## June 2009 Amended June 2018





A LEVE DEPORT





Compiled by: AMEC Earth & Environmental (a division of AMEC Americas Limited)

# SEGUIN RIVER Simplified Water Management Plan



#### PARRY SOUND POWERGEN CORPORATION

#### SEGUIN RIVER SIMPLIFIED WATER MANAGEMENT PLAN

Report No.: TC036165-008

Prepared by:

#### AMEC Earth & Environmental

(a division of AMEC Americas Limited) 160 Traders Blvd East, Suite 110 Mississauga, Ontario L4Z 3K7



June 2009 (revised July 2010) Amended June 2018

# **PLAN APPROVAL**

#### **APPROVAL STATEMENT** WATER MANAGEMENT PLAN FOR WATERPOWER For the Sequin River System **District of Parry Sound, Southern Region**

**Parry Sound Power Generation Town of Parry Sound** 

#### For the 5 year period commencing on the date of approval

In submitting this plan, we confirm 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. The signing parties agree that this plan will supercede any previous operational plans and strategies.

Calvin Epps, President Parry Sound Power Generation

#### ORIGINAL SIGNED BY

Paul Borneman Town of Parry Sound

I concur 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 that this plan be approved for implementation.

#### ORIGINAL SIGNED BY

Andy Heerschap, District Manager Parry Sound District, MNR

Approved by:

#### ORIGINAL SIGNED BY

Carrie Hayward, Regional Director, Southern Region **Ontario Ministry of Natural Resources** 

AUGUST 4, 2010

date

AUGUST 21, 2009 date

date

JULY 20, 2010

date

AUGUST 3, 2010

## **DISCLAIMER**

The following disclaimers are included in compliance with the Water Management Planning Guidelines for Waterpower (MNR, 2002).

- 1. Approval of this Water Management Plan (WMP) does not relieve the owner from their responsibility to comply with any applicable legislation.
- 2. The owner must report to the Ontario Ministry of Natural Resources (MNR) all incidents where the compliance flow and water level requirements of the plan have not been met.
- 3. MNR will from time to time carry out compliance inspections of the site as provided for in section 20 of the Lakes and Rivers Improvement Act.
- 4. Nothing in this WMP precludes the Minister from making further Orders under the Lakes and Rivers Improvement Act.
- 5. In instances where, due to energy imperatives, (e.g. system reliability, demand/supply challenges etc.) the Independent Electricity System Operator (IESO) requests that the operator seek relief from certain provisions of this plan, MNR will consider those requests expeditiously. After consultation with IESO and the owner, MNR may allow short term relief from certain provisions. (An IESO/MNR/Industry Protocol will be established and documented).
- 6. In instances of unscheduled facility imperatives (e.g. emergency maintenance etc.), MNR will consider requests from the owner for temporary relief from the plan expeditiously with consideration to the relative priorities of both MNR and the owner.
- 7. Mandatory provisions of this Plan will be waived, as appropriate, when the Plan holder and MNR are requested to do so by a police agency or other recognized emergency organization.
- 8. Approval of this WMP does not provide authority to flood private or public land without the consent of the owners of the affected land.



Table of Contents

Ministry of Natural Resources and Forestry

Office of the Director Southern Region Regional Operations Division 300 Water Street Peterborough, ON K9J 3C7 Tel: 705-755-3235 Fax: 705-755-3233 Ministère des Richesses naturelles et des Forêts

Bureau du directeur Région du Sud Division des opérations régionales 300, rue Water Peterborough (ON) K9J 3C7 Tél: 705-755-3235 Téléc: 705-755-3233



March 31, 2015

Mr. Chris Litschko Bracebridge Generation 196 Taylor Road Bracebridge ON P1L 1J9

Dear Mr. Litschko:

Subject: Approval of Amendment to Extend the Term of the <u>Water Management Plans for the Bancroft Generating Station and the Sequin River</u>

This letter is to advise that the Water Management Plans for the Bancroft Generating Station and the Sequin River have been amended under Section 23.1(6) of the *Lakes and Rivers Improvement Act.* An administrative amendment was undertaken and approved March 31, 2015 to extend the term of the water management plans for an additional three years. As indicated in our earlier correspondence, this will ensure that the water management plans remain in effect while providing time for the results of the provincial review to be known (e.g. proposed changes to the requirements for the preparation, amendment and review of water management plans). The plans will now expire March 31, 2018.

Please note, specific text changes are not being proposed to the plans as a result of this amendment. Instead, this letter should be affixed to the Bancroft Generating Station and the Sequin River Water Management Plans to indicate the term of both plans have been extended to March 31, 2018.

If you have any questions, please contact Amanda McCloskey, Regional Planner, at amanda.mccloskey@ontario.ca or at 705-755-1367.

Regards,

merchiland

Jane Ireland Regional Director Southern Region

c. Vince Ewing, Bancroft District Manager, Ministry of Natural Resources and Forestry Dan Duggan, Parry Sound District Manager, Ministry of Natural Resources and Forestry



Parry Sound PowerGen Corporation Seguin River Simplified Water Management Plan

Table of Contents

Ministry of Natural Resources and Forestry

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Ressources régionales article Région du Sud Division des opérations régionales 300, rue Water Peterborough (ON) K9J 3C7 Tél: 705-755-3253 Télé: 705-755-3233



June 29<sup>th</sup>, 2018

Bryan Ingram and John Stasiuk Bracebridge Generation Ltd. 196 Taylor Road Bracebridge, ON P1L 1J9 bingram@bracebridgegeneration.com jstasiuk@bracebridgegeneration.com

Attention:

Bryan Ingram and John Stasiuk

#### Re: Notice of Seguin River Water Management Plan Amendment Approval

This letter is to inform you that Ministry of Natural Resources and Forestry (MNRF), under the authority of Section 23.1 (6) of the *Lakes and Rivers Improvement Act*, has amended the Seguin River Water Management Plan (SRWMP). An administrative amendment was undertaken by MNRF, and was approved on June 29<sup>th</sup>, 2018.

The amendment was undertaken in order to align the SRWMP with the 2016 Maintaining Water Management Plans Technical Bulletin. These changes were identified in MNRF's letter notifying of intent to amend, dated March 23<sup>rd</sup>, 2018. As this letter indicated, these changes may include:

- · Removal of WMP expiry dates, plan term and mandatory review;
- New amendment classification, processes and proponent roles and responsibilities;
- · New compliance monitoring and data reporting processes (where applicable); and
- Details of the new Implementation Report, which will summarize monitoring efforts, assess new or continued direction of Effectiveness Monitoring Plans (EMPs) (where applicable) and support adaptive management.

Additionally, as indicated, "Bracebridge Generation Ltd." has replaced "Parry Sound PowerGen Corporation" as the current proponent of the Seguin River Water Management Plan. The provisions of the SRWMP continue to apply to facilities under new ownership.

Changes as a result of this amendment are reflected in the updated (June 2018) version of the Seguin River Water Management Plan, which is attached for your records.



**Table of Contents** 

Ministry of Natural Resources and Forestry

Office of the Director Southern Region Regional Operations Division 300 Water Street Peterborough, ON K9J 3C7 Tel: 705-755-3253 Fax: 705-755-3233 Ministère des Richesses naturelles et des Forêts

Ressources régionales article Région du Sud Division des opérations régionales 300, rue Water Peterborough (ON) K9J 3C7 Tél: 705-755-3253 Téléc: 705-755-3233



If you have any further questions about this amendment, please contact Mike Poskin, Regional Renewable Energy Coordinator at <u>mike.poskin@ontario.ca</u> or (705) 755-1362.

Sincerely,

Sharon Rew Regional Director Southern Region Ministry of Natural Resources and Forestry

CC:

Dan Duggan, District Manager, Parry Sound District, MNRF Renee Bowler, Manager, Regional Resources Section, MNRF Erin Cotnam, Land Use Planning Supervisor, MNRF Mike Poskin, A/Renewable Energy Coordinator, MNRF



#### HISTORY OF AMENDMENTS

#### March 2015 Amendment

On March 31<sup>st</sup>, 2015, the Ministry of Natural Resources and Forestry (MNRF) approved an administrative amendment to the Sequin River Water Management Plan to extend the term of the plan for an additional three years.

#### March 2018 Amendment

On March 23<sup>rd</sup>, 2018, the Ministry of Natural Resources and Forestry (MNRF) approved an administrative amendment to the Seguin River Water Management Plan to extend the term of the plan for an additional six months.

#### June 2018 Amendment

On June 29<sup>th</sup>, 2018, the Ministry of Natural Resources and Forestry (MNRF) approved an amendment to the Sequin River Water Management Plan to align the plan with the approved 2016 Maintaining Water Management Plans Technical Bulletin.

The administrative amendment resulted in changes to the following sections of the plan (additional information in Appendix G):

Expiry Date	The expiry date has been removed.	
Monitoring and Reporting	Section 5.2 and 8 have been revised.	
Compliance	Section 5 has been revised.	
Amendments	Section 7.2 has been replaced.	
Implementation Reporting	Section 7.3 has been added.	

As indicated, Bracebridge Generation Ltd. has replaced Parry Sound PowerGen Corporation as the current proponent of the Seguin River Water Management Plan.



## TABLE OF CONTENTS

			Page
Lis Lis	t of Tab t of Figu	oles ures	iii iv
1	INTRO	DDUCTION	1-1
	1.1 1.2 1.3 1.4 1.5 1.6	BACKGROUND WATER MANAGEMENT PLANNING TERMS OF REFERENCE STEERING COMMITTEE / PLANNING GROUP PLAN OBJECTIVES ENVIRONMENTAL ASSESSMENT FOR MODIFICATIONS TO THE CASCADE STREET GENERATING STATION – UNIT #3	1-1 1-4 1-5 1-6 1-7 1-8
2	THE SI	EGUIN RIVER WATERSHED AND FACILTIES	2-1
3	2.1 2.2 2.3 2.4 2.5 2.6 2.7 INFOR	WATERSHED DESCRIPTION HYDROTECHNICAL FACILITIES ZONES OF INFLUENCE SITE CATEGORIZATION 2.4.1 Recommended Site Categorization SEGUIN RIVER WATERSHED RESOURCE VALUES 2.5.1 Environmentally Sensitive Features 2.5.2 Fisheries Resources 2.5.3 Wildlife Resources 2.5.4 Socio-Economic Resources SEGUIN RIVER WATERSHED ISSUES CURRENT SYSTEM OPERATION	2-1 2-2 2-4 2-7 2-7 2-7 2-7 2-8 2-10 2-11 2-11 2-11 2-15 3-1
Л			1 1
4	4.1 4.2	OVERVIEW	4-1 4-1 4-2
5	COMP	PLIANCE MONITORING PROGRAM	5-1
	5.1 5.2 5.3	OVERVIEW MONITORING AND REPORTING BY POWERGEN EXCEPTIONAL OPERATING CIRCUMSTANCES	5-1 5-1 5-2



A	MEC Earth 8	& Environmental	page i
	5.4	NATURAL VARIATIONS IN WATER SUPPLIES	5-3
6	EFFECT	TIVENESS MONITORING PROGRAM	6-1
	6.1 6.2	DATA SHARING AND COMMUNICATIONS STAKEHOLDERS / STEWARDSHIP	6-1 6-1
7	PLAN IN	MPLEMENTATION AND AMENDMENT	7-1
	7.1 7.2	OVERVIEW	7-1 7-1
	7.3 IMPI	PLAN AMENDMENT	7-1
8	OPERA	TION PLANS	8-1
9	REFER	ENCES	9-1

#### APPENDICES

APPENDIX A	- TERMS OF REFERENCE
APPENDIX B	- ACRONYMS / GLOSSARY
APPENDIX C	<ul> <li>SCOPING REPORT / OPTIONS REPORT (ON CD)</li> </ul>
APPENDIX D	- EVENT REPORTING TEMPLATE
APPENDIX E	- MNR REVISIONS TO PLAN
APPENDIX F	- PUBLIC CONSULTATION SUMMARY
APPENDIX G	- 2018 ADMINISTRATIVE AMENDMENT BACKGROUND



### LIST OF TABLES

Table #	Description
1-1	Steering Committee for the Seguin River Water Management Plan
2-1	Dams Located on the Seguin River Watershed Within the Scope of the Seguin River Water Management Plan
2-2	Dams Located on the Seguin River Watershed Outside the Scope of the SRSWMP
2-3	Zones of Influence - Preliminary Estimation of Upstream Limit
2-4	Zones of Influence - Preliminary Estimation of Downstream Limit
2-5	Review of Known Resource Attributes And Values
2-6	Natural Heritage Information Centre Data Review
2-7	Review of Seguin River Watershed Issues
5-1	Key Adjustments to Existing Operation Plans "Enforceable" Operation Plans
5-2	Key Adjustments to Existing Operation Plans "Preliminary" Operation Plans
8-1 8-2	SRSWMP – Summary, Enforceable Operating Plans SRSWMP – Summary, Preliminary Operating Plans



#### **LIST OF FIGURES**

#### Figure # Description

- 1-1 Watershed Location Map
- 1-2 Watershed Delineation and Structure Locations
- 2-1 Downstream Zone of Influence Concept
- 3-1 Sample Rule Curve



# **1.0 Introduction**

The goal of water management planning is to contribute to the environmental, social and economic well being of the people of Ontario through sustainable development of waterpower resources.





#### 1 INTRODUCTION

#### 1.1 BACKGROUND

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. Accordingly, the Ministry of Natural Resources (MNR) and the local waterpower company, Parry Sound PowerGen Corporation (PowerGen), initiated a study to review the existing operational plans (i.e., water levels and flows) for the water control structures in the Seguin River Watershed. Further, this study reviewed operating procedures, flows and associated water levels and developed a water management planning strategy that strives to meet the goal as indicated above. PowerGen retained AMEC Earth & Environmental (AMEC) to assist them in the development of the plan. Since development of this plan, Parry Sound PowerGen Corporation and Bracebridge Generation merged. Bracebridge Generation Ltd. is now the legal name of the proponent of this water management plan.

Hydroelectric power generation has occurred on the Seguin River since the late 1800's and there are presently fourteen (14) water control structures within the Seguin River Watershed. MNR and the Town of Parry Sound each own one (1) of these structures. Bracebridge Generation Ltd. owns the remaining twelve (12), of which two (2) are not operated, nine (9) are operated as multi-use reservoirs and one (1) is a generating station. Many of the dams were originally constructed in the early 1900's and remain essentially unaltered from the time of their original construction. Figure 1-1 provides a regional perspective of the location of the Seguin River Watershed, while Figure 1-2 shows the location of the various dams and other water control structures (i.e., generating station). Further information on these structures is provided in Section 2 of this report.

Many lakes in the Seguin River Watershed would not exist in their present state if it were not for the presence of dams operated by Bracebridge Generation Ltd. The creation and maintenance of these lakes has resulted in a large influx of seasonal and weekend residents and landowners to the area that provide for a major segment of the local economy. From the economic perspective of the owner, the increase in demand for recreational and other land use associated with the lakes as a focal point, has resulted in operational restrictions and a consequent diminishment in control of the overall potential power generation for Bracebridge Generation Ltd.. This water management planning effort attempts to recognize the overall resource potential represented by Bracebridge Generation Ltd.'s operation of the multiple dams within the watershed to achieve both natural and social environment benefits and the ability for Bracebridge Generation Ltd. to provide efficient renewable power to the residents of Ontario.

Virtually the entire Seguin River watershed is located within the MNR administrative District of Parry Sound, with less than 1% lying within the District of Muskoka. The entire watershed is within the Southern Region of the MNR and is administered from the MNR District Office, located in Parry Sound. The Parry Sound District office has been actively involved in the development of this water management plan (WMP).





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#### 1.2 WATER MANAGEMENT PLANNING

In 1998, the Ontario government began working toward the establishment of a competitive electricity market in Ontario with the passage of the Energy Competition Act. Prior to this Act, the government relied heavily on Ontario Hydro to oversee the operation of numerous dams and waterpower facilities. As a Crown corporation, Ontario Hydro provided a dual role as power producer, and steward of much of Ontario's water resources. Ontario Power Generation (OPG) is the successor electricity generation company to Ontario Hydro. With the opening of the electricity market and the mandated reduction in OPG's control, the need for formal rules for new and existing waterpower producers became apparent. In order to protect the public interest, and provide for long-term sustainability of Ontario's water resources, legislative changes were enacted to the *Lakes and River Improvement Act*. In particular, in June 2002, Section 23 of the *Act* was amended to insert the following clause:

#### Management Plan

23 (1.1) If a dam or other structure or work was constructed on a lake or river before the day this section came into force or is constructed on a lake or river after this section comes into force, 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 or amend, or participate in the preparation or amendment of, a management plan for the operation and maintenance of the dam or other structure or work in accordance with the regulations and with guidelines approved by the Minister.

The purpose of water management planning is to ensure that due consideration is given to all aspects of the existing ecosystem when selecting a preferred water management strategy that may encompass hydroelectric power, flood control, and natural resource management, as well as commercial, recreational, cultural and heritage activities. Accordingly, water management plans are developed through public and agency consultation in an effort to achieve a balanced plan that reflects the interests of all parties involved in the planning process. Much of the impetus for conducting water management plans has come from the Ontario government's recognition that, with a deregulated electricity sector, a new approach to the province's waterpower resources will be required (MNR, 2002). Water management plans are now a necessity for waterpower projects, and MNR has developed guidelines for the preparation of these plans (MNR, 2002). These guidelines are directed toward waterpower producers and their operations, but also recognize the need for inclusion of other non-waterpower dam operators (including MNR) in the planning process. The guidelines indicate that where non-waterpower dam owners exercise the principle control over water levels and flows, the non-waterpower dam owners and the waterpower companies will be co-lead proponents in developing the water management plan. With Bracebridge Generation Ltd. representing the only power producer in the watershed and controlling 12 of the 14 water control structures, Bracebridge Generation Ltd. is the proponent for the Seguin River Water Management Plan.

The water management planning process can respond to local circumstances and issues through the degree of plan complexity. Generally, complex water management plans will be prepared for an entire river system where there are a number of waterpower facilities or water control structures that exert significant control over water levels and flows, or with significant issues to be resolved. Water management plans can be simplified to a river section or "zone of



influence" where there are one or more waterpower facilities or water control structures with limited control over water levels and flows for the purposes of power generation and few issues to be resolved.

MNR's review of water management planning initiatives within the Seguin River Watershed concluded that a simplified approach would be appropriate, based on the following:

- The one generating station in the watershed exerts only limited control over water levels and flows
- The remaining structures are small and significant alteration of their operation is not likely
- There do not appear to be significant issues to be addressed.

The approach used for the development of the Seguin River Simplified Water Management Plan is outlined in Section 4.

#### 1.3 TERMS OF REFERENCE

The Seguin River Simplified Water Management Plan (SRSWMP) has been prepared to fulfill Section 23.1(1) of the *Lakes and Rivers Improvement Act.* The Water Management Plan will follow a Simplified Planning Process and will be prepared in accordance with the goals and principles as outlined in Section 4.0 of the *Waterpower - Water Management Planning Guidelines for Waterpower* (MNR, 2002), replaced in 2016 with the Maintaining Water Management Plans Technical Bulletin (MNRF, 2016). The following general principles to guide the preparation of the WMP include:

- WMP's should strive to maximize the net environmental, social and economic benefits derived from water level and flow management. Operating plans that reduce or eliminate adverse effects and increase net benefits, without diminishing the power generating facilities' performance, are preferred over those that would require revenues be foregone.
- Any ongoing degradation of the riverine ecosystem resulting from the manipulation of water flows and levels through the operation of waterpower facilities and associated water control structures should be identified and where feasible the WMP should seek to improve or restore the riverine system.
- Efforts should be made to collect the best available information describing technical, financial, environmental, socio-economic conditions, issues and concerns for application to the WMP.
- A thorough assessment of options for water levels and flows that includes effective application of relevant technical, environmental, social and economic considerations.
- The WMP should apply a dynamic, adaptive management process which continually strives to improve resource management in response to information that better defines effects of water level and flow management in the watershed.
- Based on information derived from application of an approved WMP, any adaptive management action should be taken in a timely manner to provide an environmental, social



and economic benefit.

- Water management planning should be undertaken without prejudice to the rights of Aboriginal people and treaty rights.
- Information should be collected using open and transparent processes.

Preparation of the Simplified Water Management Plan is in accordance with the Terms of Reference for the SRSWMP which is provided in Appendix A of this report. This Seguin River Simplified Water Management Plan has been prepared by the Steering Committee outlined below.

#### 1.4 STEERING COMMITTEE / PLANNING GROUP

The members of the Steering Committee and Planning Group for the SRSWMP project represent the organizations/agencies outlined in Table 1-1. Members of the initial project steering committee are outlined in the SRSWMP Terms of Reference in Appendix A (Section 3).

As noted previously, PowerGen requested the involvement of AMEC and Northern Ontario Power Company Limited given their water resource expertise and knowledge of other water management planning efforts elsewhere in the Province and their broad experience in the hydropower generation sector in Ontario.

 Table 1-1

 Steering Committee and Planning Group for the

 Seguin River Simplified Water Management Plan

 Parry Sound PowerGen Corporation

 Northern Ontario Power Company

 AMEC Earth & Environmental

 Ministry of Natural Resources

 Department of Fisheries and Oceans

 Town of Parry Sound

 Shawanaga First Nation

 Wasauksing First Nation

In addition to their participation in the development of the plan as Steering Committee Members, these First Nation communities were provided copies of the Scoping Report, Options Report and Draft Plan for review and comment and further opportunities to discuss the project directly with the proponent and MNR.



#### 1.5 PLAN OBJECTIVES

The Steering Committee has identified the following objectives for the SRSWMP:

- 1) Review, document and understand the water control structures operations relative to environmental, social and economic benefits;
- 2) Establish the level of control that the water control structures exercise over water levels and flows;
- 3) Determine the zones of influence of the water control structures;
- 4) Develop enforceable rule curves for all water control structures within the scope of the SRSWMP. Please note that this is a long-term objective of the SRSWMP.

Even though the Sequin River and the lakes associated with the dams have been a popular recreation area for many years and Public Utilities and/or PowerGen has been generating power at the Cascade Street location for close to a century the data that is required to fully develop the SRSWMP is insufficient. Therefore the development of enforceable rule curves for all water control structures within the scope (see Section 2.2) of the SRSWMP will be done in two phases. Phase One will be completed by the spring of 2009 and Phase Two will be completed five (5) years from the date of Plan Approval.

As an objective of this first phase of the SRSWMP operating plans for compliance and enforcement purposes will be prepared for the following structures only:

- Cascade Street Dam
- Mill Lake Dam
- Hurdville Dam
- Lorimer Lake Dam

"Preliminary", "not enforceable" operating plans describing "best management practices" have been prepared for the remaining structures based upon local datum as a component of this first phase of the SRSWMP:

- Horn Lake Dam
- Fry's Lake Dam
- Whitefish Lake Dam
- CPR Trestle Dam
- Martin Lake Dam
- Harris Lake Dam
- Haines Lake Dam

Operating plans for compliance and enforcement purposes will be developed for the "Preliminary Operating Plans" as described above for the seven dams as a component of the second phase of the SRSWMP, to be completed five (5) years from the date of Plan Approval.



- 5) Document resource values and environmental, social and economic issues within the zones of influence of the water control structures;
- 6) Establish whether a change in water control structure operation (water levels and discharge flows) would have a net environmental, social and/or economic benefit;
- 7) Preparation of a consultation summary report.

As noted previously, the system is, and has always been, operated based on professional judgement and/or operator experience. As such, and as further documented in Section 3, little information specific to water level and flow management has been formally recorded. This planning effort, therefore, provides the opportunity to understand, formalize and document the current operational plan in a manner consistent with Plan Objective #1.

#### 1.6 ENVIRONMENTAL ASSESSMENT FOR MODIFICATIONS TO THE CASCADE STREET GENERATING STATION – UNIT #3

The Cascade Street GS currently has two operational turbines. The expansion of the generating station to include a third turbine has been approved through an environmental assessment and permitting process completed in 2002-2003. Operation of the new turbine is currently not scheduled however detailed design efforts are currently underway to bring into operation the maximum capacity of the generating station. This will permit Bracebridge Generation Ltd. to enhance the hydroelectric power generation efficiency such that renewable generation capacity can be added to the existing energy sources of Parry Sound and the Province of Ontario.

Commitments relating to water level management, at the Cascade Street GS and the conditions of the associated federal and provincial approvals and permits, are outlined in the Environmental Screening Report (ESR) (AMEC, 2003) for the proposed expansion. Installation of the third turbine would enact these commitments and conditions. However, changes that may be proposed to the "approved" SRSWMP regarding stream flows and/or water levels stemming from the installation of the third turbine will require amendment to the water management plan to ensure operational consistency with the approved ESR.



# 2.0 The Seguin Watershed and Facilities

Hydroelectric power generation has occurred on the Seguin River since the late 1800's and there are presently fourteen water control structures within the watershed.





### 2 THE SEGUIN RIVER WATERSHED AND FACILTIES

#### 2.1 WATERSHED DESCRIPTION

The Seguin River Watershed is located within the Parry Sound District with less than 1% of the drainage basin located in the geographic township of Cardwell in the District of Muskoka. The headwaters are on the western slopes of the Algonquin Dome near the hamlet of Whitehall, and flow westerly for a distance of approximately 40 kilometres to Parry Sound Harbour at Parry Sound and ultimately to Georgian Bay. The watershed encompasses an area of about 102,300 hectares (1023 km<sup>2</sup>).

The Huron First Nations used the Parry Sound area as a 'holiday land' for more than 100 years. The area served as their summer hunting and fishing ground. The Ojibway First Nations established a village at the mouth of the Seguin River. They called their village "Wasauksing" which loosely translated means 'shining shore'. First Nations presence in the area continues today with a First Nations community (Wasauksing First Nation) located downstream of the Seguin River mouth on Parry Island and another (Shawanaga First Nation) located approximately 30 kilometres northwest of Parry Sound.

Parry Sound is the largest town in the area, incorporated on April 23, 1887." (Source: www.rainbowcountry.com). Today, the Town is the major commercial hub for Northeastern Georgian Bay. This centre serves a population of over 15,000 and is little more than two hours by four-lane divided highway from Toronto. The community is a prime visitor destination with a typical summer season seeing the population of the region swell to over 75,000 people, residing in many thousands of cottages in the region. There are over 100 resorts, several provincial parks, and more than a dozen marinas located in the area (www.rainbowcountry.com).

According to a 1997 survey conducted by the Parry Sound Area Community Business and Development Centre (CB&DC), over 8000 people are employed in the Parry Sound area in a variety of areas including retail, commercial, industrial and institutional sectors. Of these about 25% are directly employed by tourism/recreation related services. Tourism is one of the strongest contributors to the West Parry Sound economic base with annual spending upwards of \$60 million (www.demographics.parrysound.on.ca).

The following municipalities are located either fully or partially within the Watershed area:

Township of Muskoka Lakes Township of Seguin Township of McMurrich/Monteith Township of Ryerson Township of Magnetawan Township of McKellar Township of McDougall Municipality of Whitestone Town of Parry Sound



#### 2.2 HYDROTECHNICAL FACILITIES

Hydroelectric power generation has occurred on the Seguin River since the late 1800's and there are presently fourteen (14) water control structures within the Seguin River Watershed. MNR and the Town of Parry Sound each own one (1) of these structures. PowerGen owns the remaining twelve (12), of which two (2) are not operated, nine (9) are operated as multi-use reservoirs and one (1) is a generating station.

The Cascade Street Generating Station (GS), a hydroelectric-based facility, is located within the Town of Parry Sound approximately one (1) kilometre upstream from the mouth of the Seguin River. It is located on Lot 28, Concession III, Township of McDougall, now in the Town of Parry Sound, and is owned by Bracebridge Generation Ltd. The Cascade Street GS is the only hydroelectric power generating station in the watershed. No significant tributaries enter below the generating station, and as such, effectively all runoff from the Seguin River Watershed must pass through the generating station or be bypassed through the associated dam structure. The Cascade Street GS currently has two operational turbines generating 1.2 MW of power.

As well as the Cascade Street GS and the associated dam, Bracebridge Generation Ltd. owns and operates eleven (11) additional water control structures in the Seguin River Watershed, for a total of twelve (12). Operations of the water control structures, with the exception of the Nine Mile Lake Dam and the Trout Lake Dam, subsequently have an influence on the hydropower generation at the Cascade Street GS and are included in the SRSWMP.

The CPR Trestle Dam, owned by the Town of Parry Sound, controls the upstream waterbody known as the Mill Pond located within the Town itself. The dam is operated to largely maintain stable water levels in Mill Pond and moderate floodwaters. The stability of Mill Pond water levels is an important consideration in the turbine submergence requirements at the Cascade Street GS. As such, it is included within the scope of the SRSWMP.

Accordingly, a total of eleven (11) dams (summarized in Table 2-1) have been defined within the scope of the SRSWMP. These dams have all been included within the scope given their potential to provide water storage for hydropower production purposes, although not all may be effectively operated for that purpose at present. As well, by including all operated dams within the scope of the SRSWMP, a mechanism for documentation of the consistent long-term dam operations and the resultant existing lake conditions is ensured.

One additional water control structure, the Vinett Lake Dam, is located within the Seguin River Watershed. The Vinett Lake Dam, owned by the Ontario Ministry of Natural Resources, is located in a headwater area in the eastern portion of the watershed and used for maintenance/ enhancement of waterfowl habitat. This dam is not included in the scope of the SRSWMP.

All of the dams located within the Seguin River Watershed are illustrated on Figure 1-2. Details regarding the location, infrastructure, and operation of each of the dams are provided in the Scoping Report in Appendix C of this report (the three dams that are not controlled for flow management at the Cascade Street GS and therefore not included in the SRSWMP are summarized in Table 2-2).



# Table 2-1Dams Located on the Seguin River WatershedWithin the Scope of the Seguin River Simplified Water Management Plan

Dam Name / Location	Township	Owner		
Horn Lake	Montoith			
Fry's Lake	Montenn			
Whitefish Lake	Humphrey			
Martin Lake	Christie			
Grey Owl (Lorimer) Lake (McKellar Lake) Hurdville Dam (Lake Manitouwabing)	McKellar	Bracebridge Generation Ltd.		
Harris Lake	Ferguson			
Beverages Lake (also controls Haines Lake)	McDougall			
Mill Lake				
Cascade Street (Head Pond Dam)	Town of Parry Sound			
CPR Trestle Dam	Town of Parry Sound	Town of Parry Sound		

# Table 2-2Dams Located on the Seguin River WatershedOutside the Scope of the Seguin River Simplified Water Management Plan

Dam Name / Location	Township	Owner	
Vinett Lake	Monteith	Ministry of Natural Resources	
Nine Mile Lake	McDougall	Bracebridge Generation Ltd.	
TTOULLAKE			
<b>NOTES:</b> These structures are not operated for waterpower production and are not affected by flows/levels of any other dam.			



#### 2.3 ZONES OF INFLUENCE

In the context of simplified water management planning a zone of influence refers to a section of watercourse or a waterbody who's social, economic, and/or environmental conditions are affected by upstream and/or downstream waterpower facilities and water control structures.

Upstream areas are generally easier to estimate as the extent of the zone is based on the dam crest elevation or high operating water level. Accordingly, the estimated upstream areas included within the zones of influence associated with each structure that is actively operated by Bracebridge Generation Ltd. are summarized in Table 2-3. The information presented in Table 2-3 is based on a review of available 1:50000 scale NTS and 1:10000 OBM maps and information provided by Bracebridge Generation Ltd.

The downstream limit of the zone of influence is somewhat more difficult to determine explicitly. It typically takes the form of a defined grade or conveyance controlling features such as a set of rapids or a waterfall, a lake or wetland, a channel constriction, or it is estimated as a location along a watercourse where the contribution to flow from the operation of the upstream waterpower facility and/or water control structure is not considered significant (relative to total flow at the location). The information that is currently available is considered insufficient to definitively identify the downstream limit of the zone of influence.

A summary of the drainage area above each of the water control structures and directly contributing to flows released at the structure, compared with drainage areas at key demarcation or subwatershed confluences located downstream of a structure is provided in Table 2-4. This comparison provides a perspective to estimate the downstream limit of the zone of influence based on flow contributions from the upstream water control structure. It follows that as the percentage of the contributing drainage area associated with the water control structure decreases, its influence on water levels and flows at a downstream location also decreases. In some cases the bounding criteria are also based on an upstream boundary associated with a downstream water control structure, as in the case of Lorimer Lake and Beverages Lake. An illustration of the concept used for the estimations provided in Table 2-4.

It must be noted that during low flow periods, the zone of influence may extend further downstream than a location based on comparative drainage areas. This is due to the low flow contribution that may come from the reservoir associated with a water control structure, due to extended detention, when all other "natural" watercourses are "dry". Under such circumstances the effective baseflow can be maintained for a larger duration than under natural conditions due to the storage in the reservoir. As such, low flow maintenance requirements can be an element of the SRSWMP associated with certain water control structures.

Conversely, if much of the flow at a particular location downstream is sourced from uncontrolled areas, then spring flooding would also be largely uncontrollable and potential flood control opportunities that could be achieved at an upstream water control structure may be minimal.

As the elements of the SRSWMP evolve, the demarcation of the zones of influence will be refined.



# The Zone of Influence

In the context of simplified water management planning a zone of influence refers to a section of watercourse or a waterbody whose social, economic, and/or environmental conditions are affected by upstream and/or downstream waterpower facilities and water control structures.

Upstream areas are generally easier to estimate as the extent of the zone is based on the downstream dam crest elevation or high operating water level.

The downstream limit of the zone of influence is more difficult to determine as it typically takes the form of a defined grade or conveyance controlling features such as a set of rapids or a waterfall, a lake or wetland, a channel constriction, or it is estimated as a location along a watercourse where the contribution to flow from the operation of the upstream waterpower facility and/or water control structure is not considered significant (relative to total flow at the location).

As a measure of the downstream zone of influence, the drainage area above each of the water control structure was determined and compared with drainage areas at locations downstream This comparison provides a perspective to estimate the downstream limit of the zone of influence based on flow contributions from the controlled lake upstream. It follows that as the percentage of the contributing drainage area associated with the water control structure decreases, its influence on water levels and flows at a downstream location also decreases.

The example for Whitefish Lake Dam is illustrated above and summarized below. In this case, the estimated downstream zone of influence, based on this flow contribution criterion, would be approximated as the outlet from Turtle Lake.

Wikitafiah Laka Dam		Upstream		Downstream		Drainage Area to Dam	
(estimate of the dow nstream zone of influence)	Point #	Area #'s Contributing Drainage to Point	Drainage (km <sup>2</sup> )	Area #'s Contributing Drainage to Point	Drainage (km <sup>2</sup> )	as a % of I Area to	Drainage Point
Drainage Area to Dam	1		. ,	1	22.03		100.00%
Dam to Trout Lake confluence	1 to 2	1	22.03	1+2	26.62	100.00%	82.74%
Trout Lake confluence to Turtle Lake inlet	2 to 3	1+2	26.62	1+2+3	30.23	82.74%	72.88%
Turtle Lake inlet to outlet	3 to 4	1+2+3	30.23	1+2+3+4	40.51	72.88%	54.38%
Turtle Lake outlet to Maple Lake inlet	4 to 5	1+2+3+4	40.51	1+2+3+4+5	111.28	54.38%	19.80%
Maple Lake inlet to outlet	5 to 6	1+2+3+4+5	111.28	1+2+3+4+5+6	148.84	19.80%	14.80%
						amec	Ø
					SEG WATI	UIN RIVER SIM ER MANAGEME	1PLIFIED ENT PLAN
					ZONE	DOWNSTREA OF INFLUENCE	AM E CONCEPT
					TC036165	JUNE 2007	Figure 2

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Table 2-3					
Zones o	Zones of Influence - Preliminary Estimation of Upstream Limit				
Dam Approximate Area (ha) Upstream					
Horn Lake Dam	575	Horn Lake Some upstream wetland areas			
Fry's Lake Dam	65	Upper Fry Lake Wetland at inlet to lake at north end Wetland areas to the south-east			
Whitefish Lake Dam	690	Little & Big Whitefish and Clear Lakes Baby Lake and Cosh Lake			
Martin Lake Dam	135	Martin Lake Small upstream lake on south end of Martin Lake			
Beverages Dam	170	Haines Lake McNutt Lake			
Owl Lake	685	Lorimer and Grey Owl Lakes Wetland areas around Lorimer Lake			
Hurdville Dam	1450	Manitouwabing Lake Wetland areas around Manitouwabing Lake			
Harris Lake	Harris Lake 165 Harris Lake				
Mill Lake	700	Mill Lake Mountain Basin (part of Mill Lake) Portage Lake (aka McDougall Lake)			
Cascade Street Dam	20	Headpond to Mill Lake Dam and tributary wetland north of William St.			
CPR Trestle Dam	15	Headpond to Cascade Street GS tailrace			

Table 2-4					
	Zones of Influence	e - Preliminary Estimates of Downstre	eam Limit		
	Influence by				
Dam	Dam /	Location	Drainage Area		
24	Distance from Dam		From	То	
	(km <sup>-</sup> / km)		100.00/	0.1.00/	
Horn Lake	37 / 6	Dam to Seguin River	100.0%	81.9%	
		Seguin River to Upper Fry Lake	37.0%	33.5%	
		Upper Fry Lake inlet to outlet	33.5%	30.6%	
Upper Fry	121 / 17	Dam to Isabella Lake	100.0%	61.2%	
Lake		Isabella Lake inlet to outlet	61.2%	31.0%	
		Isabella Lake to Mill Lake	31.0%	27.7%	
		Mill Lake inlet to outlet	27.7%	11.7%	
Whitefish	22 / 4	Dam to Trout Lake confluence	100.00%	82.74%	
Lake		Trout Lake confluence to Turtle Lake	82.7%	72.9%	
		Turtle Lake inlet to outlet	72.9%	54.4%	
		Turtle Lake to Maple Lake inlet	54.4%	19.8%	
		Maple Lake inlet to outlet	19.8%	14.8%	
		Maple Lake outlet to Isabella Lake	14.8%	13.0%	
		Isabella Lake inlet to outlet	13.0%	5.5%	
		Isabella Lake outlet to Mill Lake inlet	5.5%	4.9%	
		Mill Lake inlet to outlet	4.9%	2.1%	
Martin Lake	24 / <mark>3</mark>	Dam to Maple Lake	100.0%	89.7%	
		Maple Lake inlet to outlet	89.7%	16.3%	
		Maple Lake to Isabella Lake	16.3%	14.6%	
		Isabella Lake inlet to outlet	14.6%	6.2%	
		Isabella Lake to Mill Lake	6.2%	5.5%	
		Mill Lake inlet to outlet	5.5%	2.3%	
Beverages	41 / < 1	Dam to Mill Lake	100.0%	100.0%	
		Mill Lake inlet to outlet	100.0%	4.0%	
Lorimer Lake	40 / < 1	Dam to Hurdville Lake	100.0%	79.8%	
		Hurdville Lake inlet to outlet	79.8%	3.9%	
Harris Lake	23 / <b>10</b>	Dam to Mill Lake	100.0%	51.5%	
		Mill Lake inlet to outlet	51.5%	2.2%	
Hurdville	408 / <mark>9</mark>	Dam to Mill Lake	100.0%	90.2%	
Dam		Mill Lake inlet to outlet	90.2%	39.5%	
Mill Lake	1033 / < 1	Dam to Cascade St. Headpond	100.0%	100.0%	
		Cascade St. Headpond inlet to outlet	100.0%	99.4%	
Cascade	1039 / < 1	Dam to CPR Trestle Dam	100.0%	99.7%	
Street		CPR Trestle Dam to <b>mouth of Seguin</b> River	99.7%	99.7%	

#### 2.4 SITE CATEGORIZATION

WMP's have varying degrees of complexity and the planning effort that is undertaken reflects that variability. MNR in consultation with plan proponents (in this case Bracebridge Generation Ltd.) determines the scale and complexity of water management planning that best suits the river system. Generally, complex WMP's are prepared for an entire river system where there are a number of water power facilities or water control structures with significant control over water levels and flows and/or with significant issues to be resolved. WMP's may be simplified to a river section or "zone of influence" based on limited control over water levels and flows by the water power facilities and water control structures, and on recognition that there will be few issues to resolve.

The steering committee in consultation with MNR (who are represented on the steering committee) determined that a simplified planning approach best suits the Seguin River Watershed. Within the context of the simplified planning approach the component facilities must be categorized as to their level of control over water levels and flows. The two categories are:

- A) Facilities that do not exert a level of control over flow and levels within the zone of influence around the facility. Facilities within this category may also encompass those facilities that are thought to have insignificant or limited control over the flows and levels within their zone of influence within the river system and are without issues that may be mitigated through a change in their operating range; and
- B) Facilities that exert a level of control over the flows and levels of the zone of influence and have associated issues that may be mitigated through alterations in their operating plans.

#### 2.4.1 Recommended Site Categorization

It was recommended by the Steering Committee, and approved by MNR, that the SRSWMP be classified as a category B planning effort.

The water control structures included within the scope of this planning effort are facilities that can exert control over lake water levels and flows. It should be recognized that the values in the watershed have been established based on the long term and consistent operations of the present day facilities as observed for over 75 years. Considering the significant values (recreation, fisheries, wildlife, property and hydro power) associated with the Seguin River System, operating plans should be evaluated to confirm the net environmental, social and economic benefit of their application.

#### 2.5 SEGUIN RIVER WATERSHED RESOURCE VALUES

A review of environmental and socio-economic values in the watershed was undertaken. This review was completed using available hardcopy mapping, digital GIS information and fish habitat and lake survey data (habitat inventory information) provided by the MNR and MNR's Natural Heritage Information Centre (NHIC). The preliminary zone of influence for each water control structure was used to delineate the search area for potential interactions between water

level/flows and known resource uses. A summary of Seguin River Watershed known resource attributes and values considered relevant within the context of the SRSWMP process is provided in Table 2-5.

These resource attributes have been limited to those that directly describe or relate to the aquatic resource in some formal manner. These resources are the most likely to be influenced by water level management. In terms of socio-economic attributes or values, the intent is not to establish a low scale description of individual facilities, businesses or residents for example. These aspects are addressed in the context of recognizing upstream water users collectively for permanent / temporary residence and associated passive / active recreational opportunities.

It should also be noted that this summary represents a starting point only and additional values may be added through the course of the SRSWMP development process.

As noted previously, the MNR's Natural Heritage Information Centre (NHIC), which compiles, maintains and provides information on rare, threatened and endangered species and spaces in Ontario, was used as a data resource to identify potential environmental values. Although numerous entries are identified within the watershed boundary of the Seguin River only a limited number can be reasonably associated with zones of influence of water control structures.

It is evident that water based resources such as moose aquatic feeding areas and fish spawning sites are directly linked to water level management, other more terrestrial based features such as trails and traplines may not be. The relevance of any such resource values will be confirmed during the next review of the SRSWMP.

#### 2.5.1 Environmentally Sensitive Features

The NHIC records indicate the presence of several features having rare or uncommon status. The NHIC database identified the terrestrial near-shore environmental occurrences that at a minimum fall into the potential zone of influence consideration (conservatively considered) as outlined in Table 2-6.

Zone of Influence	Values	
Zone or initiaence	Environmental – Natural Environment	Socio-Economic
Horn Lake Dam	<ul> <li>A warm-water fishery featuring largemouth bass, yellow perch, brown bullhead, common white sucker and chub has been identified.</li> <li>Aquatic habitat for fish community and wildlife.</li> </ul>	<ul> <li>Upstream water users*</li> <li>Water storage for hydro power production</li> </ul>
Fry's Lake Dam	<ul> <li>A warm-water fishery featuring northern pike, white sucker, brown bullhead, pumpkinseed and yellow perch has been identified.</li> <li>Aquatic habitat for fish community and wildlife</li> </ul>	<ul> <li>Upstream water users*</li> <li>Trails</li> <li>Water storage for hydro power production</li> </ul>
Whitefish Lake Dam	<ul> <li>A warm and cold-water fishery consisting of lake trout, lake whitefish, rainbow smelt, white sucker, brown bullhead, rock bass, smallmouth bass and yellow perch has been identified.</li> <li>Aquatic habitat for fish community and wildlife</li> </ul>	<ul> <li>Upstream water users*</li> <li>Trails</li> <li>Water storage for hydro power production</li> </ul>
Martin Lake Dam	<ul> <li>A warm and cold water fishery consisting of cisco, white sucker, brown bullhead, pumpkinseed, smallmouth and largemouth bass and yellow perch has been identified.</li> <li>Aquatic habitat for fish community and wildlife</li> </ul>	<ul> <li>Upstream water users*</li> <li>Water storage for hydro power production</li> </ul>
Beverages Dam (Haines Lake)	<ul> <li>A warm and cold-water fishery consisting of cisco, northern pike, white sucker, walleye, smallmouth bass, yellow perch and rock bass has been identified.</li> <li>Aquatic habitat for fish community and wildlife</li> </ul>	<ul> <li>Upstream water users*</li> <li>Water storage for hydro power production</li> </ul>
Owl Lake Dam	<ul> <li>Upstream of Owl Lake Dam, Lorimer and Owl Lakes have warm and cold-water fisheries consisting of lake trout (stocked into Lorimer Lake), northern pike, large and smallmouth bass, cisco, brown bullhead, pumpkinseed and white sucker.</li> <li>Immediately downstream of the Owl Lake Dam – McKellar Lake is a walleye spawning site. McKellar Lake feeds into Manitouwabing Lake where another walleye spawning bed is located in the Village of McKellar.</li> <li>Aquatic habitat for fish community and wildlife</li> </ul>	<ul> <li>Upstream water users*</li> <li>Trails</li> <li>Trapline Areas</li> <li>Water storage for hydro power production</li> </ul>
Harris Lake Dam	<ul> <li>A warm water fish community consisting of largemouth bass, black crappie, yellow perch, pumpkinseed and white sucker has been identified.</li> <li>Aquatic habitat for fish community and wildlife</li> </ul>	<ul> <li>Upstream water users*</li> <li>Trails</li> <li>Water storage for hydro power production</li> </ul>
Lake Manitouwabing / Hurdville Dam	<ul> <li>Lake Manitouwabing has a diverse warm and cold-water fish community consisting of lake whitefish, cisco, northern pike, walleye, large and smallmouth bass, brown bullhead, pumpkinseed and rock bass.</li> <li>Aquatic habitat for fish community and wildlife</li> </ul>	<ul> <li>Upstream water users*</li> <li>Commercial operators including marinas, golf courses</li> <li>Trails</li> <li>Water storage for hydro power production</li> </ul>
Mill Lake Dam	<ul> <li>A warm and cold-water fish community consisting of lake whitefish, cisco, northern pike, walleye, smallmouth bass, white sucker and pumpkinseed has been identified. Splake are stocked by the MNR to create artificial angling opportunities.</li> <li>Aquatic habitat for fish community and wildlife</li> </ul>	<ul> <li>Upstream water users*</li> <li>Highway 69 Outcrops (Earth Science ANSI)</li> <li>Seguin Chutes (Life Science ANSI)</li> </ul>
Cascade Street GS	<ul> <li>The MNR has no data on this specific reach of the Seguin River, however, it is reasonable to believe it is inhabited by northern pike, walleye, large and smallmouth bass, white sucker, pumpkinseed and rock bass.</li> <li>Rainbow trout are released into the Seguin River by the MNR at the Cascade Street Dam headpond for a put and take fishery.</li> <li>Aquatic habitat for fish community and wildlife</li> </ul>	<ul> <li>Upstream water users*</li> <li>Hydro power generation</li> </ul>
CPR Trestle Dam	<ul> <li>A significant walleye, smelt and white sucker spawning area is located immediately below this dam.</li> <li>Aquatic habitat for fish community and wildlife</li> </ul>	Upstream water users*

seasonal/permanent residents and availability of passive/active recreation opportunities.



Section 2 – The Seguin River Watershed and Facilities

Table 2-5 Review of Known Resource Attributes And Values	; f S
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Parry Sound PowerGen Corporation Seguin River Simplified Water Management Plan

Section 2 – The Seguin River Watershed and Facilities

Table 2-6           Natural Heritage Information Centre Data Review		
Zone of Influence	Comments	
Horn Lake	The NHIC information indicated that there was an occurrence of a Hog-nosed snake in the vicinity of Horn Lake.	
Lake Manitouwabing	The NHIC information indicated that there was an occurrence of a Hog-nosed snake in the vicinity of Lake Manitouwabing.	
Whitefish Lake	The NHIC information indicated that there was an occurrence of a Purple Stemmed Cliffbrake. The habitat of this fern is typically dry, limestone-rich cliffs & outcroppings.	
	As well, the NHIC information indicated that there was an occurrence of a Massassauga rattlesnake in the vicinity of Whitefish Lake and a Five-lined skink in the vicinity of Clear Lake, which may be in the zone of influence of Whitefish Lake	

With the exception of Purple Stemmed Cliffbrake which is considered rare in Ontario, the species noted above are either classified as threatened or species of special concern according to the *Species at Risk in Ontario* list. It is unknown whether the water level management on the subject lakes represents a positive influence, negative influence or no influence on species at risk or their habitat.

#### 2.5.2 Fisheries Resources

Warmwater/coolwater fish communities represented by walleye, largemouth and smallmouth bass, and northern pike as the predominant predatory species, characterize the common fisheries resources in the watershed.

There is naturally producing lake trout population in Whitefish Lake. There are no known impacts on lake trout spawning or egg incubation as a result of the manipulation of flow and water levels by operations of the dam on this lake.

Both the manipulation of flow and water levels in association with dam operations could influence the spawning behaviour and success of both spring and fall spawning fish species. Likewise, drawdowns during the summer and winter would reduce the availability of habitat for various life stages of fish. Consequently, effective water level and flow management is an important consideration in the SRSWMP to assist in sustaining the fishery resource within the watershed. As an example, PowerGen, in cooperation with the MNR, is presently manipulating spring flow release at the Hurdville Dam to promote successful walleye spawning in the downstream zone of influence. This is presently the only active management practice for fish within a downstream zone of influence within this watershed.



#### 2.5.3 Wildlife Resources

The existing habitat attracts a variety of wildlife. In general, the study area provides aquatic habitat for these species but their distribution may vary from lake to lake based on other land use activities, the intensity of water use on the lakes and associated disturbance. This wildlife provides both passive value in terms of viewing/listening opportunities as well as other active pursuits such as hunting and trapping.

#### 2.5.4 Socio-Economic Resources

Given the substantial size of the watershed, the abundance of readily accessible lakes and watercourses, as well as, the distribution of numerous communities in the form of towns and hamlets, the study area is well populated. Along with the permanent residents located along the watercourse shorelines, the area is also highly popular for its seasonal and recreational land use features. As such, the local populations fluctuate, typically increasing in the summer, and water-based activities such as boating predominate. To further accommodate the recreational base of activity within the lakes, resorts and marina operators provide services and facilities. Communities such as Parry Sound have also established waterside trails and parks and parkettes to provide recreational access to the river for their residents.

Other watershed interests include sportsmen associations (fish and game) and snowmobile associations that make use of the aquatic corridors and their resources. The Seguin River is also a locally recognized canoe route.

#### 2.6 SEGUIN RIVER WATERSHED ISSUES

A summary of issues identified from a number of sources is provided in Table 2-7, namely:

- PowerGen correspondence files
- Seguin River Watershed, Water Level Control Structure Study (Watech, 2001)
- Information provided by MNR

The list of issues identified in Table 2-7 is not based on a comprehensive list of potential issues, but rather only those that have been clearly identified or brought to the attention of PowerGen over the years of typical historic operations practice. With no plans for significant changes to the historic operational approach that has been applied over the long term, the key identified issues are not anticipated to change.

PowerGen maintains correspondence on file on a structure by structure basis. Approximately 125 available letters and associated comments were reviewed, some dating back to 1927, to identify specific issues raised by lake residents and other stakeholders. Issues raised by residents/stakeholders typically stem from low and high water levels. General summer concerns related to hazardous navigation (low water level), loss of shoreline (high water level), wake (boat and wind) damage to onshore infrastructure (high water level) and flooding of natural areas (high water level). General winter concerns included ice damage to shallow water



infrastructure when water levels were low and ice damage to onshore infrastructure when water levels were high. Consequently, striving to maintain stability and consistency in water level management is of interest to the local stakeholders.

Other general observations include:

- Residents on a lake with a dam at its outlet generally believe the water level on the lake is primarily governed by the operation of the dam. Natural processes such as rainfall, snowmelt and evaporation and their inevitable fluctuations over time are often overlooked as significant contributory factors.
- Residents generally did not agree on what is an acceptable water level.

Water control structure operation also has the potential to affect terrestrial and aquatic habitats. The issue has been identified herein as it relates to potential affects to local resource values, ecosystem attributes, and natural resource features both actively and passively applicable to the socio-economic value of the lakes. Where beaver colonies exist they construct feed beds in the fall (October / November). Drawdowns after feed beds are constructed could result in some or all of their winter food supplies being inaccessible. The lodge access might also be frozen out. Similar concerns exist for muskrats which are likely even more susceptible to freeze out because they generally occupy shallow water marshes. Otter often occupy beaver lodges; undercut banks, log jams and bank dens created by beaver to den or rest in. All three furbearers use bank dens. These habitats could all be affected by fall / winter drawdowns. Where winter drawdowns have been the long-term operational norm, wildlife populations are likely already influenced.

Therefore, any consideration of further drawdown or increased flooding may present an increased risk for further impacts on terrestrial and aquatic species and the potential impacts would have to be carefully assessed.
Zone of Influence	Issues		
Zone of initiaence	Environmental	Socio-Economic	
Horn Lake Dam	• Significant winter draw-down may limit available fish habitat through a proportional increase in oxygen starved	No complaints on file with PowerGen	
	<ul> <li>strata in late winter.</li> <li>Significant winter draw-down may limit over-wintering reptiles and amphibians.</li> </ul>	• For major maintenance to water control structures ar communication with regulatory agencies and stakehold	
Fry's Lake Dam	• Significant winter draw-down may limit available fish habitat through a proportional increase in oxygen starved	No complaints on file with PowerGen	
	strata in late winter.	Possible impacts on trap lines	
	<ul> <li>Significant winter draw-down may limit over-wintering reptiles and amphibians.</li> </ul>	For major maintenance to water control structures ar communication with regulatory agencies and stakehold	
Whitefish Lake Dam	• No known fisheries issues identified under the current operating regime.	Low summer water levels result in complaints	
	• Limitation on winter water level manipulation (draw-down) for protection of incubating lake trout and lake whitefish eggs.	<ul> <li>Stop logs are not sealed as an adjacent landowner tak top of the waterfall</li> </ul>	
		Possible impacts on trap lines	
		• For major maintenance to water control structures ar communication with regulatory agencies and stakehold	
Martin Lake Dam	• Significant winter draw-down may limit available fish habitat through a proportional increase in oxygen starved	No complaints on file with PowerGen	
	strata in late winter.	Release of water cannot be too rapid given downstream	
	<ul> <li>Significant winter draw-down may limit over-wintering reptiles and amphibians.</li> <li>Limitation on winter water level manipulation (draw down) for protection of insubsting sizes ages</li> </ul>	For major maintenance to water control structures and statistical with accurate to the statistical statis statistical statisticae statisticae statisticae statisticae sta	
Deverage Dem	Limitation on writer water level manipulation (draw-down) for protection or inclubating cisco eggs.	communication with regulatory agencies and stakenoid	
Beverages Dam	<ul> <li>Limitation on early summer drawdown, to accommodate bass spawning and incubation.</li> <li>Depending on their part of the lateral of the lateral sector of the sector o</li></ul>	Summer water levels accommodate larger beach areas	
	<ul> <li>Depending on timing and extend of fail drawdown, there could be negative impacts on incubating cisco eggs.</li> <li>This may also contribute to most literative for any visit taking and extend of the sector of the sector.</li> </ul>	<ul> <li>For major maintenance to water control structures ar communication with regulatory agencies and stakehold</li> </ul>	
	This may also contribute to mortality of over-wintering reptiles and amphibians		
Owl Lake Dam	• The current operating regime does not seem to detrimentally impact on the indigenous fish species.	<ul> <li>Low winter water levels causing damage to water intake</li> </ul>	
	<ul> <li>Limitation on water level draw-down to accommodate the presence of both fall and spring spawners during spawning and incubation periods.</li> </ul>	High water levels resulting in wake damage during sum	
	spawning and incubation periods.	<ul> <li>Significant leakage accommodates flow augmentation f</li> </ul>	
	<ul> <li>Flow augmentation to supplement flows over downstream walleye spawning bed during spawning and incubation periods may be required.</li> </ul>	Non agreement between lake residents as to acceptable	
		Navigation and inaccessible docking facility issues sten	
		Possible impacts on trap lines	
		<ul> <li>For major maintenance to water control structures ar communication with regulatory agencies and stakehold</li> </ul>	
		Inadequate communications regarding water level man	



Section 2 – The Seguin River Watershed and Facilities

Table 2-7 Review of Seguin River Watershed Issues
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d associated significant water level fluctuations, appropriate ers for due process application
d associated significant water level fluctuations, appropriate ars for due process application
es water from a small pond immediately below the dam at the
d associated significant water level fluctuations, appropriate ers for due process application
culverts constrictions
d associated significant water level fluctuations, appropriate ers for due process application
for residents at the east end of the lake
d associated significant water level fluctuations, appropriate ers for due process application
'S
mer months and ice and wave damage in winter/spring
or downstream water users
e lake levels
ming from low water levels
d associated significant water level fluctuations, appropriate ers for due process application
agement

	Issues	
Zone of Influence	Environmental	Socio-Economic
Harris Lake Dam	<ul> <li>The current operating regime does not seem to detrimentally impact on the indigenous fish species.</li> <li>Limitation on water level draw-down to accommodate the presence of both fall and spring spawners during spawning and incubation periods.</li> </ul>	<ul> <li>High water levels causing shoreline erosion, loss of use</li> <li>Winter ice damage resulting from low water levels</li> <li>Non agreement between lake residents as to acceptable</li> <li>Navigation and inaccessible docking facility issues stem</li> <li>For major maintenance to water control structures a communication with regulatory agencies and stakeholded</li> </ul>
Lake Manitouwabing / Hurdville Dam	<ul> <li>Limitation on winter water level manipulation (draw-down) for protection of incubating lake whitefish and cisco eggs.</li> <li>Flow augmentation to optimize flow over down-stream walleye spawning habitat.</li> </ul>	<ul> <li>Low winter water levels causing damage to water intake</li> <li>High water levels resulting in wake damage during sum</li> <li>Significant leakage accommodates flow augmentation fe</li> <li>Non agreement between lake residents as to acceptable</li> <li>Navigation and inaccessible docking facility issues stem</li> <li>Possible impacts on trap lines</li> <li>For major maintenance to water control structures a communication with regulatory agencies and stakeholde</li> <li>Inadequate communications regarding water level mana</li> </ul>
Mill Lake Dam	<ul> <li>The current operating regime does not seem to detrimentally impact indigenous fish species.</li> <li>Limitation on water level draw-down to accommodate the presence of both fall and spring spawners during spawning and incubation periods.</li> </ul>	<ul> <li>Navigation and inaccessible docking facility issues stem</li> <li>High water levels in spring causing flood damage on pro</li> <li>For major maintenance to water control structures a communication with regulatory agencies and stakeholded</li> </ul>
Cascade Street GS CPR Trestle Dam	<ul> <li>The current operating regime does not seem to detrimentally impact on the indigenous fish species</li> <li>Sluiceway manipulations during spring spawning and incubation periods could be adjusted to enhance spawning and incubation success.</li> </ul>	<ul> <li>No complaints on file with PowerGen</li> <li>Watech, 2001 indicates that complaints regarding low w</li> <li>For major maintenance to water control structures a communication with regulatory agoncies and stakeholds</li> </ul>



Section 2 – The Seguin River Watershed and Facilities

Table 2-7 (cont'd) Review of Seguin River Watershed Issues
eable shoreline and damage to trees
le lake levels
nming from low water levels
and associated significant water level fluctuations, appropriate lers for due process application
es
nmer months and ice and wave damage in winter/spring
for downstream water users
le lake levels
nming from low water levels
and associated significant water level fluctuations, appropriate lers for due process application agement
nming from low water levels
roperties on Portage Lake
and associated significant water level fluctuations, appropriate lers for due process application
water levels in Mill Pond are on file with the Town of Parry Sound
and associated significant water level fluctuations, appropriate lers for due process application



#### 2.7 CURRENT SYSTEM OPERATION

Industrial facilities at the Cascade Street GS location have been making use of available energy from the Seguin River flows since the late 1800's. The start of operations of the new Cascade Street GS in 1919 represented the beginning of commercial power generation from the waters of the Seguin River. The associated plan of operation of the water control structures for the purposes of power generation has also been in effect for about 75 years and has remained essentially unchanged since inception.

The system is, and has always been, operated based on professional judgement and/or operator experience. As such, the optimal or most efficient operation of the system in its entirety is not necessarily achieved. However, having operated in this manner for a number of generations, no significant issues/concerns have been raised by other water users in the system. The shoreline residential development that has occurred in the Seguin River System has largely been undertaken in due consideration of long-term reservoir management patterns. This approach to managing the watershed is expected to continue into the future, however, the SRSWMP planning effort provides the opportunity to understand, formalize and document the current operational plan.

Three of the water control structures in the Seguin River System, namely; Mill Lake Dam, Hurdville Dam on Manitouwabing Lake (the main storage reservoir in the system) and Beverages Dam on Haines Lake, are operated fairly frequently to meet seasonal water level criteria and to pass flow safely through the system. The other dams are typically operated two or three times per year, changing the seasonal settings of the stop logs to store or release flow from the spring freshet. Flow travel times to the Cascade Street GS, in response to heavy rainfall, vary from thirty (30) hours at Manitouwabing Lake to five (5) days from Whitefish Lake, at the southeast limit of the basin.

It is clear that water stored and released from the lakes in the upper watershed areas do not produce an immediate return in the form of hydropower production. However, flow from all of the upper lakes with water control structures combine in Mill Lake, which controls all flow to the Cascade Street GS. As such, each controlled lake clearly contributes to hydropower production through varying levels of storage and extended release.

Mill Lake is operated to directly regulate flows to improve generation at the Cascade Street GS and this operation is secondary to water level management for other lake users from May 24 to Labour Day. During this period the level in Mill Lake is maintained such that any drop does not exceed about 0.15m (6") below the spillway crest in recognition of other lake users.

The CPR Trestle Dam controls the upstream water body known as the Mill Pond. The dam is operated to largely maintain stable water levels in Mill Pond. This pond serves an aesthetic and recreational value to numerous (about 80 buildings can be identified from the 1:10000 scale Ontario Base Map) water front residents, as well as, the general population of Parry Sound at points of public access. Due to topography, residents are well removed from the river shoreline, and therefore, water level control at this dam is not targeted at flood control. The stability of Mill Pond water levels is an important consideration in the turbine submergence requirements at the



Cascade Street GS and facility designs as the existing and new facilities are dependent on the stability of minimum water levels.

Given the lack of monitoring equipment and the relative scarcity of known flood damage centres in the overall Seguin River watershed, few if any flood warnings specific to the Seguin River have been issued. However, District wide Watershed Condition Bulletins have been issued by MNR.

The operating policy when flow in the river is lower than the maximum rated flow of the Cascade Street GS turbine units, is to pull log(s) at Mill Lake in the morning and replace the logs in the afternoon on approach of the 0.15m (6") maximum draw-down. These flows pass promptly to the generating station through the small Cascade Street Dam headpond which does not serve a major storage function. This use of stored flow capacity usually allows the Unit No. 1 turbine to operate more efficiently by use of the flows for about eight hours (turbine is ramped down as the flow diminishes).



## 3.0 Information Gaps, Priorities and Program

Planning should proceed based on the most recent and best quality information that is available at the time of decision making





#### 3 INFORMATION GAPS, PRIORITIES AND PROGRAM

Although the Seguin River has been a popular recreation area for many years and Public Utilities and/or PowerGen has been generating power at the Cascade Street location for close to a century, the data available to support the water management planning process is not extensive. The key data gaps and how they influence the SRSWMP process are described below.

Please note that the anticipated timelines associated with data collection were conceived at the time that the Scoping and Option Reports were prepared in 2005 and 2006, respectively. The data collection program described in this chapter has been modified from the original reporting to reflect revised timelines.

#### • There were limited or no as-built drawings of the subject water control structures.

As such, a data gathering and dam structure survey program has been approved as a component of this planning effort. Data sources will include PowerGen, MNR and the local municipalities. A surveyor will be contracted to survey the subject structures for purpose of record. At a minimum, field surveys will be required to:

- Establish GSC benchmarks to assist with the preparation of river and lake profiles, consistent descriptions of dam operations, and rule curves relative to other water control structures.
- Gather information on specific dam characteristics such as size and number of stop logs in each stop log bay to assist with the preparation of consistent description of operations, stage-storage-discharge curves and potential hydrologic and hydraulic modeling.

A survey program has been established to gather geodetic topographic and dam specific information. Given the number of dams to be surveyed, this program has been phased over a number of years as follows:

- 2012 Fries Lake, Horn Lake
- 2013 Harris Lake, Lormier Lake
- 2014 Martin Lake, Whitefish Lake, Beverage Lake

Survey data for the Cascade Street Dam was available at the outset of plan development. Survey of the CPR Trestle, Mill Lake and Hurdville Dams was completed in 2004. Survey of the dam crest of Lorimer Lake Dam was completed in 2005.

#### • Defined rule curves were not available for most of the water control structures.

A rule curve (as illustrated in Figure 3-1) specifies a target reservoir water level elevation throughout the year.

Rule curves are a diagrammatic representation of intended water levels throughout the year. They reflect a range of target water levels established to balance competing interests for



water. The rule curve process starts by establishing the top and bottom of the curves (highest tolerable level, lowest tolerable level) to avoid severe flooding or severe low flow conditions associated with drought. Within that range, consideration is given to other water uses (e.g., navigation, water supply, recreation, etc.).

Target water levels can also be applied for the maintenance, management and preservation of critical habitats. As examples, water levels can be set to inundate fish spawning areas during spring and fall ensuring or promoting recruitment of various species. Wetland conditions can also be maintained through establishment of critical water levels. In some instances wetlands can be managed and enhanced through strategic drawdowns although such as measure falls outside the standard rule curve definition.



Rule curve development is both a quantitative and qualitative process incorporating reviews of existing operational and water level data and discussions with other water users in the system.

Only one of the subject water control structures has an approved and documented operating plan, namely;

- Hurdville<br/>DamEstablished in the Resolution of the Public Utilities Commission of the Town of<br/>Parry Sound No. 87.83 (dated August 10, 1987), namely:
  - The water level in Lake Manitouwabing should be held around the 6" (0.15m) below the benchmark and less than 12" (0.3m) down from the benchmark during the months of June, July, August, September and October, subject to any conditions beyond our control.
  - The Commission should endeavour to maintain the water levels not less than 24" (0.6m) down from the benchmark during the months of November, December, January and February.
  - The water level should be held not less than 32" (0.8m) down from the benchmark during the months of March and April prior to spring runoff to prevent flooding.

The Commission should be informed of any necessity to lower the levels in the



previous items prior to any pulling of logs. The benchmark at Hurdville Dam has elevation 240.30m (788.38ft).

It should be noted that the resolution does not specify an operating water level for the month of May. For the purposes of plan development it has been assumed that the operating water level for May should be consistent with the water level specified for June, July, August, September and October.

As noted previously, an objective of this first phase of the SRSWMP, operating plans for compliance and enforcement purposes will be prepared for the following structures only:

Cascade Street Dam	Hurdville Dam
Mill Lake Dam	Lorimer Lake Dam

"Preliminary" and "not enforceable" operating plans describing "best management practices" will be prepared for the remaining structures based upon local datum as a component of this first phase of the SRSWMP, to be completed by the spring 2009:

Horn Lake Dam	Martin Lake Dam	CPR Trestle Dam
Fry's Lake Dam	Harris Lake Dam	
Whitefish Lake Dam	Haines Lake Dam	

Operating plans for compliance and enforcement purposes will be developed for the "Preliminary Operating Plans" as described above for the seven dams as a component of the second phase of the SRSWMP, to be completed five (5) years from the date of Plan Approval

This second phase of the SRSWMP will allow time for the collection of data to fill identified gaps and finalization of 11 enforceable operating plans for the complete system. At the end of the five year period, the SRSWMP would be subject to a plan review under the water management planning process set out in the "*Water Management Planning Guidelines for Waterpower*" at which time the "preliminary" operating plans will be replaced by approved and enforceable operating plans.

With approval of the SRSWMP in 2009, the plan review will take place five (5) years from the date of Plan Approval

#### • There are no streamflow gauging stations in the watershed.

The type and location of water level monitoring equipment recommended for monitoring and compliance purposes is identified in Section 5 of this report.

• There is some data on stop log operation and lake water levels at a subset of the subject water control structures. A number of the subject water control structures have no or very limited data.

These sites are identified above as having "Preliminary" and "not enforceable" operating plans. A data collection program will be developed for consistent gathering and management of stop log operation and lake water level information for consideration during the next review of the SRSWMP.



### • There is only limited ecosystem data for the subject lakes relative to lake level management.

Lake survey and fish habitat distribution data would be beneficial where water level management could be applied when there are known fisheries concerns (i.e. CPR Trestle Dam) but where supporting data is lacking. A data collection program would address the identification of locations of known fisheries concerns associated with the subject water control structures. The proponent will endeavour to collect such data for consideration during the next review of the SRSWMP, scheduled for five (5) years from the date of Plan Approval.

Further, no data is available describing the nature and extent of wetlands and related vegetation communities on the subject lakes. A simple understanding of how such wetland features are dependent on water level management would assist in the development of rule curves. The proponent will endeavour to collect data to enhance the understanding of these features for consideration during the next review of the SRSWMP.

As lake water level and river flow data (as calculated from applicable dam discharge tables and stop log leakage estimates) is collected through recorded records of dam manipulation operations, an ecosystem data program will be developed, with assistance from MNR, that will establish the priorities for ecosystem data collection within the watershed.

#### • Walleye spawning areas and dam operations

There is limited data confirming walleye spawning in areas where management of flows is being considered for the benefit of the spawn.

#### • Bathymetric data is available for all of the subject lakes.

Bathymetric data, namely water depth relative to water surface (sometimes converted to geodetic elevation), defines below water surface topography. This information assists with the understanding of potential aquatic habitats and in the development of stage-storage-discharge curves using hydrologic and hydraulic modeling.

MNR has made bathymetric data available for Lake Manitouwabing, Mill Lake, Grey Owl Lake, Haines Lake, Martin Lake, Whitefish Lake, Horn Lake, Harris Lake and Fry Lake. Further, Parry Sound PowerGen has bathymetric data for the Cascade Street Head Pond and Mill Pond. The available information is described in further detail in the Scoping Report in Appendix C.

Some bathymetric data may be rather coarse in scale and will therefore be limited to large scale review of water level regulation and potential effects. The proponent will endeavour to collect site specific bathymetric data, where deemed practical and appropriate, relative to application for resource management purposes, for consideration during the next review of the SRSWMP.

#### • No inflow design flood has been determined for any of the subject structures.

The inflow design flood, or IDF, is the flood hydrograph used in the design of a dam and its



associated works particularly for sizing the spillway and outlet works and for determining maximum temporary storage, height of dam, and freeboard requirements. The determination of the IDF is associated with a Dam Safety Review. It must be noted that flooding (in this context flooding caused by natural weather events not dam operation) and dam safety are **not** part of the SRSWMP, but the SRSWMP cannot create impacts/issues by allowing an operating range that cannot safely pass the IDF.

#### • Public Input

Given the extensive use of the Seguin River System, there has been public interest in the management plan. Since the operational plans will be largely consistent with the long-term historic operations, the consultation strategy was developed for this planning process to solicit the public's concerns with the current management of the system and collection of information to identify values and deal with relevant issues for consideration during the next review of the SRSWMP. This approach assisted in the identification of any further public concern related data gaps. This strategy, in keeping with the scope and level of effort envisioned for this planning effort was limited to posting of the Final Scoping Report and Draft Plan on the Ontario Ministry of the Environment's Environmental Registry available at the following Internet URL,

#### http://www.ene.gov.on.ca/envision/env\_reg/ebr/english/index.htm

mailings to Lake Associations and local municipalities, newspaper notices, and hardcopy reporting available in selected locations (i.e., PowerGen office, MNR office, Parry Sound Library, etc.). Information regarding the development of the plan was also posted on the AMEC public consultation website at <u>www.public-participation.ca</u>.

Further, the proponent and MNR will log public comments and/or complaints that are received relative to facilities associated with both "Preliminary" and "Enforceable" Operating Plans.

#### • Hydrologic simulation modeling for water management plan development

The proponent will endeavour to develop a hydrologic simulation model of the watershed, for consideration during the next review of the SRSWMP. Such a model could assist in the understanding and documenting of the operational plans and would also be suitable for evaluation of options with regard to system operation and assessment of the extent of a structure's downstream influence.

It is recognized that critical information has not been available during the planning process, however, the proponent will endeavour to develop a long-term data collection program that would ensure better information is available for subsequent SRSWMP review stages.

As noted above, a SRSWMP review term of five years has been adopted by the Steering Committee. This will allow time for the infilling of data gaps and finalization of 11 enforceable operating plans for the complete system. At the end of the five year period, the SRSWMP would be subject to a plan review under the water management planning process set out in the *"Water Management Planning Guidelines for Waterpower"* at which time the "preliminary" operating plans will be replaced by approved and enforceable operating plans.



## 4.0 Option Development

A long-term objective is the development of enforceable operating plans for all water control structures





#### 4 OPTION DEVELOPMENT

#### 4.1 OVERVIEW

As noted in the waterpower guidelines (MNR, 2002), a sound and thorough assessment of options for the management of water flows and levels in a river system means that alternatives are developed in an open and practical manner, and that the relevant technical, environmental, social and economic considerations are described. An inventory of the issues that exist at a local scale and a river-system scale represents a baseline of information with which to assess options for adjustments in dam operations from both a positive and negative perspective. Tradeoffs among options should consider their qualitative and quantitative environmental, social and economic benefits and costs.

The waterpower guidelines (MNR, 2002) suggest the development and assessment of options for dam operation utilize the best available biophysical and socio-economic data be utilized. Notwithstanding, Section 3 of this report clearly indicates a number of data gaps that need to be addressed. Through programs of data collection, developed under this planning process and access to data collected/generated by others that have relevance to this planning effort, enhanced understanding of watershed processes can be integrated into the water management planning process. Options should be sufficiently focused to address the plan's objectives and resource management strategies, and ultimately serve supporting principles and goals of water management planning. Further, the options under consideration will be limited by the fact that the plan is being developed to address as-built facilities and water control structures that have been in existence since the 1920's.

It is also understood that the operations of waterpower facilities and other water control structures can affect complex ecological processes and interactions. While the general pattern and trend of the effects may be predictable, the degree of impact may not be completely known. This is recognized and addressed in water management planning through the use of an adaptive management approach to planning, resource protection and enhancement. Adaptive management is a long-term process that strives to continually improve resource management to reduce areas of uncertainty, build on successes and make adjustments to limit failures. It is a proactive and dynamic management process that allows for adaptive decision-making and is a principle of this plan. This will require an open dialogue and a cooperative effort between resource managers of MNR and the dam owner Bracebridge Generation Ltd..

A long-term objective of this plan is the development of enforceable operating plans or rule curves for all water control structures within the scope of the SRSWMP.

As indicated previously, rule curves are a diagrammatic representation of intended lake water levels throughout the year. They reflect a range of target water levels established to balance competing interests for water. The rule curve process starts by establishing the top and bottom of the curves (highest tolerable level, lowest tolerable level) to avoid severe flooding or severe drought conditions. Within that range, consideration is given to other water uses (e.g.,



navigation, water supply, recreation, etc.). Critical habitat concerns also drive target levels to ensure against damage to sensitive natural heritage resources.

Appendix J of the Water Management Planning Guidelines for Waterpower (MNR, 2005) (since replaced by the 2016 Maintaining Water Management Plans Technical Bulletin) provides the details with regard to the compliance with and enforcement of "enforceable" operating plans developed as components of the SRSWMP. The Compliance and Enforcement Guidelines provide direction and guidance for review of whether the flows and levels controlled by waterpower facilities and associated structures, are managed in accordance with approved Water Management Plans. In the guideline, industry has a self-monitoring and reporting role and MNR has an inspection, audit and enforcement role.

#### 4.2 EVALUATION OF ALTERNATIVES

As indicated previously, the present operations at those dams considered within the scope of the water management plan are not defined in a clear and consistent manner. There are a variety of key operational data gaps, as outlined in Section 3, limiting the ability to gain a full understanding of present operations, including:

- □ target water levels at varying times during the year
- □ limited water level data from which historical operating ranges can be defined
- limited data defining historical stop-log manipulations throughout the year, and associated water level management.

As such, an objective of the SRSWMP is to review, document and understand the present water control structures' operations. To this end, draft operating plans describing existing operations based on the available information were prepared (AMEC, 2006) and are on the following pages. These existing operating plans were proposed as Alternative #1.

The Steering Committee and Planning Group completed a comprehensive review of the proposed Alternative #1 plans. Where environmental, social and economic issues were clearly evident, an evaluation of alternative operational scenarios was completed and adjustments recommended (see Tables 4-1 and 4-2). Through this process the Alternative #1 plans were modified to produce the preferred alternative Operating Plans outlined in Section 8 of this report.

It should be noted that, in reviewing the "enforceable" operating plans that the "Water Level Compliance Zone" represents the enforceable component of the plan.

Many of the "preliminary" operating plans include a "notification zone". The notification zone is triggered at water levels specific to individual lakes. When drawdown enters the notification zone the proponent (in this case Bracebridge Generation Ltd.) notifies the Parry Sound District MNR Supervisor.

An initial objective of alternative development was maintenance of river flows downstream of dams. It was hoped that alternatives could be developed to ensure that the section of the river between the toe of the dam and the tailrace would remain "wet". However, due to the structure

Seguin River Simplified Water Management Plan Cascade Street GS Dam - Operating Plan



Seguin River Simplified Water Management Plan Fry's Lake Dam - Operating Plan



Note: \* - Elevation set to arbitrary datum

Seguin River Simplified Water Management Plan Grey Owl Lake Dam - Operating Plan



Seguin River Simplified Water Management Plan Haines Lake Dam - Operating Plan



Note: \* - Elevation set to arbitrary datum



Seguin River Simplified Water Management Plan Harris Lake Dam - Operating Plan



Note: \* - Elevation set to arbitrary datum

Seguin River Simplified Water Management Plan Horn Lake Dam - Operating Plan



Note: \* - Elevation set to arbitrary datum

Seguin River Simplified Water Management Plan Hurdville Dam - Operating Plan



\* The operating zone as defined by the Resolution of the Public Utilities Commission of the Town of Parry Sound No. 87.83

Seguin River Simplified Water Management Plan Martin Lake Dam - Operating Plan



Note: \* - Elevation set to arbitrary datum



Seguin River Simplified Water Management Plan

PARRY SOUND POWERGEN

Seguin River Simplified Water Management Plan Whitefish Lake Dam - Operating Plan



Note: \* - Elevation set to arbitrary datum



of the Seguin River and the elevation drops that presently exist between the toe of the dams and the downstream waterbody this could not be done. There are presently multiple control structures within the system that will have historically had no water flowing out of the dam during the summer months.

During the summer season, therefore, a strategy will be adopted to utilize the available storage within the normal operating zone of both the enforceable and preliminary operating plans. This strategy would modulate the discharge from the dams so as to minimize changes in downstream river flow and provide a minimum flow in the river reaches immediately downstream of structures under normal operating conditions. Such a strategy may also provide slightly higher and more consistent flows for hydropower during the summer season. This strategy will also help maintain important social and ecological habitat values. Even a minimum flow that is maintained through dam leakage may provide enough flow to prevent dewatering of downstream river reaches during normal operating conditions. Under low water conditions, dewatering may be unavoidable and the Plan provides relief of mandatory operating requirements in the event that a low water trigger is met.

	Table 4-1 Key Adjustments to Existing Operation Plans "Enforceable" Operation Plans
Cascade Street GS Dam	<ul> <li>Daily fluctuations within the head pond will not exceed 0.60 m from the crest of the dam consistent with long-term operation of the facility</li> <li>Changes that may be proposed to the "approved" SRSWMP regarding stream flows and/or water levels stemming from the installation of the third turbine will require application of the water management plan amendment process to ensure consistency with the approved Environmental Screening Report.</li> </ul>
Hurdville Dam	<ul> <li>Resolution of the Public Utilities Commission of the Town of Parry Sound No.87.83 (dated August 10, 1987) which governs the operations of the Hurdville Dam has not been altered.</li> </ul>
Mill Lake Dam	• Maximum water level drawdown reduced to 0.24 m below crest of the dam from April 15 to September 15 and 0.48 m from September 16 to April 14 to address potential fisheries and on lake water users' considerations.
Grey Owl Lake Dam	<ul> <li>Maximum water level drawdown reduced to 0.50 m below crest of the dam to address potential fisheries and on lake water users' considerations.</li> <li>MNR has identified that walleye spawn downstream of the Grey Owl Lake Dam just below the culverts on the west side of McKellar Lake Road. Operation of this structure during the walleye spawning season (typically in mid to late April to early May) should be undertaken, where possible, to promote the maintenance or augmentation of base flows in the known spawning area to support walleye reproductive success at this location.</li> </ul>

- Please note that during operational changes water levels will respond based on the available flow. It should not be expected that water levels will adjust immediately.
- Discharge from the dams will be modulated through utilization of available storage within the Normal Operating Zone, where practical, in order to provide minimum flows in the immediate downstream river reach.



Parry Sound PowerGen Corporation Seguin River Simplified Water Management Plan

Section 4 – Option Development

Table 4-2 Key Adjustments to Existing Operation Plans "Preliminary" Operation Plans (please note that the "proponent" is Bracebridge Generation Ltd.)	
Horn Lake Dam	<ul> <li>Winter drawdown on the lake be raised from 98.0m to 98.5m in the period February 1 to April 30 to mitigate potential impacts to aquatic habitat.</li> <li>The preliminary operating plan includes a notification zone.</li> <li>The notification zone is triggered at water levels below 99.0 m in the period January 1 to April 30; 99.25m in the period May 1 to July 10, and 99.0m in the period July 11 to December 31.</li> </ul>
Martin Lake Dam	<ul> <li>The preliminary operating plan includes a notification zone.</li> <li>The notification zone is triggered at water levels below 98.8 m in the period January 1 to December 31.</li> </ul>
Fry's Lake Dam	<ul> <li>The preliminary operating plan includes a notification zone.</li> <li>The notification zone is triggered at a water level of 99.3m in the period January 1 to April 1; 99.5m in the period April 2 to September 14; and 99.3m in the period September 15 to December 31.</li> </ul>
Whitefish Lake Dam	<ul> <li>Maximum water level drawdown 1.2 m below crest of the dam from January 1 to December 31.</li> <li>No changes made to historical operating regime due to data uncertainties.</li> </ul>
Harris Lake Dam	• Maximum water level drawdown reduced to 0.50 m below crest of the dam from January 1 to mid April and October 1 to December 31; and 0.35 m from mid April to September 30 to address potential fisheries and on lake water users' considerations.
Haines Lake Dam	• Maximum water level drawdown reduced to 0.50 m below crest of the dam from April 1 to June 30 and 0.80 m from October 1 to December 31 to address potential fisheries and on lake water users' considerations.
CPR Trestle Dam	<ul> <li>Maximum water level drawdown reduced to 0.50 m below crest of the dam from April 1 to June 30 to address potential fisheries considerations.</li> <li>Operation of this structure during the walleye spawning season (typically mid to late April to early May) should be undertaken with a preference to the stop logs on the north (Lumber Store) side of the structure for the release of any flows, and to the south stop log bay for additional retention of flows. This will promote the maintenance or augmentation of flows in the identified spawning area and existing fish passage structure to direct fish to the preferred spawning habitat below the Lumber Store gate.</li> </ul>

- Please note that during operational changes water levels will respond based on the available flow. It should not be expected that water levels will adjust immediately.
- Discharge from the dams will be modulated through utilization of available storage within the Normal Operating Zone, where practical, in order to provide minimum flows in the immediate downstream river reach.
- Haines Lake Dam MNR has anecdotal reports that suggest walleye spawn downstream of the Haines Lake Dam. MNR investigated these reports in May 2008 (MNR, 2008) and concluded that that walleye are not spawning below Haines Lake Dam and modification of the dam operating regime for this purpose is not warranted to support walleye reproductive success at this location.



## 5.0 Compliance Monitoring Program

Defines the parameters that will be monitored to deterine whether the facility is within the established operating range, exceptional circumstances and reporting procedures





#### 5 COMPLIANCE MONITORING PROGRAM

#### 5.1 OVERVIEW

The Compliance Monitoring Plan defines the parameters (levels and/or flows) that will be monitored to determine whether the waterpower facility is within the established operating range for "enforceable" facility operating plans and operating zones (see Section 8 for "enforceable" facility operating plans and operating zones), identifies exceptional operating circumstances; and, establishes the event reporting procedures and format. For all facilities (both "enforceable" and "preliminary") the Compliance Monitoring Plan establishes the report procedures and format, and establishes the format for data reports.

The procedures described in this section pertain to self reporting by Bracebridge Generation Ltd. to meet the requirements of the SRSWMP. However, it is recognized that MNR may audit Bracebridge Generation Ltd.'s facility operations at any time to verify compliance.

#### 5.2 MONITORING AND REPORTING BY POWERGEN

Recorded water levels will be the basis of all compliance and enforcement auditing, monitoring, inspections and reporting for the four "enforceable" operating plans, and seven "preliminary" operating plans when they become "enforceable" five years following plan approval. Annual compliance reports for each of the "enforceable" operating plans will be made available to MNR by January 31<sup>st</sup>.

Water level data will be recorded by Bracebridge Generation Ltd. for each facility (both "enforceable" and "preliminary") utilizing manual staff gauges at the dams and/or portable data loggers. Flows will be recorded in the same manner as levels, derived from calculated dam discharge in the absence of downstream flow gauges. Water level observation frequency will vary during the year from daily, during periods when water levels are fluctuating, to either weekly or bi-weekly (typically during the summer months) when water levels are levels are less variable. Proponents shall make all water flow and level data available to the Ministry upon request.

The following recording format will be used.

- Water Level Data Recording Format: date, time, water level.
- Data Discharge Reporting Format: calculated discharge/flow through the dam, date.
- Stop Log Manipulations and Sluice Settings Data Reporting Format: number of stop logs removed or replaced by dam sluice, final dam stop log compliment, date.
- Stop Log Leakage Data Reporting Format under low flow conditions when no flow occurs over the spillway / stop logs: estimated leakage reported in cubic metres per second to one significant digit (i.e., 0.4 cms leakage estimated), date.
- Data Reporting Data to be archived for a period of 5 years. Any data collected near the end of the WMP term must be retained for a minimum of 5 years from the day it is collected.



• Data will be provided electronically as Comma Separated Variable (CSV) format, Microsoft Excel Version 97 or above, or equivalent. Electronic data sent via e-mail is acceptable.

Further:

- Data is to be archived for a minimum of 5 years. Therefore all data collected must be kept for 5 years from the day it is collected to ensure the minimum 5 year requirement is met.
- The proponent shall make existing data available to an MNR inspector or engineer when requested to do so.
- When requested by MNR to supply existing data, the proponent shall do so in the timeframe indicated in the request.

Facilities are required to self-monitor mandatory water flow and level limits, and report on any incidents where a deviation from the operating requirements of the WMP (mandatory water flow and level), or other mandatory conditions of the WMP. All incidents must be reported to the MNRF. Events outside the water level compliance zone for "enforceable" operating plans, shall be reported to the Water Resources Technical Specialist in the MNR Bracebridge Area office (705- 645-8747) (or designated alternate) immediately or other location as per MNR direction within 24 hours of the time that Bracebridge Generation Ltd. is aware of the event. The telephone message will, to the extent that the information is available, explain Items 1 to 5 below and an event report will be faxed to the Bracebridge Area Office within 30 days of the occurrence, outlining the details of the incident, any additional information not provided in the incident notification and subsequent remediation. Each report will be dated and signed by the waterpower operator (see Event Report form template provided in Appendix E).

The report should include:

- 1. The date, time and nature of the deviation;
- 2. The extent of the deviation;
- 3. Possible causes of the deviation;
- 4. Known or anticipated impacts associated with the deviation; and
- 5. Steps taken or to be taken, including the timeframe, to correct the deviation.

#### 5.3 EXCEPTIONAL OPERATING CIRCUMSTANCES

The steering committee for the SRSWMP recognizes that there may be exceptional circumstances which can affect the ability of Bracebridge Generation Ltd. to maintain flows and water levels within the prescribed ranges as noted in Section 8 of this document. Natural, anthropogenic and mechanically induced occurrences may result in levels or flows outside the normal operating range.

Reporting during exceptional operating circumstances will be via telephone to the Water Resources Technical Specialist (or designated alternate) at the MNR Bracebridge Area office (705-645-8747) immediately upon verification of an out of range event.

Subsequent reporting of exceptional operating circumstances will follow the normal reporting formats as outlined in Section 6.2.



The following operational scenarios are considered exceptional in the context of the SRSWMP:

- 1. Significant rain or drought events which exceed the high or low water triggers established for each facility (as identified in Section 5). Reporting of high and low water triggers shall be undertaken at the beginning and end of each event.
- An Independent Electricity System Operator (IESO) or provincially declared energy emergency. If requested to respond to such an emergency, MNR and Bracebridge Generation Ltd. would work together to optimize power output from the river system. Waterpower facility operations outside the water level compliance zone would be reported as per Section 6.2.
- 3. Failure of generating station monitoring, mechanical equipment, or structures may result in the facility going outside its water level compliance zone. Such events will be reported immediately to the local MNR office (Senior Water Control Technologist or alternate) and to the central WMP 'reporting line' as noted in Section 6.2.
- 4. Icing of physical structures and monitoring equipment may result in the loss of operational/monitoring capability with that equipment. Such events will be reported immediately to the local MNR office (Senior Water Control Technologist or alternate) and to the central WMP 'reporting line' as noted in Section 6.2. MNR will be notified of the expected return to service time/date.
- 5. An electrical distribution system outage may cause generating plants to be isolated from the distribution network, and need to be shut down. Under these conditions, head-pond levels may rise temporarily until flow can be diverted through spillways or bypass channels. Such events will be reported immediately to the local MNR office (Senior Water Control Technologist or alternate) and to the central WMP 'reporting line' as noted in Section 6.2.
- 6. Short-term flow or water level changes resulting from dam safety tests (i.e., to ensure that stop logs can be removed to pass high flow events). Such events will be reported immediately to the local MNR office (Senior Water Control Technologist or alternate) and to the central WMP 'reporting line' as noted in Section 6.2.
- 7. Short to long-term flow or water level changes associated with maintenance, repairs or recapitalization of facilities. Since such work activities typically fall under a longer term planning process, MNR will be notified as a stakeholder, and appropriate mitigation strategies will be developed to minimize the potential extent and duration of any non-compliance requirements.

#### 5.4 NATURAL VARIATIONS IN WATER SUPPLIES

MNR recognizes that weather conditions and their impacts on water supplies are a source of ongoing uncertainty in managing water power facilities and other control structures. As such, Bracebridge Generation Ltd. will **not** be considered to be out of compliance with the SRSWMP



when they operate outside the water level compliance zone as a result of a high or low water conditions as defined below.

#### Low Water Indicator

Facilities with minimum downstream flow and minimum reservoir/head-pond water level requirements are in a low water condition when all of the following conditions are met:

- outflow from the facility is at or below the minimum flow target
- water level in the head pond/reservoir is at or below the minimum water level stipulated in the SRSWMP, and
- the head pond/reservoir water level is decreasing.

Facilities with no minimum downstream flow requirements but having a minimum reservoir/head-pond water level are in a low water condition when all of the following conditions are met:

- outflow from the facility is at the minimum possible under normal operating procedures
- the head pond/reservoir water level continues to decrease.

#### **High Water Indicator**

High water conditions exist at a facility when all the following conditions are met:

- water level in the head pond/reservoir is at or above the maximum water level stipulated in the approved SRSWMP, and
- head pond/reservoir water level is increasing, and
- discharge facilities have been operated to discharge the maximum discharge possible (while attempting to minimize upstream and downstream flood damage).

In instances where Bracebridge Generation Ltd. recognizes that it can no longer operate within the approved water level compliance zone because a low or high water indicator has been met, they will:

- immediately advise MNR and file an event report
- comply with any conditions/components contained in the SRSWMP related to these circumstances.

Owners of facilities that have mandatory water flow and level requirements may convene the Standing Advisory Committee (SAC) to assess options once a low water indicator has been met. SAC's were formerly convened upon completion of complex plans. For a simplified plan such as this, a SAC is not required and the assessment of options in a high or low water situation will be discussed between the proponent and MNR. Assessments will consider the circumstances of the situation against the priorities that were set during the planning process and will make recommendations accordingly. MNR may request appropriate existing data and information to confirm or assess the high or low water conditions, or may independently verify the situation.



## 6.0 Effectiveness Monitoring Program

Are the operational changes arising from implementation of the plan resulting in the anticipated ecological and social improvements





#### 6 EFFECTIVENESS MONITORING PROGRAM

The SRSWMP effectiveness monitoring program will determine whether the operational changes arising from implementation of the WMP result in the anticipated ecological and social improvements. Specialized flow management through dam operations, identified within the SRSWMP, was intended to address/improve the sustainable minimum flow at walleye spawning sites at Hurdville Dam, Mill Lake Dam, Grey Owl Lake Dam, Harris Lake Dam, Haines Lake Dam and the CPR Trestle Dam. The dam operation changes were also intended to maintain/improve the continued enjoyment of lake-based recreational activities and waterpower production.

As the SRSWMP is being implemented in two (2) Phases, effectiveness monitoring under Phase 1 will focus on those facilities with "enforceable" operation plans. However, this does not preclude monitoring of the facilities with "preliminary" operation plans, although, at these facilities monitoring efforts will be focused at establishing baseline conditions in most cases.

Reporting on the results of data collection and of the effectiveness monitoring program will occur through submission of the Implementation Report, as outlined in Section 7.3.

#### 6.1 DATA SHARING AND COMMUNICATIONS

A formal data sharing agreement will be established between MNR and Bracebridge Generation Ltd. to facilitate sharing of data collected during the SRSWMP. As part of that process, annual meetings will be organized to discuss operational matters and improve efficiencies. The annual meeting will be scheduled at a time/place convenient to both MNR and Bracebridge Generation Ltd., to review the previous year's operations, identify operational strategies that worked well or caused problems, and develop a proactive, adaptive management style approach to communication, issue identification and resolution.

The data sharing agreement will also include the following:

- survey data for structures included in this plan
- stop log operation (including total number of stop logs after every stop log manipulation) and lake water level information for structures included in this plan
- ecosystem data that will be collected
- site specific bathymetric data that may be collected
- results from a hydrologic simulation model of the watershed that may be developed

The proponent and MNR will also log public comments and/or complaints that are received relative to this plan.

#### 6.2 STAKEHOLDERS/STEWARDSHIP

It is recognized that Bracebridge Generation Ltd.'s operation of multiple dam facilities has



Section 6 – Effectiveness Monitoring Program

created impoundments that benefit the local community. This community has a considerable vested interest in the effective management of the reservoirs. Accordingly, in addition to the immediate stakeholders

responsible for the SRSWMP, working arrangements/stewardship agreements will be pursued with other watershed stakeholders to assist with monitoring, data analysis and the filling of data gaps. A short list of the many potential partners includes the following organizations/groups:

- Lorimer Lake Cottage Association
- McKellar Lakes Homes & Cottage Association
- Tait's Island Cottager's Association
- Manitouwabing Lake Community Association
- Manitou-Seguin Game & Fish Club
- Whitefish Lake Cottagers Association
- Seguin Township Associations & Ratepayers
- Isabella Lake Ratepayer's Association
- Southdale Property Owners / Duck Lake
- Tri-Lake Cottagers Association
- Municipality of McDougall
- McKellar Township
- McMurrich Township
- Township of Seguin
- Municipality of Whitestone
- Parry Sound Snowmobile District
- Parry Sound Nature Club
- McKellar Conservation Association

Further, the proponent and MNR will log public comments and/or complaints that are received relative to facilities associated with both "Preliminary" and "Enforceable" Operating Plans.



# 7.0 Plan Implementation and Amendment

The plan describes an operating strategy for facilities within the watershed which attempts to balance environmental, social and economic interests





#### 7 PLAN IMPLEMENTATION AND AMENDMENT

#### 7.1 OVERVIEW

The Seguin River Simplified Water Management Plan has been prepared by and will be implemented by the Ontario Ministry of Natural Resources and Bracebridge Generation Ltd.. The plan describes an operating strategy for facilities within the Seguin River Watershed which attempts to balance environmental, social and economic interests on the river system through the management of water flows and levels. This section describes the mechanism by which the plan will be implemented.

#### 7.2 ANNUAL REPORT

Bracebridge Generation Ltd. will produce an annual report that provides a summary of system operations, identifies any new issues/concerns and associated actions/resolutions, and outlines ongoing implementation, coordination/cooperation, monitoring and data gathering activities. The annual report will be provided to the stakeholders, the Wasauksing and Shawanaga First Nations and made available to the public upon request.

#### 7.3 Plan Amendments

In order for the WMP to remain current and to address future issues, the plan may be amended by following the amendment process set out in this section. Any change to the WMP requires an amendment to be submitted to the plan proponents and approved by MNRF. From time to time, new data, information, or issues may arise. MNRF retains the authority to amend a plan at any time, or issue an Order for the plan proponent(s) to amend the WMP.

#### 7.3.1 The Amendment Process

Any party (Plan Proponent, MNRF, or 3<sup>rd</sup> Party) with an interest in the WMP may request an amendment to the WMP by bringing forward issues to the attention of the plan proponent(s).

An amendment request must be accompanied by sufficient information to allow the proponent(s) to determine whether the proposed amendment should proceed, and whether the amendment should be treated as minor or major. Proponent(s) must apply due diligence when considering proposed amendments.

The plan proponent(s) are responsible for:

- Receiving amendment requests;
- Assessing amendment requests based on criteria outlined in this section;
- Proposing amendments to MNRF; and
- Preparing amendment proposals for MNRF review

MNRF will review proposed amendments to ensure that plan proponents screen and process

amendments consistent with the 2016 Maintaining Water Management Plans Technical Bulletin.

#### 7.3.1.1 Types of Amendments

Changes to the WMP may include simple text corrections to significant modifications to an operating regime. In order to provide flexibility for a range of potential amendment requests, two categories of amendments (minor and major) exist. The categories are mainly differentiated by the expected level of public interest in the proposed change to the WMP.

Amendments may be subject to public and First Nations and Métis community engagement or consultation, dependent on the category of amendment (described below), as detailed in Section 3.5 of the Maintaining Water Management Plan Technical Bulletin, 2016.

#### 7.3.1.1.1 Minor Amendments

Minor amendments are changes that do not affect the operating regime, plan objectives, are not expected to generate a high level of public interest, and are not expected to adversely affect Aboriginal and treaty rights. Minor amendments will not be subject to public and First Nations and Métis community engagement or consultation beyond discussions with a SAC (if applicable). Minor amendments may include:

- Changes in the presentation of information, factual or text corrections; and/or
- Changing a WMP to include a new dam and its associated Operating Plan (Section 2.1 of the Maintaining Water Management Plan Technical Bulletin, 2016)

#### 7.3.1.1.2 Major Amendments

Major amendments are more significant in scale such as: changes to the operating regime or plan objectives, changes that could be expected to generate a high level of public interest or changes that might adversely affect Aboriginal and treaty rights. A major amendment will be subject to public, First Nations, and Métis community engagement or consultation. For major amendments where equivalent consultation and engagement has previously occurred through another process (e.g. previous notification that a change will be required, or amendments required after public consultation in other planning processes), the MNRF may exercise discretion to process the proposed change as a minor amendment on a case by case basis.

#### 7.3.1.2 Amendment Request

Individuals submitting an amendment request shall clearly articulate concerns and potential solutions. Amendment requestors shall participate in good faith opportunities undertaken to obtain Indigenous Communities, public and stakeholder input on proposed major amendments and should consider their ability to contribute towards those engagement opportunities.

An amendment request should provide sufficient information to allow plan proponent(s) to determine whether an amendment request should be investigated further. It is the responsibility of the individual(s) requesting the amendment to demonstrate that the request is credible, worthy of consideration and within the scope of the WMP and the LRIA.

The amendment request must contain the following information:

- A description of the changes being requested;
- The rationale for the changes being requested;
- Results of any pre-consultation completed with potentially affected parties; and
• Where changes in operations are proposed, a description of how the proposed operation changes may impact other dams subject to the WMP.

Upon receipt of an amendment request from a third party, the plan proponent(s) will acknowledge receipt of the request in writing to the third party and notify the MNRF that a request has been received. Where the MNRF receives an amendment request from a third party, the request will be forwarded to the plan proponent(s).

Where plan proponent(s) are considering submitting an amendment request to the MNRF, prior consultation with the MNRF, the SAC (if applicable) and other plan proponents may occur.

Plan proponents will maintain records for all amendment requests.

### 7.3.1.3 Review of Amendment Request and Categorization of Amendment

The proponent(s) is responsible for screening amendment requests to determine if the request should proceed through the amendment process, and for categorizing the amendment as minor or major. This determination will ensure the appropriate degree of public consultation for the plan amendment.

The assessment will consider the following criteria:

- a) Is the amendment consistent with this Technical Bulletin?
- b) Is the amendment consistent with the WMP objectives, or does the amendment propose a change to the WMP objectives?
- c) Is there an alternative method to deal with the request rather than amending the WMP?
- d) Is the request within the scope of the WMP?
- e) Is the request related to any ongoing data or effectiveness monitoring commitments?
- f) Is the request supported by other potentially affected parties?
- g) Is the amendment required to comply with other regulatory requirements?
- h) Has the amendment request been considered previously?
- i) Does the amendment have the potential to negatively affect dam safety/public safety?
- j) Does the amendment have potential impacts on socio-economic or environmental considerations?

Where an amendment request does not contain sufficient information to complete an assessment or make a recommendation to MNRF, the plan proponent will return the proposed amendment to the third party with a request for additional information.

When a plan proponent(s) has completed the screening of the amendment request, written notification will be provided to MNRF. The notification will include: a summary of the amendment request and supporting rationale, results of the assessment, a recommendation of whether the request should be further considered, and if so, the appropriate category for the amendment.

#### 7.3.1.2 Review of Assessment Results

The MNRF will review the plan proponent's screening results and will:

- Agree with the recommendation;
- Request additional information; or
- Disagree with the recommendation.

Where the plan proponent(s) recommends against proceeding with the amendment request, and the MNRF is in agreement, the plan proponent(s) will notify the requestor of the decision with supporting rationale.

Where the MNRF agrees that the amendment request should proceed, the plan proponent(s) will develop and submit the final amendment proposal for MNRF consideration. The plan proponent(s) will undertake any necessary planning, consultation, information gathering or other investigative activities associated with the amendment. Where the amendment is requested by a third party, the third party may be expected to support engagement activities.

Where the MNRF disagrees with the recommendation, the MNRF will discuss the proposed amendment with the plan proponent(s). The MNRF may subsequently direct the plan proponent(s) to proceed with consideration of the plan amendment.

## 7.3.2 Ordering an Amendment

When a decision is made to proceed through the plan amendment process, the MNRF may formalize the decision through the issuance of an Order to prepare an amendment or approve the amendment under the authority of LRIA Section 23.1(6). Plan proponent(s) may also request that the MNRF issue an Order to amend the plan.

The MNRF retains the authority to require a plan proponent to undertake a WMP amendment where the plan proponent is unwilling to consider reasonable requests or where there are significant concerns regarding a facility's operation.

When MNRF intends to order a plan proponent to amend a plan, the proponent(s) will be provided a notice of intent to issue an Order to amend the plan prior to the issuance of the Order. Upon receipt of a notice of intent to issue an Order to amend a plan, the proponent(s) has 15 days to submit a request for an inquiry to the MNRF. Requests for an inquiry under the LRIA are referred by the MNRF to the Office of the Mining and Lands Commissioner (OMLC). Additional detail regarding appeals to the OMLC is referenced in MNRF's LRIA Administrative Guide and Section 11 of the LRIA.

### 7.3.3 Amendment Preparation

Where the MNRF has determined that a proposed amendment request should proceed, the plan proponent(s) shall prepare the final amendment proposal, including completing consultation activities or information gathering in support of the proposed amendment. Where the amendment is requested by a third party, the third party requester should discuss opportunities for collaboration in preparing the amendment.

For minor amendments, the plan proponent(s) must engage the MNRF, other plan proponent(s) and the SAC (if applicable). Public and First Nations and Métis community engagement and consultation requirements for major amendments are described in this plan.

### 7.3.3.1 Consultation and Engagement Requirements for Major Amendments

Plan proponent(s) and in certain circumstances third party amendment requestors, shall undertake public and First Nations and Métis community engagement and consultation when developing a major amendment. Specific requirements shall be discussed with the MNRF in advance. The scope of consultation and engagement may vary depending on:

• Scope and scale of the proposed major amendment;

- Level of public, stakeholder and First Nation and Métis community interest in dam operations;
- Level of potential impact on Aboriginal and treaty rights;
- Potential impacts on other regulatory approvals; and
- Potential impacts within the scope of the LRIA and the WMP.

Consultation and engagement approaches may include:

- Direct written notice;
- Open houses;
- Information sessions;
- Public notice; and/or
- Community meetings or workshops/focus groups.

Sufficient opportunity for reasonable engagement shall be provided and information regarding the amendment shall be communicated in concise plain language.

#### 7.3.1.2 Consultation and Engagement Requirements Where EA Applies

In some instances, proposed changes to existing operations of the WMP will be subject to the Environmental Assessment (EA) Act, such as MNRF's Resource Stewardship and Facility Development Class EA, or the OWA Class EA.

In such cases, the EA Act requirements shall be completed in advance of submitting an amendment request. The plan proponent(s) is not required, but may elect, to incorporate WMP amendment considerations during the EA Act process.

Where proposed changes are subject to an EA, the proponent may not be required to complete any additional public and First Nations and Métis community engagement and consultation in support of the proposed WMP amendment where sufficient engagement activities have been completed as part of the EA process.

MNRF determination of whether consultation and engagement completed during the EA is sufficient for purposes of a WMP amendment shall be made as part of the Ministry's assessment of the WMP amendment screening results. Additional consultation and engagement shall not be required, unless the MNRF concludes that the EA consultation was insufficient. In this case, the MNRF will determine the scope and scale of additional consultation and engagement necessary for the purposes of the WMP amendment.

### 7.3.4 Amendment Submission

Following completion of any applicable consultation requirements, the plan proponent(s) will provide the MNRF, other plan proponent(s) where appropriate, and any third party requesters, a copy of the final amendment proposal including:

- a) Amendment request and supporting rationale;
- b) Proposed changes (replacement text) as they would appear within the approved plan;
- c) Map of the area affected by the amendment (if applicable);
- d) Record of consultation identifying the type of form of feedback sought, issues identified and steps taken by the proponent to modify the proposed amendment in response to comments (if applicable); and
- e) Any other supporting information deemed applicable to the proposed amendment.

#### 7.3.5 Amendment Review

All amendments to the WMP must be approved by the MNRF.

The MNRF will complete a review of the amendment submission. For proposed minor amendments, the MNRF will complete a review within 30 days of receipt of a complete submission. For proposed major amendments, MNRF will complete a review within 60 days of receipt of a complete submission.

During and/or following the review of the proponent's amendment submission, the MNRF may, with supporting rationale, request additional information required to complete the MNRF's review.

#### 7.3.5.1 Requests for Additional Information

Where additional information is required, the MNRF will identify in writing the additional information requested and the rationale for the request. In such circumstances, the MNRF review timeline will be put on hold until the MNRF receives the requested information.

Upon receiving a request for additional information from the MNRF, the proponent may:

- Agree to provide the additional information by the specified time;
- Request a change to the specified time for submitting the information;
- Request a review by the Regional Director of the required information; or
- Refuse to provide the additional information.

Further details regarding the above scenarios can be found in Section 3.7.1 of the Technical Bulletin (2016).

#### 7.3.6 Issuance of Decision

In issuing a decision on the proposed amendment, the MNRF shall either:

- Approve the amendment;
- Approve the amendment subject to changes considered advisable to further the purposes of the Act; or
- Refuse the amendment.

MNRF will provide the plan proponent(s) and any third party requester, as appropriate, written confirmation of its decision and supporting rationale.

If the amendment is approved, the WMP will be revised and a record of the amendment will be appended to the approved WMP.

Where the MNRF intends to refuse an amendment, a Letter of Intent to Refuse approval of the amendment will be issued to the proponent identifying the supporting rationale and any additional measures the proponent(s) can take to address any outstanding concerns. The Letter of Intent to Refuse approval of amendment will notify the proponent that unless the MNRF receives a request within 15 days from the proponent for an inquiry, the amendment will be refused.

Requests for an inquiry under the LRIA are referred by the Ministry of the Office of Mining and Lands Commissioner (OMLC). Additional information on appeals to the OMLC is detailed in MNRF's LRIA Administrative Guide.

#### 7.3 Implementation Report

Plan proponents for the WMP shall submit an Implementation Report to the MNRF every five years. This report shall be a collective submission from all plan proponents.

The Implementation Report will provide status updates, transparency of dam operations and inform adaptive management considerations. The Implementation Report is not intended to initiate a fundamental review of the WMP.

The Implementation Report will include:

- Summary of all amendment requests received, including the rationale for completed amendments and how proposed amendments that did not proceed were addressed;
- Status of the Standing Advisory Committee, where applicable;
- Report on the results of the effectiveness monitoring program (EMP), if applicable, including a summary of monitoring conducted and findings, a determination of whether operations are having a negative or unintended impact, and an assessment of whether revisions to the facility operations, or the EMP, are required; and
- Status and results of any data or information collection outlined in the WMP's data collection program, if applicable, and a determination of whether revisions to the program are required.

The MNRF will review the report for completeness but will not formally approve the report. If the report is not complete, the MNRF will request that additional information be provided. The MNRF may also audit records used by the proponent(s) to prepare the Implementation Report and may request any additional information to verify the information presented.

Upon confirmation from the MNRF that the Implementation Report is complete, plan proponents will make the report publicly available.

The date for submission of the initial implementation report, through consultation with OWA, has been established as **December 31<sup>st</sup>, 2019**. In Accordance with the Maintaining Water Management Plans Technical Bulletin (2016), Implementation Reports must be submitted every five years thereafter.



# 8.0 Operation Plans





## 8 OPERATION PLANS

As noted previously, the development of enforceable operation plans for all water control structures within the scope of the SRSWMP is a long-term objective of the SRSWMP. However, limitations in the available data have required a phased approach. Therefore, the development of enforceable rule curves for all water control structures within the scope (see Section 2.2) of the SRSWMP will be done in two phases. Phase One will be completed by Spring 2009 and Phase Two will be completed five (5) years from the date of Plan Approval.

As an objective of this first phase of the SRSWMP operating plans for compliance and enforcement purposes have been prepared for the following structures only:

- Cascade Street Dam
- Mill Lake Dam
- Hurdville Dam
- Lorimer/Grey Owl Lake Dam

"Preliminary", "not enforceable" operating plans describing "best management practices" have been prepared for the remaining structures based upon local datum:

- Horn Lake Dam
- Fry's Lake Dam
- Whitefish Lake Dam
- CPR Trestle Dam
- Martin Lake Dam
- Harris Lake Dam
- Haines Lake Dam

Operating plans for compliance and enforcement purposes will be developed for the "Preliminary Operating Plans" as described above for the seven dams as a component of the second phase of the SRSWMP, to be completed five (5) years from the date of Plan Approval.

Tables 8-1 and 8-2 provide an overview of the fundamental operating, monitoring and reporting requirements for all plans comprising the SRSWMP for enforceable and preliminary operating plans, respectively.

Parry Sound PowerGen Corporation Seguin River Simplified Water Management Plan

Table 8-1 SRSWMP – Summary - Enforceable Operating Plans						
Facility	Class	Requirements				
		Mandatory Operation (see Section 4 for details)	Monitoring (see Section 5 and 6 for details)	Mandatory Reporting (see Section 5 for details)		
Cascade Street GS Dam Hurdville Dam	Enforceable Enforceable	<ul> <li>Daily fluctuations within the head pond will not exceed 0.60 m (from dam crest) consistent with long-term operation of the facility</li> <li>Discharge from the dam will be adjusted by using available storage within the Normal Operating Zone in order to allow minimum flows to be maintained for ecological objectives and other values in the immediate downstream river reach (unless a low water condition exists).</li> <li>Maximum water level drawdown is 0.75 m below the crest of the dam from April 15 to November 1</li> <li>Maximum water level drawdown is 1.05 m below the crest of the dam from November 2 to end of February</li> <li>Maximum water level drawdown is 1.26 m below the crest of the dam from March 1 to mid April (about April 15<sup>th</sup>) prior to spring runoff to prevent flooding.</li> <li>Resolution of the Public Utilities Commission of the Town of Parry Sound No.87.83 (dated August 10, 1987) which governs the operations of the Hurdville Dam has not been altered.</li> </ul>	Water level data, for compliance monitoring purposes, will be recorded by Bracebridge Generation Ltd. utilizing manual staff gauges at the dams. Water level observation frequency will vary during the year from daily, during periods when water levels are fluctuating, to weekly or bi- weekly (typically during the summer months) when water levels are less variable. The effectiveness monitoring program will determine whether the operational changes arising from implementation of the WMP result	Proponents shall make water flow and level data available to the Ministry upon request. Reporting on the results of data collection and/or effectiveness monitoring programs will occur through submission of the Implementation Report. Recording shall include:		
		<ul> <li>Discharge from the dam will be adjusted by using available storage within the Normal Operating Zone in order to allow minimum flows to be maintained for ecological objectives and other values in the immediate downstream river reach (unless a low water condition exists).</li> </ul>		<ul> <li>data is to be archived for a period of 5</li> </ul>		
Mill Lake Dam	Enforceable	<ul> <li>Maximum water level drawdown is 0.24 m below crest of the dam from April 15 to September 15</li> <li>Maximum water level drawdown is 0.48 m below crest of the dam from September 16 to April 14</li> <li>Discharge from the dam will be adjusted by using available storage within the Normal Operating Zone in order to allow minimum flows to be maintained for ecological objectives and other values in the immediate downstream river reach (unless a low water condition exists).</li> </ul>		<ul> <li>data will be provided electronically</li> <li>the proponent shall make existing data available to an MNR when requested to do so</li> </ul>		



#### Parry Sound PowerGen Corporation Seguin River Simplified Water Management Plan

Grey Owl Lake Dam	Enforceable	<ul> <li>Maximum water level drawdown is 0.50 m below crest of the dam</li> <li>MNR has identified that walleye spawn downstream of the Grey Owl Lake Dam just below the culverts on the west side of McKellar Lake Road. Operation of this structure during the walleye spawning season (typically in mid to late April to early May) will be undertaken, where possible, to promote the maintenance or augmentation of base flows in the known spawning area to support walleye reproductive success at this location.</li> <li>Discharge from the dam will be adjusted by using available storage within the Normal Operating Zone in order to allow minimum flows to be maintained for ecological objectives and other values in the immediate downstream river reach (unless a low water condition exists).</li> </ul>	in the anticipated ecological and social improvements.	<ul> <li>when requested by MNR to supply existing data, the proponent shall do so in the timeframe indicated in the request.</li> <li>data required for compliance monitoring and reporting shall be maintained for a period of 5 years following it being recorded</li> </ul>
				Events outside the water level compliance zone shall be reported by telephone to the Bracebridge Area office or other location as per MNR direction within 24 hours of the time that Bracebridge Generation Ltd. is aware of the event. The report should include: • The date, time and nature of the deviation; • The extent of the deviation; • Possible causes of the deviation; • Known or anticipated impacts associated with the deviation; and • Steps taken or to be taken, including the timeframe, to correct the deviation. The facility owner/operator is then required to provide a written report to the MNRF within 30 days, outlining the details of the incident, any additional information not provided in the incident notification and subsequent remediation. Reporting during exceptional operating circumstances shall be via telephone to the Water Resource Co-ordinator (or designated alternate) at the MNR Bracebridge Area office (705-645-8747) immediately upon verification of an out of range event (see Section 6.3 for details).



Table 8-2 SRSWMP – Summary - Preliminary Operating Plans					
-	Class	Requirements			
Facility		Recommended Operation (see Section 4 for details)	Monitoring (see Section 5 and 6 for details)	Recommended Reporting (see Section 5 for details)	
Horn Lake Dam	Preliminary	<ul> <li>Maximum water level drawdown is 1.5 m below the crest of the dam from January 1 to December 31.</li> <li>The preliminary operating plan includes a notification zone. The notification zone for Horn Lake Dam is set at a water level of 99.0 m in the period January 1 to April 30; 99.25m in the period May 1 to July 10, and 99.0m in the period July 11 to December 31.</li> <li>Discharge from the dam will be adjusted by using available storage within the Normal Operating Zone in order to allow minimum flows to be maintained for ecological objectives and other values in the immediate downstream river reach (unless a low water condition exists).</li> <li>Summer stop log operations to release water from storage occur on or after July 10th.</li> </ul>	Water level data, for compliance monitoring purposes, will be recorded by Bracebridge Generation Ltd.utilizing manual staff gauges at the dams. Water level observation frequency will vary during the year from daily, during periods when water levels are fluctuating, to weekly or bi- weekly (typically during the summer months) when water levels are less variable.	<ul> <li>Proponents shall make water flow and level data available to the Ministry upon request. Reporting on the results of data collection and/or effectiveness monitoring programs will occur through submission of the Implementation Report.</li> <li>Recording shall include: <ul> <li>water level data recording</li> <li>data is to be archived for a period of 5 years</li> <li>data will be provided electronically</li> <li>the proponent shall make existing data available to an MNR when requested to do so</li> <li>when requested by MNR to supply existing data, the proponent shall do so in the timeframe indicated in the request.</li> <li>data required for compliance monitoring and reporting shall be maintained for a period of 5 years following it being recorded</li> </ul> </li> <li>Events outside the water level compliance zone shall be reported by telephone to the Bracebridge Area office or other location as per MNR direction within 24 hours of the time that Bracebridge Generation Ltd. is aware of the event.</li> <li>The report should include:     <ul> <li>The date, time and nature of the deviation;</li> <li>The extent of the deviation;</li> </ul> </li> </ul>	
Martin Lake Dam	Preliminary	<ul> <li>Maximum water level drawdown is 2.4 m below the crest of the dam from January 1 to December 31</li> <li>The preliminary operating plan includes a notification zone. The notification zone for Martin Lake Dam is triggered at water levels below 98.8 m in the period January 1 to December 31.</li> <li>Discharge from the dam will be adjusted by using available storage within the Normal Operating Zone in order to allow minimum flows to be maintained for ecological objectives and other values in the immediate downstream river reach (unless a low water condition exists).</li> </ul>			
Fry's Lake Dam	Preliminary	<ul> <li>Maximum water level drawdown is 1.0 m below the crest of the dam from September 7 to March 30</li> <li>Maximum water level drawdown is 0.5 m below the crest of the dam from April 1 to September 6</li> <li>The preliminary operating plan includes a notification zone. The notification zone is triggered at a water level of 99.3m in the period January 1 to April 1; 99.5m in the period April 2 to September 14; and 99.3m in the period September 15 to December 31.</li> <li>Discharge from the dam will be adjusted by using available storage within the Normal Operating Zone in order to allow minimum flows to be maintained for ecological objectives and other values in the immediate downstream river reach (unless a low water condition exists).</li> </ul>			
Whitefish Lake Dam	Preliminary	<ul> <li>Maximum water level drawdown is 1.2 m below crest of the dam from January 1 to December 31.</li> <li>Discharge from the dam will be adjusted by using available storage within the Normal Operating Zone in order to allow minimum flows to be maintained for ecological objectives and other values in the immediate downstream river reach (unless a low water condition exists).</li> </ul>			
Harris Lake Dam	Preliminary	<ul> <li>Maximum water level drawdown is 0.50 m below crest of the dam from January 1 to mid April</li> <li>Maximum water level drawdown is 0.35 m from mid April to September 30</li> <li>Maximum water level drawdown is 0.50 m below crest of the dam October 1 to December 31</li> <li>Discharge from the dam will be adjusted by using available storage within the Normal Operating Zone in order to allow minimum flows to be maintained for ecological objectives and other values in the immediate downstream river reach (unless a low water condition exists).</li> </ul>			
Haines Lake Dam	Preliminary	<ul> <li>Maximum water level drawdown is 0.50 m below crest of the dam from April 1 to June 30</li> <li>Maximum water level drawdown is 1.0m below crest of the dam from July 1 to September 30</li> <li>Maximum water level drawdown is 0.8 m below crest of the dam from October 1 to December 31</li> <li>Maximum water level drawdown is 1.0 m below crest of the dam from January 1 to March 31</li> <li>Discharge from the dam will be adjusted by using available storage within the Normal Operating Zone in order to allow minimum flows to be maintained for ecological objectives and other values in the immediate downstream river reach (unless a low water condition exists).</li> </ul>			



#### Parry Sound PowerGen Corporation Seguin River Simplified Water Management Plan



<ul> <li>Possible causes of the deviation;</li> </ul>
<ul> <li>Known or anticipated impacts</li> </ul>
associated with the deviation; and
<ul> <li>Steps taken or to be taken, including</li> </ul>
the timeframe, to correct the deviation.
The facility owner/operator is then required to
provide a written report to the MNRF within 30
days, outlining the details of the incident, any
additional information not provided in the
incident notification and subsequent
remediation.
Reporting during exceptional operating
circumstances shall be via telephone to the
Water Resource Co-ordinator (or designated
alternate) at the MINR Bracebridge Area office
(705-645-8747) immediately upon verification
of an out of range event (see Section 6.3 for
details).

Seguin River Simplified Water Management Plan Cascade Street GS Dam - Operating Plan Status: Enforceable



**PARRY SOUND POWERGEN** 

CORPORATION

Seguin River Simiplified Water Management Plan Cascade Street Dam - Operating Plan Status: Enforceable

## **Operating Plan Notes**

1. The proponent and MNR will log public comments and/or complaints that are received relative to this plan.

Seguin River Simplified Water Management Plan Mill Lake Dam - Operating Plan Status: Enforceable



Seguin River Simiplified Water Management Plan Mill Lake Dam - Operating Plan Status: Enforceable

## **Operating Plan Notes**

1. The proponent and MNR will log public comments and/or complaints that are received relative to this plan.



Seguin River Simiplified Water Management Plan Hurdville Dam - Operating Plan Status: Enforceable

## **Operating Plan Notes**

1. The proponent and MNR will log public comments and/or complaints that are received relative to this plan.

Seguin River Simplified Water Management Plan Grey Owl Lake Dam - Operating Plan Status: Enforceable



Seguin River Simiplified Water Management Plan Grey Owl Lake Dam - Operating Plan Status: Enforceable

## **Operating Plan Notes**

- 1. MNR has identified that walleye spawn downstream of the Grey Owl Lake Dam just below the culverts on the west side of McKellar Lake Road. Operation of this structure during the walleye spawning season (typically in late April to early May) should be undertaken, where possible, to promote the maintenance or augmentation of base flows in the known spawning area to support walleye reproductive success at this location.
- 2. The proponent and MNR will log public comments and/or complaints that are received relative to this plan.



Jul

Months of the Year

Jun

Aug

Sep

Oct

Nov

Seguin River Simplified Water Management Plan

Note: \* - Elevation set to arbitrary datum

Jan

Elevation (m)\*

Dec

(minor scale increment 3")

Feb

Mar

Apr

May

**Operating Plan documented May 2009** Flood Damage Zone delineation not currently available

Seguin River Simiplified Water Management Plan Horn Lake Dam - Operating Plan Status: Preliminary

## **Operating Plan Notes**

- 1. The preliminary operating plan includes a notification zone. When drawdown enters the notification zone the proponent shall notify the Parry Sound District MNR Supervisor. The notification zone for Horn Lake Dam is set at a water level of 99.0 m in the period January 1 to April 30; 99.25m in the period May 1 to July 10, and 99.0m in the period July 11 to December 31.
- 2. Summer stop log operations to release water from storage occur on or after July 10th.
- 3. The proponent and MNR will log public comments and/or complaints that are received relative to this plan.



Note: \* - Elevation set to arbitrary datum

Seguin River Simiplified Water Management Plan Fry's Lake Dam - Operating Plan Status: Preliminary

## **Operating Plan Notes**

- 1. The preliminary operating plan includes a notification zone. When drawdown enters the notification zone the proponent shall notify the Parry Sound District MNR Supervisor. The notification zone for Upper Fry's Lake Dam is triggered at a water level of 99.3m in the period January 1 to April 1; 99.5m in the period April 2 to September 14; and 99.3m in the period September 15 to December 31.
- 2. The proponent and MNR will log public comments and/or complaints that are received relative to this plan.

Seguin River Simplified Water Management Plan Whitefish Lake Dam - Operating Plan Status: Preliminary





PARRY SOUND POWERGEN

**CORPORATION** 

Operating Plan documented May 2009 Flood Damage Zone delineation not currently available

Seguin River Simiplified Water Management Plan Whitefish Lake Dam - Operating Plan Status: Preliminary

## **Operating Plan Notes**

1. The proponent and MNR will log public comments and/or complaints that are received relative to this plan.

## Seguin River Simplified Water Management Plan CPR Trestle Dam - Operating Plan Status: Preliminary



Seguin River Simiplified Water Management Plan CPR Trestle Dam - Operating Plan Status: Preliminary

## **Operating Plan Notes**

1. Operation of this structure during the walleye spawning season (typically in April) should be undertaken with a preference to the stop logs on the north (Lumber Store) side of the structure for the release of any flows, and to the south stoplog bay for additional retention of flows. This will promote the maintenance or augmentation of flows in the identified spawning area and existing fish passage structure to direct fish to the habitat below the Lumber Store gate.

## Seguin River Simplified Water Management Plan Martin Lake Dam - Operating Plan Status: Preliminary



Seguin River Simiplified Water Management Plan Martin Lake Dam - Operating Plan Status: Preliminary

## **Operating Plan Notes**

- 1. The preliminary operating plan includes a notification zone. When drawdown enters the notification zone the proponent shall notify the Parry Sound District MNR Supervisor. The notification zone for Martin Lake Dam is set at a water level of 98.8 m in the period January 1 to December 31.
- 2. The proponent and MNR will log public comments and/or complaints that are received relative to this plan.



Note: \* - Elevation set to arbitrary datum

Seguin River Simiplified Water Management Plan Harris Lake Dam - Operating Plan Status: Preliminary

## **Operating Plan Notes**

1. The proponent and MNR will log public comments and/or complaints that are received relative to this plan.



Seguin River Simiplified Water Management Plan Haines Lake Dam - Operating Plan Status: Preliminary

## **Operating Plan Notes**

1. The proponent and MNR will log public comments and/or complaints that are received relative to this plan.



# 9.0 References





#### 9 **REFERENCES**

- AMEC, 2002 Cascade Street Generating Station, Feasibility Study for Installation of Unit No.3, Parry Sound PowerGen Corporation, AMEC Earth & Environmental, April 2002.
- AMEC, 2003 Environmental Screening For Modifications To The Cascade Street Generating Station – Unit #3, Parry Sound, Ontario, for Parry Sound PowerGen Corporation by AMEC Earth & Environmental, July 2003.
- AMEC, 2005 Seguin River Simplified Water Management Plan, Scoping Report, Parry Sound PowerGen Corporation, January 2005.
- MNR, 1985 *Ontario's Water Power Sites*, Ontario Ministry of Natural Resources, p.57, 1985.
- MNR, 1999 *Ontario Dam Safety Guidelines* (draft), Ontario Ministry of Natural Resources, September 1999.
- MNR, 2002 *Waterpower Water Management Planning Guidelines for Waterpower*, Ontario Ministry of Natural Resources, 2002.
- MNR, 2005 Waterpower Water Management Planning Guidelines for Waterpower, Appendix J, Compliance and Enforcement Guidelines, Ministry of Natural Resources, July 2005.
- MNR, 2008 Walleye Spawning Bed Site Inspection, Haines Lake Creek and Dam, Concession 1, Lot 16, Township of McDougall, MNR (Eastern Georgian Bay Stewardship Council), May 12, 2008.
- MNRF, 2016 *Maintaining Water Management Plans Technical Bulletin, Ministry of Natural Resources and Forestry, October 2016.*
- Watech, 2001 Seguin River Watershed, Water Level Control Structure Study, Watech Services Inc., November 2001.

General File on Seguin River Fisheries Resources, Ontario Ministry of Natural Resources.

Database of MNR Dams, Ontario Ministry of Natural Resources.



## APPENDICES

APPENDIX A - TERMS OF REFERENCE
APPENDIX B - ACRONYMS / GLOSSARY
APPENDIX C - SCOPING REPORT / OPTIONS REPORT (ON CD)
APPENDIX D - EVENT REPORTING TEMPLATE
APPENDIX E - MNR REVISIONS TO PLAN
APPENDIX F - PUBLIC CONSULTATION SUMMARY
APPENDIX G - 2018 ADMINISTRATIVE AMENDMENT BACKGROUND


Appendix A – Terms of Reference

# **APPENDIX A**

## **TERMS OF REFERENCE**



### SEGUIN RIVER SIMPLIFIED WATER MANAGEMENT PLAN TERMS OF REFERENCE

### 1.0 INTRODUCTION

The Cascade Street Generating Station (GS), a hydroelectric based facility, is located within the Town of Parry Sound. The Cascade Street Generating Station is located in Lot 28, Concession III, Township of McDougall now in the Town of Parry Sound, and is owned by Parry Sound PowerGen Corporation (PowerGen) a wholly owned subsidiary company of Parry Sound Hydro Corporation.

As well as the Cascade Street GS and the associated Dam, PowerGen own and operate 10 additional water control structures. Nine of the 11 PowerGen controlled structures are operated for the purposes of hydroelectric generation. The Seguin River also has two water control structures owned by third parties. These include the Vinette Lake Dam owned by the Ontario Ministry of Natural Resources, and the Trestle Dam owned by the Town of Parry Sound. The Seguin River is located within the Parry Sound District with less than 1% of the drainage basin located in the geographic township of Cardwell in the District of Muskoka. The headwaters are on the western slopes of the Algonquin Dome near the hamlet of Whitehall, and flow westerly for a distance of approximately 40 kilometres to Georgian Bay. The watershed encompasses an area of about 102,300 hectares (1023 km<sup>2</sup>)<sup>1</sup>. The Cascade Street GS is located approximately 1 kilometre upstream from the mouth of the Seguin River with no significant tributaries entering below the generating station. Effectively the entire runoff from the Seguin River watershed must be passed through the generating station or bypassed through the associated dam structure.

There are 11 dams on the Seguin River watershed that are controlled either directly or indirectly for the purpose of flow management at Cascade Street GS. These dams would fall within the scope of the Seguin River Water Management Plan and are summarized in Table 1.

The Trestle Dam, owned by the Town of Parry Sound, is not operated for hydroelectric power production, but flows and controlled levels associated with the dam are influenced by the operation of the Cascade Street GS and associated dam.

The remaining three dams (see Table 2) are not controlled for flow management at the Cascade Street GS and would thereby not be included in the water management plan.



# Table 1Dams Located on the Seguin River WatershedWithin the Scope of the Seguin River Water Management Plan

Dam Name / Location	Township	Owner
Horn Lake	Monteith	PowerGen
Fry's Lake	Monteith	PowerGen
Whitefish Lake	Humphrey	PowerGen
Martin Lake	Christie	PowerGen
Grey Owl Lake	McKellar	PowerGen
(McKellar Lake)		
Hurdville Dam	McKellar	PowerGen
(Lake Manitouwabing)		
Harris Lake	Ferguson	PowerGen
Beverages Lake (also	McDougall	PowerGen
controls Haines Lake)		
Mill Lake	Town of Parry Sound	PowerGen
Cascade Street	Town of Parry Sound	PowerGen
(Head Pond Dam)		
Trestle Dam	Town of Parry Sound	Town of Parry Sound

# Table 2Dams Located on the Seguin River WatershedOutside the Scope of the Seguin River Simplified Water Management Plan

Dam Name / Location	Township	Owner	Comment
Vinette Lake Dam	Monteith	Ministry of Natural Resources	Headwater structure is not operated for waterpower production. Not affected by flows or levels of any other dams.
Nine Mile Lake	McDougall	PowerGen	Structure is not operated for waterpower production. Not affected by flows or levels of any other dam.
Trout Lake	McDougall	PowerGen	Structure is not operated for waterpower production. Not affected by flows or levels of any other dam.



### 2.0 PLAN GOAL AND PRINCIPLES

The Seguin River Water Management Plan will be prepared to fulfill Section 23 (1.1) of the *Lakes and Rivers Improvement Act.* The Water Management Plan will follow a Simplified Planning Process and will be prepared in accordance with the goals and principles as outlined in Section 4.0 of the *Waterpower - Water Management Planning Guidelines for Waterpower* (MNR, 2002).

### 3.0 STEERING COMMITTEE MEMBERSHIP

The Steering Committee for the Seguin River Hydro Generating Station Simplified Water Management Plan shall consist of:

Calvin Epps – Chair	Parry Sound PowerGen Corporation
Clary Gatien	Northern Ontario Power Company
Andreas Stenzel	AMEC Earth & Environmental Limited
Peter Nimmrichter	AMEC Earth & Environmental Limited
Oliver Pastinak	Ministry of Natural Resources
Eric McIntyre	Ministry of Natural Resources
Mike Phillips	Ministry of Natural Resources
Dan Thompson	Department of Fisheries and Oceans
Paul Borneman	Town of Parry Sound
To be announced	Shawanaga First Nation
To be announced	Wasauksing First Nation

### 4.0 ROLES AND RESPONSIBILITIES

The proponent for the preparation of the Seguin River Simplified Water Management Plan will be PowerGen. PowerGen will be responsible for undertaking the planning process in consultation with the MNR, as per the *Waterpower - Water Management Planning Guidelines for Waterpower* (MNR, 2002).

PowerGen will be required to:

• Coordinate a planning team consisting of technical disciplines consisting of but limited to biologists/ecologists, engineers, hydrologists, and information specialists that will be required to provide input to the preparation of the Simplified Water Management Plan;



- Coordinate and consult with MNR and other members of the Steering Committee throughout the process of the Simplified Water Management Plan;
- Assemble environmental, hydrologic, engineering and socially related information from available sources and undertake a gap analysis to establish data collection needs;
- Establish a data collection plan based on the gap analysis;
- Apply historical flow, water level, climatic and operations data to establish a baseline model to be applied in the preparation of the Simplified Water Management Plan;
- Preparation of a Simplified Water Management Plan Report documenting the planning process.

MNR's responsibility in the planning process will be consistent with Section 7.3 of the *Waterpower - Water Management Planning Guidelines for Waterpower* (2002).

### 5.1 SCHEDULE

Terms of Reference	December 12, 2003
Final Scoping Report	January 24, 2005
Final Option Report	April 29, 2004
Final Draft Plan	May 26, 2005
Final WMP Plan	July 15, 2005

#### References

1. Ministry of Natural Resources, Ontario's Water Power Sites, p.57, 1985.



Appendix B – Acronyms / Glossary

# APPENDIX B ACRONYMS/GLOSSARY



### LIST OF ACRONYMS

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### **GLOSSARY OF TERMS**

**Dam Crest –** the top of the dam.

**Dam Sill** – In the context of the dams described in this report, the dam sill is the bottom of the stop log bay or operated gate and represents the lowest elevation of the dam structure over which flows can pass (in the theoretical event of complete removal of logs or lifting of a gate). Hypothetically, the reservoir would fall to this elevation in the event of no available flows under an open gate scenario.

**Dead Storage –** Storage in reservoirs that lies below the elevation of the dam's lowest outlet or operations water level and which cannot be drawn out or used beneficially is known as dead storage.

**Enforceable Operation Plan –** Appendix J of the Water Management Planning Guidelines for Waterpower (MNR, 2005) provides the details with regard to the compliance with and enforcement of "enforceable" operating plans developed as components of the SRSWMP. The Compliance and Enforcement Guidelines provide direction and guidance for review of whether the flows and levels controlled by waterpower facilities and associated structures, are managed in accordance with approved Water Management Plans. In the guideline, industry has a self-monitoring and reporting role and MNR has an inspection, audit and enforcement role.

**Flood Damage Zone –** Water levels in this zone are known to result in flood damages upstream and/or downstream of the water control structure.

**Flood Surcharge Zone –** The flood surcharge zone represents reservoir storage above the water level compliance zone that serves as a storage buffer to diminish the impacts of high floods. This flood surcharge zone can be used effectively through dam operations and management when feasible. Following a flood, water in this storage zone is released in a controlled manner within the limits of downstream channel capacity.

**Notification Zone -** Many of the "preliminary" operating plans include a "notification zone". The notification zone is triggered at water levels specific to individual lakes. When drawdown enters the notification zone the proponent notifies the District MNR Supervisor.

**Owner -** includes the owner of the facility/structure and the person(s) authorized by the owner to operate the facility/structure on the owner's behalf.

**Peaking** - refers to a mode of operation in which the generating station operates for specific periods of high energy demand, typically daytime use on weekdays and stores the remainder of the water during off-peak times in its forebay and/or in an upstream reservoir.

**Preliminary Operation Plan** – "Non-Enforceable" or "Preliminary" operating plans will only become enforceable upon review of water level and flow data to be collected over the negotiated period of time following plan approval. The SRSWMP Steering Committee has adopted a plan review term of five years. During this initial review term collection of information



to fill identified data gaps and development of the remaining enforceable operating plans for the complete system will be undertaken. At the end of the five year period, the SRSWMP would be subject to a plan review under the water management planning process set out in the "*Water Management Planning Guidelines for Waterpower*" at which time the "preliminary" operating plans will be replaced by approved and enforceable operating plans.

**Rule Curves or Operations Plans** – are a diagrammatic representation of intended water levels that can be established through operational management of a dam (i.e., through adjustment of the flow control mechanism) throughout the year for a specific reservoir. They reflect a water level compliance zone established to balance competing interests for water. The rule curve development process starts by establishing the top and bottom of the curves (highest tolerable level, lowest tolerable level) to avoid severe flooding or severe drought conditions. Within that range, consideration is given to other water uses (e.g., navigation, water supply, recreation, etc.). Critical habitat concerns also drive target levels to ensure against damage to sensitive natural resources. Rule curve development is both a quantitative and qualitative process incorporating reviews of existing operational and water level data and discussions with other water users in the system.

**Run-of-River** - refers to a mode of operation in which the generating station has minimal forebay storage that passes some or all of the inflow through one or more turbines on a continuous basis with the remainder, if any, going over an existing falls or spillway.

**Water Level Compliance Zone –** defines the acceptable range of water level fluctuations achieved through dam operations and management that will most reasonably suit the needs of the majority of users, and incorporates a certain amount of fluctuation to accommodate the variability associated with normal weather events.



Appendix C – Scoping Report

# APPENDIX C SCOPING REPORT / OPTIONS REPORT



Appendix D – Event Report Template

# APPENDIX D EVENT REPORTING TEMPLATE



Appendix D -	Event Report	Template
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MNR Fax No.: (705) 645-8372

### Event Report Seguin River Simplified Water Management Plan

Date of Observed Event: Time of Observed Event:		(mm/dd/yyyy) hh:mm
Rep	Dorted to MNR by Phone to Office: Date: Time:	<ul><li>G Bracebridge Area</li><li>G Provincial Coordination Centre</li></ul>
	24-Hour Average water Level (m):	
Nat	ure of Incident:	
G	Low Water Trigger Met	Start Date / Time
		End Date / Time
G	High Water Trigger Met	Start Date / Time
		End Date / Time
G	Equipment Failure	
G	ISO Request and Approval by MNR	Contact Person:
G	Emergency	
G	Upstream Dam Operations	Upstream Dam:
G	Facility or Dam Maintenance	
G	Other	

Is corrective action required to bring the operation back into Plan? Please describe:

How long will it be before the operation is expected to be back into Plan?

Owner/Operator (Signature)

Name (Print)

Date

Parry Sound PowerGen

**Utility Name** 

G additional information attached



Appendix E – MNR Revisions to Plan

# APPENDIX E MNR REVISIONS TO PLAN



# **APPENDIX F**

# PUBLIC CONSULTATION SUMMARY



### PUBLIC CONSULTATION SUMMARY

The public consultation process for the Seguin River Simplified Water Management Plan (SWMP) was coordinated by both Parry Sound PowerGen and the Ministry of Natural Resources. Formal opportunities for public consultation were provided during the Scoping Report and Draft Plan stages. A summary of the public consultation process utilized for this SWMP development is provided below.

#### SCOPING REPORT

- Public consultation period for the Scoping Report was established from January 31 to March 2, 2005 (30 days).
- A newspaper posting announcing that the Scoping Report was available for public review was placed in local papers (Almaguin News and Parry Sound North Star) (a copy is provided at the end of this appendix).
- A direct mailing to local municipalities and stakeholders was carried out during this consultation period.
- An Information Notice was posted on the EBR Registry (EBR Registry Number XB05E3002) on January 31, 2005.
- Access to all Scoping Report documentation was provided on AMEC's Public Consultation website (<u>www.public-participation.ca</u>).
- Copies of the Scoping Report were available for public review at the MNR offices in Bracebridge and Parry Sound, as well as, the offices of Parry Sound PowerGen in Parry Sound and the Parry Sound Public Library.

A total of three formal submissions from the public were received during this public consultation period. Responses were provided to all submissions in May 2005.

Table 1 summarizes the public comments received and how these comments were considered in the preparation of the Options Report and Draft Plan:



TABLE 1				
Person/ Agency	Issue	Response		
Township of McKellar	<ul> <li>A number of specific points were raised:</li> <li>expressed concern regarding possible conflict of interest between Steering Committee members</li> </ul>	<ul> <li>the roles of the two consultants working on the project were explained with conclusion that no conflict of interest has been identified</li> </ul>		
	<ul> <li>recommended documentation of both positive and negative implications</li> </ul>	<ul> <li>agreed that changes to operational strategies can have both positive and negative impacts and the existing operational tact may in fact represent the best balance.</li> </ul>		
	<ul> <li>recommended Emergency and Maintenance Plans be developed for each structure in the Plan.</li> </ul>	• Emergency Preparedness Plans are typically a component of a Dam Safety Review and would not be completed as a component of this planning process. It is expected, however, that PowerGen will complete Dam Safety Reviews for their water control structures as a separate operational undertaking in the future.		
	<ul> <li>indicated that comments relating to Owl Lake Dam and Hurdville Dam be identical</li> <li>expressed interest in the development of a watershed simulation model</li> </ul>	<ul> <li>comment incorporated into the Scoping Report</li> <li>A preliminary hydrologic simulation model is in the development stages and it will be enhanced in the future as new data becomes available</li> </ul>		
	<ul> <li>identified needed corrections to Figure 2-6 and 2-8</li> <li>stressed the importance of opportunity for</li> </ul>	<ul> <li>comment incorporated into the Scoping Report</li> <li>outlined the public consultation approach</li> </ul>		
	public consultation	adopted by the Steering Committee		
Member of the Public	asked if there is currently an agreement that governs the management of water levels on Lake Manitouwabing.	Yes and provided details regarding Resolution of the Public Utilities Commission of the Town of Parry Sound No. 87.83 (dated August 10, 1987) which details regulation of Lake Manitouwabing.		
Member of the Public	asked if there is currently an agreement that governs the management of water levels on Lake Manitouwabing.	Yes and provided details regarding Resolution of the Public Utilities Commission of the Town of Parry Sound No. 87.83 (dated August 10, 1987) which details regulation of Lake Manitouwabing. Also indicated that expansion of the water level limits defined by Resolution 87.83 is not a consideration for this Plan.		



### DRAFT PLAN

- The public consultation period for the Draft Plan was established from May 12 to June 25, 2008 (45 days) at the request of MNR.
- Newspaper postings were placed in the Almaguin News on Friday, May 16th, 2008 and the Parry Sound North Star on Wednesday, May 14<sup>th</sup>, 2008 (a copy is provided at the end of this appendix).
- A direct mailing to local municipalities and stakeholders was carried out on May 7<sup>th</sup>, 2008.
- Access to all Draft Plan documentation was provided on AMEC's Public Consultation website (www.public-participation.ca) as of May 12<sup>th</sup>, 2008.
- An Information Notice update was posted on the EBR Registry (EBR Registry Number XB05E3002) on May 12<sup>th</sup>, 2008 advising that the Draft Plan was available for review.
- Copies of all Draft Plan documentation were provided at the MNR offices in Bracebridge and Parry Sound, as well as, the offices of Parry Sound PowerGen in Parry Sound as of May 12<sup>th</sup>, 2008.
- A newspaper article written by a Parry Sound North Star reporter was published in the May 28<sup>th</sup>, 2008 paper and in the article, the reporter advised of the opportunity for the public review of the Draft Plan for the Seguin River WMP.

A total of six formal submissions from the public were received during this public consultation period. Formal responses have been provided to all submissions as of May 2009.

Table 2 summarizes the public comments received and how these comments were considered in the preparation of the Final Plan:

Following the formal public consultation period, Township representatives were invited to the Annual General Meeting of Parry Sound Hydro Corporation on July 7th, 2008 for an overview of the Water Management Planning process. Invitees included:

- McDougall Township;
- Seguin Township;
- McKellar Township; and,
- McMurrich/Monteith Township.



TABLE 2				
Person/ Agency	Issue	Response		
Seguin Township	expressed interest in the impacts of the proposed plan on each of recreational lakes within the Seguin River watershed, as well as, any changes anticipated to the current practices	Provided information for the following lakes which are included in the scope of the SRSWMP located wholly or partially within Seguin Township: • Whitefish Lake • Martin Lake • Fry's Lake • Beverage's (or Haines) Lake		
Member of the Public	Hurdville Dam – concerned about the low water levels at bay at Meharg Drive on Lake Manitouwabing in the summer; request examination of the current water level measurement used as a basis of operating the dam	Provided details regarding Resolution of the Public Utilities Commission of the Town of Parry Sound No. 87.83 (dated August 10, 1987) which details regulation of Lake Manitouwabing. Also indicated that PowerGen will endeavour to obtain additional information to better understand this issue.		
Member of the Public	Horn Lake – concerned about the rapid drop in water level on Horn Lake in the spring and the potential for impact on fish and wildlife; requests that logs not be pulled at the Horn Lake Dam until after the 2 <sup>nd</sup> Saturday in July	<ul> <li>Similar responses were provided to those members of the public specifically interested in Horn Lake.</li> <li>indicated that specific concerns identified in</li> </ul>		
Member of the Public	Horn Lake – concerned about the dam operations in the spring resulting in low water levels on the lake and potentially impacting fish spawning; request that the operational zone be narrowed and the spring drawdown be reduced.	these responses spurred Steering Committee discussions which resulted in changes to the planned operation that reduced drawdowns and changed when summer operations were initiated.		
Member of the Public	Horn Lake – concerned about the spring drawdown in May/June and the potential impact to bass spawning	Horn Lake		
Member of the Public	Martin Lake – approves of the current operation of the dam on Martin Lake	Provided a summary of the key adjustments made to the existing operating plan for Martin Lake, as well as, the existing and resultant "Preliminary Operating Plan".		



### Newspaper Posting – Scoping Report Review





#### Newspaper Posting – Draft Plan Review





# **APPENDIX G**

### 2018 ADMINISTRATIVE AMENDMENT BACKGROUND

What is changing?	Where does this apply?	What does this mean?
The plan expiry date will be <b>removed</b> .	<b>ALL</b> simple water management plans in Ontario.	<ul> <li>A ten-year review will no longer occur.</li> <li>Plans no longer expire.</li> <li>Plans will now be maintained through the amendment and reporting processes outlined below.</li> </ul>
Existing text about amendment processes in water management plans to be removed and replaced with: "Provision for Plan Amendments Plan Amendments In order for the WMP to remain current and to address future issues, the plan may be amended by following the amendment process set out in this section. Any change to the WMP requires an amendment to be submitted to the plan proponents and approved by MNRF. From time to time, new data, information, or issues may arise. MNRF retains the authority to amend a plan at any time, or issue an Order for the plan proponent(s) to amend the WMP. The Amendment Process Any party (Plan Proponent, MNRF, or 3 <sup>rd</sup> Party) with an interest in the WMP may request an amendment to the WMP by bringing forward issues to the attention of the plan proponent(s). An amendment request must be accompanied by sufficient information to allow the proponent(s) to determine whether the proposed amendment should proceed, and whether the amendment should be treated as minor or major. Proponent(s) must apply due diligence when considering proposed amendments. The plan proponent(s) are responsible for:	ALL simple water management plans in Ontario.	<ul> <li>Any change to a WMP requires an amendment.</li> <li>Plan proponents are now responsible for receiving amendment requests from a third party, and may also propose amendments.</li> <li>Once the proponent receives an amendment request, they must notify MNRF, assess and process the request based on the listed criteria, and then make a recommendation regarding the amendment to MNRF. Proponents are then responsible for preparing amendment proposals for Ministry review.</li> <li>All amendments require approval from MNRF.</li> <li>The Minister retains the authority to amend or order to amend the plan at any time.</li> </ul>

What is changing?	Where does this apply?	What does this mean?
<ul> <li>Assessing amendment requests based on criteria outlined in this section;</li> <li>Proposing amendments to MNRF; and</li> <li>Preparing amendment proposals for MNRF review</li> <li>MNRF will review proposed amendments to ensure that plan proponents screen and process amendments consistent with the 2016 Maintaining Water Management Plans Technical Bulletin.</li> </ul>		
Types of Amendments		
Changes to the WMP may include simple text corrections to significant modifications to an operating regime. In order to provide flexibility for a range of potential amendment requests, two categories of amendments (minor and major) exist. The categories are mainly differentiated by the expected level of public interest in the proposed change to the WMP.		
Amendments may be subject to public and First Nations and Métis community engagement or consultation, dependent on the category of amendment (described below), as detailed in Section 3.5 of the Maintaining Water Management Plan Technical Bulletin, 2016.		
Minor Amendments		
<ul> <li>Minor amendments are changes that do not affect the operating regime, plan objectives, are not expected to generate a high level of public interest, and are not expected to adversely affect Aboriginal and treaty rights. Minor amendments will not be subject to public and First Nations and Métis community engagement or consultation beyond discussions with a SAC (if applicable). Minor amendments may include: <ul> <li>Changes in the presentation of information, factual or text corrections; and/or</li> <li>Changing a WMP to include a new dam and its associated Operating Plan (Section 2.1 of the Maintaining Water Management Plan Technical Bulletin, 2016)</li> </ul> </li> </ul>		
Major Amendments		

What is changing?	Where does this apply?	What does this mean?
Major amendments are more significant in scale such as: changes to the operating regime or plan objectives, changes that could be expected to generate a high level of public interest or changes that might adversely affect Aboriginal and treaty rights. A major amendment will be subject to public, First Nations, and Métis community engagement or consultation. For major amendments where equivalent consultation and engagement has previously occurred through another process (e.g. previous notification that a change will be required, or amendments required after public consultation in other planning processes), the MNRF may exercise discretion to process the proposed change as a minor amendment on a case by case basis.		
Amendment Request		
Individuals submitting an amendment request shall clearly articulate concerns and potential solutions. Amendment requestors shall participate in good faith opportunities undertaken to obtain Indigenous Communities, public and stakeholder input on proposed major amendments and should consider their ability to contribute towards those engagement opportunities.		
An amendment request should provide sufficient information to allow plan proponent(s) to determine whether an amendment request should be investigated further. It is the responsibility of the individual(s) requesting the amendment to demonstrate that the request is credible, worthy of consideration and within the scope of the WMP and the LRIA.		
<ul> <li>The amendment request must contain the following information: <ul> <li>A description of the changes being requested;</li> <li>The rationale for the changes being requested;</li> <li>Results of any pre-consultation completed with potentially affected parties; and</li> <li>Where changes in operations are proposed, a description of how the proposed operation changes may impact other dams subject to the WMP.</li> </ul> </li> </ul>		
Upon receipt of an amendment request from a third party, the plan proponent(s) will acknowledge receipt of the request in writing to the third party and notify the MNRF		

What is changing?	Where does this apply?	What does this mean?
that a request has been received. Where the MNRF receives an amendment request from a third party, the request will be forwarded to the plan proponent(s).		
Where plan proponent(s) are considering submitting an amendment request to the MNRF, prior consultation with the MNRF, the SAC (if applicable) and other plan proponents may occur.		
Plan proponents will maintain records for all amendment requests.		
Review of Amendment Request and Categorization of Amendment		
The proponent(s) is responsible for screening amendment requests to determine if the request should proceed through the amendment process, and for categorizing the amendment as minor or major. This determination will ensure the appropriate degree of public consultation for the plan amendment.		
The assessment will consider the following criteria:		
<ul><li>b) Is the amendment consistent with the WMP objectives, or does the</li></ul>		
amendment propose a change to the WMP objectives? c) Is there an alternative method to deal with the request rather than amending		
the WMP?		
d) Is the request within the scope of the WMP?		
commitments?		
f) Is the request supported by other potentially affected parties?		
g) Is the amendment required to comply with other regulatory requirements?		
<ul> <li>h) Has the amendment request been considered previously?</li> <li>i) Does the amendment have the potential to pogetively affect dam safety/public.</li> </ul>		
safety?		
j) Does the amendment have potential impacts on socio-economic or		
environmental considerations?		
Where an amendment request does not contain sufficient information to complete an		

What is changing?	Where does this apply?	What does this mean?
assessment or make a recommendation to MNRF, the plan proponent will return the proposed amendment to the third party with a request for additional information.		
When a plan proponent(s) has completed the screening of the amendment request, written notification will be provided to MNRF. The notification will include: a summary of the amendment request and supporting rationale, results of the assessment, a recommendation of whether the request should be further considered, and if so, the appropriate category for the amendment.	,	
Review of Assessment Results		
<ul> <li>The MNRF will review the plan proponent's screening results and will:</li> <li>Agree with the recommendation;</li> <li>Request additional information; or</li> <li>Disagree with the recommendation.</li> </ul>		
Where the plan proponent(s) recommends against proceeding with the amendment request, and the MNRF is in agreement, the plan proponent(s) will notify the request of the decision with supporting rationale.	pr	
Where the MNRF agrees that the amendment request should proceed, the plan proponent(s) will develop and submit the final amendment proposal for MNRF consideration. The plan proponent(s) will undertake any necessary planning, consultation, information gathering or other investigative activities associated with the amendment. Where the amendment is requested by a third party, the third party may be expected to support engagement activities.		
Where the MNRF disagrees with the recommendation, the MNRF will discuss the proposed amendment with the plan proponent(s). The MNRF may subsequently direct the plan proponent(s) to proceed with consideration of the plan amendment.	ot l	
Ordering an Amendment		
When a decision is made to proceed through the plan amendment process, the MNR	F	

What is changing?	Where does this apply?	What does this mean?
may formalize the decision through the issuance of an Order to prepare an amendment or approve the amendment under the authority of LRIA Section 23.1(6). Plan proponent(s) may also request that the MNRF issue an Order to amend the plan.		
The MNRF retains the authority to require a plan proponent to undertake a WMP amendment where the plan proponent is unwilling to consider reasonable requests or where there are significant concerns regarding a facility's operation.		
When MNRF intends to order a plan proponent to amend a plan, the proponent(s) will be provided a notice of intent to issue an Order to amend the plan prior to the issuance of the Order. Upon receipt of a notice of intent to issue an Order to amend a plan, the proponent(s) has 15 days to submit a request for an inquiry to the MNRF. Requests for an inquiry under the LRIA are referred by the MNRF to the Office of the Mining and Lands Commissioner (OMLC). Additional detail regarding appeals to the OMLC is referenced in MNRF's LRIA Administrative Guide and Section 11 of the LRIA.		
Amendment Preparation		
Where the MNRF has determined that a proposed amendment request should proceed, the plan proponent(s) shall prepare the final amendment proposal, including completing consultation activities or information gathering in support of the proposed amendment. Where the amendment is requested by a third party, the third party requester should discuss opportunities for collaboration in preparing the amendment.		
For minor amendments, the plan proponent(s) must engage the MNRF, other plan proponent(s) and the SAC (if applicable). Public and First Nations and Métis community engagement and consultation requirements for major amendments are described in this plan.		
Consultation and Engagement Requirements for Major Amendments		
Plan proponent(s) and in certain circumstances third party amendment requestors, shall undertake public and First Nations and Métis community engagement and		

What is changing?	Where does this apply?	What does this mean?
<ul> <li>consultation when developing a major amendment. Specific requirements shall be discussed with the MNRF in advance. The scope of consultation and engagement may vary depending on: <ul> <li>Scope and scale of the proposed major amendment;</li> <li>Level of public, stakeholder and First Nation and Métis community interest in dam operations;</li> <li>Level of potential impact on Aboriginal and treaty rights;</li> <li>Potential impacts on other regulatory approvals; and</li> <li>Potential impacts within the scope of the LRIA and the WMP.</li> </ul> </li> </ul>		
<ul> <li>Consultation and engagement approaches may include:</li> <li>Direct written notice;</li> <li>Open houses;</li> <li>Information sessions;</li> <li>Public notice; and/or</li> <li>Community meetings or workshops/focus groups.</li> </ul>		
Sufficient opportunity for reasonable engagement shall be provided and information regarding the amendment shall be communicated in concise plain language.		
Consultation and Engagement Requirements Where EA Applies		
In some instances, proposed changes to existing operations of the WMP will be subject to the Environmental Assessment (EA) Act, such as MNRF's Resource Stewardship and Facility Development Class EA, or the OWA Class EA.		
In such cases, the EA Act requirements shall be completed in advance of submitting an amendment request. The plan proponent(s) is not required, but may elect, to incorporate WMP amendment considerations during the EA Act process.		
Where proposed changes are subject to an EA, the proponent may not be required to complete any additional public and First Nations and Métis community engagement and consultation in support of the proposed WMP amendment where sufficient engagement activities have been completed as part of the EA process.		

What is changing?	Where does this apply?	What does this mean?
MNRF determination of whether consultation and engagement completed during the EA is sufficient for purposes of a WMP amendment shall be made as part of the Ministry's assessment of the WMP amendment screening results. Additional consultation and engagement shall not be required, unless the MNRF concludes that the EA consultation was insufficient. In this case, the MNRF will determine the scope and scale of additional consultation and engagement necessary for the purposes of the WMP amendment.		
Amendment Submission		
<ul> <li>Following completion of any applicable consultation requirements, the plan proponent(s) will provide the MNRF, other plan proponent(s) where appropriate, and any third party requesters, a copy of the final amendment proposal including: <ul> <li>a) Amendment request and supporting rationale;</li> <li>b) Proposed changes (replacement text) as they would appear within the approved plan;</li> <li>c) Map of the area affected by the amendment (if applicable);</li> <li>d) Record of consultation identifying the type of form of feedback sought, issues identified and steps taken by the proponent to modify the proposed amendment in response to comments (if applicable); and</li> <li>e) Any other supporting information deemed applicable to the proposed amendment.</li> </ul> </li> </ul>		
Amendment Review		
All amendments to the WMP must be approved by the MNRF.		
The MNRF will complete a review of the amendment submission. For proposed minor amendments, the MNRF will complete a review within 30 days of receipt of a complete submission. For proposed major amendments, MNRF will complete a review within 60 days of receipt of a complete submission.		
During and/or following the review of the proponent's amendment submission, the		

What is changing?	Where does this apply?	What does this mean?
MNRF may, with supporting rationale, request additional information required to complete the MNRF's review.		
Requests for Additional Information		
Where additional information is required, the MNRF will identify in writing the additional information requested and the rationale for the request. In such circumstances, the MNRF review timeline will be put on hold until the MNRF receives the requested information.		
<ul> <li>Upon receiving a request for additional information from the MNRF, the proponent may:</li> <li>Agree to provide the additional information by the specified time;</li> <li>Request a change to the specified time for submitting the information;</li> <li>Request a review by the Regional Director of the required information; or</li> <li>Refuse to provide the additional information.</li> </ul>		
Further details regarding the above scenarios can be found in Section 3.7.1 of the Technical Bulletin (2016).		
Issuance of Decision		
<ul> <li>In issuing a decision on the proposed amendment, the MNRF shall either:</li> <li>Approve the amendment;</li> <li>Approve the amendment subject to changes considered advisable to further the purposes of the Act; or</li> <li>Refuse the amendment.</li> </ul>		
MNRF will provide the plan proponent(s) and any third party requester, as appropriate, written confirmation of its decision and supporting rationale.		
If the amendment is approved, the WMP will be revised and a record of the amendment will be appended to the approved WMP.		

What is changing?	Where does this apply?	What does this mean?
Where the MNRF intends to refuse an amendment, a Letter of Intent to Refuse approval of the amendment will be issued to the proponent identifying the supporting rationale and any additional measures the proponent(s) can take to address any outstanding concerns. The Letter of Intent to Refuse approval of amendment will notify the proponent that unless the MNRF receives a request within 15 days from the proponent for an inquiry, the amendment will be refused. Requests for an inquiry under the LRIA are referred by the Ministry of the Office of Mining and Lands Commissioner (OMLC). Additional information on appeals to the OMLC is detailed in MNRF's LRIA Administrative Guide."		
Existing text outlining specific requirements for reporting of water flows and levels data to MNRF will be <b>removed and replaced</b> with: "Proponents shall make water flow and level data available to the Ministry upon request."	Simple water management plan proponents in Ontario <b>that have an existing</b> <b>operating regime only</b> (dams that have an effect on flows/levels).	<ul> <li>Existing requirements for data collection and the retention of this data remain in effect.</li> <li>Proponents no longer have to submit routine flow and level monitoring data on existing schedules, rather they will be submitted upon request by MNRF.</li> <li>The data that is collected under existing requirements will be communicated through the Implementation Report, as explained further below.</li> </ul>
Incident notification text will be <b>revised</b> to ensure it aligns with the requirements outlined below: "Self-Monitoring, Data Reporting and Incident Notification All facilities are required to self-monitor mandatory water flow and level limits, and report on any incidents where a deviation from the operating requirements of the WMP (mandatory water flow and level), or other mandatory conditions of the WMP. All incidents must be reported to the MNRF.	Simple water management plan proponents in Ontario <b>that have an existing</b> <b>operating regime only</b> (dams that have an effect on flows/levels).	<ul> <li>Proponents must notify MNRF of deviations from the operating regime (flows and levels) within 24 hours of an incident occurring.</li> <li>Proponents must make MNRF aware of the expected cause and duration of the incident, any remedy the proponent has taken to correct the deviation, and if/when a return to band is expected.</li> <li>In addition to this initial notification, the proponent must send a follow-up report to</li> </ul>

What is changing?	Where does this apply?	What does this mean?
<ul> <li>An initial notification to the MNRF is required within 24 hours of the occurrence of the incident or when the proponent(s) first becomes aware of the incident.</li> <li>The report should include: <ul> <li>The date, time and nature of the deviation;</li> <li>The extent of the deviation;</li> <li>Possible causes of the deviation;</li> <li>Known or anticipated impacts associated with the deviation; and</li> <li>Steps taken or to be taken, including the timeframe, to correct the deviation.</li> </ul> </li> <li>The dam owner will maintain and retain records of all level and flow information, and will create and maintain a permanent archive of those records for future reference.</li> <li>The facility owner/operator is then required to provide a written report to the MNRF within 30 days, outlining the details of the incident, any additional information not provided in the incident notification and subsequent remediation."</li> </ul>		<ul> <li>MNRF that details the incident within 30 days.</li> <li>Many plans already outline similar requirements for incident notification.</li> </ul>
<ul> <li>Annual compliance text will be revised to ensure it aligns with the requirements outlined below:</li> <li>"Annual Compliance Reports</li> <li>The plan proponent will prepare and submit an Annual Compliance Report. The report will contain a summary and description of all incidents and any remedial action(s) proposed or undertaken. In the event there were no recorded incidents of noncompliance, the report will state as such."</li> </ul>	Simple water management plan proponents in Ontario <b>that have an existing</b> <b>operating regime only</b> (dams that have an effect on flows/levels).	<ul> <li>Proponents will submit an annual signed compliance report to MNRF that outlines any incidents (deviances from the operating regime flows/levels) in the past year, if any.</li> <li>Many plans already outline similar requirements for compliance reporting.</li> </ul>
The following statement will be <b>added</b> to existing data collection and/or effectiveness monitoring sections: "Reporting on the results of data collection and/or effectiveness monitoring programs will occur through submission of the Implementation Report, as outlined in Section XX."	Simple water management plan proponents in Ontario <b>that have an existing</b> <b>operating regime only</b> (dams that have an effect on flows/levels).	<ul> <li>Where they exist, data collection and effectiveness monitoring requirements continue to apply.</li> <li>Proponents will report on collected data and the status of the effectiveness monitoring program through the Implementation Report,</li> </ul>

What is changing?	Where does this apply?	What does this mean?
		as outlined below.
<ul> <li>A section will be added to introduce the new requirement for the implementation report as below. Note that MNRF is working to confirm a schedule for submission of these reports; final dates will be amended into the plan.</li> <li>"Implementation Reporting</li> <li>Plan proponents for the WMP shall submit an Implementation Report to the MNRF every five years. This report shall be a collective submission from all plan proponents.</li> <li>The Implementation Report will provide status updates, transparency of dam operations and inform adaptive management considerations. The Implementation Report will include: <ul> <li>Summary of all amendment requests received, including the rationale for completed amendments and how proposed amendments that did not proceed were addressed;</li> <li>Status of the Standing Advisory Committee, where applicable;</li> <li>Report on the results of the effectiveness monitoring program (EMP), if applicable, including a summary of monitoring conducted and findings, a determination of whether operations are having a negative or unintended impact, and an assessment of whether revisions to the facility operations, or the EMP, are required; and</li> <li>Status and results of any data or information collection outlined in the WMP's data collection program, if applicable, and a determination of whether revisions to the program are required.</li> </ul></li></ul>	ALL simple water management plan proponents in Ontario.	<ul> <li>Proponents are responsible for submitting an Implementation Report every five (5) years.</li> <li>The initial Implementation Report will be due between 1 to 3 years from the March 31<sup>st</sup>, 2018 expiry date of the WMP. MNRF continues to work with the Ontario Waterpower Association to finalize these dates. The initial Implementation Report submission date for your WMP will be included in the final amendment to your plan.</li> <li>Please contact Mike Poskin, Regional Renewable Energy Coordinator, with any questions regarding this date at mike.poskin@ontario.ca or (705) 755- 1362.</li> <li>The implementation report may include a summary of any amendment requests received, a status update on the Standing Advisory Committee (if one exists), the status of the Effectiveness Monitoring Program, and a report on any flow and level data collected by proponents (if applicable).</li> <li>MNRF will review the reports, may audit the</li> </ul>
The MNRF will review the report for completeness but will not formally approve the report. If the report is not complete, the MNRF will request that additional information be provided. The MNRF may also audit records used by the proponent(s) to prepare		<ul> <li>records and/or request other information used to make the report.</li> <li>Once completed and reviewed by MNRF, proponents should make the implementation</li> </ul>

What is changing?	Where does this apply?	What does this mean?
the Implementation Report and may request any additional information to verify the information presented.		report available to the public.
Upon confirmation from the MNRF that the Implementation Report is complete, plan proponents will make the report publicly available."		