An aerial photograph of Boulevard Lake, a large body of water with a winding shoreline. The lake is surrounded by dense green forests and rolling hills. In the foreground, there are some buildings and a parking lot. The text "Boulevard Lake (Current River) Water Management Plan" is overlaid on the lower part of the image.

**Boulevard Lake (Current River)
Water Management Plan**

March 2006

APPROVAL STATEMENT

WATER MANAGEMENT PLAN FOR WATERPOWER

for the

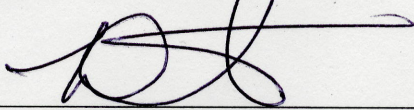
Boulevard Lake Dam and Generating Station on the

Current River

**Thunder Bay Administrative District, North-West Region
The Corporation of the City of Thunder Bay**

for the 10 year period April 1, 2006 to March 31, 2016

In submitting this plan, (I/we) declare that this water management plan for waterpower has been prepared in accordance with *Water Management Planning Guidelines for Waterpower*, as approved by the Minister of Natural Resources on May 14, 2002.

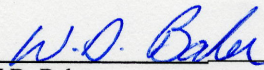


General Manager Transportation & Works, The Corporation of the City of Thunder Bay
I have authority to bind the corporation.

MAR 14 2006

[date]

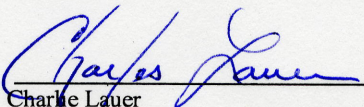
I certify that this water management plan has been prepared in accordance with *Water Management Planning Guidelines for Waterpower*, as approved by the Minister of Natural Resources on May 14, 2002, and that direction from other sources, relevant policies and other obligations have been considered. I recommend this plan be approved for implementation.



W.D. Baker
District Manager, Thunder Bay District
Ontario Ministry of Natural Resources

March 22, 2006
Date

Approved by:



Charles Lauer
Regional Director, Thunder Bay
Ontario Ministry of Natural Resources

MAR 22/06
Date

In 1994, MNR finalized its Statement of Environmental Values (SEV) under the Environmental Bill of Rights. The SEV is a document that describes how the purposes of the EBR are to be considered whenever decisions that might significantly affect the environment are made in the ministry. During the development of this water management plan, the ministry has considered its SEV.

This water management plan (WMP) sets out legally enforceable provisions for the management of flows and levels on this river within the values and conditions identified in the WMP.

In instances where, due to emergency energy shortages, the Independent Electricity Market Operator (IMO) requests that owners of the waterpower facilities and associated water control structures seek relief from certain provisions of this WMP, the Ministry of Natural Resources (MNR) will consider those requests expeditiously and, after consultation with the IMO, may allow short-term relief from certain provisions.

The mandatory provisions of this WMP will be waived, as appropriate, when the dam owners (which may include other dam owners, such as MNR) are requested to do so by a police service or other emergency organization.

This plan does not authorize any other activity, work or undertaking in water or for the use of water, or imply that existing dams(s) meet with safe design, operation, maintenance, inspection, monitoring and emergency preparedness to provide for the protection of persons and property under the Lakes and Rivers Improvement Act. Approval of this WMP does not relieve the dam owners from their responsibility to comply with any other applicable legislation. For the purposes of this plan, an operational plan means a plan for the management of flows and levels.

Simplified Water Management Plan (WMP) Table of Contents

1. Approval Page
 - Signature of MNR Regional Director to approve WMP
 - Transmittal page stating the WMP has been prepared in accordance with the guidelines and signed by the City of Thunder Bay

2. Introduction
 - Goal and guiding principles of water management planning
 - Terms of reference for WMP
 - Plan objectives
 - Issues, resource values and interests identified through scoping

3. Physical and biological description of the reach of river (zone of influence above and below the facility).
 - Known effects of waterpower facilities and water control structures on the reach of river

4. Waterpower facility and other water control structures
 - Descriptions (physical structures, limitations, capacity, etc.)
 - Identification of current water management strategies (facility operating regime, minimum flow releases, sport fishing opportunities, recreation/tourism opportunities, etc)

5. Operating plan for the waterpower facility and each water control dam within the zone of influence

6. Issues (if they are known to exist outside of data gaps) directly related to the regulation of flows and levels within the zone of influence.

7. Key data gaps and information related to effects of water flows and levels within the zone of influence. Remaining baseline data collection to be carried out during term of plan by The City of Thunder Bay, MNR and/or other groups

8. Effectiveness monitoring program
 - Monitoring studies identified
 - Data collection methods and protocols selected
 - Reporting timelines
9. Compliance monitoring program
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11. Figures
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 - C - Boulevard Lake Dam Standard Operating Procedure
 - D - Permit to Take Water - MOE
 - E - Public Consultation Report
 - F - Lease Agreement with Power Producer
 - G - Draft Scoping Report

2. Introduction

Goal and Guiding Principles of Water Management Planning

The goal of water management planning is to contribute to the environmental, social and economic well-being of the people of Ontario through the sustainable development of waterpower resources and to manage these resources in an ecologically sustainable way for the benefit of present and future generations.

A number of principles were developed for water management planning throughout the province and are listed in the Water Management Planning for Waterpower Guidelines 2002. This planning process has the intent of following these principles as they apply to the scope of planning required for the Dam and Generating Station at Boulevard Lake. The decision-making process for this water management plan will be consensus based where possible.

Terms of Reference

A formal steering committee was formed between the City of Thunder Bay and the MNR. The steering committee will form the functions of a planning team in developing the water management plan. Members of the steering committee are listed in Appendix A.

The proponent for the preparation of the Boulevard Lake (Current River) Simplified Water Management Plan is the City of Thunder Bay. The City of Thunder Bay will be responsible for undertaking the following planning process in consultation with the MNR:

- a) Confirm the contents of the scoping report and coordinate and consult with MNR throughout the production of the simplified water management plan
- b) Provide engineering and operational specifics required to document and assess effectiveness of current operations required to fill current information gaps.
- c) Coordinate the public consultation process in conjunction with MNR for the Boulevard Lake Simplified Water Management Plan.
- d) Prepare a Simplified Water Management Plan documenting the planning process to the satisfaction of the MNR as per the Generic Table of Contents provided to the City of Thunder Bay by the MNR.

The Draft and Final versions of the simplified water management plan are to be submitted to the MNR Thunder Bay District Manager for approval. The MNR Northwest Regional Director has final signing authority over all Water Management Plans in the Northwest Region. The full Terms of Reference can be found in Appendix B.

Schedule for Water Management Plan Development

Initiation of planning and development of scoping report	December 2004
Preliminary scoping report	February 2005
Confirmation of the Contents of the Scoping Report	October 8, 2005
Final Scoping Report with Categorization Decision	October 8, 2005
Public Consultation approach defined	December 8, 2005
Development of monitoring and inventory process designed to fill in the informational data gaps identified in the scoping report	January 2005
Draft Plan submission to the MNR	January 1, 2006
Final Plan submission to the MNR	March 1, 2006

Water Management Planning Objectives

The objectives of the Current River Simplified Water Management Planning process:

- a) Fulfill the legislative requirements of Section 23.1 (1.1) of the Lakes and Rivers Improvement Act.
- b) Review, document and understand the operations of the waterpower facility, control structure, and fishway at Boulevard Lake relative to environmental, social, and economic benefits;
- c) Establish the level of control that the facility exercises over flows and levels;
- d) Document resource values and environmental, social and economic issues within the zone of influence of the facility; and
- e) Establish a monitoring program to determine whether a change in the management of levels and flows would have a net environmental, social and economic benefit.

Issues, Resource Values and Interests Identified Through Scoping

Recreation Values:

The park around Boulevard Lake offers a range of recreational opportunities, including a playground, supervised swimming at a sand beach, canoeing, kayaking, paddle boating and windsurfing, as well as sailing lessons and a 5

km (3 mile) trail which circles the lake. The Ministry of Natural Resources has also stocked Brook Trout into Boulevard Lake on occasion.

Biological Values:

The extent of green space along the Current River has made it a popular river for fishing. The mouth of the current river has been historically used by spawning walleye in the spring and has been a popular location for walleye fishing. The main branch of the river below Onion Lake is thought to have a marginal brook trout (*Salvelinus fontinalis*) population. Rainbow Trout have been introduced into the watershed with the intention of establishing a returning run of rainbow trout (*Oncorhynchus mykiss*) within the Current River. The introductions of Rainbow Trout followed the construction of the fishway at Boulevard Lake in 1992. Several groups and levels of government were involved in this project including the North Shore Steelhead Association, The Lakehead Region Conservation Authority, The City of Thunder Bay, and The Ministry of Natural Resources.

Issues of Public Infrastructure:

The pressures of ice on the dam and a municipal water main may cause damage due to it's' location on the bed of the Boulevard Lake if water levels are not lowered before winter. Thrust blocks situated on the banks of the lake support the water main. The water levels need to be lowered below the blocks to prevent movement caused by ice pressures. The build-up of ice along the dam may prevent the operation of stop logs in the spring and cause flooding south and north of the dam.

Data Gaps in Fish Management:

Key data gaps surrounding the operation of the dam and generating station relate to water flows and levels through the fishway and downstream from the dam to the generating station. This information is necessary to promote Rainbow Trout movement upstream and through the fishway. Section 7 outlines the lack of reliable data of fish movement.

Gaps in Operational Information:

There were some gaps in operational information that the City of Thunder Bay was responsible for confirming during the planning process. Section 7 provides this information related to water levels of Boulevard Lake, how it is measured and recorded and the protocol for operation of the generating station.

New Issues Arising Through Public Comment:

Generally the issues covered in the scoping report were the same issues coming forward during the public consultation process. Suggestions that the biological resources should be at a higher priority than those listed in the agreement between the City and the Generating Station Operator were common, however the agreement is clear on priorities and is valid until 2025. Lease Agreement with Power Producer can be found in Appendix F. Other issues were related to flows and levels, including the opportunity to regulate flows into the generating station with a regulating valve and the potential for flooding north and south of the dam.

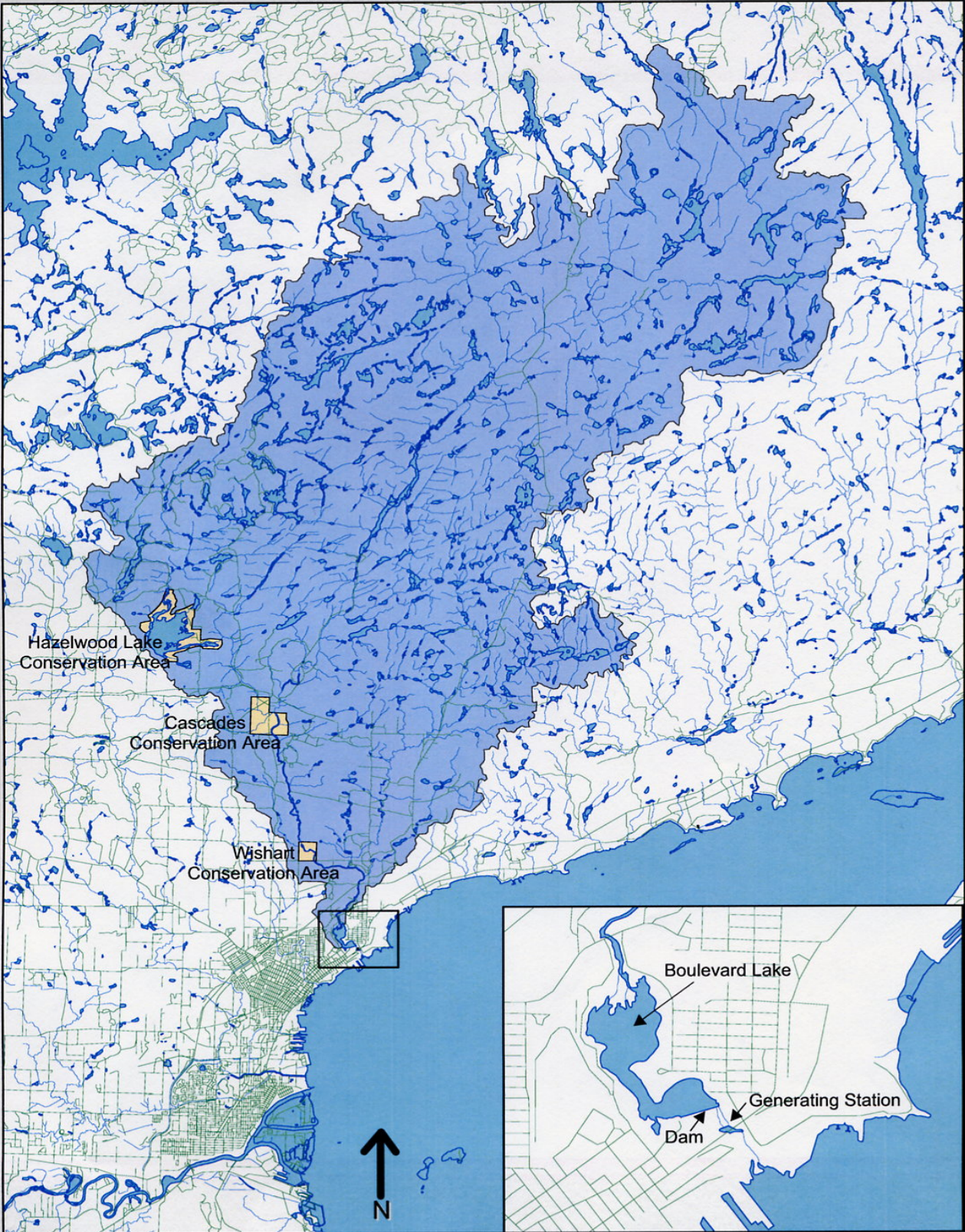
3. Physical and Biological Description of the Reach of River (Zone of Influence)

The Boulevard Lake hydro power facility and water control structure are located 650m upstream of the mouth of the Current River within the City of Thunder Bay. The Current River watershed originates approximately 47 km northeast of Thunder Bay and has a surface length of 63 km that terminates into Lake Superior in the Northeast section of the City of Thunder Bay (refer to Map 1). There are over 30 tributaries to the Current River. The two main branches are the North Current River and Ferguson Creek that have an area of 115 km² and 72 km² respectively (Beak Consultants Limited, 1990). The average gradients for the North Current River and the Current River are 7m/km and 5m/km respectively.

The drainage basin is composed primarily of Precambrian bedrock and glacial tills. The bedrock is chiefly shales of low porosity and permeability resulting in marginal groundwater supply. (Beak Consultants Limited, 1990). The climate in the Current River Watershed is characterized as “modified continental” where the mean temperature difference between summer and winter is 35°C. Mean daily temperatures for January and July are -14.4°C and 17.4°C respectively based on data from 1960 to 1989. This region is marked by a pattern of low winter and high summer precipitation. In summer, successions of cyclonic storms pass through the area. (Environment Canada, 2002).

The average daily water temperatures in June and July 2002 ranged from 13-26°C for the Current River and Ferguson Creek (OMNR, 2002). The minimum estimated flow over the Boulevard Lake Dam under extreme drought conditions could drop to 0.2-0.3m³/second. This flow is considered to be barely enough to provide flow through one sluiceway (MM. Dillon Ltd. 1989). Boulevard Lake is used extensively for recreational purposes in the summer. The lake itself represents one of two public freshwater swimming opportunities within the City of Thunder Bay. It is widely used by recreational flat water paddlers and hosts events such as the annual dragon boat races.

Current River Watershed



Scale 1:240,000

Zone of Influence

The zone of influence is the area upstream and downstream where the dam and generating station have the ability to influence water flows and levels.

The zone of influence for the Current River (Boulevard Lake) Simplified Plan is described as follows:

Immediately upstream of the Dam (and intake for the generating station) is the man made 44ha reservoir (Boulevard Lake). There is a relatively steep set of rapids at the inflow to Boulevard Lake. The Dam and Generating station have the potential to affect flows to the base of these rapids based on their operation (basically they have an impact on the water level within the reservoir). The mouth of the Current River empties into Lake Superior approximately 650m downstream of the dam (450m) downstream of the generating station. The dam and Generating station (combined) have the ability to impact flows and levels from the base of the dam to the mouth of the river. Map 2 shows the upstream and downstream zone of influence for the Dam and Generating Station at Boulevard Lake.

4. Waterpower Facility and Other Water Control Structures

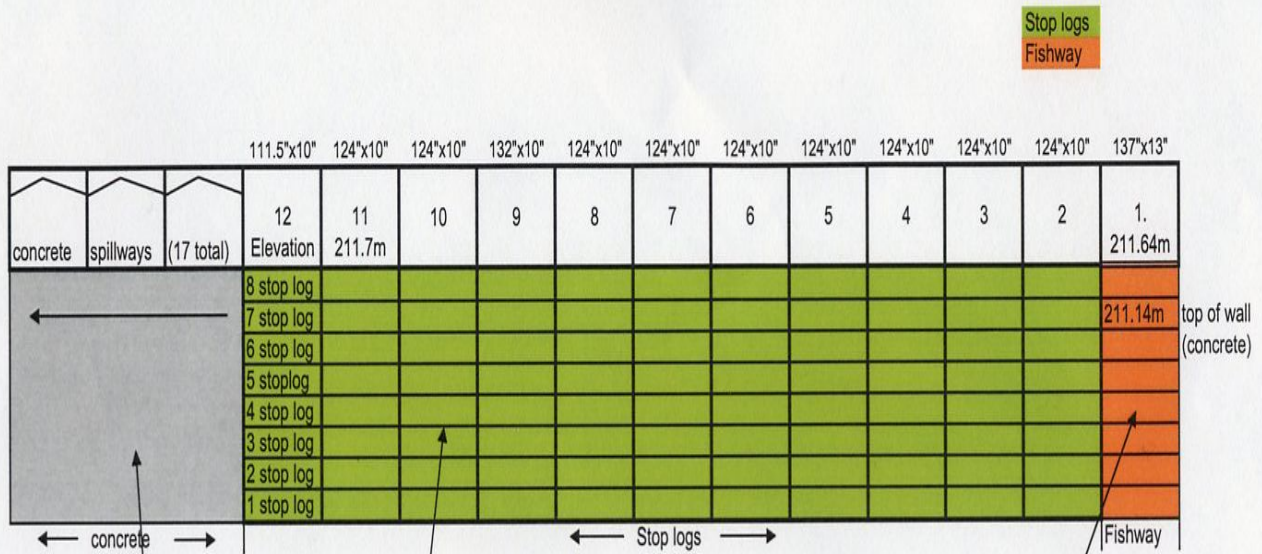
Description:

The Boulevard Lake Dam is owned and operated by the City of Thunder Bay. The associated waterpower facility is operated by The Power Producer under a lease from the City of Thunder Bay. The Dam features 17 sluiceways with concrete weirs, 11 sluiceways containing 8 stop logs each, and one fishway for a total of 29 sluiceways (Figure 1). The man-made reservoir (locally known as Boulevard Lake) above the dam is approximately 44 hectares in size. The City of Thunder Bay has protocols in place that state that the water level within the reservoir is to be monitored at Bare Point, the City's water treatment facility. A level recorder is currently in operation and the signal is transmitted instantaneously to the Bare Point Water Treatment Plant via a SCADA system. The waterpower facility draws water from the North side of the Dam and diverts a maximum of $3.9\text{m}^3/\text{second}$ through a 1200mm pipe approximately 200 metres downstream to the generating station. The generating station uses a single vertical propeller turbine known as a Kaplan turbine (Friday, 2001). According to M.M. Dillon Ltd. 1989, the $3.9\text{m}^3/\text{second}$ that the generating station draws from Boulevard Lake is equivalent to flow spilling over all 11 sluiceways. M.M. Dillon also states that the turbine capacity exceeds the mean monthly inflow to the Lake in January, February, March, and August.

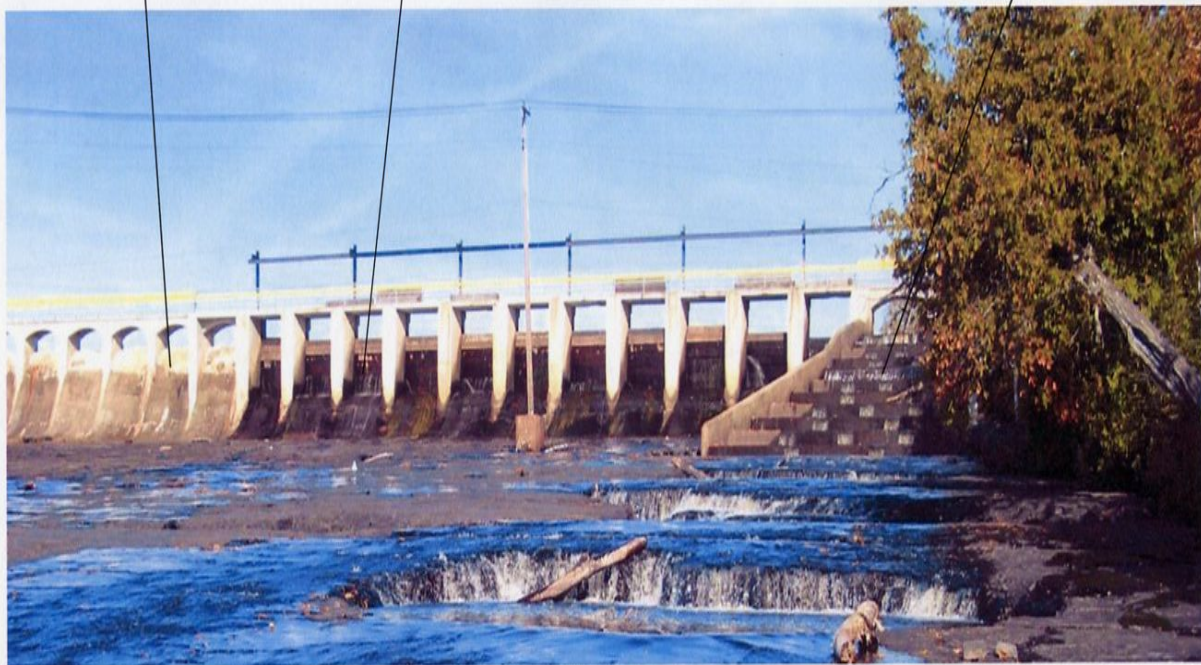
Map 2: Zone of Influence of Boulevard Lake Dam and Generating Station
(Current River)



Figure 1: Boulevard Lake Dam



Note: Dam is represented in the above schematic with all logs in place. The photo below was taken while the dam was set for the summer season (Figure 2).



5. Operating Plan

Current Operations:

In a letter dated June 29, 2004, Darrell Matson, General Manager of the Transportation and Works Department for the City of Thunder Bay confirmed the priorities for operations at the location of the Boulevard Lake Dam. The priorities are as follows:

1. Recreation and maintenance for the Boulevard Lake Dam structure (in accordance with Schedule 'B' to the 1985 lease agreement with the power producer). The 1985 lease agreement may be found in Appendix F.
2. Power Generation.
3. Operation of the fish ladder.

These priorities were established through the Ontario Ministry of the Environments (OMOE) process of issuing a Permit to Take Water (Appendix D), in accordance with section 34 of the Ontario Water Resources Act. This permit (92-P-6016) was issued in 1992 to the City of Thunder Bay as a method of preventing ongoing water use conflicts arising from operation of the fish ladder and other competing uses of the water. The City of Thunder Bay, the North Shore Steelhead Association, the MNR, The Power Producer, and the LRCA were consulted during this process. A copy of the permit may be found in Appendix D.

The Permit to Take Water expired on March 31, 2003. The OMOE is in the process of reviewing an application to renew the permit, and intends to ensure that provisions in the new permit are consistent with this Water Management Plan.

Dam:

The Boulevard Lake Dam is operated twice a year outside of actions taken due to isolated weather events and maintenance requirements. The lake is drawn down in the fall, generally following the Thanksgiving long weekend. The stop logs are replaced to summer levels around the time of the Victoria Day long weekend in May. Some discretion is required by city staff based on annual and seasonal differences in weather and water flows. See Figure 2 for summer and winter stop log operations on the Boulevard Lake Dam. Currently, the stop log configuration may be regularly altered to provide more suitable flows through the fishway during rainbow trout migrations in the spring at the discretion of the City of Thunder Bay. This is an area of the operations that will be discussed further in the Section 7 Key Data Gaps section of the document. Table 1 shows the operating elevations for Boulevard Lake.

Figure 2: Boulevard Lake Dam Seasonal Operations

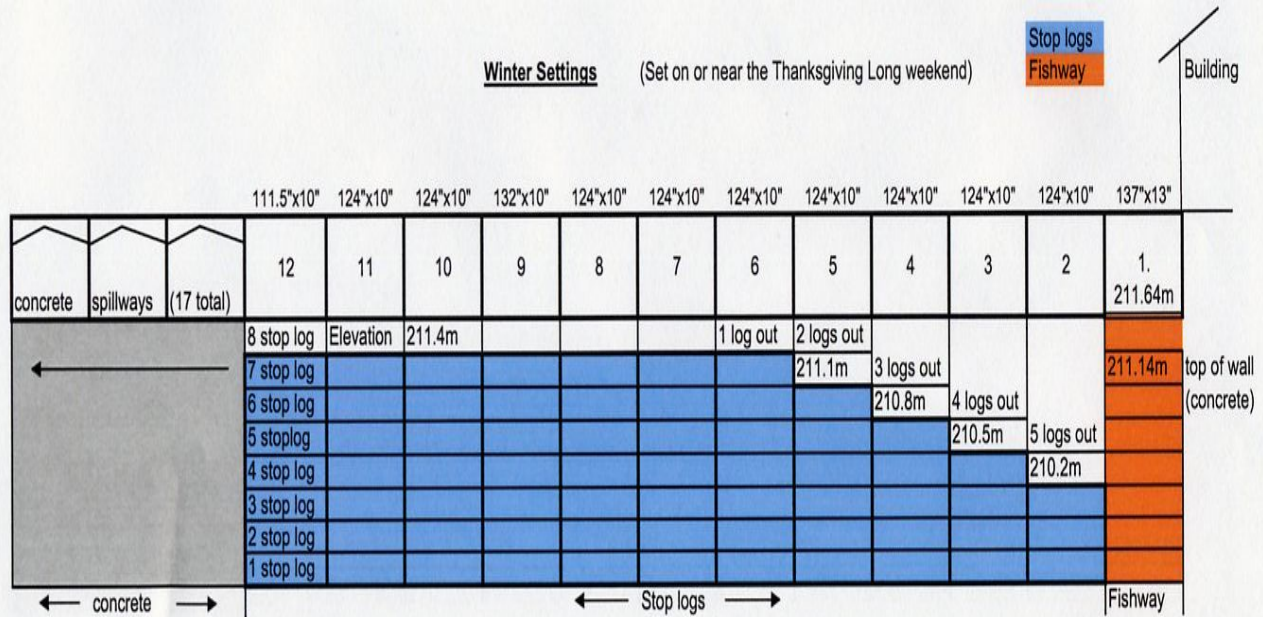
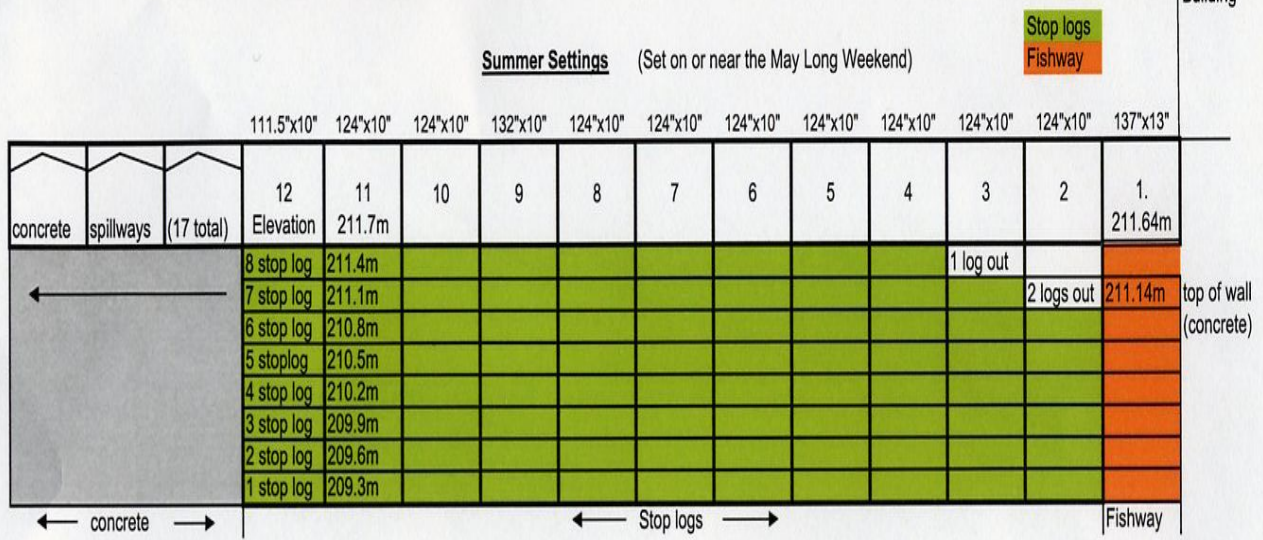


Table 1: Operating Elevations for Boulevard Lake

<u>Location</u>	<u>Elevation (metres)</u>
Normal Summer Level	210.80m to 211.80m
Normal Winter Level (3 logs in)	210.34m
Top of Spillway (all logs in)	211.7m
Top of Stop logs in fishway (all logs in)	211.64m
Top of concrete sill in fishway	211.14m

Generating Station:

As stated in the Dam and Hydropower Facility section above, The GS at Boulevard Lake passes a maximum flow of 3.9m³/s from above the dam (el. 210.61m), 200m downstream and through the turbine. The elevation at the point of suction above the turbine is 196.0m and the outflow of the generating station is 188.84m creating a total drop in elevation of 21.77m. The elevation of the river adjacent to the generating station is 193.20m. The installed capacity of the generating station is 270.4kw.

The City of Thunder Bay has a binding agreement (40 Year lease to 2025) with the Power Producer that was amended by By-Law No. 275-1988. This document as well as a Standard Operating Procedures/Protocols Document (1997) that was developed jointly with the City of Thunder Bay, The Power Producer and the North Shore Steelhead Association governs the operations of the Boulevard Lake Dam and Generating Station. A copy of the Standard Operating Procedures can be found in Appendix C.

As stated in the procedures/protocols document:

“The City of Thunder Bay has the right to set the level anywhere within the specified normal limits (Table 1). Once set, this level can not be changed without giving Mr. Whiteside one week advance notice, except in cases of urgency, as in storm events.” This document also completely restricts power production during the summer recreational season (July and August). The 1997 protocols document states that the power producer “can draw water 0.15m below the level set by the City as long as water is allowed to spill daily to maintain a clean lake surface” during the months that he is permitted to operate.

Fishway:

The elevation of the top log in the fishway is 211.64m. This is 6cm lower than the height of the stop logs along the rest of the structure. There is a concrete wall behind the logs within the fishway, the top of which has an elevation of 211.14m. This sets the potential operating range of the fishway at 50cm or the equivalent of 2 stop logs. Other factors in how the dam is operated will

impact the flows through the fishway. The 1997 protocols document states that fishway will be operated from the time the logs are installed in the spring (see seasonal operations, Figure 2) for the duration of the spring runoff period. The fishway will also be operated in the fall to promote a fall run of Rainbow Trout.

Parameters that have been established for the operation of the fishway include:

Operation of logs within the dam structure and the fishway may need to occur such that the water level within the fishway not exceed at depth of flow greater than 30cm.

During high flows when logs need to be pulled in the Dam structure in order to pass a greater volume of water than is desirable through the fishway and generating station, logs should be pulled from spillways immediately adjacent to the fishway in order to maintain flow along the north side of the river to encourage fish passage.

6. Issues Arising from Public Consultation Related to the Regulation of Flows and Levels within the Zone of Influence

A number of new issues were brought forward during the public consultation process related to flows and levels, including the opportunity to regulate flows into the generating station with a regulating valve and the potential for flooding north and south of the dam. The only known valve outside of the generating station allows for shut off.

Suggestions that the biological resources should be at a higher priority than those listed in the agreement between the City and the Generating Station Operator were common, however the agreement is clear on priorities and is valid until 2025.

It was suggested that the lake level should not be drawn down in the winter to enhance the fish migration. However two issues limit the ability of the City to do this. Firstly, thrust blocks situated on the banks of the lake support the water main. Secondly, the water levels need to be lowered below the blocks to prevent movement caused by ice pressures. The build-up of ice along the dam may prevent the operation of stop logs in the spring and cause flooding south and north of the dam. Details of the public meeting are in Appendix E.

7. Key Data Gaps

Gaps in Operational Information:

Some of the gaps in operational information were provided by the City of Thunder Bay early in the planning process:

1. The 1997 Protocols Document states that the water level in Boulevard Lake is monitored at Bare Point. This document also states that the level recorder was not in operation at that time. Is the reservoir level recorded/monitored at Bare Point currently? If so, how is the water level of Boulevard Lake reported to Bare Point? (Hourly? Instantaneous?).

Response: The level recorder is currently in operation and the signal is transmitted to the Bare Point Water Treatment Plant via a SCADA System on an instantaneous basis. The data is stored electronically and archived for sixty days (60).

2. What is the (daily?) schedule of operation for the generating station? Does the City have a schedule of operations for the generating station? If not, based on the fluctuations in water levels within the reservoir is it possible to determine the mini-peaking schedule of the Generating Station?

Response: The daily schedule of operations for the generating station is contained within the City of Thunder Bay Environment Division's Standard Operating Procedure (SOP) which is aligned with the provisions contained in the Lease Agreement for Power contained within the SOP and the Agreement. The SOP is contained within Appendix C. Based upon the information available at the Bare Point Plant it is possible to determine the start times of which the generator is in operation. The duration of the run time cannot always be determined by the level records. Run Time Records are available through the owner of the power generating station as the generator start and run times are recorded.

Gaps in Fish Management Information:

The main information gaps surrounding the operation of the dam and generating station relate to water flows and levels through the fishway and downstream from the dam to the generating station. This information is necessary to promote Rainbow Trout movement upstream and through the fishway. The fishway was constructed in 1992. There is anecdotal information pointing toward records of early attempts to monitor to the potential movement of Rainbow Trout through the fishway with limited success. The North Shore Steelhead Association have indicated that there is no reliable data at this time.

8. Effectiveness Monitoring Program

Monitoring Studies Identified:

A monitoring and reporting program as to stop log configuration, reservoir water level, and flow through the fishway during times of expected Rainbow Trout runs will provide the background information component necessary to evaluate these operations. Once combined with data related to potential fish passage through the fishway, an evaluation of current operations may be completed. Analysis also should determine what represents optimal flows between the dam and generating station to promote fish passage during the spring and fall spawning runs of Rainbow Trout. Once this is established, monitoring of flows between the base of the fishway and the generating station will determine if adequate or optimal flows for fish passage are being provided through that section of river. Confirmation of run time schedules for the generating station during this time period will complete the information needed to assess the effectiveness of current operations.

Key considerations include:

Fishway

The fishway will be operated from April 1 to June 15 to meet the duration of the potential spring migration. The Fishway will also be operated in the fall from September 15 to October 15 in order to promote a fall run of Rainbow Trout.

If an event occurs where there is direct competition for water flows between the fishway and the generating station, the existing priorities will be followed. The city will document the duration of any event of this nature occurs within the two fishway operating periods. This record will be used to establish a dataset to determine the impact of the existing priorities on potential fish passage.

Operation of logs within the dam structure and the fishway may need to occur such that there is a consistent water flow through the fishway and that the water level within the fishway does not exceed at depth of flow greater than 30cm.

During high flows when logs need to be pulled in the Dam structure in order to pass a greater volume of water than is desirable through the fishway and generating station, logs should be pulled focussing on, but not limited to spillways immediately adjacent to the fishway in order to maintain flow along the north side of the river to encourage fish passage.

Data Collection Methods and Protocols Selected:

Flow measurement and reservoir level devices will be installed at the fishway. These include a staff gauge and a water level logger. The data from the water level logger will be downloaded at the end of each potential spawning run. Any changes to stop log configuration with rationale should be recorded. This data combined with generating station operation schedule will be analyzed annually. Daily average measurements should be provided within the annual report.

Reporting Timelines:

December 1 of each year allows for an immediate follow-up to the potential fall run of rainbow trout and will include reports for both spring and fall.

9. Compliance Monitoring Program

Upon approval of the WMP, The City of Thunder Bay is accountable to operate the dam and fishway in accordance with the protocols identified in the Operational Plan. To ensure that legislated commitments are being met, The City of Thunder Bay and OMNR will monitor their operations on an ongoing basis. The key elements of the program are self monitoring and reporting of non compliance by the City of Thunder Bay, the responsibility of MNR for investigation and enforcement and the recognition that conditions beyond the control of operations can affect water levels and flows.

Table 2: Compliance Monitoring Requirements and Compliance Limits

Item	Data
Boulevard Lake level	Daily Average from April 1 to November 15
Fishway Flow Depth	Data will be recorded at a minimum 12 hour interval. Flows will be provided through the fishway between April 1 to June 15, and September 15 to October 15. The flow depth will not exceed 30cm
Generating Station Operation	Boulevard Lake Level is not lowered below .15m of the level set by the city.

This data will be maintained by the City of Thunder Bay and data required by the OMNR for compliance monitoring will be provided in annual reporting or intermittently in the case of non-compliance reporting. Reports should be directed toward the District Manager, Thunder Bay District, OMNR.

OMNR may undertake a limited number of compliance activities, such as monitoring of real-time water levels from time to time or occasional audits.

Compliance Reporting

Annual Compliance Report

- An annual compliance report will be prepared by the City of Thunder Bay and will be submitted on December 1 of each year.

Out of Compliance Reporting

- The City of Thunder Bay will report on any non compliance with the operational plan requirements within 24 hours of being aware of the event.

Investigation and Enforcement

- Investigation and enforcement is the responsibility of the OMNR
- OMNR will review all cases when they become aware of a non-compliance. They will take into account all circumstances associated with the non-compliance including the history of the offender as well as the nature, severity and reasons for the occurrence in contemplating enforcement action.

10. Provision for Plan reviews, Amendments and Plan Renewals

This plan has a term of ten years, from April 1, 2006 to March 31, 2016. The first plan review will commence no later than March 31, 2014. Subsequent reviews of the plan will be carried out as required and as determined by OMNR and the City of Thunder Bay. The review will involve public consultation through the *Environmental Bill of Rights* Registry (EBR) postings where required. An unscheduled plan review may be required at any time if an issue develops that justifies a comprehensive reassessment of the whole plan.

Amendments to the WMP can also be made during the term of the plan provided the outcomes remain consistent with the goals and objectives of the WMP. An amendment can be initiated by OMNR, the operator, or any other individual or organization.

Three categories of amendments are provided:

- Administrative
- Minor
- Major

The amendment process involves:

- a) Submission of a request for an amendment.
- b) Review of the request by the OMNR District Manager, with advice from the Steering Committee.
- c) Acceptance or denial of the request.
- d) If acceptance, assignment of a category to the amendment.
- e) Completion of all applicable planning requirements, including public consultation.
- f) Record-keeping requirements.

1. Amendment Request

Any request must be accompanied by sufficient information to allow the OMNR Regional Director to determine whether the proposed amendment should proceed, and whether the amendment should be treated as administrative, minor, or major. The amendment request must contain the following information:

- A brief description of the proposed amendment.
- The rationale for the proposed amendment and a discussion of its significance.

If new operations are proposed:

- A brief description of the proposed operations and a description of the previously approved operations in the WMP which will be changed by the proposed amendment.
- An outline of the applicable planning requirements for the proposed operations, including public consultation, based on the planning requirements for similar operations in a WMP.

2. Review of Amendment Request and Categorization of Amendments

The OMNR Regional Director is responsible for determining whether an amendment should proceed, and for categorizing the amendment as administrative, minor, or major. In making this determination, the Regional Director will assess the appropriate extent of public consultation and OMNR review and approval necessary.

The Regional Director considers the following factors in determining whether to grant the request for an amendment, and in determining the appropriate category for the amendment:

- Whether there are legitimate time constraints which must be met for reasons of public safety, biological or industrial necessity, or public convenience and necessity.

- Whether there has been previous notification that the requested amendment will be required, and the degree to which planning and public consultation has taken place previously (e.g. decisions deferred in the WMP; amendments required after public consultation in other planning processes).
- The adequacy of the information concerning the resource features, land uses and values potentially affected and the anticipated potential effects of the requested operations.
- The number of previous requests for similar amendments.

The decision on the amendment request, and the appropriate category of amendment, will normally be made within 30 days of receipt of the request. The OMNR Regional Director will prepare a written decision, and any disagreements with the categorization of the amendment, will be recorded in that written decision.

3. Amendment Records and Distribution

All approved amendments will form part of the approved WMP. A copy of each approved amendment will be filed with the approved WMP at the appropriate OMNR district office immediately upon approval. A record of all amendment requests and all approved amendments will also be maintained.

APPENDIX A

Membership of Steering Committee/ Planning Team

STEERING COMMITTEE / PLANNING TEAM:

The City of Thunder Bay:

Environment Division: Ken McWhirter

Engineering Division: Pat Mauro

Parks Division: Paul Fayrick

The Ministry of Natural Resources:

Jim Cameron, District Planner

Jamie Fligg, Planning Biologist

APPENDIX B

Terms of Reference

1. Introduction:

The Boulevard Lake hydro power facility and water control structure are located 650m upstream of the mouth of the Current River within the City of Thunder Bay. The Current River watershed originates approximately 47 km northeast of Thunder Bay and has a surface length of 63 km that terminates into Lake Superior in the Northeast section of the City of Thunder Bay. There are over 30 tributaries to the Current River. The two main branches are the North Current River and Ferguson Creek that have an area of 115 km² and 72 km² respectively (Beak Consultants Limited. 1990).

The City of Thunder Bay owns and operates the dam for recreation, hydro production, and operation of a fishway. The Generating Station is operated by Mr. Robert Whiteside under a 40 year lease from the City of Thunder Bay that expires in 2025.

The Onion Lake Dam is an MNR owned dam located 27 km upstream of Boulevard Lake and represents a total barrier to upstream migration. This structure may have an impact on the operation of the Boulevard Lake dam. The MNR is currently investigating options for the Onion Lake Dam. These options include total removal over a ten year period, rebuilding the dam to current specifications (weir), and rebuilding the dam with a means of operating it.

The City of Thunder Bay uses a protocols document that was jointly developed with the City, the North Shore Steelhead Association and the hydro producer. A hierarchy in the management of flows and levels was established in the early 1990's and was confirmed by the City of Thunder Bay in 2004 as follows:

1. Recreation and maintenance for the Boulevard Lake Dam structure (in accordance with Schedule 'B' to the 1985 lease agreement with the power producer). The 1985 agreement may be found in Appendix B of the Scoping Report.
2. Power Generation.
3. Operation of the fish ladder.

2. Plan Goal and Principles

The goal of water management planning is to contribute to the environmental, social and economic well-being of the people of Ontario through the sustainable development of waterpower resources and to manage these resources in an ecologically sustainable way for the benefit of present and future generations.

A number of principles were developed for water management planning throughout the province and are listed in the Water Management Planning for Waterpower Guidelines 2002. This planning process has the intent of following these principles as they apply to the scope of planning required for the Dam and Generating Station at Boulevard Lake. The decision-making process for this water management plan will be consensus based where possible.

3. Water Management Planning Objectives

The objectives of the Current River Simplified Water Management Planning process:

- a) Fulfill the legislative requirements of Section 23.1 (1.1) of the Lakes and Rivers Improvement Act.
- b) Review, document and understand the operations of the waterpower facility, control structure, and fishway at Boulevard Lake relative to environmental, social, and economic benefits;
- c) Establish the level of control that the facility exercises over flows and levels;
- d) Document resource values and environmental, social and economic issues within the zone of influence of the facility; and
- e) Establish a monitoring program to determine whether a change in the management of levels and flows would have a net environmental, social and economic benefit.

4. Steering Committee

A formal steering committee was formed between the City of Thunder Bay and the MNR. The steering committee will form the functions of a planning team in developing the water management plan.

5. Roles and responsibilities

The proponent for the preparation of the Boulevard Lake (Current River) Simplified Water Management Plan is the City of Thunder Bay. The City of Thunder Bay will be responsible for undertaking the following planning process in consultation with the MNR:

- a) Confirm the contents of the scoping report and coordinate and consult with MNR throughout the production of the simplified water management plan.
- b) Provide engineering and operational specifics required to document and assess effectiveness of current operations required to fill current information gaps.
- c) Coordinate the public consultation process in conjunction with MNR for the Boulevard Lake Simplified Water Management Plan.
- d) Prepare a Simplified Water Management Plan documenting the planning process to the satisfaction of the MNR as per the Generic Table of Contents provided to the City of Thunder Bay by the MNR.

The Draft and Final versions of the simplified water management plan are to be submitted to the MNR Thunder Bay District Manager for approval. The MNR Northwest Regional Director has final signing authority over all Water Management Plans in the Northwest Region.

6. Proposed Schedule for Water Management Plan Development

Confirmation of the Contents of the Scoping Report	February 12, 2005
Final Scoping Report with Categorization Decision	February 19, 2005
Public Consultation	December 20, 2005
Draft Plan submission to the MNR	January 1, 2006
Development of monitoring and inventory process designed to fill in the informational data gaps identified in the scoping report.	February 1, 2006
Final Plan submission to the MNR	March 1, 2006

APPENDIX C

1997 Procedures and Protocols Document

CITY OF THUNDER BAY
TRANSPORTATION & WORKS ENVIRONMENT DIVISION
SEWER & WATER PROCEDURE

SECTION **General Procedures**
ORIGIN DATE 30 April, 1997
REVISION DATE 23 April, 1999
PRINT DATE 23 April, 1999

BOULEVARD LAKE OPERATING PROCEDURE

OPERATING ELEVATIONS

Walkway at 3 rd Spillway	213.236 metres	
Normal Summer Level	210.80 to 211.80 metres	
Normal Winter Level	210.34 metres	(3 logs in)
Top of spillway, all logs in -	211.7 metres	

Target Levels -	White		211.92
	Yellow		211.85
	Red		211.7
			211.51

POWER GENERATING STATION CRITERIA

Can draw water 0.15 metres below level set by City as long as water allowed to spill daily to maintain a "clean lake surface".

The generating station is not to operate during the months of July and August.

CITY OF THUNDER BAY
TRANSPORTATION & WORKS ENVIRONMENT DIVISION
SEWER & WATER PROCEDURE

SECTION	General Procedures
ORIGIN DATE	30 April, 1997
REVISION DATE	23 April, 1999
PRINT DATE	23 April, 1999

BOULEVARD LAKE OPERATING PROCEDURE

LEVEL RECORDER

Level is monitored at Bare Point. Operators are to notify Sewer and Water North if levels are approaching any of the limiting levels

SUMMER/WINTER OPERATION

Manpower requirements as well as seasonal and weather conditions dictate the exact time of insertion and removal of spillway logs. Generally, all logs are installed as soon as the ice on the lake has deteriorated to a state where it will not jam the spillways. Logs are removed in the Fall prior to a hard freeze. Late removal of the logs makes this operation more difficult due to icing of the log guides. Some discretion by City staff is required.

FISH LADDER

Operation of the fish ladder will be maintained from the time the spillway logs are installed in the Spring and for the duration of the Spring runoff period. During this time the water flow over the fish ladder may have to be controlled through the removal of logs such that the flow over the ladder does not exceed 30 cm. depth.

The intent is to maintain some measure of flow through the fish ladder, which will occur so long as the lake level is controlled at 211.7 m. (all logs in). During high flow periods, even with the power generator drawing maximum water, the lake level may rise and consequently cause excessive flow through the ladder. Log(s) removed to decrease this flow should come from the spillway(s) immediately adjacent to the ladder.

The fish will wait for suitable conditions, so if the flow is cycling between a high and a low over a 24 hour period, as can be experienced with a Spring melt where temperatures fluctuate between a daytime high and a nighttime low, there should be no need to remove logs. Daily observations should be made by Sewer and Water North preferably at the same time each day, during such periods. If a high flow is persisting past two or three days, log(s)

CITY OF THUNDER BAY
TRANSPORTATION & WORKS ENVIRONMENT DIVISION
SEWER & WATER PROCEDURE

SECTION	General Procedures
ORIGIN DATE	30 April, 1997
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PRINT DATE	23 April, 1999

BOULEVARD LAKE OPERATING PROCEDURE

should be removed. These log(s) should be replaced when the level has fallen back to approximately 211.7 m.

Flow over the dam should be effected closer to the ladder (north-east end of dam) rather than than to the south-east end, i.e. the flow should occur over the log gates rather than the concrete spillways, to encourage the fish to migrate towards the ladder.

Maintenance of water flow as late as possible into the Fall will permit fish to enter the upper reaches of the Current River and improve breeding stock.

TELEPHONE CONTACTS

Sewer and Water North	684-2424 or 684-2191
Bare Point WTP	683-8141 or 683-3251
Robert Whiteside	767-2352

CHANGE IN OPERATING LEVEL

The City has the right to set the level anywhere within the specified normal limits. Once set, this level cannot be changed without giving Mr. Whiteside one week advance notice, except in cases of urgency, as in storm events.

LEVEL CONTROL

1. Level control is manual by means of the removal or insertion of logs which are nominally 30 cm. deep. There are 11 spillways which can be controlled.
2. The lake level should be set at the beginning of June at 211.7 metres (all logs in) which will provide the maximum depth of water in the lake. Therefore the fish ladder should have water and the power generator will operate at maximum head.
3. The power generating station is allowed to draw the water level down 0.15 metres below this level or to 211.55 metres.
4. The power generating station must allow some water to spill over to maintain a clean lake surface.

CITY OF THUNDER BAY
TRANSPORTATION & WORKS ENVIRONMENT DIVISION
SEWER & WATER PROCEDURE

SECTION **General Procedures**
ORIGIN DATE 30 April, 1997
REVISION DATE 23 April, 1999
PRINT DATE 23 April, 1999

BOULEVARD LAKE OPERATING PROCEDURE

LEVEL OUTSIDE OF LIMITS

1. If the level is rising above 211.80 metres, a log(s) will have to be removed. Mr. Whiteside should be notified. He could be drawing maximum water in this case, until the level is back to normal.
2. If the level is falling below the set level by more than 0.15 metres, the power generator should cease operations. Mr. Whiteside should be notified.

RECORD KEEPING

Changes made to the operating level should be logged at Sewer and Water North and Bare Point.

For convenience, the operating level, which is defined here as the level of the lowest spillway, and the correlation to the number of logs is tabulated below.

Number Of Logs		Elevation, Top of Log
Removed	Remaining	(metres)
0	8	211.7
1	7	211.4
2	6	211.1
3	5	210.8
4	4	210.5
5	3	210.2
6	2	209.9
7	1	209.6
8	0	209.3



**TRANSPORTATION & WORKS
DEPARTMENT**

ENGINEERING DIVISION
Victoriaville Civic Centre
111 Syndicate Avenue, South
Thunder Bay, ON P7C 5K4

Tel: (807) 625-2266/2267
Fax: (807) 625-3588

File: 0277.008

September 26, 2005

Ministry of Natural Resources
Thunder Bay District Office
Suite B001
435 South James Street
Thunder Bay, ON
P7E 6S8

**ATTENTION: JAMIE FLIGG,
WATER MANAGEMENT PLANNER**

Dear Jamie

**RE: *Draft Scoping Report
Boulevard Lake – Current River***

Further to our meeting with respect to the review of the draft Boulevard Lake (Current River) Water Management Plan Scoping Report we are as detailed below providing a response to the operational gaps that were identified.

The draft report states:

1. The 1997 protocols documents states that the water levels in Boulevard Lake is monitored at Bare Point. This document also states that the level recorder was not in operation at that time. Is the reservoir level recorder monitored at Bare Point currently, if so how is the water level at Boulevard Lake recorded at Bare Point (hourly? instantaneously?).

The level recorder is currently in operation and the signal is transmitted to the Bare Point Water Treatment Plant via a SCADA System on an instantaneous basis. The data is stored electronically and archived for sixty days (60).



Draft Scoping Report
Boulevard Lake – Current River
September 2005



2. What is the (daily?) schedule of operation for the generating station? Does the City have a schedule of operations for the generating station, if not based on the fluctuations in water levels within the reservoir is it possible to determine the mini-peak in schedule of the generating station.

The daily schedule of operations for the generating station is contained within the City of Thunder Bay Environment Division's Standard Operating Procedure (SOP) (attached) which is aligned with the provisions contained in the Lease Agreement for Power Generation. The generating station will operate daily in accordance with the parameters contained within the SOP and the Agreement. Based upon the information available at the Bare Point Plant it is possible to determine the start times of which the generator is in operation. The duration of the run time cannot always be determined by the level records. Run Time Records are available through the owner of the power generating station as the generator start and run times are recorded.

Should you have any questions with respect to the information contained within this letter please call. City Administration is looking forward to reviewing the final Boulevard Lake (Current River) Water Management Plan Scoping Report and reviewing the undertakings required to comply with the Water Management Plan.

Yours truly

A handwritten signature in black ink, appearing to be "Darrell Matson", written over a horizontal line.

Darrell Matson
General Manager
Transportation & Works

DM:laa

cc: Ken McWhirter, Manager – Environment Division
Pat Mauro, P.Eng., Manager – Engineering Division

APPENDIX D

**Water Taking Permit
92-P-6061 (1992)**



Ontario

Ministry of the Environment

Application for Permit To Take Water

* Ce formulaire est disponible en français

Information requested by this form is collected under the authority of the Ontario Water Resources Act, R.S.O 1990, Chapter 0.40 (OWRA) and the Environmental Bill of Rights, Statutes of Ontario, 1993, Chapter 28 (EBR). The purpose of the Permit is to regulate water takings in order to promote efficient development and equitable use of surface and ground waters.

<input type="checkbox"/> New Permit	Existing Permit No.
<input checked="" type="checkbox"/> Permit Renewal	92-6016
<input type="checkbox"/> Permit Amendment	
Name of Applicant	CITY OF THUNDER BAY, ENGINEERING DIV.
Telephone No.	(807) 625-2289
Address	P.O. Box 800, Thunder Bay ON
Postal Code	D7C 5K4

Application Particulars

Please read instructions on the Guide for Applying for Approval of Permit to Take Water ("Guide") and ensure that all sections of the application are completed in full, especially the section of Request Amount of Taking from each Source and project/application description for purposes of EBR registry. Submit a diagram of the area of this water taking. Diagram, instructions and example are shown in the "Guide". If the taking is from a groundwater source, then a diagram indicating any wells within 500 metres of the taking must be submitted. If there are questions concerning the application, please contact the corresponding Ministry of Environment and Regional Office listed in the "Guide".

A Source of Water

① Well(s): How many?	Spring(s): How many?	② Lake, Stream or River Name(s)	Current River
③ Pond(s): How many?	Type: <input type="checkbox"/> Dugout <input type="checkbox"/> By-Pass <input type="checkbox"/> On-Stream <input type="checkbox"/> Pit or Quarry		
④ Other: Type of Source			
⑤ Construction Date of Source:		⑥ Date of Installation of Water Taking Equipment:	

Dam 1910 Hydro Generating Stn. 07/92

B Location of Taking

Lot, Concession, Township or former Township and County or Region or District, or City, Town or Village with name of street and number

Part of Mining Location 7, Savigney's Survey
City of Thunder Bay, District of Thunder Bay

Are the proposed works located in an area of development control as defined by the Niagara Escarpment Planning and Development Act (NEPDA)?

Yes No (If Yes, attach copy of NEPDA permit)

C Location of Water Use

Same as B, or

Lot Concession, Township or former Township and county or Region or District, or City, Town or Village with name of street and number

D Purpose of Taking

Irrigation Commercial Industrial Municipal Public Supply Recreation

Drinking Water Other (please describe) Impoundment for recreational hydroelectric generation and fisheries enhancement

E Period of Water Taking (complete either section 1 or 2 below)

① Taking to commence on 31/03/03 and to extend for a period of 10 days weeks months years

② Seasonal taking to extend from _____ to _____ each year for _____ (number of years)

F Requested Amount of Taking from each Source (if the taking involves the taking of water into storage, please state the amount of water taken into storage as well as the amount of water withdrawn from storage).

Source Number	Name of source or Description	Maximum amount taken per minute	Maximum amount taken per day	Number of hours of taking per day-maximum	Number of hours taken per day-average	Maximum number of days taking per year
	Current River	*	*	*	*	*
		(SEE APPENDIX 1)				
Indicate unit of measure <input type="checkbox"/> Litres <input type="checkbox"/> Imperial Gallons <input type="checkbox"/> U.S. Gallons N.A.						

G Project/application description for purposes of EBR registry (brief description of proposal)

1000' long x maximum 25' high concrete dam, fish ladder and hydroelectric generating station to form Boulevard Lake, a recreational facility and to generate power, operating as outlined in Appendix 1.

H Environmental Bill of Rights requirements

Is this a proposal for a Prescribed Instrument under EBR? Yes No

If "Yes", is it excepted from public notification? Yes No

If it is excepted from public notification, provide reason.

Equivalent Public Participation Emergency

Environmentally Insignificant Amendment or Revocation EAA or Tribunal Decision

Documentation in support of the above noted exception must be provided (refer to "Guide").

I Supporting information checklist. This is a list of supporting information attached to this application and is subject to the Freedom of Information and Protection of Privacy Act (FOI/PPA) and the Environmental Bill of Rights (EBR).

SUPPORTING INFORMATION	ATTACHED?	REFERENCE	CAN BE DISCLOSED ?
Pre-application consultation with MOE	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no	Telephone Discussion with J. Gilliam 6/7/04	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no
Documentation Provided			
Description of the proposed works	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no		<input type="checkbox"/> yes <input type="checkbox"/> no
Environmental Study Report (ESR)	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no		<input type="checkbox"/> yes <input type="checkbox"/> no
Preliminary Report	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no		<input type="checkbox"/> yes <input type="checkbox"/> no
Design Report/Brief	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no		<input type="checkbox"/> yes <input type="checkbox"/> no
Hydraulic and Process Calculations	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no		<input type="checkbox"/> yes <input type="checkbox"/> no
Final Plans and Specifications	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no		<input type="checkbox"/> yes <input type="checkbox"/> no
Water Supply and Treatment			
Raw Water Quality Analysis	<input type="checkbox"/> yes <input type="checkbox"/> no		<input type="checkbox"/> yes <input type="checkbox"/> no
Hydro geological Report	<input type="checkbox"/> yes <input type="checkbox"/> no		<input type="checkbox"/> yes <input type="checkbox"/> no
Other Attached Information	<input type="checkbox"/> yes <input type="checkbox"/> no		<input type="checkbox"/> yes <input type="checkbox"/> no

J Statement of Applicant

I, the undersigned hereby declare that to the best of my knowledge, the information contained herein and the information submitted in support of this application is complete and accurate in every way. The applicant agrees to indemnify and save harmless the Crown in right of the Province of Ontario and its officers, employees, agents and contractors from and against all damages, loss, costs, claims, suits, injuries, demands, actions and proceedings resulting from or in any manner connected with act or omission of the applicant or any of its officers, employees, agents or contractors relating to this Application and any Permit, Renewal Permit or terms and conditions of a Permit issued in response to this Application.


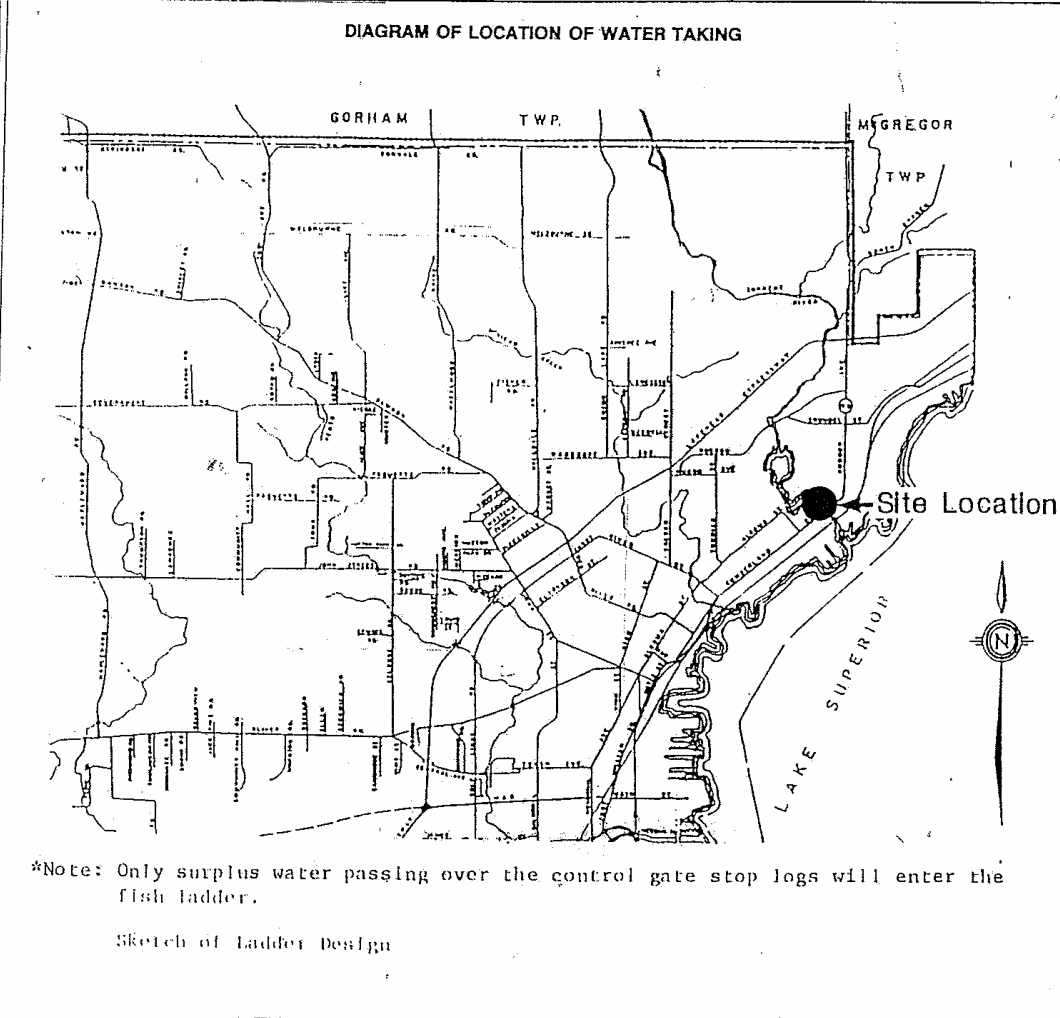
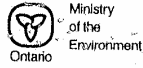
Name of Applicant or Agent/Official of Applicant (please print)	Signature of Applicant or Agent/Official of Applicant	Date
D.W. Scott, Manager, Engineering		6/7/04

Diagram of Location of Water Taking





Application for Permit to Take Water
The Ontario Water Resources Act, Section 20

Please Print in Block Letters

Ce formulaire est également disponible en français

The Corporation of the City of Thunder Bay
Name of Applicant
500 East Donald Street
Mailing Address
Thunder Bay, Ontario
City, Town... Etc. Prov.

Telephone:
Area Number: 81017 61215 211317
Postal Code: P7E5V3

Application Particulars
Please read instructions
(Permit to Take Water Program Information Sheet)

A. Source of Water

1. Well: How many? _____ Spring: How many? _____
2. Lake, Stream or River / Name: Current River
3. Pond: How many? _____ Type: Dugout By-Pass On-Stream Pit or Quarry
4. Other: Type of Source _____
5. Date of construction of source? _____ 6. Date of installation of water taking equipment? _____
D M Y D M Y

B. Location of Taking Part of Mining Location 7, Savigney's Survey
(Lot, Concession, Township and County or Region or District; or City, Town or Village with Street and Number)
City of Thunder Bay, District of Thunder Bay

C. Location of Water Use: Same as B or: _____
(Lot, Concession, Township and County or Region or District; or City, Town or Village with Street and Number)

D. Purpose of Taking: Irrigation Commercial Industrial Municipal Public Supply Recreation
 Other: Impoundment for recreational, hydroelectric generation and fisheries enhancement purposes.

E. Period of Water Taking (Complete 1 or 2)

1. Taking to commence on 103 193 and to extend for a period of Years - as long as water is available annually
(Days, Weeks, Months, Years) during the spring freshet
2. Seasonal taking to extend from _____ to _____ each year for _____
D M Y D M Y Years

F. Request Amount of Taking from Each Source

	SOURCE 1	SOURCE 2	SOURCE 3
1. Source Name or Description	Current River		
2. Maximum Amount Taken in One Minute			
3. Maximum Amount Taken in One Day		see attached Operating Plan	
4. Number of Hours of Taking in One Day		and Water Allocation	
5. Maximum Number of Days of Taking in One Year		schedule	

State Units Used (check one)

Imperial Gallons Per Minute or Day

U.S. Gallons Per Minute or Day

Litres Per Minute or Day

G. Submit a diagram of the area of water use in the space provided on the reverse side of this form (Diagram instructions and example are shown on the information sheet)

The Applicant agrees to indemnify and save harmless the Crown in right of the Province of Ontario and its officers, employees, agents, and contractors from and against all damages, loss, costs, claims, suits, injuries, demands, actions, and proceedings resulting from or in any manner connected with any act or omission of the applicant or any of its officers, employees, agents or contractors and relating to this Application and any Permit, Renewal Permit, or terms and conditions of a Permit, issued in response to this Application.

I understand that it is the policy of the Director in issuing a Permit to Take Water to impose the General Terms and Conditions appearing on the reverse side of this Application. There are no special circumstances or reasons why the Director should not impose such terms and conditions in issuing the Permit I am applying for. (Note: Cross out the previous sentence if it is not applicable to you and enclose with your Application a letter to the Director setting out such reasons and special circumstances.)

Date: 06 1992 City Engineer
D M Y Status of Agent or Official of Applicant Signature of Applicant or of Authorized Officer or Agent

Permit Expires 31 03 03 (For Office Use Only) Permit Number: 912 610116
D M Y

Pursuant to Section 20 of the Ontario Water Resources Act, permission is hereby granted for the taking of water in accordance with the above Application, subject to the General Terms and Conditions which appear overleaf, and subject to the Special Conditions and amendments to the Application Particulars, as follows:

See Appendix I

Notice of Terms and Conditions
The Ontario Water Resources Act, Section 61

Take notice that in issuing this Permit to Take Water, I have imposed terms and conditions pertaining to the taking of water and to the results of the taking. The terms and conditions have been designed to allow for the development of water resources for beneficial purposes while providing reasonable protection to existing water uses and to public interests in water.

You may appeal the terms and conditions by giving written notice to the Director of the Ministry at the appropriate Region Office (see information sheet), and to the Environmental Appeal Board, 142 St. Clair Avenue West, Toronto, Ontario M4V 1N3, within fifteen days after service of this Notice. In the event of an appeal, the terms and conditions of the Permit, as issued, would remain in effect until the appeal has been finalized.

Date: 30 06 1992 S. Remmen, Northwest Region
D M Y Name of Region Office and Director Signature of Director

**COMPANION TO THE
GUIDE FOR APPLYING
FOR
APPROVAL OF
PERMIT TO TAKE WATER**

SECTION 34

ONTARIO WATER RESOURCES ACT

R.S.O. 1990

**ADDITIONAL
INFORMATION REQUIREMENTS
TO BE SUBMITTED WITH
APPLICATION FORM**

OCTOBER 30, 2003

CONTENTS OF THIS DOCUMENT ARE
SUBJECT TO CHANGE WITHOUT FURTHER NOTICE □

Street Address	N/A	City/Town/Village	Postal Code
Rural Route #	N/A	Lot	N/A
Municipality		County	MOE District Office
Former Municipality	N/A		Belleville Ottawa Cornwall Peterborough Kingston X Thunder Bay

5. **Consultant Company Information**

Not Applicable X

Name		Contact Name
Street Address	City/Town/Village	Postal Code

Letter of Authorization to Act as Agent for Applicant Attached Yes No

6. **Purpose of Water Taking** (Guide Item 6)

General Category (check one)	Specific Use - check one specific use related to the General Category	
Agriculture	Field Crops Forage/Pasture Crops Fruit Orchard Market Garden/Flowers Nursery	Sod Farm Tender Fruits/Berries Tobacco Other - state
Commercial	Aquaculture Bottled Water* Golf Course Irrigation Mall/Business	Snow Making Water Trucking - Potable Water Trucking - Non-Potable Other - state
Construction	Road Building	Other - state

Dewatering	Pits + Quarries Construction	Other - state
Industrial	Aggregate washing Brewing/Soft Drinks Process Cooling Water Food Processing	Manufacture - Process Water Pipeline Testing X Power Generation Other - state
Institutional	School Hospital	Other - state
Recreational	Aesthetic/Landscaping Fish Pond	Wet Land x Other - state <i>Swimming & Boating</i>
Remediation	Groundwater	Other - state
Water Supply	Campground Communal Municipal	Potable Public Supply Restaurant Other - state
Miscellaneous	Dam/Reservoir Heat Pump Pumping Test	Draw-down Test Wildlife Conservation Other - state

*Bulk Extraction

N/A
Containers > 20 litre
Containers < 20 Litre
Containers

7. **Base Map Information** - Map reference for Diagram of Water Taking (Guide Item 13), please provide one or the other.

Ontario Base Map #	National Topographic System # 52A/6
--------------------	--

□

8. Source Location (Guide Items 4 and 8)

Volumes of water taken should be expressed in liters. The conversion factors are listed in the Guide under Item 8.

	Source Name	Source Type	Geographic Reference Location		
			UTM Zone	Northing Latitude	Easting Longitude
1					
2					
3					
4					

SEE APPENDIX 1 FOR OPERATING PLAN

APPENDIX 1

SPECIAL TERMS AND CONDITIONS
PERMIT NO. 92-P-6016

1. The hydro-electric generating capacity presently available at the Boulevard Lake dam has a maximum hydraulic capacity of 3.9 m³/sec.

Current capacity shall not be modified without prior approval of the Chief, Water Resources Unit, Ontario Ministry of the Environment, Thunder Bay office.
2. The maximum elevation of the fish ladder will be set such that the fish ladder in itself will not have any effect or control on lake level.
3. Operating procedures controlling Boulevard Lake water levels must be maintained as per the Agreement between Mr. Robert Whiteside and the City of Thunder Bay dated March 29, 1985, and amended by By-law No. 275-1988.
4. Water Use Priorities as defined for the purposes of the Boulevard Lake dam structure shall be as follows:
 - (1) traditional recreational uses and maintenance procedures for Boulevard Lake,
 - (2) power generation,
 - (3) operation of the fish ladder.

It is recognized that it is only the excess flows above those noted as being needed to maintain Boulevard Lake's recreational function and the operation of the hydro-electric generating station that will be allocated for purposes of operating the fish ladder, and that the fish ladder will not be operational during periods of low flow.

June 30/92
Date

Stirling H. Kemmer
Director

APPENDIX E

Public Consultation Report

Public Consultation

The public was invited to provide comments through an Information Center meeting held on December 20, 2005 at the Current River Community Center. The meeting was advertised in the Chronicle Journal for two weekends prior to the meeting and notices were forwarded to the various stakeholders. The meeting consisted of a presentation outlining the Scoping Report and question and answer period followed. The meeting was coordinated by City of Thunder Bay representatives and the MNR. Seventeen individuals were in attendance.

Information Center Meeting

Some of the issues raised at the meeting are as follows:

- On occasion there is no flow over the fish ladder during spring time and fall.
- Any potential to make modifications to the sluice gates at the fish ladder?
- The City should not be drawing down the lake in the winter to existing elevations because it may be causing harm to fish habitat.
- The City should review and determine if there is a threshold of lake level for draw down so that ice build up in the spring does not cause flooding.
- City indicates that ice build-up over the winter creates a risk of flooding and ice jams at the spillways and in addition may damage a water main crossing along the bottom of Boulevard Lake.
- Debris flowing down stream may jam up sluice ways during spring.
- If priority in operation of the dam is recreation as number one, then fishing is recreation which is linked to fish migration up the ladder.
- MNR indicates Water Management Guidelines objective is to find a balance between environmental, social, economic and recreation.

Other comments and questions include:

- Comment that we have destroyed what was in the river 40 years ago and it may never come back.
- Do we need a permit to draw water for the fish ladder?
- Fish may not necessarily need to go down to the mouth and then back up, there could be resident rainbow trout upstream of the fish ladder.
- MNR studying the Onion Lake Dam through a Class EA process, open house in February or March.
- Stop logs at fishway are leaking badly (can we place a membrane behind it). Deterioration of concrete prevents a leak proof solution.
- When is City going to upgrade dam (a consultant report done in 2000 does not show anything significant but the dam requires rehabilitation)? Presently the City forecast

shows rehabilitation of the dam in 2008 however this is contingent on budget availability and Council approval.

-Forest Capital Canada outlined their plans of 2000 including widening the dam but had no consideration for fishing off the dam since there are many other opportunities along Current River (Greensway Master Plan provides more information and an estimate for a fish fence).

-North Shore Steelhead Association was represented and will assist in any way they can.

-Fish fence was reviewed by the steel head association but it requires manpower and funds. This organization and others are attempting to raise funds or get grants.

-What is the optimum flow over the fishway – MNR suggest measure flows over the fishway to determine if conditions are suitable and if not determine if changes can be made to the sluiceway to control flow.

-It was suggested that the dam should be modified to allow flow at all times.

Further Public Input

The draft Water Management Plan will be ready for review by the public by mid January. It will be posted on the EBR and will be available for review at the City of Thunder Bay Engineering Division and the MNR Thunder Bay District office. Public comment will be invited for 30 days at which time the Plan will be finalized and submitted to the MNR.

Comments were received from The Power Producer, The Department of Fisheries and Oceans, and the North Shore Steelhead Association.

APPENDIX F

**1985 Lease Agreement
(City and Power Producer)**



THE CORPORATION OF THE CITY OF THUNDER BAY

BY-LAW NUMBER 275... 1988...

A By-law to authorize the execution of an Agreement between THE CORPORATION OF THE CITY OF THUNDER BAY and ROBERT WHITESIDE.

WHEREAS By-law 122-1985 as amended by By-laws 154-1985, 156-1985 and 224-1985 authorized the execution of a lease between the Corporation of the City of Thunder Bay and Robert Whiteside for lands adjacent to the Current River for the construction and operation of a hydro electric generation;

AND WHEREAS it is desirable to amend said lease to properly define the demised premises in a manner suitable to the Land Registry Office;

NOW THEREFORE THE COUNCIL OF THE CORPORATION OF THE CITY OF THUNDER BAY ENACTS AS FOLLOWS:

- 1. That the Mayor and Clerk be and they are hereby empowered and authorized to execute the attached Agreement (Schedule 'A') between THE CORPORATION OF THE CITY OF THUNDER BAY and ROBERT WHITESIDE;
2. By-laws 122-1985, 154-1985, 156-1985 and 224-1985 of The Corporation of the City of Thunder Bay are hereby repealed.
3. This By-law shall come into force and take effect upon the final passing hereof.

Enacted and Passed this 24 day of December, A.D. 1988... as witnessed by the Seal of the Corporation and the hands of its proper Officers.

Jack Maitles Mayor
D. G. Hill City Clerk

Read a First time this 24 day of December, A.D., 1988.
Read a Second time this 24 day of December, A.D., 1988.
Read a Third time and finally passed this 24 day of December, A.D., 1988.

LEASE

THIS INDENTURE made as of the 29th day of March, 1985
IN PURSUANCE OF THE SHORT FORMS OF LEASES ACT
B E T W E E N:

THE CORPORATION OF THE CITY OF THUNDER BAY,

hereinafter called the "Landlord",
OF THE FIRST PART;

- and -

ROBERT WHITESIDE, of the City of Thunder Bay,
in the District of Thunder Bay, Businessman,

hereinafter called the "Tenant",
OF THE SECOND PART.

ARTICLE I

DEFINITIONS AND INTERPRETATION

Section 1.01: Defined Terms

For the purpose of this Lease and of all indentures, leases, or other instrument supplemental hereto, which may confirm or amend this Lease pursuant to its provisions, the following expressions shall have the meanings respectively hereinafter ascribed to them in this Section 1.01:

(a) "demised premises" shall mean those lands and premises shown and described in Schedule "A" hereto, and includes any improvements or alterations made thereon or thereeto.

(b) "hereof" or "herein" shall mean contained in this Lease.

(c) "Lease" or "this Lease" shall mean this indenture (including the Schedules) as originally executed and delivered, or if amended or supplemented, as so amended or supplemented.

Section 1.02: Interpretation

(a) The captions and headings in this Lease are inserted for convenience of reference only and do not define, limit or enlarge the scope, meaning or intent of any provision. This Lease shall be interpreted and governed by the laws of the Province of Ontario. All of the provisions of this Lease shall be deemed and construed to be conditions as well as covenants as though the words specifically expressing or importing covenants or conditions were used in each separate provision hereof.

(b) When the context so requires or permits the singular number shall be read as if the plural were expressed, and the masculine gender as if the feminine or neuter, as the case may be, were expressed.

ARTICLE II

DEMISE, TERM, RENT AND RENEWAL

Section 2.01: Demise

In consideration of the rents, covenants and agreements hereinafter reserved and contained on the part of the Tenant to be paid, observed and performed, the Landlord hereby demises and

leases to the Tenant the demised premises, subject to the rights of entry on the part of the Landlord as herein contained.

Section 2.02: Term

To have and to hold the demised premises from the 1st day of ~~May, 1985~~ and from thenceforth next ensuing and fully to be completed and ended on the 30th day of ~~April, 2025~~, subject to the rights of entry on the part of the Landlord and to the provisions hereof with respect to earlier termination and renewal.

Section 2.03: Rent

Yielding and paying unto the Landlord, its successors and assigns, rent as follows:

In a lump sum, payable within seventy-five (75) days following the end of each year of the term hereof, percentage rent equal to 5% of the Tenant's gross revenues derived from any business or operation carried on by the Tenant on the demised premises.

Section 2.04: Statement of Gross Revenues

(a) On or before the expiration of one hundred and eighty (180) days following each year during the term, the Tenant shall furnish the City with an audited statement of an independent firm of Chartered Accountants of the aforementioned gross revenues, showing in reasonable detail, in accordance with good accounting practice, the information necessary for the exact calculation of the percentage rent payable to the Landlord.

(b) In lieu of the aforementioned auditors' statement, the Tenant may provide the Landlord with a statement from Thunder Bay Hydro, Ontario Hydro and any other public utility purchasing power from the Tenant as evidence of the gross revenue derived from those customers.

(c) The Landlord's Auditors shall be furnished with such information as they may reasonably require in order to verify all such statements.

Section 2.05: Municipal Real Property Taxes

The Tenant shall not be responsible for municipal real property taxes or local improvement rates charged upon the demised premises.

Section 2.06: Business and Other Taxes, License Fees

The Tenant covenants to pay all business taxes and license fees in respect of any business or operation carried on by him on the demised premises, and any other tax in respect thereof whatsoever, excluding only the municipal real property taxes referred to in Section 2.05 hereof.

Section 2.07: Utilities

The Tenant covenants with the Landlord to pay all utility charges including, but not limited to accounts for electric current, water, telephone and heat.

Section 2.08: Rent to be Net

All rent required to be paid by the Tenant hereunder shall be paid without any deduction, abatement or setoff whatsoever, it being the intention of this Lease that all expenses, costs, payments and outgoings incurred in respect of the demised premises or for any other matter or thing affecting the demised premises shall (unless otherwise expressly stipulated herein to the contrary) be borne by the Tenant, that the rent herein provided shall be absolutely net to the Landlord and free of all

abatement, setoff or deduction of every nature arising from or related to the demised premises or any improvements thereon and that, subject to the provisions of the Lease, the Tenant shall pay all such taxes, charges, rates, assessments, expenses, costs, payments and outgoings.

Section 2.09: Interest on Rent in Arrears

When rent or any other amount payable hereunder by the Tenant to the Landlord shall be in arrears, such amount shall bear interest until paid at a rate two (2%) per cent greater than the prime rate of interest charged by the Chartered Bank which is the Landlord's bank at the time, and the Landlord shall have all remedies for the collection of such interest if unpaid after demand as in the case of rent in arrears, but this stipulation for interest shall not prejudice or affect any other remedies of the Landlord under this Lease. Any sums, costs, expenses or other amounts from time to time due and payable by the Tenant to the Landlord under the provisions of this Lease, including sums payable by way of indemnify, and whether expressed to be rent or not, may, at the option of the Landlord be treated as and deemed to be rent, in which event the Landlord shall have all remedies for the collection of such sums, when in arrears, as are available to the Landlord for the collection of rent in arrears.

ARTICLE III

USE OF DEMISED PREMISES

Section 3.01: Quiet Enjoyment

The Landlord covenants with the Tenant for quiet enjoyment and to observe and perform all the covenants and provisos of this Lease on the part of the Landlord to be observed and performed.

Section 3.02: Use of Demised Premises

The Tenant covenants not to carry on any business that may be deemed a nuisance upon the said premises, and will use the demised premises solely for the purposes of a mini hydro generating facility constructed and operated in accordance with the terms hereof.

ARTICLE IV

TENANT'S GOODS AND FIXTURES

Section 4.01: Liability to Distress

The Tenant hereby covenants and agrees with the Landlord that in consideration of the premises and of the leasing and letting by the Landlord to the Tenant of the lands and premises above mentioned for the term hereby created (and it is upon the express understanding that these presents are entered into), that notwithstanding anything contained in The Landlord and Tenant Act of Ontario, or any other statute which may hereafter be passed to take the place of the said Act or to amend the same, that none of the goods or chattels of the Tenant at any time during the continuance of the term hereby created on the said demised premises shall be exempt from levy by distress for rent in arrears by the said Tenant as provided for by section or sections of the said Act above-named, or any amendment or amendments thereto, and that upon any claim being made for such exemption by the Tenant or on distress being made by the Landlord this covenant and agreement may be pleaded as an estoppel against the said Tenant in any action brought to test the right of the levying upon any such goods as are named as exempted in said section or sections, or amendment or amendments thereto, the Tenant waiving, as it hereby doth all and every benefit that could or might have accrued to it under and by virtue of the said section or sections of the said Act, or any amendment or amendments thereto but for the above covenant.

Section 4.02: Alienation of Goods and Chattels

Provided that if during the term hereby granted any of the goods and chattels of the Tenant shall be at any time seized or taken in execution or in attachment by any creditor of the Tenant, or if the Tenant shall make any assignment for the benefit of creditors or becoming bankrupt or insolvent shall take the benefit of any Act that may be in force for bankrupt or insolvent debtors, or in case the said premises become vacant and so remain for the period of seven days, or be used for any other purpose than that for which they are let, or in the case the Tenant shall attempt to abandon the said premises, or to sell or dispose of his goods and chattels so that there would not in the event of such sale or disposal be, in the opinion of the Landlord, a sufficient distress on the premises for the then accruing rent, then the current month's rent, together with the rent for the three months next accruing shall immediately become due and payable and the said term shall, at the option of the Landlord, forthwith become forfeited and determined, and the Landlord may re-enter and take possession of the said premises as though the Tenant were holding over after the expiration of the said term.

Section 4.03: Removal of Tenant's Fixtures

Provided, that the Tenant may remove his fixtures, subject to the provisions hereof.

ARTICLE V

INSURANCE

Section 5.01: Insurance to be Placed

(a) At all times during the term of this Lease the Tenant, at its own cost and expense, shall effect and keep in force insurance protecting both the Landlord and the Tenant (without any rights of cross claim or subrogation against the Landlord) against claims for personal injury, death, property damage or third party or public liability claims arising from any accident or occurrence upon or in the demised premises and the improvements thereon, from any cause to an amount of not less than Three Million (\$3,000,000.00) Dollars.

(b) The amount of such insurance shall be adjusted as provided in Schedule "B" hereof.

(c) The Tenant hereby releases the Landlord, its successors and assigns, from any and all liability for loss or damage caused by any of the perils against which the Tenant shall have insured or pursuant to the terms of this Lease is obligated to insure and whether or not such loss or damage may have arisen out of the negligence of the Landlord, and the Tenant hereby covenants to indemnify and save harmless (to the limits to which it is required to insure under this Lease) the Landlord from and against all manner of actions, causes of action, suits, damages, loss, costs, claims and demands of any nature whatsoever relating to such loss or damage.

(d) The Tenant shall pay all premiums and costs of all insurance required to be effected by the Tenant under any provision of this Lease and shall from time to time keep on file with the Landlord certified copies of insurance policies, renewal contracts and other documents sufficient to show and establish accurately, at all times, the current status of policies in force, and, in particular, shall submit to the Landlord before the expiration of every current policy evidence of the renewal of such policy or the issuance of a replacement policy and of the payment of all premiums due for such renewal or replacement, and shall within seventy-two hours notify the Landlord of any cancellation or intended cancellation by any insurer of any policy or any circumstances known to the Tenant materially affecting their

coverage. The Tenant shall not cancel any policy of insurance without the prior written consent of the Landlord, which consent shall not be unreasonably withheld. Each policy shall provide that no cancellation shall be effective without thirty days' prior notice by the insurer to the Landlord provided that if such provision for thirty days' prior notice is not reasonably obtainable, the policy shall provide the greatest number of days prior notice reasonably obtainable.

(e) If the Tenant shall be in default with respect to any of its obligations under this Lease regarding insurance, including the obligation to submit proof of insurance to the Landlord, the Landlord may, but shall not be obliged to, place any insurance at the cost and expense of the Tenant and may pay any arrears of premium, and any expense incurred by the Landlord shall be reimbursed to it by the Tenant on demand, and if unpaid after demand, the Landlord shall have all the remedies for collection thereof as in the case of rent.

(f) No blasting shall be carried out by the Tenant until the said liability insurance policy contains or is amended to contain, or there is otherwise provided, a specific blasting rider specifically naming the Landlord as an insured party. Such insurance shall be approved by the Engineer of the Landlord before any blasting shall occur.

Section 5.02: Insurance Regulations

The Tenant shall comply with any applicable regulation or order of the Canadian Underwriters Associations or any Canadian body having a similar function or any liability or fire insurance company which insures the Landlord and Tenant.

ARTICLE VI

USE AND MAINTENANCE OF DEMISED PREMISES

Section 6.01: Services

~~The Landlord shall not be obliged to furnish any services or facilities or make any repairs or alterations to the demised premises or the improvements thereon; the Tenant hereby assuming full and sole responsibility for the condition, operation, repair, replacement, relocation, maintenance and management of the demised premises and the improvements.~~

Section 6.02: Operation

The Tenant shall keep the demised premises neat and clean, shall impose and enforce regulation relating to the use and occupancy of the demised premises consistent with a high quality operation, shall maintain the general appearance and standard of the demised premises and shall generally manage them as would a prudent owner.

Section 6.03: Repairs

(a) The Tenant, without cost to the Landlord, shall during the entire term keep in good order and condition the demised premises and the appurtenances thereof and the Tenant's equipment thereof, both inside the demised premises and outside the demised premises to the extent that facilities are there located as part of the Tenant's operations, and shall expeditiously, and to the same extent as a prudent owner, make any and all necessary repairs, replacements, alterations, additions, changes, substitutions and improvements, ordinary and extraordinary.

(b) Such repairs shall be in all respects to a standard at least equal in quality of material and workmanship to the original work and material in the demised premises or to any more modern standard as may then be prevailing at least equal, under the circumstances, to the quality of the original work and material and shall meet the requirements of municipal or governmental

authorities and the fire insurance underwriters.

(c) The Tenant shall not commit, and shall use all reasonable efforts to prevent the commission by others, of any waste or injury to the demised premises or any part thereof or use any of the same for any illegal or unlawful purpose or in any manner which will result in the cancellation of any insurance or in the refusal of any insurer to issue any insurance as requested.

(d) The Tenant shall not injure or disfigure the demised premises or permit, to the extent which is within its reasonable power, the same to be injured or disfigured in any way.

(e) At the expiration or other termination of this Lease, the Tenant shall, except as otherwise expressly provided herein, surrender and deliver up the demised premises with the improvements, appurtenances and equipment removed therefrom and the lands restored as nearly as possible to the state in which they existed at the commencement of the term hereof, all at the sole cost and expense of the Tenant.

(f) The Tenant accepts the demised premises in such condition as they may be at the time of delivery, knowing the condition thereof and agreeing that the Landlord has made no representation, warranty or agreement with respect thereto.

Section 6.04: Changes and Alterations

(a) Except as elsewhere specifically permitted herein, the Tenant shall not make or permit to be made any replacements, alterations, additions, changes, substitutions or improvements on or to the demised premises, without first obtaining the written approval of the Landlord thereto, which the Landlord agrees not to unreasonably withhold provided that the Tenant is not in default hereunder and that such changes and alterations are in reasonable conformity with the demised premises as originally constructed or as permitted to be changed hereunder.

(b) Before requesting the Landlord's approval, the Tenant shall submit or cause to be submitted in duplicate to the Landlord detailed drawings, elevations (where applicable), specifications (including materials to be used), location (where applicable) and cost estimates of such proposed alterations, one of which copies may be retained by the Landlord.

(c) Such alterations shall meet the requirements of all municipal, provincial, federal and other governmental or other authorities, of the fire insurance underwriters and of the mortgagee, if any.

(d) The Tenant covenants and agrees that any alterations or other additional work once begun shall be prosecuted with reasonable diligence.

Section 6.05: Nuisance

The Tenant shall not do or omit upon the demised premises, or permit to be done or omitted, anything which shall be or result in a nuisance.

ARTICLE VII

GOVERNMENTAL AND OTHER REGULATIONS

Section 7.01: Compliance with Governmental and Other Regulations

The Parties covenant that they will comply with all provisions of law, including, without limitation, federal and provincial legislative enactments, municipal zoning and building by-laws and any other governmental or municipal regulations which relate to the demised premises and the making of any repairs,

replacements, alterations, additions, changes, or substitutions according to their respective responsibilities and operations hereunder. The Parties covenant to comply with all police, fire and sanitary regulations imposed by any federal, provincial or municipal authorities or made by fire insurance underwriters, and to observe and obey all governmental and municipal laws, by-laws, regulations and other lawful requirements according to their respective responsibilities and operations hereunder governing the conduct of any business conducted on the demised premises.

ARTICLE VIII

INSPECTION

Section 8.01: Inspection and Exhibition by the Landlord

(a) The Landlord, its engineers, agents and employees shall have the right to enter on the demised premises at any reasonable time for the purposes of

(i) inspection and for ascertaining the condition or state of repair thereof; and

(ii) for verifying that the provisions of this Lease are being complied with.

ARTICLE IX

INDEMNITY

Section 9.01: Exemption of Landlord from Liability and Indemnity by Tenant

(a) The Landlord shall not be liable or responsible in any way for personal or consequential injury of any kind whatsoever that may be suffered or sustained by the Tenant or any person who may be upon the demised premises or for any loss, theft, damage or injury to any property upon the demised premises however caused. The Tenant shall indemnify the Landlord against all claims by any person arising from the operation of the improvement or any defect or want of repair therein or any want of maintenance thereof or anything done or omitted to be done on the demised premises or any other thing whatsoever related thereto (except for any claim arising from the negligent act or omission of an officer, employee or servant of the Landlord while acting within the scope of his duties or employment) whether arising from any breach or default or from any negligence by the Tenant, their tenants, agents, contractors, employees, invitees or licencees or from any accident, injury or damage or any other cause whatsoever related thereto; and such indemnity shall extend to all costs, legal fees, expenses and liabilities which the Landlord may incur with respect to any such claim. This clause shall be subject to the provisions of Section 5.01 hereof.

(b) The Tenant covenants and agrees to indemnify and save harmless the Landlord of and from any and all manner of claims, damages, loss, costs and charges whatsoever occasioned to, or suffered by, or imposed upon the Landlord or its property, either directly or indirectly, in respect of any matter or arising out of the Tenant's occupancy, or use of the premises hereby demised, or out of any operation in connection therewith, or in respect of any accident, damage or injury to any person, animal, or thing by, from or on account of the same, but only if such claims, damages, loss, costs or charges aforesaid are caused by or arise out of the negligence of the Tenant, its successors and assigns, or the improper use of the said premises by the Tenant.

ARTICLE X

ASSIGNMENT AND MORTGAGING

Section 10.01: Assignment

The Tenant shall not assign or sublet without leave,

such leave not to be arbitrarily or unreasonably withheld. Notwithstanding the foregoing, the Landlord shall grant such leave in the case of an assignment to the Hydro Electric Commission of Thunder Bay or to Ontario Hydro.

Section 10.02: Mortgaging

The Landlord shall grant leave to the mortgaging of this Lease in the case of bona fide arms length mortgages granted by the Tenant for the purpose of financing the operations to be carried on the demised premises.

ARTICLE XI

OVERHOLDING

Section 11.01: Overholding

It is agreed that if upon the determination of this Lease by passage of time, the Landlord permits the Tenant to remain in possession of the demised premises and accepts rent in respect thereof, a tenancy from year to year or otherwise shall not be created by implication of law, and the Tenant shall be deemed to be a monthly tenant only at a rental computed as hereinbefore provided, and all the terms and conditions hereof, so far as applicable, shall apply to such monthly tenancy.

ARTICLE XII

NOTICE

Section 12.01: Notice

Any notice in writing required or permitted to be given to the Landlord hereunder shall be sufficiently given if delivered to the Clerk of the Landlord personally or mailed by registered mail, postage prepaid, addressed to -

The Corporation of the
City of Thunder Bay
Land Management Department
City Hall, 500 Donald Street
Thunder Bay, Ontario
P7C 5V3

Any such notice mailed as aforesaid shall be deemed to be given to the Landlord on the second normal business day following the date of such mailing.

Any notice in writing required or permitted to be given to the Tenant hereunder shall be sufficiently given if delivered to an Officer of the Tenant personally or mailed by registered mail, postage prepaid, addressed to -

Robert Whiteside
203 County Boulevard
Thunder Bay, Ontario
P7A 7P3

Any such notice mailed as aforesaid shall be deemed to be given to the Tenant on the second normal business day following the date of such mailing.

ARTICLE XIII

MISCELLANEOUS

Section 13.01: Special Conditions

The Parties covenant and agree that the special conditions annexed hereto as Schedule "B" shall form part of this Lease and shall be binding upon the parties hereto.

Section 13.02: Remedies to be Cumulative

It is expressly understood and agreed that the remedies of the parties under this Lease are cumulative and the exercise by a party of any right or remedy for the default or breach of any term, covenant, condition or agreement herein contained shall not be deemed to be a waiver of or to alter, affect, or prejudice any other right or remedy or other rights or remedies, to which such party may be lawfully entitled for the same default or breach; and any waiver by either party of the strict observance, performance or compliance by the other of or with any term, covenant, condition or agreement herein contained, or any indulgence granted by one party to the other shall not be deemed to be a waiver of any subsequent default or breach by such party, nor entitle such party to any similar indulgence theretofore.

Section 13.03: Relationship of Parties

It is understood and agreed that the provisions contained in this Lease shall not be deemed to create any relationship other than that of Landlord and Tenant as to the demised premises.

Section 13.04: Time of Essence

Time shall be of the essence of this Lease, save as herein otherwise specified.

Section 13.05: Impossibility of Performance

It is understood and agreed that whenever and to the extent that the Landlord shall be unable to fulfil, or shall be delayed or restricted in the fulfilment of any obligation hereunder, in respect of the supply or provision of any service or utility or the doing of any work or the making of any repairs by reason of being unable to obtain the material, goods, equipment, service, utility or labour required to enable it to fulfil such obligation or by reason of any statute, law or order-in-council, or any regulation or order passed or made pursuant thereto by reason of the order or direction of any administrator, controller or board, or any governmental department or officer, or other authority, or by reason of not being able to obtain any permission or authority required thereby, or by reason of any other cause beyond its control whether of the foregoing character or not, and the Landlord shall be relieved from the fulfilment of such obligation and the Tenant shall not be entitled to compensation for any inconvenience, nuisance or discomfort thereby occasioned.

Section 13.06: Applicable Law

This Lease shall be construed and interpreted in accordance with the laws of the Province of Ontario.

Section 13.07: Amendment

This Lease may not be modified or amended except by an instrument in writing of equal formality herewith executed by the parties hereto or by their successors and assigns.

Section 13.08: Binding Effects

It is further agreed and declared that these presnets shall extend to, be binding upon and enure to the benefit of the parties hereto and their respective successors and assigns as limited in this Lease.

Section 13.09: Counterparts

This Lease may be executed in several counterparts each of which when executed by the parties shall be deemed to be an original and such counterparts shall together constitute one and the same instrument.

SCHEDULE "A"

FIRSTLY:

Part of Lot 7, Herrick's Survey
Parts 3, 4, 7 and 8, Reference Plan 55R-7191
City of Thunder Bay, Township of McIntyre
District of Thunder Bay

SECONDLY:

Part of Lot 8, Plan 805
Parts 1, 5 and 6, Reference Plan 55R-7191
City of Thunder Bay, District of Thunder Bay

THIRDLY:

Part of the Original Road Allowance along the Current
River in front of Lot 7, Herrick's Survey, Part 2,
Reference Plan 55R-7191, City of Thunder Bay, Township
of McIntyre, District of Thunder Bay

SCHEDULE "B"

SPECIAL CONDITIONS

I REGISTRATION OF THIS LEASE

1. The Parties agree that this Lease shall not be registered unless the Tenant provides a Description Reference Plan of the demised premises at its sole cost and expense.

II CONSTRUCTION OF MINI HYDRO FACILITY

1. Plans Required

(a) The Tenant shall, at its sole expense, produce plans and specifications prepared by a professional engineer qualified to practice in Ontario showing all details of the proposed hydro electric generation project. Without limiting the generality of the foregoing, the plans shall also show:

(i) All boundaries and dimensions of the lands hereby leased.

(ii) The location and dimensions of all buildings, structures and uses proposed on the said lands.

(iii) The location and dimensions of all yards, parking areas, loading spaces, driveways and roadways.

(iv) The locations of any proposed lighting facilities lighting the parking area of the project.

(v) Any proposed grading or change in elevation or contours of the said lands.

(b) Before commencing construction of any portion of the said project, the Tenant shall obtain the Landlord's approval of such plans, such approval not to be unreasonably withheld.

2. Control, Supervision of Construction and Development

(a) Before construction commences on any portion of the work, the Tenant shall provide evidence satisfactory to the Landlord's Auditor that he has financing arranged in order to complete the construction of the project. The Landlord's Auditor shall give to the Landlord an opinion as to the availability of such financing but in his report will not include the details thereof. The Tenant shall also lodge with the Landlord a copy of a signed agreement with Thunder Bay Hydro, wherein Thunder Bay Hydro agrees to purchase the power produced by the Tenant on the lands noted herein. The Tenant shall also lodge with the Landlord copies of the approvals of all agencies whose approval is required for the project to proceed.

(b) In the construction of facilities and the performance of its obligations under this Agreement, the Tenant shall observe and conform with all Municipal, Provincial and Federal laws and regulations applicable thereto and shall save the Landlord harmless from any breach thereof.

(c) The site will be available to the Landlord's Engineer or his representative at all times during construction for inspection of said construction to satisfy him the said construction has taken place as laid out in the drawings submitted as part of this Agreement. Any alterations or deviations from said drawings will only be made with the approval of the Landlord, such approval not to be unreasonably withheld.

(d) Any approval of the Landlord hereunder may be given by the Landlord's Engineer or by such other professional engineer as the Landlord may from time to time designate.

3. Construction Liens

The Tenant shall throughout the course of construction of the project at its own cost and expense cause any and all construction liens, certificates of action, and other liens for labour, services or materials alleged to have been furnished to or done or performed on or in respect of the demised premises or to have been charged by the Tenant on its behalf, at the demised premises upon which it has agreed to construct the project as hereinbefore provided and which construction liens, certificates of action and other liens may be registered against or otherwise affect such demised premises to be paid, satisfied, released, cancelled and vacated within thirty (30) days after the Landlord shall send to the Tenant written notice by registered mail of any claim for such lien. Provided, however that in the event of a bona fide dispute by the Tenant of the validity or correctness of any claim for such lien, the Tenant shall not be bound by the foregoing but shall be entitled to defend against the same in any proceedings brought in respect thereof after first paying into Court the amount claimed and such costs as the Court may direct and registering all such documents as may be necessary to discharge such lien or certificate of action, or providing such other security in respect of such claim as will result in the discharge of such lien, provided always that neither the demised premises nor any part thereof, nor the Tenant's interest therein shall thereby become liable to forfeiture or sale.

4. Facilities and Matters to be Provided

(a) Without restricting the generality of the other provisions of this Lease, it is hereby agreed for greater certainty that:

(i) The Tenant shall supply and install the necessary pipe connection from the gate-house to the generating station and from the generating station to the stream bed of the Current River and without limiting the generalities of the foregoing shall include all fittings, connections and valves necessary to comply with the requirements of this Agreement.

(ii) The Tenant shall supply and install a hydro generating station to the satisfaction of Thunder Bay Hydro and Ontario Hydro and including all electrical connections and safety requirements as detailed in the plans required to be submitted hereunder.

(iii) The Tenant shall provide protection around the intake to the gate-house on the Boulevard Lake side of the dam such as booms, danger signs and trash or bar grates as may be required to protect the public and as shown on the plans required hereunder.

(iv) The Tenant shall install control systems and warning systems to maintain the water levels of Boulevard Lake within the limits specified in this Agreement or as may be specified by the Landlord, from time to time, as it deems necessary and advisable in its sole discretion.

(v) The Tenant shall supply and install the necessary wires and poles to connect the electrical output of the generating facility to the existing Thunder Bay Hydro Grid System in accordance with the plans required hereunder.

(vi) The Tenant will construct and maintain in a safe condition and good state of repair, a roadway access to the lands and a parking lot as required in accordance with the plans required hereunder.

(vii) The Tenant may erect and maintain signs to advertise the facility on the lands, subject to the approval of the Manager of Parks and Recreation of the Landlord or such other person as the Landlord may from time to time designate, such

signs to be maintained at all times in good condition and repair, and to be in compliance with the municipal by-laws applicable thereto.

(viii) The Tenant shall restore the lands subject to this Lease, to the extent that the same is reasonably practicable, to the state thereof which existed as at the commencement of the term of this Lease and to the satisfaction of the Landlord's Manager of Parks and Recreation or such other person as the Landlord may designate. Without restricting the generality of the foregoing, the Tenant shall perform all work required to stabilize the river bank made necessary by the construction, operation or removal of the project, as may be reasonably required by the Landlord from time to time, including such work as may be necessary during the course of construction as the said Manager may require.

5. Performance Guarantee

(a) Before the commencement of any construction hereunder, the Tenant shall deposit with the Landlord cash or a letter of credit in a form to be approved by the Landlord in the amount of \$7,000.00 for the purpose of removing or burying anything constructed or placed upon the demised premises in the event that the project is not constructed and installed in accordance with this Agreement. The cash portion, if any, shall be deposited in an interest bearing account and any interest accrued upon the deposit shall be paid to the Tenant upon the release of such security.

(b) The said security will be released fourteen (14) days after the completion of construction of the project.

6. Blasting

(a) Before any blasting operation is undertaken, the Tenant shall engage the services of an expert in the field to give advice as to type and spacing of drill holes, the type and strength of blasting materials, the timing of charges and the monitoring required to assure that vibrations levels are not damaging. The Tenant will be responsible for pre-construction surveys and for monitoring during blasting. All blasting work shall be done by qualified explosives workmen.

(b) The Tenant shall notify the Landlord's Engineer of the name, qualification and previous experience of all workmen who will be performing blasting work. No workmen shall engage in any blasting work until their qualifications are approved by the Landlord's Engineer.

(c) The Tenant shall give the Landlord's Engineer 48 hours notice before doing any blasting work.

III WATER LEVEL OF BOULEVARD LAKE

1. The Landlord reserves the right to maintain the level or to adjust the level of Boulevard Lake. The Landlord will give one (1) week notice to the Tenant of its intentions to regulate lake levels in accordance with the following general operating procedure. The amount of time taken to achieve the intended lake level will be dependent on prevailing precipitation and run-off conditions.

(a) The normal summer level of Boulevard Lake in the period June 1st to September 30th is set as 211.80 metres elevation.

(b) The normal winter level of Boulevard Lake during the period November 1st to March 30th is set at 210.34 metres elevation.

The summer level for recreation purposes can be lowered from the normal summer level by the maximum of 1 metre and raised partially or totally to the normal summer level.

(d) The water level of Boulevard Lake can be lowered totally for up to two (2) weeks for annual maintenance if necessary.

(e) The water level of Boulevard Lake during the spring run-off season and during major storms will fluctuate depending on weather conditions. In cases of major storms, the Landlord may change the water level of Boulevard Lake, giving notice only to the extent practicable in the circumstances.

(f) The water level of Boulevard Lake may be completely drained during major maintenance construction or emergencies for extended periods when these matters may become necessary.

~~(g) The Tenant shall maintain the Lake surface free from debris by allowing water to spill over the spillway daily during the swimming season.~~

2. Control of Water Level of Boulevard Lake

The Tenant will provide facilities which may be located in the gate-house to continuously record the level of water in Boulevard Lake and shall conduct all its operations such that the water level of the lake is no more than 0.15 metres above or below the specified level of the lake for that time. The Tenant shall cease operations during such periods of time when the water levels are not within the said specified limits. The Tenant will incorporate an alarm system connected by telephone line to a twenty-four (24) hour answering service. The answering service will contact the Bare Point Water Treatment Plant Operator or any other designated person of an abnormal operating situation of the generating facility.

IV DAM AND GATE-HOUSE

1. (a) The Tenant shall not do any work, make any change or do anything to alter the dam, the gate-house, the stop logs or spillway on the dam.

(b) The Landlord may, but shall not be bound to, perform work and effect alterations and improvements on the dam, the gate-house, the spillway and other facilities as may be requested by the Tenant, and at the cost of the Tenant. All costs of such works and maintenance of such works will be at the expense of the Tenant.

(c) In the case of the stop logs, the Landlord will perform work at the reasonable request of the Tenant provided that:

(i) The Tenant shall obtain from qualified consultants specifications and other details as to the manner in which the work is to be performed; and

(ii) The Tenant shall, before the Landlord incurs any cost in connection with such work, place the Landlord in funds to the full amount of performing the same so that the work is carried out without any cost whatsoever to the Landlord and without the Landlord incurring any debt or liability in connection therewith.

(d) The Tenant shall have access to the gate-house from time to time in the company of an employee of the Landlord unless the Landlord's Engineer determines that it is not necessary for the Tenant to be so accompanied.

V LANDLORD NON-LIABILITY

1. (a) The Landlord will not be liable for any loss of revenue or damage to the Tenant due to action of the Landlord in operating the dam to provide lake levels and flows through the dam as the Landlord may deem consistent with providing recreation activities on Boulevard Lake, with maintaining the structural integrity of the dam or with providing flood control on the Current.

River. In case of failure of the dam the Landlord accepts no liability for loss of revenue or damage which may be caused to the Tenant.

(b) The Landlord will not be liable for any loss of revenue or damage to the Tenant due to low volume flow in the Current River.

(c) Without restricting the generality of the foregoing, the Landlord shall not be liable for any damages sustained by the Tenant in the event that the Landlord, in response to an emergency and acting for the protection of the dam and/or other property and/or the lives, safety and property of the public increases the flow of water over the dam with the foreseen result that such damage to the Tenant will occur.

VI

ACCESS

1. (a) The Tenant will not have sole access to the said lands outlined in this Agreement. The Landlord may conduct activities as it may deem desirable that are not in conflict with the Tenant's operation.

(b) The Tenant shall have the right of access to the demised premises over the roadway hereinbefore referred, together with the Landlord and such others as the Landlord may from time to time permit.

VII

CANCELLATION OF AGREEMENT

1. In addition to any of its other rights of termination, the Landlord may terminate this Lease in the following events:

(a) In the event that the Tenant has not obtained all approvals necessary for the construction of the project within one (1) year after the commencement of the term hereof.

(b) In the event that construction having a value of not less than \$200,000.00, as determined by the Landlord, acting reasonably, has not been completed within two (2) years after the commencement of the term hereof.

(c) In the event that the mini hydro facility is not completely constructed within four (4) years after the commencement of the term hereof.

(d) In the event that the Tenant ceases or substantially ceases to operate the mini hydro facility for a period of one (1) year. This shall not apply where:

(i) such cessation has occurred because of actions of the Landlord in preventing the Tenant's operations, except where the Landlord has done so as a result of a default of the Tenant hereunder; or

(ii) where such cessation has occurred for the purpose of effecting repairs and such repairs have been the subject of a bona fide delay because of the unavailability of equipment required therefor.

VIII

EMERGENCIES

1. In addition to the particular rights of the Landlord relating to emergencies more specifically set out herein, the Landlord shall have the right to require the Tenant to cease operations, or any aspect thereof, where it is necessary to do so for the protection of persons and property, and the Landlord shall be obliged in such cases to give notice only to the extent practicable in the circumstances.

IX

INSURANCE ADJUSTMENT

1. At the commencement of each five year period during the term hereof, beginning with the commencement of the sixth year of the term hereof, the amount of liability insurance referred to in Section 5.01 of this Lease shall be adjusted so that the amount of such insurance for each such five year period shall bear the same ratio to the initial amount as the Consumer Price Index (rounded to the nearest two decimal places) published by Statistics Canada for such date bears to the level thereof as at the date of the commencement of the term of this Lease. In the event that the said Index is not published as at any such date, the most recent published index level during the six months prior thereto shall be used in such calculation. In the event that such Index ceases to be published, a similar index selected by the Landlord shall be used for the purposes of such calculation.

X

PERIOD OF OPERATION

Notwithstanding anything elsewhere herein contained, the mini-hydro generating facility shall not be operated and, in particular, no water shall be drawn from Boulevard Lake, during the months of July and August."

XI

BERMING OVER PIPE

1. Within five (5) years from the date of the commencement of the term hereof, the Tenant shall completely berm and landscape the pipe from the dam to the generator to the satisfaction of the City."