

APPENDIX A
TERMS OF REFERENCE

1149377 Ontario Limited
The Ontario Ministry of Natural Resources
The Town of Blind River

**Blind River
Water Management Plan
Terms of Reference**

February 2003

P14645.00

Acres International Limited
Niagara Falls, Ontario

Table of Contents

List of Tables List of Figures

1	INTRODUCTION.....	1
1.1	BACKGROUND.....	1
1.2	WATER POWER COMPANIES AND FACILITIES.....	1
1.2.1	1149377 Ontario Limited.....	1
1.2.2	Town of Blind River.....	2
1.3	MNR WATER CONTROL STRUCTURES.....	2
1.4	PRESENT WATER LEVEL AND FLOW MANAGEMENT.....	2
1.5	LEGISLATIVE AND POLICY CONTEXT.....	5
2	PLAN GOAL AND PRINCIPLES.....	7
3	STEERING COMMITTEE AND PLANNING TEAM.....	9
3.1	STEERING COMMITTEE/PLANNING TEAM.....	9
3.2	ADVISORS.....	9
4	ROLES AND RESPONSIBILITIES.....	11
4.1	1149377 ONTARIO LIMITED.....	11
4.2	MINISTRY OF NATURAL RESOURCES.....	11
4.3	TOWN OF BLIND RIVER.....	12
4.4	STEERING COMMITTEE/PLANNING TEAM.....	12
4.5	RESOURCE MANAGEMENT ADVISORY COMMITTEE.....	13
4.6	DECISION-MAKING/DISPUTE RESOLUTION.....	13
5	SCHEDULE FOR WMP DEVELOPMENT.....	15
6	APPROVAL OF THE TERMS OF REFERENCE.....	17
7	REFERENCES.....	19

Appendix A - Water Level Data (Holla, 1994)

Appendix B - Water Management Plan, Generic Table of Contents

List of Tables

Number	Title
1	Average Monthly Flows in the Blind River
2	Return Period Peak Flows in the Blind River Watershed

List of Figures

Number	Title
1	Study Area

1 Introduction

The Terms of Reference (TOR) were prepared in accordance with the Ontario Ministry of Natural Resources' (MNR) "Water Management Planning Guideline for Waterpower" (May 2002).

1.1 Background

The Blind River originates from a number of small lakes approximately 42 km north of the Town of Blind River, Ontario. The river flows southwesterly through a chain of small lakes and watercourses until it eventually enters the northwest end of Matinenda Lake, the largest lake in the watershed (see Figure 1). Prior to discharging into the Blind River, and subsequently Chiblow Lake, the second-largest lake in the watershed, flow out of Matinenda Lake is regulated by a water control dam owned and operated by MNR. Outflow from Chiblow Lake passes through a series of small lakes and two hydroelectric generating stations prior to flowing through the Town of Blind River, where the last dam and generating station are situated. At this location, the Blind River drains into the North Channel of Lake Huron.

1.2 Water Power Companies and Facilities

There are three hydroelectric facilities on the Blind River, two of which are owned by 1149377 Ontario Limited, and operated by Acres International Limited (Acres) (Chiblow and Scarfe Lake generating stations) while the other is owned by the Town of Blind River.

1.2.1 1149377 Ontario Limited

The company owns two run-of-river hydroelectric generating stations on the Blind River, which it purchased in 1996 from an ownership group that included Algonquin Power Systems Inc. Acres International Limited (Acres) provides engineering and consultation services for these structures under contract.

The Chiblow Lake generating station (GS) is located near the outflow of Chiblow Lake, approximately 17 km northwest of the Town of Blind River. This 1450-kW (1.45-MW) station was constructed in 1992-1993, and consists of a concrete dam (owned by MNR and operated by Acres), and a 580-m long, steel overland penstock, which leads to the GS. The powerhouse contains a single turbine with a rated flow capacity of 13.0 m³/s. Discharge from the station passes into the northern end of High Lake.

The Scarfe Lake GS is located at a natural steep outlet from Canoe Lake (also known as Scarfe Lake). This 2000-kW (2.0-MW) station, constructed in 1986 to 1987, is approximately 13 km north of the Town of Blind River. The plant consists of a concrete dam

with three spillway bays, a 19-m long overflow section and two intakes connected to steel penstocks, which run approximately 150 m to the powerhouse. The powerhouse contains two Francis turbines, each with a rated flow of 5.2 m³/s, that discharge into Cataract Lake.

1.2.2 Town of Blind River

The Town of Blind River operates one hydroelectric GS on the Blind River, equipped with two 50-kW induction generators. This facility is located within the Town of Blind River approximately 300 m upstream of the Blind River outlet into the North Channel of Lake Huron. The hydro station utilizes head potential created by the Blind River dam, which is owned by MNR and operated by the municipality.

1.3 MNR Water Control Structures

The MNR owns three water control structures in the Blind River watershed—the Matinenda Lake dam, the Chiblow Lake dam and the Blind River dam. The Matinenda Lake dam is located at the approximate midpoint of the 1-km long channel separating the outlet of Matinenda Lake and the head of Chiblow Lake. The dam consists of two identical stop log sluiceways, each equipped with a total of four stop logs, flanked by one 28.8-m long spillway.

The Chiblow Lake dam, originally constructed in the 1950s, is a concrete dam that consists of two centrally located spillways equipped with wooden stop logs, with wing walls extending to shore on both sides of the spillways. The easternmost spillway discharges through another stop log-equipped bay and then directly into the Chiblow Lake GS intake pipe. While the dam is owned by MNR, SG-Acres operates the structure according to the defined operating procedure for the Chiblow Lake GS.

The Blind River dam is located near the outlet to the North Channel. This dam was originally built in 1930, and was reconstructed in the 1970s. The Town of Blind River operates a small hydroelectric generating station, which is situated in the east control gate of the dam. This structure affects head pond water levels upstream to and including Lake Duborne.

1.4 Present Water Level and Flow Management

The four dams in the Blind River watershed are generally operated according to procedures identified in the “Blind River Watershed Study” (MNR, 1994). The dams are operated for a number of purposes, including power production, spring flood control, fisheries protection, water level control and recreation.



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Figure 1
Blind River Water Management Plan
1149377 Ontario Ltd.
Study Area



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Historical water level ranges for Matinenda Lake (1974-1993), Chiblow Lake (1975 to 1992), Duborne Lake (1975-1993) and the Blind River upstream from the Blind River Dam (no years provided) are presented in Appendix A.

The drawdown on Chiblow Lake is completed by the beginning of October to allow for lake trout spawning, which is usually completed by the beginning of November. It is important to keep the lake above the October drawdown level over the winter to prevent the exposure of eggs from lake trout that have spawned on the shallow shoals.

Table 1 presents the average monthly outflows from Matinenda and Chiblow Lakes, while Table 2 presents peak flows for varying return periods at several locations throughout the Blind River watershed.

1.5 Legislative and Policy Context

MNR has the legislative mandate for waterpower development and operation of waterpower facilities (dams and powerhouses) under the Lakes and Rivers Improvement Act (LRIA) and under the Public Lands Act. In December 2000, the LRIA was amended to establish the statutory authority for the Ministry to order the preparation of a water management plan under Section 23(1.1) as follows:

“Where a dam or other structure or work has been heretofore or is hereafter constructed on a lake or river and the Minister considers it necessary or expedient for the purposes of this Act, the Minister may order the owner of the dam or other structure or work to prepare a management plan for the operation of the dam or other structure or work in accordance with guidelines approved by the Minister and to operate the dam or other structure or work in accordance with the plan.”

In addition, the document “Beyond 2000, Ministry of Natural Resources Strategic Directions” (MNR, 1999) sets out the directions, goals and targets of MNR that guide sustainable resource management in Ontario.

Several federal and provincial fisheries policies also provide strategic direction (e.g., the federal Policy for the Management of Fish Habitat (DFO, 1986), Canada’s Policy for Recreational Fisheries (DFO, 1987) and the Strategic Plan for Ontario Fisheries (MNR, 1992).

Table 1

Average Monthly Flows in the Blind River

Month	Flow (m ³ /s)	
	Matinenda Lake	Chiblow Lake
January	5.5	6.2
February	5.0	6.0
March	6.2	7.5
April	16.6	19.2
May	16.3	19.0
June	9.0	10.3
July	5.7	6.0
August	3.5	4.0
September	3.8	4.3
October	5.5	6.5
November	7.3	8.7
December	7.0	8.0

Source: Chiblow Power Approvals Package (as quoted in Holla, 1994).

Table 2

**Return Period Peak Flows
in the Blind River Watershed
(m³/s)**

Location	2-Year	5-Year	25-Year	100-Year	Timmins Storm
Upstream of Matinenda Lake	13	24	46	68	281
Matinenda Lake Outlet	0.4	0.7	1.0	1.8	14
Chiblow Lake Outlet	0.4	0.6	0.9	1.2	6
Inflow to Canoe Lake	30	38	52	64	123

Source: Proctor and Redfern (1993).

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” (MNR, 2002).

The following principles, as defined in Section 4.0 of the “Water Management Planning Guideline for Waterpower” (MNR, 2002), will guide planning through the preparation, review, approval and implementation of a water management plan.

- Maximum Net Benefit to Society
- Riverine Ecosystem Sustainability
- Planning Based on Best Available Information
- Thorough Assessment of Options
- Adaptive Management
- Timely Implementation of Study Findings
- Aboriginal and Treaty Rights
- Public Participation.

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4 Roles and Responsibilities

It is agreed that the water management plan for the Blind River system will be prepared mutually by MNR (Blind River), the main power producer on the system (1149377 Ontario Limited) and the Town of Blind River, with input from other stakeholders in the area.

4.1 1149377 Ontario Limited

Specific roles and responsibilities of 1,173,403 Ontario Limited, as represented by Acres, are as follows:

- Provide a co-chair for the Steering Committee/Planning Team.
- Assist in preparing the Terms of Reference for MNR approval.
- Assist MNR in preparing Sections 5, 9, 10, 11, and 12 of the water management plan as outlined in the Table of Contents in Appendix B and where specific to Canoe (Scarfe) and Chiblow Lakes.
- Review comments on public notices, public consultation programs, evaluation criteria, and sections of the water management plan prepared by MNR.
- Attend Steering Committee/Planning Team meetings, public meetings and First Nation meetings.

4.2 Ministry of Natural Resources

Specific roles and responsibilities of MNR are as follows:

- Initiate the water management planning process.
- Provide a co-chair for the Steering Committee.
- Provide MNR staff for the Planning Team.
- Review/approve Terms of Reference.
- Prepare public notices, EBR notices, public consultation program, and First Nations consultation program.

- Prepare Sections 1 to 4 and 6, 7, 8, and 13 to 18 of water management plan in accordance with the Table of Contents in Appendix B.
- Lead the preparation of Sections 5, 9, 10, 11 and 12 of water management plan in accordance with the Table of Contents in Appendix B, with assistance from the other team members.
- Lead all public and First Nations consultation programs.
- Take responsibility for all ecological, compliance and enforcement monitoring programs associated with water management planning.

4.3 Town of Blind River

Specific roles and responsibilities of the Town of Blind River are as follows:

- Provide a member for the Steering Committee and Planning Team.
- Assist in preparing the Terms of Reference for MNR approval.
- Assist in preparing Sections 5, 9, 10, 11, and 12 of the water management plan as outlined in the Table of Contents in Appendix B and where specific to Duborne Lake and the lower end of Blind River.
- Review comments on public notices, public consultation programs, evaluation criteria, and sections of the water management plan prepared by MNR.
- Attend Steering Committee meetings, Planning Team meetings, public meetings and First Nation meetings.

4.4 Steering Committee/Planning Team

With reference to the “Water Management Planning Guideline for Waterpower” (MNR, 2002), the Steering Committee/Planning Team “will have the overall responsibility for ensuring that the WMP is prepared in accordance with this guideline and the terms of reference”. The role of this team will also involve the resolution of funding and staffing issues, establishment of the Resource Management Advisory Committee (RMAC), plan process review, dispute resolution, plan review, and recommending plan approval. The Steering Committee/Planning Team will meet as necessary throughout the planning process to ensure the planning process and the WMP are following in accordance with approved plans.

Specific tasks/activities to be undertaken by the team include

- developing the Plan in accordance with the roles and responsibilities noted in Sections 4.1, 4.2 and 4.3 above
- developing and implementing the public consultation process
- reviewing public and other input and addressing those issues/concerns in the plan as appropriate.

4.5 Resource Management Advisory Committee

The Resource Management Advisory Committee (RMAC) is comprised of individuals reflecting the range of water resource use and interests in the Blind River watershed. Its primary responsibility will be to provide advice and comment to the plan proponents during the water management planning process, so as to enhance the process of communicating and consulting with the public. This will include assisting the proponents in obtaining information and advice from the general public and other organizations that have a vested interest in the management of the river.

4.6 Decision-Making/Dispute Resolution

The decision-making process during plan development will be by consensus, with the Planning Team being the first point at which day-to-day decisions are made. Should the Steering Committee/Planning Team be unable to arrive at a decision regarding a particular point or issue, it will be forwarded to a more senior representative of MNR and the other participants for resolution. Again, decision-making will be by consensus at that level. Should that committee be unable to agree upon a particular issue, it will be forwarded to a Dispute Resolution Mediator, paid for by MNR. The proponent retains the right to appeal a decision by MNR or a dispute resolution mediator.

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5 Schedule for WMP Development

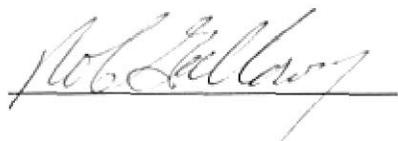
A proposed schedule for development of the WMP is shown on the next page, and identifies a series of planning steps and activities. The schedule targets completion of the plan by the end of December 2003, which is a period of approximately 18 months. This period of time is considered a reasonable target, but may be adjusted as required to address any concerns or issues arising from the public consultation aspects of the planning process.

Proposed Time Frame for Development of the Blind River Water Management Plan

Time Frame	Planning Steps
January 15, 2002 to November 30, 2002	<p>Planning Organization and Commencement</p> <ul style="list-style-type: none"> • Initiation of planning • Steering Committee/Planning Team formation • Terms of Reference Development • LRIA Order for WMP • Public Notice • PAC establishment, if required • Public consultation plan • First Nations consultation plan
December 2002 to to March 31, 2003	<p>Scoping</p> <ul style="list-style-type: none"> • ID plan objectives • Description of riverine system • Identification of issues, values, interests/data gaps • Establish monitoring program • Base case model (existing water management) • Scoping report • Consultation invitation to participate • Consultation record
April 1, 2003 to August 31, 2003	<p>Option Development</p> <ul style="list-style-type: none"> • Development/approval of options • Criteria for evaluation of options • Modeling of options • Evaluation of options (environmental/ social/economic) • Public and First Nations consultation on options • Selection of preferred option • Report on options • Consultation record
September 1, 2003 to October 31, 2003	<p>Draft WMP</p> <ul style="list-style-type: none"> • Production of draft plan • Public and First Nations consultation on draft plan • Submission of Final Plan • Standing advisory committee established
November 1, 2003 to December 30, 2003	<p>Government Review and Approval of WMP</p> <ul style="list-style-type: none"> • MNR review and approval decision • Consultation with government agencies • Public and First Nations inspection of approved plan

6 Approval of the Terms of Reference

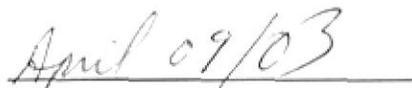
These TORs have been reviewed by the Steering Committee/Planning Team, and are hereby approved by the Minister of Natural Resources or his delegate as required by Annex A of the Water Management Planning Guidelines (2002).



MNR Regional Director

Mr. Rob Galloway

NE Region, Timmins



Date

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7 References

Fisheries and Oceans Canada. 1987. **Canada's Policy for Recreational Fisheries.**

Fisheries and Oceans Canada. 1986. **Policy for the Management of Fish Habitat.**

Holla, D. 1994. **Blind River Watershed Study - Preliminary.** Prepared for Ontario Ministry of Natural Resources. August 1994.

Ontario Ministry of Natural Resources. 2002. **Water Management Planning Guidelines for Waterpower.**

Ontario Ministry of Natural Resources. 1999. **Beyond 2000 - Ministry of Natural Resources' Strategic Directions. Corporate Affairs Branch.**

Ontario Ministry of Natural Resources. 1992. **Strategic Plan for Ontario's Fisheries – SPOF II - An Aquatic Ecosystem Approach to Managing Fisheries.**

Proctor & Redfern. 1983. **Microhydro Site Investigations.**

Appendix A

Water Level Data (Holla, 1994)

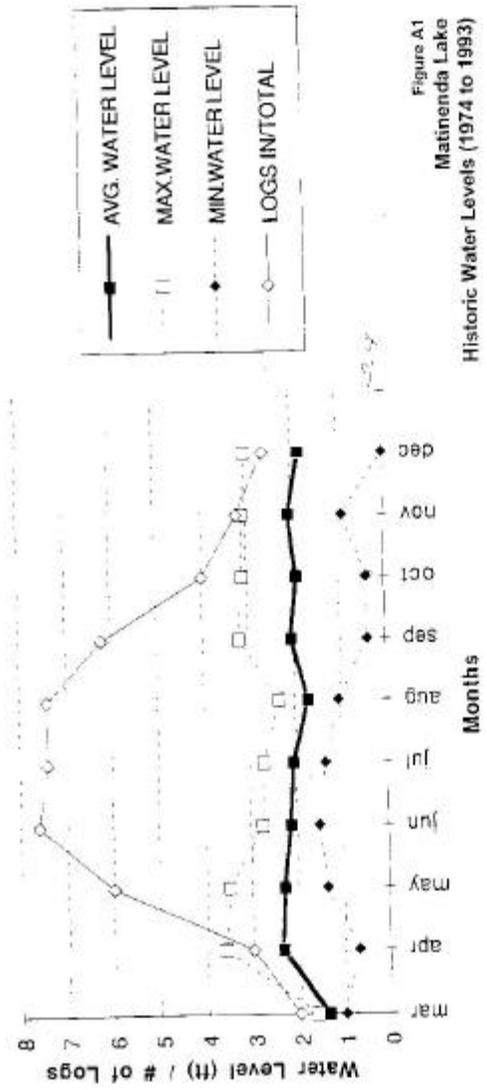


Figure A1
 Matinenda Lake
 Historic Water Levels (1974 to 1993)

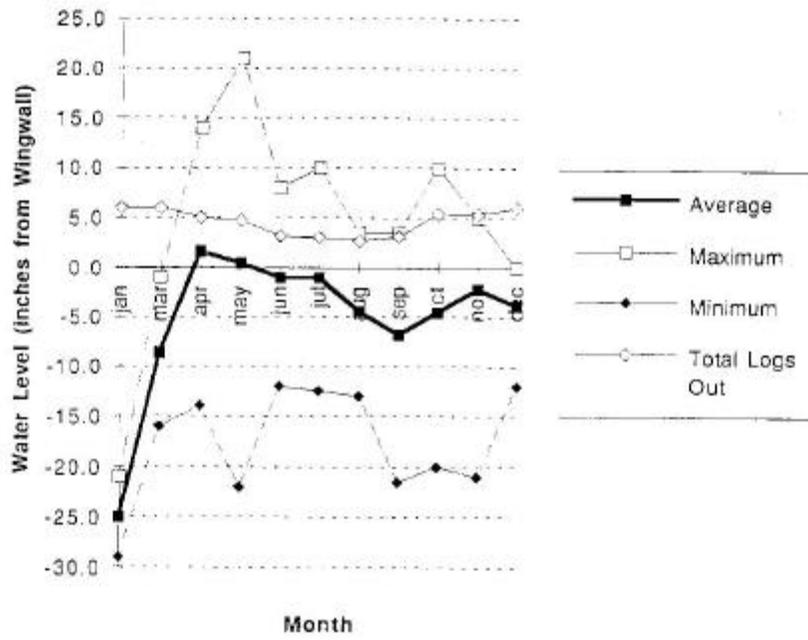


Figure A2
Chiblow Lake
Water Levels (1975 to 1992)

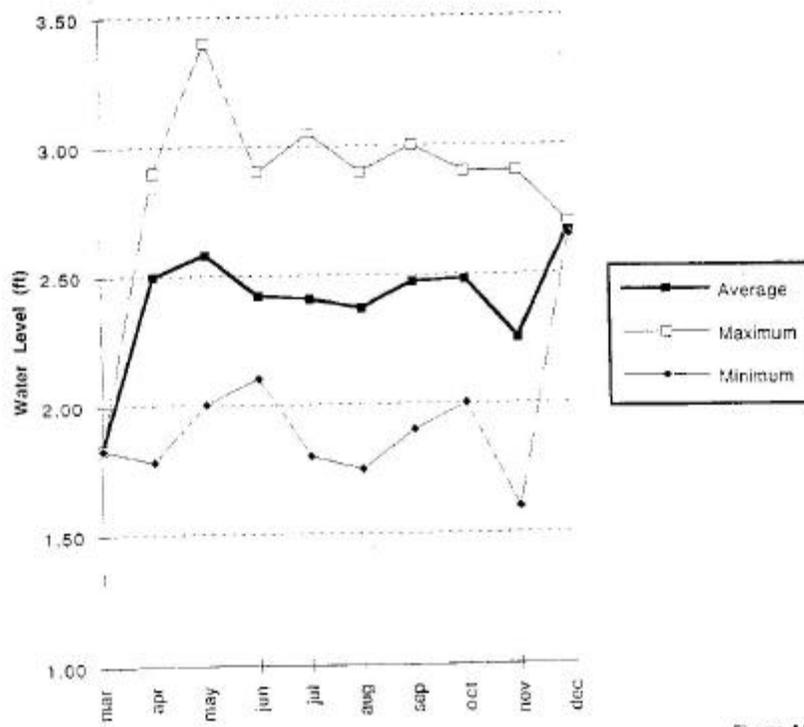


Figure A3
 Duborne Lake
 Water Levels (1975 to 1993)

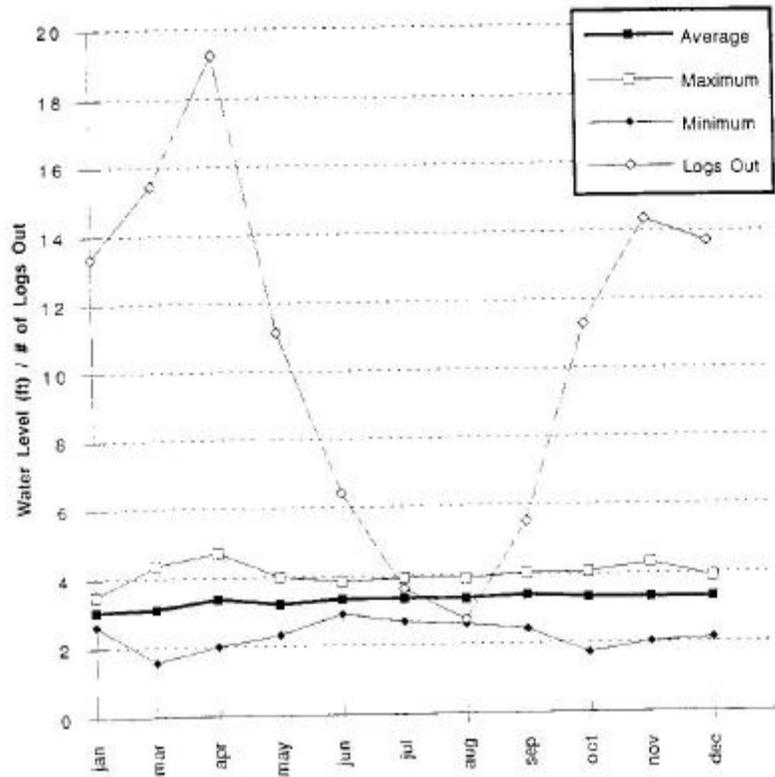


Figure A4
Blind River Dam
Historical Data

Appendix B

**Water Management Plan
Generic Table of Contents**

Appendix B: Water Management Plan Generic Table of Contents

The generic table of contents for a complex water management plan is set out below.

- 1. Approval Page**
 - Signature of Minister or delegate to approve WMP, including a declaration that MNR's Statement of Environmental Values was considered in making the decision
 - Transmittal page stating the WMP has been prepared in accordance with the guidelines and signed by the chair of the steering committee
 - If applicable, the rationale for MNR revisions made to the plan
- 2. Introduction**
 - Goal and guiding principles of water management planning
 - Terms of reference for WMP
 - Issues, resource values and interests identified through scoping
 - Plan objectives
- 3. Physical and biological description**

of riverine ecosystem (natural and existing flow regimes, bathymetry of waterbodies, sensitive natural areas, locations of natural heritage features and areas, etc.)

 - Effects of waterpower facilities and water control structures on riverine ecosystem
- 4. Socio-economic description and profile**

related to the riverine system and water management (hydroelectric power production, recreation, tourism, native values maps, information acquired through Traditional Ecological Knowledge, etc.)
- 5. Waterpower facilities and other water control structures**
 - Descriptions (physical structures, limitations, capacity, etc.)
 - Identification of current water management strategies (facilities operating regimes, minimum flow releases, sport fishing opportunities, recreation/tourism opportunities, etc.)
- 6. Issues, resource values and interests**
 - Environmental
 - Social
 - Economic
- 7. Key gaps in baseline data and information**

related to effects of water flows and levels
- 8. Baseline data collection program**
 - Original data collection program
 - Progress report on information collected and studies completed during planning
 - Remaining baseline data collection to be carried out during term of plan by companies, MNR and/or other groups
- 9. Option development**
 - The range of options considered
 - Net benefits and costs associated with each option
- 10. Methods and criteria**

used to compare and evaluate alternative operating regimes
- 11. The preferred option**

and its overall expected environmental, social, and economic effects
- 12. Description of operating**

plans for each waterpower facility and water control dam
- 13. Effectiveness monitoring program**
 - Monitoring studies identified
 - Data collection methods and protocols selected
 - Reporting timelines
- 14. Compliance monitoring program**
- 15. Provision for plan reviews, amendments, and plan renewals.**
- 16. Figures**
 - Maps of riverine ecosystem showing extent of the plan and relevant information including watershed and river cross section maps
 - Site maps for each facility and dam
 - Resource value map for riverine system

Water Management Planning Guidelines for Waterpower

17. Appendices

- Memberships of steering committee, planning committee and public advisory committee
- Terms of Reference for water management planning
- Original operating plans of facilities and dams
- Public Consultation Report
- First Nations Consultation Report
- Details on options and analysis
- Description of MNR revisions to the plan

18. Schedules

- Operating plans for each waterpower facility and control dam, including effectiveness and compliance monitoring