*Public Lands Act /Provincial Parks and Conservation Reserves Act*)
3. Effects Monitoring
- c. May be required subject to the class EA
  - d. Should be considered throughout the planning process (e.g. during the project assessment stage of the Class EA process)
  - e. Can be relevant at all stages (e.g. site preparation, construction, commissioning, operation, etc.)
  - f. May also be condition of subsequent permits and approvals
  - g. May be important to monitor to verify the extent of effects (and compare actual with predicted effects), effectiveness of impact management strategies and whether additional measures are warranted
  - h. Monitoring programs should consider and document the following:
    - i. Component: the environmental component or strategy being monitored and the scope of the program;
    - ii. Rationale: the reason for monitoring;
    - iii. Methods and timing/duration: the procedures that are to be used for monitoring (e.g., techniques, equipment, indicators, measurements, duration, frequency, etc.);
    - iv. Reporting: provision for reporting of data, results and action taken, including frequency and to whom results are reported; and
    - v. Adaptive Management: provision for additional actions that may be required to mitigate an impact, including any related monitoring.
4. Documentation Retention
- i. Proponents required to retain all Notices, a copy of the ER and any Monitoring Reports.
  - j. Records of public, agency and Aboriginal consultation may support subsequent approvals and permitting processes
  - k. These records must be retained for a minimum of 10 years and be made available pursuant to Freedom of Information and Protection of Privacy Provisions

## Coordination and Integration of Additional Key Legislative Requirements

There may be circumstances where the elements of the project involve more than one Class EA, and potentially more than one proponent.

### **Other Class EAs**

1. Class EA for Minor Transmission Facilities (Hydro One, 1992)
2. Class EA for MNR Resource Stewardship and Facility Development Projects (MNR, 2002)
3. Class EA for Provincial Parks and Conservation Reserves (MNR, 2004)
4. Class EA for Remedial Flood and Erosion Control Projects (Conservation Ontario, 2002)
5. Other Class EAs

### **Federal Requirements for Waterpower Development Environmental Assessment Processes in Ontario**

1. Canadian Environmental Assessment Act Requirements (CEA Agency)
2. Fisheries Act (Fisheries and Oceans Canada)
3. Navigable Water Protection Act (Transport Canada)
4. Dominion Waterpower Act (Indian and Northern Affairs Canada)



## Potential Effects Identification Matrix

Criteria	Potential Level of Effect						Comments, Rationale
	-H	-L	Nil	Unk	+L	+H	
<b>General Natural Environment Considerations</b>							
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)							
<b>Aquatic and Riparian Ecosystem Considerations</b>							
Shoreline dependant species							
Wetland dependant species							
Fish Habitat							
Fish Migration							
Fisheries							
Erosion and Sedimentation							
Fish Injury or Mortality (impingement and entrainment)							
Water levels, flows and movement (surface or groundwater)							
Drainage, Flooding and Drought patterns							
Water Temperature							
Other (specify)							
<b>Aboriginal Community Considerations</b>							
First Nation reserves or other Aboriginal communities							
Spiritual, ceremonial, cultural, archaeological, or burial sites							
Traditional land or resources used for harvesting activities							
Employment							
Lands subject to land claims							
Economic Development							
Other (specify)							
<b>Land and Resource Use Considerations</b>							
Access to inaccessible areas (land or water)							
Navigation							
Riparian rights or privileges							
Recreational use – (land or water)							
Angling and hunting opportunities							
Trapping activities							
Baitfish harvesting activities							
Views or aesthetics							
An existing land or resource management plan							
An existing water management plan							
Protected areas							
Other (specify)							
<b>Cultural Heritage Resources Considerations</b>							
Archaeological sites							
Buildings or structures							
Cultural heritage landscapes							
Other (specify)							
<b>Social and Economic Considerations</b>							
The Location of people, businesses, institutions, or public facilities							
Community character, enjoyment of property, or local amenities							
Employment							
Public health and/or safety							
Local, regional, or provincial economies							
Tourism values							
Water supply							
Aesthetic image of the surrounding area							
Other (specify)							
<b>Energy/Electricity Considerations</b>							
Reliability (e.g. voltage support)							
Security (e.g. Black Start)							
Electricity flow patterns							
Other (specify)							



**IBI Group**  
200-9133 Leslie Street  
Richmond Hill ON L4B 4N1 Canada  
tel 905 763 2322  
fax 905 763 9983

# Minutes

**Date** July 30, 2009

**Project No** 11995

**Steno** cm

**Subject** Lizard Creek Small Hydro Project  
Environmental Assessment and Approvals  
Start-up Meeting re A.O.R. Status DSR-01-05

**Location** MNR's Blind River Office

**Date** July 28, 2009

**Present** Julie Johnston, MNR - Sault Ste. Marie, Renewable Energy Technician (JJ)  
Erin Nixon, MNR - Sault Ste. Marie, District Planner (EN)  
Ernie Gatien, MNR - Blind River, Senior Lands and Waters Technical Specialist (EG)  
Jim Trottier, MNR - Blind River, Area Biologist (JT)  
Chris Ellingwood, Niblett Environmental, Natural Heritage Conservation (CE)  
Rick Roberts, Lizard Creek Power Inc., Proponent (RR)  
Paul Young, IBI Group, Project Director (PY)  
Patrick Garel, IBI Group, Project Manager – EA (PG)

**Distribution** All Present  
Sandra Dosser, MNR  
Nathan Hanes, MNR  
Kim Mihell, MNR  
Sheila Walsh, MNR  
Robert Hunt, ENE  
Carrie Hutchison, ENE  
Jennifer Hallett, DFO  
Kelly Withers, DFO

**Prepared by:** Patrick Garel

<b>Item Discussed</b>	<b>Action By</b>
<b>Item Discussed</b>	<b>Action By</b>
<p>1 Introduction</p> <ul style="list-style-type: none"> <li>- Introductions made, and roles of groups were discussed.</li> </ul> <p>2 EA process and Possible Transition to Renewable Energy Approval</p> <ul style="list-style-type: none"> <li>- IBI outlined process and requirements for Class EA for Waterpower Projects (see handout)</li> <li>- MNR advised that cumulative effects now a requirement in their review based on MNR's Statement of Environmental Values</li> <li>- The Green Energy Act and the impending new Renewable Energy Approvals/Complete Submission Policy was discussed. It is assumed that once this process is in place there will be a transition from the Class EA. For general information IBI outlined the Ontario Waterpower Association's recent comments on the new approvals as posted on the EBR.</li> </ul>	
<p><b>3. Overview of Project Concept</b></p> <p><b>3. a) Project Description</b></p> <p>RR and PY made a brief presentation of the project, summarized as follows:</p> <ul style="list-style-type: none"> <li>- Small Hydroelectric power plant which will produce 4.5 gWH of energy annually</li> <li>- The project would consist of a flow conveyance channel, water control structure, penstock, powerhouse (or power plant), and a new transmission line all located along Lizard Creek, a tributary to Serpent River, located in the North Shore Township, 20 km southeast of the City of Elliot Lake, Ontario</li> <li>- Project will result in flooding of 25 to 30 hectares of land to create head pond</li> <li>- Power plant would be located approximately 300m upstream of the Lizard Creek/Serpent River junction point</li> <li>- The channel would divert water from Lizard Creek at 2.66 cms into the intake structure, regulating flows into the 300m penstock, with a 1.0MW horizontal Francis double runner turbine connected at the end in the powerhouse</li> <li>- A rapids that divides Lizard Lake into two sections would be removed to raise water levels in lower section. A control structure and earth berm would be constructed along Lizard Creek. Project would use Lizard Lake as a headpond which would extend into Lizard Creek upstream of the control structure and berm, creating a new flooded area.</li> <li>- new transmission line (approximately 1 km long) would connect</li> </ul>	

Item Discussed	Action By
<p>to nearby existing Hydro One transmission line</p> <ul style="list-style-type: none"> <li>- access now limited to Hydro One road at south end of site               <ul style="list-style-type: none"> <li>o will construct 2 new access roads (A2 and A3)</li> <li>o A3 will run along the conveyance channel</li> <li>o A4 existing – may not be road, just an ATV trail (refer to handout for sketch of site)</li> </ul> </li> <li>- The plant will be run-of-river but will utilize daily peaking with no more than 48 hrs. pondage as per “Ecologo” requirements.</li> </ul>	
<ul style="list-style-type: none"> <li>- Add control point on Lizard Lake where rapid will be removed onto future drawings (requested by EG – MNR)</li> </ul>	<b>IBI</b>
<ul style="list-style-type: none"> <li>- Plant bypass flow is proposed to be 0.07 cms and will be further analysed by CE, Niblett,. MNR requested that a review of their Q<sub>80</sub> ideal flow be undertaken.</li> </ul>	<b>CE</b>
<ul style="list-style-type: none"> <li>- There would be no effect on hydro plant (operated by First Nations) downstream on the Serpent River, as the Lizard Creek Plant will be run-of-river, with daily peaking only and relative contribution of the Lizard creek flows to Serpent flows is very small.</li> </ul>	
<ul style="list-style-type: none"> <li>- MNR advised that the proponent should expect comments about effect on Grassy Lake (noted by EN). In response IBI will:               <ul style="list-style-type: none"> <li>o define zone of influence well</li> <li>o note negligible impact on Grassy Lake in EA</li> </ul> </li> <li>- MNR recommended that proponent should include details of proposed infrastructure and include Zone of influence in NOC. This could be done by indicating a rectangle around zone. The map could be “zoomed in” to show more detail.</li> </ul>	<b>IBI</b>  <b>PG</b>
<p><b>3. b) Ongoing Environmental Work</b></p> <p>CE described work previously undertaken by others, work recently completed by Niblett and future work to be undertaken. Work to date includes:</p> <ul style="list-style-type: none"> <li>- gill nets – collected walleye, suckers</li> <li>- minnow ponds examined</li> <li>- beaver pond examined – west end of Lizard Lake</li> <li>- Niblett to return in Sept. to examine if Chinooks make it up past waterfall at foot of Lizard Creek</li> <li>- did transects through proposed flooding areas, looking for:               <ul style="list-style-type: none"> <li>o existing species</li> <li>o effects of losing beaver activity</li> </ul> </li> <li>- considering clearing areas of trees to predict effects of flooding</li> <li>- manual search for species               <ul style="list-style-type: none"> <li>o Species found only include snapping turtle and water snake. No sightings of wood turtle or Blanding's turtle.</li> <li>o some evidence of moose using area (not intense)</li> </ul> </li> </ul>	

<b>Item Discussed</b>	<b>Action By</b>
<ul style="list-style-type: none"> <li>- Birds found in the area               <ul style="list-style-type: none"> <li>o Canada Warbler</li> <li>o no bald eagle nests</li> <li>o Found one nest of broad winged hawk                   <ul style="list-style-type: none"> <li>o coordinates taken by Niblett</li> <li>o pictures taken by Niblett</li> <li>o Niblett to provide GIS coordinates to MNR</li> </ul> </li> </ul> </li> <li>- MNR requested that the proponent:               <ul style="list-style-type: none"> <li>- send copy of 2008 ESR to MNR (prepared by Ray Lipinski)</li> <li>- send GIS coordinates to MNR of any important sightings on an ongoing basis</li> <li>- check if any records of salmon moving upstream (will check with Ray Lipinski) cc to EN</li> </ul> </li> </ul>	<p style="text-align: center;"><b>CE</b>  <b>IBI this week</b>  <b>CE</b>  <b>JT (approx. 2 weeks)</b></p>
<p><b>4. Roles and Responsibilities of Each Agency</b></p> <ul style="list-style-type: none"> <li>- Niblett to contact DFO to discuss DFO concerns, requirements and processes for EA. Contact:               <ul style="list-style-type: none"> <li>o Jennifer Hallett (tel no. 705-941-2012)</li> </ul> </li> <li>- IBI to contact MOE to discuss MOE concerns, requirements and processes for EA. Contact:               <ul style="list-style-type: none"> <li>o Carrie Hutchinson (tel no. 807-475-1720)</li> <li>o Ed Snucins</li> </ul> </li> <li>- A Phase 1 archaeological study will be required. IBI will consult the following:               <ul style="list-style-type: none"> <li>o Ministry of Culture</li> <li>o First Nations</li> <li>o MNR</li> </ul> </li> <li>- The proponent will stay in close contact with Sheila Walsh (MNR) re aboriginal consultation               <ul style="list-style-type: none"> <li>o all consultation needs to be documented for EA</li> <li>o may not be allowed to include MNR consultation with First Nations in EA</li> <li>o need to discuss further with Sheila how to go about contacting First Nations and how to document appropriately – she returns from holidays in 2 weeks</li> </ul> </li> <li>- provide known uses of the area in the EA               <ul style="list-style-type: none"> <li>o no formal report for area</li> <li>o IBI to check site description first and discuss with EN afterwards to determine if information is adequate</li> </ul> </li> <li>- The project is located in Enhanced Management Area (EMA)               <ul style="list-style-type: none"> <li>o site restrictions are included in site description package prepared by MNR</li> <li>o IBI to check MNR website for list of site restrictions, etc.                   <ul style="list-style-type: none"> <li>▪ EN will email link</li> </ul> </li> </ul> </li> </ul>	<p style="text-align: center;"><b>PG</b></p> <p style="text-align: center;"><b>IBI</b></p> <p style="text-align: center;"><b>IBI</b></p> <p style="text-align: center;"><b>IBI/EN</b></p> <p style="text-align: center;"><b>EN this week/</b>  <b>IBI</b></p>

Item Discussed	Action By
<p><b>5. Approach to Data Collection, Public Consultation, Aboriginal Interests and Relative Roles and Responsibilities</b></p> <ul style="list-style-type: none"> <li>- Table of Potential Effects Identification Matrix from Waterpower Class EA was reviewed – see handout</li> <li>- Data Collection is ongoing           <ul style="list-style-type: none"> <li>o Niblett's work as discussed above</li> <li>o species at risk               <ul style="list-style-type: none"> <li>▪ Milksnakes - no protocol for surveying, manual search                   <ul style="list-style-type: none"> <li>• ranking – special concern</li> <li>• threats – persecution, road</li> </ul> </li> </ul> </li> </ul> </li> <li>- Developing a Monitoring Plan           <ul style="list-style-type: none"> <li>o Baseline and post construction – EN to look into</li> <li>o Niblett will need a few months to prepare a first draft</li> <li>o Late August CE to touch base with MNR and DFO on monitoring plan</li> </ul> </li> <li>- Niblett will talk with EG prior to carrying out further fieldwork about what work is appropriate           <ul style="list-style-type: none"> <li>o There are concerns with facility locations for permanent work</li> </ul> </li> </ul> <p>Public Consultation and Aboriginal Engagement</p> <ul style="list-style-type: none"> <li>- EN, JT, EG to review NOC</li> <li>- Contacts/mailling list – IBI to contact Dick Hagman - MNR to obtain suggested mailout list (EG requested all correspondence be copied to him as well)</li> <li>- IBI to send out direct mailings prior to advertising</li> <li>- Consultation and Engagement Plan to be developed next week           <ul style="list-style-type: none"> <li>o Send to EN for review – she will distribute</li> <li>o Send to MOE</li> </ul> </li> </ul>	<p><b>EN – 2 wks. JT</b></p> <p><b>CE late August</b></p> <p><b>RR/IBI</b></p> <p><b>EN this week</b></p> <p><b>IBI</b></p> <p><b>PG next week</b></p>
<p><b>6. Expectations for Further Communication</b></p> <p>IBI</p> <ul style="list-style-type: none"> <li>- add time tags to EA schedule for IBI work</li> <li>- develop consultation and engagement plan next week</li> <li>- advise aboriginal community before public meeting           <ul style="list-style-type: none"> <li>o send letter with NOC to First Nations</li> </ul> </li> <li>- send updates to First Nations if interested           <ul style="list-style-type: none"> <li>o copy to RR</li> </ul> </li> <li>- schedule site visit in Sept. around time of public meeting</li> <li>- create website for project information           <ul style="list-style-type: none"> <li>o IBI will look into cost with IBI IT department</li> <li>o IBI will set up before releasing and include in NOC if possible</li> </ul> </li> <li>- IBI to create FTP for all parties involved – IBI IT department</li> <li>- send minutes to Agencies not in attendance           <ul style="list-style-type: none"> <li>o use list of invitees</li> <li>o set deadline for comments</li> </ul> </li> </ul>	<p><b>IBI this week</b></p> <p><b>IBI next week</b></p> <p><b>IBI</b></p> <p><b>PG</b></p> <p><b>IBI</b></p> <p><b>PG this/next week</b></p> <p><b>PG next week</b></p> <p><b>PG next week</b></p>

Item Discussed	Action By
<p><b>7. Other Potential Permitting and Approval Requirements</b></p> <p>Navigable Waters Protection Act (Transport Canada)</p> <ul style="list-style-type: none"> <li>○ likely require safety boom around intake</li> </ul> <p>Fisheries Act (Fisheries and Oceans Canada)</p> <ul style="list-style-type: none"> <li>○ possible HADD; therefore will CEAA most likely will be triggered</li> </ul> <p>MNR approvals</p> <ul style="list-style-type: none"> <li>○ LRIA (Lakes and Rivers Improvement Act) – discuss with EG           <ul style="list-style-type: none"> <li>○ Includes:               <ul style="list-style-type: none"> <li>▪ locational approval</li> <li>▪ plans and specs approval</li> <li>▪ amendment to existing managed waterways</li> </ul> </li> </ul> </li> <li>○ PLA (Public Lands Act) – discuss with EG           <ul style="list-style-type: none"> <li>○ Includes:               <ul style="list-style-type: none"> <li>▪ Permission for Surveying</li> <li>▪ land use permitting (start during construction)</li> <li>▪ sketch of what will need to be occupied                   <ul style="list-style-type: none"> <li>▪ construction</li> <li>▪ roads – access</li> </ul> </li> <li>▪ Work Permits Required</li> <li>▪ Waterpower Lease Agreement</li> <li>▪ Easement for transmission line and road</li> </ul> </li> </ul> </li> <li>○ ESA (Endangered Species Act) – discuss with JT           <ul style="list-style-type: none"> <li>○ may need permit or authorization under act</li> </ul> </li> <li>○ Other possible EA processes include:           <ul style="list-style-type: none"> <li>○ Screening under MNR Class EA for Resources Stewardship (Transmission line)</li> </ul> </li> </ul>	

# Attachment B

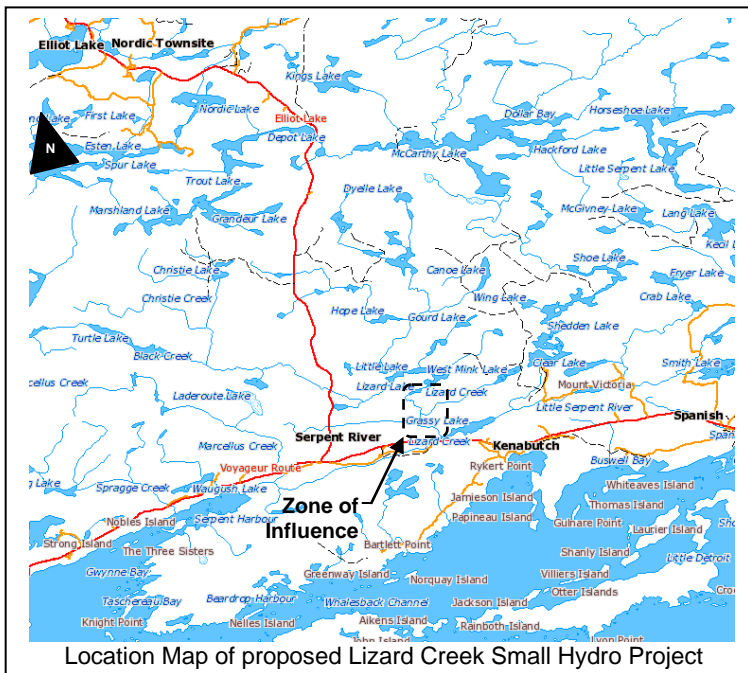
## Notice of Commencement

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## Notice of Commencement under the Class EA for Waterpower Projects

### Lizard Creek Small Hydro Project



Lizard Creek Power Inc. is planning to undertake an environmental evaluation and assessment for the proposed Lizard Creek Small Hydro Project, located in the Township of North Shore, 20km southeast of the City of Elliot Lake, Ontario. The zone of influence for the proposed project runs along Lizard Creek, from the southern end of Lizard Lake south to where Lizard Creek enters Serpent River, downstream of Grassy Lake, as presented on the map (left). If approved this waterpower project would consist of a flow conveyance channel, water control structure, penstock, powerhouse, limited improvement to access roads and a new 1 km transmission line all located along Lizard Creek, producing on average 4.5 gWh of renewable energy annually. The project is subject to the provisions of the Ontario Waterpower Association "Class Environmental Assessment for Waterpower Projects" (2008). Pursuant to the Class EA, this project is considered to be on a managed waterway.

The Class EA process requires Lizard Creek Power to undertake an evaluation of the project to evaluate its potential effects on the environment (positive and negative) and prepare a detailed Environmental Report. The project is also expected to require review under various permits and approvals, including, but not limited to, the *Environmental Protection Act*, the *Canadian Environmental Assessment Act*, the *Fisheries Act*, the *Public Lands Act*, the *Navigable Waters Protection Act*, the *Species at Risk Act*, the *Lakes and Rivers Improvement Act*, the *Ontario Water Resource Act*, and the *Endangered Species Act*. This notice and the public consultation process for the project under the Class EA is intended to coordinate and meet the notification requirements relevant to the planning stage of the project under these statutes.

The Class EA process is anticipated to be ongoing over the course of 1 year, following which construction is anticipated to commence and be ongoing for 4 months, provided approval.

The evaluation and environmental report will assess the potential effects of the proposed waterpower project on the environment during its construction and operation. Lizard Creek Power has identified certain environmental components that are expected to be the focus of the proposed project. Public consultation and Aboriginal engagement will be an integral component of this process. IBI Group is preparing the Environmental Screening on behalf of Lizard Creek Power Inc. You are invited to provide comments on the issues to be addressed, and/or to ask to be placed on the project's mailing list. For information on the project proposal, to raise any issues or concerns, or to be placed on the mailing list, contact:

Mr. Patrick Garel, E.I.T.  
IBI Group  
Suite 200 - 9133 Leslie Street  
Richmond Hill ON L4B 4N1 Canada  
tel 905 763 2322 ext 2234  
fax 905 763 9983  
[pgarel@ibigroup.com](mailto:pgarel@ibigroup.com)

Mr. Rick Roberts  
Lizard Creek Power Inc.  
10 Kilborn Way  
Elliot Lake ON P5A 2T1  
tel 705 848 0208  
fax 705 848 9022  
[cantechcon@bellnet.ca](mailto:cantechcon@bellnet.ca)

A Public Information Centre will be held at the Township of North Shore offices located at:

Township of the Northshore  
1385 Hwy. 17  
P.O. Box 108  
Algoma Mills, Ontario  
P0R 1A0

The date and time of this meeting have not yet been set. These details will be provided once determined.

Under the *Freedom of Information and Protection of Privacy Act* and the *Environmental Assessment Act*, unless otherwise stated in the submission, any personal information such as name, address, telephone number and property location included in a submission will become part of the public record files for this matter and will be released, if requested, to any person.

# Attachment C

## Letters Sent to First Nations

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Cantech Construction o/b  
Lizard Creek Power Inc.  
10 Kilborn Way  
Elliot Lake, ON P5A 2T1  
Tel: 705-848-0208  
Fax: 705-848-9022  
email: [cantechcon@bellnet.ca](mailto:cantechcon@bellnet.ca)

August 14, 2009

Serpent River First Nation  
Chief Isadore Day  
Box 14  
48 Village Road  
Cutler, ON  
POP 1B0

Chief Isadore Day:

### **LIZARD CREEK SMALL HYDRO PROJECT - NOTICE OF COMMENCEMENT**

Please find enclosed the Notice of Commencement for the environmental evaluation and assessment for the proposed Lizard Creek Small Hydro Project, to be located in the Township of North Shore.

We invite you to participate in the process and offer your comments. Lizard Creek Power Inc. would be pleased to meet with the Serpent River First Nation to provide updates on this Project and/or discuss Aboriginal values and interests. A web site has been created by Lizard Creek Power Inc. and information will be updated regularly for your convenience, please visit at [www.lizardcreekpower.com](http://www.lizardcreekpower.com)

If you require any further information please do not hesitate to contact at:

Mr. Rick Roberts  
Lizard Creek Power Inc.  
10 Kilborn Way  
Elliot Lake ON P5A 2T1  
tel 705 848 0208  
fax 705 848 9022  
[cantechcon@bellnet.ca](mailto:cantechcon@bellnet.ca)

or

Mr. Patrick Garel, E.I.T.  
IBI Group  
Suite 200-9133 Leslie Street  
Richmond Hill ON L4B 4N1 Canada  
tel 905 763 2322 ext 2234  
fax 905 763 9983  
[pgarel@ibigroup.com](mailto:pgarel@ibigroup.com)

Yours truly,

**Cantech Construction**

Rick Roberts  
President

Canteck Construction c/o  
Lizard Creek Power Inc.  
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Elliot Lake, ON P5A 2T1  
Tel: 705-848-0208  
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10 Kilbom Way  
Elliot Lake ON P5A 2T1  
tel 705 848 0208  
fax 705 848 9022  
[canteckcon@bellnet.ca](mailto:canteckcon@bellnet.ca)

or

Mr. Patrick Gareil, E.I.T.  
IBI Group  
Suite 200-9133 Leslie Street  
Richmond Hill ON L4B 4N1 Canada  
tel 905 763 2122 ext 2214  
fax 905 763 9983  
[pgareil@ibigroup.com](mailto:pgareil@ibigroup.com)

Yours truly,



Canteck Construction

Rick Roberts  
President

Cantech Construction o/b  
Lizard Creek Power Inc.  
10 Kilborn Way  
Elliot Lake, ON P5A 2T1  
Tel: 705-848-0208  
Fax: 705-848-9022  
email: [cantechcon@bellnet.ca](mailto:cantechcon@bellnet.ca)

August 14, 2009

Sagamok Anishnawbek  
Chief Paul Eshkawkogan  
P.O. Box 610  
Massey, ON P0P 1P0

Chief Paul Eshkawkogan:

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If you require any further information please do not hesitate to contact at:

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Yours truly,

**Cantech Construction**

Rick Roberts  
President

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August 14, 2009

Sagamok Anishnawbek  
Chief Paul Esbharwogan  
P.O. Box 610  
Mansey, ON P0P 1P0

Chief Paul Esbharwogan:

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[pgardl@ibigroup.com](mailto:pgardl@ibigroup.com)

Yours truly,

  
Cantech Construction

Rick Roberts  
President

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Tel: 705-848-0208  
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email: [cantechcon@bellnet.ca](mailto:cantechcon@bellnet.ca)

August 14, 2009

Mississauga First Nation  
Chief Douglas Daybutch  
P.O. Box 1299  
Blind River, ON P0R 1B0

Chief Douglas Daybutch:

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If you require any further information please do not hesitate to contact at:

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**Cantech Construction**

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President

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August 14, 2009

Mississauga First Nation  
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Blind River, ON P0R 1B0

Chief Douglas Daybitch:

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Richmond Hill ON L4B 4N1 Canada  
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fax 905 763 9983  
[pgarel@ehigroup.com](mailto:pgarel@ehigroup.com)

Yours truly,

  
Cantech Construction

Rick Roberts  
President



## **PROJECT DESCRIPTION**

Main document changes and comments

Page 1: Deleted Patrick Garel 10/27/2009 9:32:00 AM

(Rev. 4)

Page 1: Inserted Patrick Garel 10/27/2009 9:33:00 AM

the Feed in Tariff (F.I.T.) Contract

Page 1: Deleted Patrick Garel 10/27/2009 9:33:00 AM

a Standard Offer Contract

Page 4: Deleted Patrick Garel 10/27/2009 9:34:00 AM

(Rev. 2)

Page 6: Inserted Patrick Garel 10/27/2009 10:00:00 AM

233.00

Page 6: Deleted Patrick Garel 10/27/2009 10:00:00 AM

232.80

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Currently the actual normal operating levels of these Lakes has been established to have a range of +/- 800 mm from a high water level of +/- 233.60 to a low water level of +/- 232.800. This range has been verified through on Site monitoring over a 2 year period, correlated to a bench mark set by an OLS.

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This actual normal operating level of these lakes has yet to be confirmed by means of a land survey. A survey was conducted to verify the available head at the project site, but not to verify water levels of Lizard and Lillie Lakes. Information used for lake levels has been taken from Ontario base maps. It is possible that the water levels indicated in these maps is not exact and may not be

accurate to 0.01 m, as described in the operating ranges. The actual operating level may be adjusted; dependent on result of the survey, but the expectation is that the maximum operating range would be within 0.6 m below the measured normal water level. If the operating range is to be adjusted based on results of a survey, the maximum operating water level would be below the surveyed high water level of Lizard and Lillie Lakes.

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Lower Lizard Lake and upper

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Upper

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above the control structure

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approximately 0.3 to 0.6 m

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10

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±35

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1,028,840

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700,000

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km <sup>2</sup>		
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Standard Offer		

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F.I.T.

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## **1.0 Project Site Information**

### **1.1 Description of Proposed Project / Purpose of Project**

The Lizard Creek Small Hydro Generating Station will be rated at 1 MW output, at a design flow of 2.66 cms, with a head of 46.3 m. The facility will be operated as an intermediate facility, with a limited amount of peaking operation. The facility will utilize Lizard Lake as the head pond at elevation 233.40 m Canadian Geodetic Datum (CGD), with the tailrace discharging into Lizard Creek at elevation 187.10 mCGD. The maximum headpond fluctuation will be less than one metre. Water will be diverted from Lizard Creek near the outflow of Lizard Lake, to form a new flooded area and flow conveyance channel, both at 233.40 mCGD; the same level as Lizard Lake. A dam will be constructed at the outflow of Head Pond Flood Area W-1, as indicated on Map PD-3 in a configuration that will allow flows in excess of turbine capacity (2.66 cms) to pass into the natural stream bed, and to allow for provision of a continuous minimum ecological flow, through an embedded orifice type structure. At the outflow of the conveyance channel an intake structure will supply water to the penstock (approximately 300 m in length, 1.1 m diameter), which will convey water to the powerhouse.

A horizontal Francis double runner turbine provided by Canadian Hydro Components Ltd. will operate a 1 MW synchronous generator, at the design flow. An optimization study will be conducted with the turbine supplier and the engineering consultants to confirm the optimal turbine design specifications for this site. It is possible that the allocation of capacity of the turbines will be modified in the final design to provide the optimal configuration for this site. The optimal configuration would provide the greatest generation efficiency for the site-specific hydrology and other design considerations, maintaining the total design flow and capacity.

A substation adjacent to the powerhouse will step up voltage to 12 500 volts. Generated electricity will be provided to existing Hydro One transmission lines via a new 1 km transmission line.

Generated electricity will be sold through the Feed in Tariff (F.I.T.) Contract with the Ontario Power Authority.

### **1.2 Location of Site**

#### **1.2.1 Property Boundaries**

Property boundaries are identified in Map PD3. The southern portion of the project area falls within General Use Area G1890, as identified in the MNR Crown Land Use Atlas. The powerhouse, penstock,

some roads and the transmission corridor will be within this area. The remaining project areas to the north are crown land. Access to the project site is through property of the Township of the North Shore. Access also requires use of an existing road along a Hydro One transmission corridor/easement.

All property boundaries related to the Lizard Creek Small Hydro Project will be surveyed for purposes of the Water Power Lease Agreement, or other required tenure documents such as easements or Land Use Permits.

### **1.2.2 Township, Lot and Concession**

The project is within the District of Algoma, Lewis Township (within the Township of North Shore), Lot 7, Concession 3,

### **1.2.3 Geographic Coordinates of Project**

#### **1.2.3.1 GPS UTM Coordinates**

GPS coordinates of the powerhouse location are:

UTM Zone 17T, Easting: 3838928 Northing: 5118961 NAD83

#### **1.2.3.2 Geographic Coordinates of Project**

Geographic coordinates of the powerhouse location are:

N 46° 12' 51.6" W 82° 30' 17.4" NAD83

#### **1.2.3.3 Drainage Area**

The drainage area of Lizard Creek is 143.87 km<sup>2</sup> (OFAT).

#### **1.2.3.4 Names of Affected bodies of Water**

The affected bodies of water are Lizard Lake, and Lizard Creek. The receiving watercourse is the Serpent River, approximately 100 m downstream of the tailrace. Serpent River is located downstream of Grassy Lake.

## **2.0 Technical and Operational Aspects of the Site Development**

### **2.1 Installed Capacity**

The installed capacity of the Lizard Creek Generating Station will be 1 MW. This will be achieved through the use of a 1 MW Francis turbine, with a design flow of 2.66 cms.

### **2.2 Annual Energy Output**

The maximum annual energy output of the Lizard Creek Generating Station will be approximately 4.5 GWh.

### **2.3 Interconnect Requirements**

A substation located adjacent to the powerhouse will house a transformer, switchgear and related electrical equipment. Generated electricity will be 4160 V, 3 phase, and will be transformed to 12 500 V to match the Hydro One feeder.

### **2.4 Access Roads**

Road access for the project involves use of existing roads (A-1) and new roads that will be constructed (A-2, A-3 and A-4). Road locations are indicated on Map PD3, and a description of each road is provided below. All roadwork will be done to applicable standards following necessary Work Permit or other approvals. Road work will be done with an intent to minimize site disturbance to the extent possible, and follow all prescribed mitigative measures identified in the Work Permit.

#### **2.4.1 Access Road section A-1**

The main access to the project site will be through the Township of the North Shore Landfill Site, which has a gated access at Highway 17. This road is identified as A-1 on Map PD3, and is approximately 100 m in length. The Township of North Shore has already provided approval for use of this access, with some conditions. Very minor upgrading of this road to the Hydro One transmission line access road will be required.

The second segment of the road designated as A -1 bypasses the landfill site and provides access to a Hydro One transmission corridor, approximately 0.5 km from the landfill site. The transmission corridor also has a road along its length, which leads to the project site and continues to the east. This



road segment, approximately 0.9 km in length will require only very minor surface upgrading. This road segment along the transmission corridor is a multi-use road, and is part of the Ontario Federation of Snowmobile Clubs trail network. A significant upgrade will be required for the water crossing structure (bridge) at Lizard Creek (WC-1), as described below in Section 2.5.2. Winter access and use of this road will be discussed with the local snowmobile clubs to facilitate mutual use and access.

The penstock will cross under this road at one location (PC-1 ), as described in Section 2.7.4.

#### **2.4.2 Access Road Section A-2**

A new access road identified as A-2 on Map PD3 will be approximately 500 m in length. This road will begin at road A-1 (snowmobile trail/transmission corridor access road), east of the existing snowmobile bridge (WC-1), and run south to the powerhouse. This road will cross the penstock at one location (PC-2) as described in Section 2.7.4.

#### **2.4.3 Access Road Sections A-3 and A-4**

This new section of road will originate at road A-1 on the east side of the existing snowmobile bridge (WC-1) and will follow an existing but overgrown forest access road running to the north, for a distance of about 200 m. At this point a side-road will split from this road and run to the east approximately 100 m, to provide access to the Intake Structure S-2.

The road will resume from the existing forest access road to the north, approximately 100 m to the west of the flow conveyance channel, to Control Structure S-1. From S-1 a new section of road will lead to the north-east, crossing the flow conveyance channel at WC-2. This water crossing will be discussed in greater detail in Section 2.5.4. The road will then turn to the north-west to connect with the existing forest access road on the south side of Lizard Lake. This road segment is identified on Map PD3 as A-4.

#### **2.4.4 Existing Forrest Access Road East of Water Crossing WC-3**

The forest access road east of water crossing WC-3 (Lizard Lake bridge) will not be required or used for the purposes of this project. The structure WC-3 will be removed, as described below in Section 2.5.3.

## **2.5 Water Crossings**

### **2.5.1 General**

For the purposes of the Lizard Creek project, it will be necessary to modify two water crossings, and construct one new one. Work Permit approval will be obtained for all water crossings. At the Work Permit stage complete detailed engineering plans and specifications will be provided for review and approval. A brief non-technical description of each water crossing is provided below.

### **2.5.2 Water Crossing WC-1**

There is an existing bridge crossing Lizard Creek at the location designated as WC-1 on Map PD3. It is anticipated that this snowmobile trail bridge will be replaced for the purposes of access for this project. This bridge was installed by the Ontario Federation of Snowmobile Clubs local chapter, but is considered to be a multi-use structure. Discussions with the snowmobile clubs and other stakeholders will be held, but it is anticipated that replacement or upgrading of this bridge will be welcomed. The decking and approaches for this structure are deteriorating.

A memorandum of understanding will also be drafted with MNR for this structure if required.

### **2.5.3 Water Crossing WC-2**

A new water crossing will be required to cross the flow conveyance channel. This structure will be constructed in the dry, before flooding, and Work Permit Approval will be obtained. Plans for this water crossing will be provided with the Work Permit Application. The exact location of this water crossing has not yet been determined.

### **2.5.4 Water Crossing WC-3**

An existing rock crib timber bridge at location identified as WC-3 on Map PD3 has been identified by MNR for removal. This bridge has been posted as unsafe, and has not yet been removed mainly because another bridge used to access this site was removed first. Lizard Creek Power Inc. will remove this bridge, with the prior approval of MNR. Lizard Creek Power Inc. will also remove a derelict/abandoned vehicle situated on the north side of the bridge before bridge removal. This vehicle was posted by MNR for removal several years ago.

## 2.6 Flooding

### 2.6.1 Lower Lizard Lake and upper Lizard Creek W-1

Lizard Lake and Lillie Lake will be maintained at the existing operating elevation of 233.40 mCGD, with a normal operating range of approximately 233.00 to 233.60 mCGD. The upper operating level of 233.60 mCGD is expected to be within the range of normal seasonal level variation for the sections of upper Lizard Creek and lower Lizard Lake that will be flooded. This area has been designated as W-1 on Map PD3.

Currently the actual normal operating levels of these Lakes has been established to have a range of +/- 800 mm from a high water level of +/- 233.60 to a low water level of +/- 232.800. This range has been verified through on Site monitoring over a 2 year period, correlated to a bench mark set by an OLS.

Upper Lizard Creek above the control structure will be raised to an operating elevation of 233.40 mCGD, with a total flooded area of  $\pm 35.0$  ha. Part of this flooded area is already seasonally inundated, as evidenced by field observations. Additionally, levels of Lizard Lake and upper Lizard Creek are also frequently affected to varying extents by beaver dams at various locations. There is evidence of large beaver dams in this area that could have easily altered the water level by one meter or more for some reaches of this waterway.

The existing water crossing WC-3 will be removed. At the location of the bridge WC-3 there is a small chute, resulting in a drop in water level of approximately 1 m, making this the probable upstream extent of water level fluctuations. Upstream of this location water level fluctuations would be minimal, and would be within normal seasonal ranges. Reservoir volume available between 233.00 and 233.60 mCGD in upper Lizard Creek, Lizard and Lillie Lakes is estimated to be  $1,028,840 \text{ m}^3$ , based an area of  $1.715 \text{ km}^2$ .

Any flooded lands will be surveyed and authorized with an easement, or other form of tenure, as required.

### **2.6.2 Conveyance Channel W-2**

Construction of the conveyance channel will result in an additional new flooding of approximately 1 ha. Much of the channel will be contained by natural swales, minimizing surficial disturbance to the extent possible. Part of the water flowing out of Lizard Lake will be diverted by Control Structure S-1, into the conveyance channel. At the north end of this conveyance channel, adjacent to the south end of Control Structure S-1, an existing beaver meadow/pond will be flooded to bring the level up to an operating level of 233.40 mCGD. Water will flow out of this pondage area in a southerly direction through the Flow Conveyance Channel W-2. Existing natural swales will be utilized to minimize excavation requirements for construction of this channel. The banks of the channel will be stabilized with rip rap and shot-concrete where needed. The channel will typically utilize existing rock ground as one bank, with an engineered berm constructed on the other bank. Typical cross sections of the Conveyance Channel are provided in Drawing PD3.

### **2.6.3 Aquatic Habitat**

An evaluation of existing habitat will be conducted to identify any significant issues that may be caused by flooding in lower Lizard Lake and upper Lizard Creek. Lizard Creek Power Inc. will be pleased to work with MNR and Department of Fisheries and Oceans (DFO) to minimize the impact and maximize the benefit of flooded lands. Some strategies that can be considered are the creation of submerged brush piles, and strategically placing windfall trees to enhance the diversity and productivity of available aquatic habitat.

### **2.6.4 Clearing of Flooded Lands**

Clearing of flooded lands will be done to conventional standards as approved by MNR. All timber, slash and debris will be removed. Stumps will be a maximum height specified by MNR. Any merchantable timber will be removed in a manner approved by MNR, through a licensed operator. Clearing will be done to an elevation approved by MNR, expected to be approximately 234.40 mCGD. It is anticipated that only upper Lizard Creek and possibly part of lower Lizard Lake may be flooded, and only to a very small extent. The existing high water mark in these areas will be surveyed to determine the extent of any clearing required. MNR and DFO will be consulted to determine clearing requirements.

## **2.7 Water Control Structures**

### **2.7.1 General**

The design for the Lizard Creek project requires construction of two new water control structures. The first of these is designated as S-1, on Map PD3. The second structure is designated as S-2. A description of these structures is provided below. Lakes and Rivers Improvement Act and Work Permit approvals will be required for the water control structures and channel.

### **2.7.2 Water Control Structure S-1**

Water Control Structure S-1 is located at the outflow of lower Lizard Lake (Head Pond Flood Area W-1 on Map PD3). This structure has three primary functions:

1. This structure will be designed to provide ecological flows to the natural bed of Lizard Creek through an embedded orifice conduit. The sizing of this conduit will be sufficient to provide flows in the ranges anticipated, with a maximum capacity of approximately 1 cms. A valve will be installed to allow precise regulation and calibration of the required ecological flow. This orifice may also be used if necessary to draw down the headpond, for maintenance purposes if necessary. Any drawdown of this type would be subject to review and approval by MNR.
2. This structure will regulate the operating level of Lizard Lake at 233.00 to 233.60 mCGD. When the water level exceeds this value, surplus water will be spilled into the natural bed of Lizard Creek.
3. This structure will divert water towards the flow conveyance channel, which will also be maintained at a maximum level of 233.40 mCGD.

### **2.7.3 Water Control Structure S-2**

Water Control Structure S-2 controls flow from the Flow Conveyance Channel W-2 and directs water into the Penstock. This structure will be a reinforced concrete dam, approximately 15 m in length and 3 m in height. A steel knife gate will control flow into the penstock. A trash rack will prevent debris from entering the penstock. The design of the trash rack will conform to DFO standards for this type of structure. This structure will have no spillage or overflow capability, and is intended solely to direct and control flow into the penstock. The knife gate will have manual controls, although automated controls may be installed.

#### **2.7.4 Water Control Structure S-3**

Water Control Structure S-3 will be an earthen berm. It is anticipated that the design for this structure will be typical of the rock fill dam described in Drawing PD-3. Site investigation will be required to determine the specific design requirements and dimensions of this structure.

#### **2.7.5 Penstock S-4**

The penstock will be approximately 300 m in length with an inside diameter of 1100 mm, with a head of 46.3 m. It is anticipated that the penstock material will be manufactured steel (Drawing PD4) designed for the specific application.

The penstock will cross under Access Road A-1 at one location east of the snowmobile bridge WC-1. The penstock will also cross under the powerhouse access road A-2 at one location. At these crossings the penstock will be buried under the road bed, covered with sand and gravel.

#### **2.7.6 Conveyance Channel W-2**

The conveyance channel W-2 is discussed in Section 2.6.2.

### **2.8 Buildings / Structures**

#### **2.8.1 Powerhouse S-5**

The powerhouse identified as S-5 on Map PD3 will be a pre-engineered steel framed and roof building with an area of approximately 76.2 m<sup>2</sup> (820 ft<sup>2</sup>). The building will incorporate the thrustblock penstock transition, the Francis turbine and generator, controls and electrical infrastructure. The transformer and switchgear will be located on a mezzanine level. All applicable electrical codes and standards will be adhered to in the design and construction of this structure.

A parking area will be located adjacent to the powerhouse. A storage yard, enclosed with chain link fencing will also be located adjacent to the powerhouse. **2.8.2 Sub-Station SS-1**

A sub-station listed as SS-1 on Map PD3 will be located adjacent to the powerhouse. This structure will be approximately 35 m<sup>2</sup> (377 ft<sup>2</sup>) and will consist of a fenced in enclosure containing the high voltage transformer with appropriate containment. **2.8.3 Transmission Line TC-1**

Transmission corridor TC-1 will be approximately 1000 m in length. The transmission line will convey generated electricity to existing Hydro One 12 500 V lines located south-west of the generating station.

Construction of the transmission corridor and lines will be to all applicable standards and will be done by a specialized sub-contractor. Location of the transmission corridor is provided in Map PD3.

## **2.9 Operating Strategy**

The proposed operating strategy for the Lizard Creek Generating Station will be as an intermediate type operation. The terms of the F.I.T. Contract will provide an incentive for providing power at times of peak demand. However, the limited storage capacity and flows will require that the facility be operated much of the time as run-of-the-river. The proposed operating range for Lizard Lake and newly flooded areas will be 233.00mCGD to 233.60mCGD. subject to verification by land survey, and subject to approvals and the outcome of the environmental assessment and water management planning process.

A continuous minimum ecological flow will be provided by a fixed orifice at the Lizard Lake Control Structure S-1. This flow will be a value approved by MNR, following completion of the environmental assessment and water management planning steps.

## **2.10 Water Management Plan**

As part of the environmental assessment process, and as specified in the Lakes and Rivers Improvement Act, a water management plan will be required for this facility. There are presently two hydro-electric facilities on the Serpent River, for which a draft water management plan has been developed. Lizard Creek is a tributary to the Serpent River. Consequently, the water management plan for the Lizard Creek Generating Station would be done as a major amendment to the draft Serpent River Water Management Plan.

The water management plan for this facility, as part of the amendment to the draft Serpent River Water Management Plan will specify the operating ranges for Lizard Lake, taking into account environmental, social and economic factors. The operating plan will also specify mandatory flows to be provided for the natural bed of Lizard Creek. The operating ranges and flows specified by the water management plan will be enforceable under the Lakes and Rivers Improvement Act, following approval of the plan.

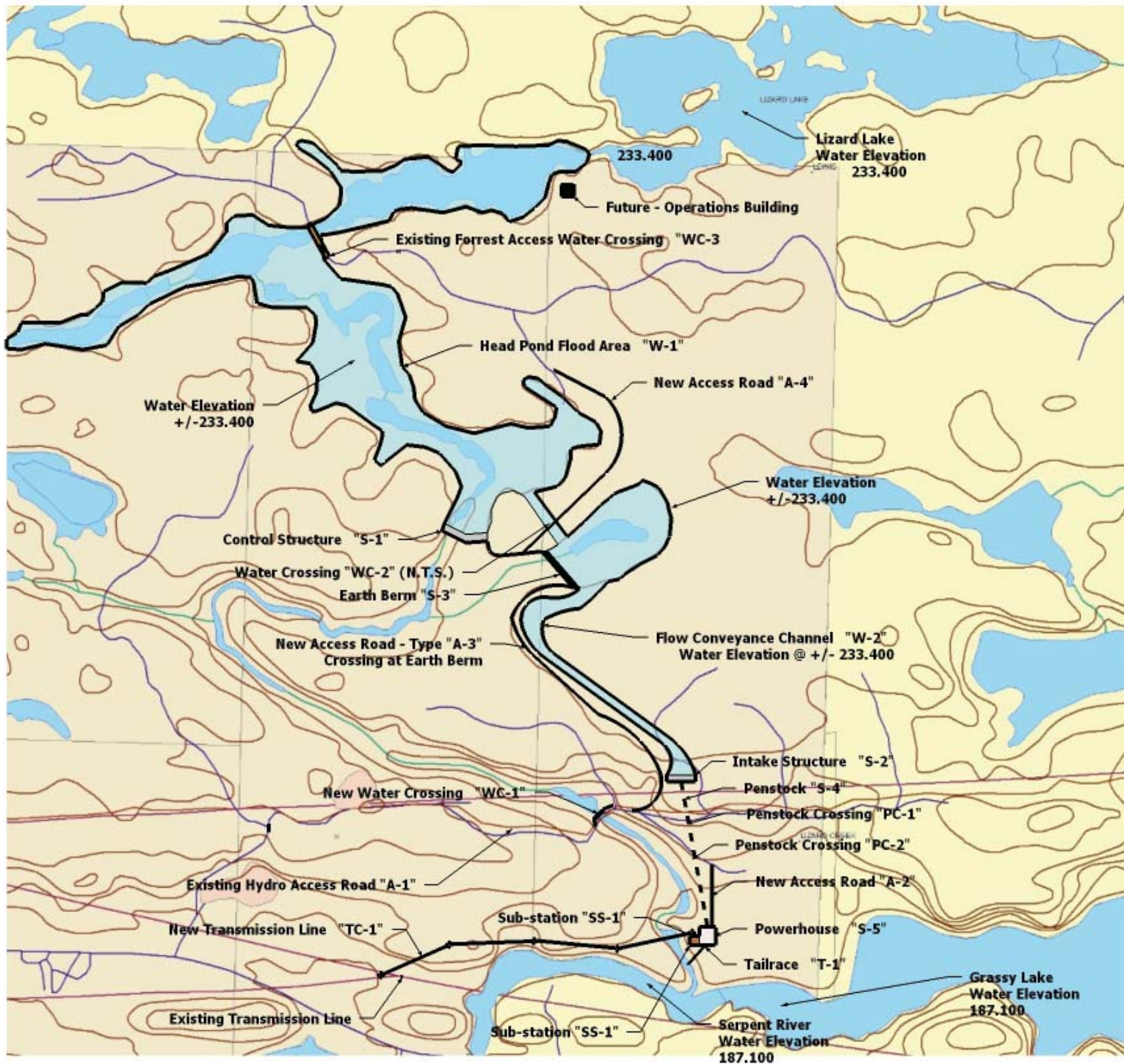
## **2.11 Interaction Between Sites**

The Serpent River has two existing hydroelectric generating facilities at this time.

A 6.5 MW facility owned by Brookfield Power is situated approximately 5 km upstream of the Lizard Creek inflow to the Serpent River. This facility is operated as run-of-the-river, and has a design flow of 16.5 cms with 1 cms continuous ecological flow. The Brookfield Power and proposed facilities would not be affected by each other in any significant way. It could be possible for the flows discharged from the Brookfield Power facility to affect the tailrace water level at the Lizard Creek Generating Station to a small extent, although this is unlikely. An increase in water level at the tailrace could marginally affect the head for the Lizard Creek facility.

A second hydroelectric facility approximately 0.8 km downstream of the Lizard Creek inflow to the Serpent River is owned by Serpent River First Nation. This 60 kW generating station is a siphon intake run-of-the-river operation. Flows available at this location would be affected by flow provided by Lizard Creek. However, the drainage area for the Serpent River First Nation Generating Station is approximately 10 times that of Lizard Creek (1347.4 vs. 143.9 km<sup>2</sup>) making the operation of the Lizard Creek Generating Station a minor factor in available flow for the Serpent River First Nation Generating Station. An additional benefit may actually be realized by the Serpent River First Nation Generating Station. This facility is only approximately 800 m downstream of the Lizard Creek inflow to the Serpent River. Any time the Lizard Creek Generating Station is operating, the additional flow will be available at the Serpent River First Nation Generating Station within a couple hours or less (approximately 65 minutes assuming flow velocity of 0.2 m/s). This could be of particular benefit to both facilities and the electrical grid if generation occurs during peak periods.





**Map PD #3**  
**Site Plan**  
**Revised**  
**may 2009**

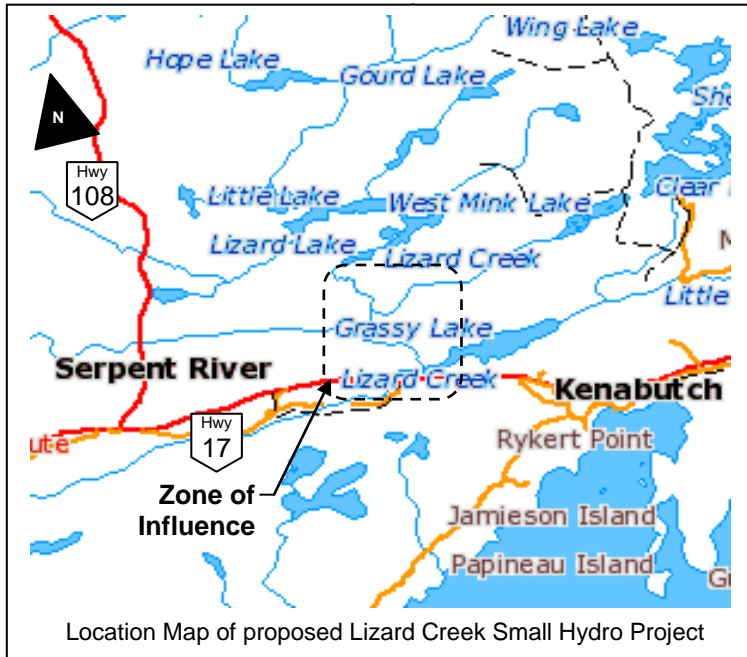
## MATRIX OF POTENTIAL EFFECTS

## Potential Effects Identification Matrix

Criteria	Potential Level of Effect						Comments, Rationale
	-H	-L	Nil	Unk	+L	+H	
<b>General Natural Environment Considerations</b>							
Air quality, including GHG Offsets					X		Calculate carbon abatement
Water quality or quantity (surface water)		X					Grab samples have been completed - Needs further study (short and long term) - Examine potential for metals to be expelled into grassy lake (particularly mercury -> take fish samples)
Water quality or quantity (groundwater)			X				
Species at risk and their habitat		X					Continue ongoing study
Significant earth or life science features			X				
Land subject to natural or human-made hazards			X				
Terrestrial wildlife (including numbers, diversity and movement of resident or migratory species)		X					
Natural vegetation and terrestrial habitat linkages		X					
Soils and sediment quality		X					
Significant natural heritage features and areas			X				Need for a Phase I archeology study
Other (specify)							
<b>Aquatic and Riparian Ecosystem Considerations</b>							
Shoreline dependant species							To be examined by Env. Sub-consultant
Wetland dependant species							
Fish Habitat							
Fish Migration							
Fisheries							
Erosion and Sedimentation							
Fish Injury or Mortality (impingement and entrainment)							
Water levels, flows and movement (surface or groundwater)							
Drainage, Flooding and Drought patterns							
Water Temperature							
Other (specify)							
<b>Aboriginal Community Considerations</b>							
First Nation reserves or other Aboriginal communities			X				
Spiritual, ceremonial, cultural, archaeological, or burial sites				X			
Traditional land or resources used for harvesting activities		X					Serpent River and Mississauga FNs have identified the Serpent River system as a place where they hunt/fish/gather
Employment					X		
Lands subject to land claims				X			
Economic Development					X		Aboriginal communities may get employment resulting from the project's development, or ongoing operations
Other (specify)				X			
<b>Land and Resource Use Considerations</b>							
Access to inaccessible areas (land or water)					X		
Navigation		X					
Riparian rights or privileges			X				
Recreational use – (land or water)			X				
Angling and hunting opportunities			X				
Trapping activities				X			Exists in area
Baitfish harvesting activities				X			Exists in area
Views or aesthetics			X				
An existing land or resource management plan					X		Improvements to existing roads
An existing water management plan			X				
Protected areas			X				
Other (specify)							
<b>Cultural Heritage Resources Considerations</b>							
Archaeological sites				X			To be examined by Cultural Heritage Sub-consultant
Buildings or structures				X			
Cultural heritage landscapes				X			
Other (specify)				X			
<b>Social and Economic Considerations</b>							
The Location of people, businesses, institutions, or public facilities			X				
Community character, enjoyment of property, or local amenities			X				
Employment					X		
Public health and/or safety		X					
Local, regional, or provincial economies					X		
Tourism values			X				
Water supply			X				
Aesthetic image of the surrounding area			X				
Other (specify)							
<b>Energy/Electricity Considerations</b>							
Reliability (e.g. voltage support)					X		
Security (e.g. Black Start)					X		
Electricity flow patterns					X		
Other (specify)					X		

**NOTICE OF THE PUBLIC INFORMATION CENTRE**

## Notice of Public Information Centre #1 - Lizard Creek Small Hydro Project



Location Map of proposed Lizard Creek Small Hydro Project

### Project

Lizard Creek Power Inc. is planning to undertake an environmental evaluation and assessment for the proposed Lizard Creek Small Hydro Project, located in the Township of North Shore, 20km southeast of the City of Elliot Lake, Ontario. The zone of influence for the proposed project runs along Lizard Creek, from the southern end of Lizard Lake south to where Lizard Creek enters Serpent River, downstream of Grassy Lake, as presented on the map (left). If approved this waterpower project would consist of a flow conveyance channel, water control structure, penstock, powerhouse, limited improvement to access roads and a new 1 km transmission line all located along Lizard Creek, producing on average 4.5 gWh of renewable energy annually. The project is subject to the provisions of the Ontario Waterpower Association "Class Environmental Assessment for Waterpower Projects" (2008). Pursuant to the Class EA, this project is considered to be on a managed waterway. The Class EA process requires Lizard Creek Power to undertake an evaluation of the project to evaluate its potential effects on the environment (positive and negative) and prepare a detailed Environmental Report.

### Public Information Centre

Lizard Creek Power Inc. invites all interested parties to attend our Public Information Centre on the Lizard Creek Small Hydro Project to ask questions and provide their comments and/or concerns about the project.

#### **A Public Information Centre (PIC) will be held as follows:**

**Tuesday October 13<sup>th</sup>, 2009**  
**Session #1: 3:00 to 5:00 p.m.**  
**Session #2: 7:00 to 9:00 p.m.**

**Township of the Northshore - Council Chamber**  
**1385 Hwy. 17, P.O. Box 108**  
**Algoma Mills, ON P0R 1A0**

Lizard Creek Power and consultant staff will be available at the PIC to explain the information displayed and receive comments. You may also request to be placed on the project's mailing list at the meeting or by contacting us as detailed below.

For information on the project proposal, to raise any issues or concerns, or to be placed on the mailing list, please see the Lizard Creek Power Inc. website at [www.lizardcreekpower.com](http://www.lizardcreekpower.com) or contact:

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Under the *Freedom of Information and Protection of Privacy Act* and the *Environmental Assessment Act*, unless otherwise stated in the submission, any personal information such as name, address, telephone number and property location included in a submission will become part of the public record files for this matter and will be released, if requested, to any person.

**[www.lizardcreekpower.com](http://www.lizardcreekpower.com)**