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Ontario Waterpower Association

and

Ministry of Natural Resources
Ontario

Evaluation and Assessment of

Ontario's Waterpower Potential

Final Report

October 2005

prepared by

HATCH ACRES
The Energy Company

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1 Introduction

In the past, the Province of Ontario has studied in great detail the waterpower potential in the province. As stated by Ontario Hydro (OH, 1987):

> *"The Province of Ontario is a land of many lakes and rivers, a legacy from the action of glaciers in the Ice Age. At last count, there are about 227,000 lakes in the province. These lakes and their interconnecting rivers cover an area of approximately 181,200 km^2, or about 17 percent of the total area of the province. With these many lakes and rivers and a mean annual runoff of 309 mm from precipitation over the entire province, it is no wonder that fresh water is considered one of the most abundant and readily available resources of the province."*

Despite this, there remains a perception that 'there are no waterpower opportunities' remaining in the province of Ontario. These statements have likely arisen because there have been no significant waterpower developments in Ontario for more than 25 years. Such statements are not accurate. As the demand for electricity increases, many waterpower sites that were previously deemed impractical or uneconomic will become more feasible. As well, developments that were previously proposed but not pursued may also become of interest.

Hatch Acres was commissioned at the beginning of August 2005 by the Ontario Waterpower Association (OWA) to undertake an evaluation and assessment of the waterpower potential in the province of Ontario. The intent of the present study is to support OWA's submission [in partnership with the Ontario Ministry of Natural Resources (MNR)] to the Ontario Power Authority (OPA), for the OPA's initiative focused on long-term energy supply options. The present study is a compilation of available information from a large number of sources. No additional fieldwork or site reconnaissance was undertaken for this study.

1.1 Ontario's Existing Waterpower Facilities

The province of Ontario has close to 200 operating waterpower facilities geographically distributed across the province. In total, these facilities have an installed capacity of more than 8000 MW and account, on average, for approximately one quarter of the province's annual average energy production.

Figures 1.1 and 1.2 provide an overview of the relative percentage of facilities by the number of plants (Figure 1.1) and by the total capacity (Figure 1.2) by category.

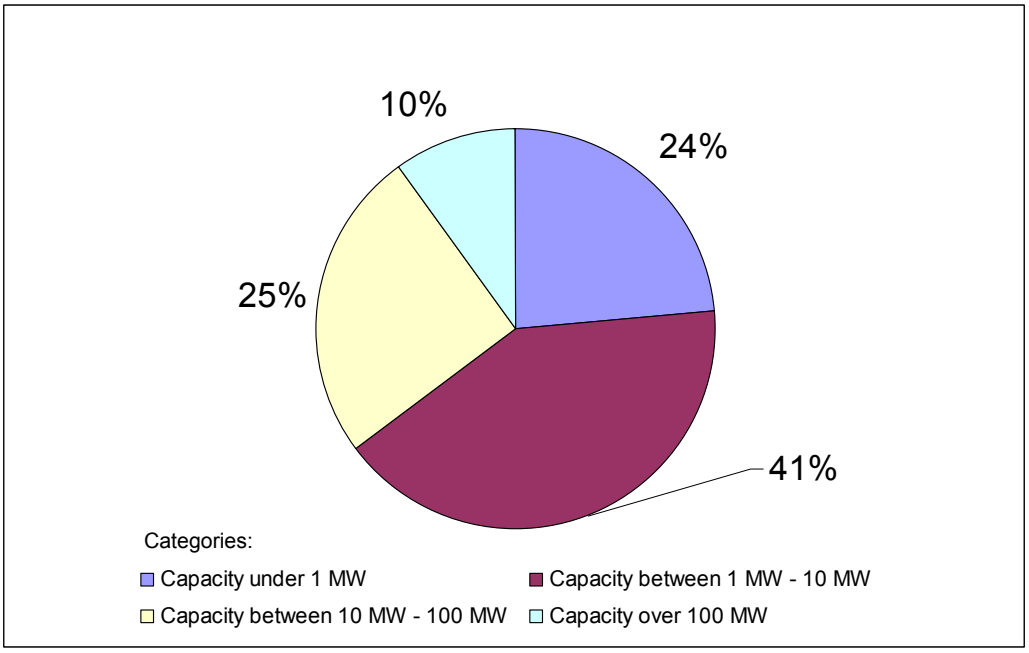

Figure 1.1: Number of Ontario Waterpower Facilities by Category

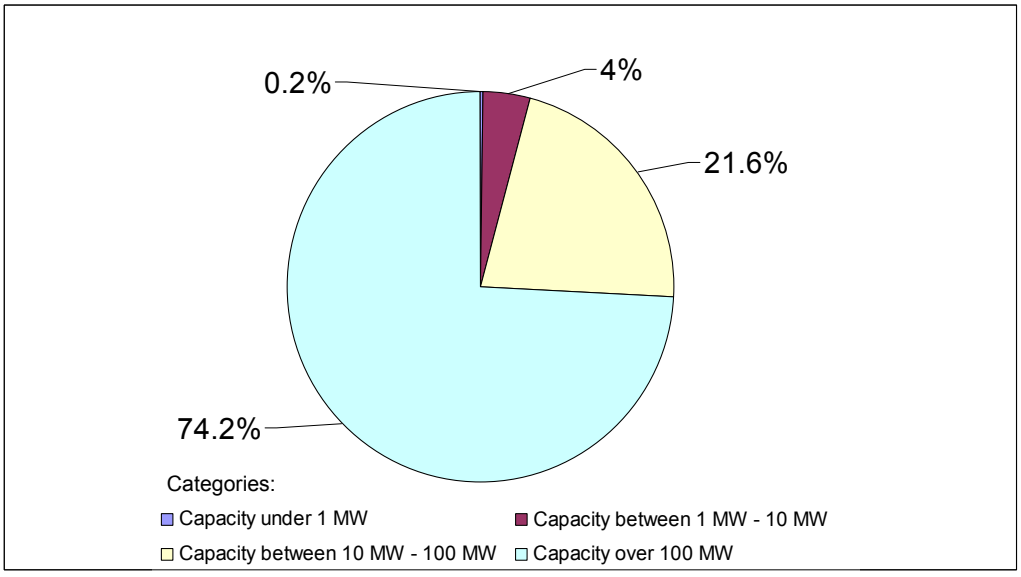

Figure 1.2: Total Capacity of Ontario Waterpower Facilities by Category

Waterpower has been produced in Ontario for more than 100 years, and up until the middle of the 20th century, accounted for almost all the electricity production in the province. Through the 1970s, 1980s and 1990s, little waterpower capacity was added, as nearly all of the new plants built were small, with the province choosing to focus investment in other technologies and sources, namely fossil and nuclear generation.

Beginning in the mid-1980s and into the early 1990s, the province, through Ontario Hydro, embarked upon the development of a 'Demand-Supply' plan that explored electricity options for Ontario going forward. With respect to waterpower, the plan ("Providing the Balance of Power," OH, 1990) identified in Chapter 12 (The Hydraulic Plan) proposed for Ontario Hydro to develop an additional 3591 MW of hydroelectricity and allocated more than 1300 MW to the private sector. More than a decade later, the majority of that potential remains unrealized.

1.2 Existing Waterpower Energy Production

Waterpower plays a unique and increasingly important role in Ontario's energy supply mix, serving both base-load and peak-load system requirements. The 'value' of flexibility was aptly described in the most recent Independent Electricity System Operator's (IESO's) 10-Year Outlook (January 2006 – December 2015) (IESO, 2005).

> *"The IESO is concerned with the future management of the province's water resources as they relate to electricity production. The flexibility available in the operation of hydroelectric facilities is of value to the Ontario power system. The importance of this needs to continue to be reflected and balanced with other uses which may influence provincial requirements with respect to water management. Ontario's electricity consumption pattern has changed over the last decade. Consumers have historically used more electricity in the winter than they did in the summer. This has reversed. Peak electricity demands now occur during the summer, the season in which water management is typically most restricted.*
>
> *Within a typical day, the total hydroelectric energy production pattern follows the shape of the total Ontario electricity demand. This flexibility of hydroelectric generation is significant; these plants can store potential*

energy when it is needed least (e.g., overnight) and can deliver their energy very quickly when it is needed (e.g., during morning load pickup when Ontario consumers increase their electricity use, at times greater than 3,000 MW per hour). Similar benefit exists from managing the water for electricity production on a weekly and seasonal basis. . . . The flexibility of hydroelectric generation has always been of value but its importance will increase even more in the future. . . . Preserving operating flexibility of hydro-electric generating facilities (whether old or new) should be a critical consideration."

This 'value' is particularly relevant in assessing supply mix options for the future. Notwithstanding that much attention has been paid to the '25 000-MW Gap' facing the province within the timeframe proposed for the inaugural "Integrated Power System Plan", flexibility in the production of energy, when required, is as important an issue going forward.

1.3 Present Study Background

This present study is intended to enable the OWA to respond to the consultative process initiated by the OPA to reach a consensus on the recommendations to be presented to the Ontario Ministry of Energy (MOE) regarding the long-term electricity 'supply mix' for the province. The specific issue area of the OPA consultative process with particular relevance to the OWA is the following:

"Assessments of different supply technologies and resources in the Ontario setting, including (but not limited to) natural gas generation, coal gasification, nuclear (new and refurbished), wind, biomass and hydro-electric resources. The assessments will be of the greatest value where they (1) utilize recent source information or current data on capital and operating costs, performance characteristics, technology life cycle, environmental impacts and any other relevant characteristics and (2) present data on a consistent basis across the supply technologies and resources that would be suitable for planning studies."

The OPA initiative on supply mix will feed directly into the development of the integrated power system plan, consultation on which is scheduled to begin in early 2006. It is imperative that the best available information is provided to this initiative. Given that there has not been any significant waterpower development in Ontario for more than 25 years, there has been a presumption that 'there are no

opportunities' remaining. The 'system mix' question has offered a unique opportunity to correct this assumption.

While there are numerous previous studies and assessments of waterpower potential in Ontario, most of those are dated, as are many of the assumptions underlying them. The OWA, on behalf of the waterpower industry, retained the services of Hatch Acres to review and re-evaluate Ontario's remaining waterpower potential.

1.4 Scope of Work

The OWA gave an overall description and scope of the study as "focused on the analysis and assessment of waterpower potential in Ontario and the identification of practical limitations to realizing that potential".

The scope of work proposed by Hatch Acres and undertaken while performing the evaluation and assessment of waterpower potential in the province of Ontario was as follows:

- research, review and evaluate background information
- assess and quantify greenfield, existing dams, redevelopments and pumped storage waterpower potential on a tertiary watershed basis
- re-evaluate previously identified 'significant' opportunities
- identify and sort potential waterpower opportunities by practicality
- identify technical, economical and political limitations/constraints to waterpower development in Ontario.

This report will discuss the approach and methodology taken to perform this evaluation and assessment of known waterpower potential in Ontario. Finally, this report will present the results, conclusions and recommendations for further investigations.

2 Approach

The assessment methodology that has been followed is to compile and collate information that has been previously published. This approach was necessary because of the very short time period available for the study. Hatch Acres approach runs parallel with OWA's objective of providing a clear and concise indication of the hydroelectric power potential and impediments to development.

The approach to this study involves review of previous studies on the hydroelectric potential in the province of Ontario and application of the best available expertise and economic assumptions. A bibliography of studies and databases is provided in the present report. The two main databases used for the evaluation and assessment of waterpower potential in Ontario were the Natural Resources Canada database (NRCAN, 2005) and the MNR database (MNR, 2004). The main study evaluated for this report was the work carried out by Ontario Hydro in 1987 entitled "Hydroelectric Power Resources of the Province of Ontario" (OH, 1987). Other internal Acres studies, together with studies supplied by OWA were also used to compile and compare hydro potential throughout Ontario.

Throughout the evaluation process information, assumptions and limitations/constraints were reviewed with the OWA. The assumptions and limitations/constraints are discussed in Section 3 (Methodology) of this report.

2.1 Categories of Assessment

The evaluation and assessment process was broken up into the following different categories:

(a) Mini-Hydro

All potential hydro sites less than 1 MW of estimated installed capacity. Although there are viable sites in this category, they were excluded from the detailed listings in the present study because they constitute a large number of sites that will likely not make a substantial contribution in terms of the amount of new energy provided to the overall system (presently 45 such facilities have a collective installed capacity of about 16 MW). It is anticipated, however, that a number of these opportunities will be pursued, particularly given the growing emphasis on

geographically distributed generation and local energy security. Site data for the some 1500 undeveloped sites that have an estimated installed capacity less than 1 MW is available in the MNR and NRCAN databases.

(b) Greenfield

Separated into three subcategories based on the estimated installed capacity

- greater than 1 MW but less than 10 MW
- greater than or equal to 10 MW but less than 100 MW
- greater than or equal to 100 MW.

(c) Potential New Powerhouses at Existing Dams

All known or published possibilities at existing dams in the province of Ontario.

(d) Redevelopment/Expansion

Separated into two subcategories

- redevelopments/extensions
- efficiency upgrades.

(e) Pumped Storage

All known pumped storage projects studied in Ontario.

The next step of the evaluation process was to sort each category/subcategory into the following three main divisions:

(i) **Probable and Committed Projects:** Hydro projects that are expected to be built or are committed to being built within the next 5 years.

(ii) **Practical New Projects:** Hydro projects that are believed to be technically and economically feasible.

(iii) **Remaining Sites:** Hydro projects that may not be technically and economically feasible, or appear not to be economically feasible at the present time.

The methodology section of this report will discuss the factors that determine the technical and economical feasibility of an individual hydro site.

3 Methodology

The following methodology was used to evaluate and assess the waterpower potential in the province of Ontario:

- identification of databases and previous studies of hydro potential
- assessment of discrete significant projects
- development and application of screening criteria.

3.1 Identification of Databases and Previous Studies of Hydro Potential

The initial step in identifying hydro potential in the province of Ontario is to identify alternative sources of available information. Information on hydro potential in Ontario is available in two main forms: databases and previous studies. As mentioned in Section 2, the primary databases used to compile the list of potential hydropower in Ontario are the Natural Resources Canada (NRCAN, 2005) and MNR (MNR, 2004) databases. Furthermore, a number of previous studies were also consulted in compiling the list of potential hydropower in Ontario. These studies are listed in the bibliography.

3.1.1 Databases

In general, databases were used to compile the list of greenfield sites and existing damsites. In terms of databases that have identified specific developments on the various river systems, Hatch Acres believes that the best available information is contained in the hydroelectric inventory developed by Natural Resources Canada (NRCAN, 2005) which can be found at http://www.small-hydro.com (International Small Hydro Atlas). This database provides an overview of the development potential but lacks details relating to the overall economics of sites, etc. To ensure completeness, the NRCAN database was compared with other databases from MNR (MNR, 2004). A number of sites that are not included in the NRCAN database were identified through this process.

MNR published a report entitled “Ontario’s Water Power Sites” in 1985 (MNR, 1985) which lists various river systems and associated information for potential sites on those river systems. One problem with this database is that

it does not report flow information; therefore, it could not be used to verify all information provided in the NRCAN database. A couple of specific databases were published through MNR's site release program in 2004, "Inventory of Potential Waterpower Opportunities on Crown Land" and "MNR Dam Structures on Crown Land" (MNR, 2004). These databases only list hydro sites on Crown Land and were used to verify information from the NRCAN database. Other MNR databases were used to add additional information such as transmission distance and policy/planning issues.

MNR has recently updated the hydrologic estimates for their database (MNR, 2004) of hydro sites in the province. These updates were developed using a Digital Elevation Model (DEM) which in itself applies results from previous regional hydrology studies. The MNR (MNR, 2004) database does not contain energy estimates. In 1992, Washburn & Gillis Associates Ltd. submitted a report (Washburn & Gillis, 1992) to the Environmental Assessment Board of Ontario Hydro entitled "Review of Small Hydro Technical Potential". This report used a database developed using data accumulated for Energy Mines and Resources Canada by Ottawa Engineering Ltd. This database was used to verify NRCAN's database and supplement it with average annual energy estimates. The annual energy estimates tabulated for the present study were taken from Washburn & Gillis (Washburn & Gillis, 1992). The Washburn & Gillis study was based on old hydrologic estimates (not the DEM estimates). In order to make best use of the DEM, site capacity factors would have to be determined to use with the new hydrologic estimates. This would require considerable effort and was beyond the scope of work for this initiative. While this may be a project warranting consideration for future investigations, it should be noted that the database provides a coarse screening of sites and that individual potential must be determined on a site-by-site basis supported by pre-feasibility analyses.

All other information pertaining to this report was extracted from previous studies produced by Hatch Acres and others.

3.1.2 Previous Studies

A number of studies were evaluated and assessed to compile a list of potential hydropower sites in Ontario. The majority of information was extracted from the work carried out by Ontario Hydro in 1987 entitled "Hydroelectric Power

Resources of the Province of Ontario" (OH, 1987). This report includes greenfield hydro sites with estimated installed capacities ranging from 0.1 MW to over 400 MW. In addition, the report also includes information on redevelopment, extensions, existing dams and pumped storage projects.

In 2003, Ontario Power Generation (OPG) prepared a presentation entitled "Hydroelectric Generation Opportunities within Ontario Power Generation" (OPG, 2003) listing realistic plant upgrades that OPG was planning for the future. In addition, OPG provided a list of efficiency upgrades that are planned to be completed by the year 2010. The information was the basis for the redevelopment/expansion opportunities category in the present assessment. Hatch Acres has been involved in, or are familiar with, a number of other development and expansion opportunities and these projects are included in the present assessment. Given that many of the projects undertaken in recent years have been redevelopments (e.g., Iroquois Falls – Abitibi, High Falls – Brascan) it is reasonable to expect that a number of redevelopments/expansions not specifically reviewed for this report will come forward. As with other estimates provided, readers are advised to consider the 'range' of potential.

A number of pumped storage projects have been studied over the past 25 years. Recently, MNR has released two sites under their Site Release Program for pumped storage projects: Steep Rock Mine, and Fourbass Lake. Knowledge on other pumped storage locations was available from a number of different studies prepared by Acres International (Acres) and Ontario Hydro, as listed in the bibliography.

3.2 Assessment of Discrete Significant Projects

For the most part, the discrete significant projects were obtained from the 1987 Ontario Hydro report (OH, 1987) which lists large hydropower projects. One river/project that stands out is the Lower Albany River, which was estimated to produce approximately 2300 MW. However, a number of policy and technical issues have hindered the development of this project. For one, the Albany River is one of the rivers under the Northern River Agreement Area. Rivers under the Northern River Agreement Area have limitations that require further investigation. Technically, the northern transmission corridor will have to be

upgraded to handle the increase in energy production. Detailed assessment would also have to consider resource management constraints. Even with these issues, the Lower Albany River projects are considered to be practical 'large hydro' projects based on the large amount of electricity that could be developed at competitive prices.

Other large hydropower projects on rivers like the Abitibi River, Moose River and Missinaibi River were also considered to be practical projects. Direction with respect to land use and resource management policy will have to be altered before these large storage hydro projects can be developed. These sites, including the Lower Albany River, could account for approximately 3500 MW of new waterpower for Ontario.

The two major pumped storage projects mentioned previously in this report, Steep Rock Mine and Fourbass Lake, were considered to be potential significant waterpower projects. The Steep Rock Mine is under study at this time. The Steep Rock Mine project is proposed to be developed in four 250-MW stages; therefore, when completed will potentially supply 1000 MW of peaking power.

The Fourbass Lake project (originally called the Matabitchuan Pumped Storage Development) was studied by Acres in 1979 for Ontario Hydro (Acres, 1979). MNR has now approved the land use for the Fourbass Lake site through the MNR site release program. The pumped storage project at the Fourbass Lake site is estimated to produce 235 MW of peaking power.

Other projects considered as 'probable and committed' or 'practical' projects could collectively account for approximately 1700 MW of new hydroelectric power.

3.3 Screening Criteria

After listing all the potential waterpower sites in the province, it was necessary to group them into the three main categories discussed in Section 2 of this report (Probable and Committed, Practical, and Remaining). A number of screening criteria were used as described below.

3.3.1 Economic Criteria

Economic viability is one of the most important factors influencing the development of a waterpower site. If a site is not economically justifiable, none of the other political, environmental or social issues are important. Economic viability for the present assessment was determined by a balance of project costs (capital cost) and project benefits (present value of energy benefits). The internal rate of return (IRR) is the discount rate that results in a balance of project costs and benefits. Investors normally have a desired (or required) IRR that varies depending upon sources of project financing, the general economic climate at the time, and the investors risk profile. It is important to note that, for the waterpower sector specifically, cost estimations for new projects are premised on assessments of risks of factors determining the length of approvals processes, and the availability of fuel (i.e., water) – factors often out of the direct control of the proponent. For this present study, two conservative IRR values, 10% and 14%, were used as inputs for the economic evaluation.

In order to facilitate economic evaluation of individual projects on a comparable basis, it was necessary to make several assumptions regarding estimation of costs and benefits.

(a) Costs

Based on the available information and the time available for research, a simplified approach was used to estimate capital costs for screening purposes.* Using Hatch Acres experience and available historic information, each site was assigned a cost per kilowatt of installed capacity. It is well known that such costs decrease as the size of a project increases. The following table presents the assumed capital costs for greenfield sites and for developments at existing dams.

* It is extremely important to realize that these estimated costs are only for the purpose of screening a large number of sites in a quick and consistent manner. Actual cost estimates for individual projects must always be developed on a site-specific basis.

Estimated Capital Cost Per Kilowatt of Installed Capacity					
	0–5 MW	**5-10 MW**	**10–20 MW**	**20–100 MW**	**>100 MW**
Greenfield Sites	$4,000	$3,500	$3,000	$3,000	$2,500
Existing Dams	$3,500	$3,000	$2,750	$2,500	$2,000

Costs for redevelopment sites were estimated on a site-by-site basis.

It is well known that the costs for low head sites are relatively high because the required electromechanical equipment is large and the associated water passages are large. Therefore, based on this knowledge, all sites with less than 3 m of gross head were placed in the 'Remaining Sites' category. This is not to suggest that some of these sites cannot or should not be developed, but rather, simply that for the purposes of the present study they were not included.

Costs based upon transmission distances and access road distances were not included in the cost estimates because this information was only available for about 50% of all sites. Nevertheless, transmission distance was used as a non-economic screening criteria as discussed in Section 3.3.2.

(b) Benefits

The energy benefits arise from the sale of generated electricity at specific prices for the energy. For the majority of sites, there is an existing estimate of energy production in published documentation for each specific site. In order to balance the benefits and costs at a particular IRR, there will be a particular energy price. This energy price can be calculated using the following formula.

$$\text{Energy Price (\$/MWh)} = \frac{\text{Capital Cost (\$/MW) x Installed Capacity (MW) x IRR}^{*}}{\text{Energy Production (MWh/yr)}}$$

Based on industry and Hatch Acres experience in the development of hydroelectric power sites, the economic threshold applied for this study to determine the potential financial feasibility of an individual site ranged from $100 to $120/MWh (expressed as an energy price). This threshold was used only as a guideline and if previous studies determined that a specific site was feasible, this guideline was not used to reject the site. Again, and in general, economies of scale (including regulatory requirements) will require that smaller sites demand a higher economic threshold.

3.3.2 Transmission Criteria

Another issue that influences the feasibility of a waterpower site is the development of transmission lines throughout the province. This 'role of transmission' issue is an important policy question. If, as a matter of public policy, transmission is meant to facilitate new economic generation, it is akin to 'essential infrastructure' and should be treated as a public good. In this case, the extra cost associated with upgrading existing transmission or creating new transmission should not be assigned to individual projects.

Although it was not possible to include transmission costs in the economic screening criteria, distance to transmission is still a crucial factor affecting the viability of any proposed development. Obviously large projects can justify a greater cost, and hence length, for any required transmission lines. Clearly, a small 1-MW plant could not bear the cost of a 100-km (or even a 10-km line) transmission line. Based on Hatch Acres experience, the following table was developed to be used as a coarse screening tool.

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* The implicit assumption in this formula is that the life of the asset is greater than 50 years so that the present value factors are dependant only on the discount rate and not also dependant on the life of the asset. This is also assuming contract or offset mechanisms that provide some degree of insulation from inflation and terms that are expected to exceed debt retirement.

Size of Project	Limit of Transmission Distance for Economic Feasibility
1 to 5 MW	5 km to 10 km
5 to 10 MW	10 km to 20 km
10 to 20 MW	20 km to 30 km
20 to 50 MW	30 km to 40 km
50 to 100 MW	40 km to 50 km
>100 MW	Not a Factor

Any specific project that fell outside the criteria tabulated above was placed in the 'Remaining Sites' category. However, if previous studies determined that a specific site was feasible, this criterion was not used to reject the site.

3.3.3 Policy Criteria

Political/public policy influence on waterpower development is a major issue in determining if Ontario's remaining waterpower potential can be realized. The political criteria include the following.

(a) Parks and Protected Areas

These lands include national/provincial parks, conservation reserves and potentially other identified 'exclusions' based on blanket policy prescriptions. In the late 1990s, through the land-use planning initiative "Ontario's Living Legacy", the province significantly expanded 'protected' areas and, most notably, waterway parks (175% increase in land base). This issue also has the potential to negatively impact existing production deemed to be 'nonconforming' uses within provincial parks. (For the purposes of the present evaluation, sites located within protected lands were not automatically placed in the 'Remaining Sites' category.)

(b) Policy Areas

Northern Rivers and the Moose River basin are presently 'Policy Areas'. This issue is related to political decisions in 'government-to-government agreements' made more than a decade ago that presumed to 'bind all future governments' with respect to waterpower

development in the Moose River basin and the 'Northern Rivers' (Attawapiskat, Albany, Winisk). In the case of the Moose River basin, a commitment was made that "within the Moose River basin north of Highway 11, there will be no hydroelectric development beyond the Mattagami River extensions until such a time as a co-planning process has been developed, agreed to and applied by the affected First Nations in Ontario". With respect to the northern rivers, the correspondence indicates that "there will be no hydroelectric development of individual sites greater than 25 MW. . . and that proposals of less than 25 MW would be considered if proposed by or consented to by the potentially affected First Nation". MNR's policy for new waterpower development (November 2004) deferred action on the Moose River basin and expanded the Northern Rivers area to include the Severn River basin. As with practical sites in protected areas, 'Policy Areas' were not considered a factor in the screening of potential waterpower sites, because such issues can be highly influenced by political decisions that could change.

(c) Water Management

One major issue in the past few years has been the lack of consideration of energy values in resource management planning initiatives. A prime example is the requirement to consider the 'Natural Flow Regime' as the basis for aquatic ecological integrity, as prescribed in the Water Management Planning Guidelines (applicable to existing and new facilities). This approach creates, by definition, conflict with water resource management that helps satisfies energy demand changes – a key attribute of storage-based hydro. Additionally, policy generalizations related to the diversion of water are emerging and could significantly compromise the optimization of existing production and new potential. Though no sites have been removed as the result of such prescriptions, there is a clear need to balance the multiplicity of objectives related to resource management and to improve the accounting related to energy values.

4 Results and Recommendations

4.1 Summary

The study results for all categories are summarized in the following Table 4.1 which gives total estimated megawatts in each of the three divisions (probable and committed, practical, and remaining).

Summary of Potential Installed Capacity by Category									
		Greenfield Sites (MW)			Potential New Powerhouses at Existing Dams (MW)	Redevelopment/Expansion Opportunities (MW)		Pumped Storage Projects (MW)	Totals (MW)
Divisions	Mini-Hydro <1 MW* (MW)	>1 MW to <10 MW	>10 MW to <100 MW	>100 MW		Redevelopments/ Extensions	Efficiency Upgrades		
Probable and Committed Projects	10	98	205	0	30	418	107	250	**1118**
Practical Projects	20	220	498	3591	150	22	0	985	**5485**
Remaining Sites	270	1367	2556	1673	593	1484	0	6088	**14 031**
TOTAL	**300**	**1685**	**3259**	**5263**	**773**	**1925**	**107**	**7323**	**20 634**

Table 4.1

* These mini-hydro estimates are a judgment based upon information given in the MNR database (MNR, 2005).

The following Table 4.2 gives similar information, except that rather than providing installed capacity it gives the number of sites in each division.

Summary of Number of Potential Sites by Category									
		Greenfield Sites			Potential New Powerhouses at Existing Dams	Redevelopment/Expansion Opportunities		Pumped Storage Projects	Totals
Divisions	Mini-Hydro <1 MW*	>1 MW to <10 MW	>10 MW to <100 MW	>100 MW		Redevelopments/ Extensions	Efficiency Upgrades		
Probable and Committed Projects	50	17	6	0	8	14	12	1	**108**
Practical Projects	100	53	20	14	23	3	0	2	**215**
Remaining Sites	1350	491	69	10	64	9	0	20	**2013**
TOTAL	**1500**	**561**	**95**	**24**	**95**	**26**	**12**	**23**	**2336**

Table 4.2

* These mini-hydro estimates are a judgment based upon information given in the MNR database (MNR, 2005).

The numbers given in Tables 4.1 and 4.2 are derived from Appendix A. However, in reality, these numbers would range (±10% to 15%).

In terms of the number of projects, the majority are under 10 MW with approximately 600 sites providing an approximate total of 1700 MW of potential power. However, only 70 sites and approximately 300 MW can be considered to be probable, committed and currently practical waterpower sites. Approximately 95 sites are in the 10-MW to 100-MW range, and these account for approximately 3200 MW of power. Of these sites, 26 sites and approximately 700-MW power are considered to be probable, committed and currently practical.

The majority of the waterpower potential (megawatts) in the province of Ontario is for sites with more than 100 MW of installed capacity. These sites are, for the most part, large storage projects on northern rivers. Approximately 14 sites with a potential of 3500 MW are considered to be currently practical. Importantly, the direction with respect to land use and resource management policy will have to be altered before they could be developed.

Redevelopment/expansion opportunities include redevelopments/plant extensions and efficiency upgrades. Information in this group came primarily from OPG and the information for efficiency upgrades was only available for the next 5 years. Further research and studies would be required to determine which plants and/or type of efficiency upgrades could be done in the future. Approximately 440 MW of redevelopment/plant extensions and 100 MW of efficiency upgrades are planned to be undertaken in the next few years in Ontario.

Potential new powerhouses at existing dams could also add waterpower potential to the province. Approximately 180 MW of power are probable, committed or practical at existing dams throughout the province.

The previously discussed categories will add both ‘base load’ and ‘peaking load’ power to the province of Ontario. The one category that will add only peaking power to the province is the pumped storage projects. Approximately 1200 MW of practical peaking power could be developed through pumped storage projects.

In all, about 6600 MW of hydroelectric power is probable, committed or practical in the province of Ontario. In order to develop this full potential, a number of policy issues will have to be reevaluated and assessed. As the demand for

electricity increases, more and more hydroelectric sites will become economically feasible.

The following detailed information is provided in Appendix A.

- Table A1.1 gives detailed results for greenfield sites from 1 to 10 MW. Tables A1.2 and A1.3 give the same information for greenfield sites from 10 to 100 MW and greater than 100 MW, respectively.
- Table A2 gives detailed results for new powerhouses at existing dams.
- Table A3 gives the information for redevelopment/expansion opportunities separated into redevelopments/extension of existing powerhouses and efficiency upgrades.
- Table A4 gives information for pumped storage projects.

The detailed lists given in Appendix A are all sorted based on drainage region and river name. These detailed lists include the following site-specific information:

- drainage region
- name of river
- name of site
- MNR's site ID
- location (latitude and longitude)
- published drainage area
- published gross head
- published flow
- published estimated installed capacity
- published estimated energy
- potential project constraints/limitations (including transmission distance, access and political issues).

The tabulated data is extensive but not all information is available for all sites. For example, on the list of pumped storage projects only, the drainage region, name of river, name of site, and estimated installed capacity were compiled. In the detailed list of sites, a column labeled "Ref. #" refers to a reference number noted at the bottom of the lists. These references are the main sources of information for each individual site.

4.2 Potential Sites Related to Land-Use and Policy Areas

The information collected and collated as part of the present study also allowed for the development of summary tables related to potential sites and land use and policy areas in Ontario. The following Tables 4.3 and 4.4 present information on total installed capacity and number of facilities for the 'Probable and Committed' and 'Practical' divisions for all greenfield and new powerhouses at existing dams.

Potential Installed Capacity – Land-Use and Policy Areas					
	Estimated Installed Capacity (MW)				
	Within a Regulated Park or Protected Area	Private/ Federal Land	On First Nation Reserves	Remaining Lands	Totals
Northern Rivers Policy Area	0	0	0	2418	**2418**
Moose River Basin Policy Area	165	10	0	1292	**1468**
Sites with No Defined Policy Areas	310	99	3	494	**905**
TOTAL	**475**	**108**	**3**	**4205**	**4791**

Table 4.3

Number of Sites – Land-Use and Policy Areas					
	No. of Sites				
	Within a Regulated Park or Protected Area	Private/ Federal Land	On First Nation Reserves	Remaining Lands	Totals
Northern Rivers Policy Area	0	0	0	10	**10**
Moose River Basin Policy Area	3	1	0	13	**17**
Sites with No Defined Policy Areas	28	23	1	62	**114**
TOTAL	**31**	**24**	**1**	**85**	**141**

Table 4.4

The information summarized in the above tables shows that of the total 6600 MW of probable and committed and practical projects, an estimated 3917 MW are in the Northern Rivers and Moose River basin policy areas. Clearly, if the Province of Ontario wishes to utilize its resources to the maximum possible advantage, it will be necessary to review the issues surrounding designation of these policy areas. In addition, half of the new waterway parks created were placed on rivers already producing waterpower – an estimated 1000 MW of unrealized potential also exists within parks and protected areas.

4.3 Recommendations for Further Investigations

Further investigations and studies are required to give a more accurate and complete understanding of the waterpower potential in the province of Ontario. The following areas require further investigation:

- **Land Use and Policy Areas:** Investigate the policy constraints involved the Northern River policy area and the Moose River Basin policy area. Investigate issues concerning developing hydroelectric generation in protected lands.

- **Digital Elevation Model (DEM):** Evaluate the DEM in detail and determine updated site capacity factors based on the updated hydrological data.

- **Transmission Lines and Essential Infrastructure:** Investigate future transmission and infrastructure developments in northern Ontario. If these future transmission lines and infrastructure (roads) can be overlaid on the DEM, a more precise estimate could be determined for the economic feasibility of an individual hydroelectric site.

- **Optimization of Existing Resources:** Investigate the potential for energy optimization (both net energy and peak energy) from key existing facilities and systems and identify the limitations to optimization (i.e., technical, policy, economic).

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Appendix A

Detailed Information on Potential Waterpower Sites

Table A1.1 - Greenfield Waterpower Sites - >1MW to <10MW

No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
Probable and Committed Projects																		
1	ENGLISH AND RAINY RIVERS	WABIGOON RIVER	WABIGOON FALLS	5QD6	50.1683	93.7217	7821	5.2	53.53	2.70	11.13	37.18				General Use	1	MNR's Competitive Site Release, CRP-02-05
2	LAKE SUPERIOR	NAMAKAN RIVER	MYRTLE FALLS	5PA17	48.4117	92.1917	13403	4.0	154.07	4.80	23.58	35.39					1	NEXT TO IVY FALLS. MNR's Competitive Site Release, CRP-04-05
3	LAKE SUPERIOR	NAMAKAN RIVER	HAY RAPIDS	5PA18	48.4483	92.3500	14491	4.0	166.56	5.20	25.49	31.57				General Use	1	MNR's Competitive Site Release, CRP-03-05
4	LAKE SUPERIOR	NAMAKAN RIVER	HIGH FALLS	5PA8	48.4500	92.3117	14400	6.1	166.98	7.90	38.97	31.04				General Use	1	MNR's Competitive Site Release, CRP-03-05
5	LAKE SUPERIOR	NAMEWAMINIKAN RIVER	8KM FROM MOUTH	2AD8	49.7085	87.9683	2513	10.7		0.35		8.42				General Use	1	Combined with 'Long Rapids' (12.8km from mouth) for CRP-06-05
6	LAKE SUPERIOR	NAMEWAMINIKAN RIVER	LONG RAPIDS (12.8KM FROM MOUTH)	2AD6	49.7250	87.9183	2478	25.0	40.00	7.65	37.52	10.13				General Use	1	Combined with '8km from mouth' for CRP-06-05
7	LAKE SUPERIOR	STEEL RIVER	OUTLET SANTOY LAKE	2BA2	48.8383	86.8683	1486	29.9	9.80	6.00	14.07	2.73				General Use	1	MNR's Competitive Site Release, CRP-08-05
8	LAKE SUPERIOR	WHITE RIVER	3.2KM BELOW WHITE LAKE	2BC2	48.6400	85.7683	4144	9.1	52.35	8.50	18.95	9.17				Provincial Park (new)	1	
9	MOOSE RIVER	GRASSY RIVER	SOUTH TIMMINS	4LA9	48.2833	81.4167	1035	30.5	13.00	4.00	18.61					General Use	4	MNR's Competitive Site Release, CRP-10-05
10	MOOSE RIVER	KAPUSKASING RIVER	WHITE OTTER FALLS TWP. CARGILL	4LF2	49.2200	82.6883	5879	8.5	51.26	6.00	19.29	26.35	1.5			General Use	4	Northern Extent, MNR's Site Release
11	MOOSE RIVER	KAPUSKASING RIVER	OLD WOMAN FALLS TWP. SHANLY	4LF1	49.1650	82.7133	5801	8.1	26.00	6.00	16.39	32.04	4	Shanly Creek Drumlins Conservation Reserve u/s, S2 Sedge along river		General Use	4	Northern Extent, MNR's Site Release
12	MOOSE RIVER	KAPUSKASING RIVER	BIG BEAVER FALLS TWP. SILMAN	4LF3	49.3000	82.5267	6008	14.8	41.58	10.00	30.12	12.14	4	Very Rare (S2) grass along river		General Use	4	Northern Extent, MNR's Site Release
13	MOOSE RIVER	MATTAGAMI RIVER	ISLAND FALLS	4LB3	49.1367	81.6283	9816	5.3	72.50	3.00	19.45	12.89	4.5			General Use	1	
14	MOOSE RIVER	MATTAGAMI RIVER	YELLOW FALLS	4LB32	49.1217	81.6150	9816	5.8	165.44	16.90	52.81	13.52				Private/Federal Land	4	Applicant of Record with MNR
15	NORTHERN LAKE HURON	WANAPITEI RIVER	4.8KM BELOW MCVITTIES	2DB9	46.2667	80.8800	3276	5.2	74.32	1.60	14.09	13.29	4	Massasauga Rattlesnake (Fed. Threatened - SARA Sch. 1) d/s		Private/Federal Land	1	SHARP HEAD AND FLOW VALUES MUST BE ENTERED. MNR's Competitive Site Release, CRP-12-05
16	OTTAWA RIVER	ENGLEHART	LOT 12 CON III EVANTUREL TWP.	2JC11	47.7967	79.8883	1139	16.5	21.76	4.00	12.96	7.19				Provincial Park (existing)	1	SHARP STUDY CONDUCTED (UNAVAILABLE)
17	OTTAWA RIVER	LARDER RIVER	1.6KM BELOW WENDIGO LAKE	2JC6	47.8571	79.7888	571	44.2		3.10		2.27					1	Applicant of Record with MNR, ALIAS - COURT RAPIDS
							Subtotal Probable and Committed Projects =			**98 MW**								
Practical Projects																		
1	ENGLISH AND RAINY RIVERS	ENGLISH RIVER	MacKENZIE LAKE	5QA33	49.6741	91.1229	5698	22.0		9.02						UPPER ENGLISH RIVER CONSERVATION RESERVE	3	
2	ENGLISH AND RAINY RIVERS	SEINE RIVER	ISLAND FALLS & RAPIDS ABOVE	5PB5	48.8183	91.3150	3755	6.7	30.17	2.00	8.08	7.57				General Use	1	MNR's Competitive Site Release, CRP-05-05
3	LAKE ONTARIO	SERPENT RIVER	MCCARTHY CHUTE	2CD15	46.3007	82.4395	1196	18.6	17.24	2.77		7.26				SERPENT RIVER Enhanced Management Area - Park Area	1	
4	LAKE SUPERIOR	AGUASABON RIVER	LOWER LAKE				5456	25.3		9.80	63.95						3	Including Long Lac Diversion. This site may elimate other sites
5	LAKE SUPERIOR	BLACK STURGEON RIVER	AT HWY 17	2AC11	48.9073	88.3808	2627	13.7		2.89	17.02	1.48					3	
6	LAKE SUPERIOR	BLACK STURGEON RIVER	GARDNER RAPIDS	2AC8	48.9667	88.3833	2580	23.2		4.78	28.21	3.50	5.5			Provincial Park (new)	3	
7	LAKE SUPERIOR	CURRENT RIVER	TROWBRIDGE FALLS	2AB17	48.4891	89.1873	673	19.8		1.07	6.29	0.71					3	
8	LAKE SUPERIOR	CURRENT RIVER	N. THUNDER BAY				666	21.3		1.14	6.71						3	
9	LAKE SUPERIOR	CURRENT RIVER	BENTLEY CREEK				642	33.5		1.72	10.16						3	
10	LAKE SUPERIOR	DORE RIVER	RAPIDS IN FIRST 3.2KM FROM MOUTH	2BD41	47.9739	84.9405	227	94.5		2.60		3.03				First Nation Reserve	1	
11	LAKE SUPERIOR	GULL RIVER	BELOW ROARING RIVER	2AD80	49.6837	89.4382	1813	19.8		2.87	16.94					GULL RIVER PROVINCIAL PARK (WATERWAY CLASS)	3	
12	LAKE SUPERIOR	GULL RIVER	ROARING RAPIDS				1163	28.9		5.80	33.29						3	
13	LAKE SUPERIOR	KAMINISTIQUIA RIVER	SHABAQUA CORNERS				1180	30.5		2.88	16.98						3	
14	LAKE SUPERIOR	KAMINISTIQUIA RIVER	HUME		48.4333	89.5500	6744	7.6		4.11	24.26	4.00	0				3	
15	LAKE SUPERIOR	KAMINISTIQUIA RIVER	LOT 2 BLOCK 'A' TWP. PAIPOONGE	2AB4	48.3683	89.5667	7770	10.6	87.82	6.63	39.12	4.74				Private/Federal Land	3	
16	LAKE SUPERIOR	KOPKA RIVER	MINK BRIDGE PORTAGE				2500	40.6		3.91	23.09						3	
17	LAKE SUPERIOR	LITTLE PIC RIVER	7.2KM FROM MOUTH	2BA6	48.8421	86.6153	1347	8.2		1.11		4.33					1	
18	LAKE SUPERIOR	LITTLE PIC RIVER	NEAR MOUTH	2BA17	48.7905	86.6318	758	39.6		2.40	14.18	1.28				NEYS PROVINCIAL PARK	3	
19	LAKE SUPERIOR	MOOSELAND RIVER	MOOSELAND RAPIDS 1	2AD82	49.5762	89.5245	1606	33.5		4.30	25.42					GULL RIVER PROVINCIAL PARK (WATERWAY CLASS)	3	
20	LAKE SUPERIOR	MOOSELAND RIVER	MOOSELAND RAPIDS 2	2AD81	49.5852	89.5041	1632	35.1		4.58	27.00					GULL RIVER PROVINCIAL PARK (WATERWAY CLASS)	3	

Table A1.1 - Greenfield Waterpower Sites - >1MW to <10MW

No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
21	LAKE SUPERIOR	NAMEWAMINIKAN RIVER	DRAGONFLY LAKE	2AD71	49.6723	88.0353	2500	40.6		9.80	49.56						3	
22	LAKE SUPERIOR	STEEL RIVER	4KM BELOW OUTLET SANTOY LAKE	2BA3	48.8017	86.8733	1486	22.9	10.20	1.75	11.04	1.47				General Use	1	
23	MOOSE RIVER	FREDERICKHOUSE RIVER	NEELANDS RAPIDS, TWP. FOURNIER	4MD3	49.0333	81.1350	3584	6.7	45.98	2.40	14.18	0.16				Private/Federal Land	1	
24	MOOSE RIVER	FREDERICKHOUSE RIVER	WANATANGO FALLS, TWP. MANN	4MD2	48.8533	81.0700	3022	10.0	38.97	3.04	17.94	10.73	0.5			General Use	1	
25	MOOSE RIVER	FREDERICKHOUSE RIVER	RAPIDS, TWP. S. CLUTE AND LEITCH	4MD4	49.1867	81.1350	4581	21.3	58.84	9.78	57.67	10.22	0			Moose River Basin Policy Area / Private/Federal Land	1	
26	MOOSE RIVER	GROUNDHOG RIVER	U. IVANHOE LAKE		48.1100	82.6700		33.5	11.38	2.97	17.54						1	
27	MOOSE RIVER	GROUNDHOG RIVER	NEAR MIDDLE OF REEVES	4LC2	48.2617	82.1450	3387	11.0	35.00	3.14	19.58	15.04				Provincial Park (new)	1	
28	MOOSE RIVER	GROUNDHOG RIVER	VIMY CREEK	4LC13	48.2500	82.1500		12.2	43.59	4.15	24.47	15.71	1.5			Provincial Park (new)	1	
29	MOOSE RIVER	GROUNDHOG RIVER	SOUTH MELROSE		48.3333	82.0833		11.6	48.41	4.38	25.84						1	
30	MOOSE RIVER	MATTAGAMI RIVER	POPLAR	4LB6	49.5883	81.7883	11831	8.8	96.44	6.62	40.55	19.47				Moose River Basin Policy Area / General Use	1	
31	MOOSE RIVER	MISSINAIBI RIVER	BLACK FEATHER RAPIDS TWP. SANKE	4LJ7	49.7367	83.2617	9336	5.2	119.28	4.84	28.54	10.38				Provincial Park (existing)	1	
32	MOOSE RIVER	MISSINAIBI RIVER	ALBANY RAPIDS	4LJ10	49.3833	83.4333		8.5	99.35	6.59	38.86					Provincial Park (existing)	1	
33	MOOSE RIVER	MISSINAIBI RIVER	SPLIT ROCK RAPIDS	4LH7	48.7783	83.4517		20.1	47.16	7.39	43.62					Provincial Park (existing)	1	
34	MOOSE RIVER	MISSINAIBI RIVER	DEVIL RAPIDS		49.2417	83.3567		12.2	81.70	7.78	45.87					Provincial Park (existing)	1	
35	MOOSE RIVER	MISSINAIBI RIVER	KETTLE FALLS TWP. SANKEY	4LJ9	49.7867	83.2200	9414	10.1	120.20	9.47	55.87	16.61				Provincial Park (existing)	1	
36	MOOSE RIVER	NEWPOST CREEK	MAWHINNEY		49.9917	81.5300		16.5	49.73	6.40	42.61						1	Approximate Location
37	MOOSE RIVER	NORTH FRENCH RIVER	NETTOGAMI ISLAND	4MF1	51.1333	80.7167	1230	15.2	2.08	1.87	11.03						1	Approximate Location
38	MOOSE RIVER	OPASATIKA RIVER	OPASATIKA RAPIDS 1		50.4000	82.3500		20.0	16.40	2.56	15.10						1	Approximate Location
39	MOOSE RIVER	OPASATIKA RIVER	BREAKNECK FALLS & RAPIDS	4LL11	50.1033	82.4250	3348	28.0	17.27	3.77	22.26	14.45				Moose River Basin Policy Area / General Use	1	
40	NORTHERN LAKE HURON	FRENCH RIVER	LOWER CHAUDIERE FALLS	2DD1C	46.1000	80.2000		8.4	2870.00	2.87	16.73						1	
41	NORTHERN LAKE HURON	STURGEON RIVER	ISLAND LAKE				2389	13.4		2.50	18.40						3	
42	NORTHERN LAKE HURON	STURGEON RIVER	RAGGED CHUTE				2415	13.4		3.60	23.65						3	
43	NORTHERN LAKE HURON	VERMILION RIVER	AT SOO CROSSING	2CF11	46.3933	81.2817	3866	5.5	34.70	1.49	8.22	4.72				Private/Federal Land	1	
44	NORTHERN LAKE HURON	VERMILION RIVER	CASCADE FALLS	2CF9	46.4350	81.2850	3799	5.8	34.11	1.54	8.52	0.55				General Use	1	
45	NORTHERN LAKE HURON	WHITEFISH RIVER	BELOW CROSS LAKE	2CF15	46.1467	81.6767	789	17.7	15.17	2.20	17.00	3.80		Provincially threatened species in general area		General Use	1	SHARP REPORT AVAIL. FOR OTHER ALTERNATIVES
46	NORTHERN LAKE HURON	WHITEFISH RIVER	LANG LAKE (LA CLOCHE MTS.)	2CF14A	46.1792	81.5833		28.0	11.00	2.30	13.00						1	
47	OTTAWA RIVER	ARROW RIVER	HIGH FALLS	2AA1	48.0383	89.7233	865	14.0	10.00	1.18	7.96					Private/Federal Land	1	TEMPORARILY ON HOLD
48	OTTAWA RIVER	PETAWAWA RIVER	CROOKED RAPIDS	2KB36	45.9103	77.5029	3416	9.1		2.75		1.38				Private/Federal Land	3	
49	SOUTHERN LAKE HURON	MAGNETAWAN RIVER	FARM RAPIDS	2EA16	45.7417	80.3533	2714	16.0	65.10	3.00	17.08	7.19				Provincial Park (new)	1	SHARP HEAD AND FLOW VALUES MUST BE ENTERED
50	SOUTHERN LAKE HURON	MAGNETAWAN RIVER	BYING INLET	2EA55	45.7706	80.5461	2745	10.4		4.40		18.95					3	
51	SOUTHERN LAKE HURON	MUSKOKA MUSQUASH	GRAY RAPIDS	2EB11	45.0350	79.8167	4724	8.2	105.22	6.73	37.14	3.57		Gray Rapids Life Science Site Musquash River Candidate Life Science ANSI		Private/Federal Land	1	
52	SOUTHERN LAKE HURON	SAUGEEN RIVER	PORT ELGIN				4029	30.5		7.30	56.06						3	
53	SOUTHERN LAKE HURON	SEVERN RIVER	PORT SEVERN	2EC25	44.8032	79.7204	6071	4.3		2.90	16.83	3.19				Private/Federal Land	3	
									Subtotal Practical Projects =	**220 MW**								
Remaining Sites (Not Practical Projects)																		
1	ALBANY RIVER	ALLAN WATER RIVER	5.5KM BELOW C.N.R.	4GB2	50.2817	90.1417	3983	1.8	71.60	1.01	4.93					Northern River Policy Area / Provincial Park (existing)	1	
2	ALBANY RIVER	ALLAN WATER RIVER	10.1KM BELOW C.N.R.	4GB3	50.3000	90.1117	3988	2.1	71.60	1.17	5.75					Northern River Policy Area / Provincial Park (existing)	1	
3	ALBANY RIVER	ALLAN WATER RIVER	STURGEON RAPIDS	4GB7	50.6033	89.7417	5009	2.1	90.00	1.47	7.23					Northern River Policy Area / Provincial Park (existing)	1	
4	ALBANY RIVER	ALLAN WATER RIVER	16KM BELOW C.N.R.	4GB64	50.3450	90.1033	3996	2.7	71.80	1.51	7.42					Northern River Policy Area / Provincial Park (existing)	1	
5	ALBANY RIVER	ALLAN WATER RIVER	BLACK BEAVER FALLS AND RAPIDS	4GB6	50.5667	89.7500	4990	2.4	89.70	1.68	8.24					Northern River Policy Area / Provincial Park (existing)	1	

Table A1.1 - Greenfield Waterpower Sites - >1MW to <10MW

No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
6	ALBANY RIVER	ALLAN WATER RIVER	11.7KM BELOW GRANITE FALLS	4GB14	50.5883	89.7450	5003	2.7	89.90	1.89	9.29					Northern River Policy Area / Provincial Park (existing)	1	
7	ALBANY RIVER	ALLAN WATER RIVER	3.2KM BELOW SESAGANAGA LAKE	4GB1	50.6950	89.6133	3742	5.5	66.00	2.83	13.89	57.82				Northern River Policy Area / Provincial Park (existing)	1	
8	ALBANY RIVER	ALLAN WATER RIVER	20.7KM BELOW C.N.R.	4GB4	50.3633	90.1067	4027	5.5	71.10	3.05	14.96	82.12				Northern River Policy Area / Provincial Park (existing)	1	
9	ALBANY RIVER	ALLAN WATER RIVER	28.8KM BELOW C.N.R.	4GB10	50.2600	90.0000	4084	6.4	72.20	3.60	17.68					Northern River Policy Area	1	
10	ALBANY RIVER	ALLAN WATER RIVER	GRANITE FALLS	4GB5	50.5300	89.7800	4944	7.0	87.60	4.78	23.46	108.14				Northern River Policy Area / Provincial Park (existing)	1	
11	ALBANY RIVER	ALLAN WATER RIVER	BRENNAN FALLS	4GB12	50.4867	89.7933	4760	7.3	84.40	4.81	23.58	107.08				Northern River Policy Area / Provincial Park (existing)	1	
12	ALBANY RIVER	BERG RIVER	OUTLET SMOOTHROCK LAKE	4GB25	50.6617	89.4100	2623	5.2	36.20	1.47	7.21					Northern River Policy Area / Provincial Park (existing)	1	
13	ALBANY RIVER	CAT RIVER	3.2KM ABOVE CAT LAKE	4GA5	51.8167	91.9000	966	6.1	26.08	1.24	6.09					Northern River Policy Area / General Use	1	
14	ALBANY RIVER	CAT RIVER	11.2KM ABOVE SLATE FALLS	4GA10	51.2083	91.6683	5472	1.8	91.68	1.29	6.31					Northern River Policy Area / General Use	1	
15	ALBANY RIVER	CAT RIVER	ABOVE WESLEYAN LAKE				5472	4.2		1.56	9.38					Northern River Policy Area	3	
16	ALBANY RIVER	CAT RIVER	9.6KM ABOVE BLACKSTONE LAKE	4GA12	51.0333	91.4217	7503	1.8	125.76	1.77	8.66	15.60				Northern River Policy Area / General Use	1	
17	ALBANY RIVER	CAT RIVER	ROADHOUSE LAKE				7503	3.7		1.89	11.33					Northern River Policy Area	3	
18	ALBANY RIVER	CAT RIVER	FAWCETT LAKE				4918	6.6		2.21	13.24					Northern River Policy Area	3	
19	ALBANY RIVER	CAT RIVER	BELOW LAKE KAPIKIK	4GA30	51.4783	91.8517	2898	3.7	77.43	2.23	10.96					Northern River Policy Area / General Use	1	
20	ALBANY RIVER	CAT RIVER	3.2KM BELOW BAMAJI LAKE	4GA11	51.0800	91.4417	6974	3.0	116.94	2.74	13.42	10.36				Northern River Policy Area / General Use	1	
21	ALBANY RIVER	CAT RIVER	1.6KM BELOW FAWCETT LAKE	4GA9	51.3217	91.7800	4918	4.6	80.62	2.89	14.19					Northern River Policy Area / General Use	1	COMBINED HEAD 2.1+2.4M
22	ALBANY RIVER	DROWNING RIVER	11.2KM BELOW WABABIMIGA RIVER	4JE10	50.4767	85.9750	1375	4.6	29.15	1.05	5.13					Northern River Policy Area / General Use	1	
23	ALBANY RIVER	DROWNING RIVER	0.8KM ABOVE WABABIMIGA RIVER	4JE8	50.4350	86.1417	979	7.6	20.96	1.24	6.10					Northern River Policy Area / Conservation Reserves (new)	1	
24	ALBANY RIVER	DROWNING RIVER	8KM BELOW WABABIMIGA RIVER	4JE9	50.4667	86.0567	1370	9.5	29.05	2.15	10.56	107.61				Northern River Policy Area / General Use	1	
25	ALBANY RIVER	DROWNING RIVER	40KM FROM MOUTH	4JE11	50.8000	85.3500	4457	3.0	96.64	2.26	11.09					Northern River Policy Area	1	
26	ALBANY RIVER	FLINDT RIVER	24KM BELOW FLINDT LAKE	4GB21	50.5883	90.0550	828	25.3	11.48	2.27	11.12					Northern River Policy Area / Provincial Park (existing)	1	
27	ALBANY RIVER	KABINAKAGAMI RIVER	NEAR CENTRE OF TWP. ALDERSON	4JA4	49.2650	84.2367	3180	3.4	38.19	1.01	4.17	52.11				Northern River Policy Area	1	CARIBOU RAPIDS
28	ALBANY RIVER	KABINAKAGAMI RIVER	NEAR CENTRE OF TWP. VERDUN	4JA8	49.5267	84.0799	3600	2.7	45.72	1.06		23.96				Northern River Policy Area / Private/Federal Land	2	
29	ALBANY RIVER	KABINAKAGAMI RIVER	AT CNR TWP. WOOLRICH	4JA2	49.1498	84.2581	2887	3.4	36.66	1.08		64.83				Northern River Policy Area / General Use	2	
30	ALBANY RIVER	KABINAKAGAMI RIVER	NEAR NORTH BOUNDARY TWP. MCFAR	4JA6	49.4467	84.1267	3491	3.7	42.06	1.21	5.00	32.96				Northern River Policy Area / General Use	1	
31	ALBANY RIVER	KABINAKAGAMI RIVER	NEAR SOUTH BOUNDARY TWP. MCFAR	4JA5	49.3217	84.2017	3289	5.5	39.99	1.72	7.06	45.92				Northern River Policy Area / General Use	1	
32	ALBANY RIVER	KABINAKAGAMI RIVER	LOT3, CONVI TWP. STUDHOLME	4JA10	49.7700	84.1033	4040	3.0	75.00	1.76	7.23	3.21				Northern River Policy Area / General Use	1	
33	ALBANY RIVER	KABINAKAGAMI RIVER	LOT1, CONII TWP. STUDHOLME	4JA12	49.8250	84.0883	4105	3.0	76.26	1.78	7.35	9.13				Northern River Policy Area / General Use	1	
34	ALBANY RIVER	KABINAKAGAMI RIVER	NEAR NORTH BOUNDARY TWP. LANDR	4JA9	49.5750	84.0433	3659	5.2	44.42	1.80	7.42	18.36		Dube Creek Iceberg keel Mark Conservation Reserve d/s		Northern River Policy Area / Private/Federal Land	1	CARIBOU RAPIDS
35	ALBANY RIVER	KABINAKAGAMI RIVER	N. STODDART				4105	7.6		2.50	13.76					Northern River Policy Area	3	
36	ALBANY RIVER	KABINAKAGAMI RIVER	MID LIMESTONE RAPIDS	4JB6	50.0551	84.0777	4218	7.6		2.56		34.36				Northern River Policy Area	2	
37	ALBANY RIVER	KABINAKAGAMI RIVER	TWP. FUSHIMI	4JB1	49.8933	84.0333	4213	4.3	76.46	2.56	10.56	16.65				Northern River Policy Area / General Use	1	FALLS
38	ALBANY RIVER	KABINAKAGAMI RIVER	LOT3, CONVII TWP. STUDHOLME	4JA11	49.7817	84.1050	4040	4.6	73.37	2.63	10.84	4.26				Northern River Policy Area / General Use	1	
39	ALBANY RIVER	KABINAKAGAMI RIVER	KABINAKAGAMI LAKE OUTLET	4JA1	49.0117	84.3533	2680	10.7	32.57	2.72	11.19	80.39				Northern River Policy Area / Private/Federal Land	1	
40	ALBANY RIVER	KABINAKAGAMI RIVER	NEAR NORTH BOUNDARY TWP. WOOLRICH	4JA3	49.1817	84.1817	3004	11.3	36.53	3.22	13.26	61.86				Northern River Policy Area / General Use	1	
41	ALBANY RIVER	KABINAKAGAMI RIVER	TWP. FUSHIMI (M. FUSHIMI)	4JB3	49.9167	84.0183	4213	6.1	76.96	3.66	15.08	19.28	5		TR LINE TO CALSTOCK THRU CONSATNCE LAKE IR92	Northern River Policy Area / General Use	1	FALLS
42	ALBANY RIVER	KABINAKAGAMI RIVER	TWP. FUSHIMI (N. FUSHIMI)	4JB2	49.9067	84.0167	4213	6.4	77.03	3.85	15.83	18.18	5		TR LINE TO CALSTOCK THRU CONSATNCE LAKE IR92	Northern River Policy Area / General Use	1	FALLS
43	ALBANY RIVER	KABINAKAGAMI RIVER	AT SOUTH BOUNDARY TWP. VERDUN	4JA7	49.4467	84.1200	3491	11.9	42.51	3.95	16.24	33.01				Northern River Policy Area / General Use	1	
44	ALBANY RIVER	KABINAKAGAMI RIVER	TWP. FUSHIMI	4JB4	49.9350	84.0200	4213	7.3	77.17	4.39	18.09	21.33				Northern River Policy Area / General Use	1	FALLS
45	ALBANY RIVER	KABINAKAGAMI RIVER	UPPER LIMESTONE RAPIDS	4JB5	50.0420	84.0465	4216	13.7		4.63	25.44	33.18				Northern River Policy Area	3	

Table A1.1 - Greenfield Waterpower Sites - >1MW to <10MW

No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
46	ALBANY RIVER	KAPIKOTONGWA RIVER	1.6KM BELOW JUNGFRAU LAKE	4JF36	50.6700	86.7417	2214	4.3	37.92	1.27	6.24					Northern River Policy Area / Private/Federal Land	1	
47	ALBANY RIVER	KAPIKOTONGWA RIVER	1.6KM ABOVE PERCY LAKE	4JF37	50.6533	86.7033	2242	4.9	38.52	1.47	7.22	108.64				Northern River Policy Area / General Use	1	COMBINED HEAD 2.4+0.9+1.5 M
48	ALBANY RIVER	KAPIKOTONGWA RIVER	1.6KM ABOVE JUNGFRAU LAKE	4JF35	50.6817	86.7850		5.5	36.21	1.55	7.62	110.24				Northern River Policy Area / General Use	1	
49	ALBANY RIVER	KAPIKOTONGWA RIVER	9.6KM BELOW STEWART LAKE	4JF32	50.6783	87.3367	1069	11.3	18.41	1.62	7.96	107.65				Northern River Policy Area / General Use	1	
50	ALBANY RIVER	KENOGAMI RIVER	ABOVE PINE LAKE				47	11.0		1.17	6.42					Northern River Policy Area	3	
51	ALBANY RIVER	KENOGAMI RIVER	N. OF CNR I				1722	10.7		2.20	12.11					Northern River Policy Area	3	
52	ALBANY RIVER	KENOGAMI RIVER	N. OF CNR III				4276	6.1		2.50	13.76					Northern River Policy Area	3	
53	ALBANY RIVER	KENOGAMI RIVER	BARLOW				1598	22.9		4.49	24.67					Northern River Policy Area	3	
54	ALBANY RIVER	LITTLE CURRENT RIVER	HOWARD FALLS	4JF2	50.3533	87.3183	1349	6.1	23.28	1.11	5.43					Northern River Policy Area / General Use	1	
55	ALBANY RIVER	LITTLE CURRENT RIVER	4.8KM BELOW ABAMASAGI LAKE	4JF20	50.4467	87.1933	1709	5.2	29.40	1.19	5.85					Northern River Policy Area / General Use	1	
56	ALBANY RIVER	LITTLE CURRENT RIVER	4.8KM BELOW O'SULLIVAN LAKE	4JF22	50.5267	86.9150	2144	4.6	36.79	1.32	6.48					Northern River Policy Area / General Use	1	
57	ALBANY RIVER	LITTLE CURRENT RIVER	IRENE FALLS	4JF3	50.5767	86.7033	2232	5.2	38.39	1.56	7.64	100.46				Northern River Policy Area / General Use	1	
58	ALBANY RIVER	LITTLE CURRENT RIVER	1.6KM BELOW IRENE FALLS	4JF24	50.5800	86.6933	2253	8.5	39.03	2.59	12.70	101.18				Northern River Policy Area / Provincial Park (existing)	1	
59	ALBANY RIVER	LITTLE CURRENT RIVER	3.2KM BELOW IRENE FALLS	4JF25	50.5883	86.6933	2261	10.1	38.85	3.06	15.01	101.86				Northern River Policy Area / Provincial Park (existing)	1	
60	ALBANY RIVER	LITTLE CURRENT RIVER	11.2KM BELOW CANYON FALLS	4JF30	50.7200	86.1250	5148	3.0	141.34	3.31	16.23					Northern River Policy Area / Provincial Park (existing)	1	
61	ALBANY RIVER	LITTLE CURRENT RIVER	3.2KM BELOW LOUELLA FALLS	4JF6	50.7333	86.0250	5832	2.7	160.21	3.37	16.55					Northern River Policy Area / Provincial Park (existing)	1	
62	ALBANY RIVER	LITTLE CURRENT RIVER	9.6KM BELOW CANYON FALLS	4JF29	50.7183	86.1583	5143	3.4	137.14	3.64	17.84	127.76				Northern River Policy Area / Provincial Park (existing)	1	
63	ALBANY RIVER	LITTLE CURRENT RIVER	6.4KM ABOVE PERCY LAKE	4JF4	50.5967	86.6933	2294	14.9	39.68	4.61	22.63	102.86				Northern River Policy Area / Provincial Park (existing)	1	
64	ALBANY RIVER	LITTLE CURRENT RIVER	BETTY FALLS	4JF28	50.6967	86.2567	5099	6.4	137.84	6.88	33.76	122.58				Northern River Policy Area / Provincial Park (existing)	1	
65	ALBANY RIVER	LITTLE CURRENT RIVER	CANYON FALLS	4JF5	50.7000	86.2433	5099	7.0	138.04	7.54	36.97	123.22				Northern River Policy Area / Provincial Park (existing)	1	
66	ALBANY RIVER	NAGAGAMI RIVER	JACKPINE RAPIDS	4JC3	49.7167	84.5967	2421	7.0	23.42	1.28	5.27	11.71				Northern River Policy Area / General Use	1	
67	ALBANY RIVER	NAGAGAMI RIVER	S. McMILLAN				2400	7.6		1.46	8.03					Northern River Policy Area	3	
68	ALBANY RIVER	NAGAGAMI RIVER	DIRTY BUSH RAPIDS				2200	9.1		1.60	8.81					Northern River Policy Area	3	
69	ALBANY RIVER	NAGAGAMI RIVER	M. GILL				3200	6.7		1.72	9.44					Northern River Policy Area	3	
70	ALBANY RIVER	NAGAGAMI RIVER	GULLOCK RAPIDS	4JC9	49.5833	84.7400	2170	10.7	20.88	1.74	7.18	29.78				Northern River Policy Area / Provincial Park (new)	1	
71	ALBANY RIVER	NAGAGAMI RIVER	W. GILL				3250	11.6		3.01	16.56					Northern River Policy Area	3	
72	ALBANY RIVER	NAGAGAMI RIVER	HIGHWOOD RAPIDS	4JC5	49.8033	84.5117	2504	10.6	6.93	4.80	27.66					Northern River Policy Area	1	
73	ALBANY RIVER	NAGAGAMI RIVER	HIGHROCK RAPIDS	4JC4	49.7233	84.6083	2421	31.1	23.37	5.67	23.34	11.74				Provincial Park (new)	1	
74	ALBANY RIVER	NAGAGAMI RIVER	THREE PORTAGES	4JC6	49.8050	84.4517	6557	8.2	97.35	6.23	25.64	18.42				Northern River Policy Area / Provincial Park (new)	1	
75	ALBANY RIVER	OGOKI RIVER	TEW LAKE	4GB65	50.6361	89.9832	829	22.0		1.46		90.50				Northern River Policy Area	1	
76	ALBANY RIVER	OGOKI RIVER	BAY/SMOOTH ROCK LAKE				2631	8.2		1.73	20.22					Northern River Policy Area	3	
77	ALBANY RIVER	OGOKI RIVER	3.6KM BELOW WHITE WATER LAKE	4GB42	50.8500	88.9600	11691	2.7	91.59	1.93	12.17	108.81				Northern River Policy Area / Provincial Park (existing)	1	
78	ALBANY RIVER	OGOKI RIVER	8.8KM BELOW WHITE WATER LAKE	4GB43	50.8750	88.9167	11722	2.7	91.85	1.93	12.20	109.64				Northern River Policy Area / Provincial Park (existing)	1	
79	ALBANY RIVER	OGOKI RIVER	FOOT OF OLIVER LAKE	4GB38	50.7433	89.4233	7674	2.7	93.42	1.97	10.08	96.79				Northern River Policy Area / Provincial Park (existing)	1	
80	ALBANY RIVER	OGOKI RIVER	2KM BELOW WABAKIMI LAKE	4GB31	50.7083	89.6133	6658	3.7	78.86	2.28	11.66	94.02				Northern River Policy Area / Provincial Park (existing)	1	
81	ALBANY RIVER	OGOKI RIVER	12.8KM BELOW SPECKLED TROUT RAPIDS	4GE12	50.8827	86.8172	16899	1.8		2.38		131.73				Northern River Policy Area / Provincial Park (existing)	1	
82	ALBANY RIVER	OGOKI RIVER	AMY FALLS	4GE1	50.8875	87.5418	1129	9.1		2.76	15.81					Northern River Policy Area / Provincial Park (existing)	3	Net after Ogoki Diversion
83	ALBANY RIVER	OGOKI RIVER	WHITEWATER LAKE ENTRANCE	4GB41	50.7833	89.3683	10380	4.6	79.56	2.85	18.01	95.22				Northern River Policy Area / Provincial Park (existing)	1	
84	ALBANY RIVER	OGOKI RIVER	WABAKIMI LAKE OUTLET	4GB30	50.6950	89.6133	6651	4.9	79.33	3.03	15.54	95.36				Northern River Policy Area / Provincial Park (existing)	1	
85	ALBANY RIVER	OGOKI RIVER	0-3.2KM BELOW KENOJI LAKE	4GP37	50.7317	89.5667	7612	7.3	91.41	5.20	26.67					Northern River Policy Area	1	

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No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
86	ALBANY RIVER	OGOKI RIVER	SPECKLED TROUT RAPIDS	4GE11	50.8357	86.9366	16658	4.6		5.99		125.40				Northern River Policy Area / Provincial Park (existing)	1	
87	ALBANY RIVER	PAGWACHUAN RIVER	22.4KM ABOVE CNR	4JD3	49.8483	85.2117	2375	5.8	28.12	1.27	5.24	50.98				Northern River Policy Area / General Use	1	
88	ALBANY RIVER	PAGWACHUAN RIVER	PURGATORY CHUTE	4JD1	49.6700	86.0100	510	45.8	4.03	1.44	5.93	58.70		Purgatory Chute Life Science Site		Northern River Policy Area / General Use	1	
89	ALBANY RIVER	PASHKOKOGAN RIVER	3.2KM ABOVE MOUTH	4GA29	51.0933	90.1133	2263	7.6	61.33	3.64	17.84					Northern River Policy Area / General Use	1	
90	ALBANY RIVER	SHEKAK RIVER	SHEKAK RIVER (3km N OF 11)	4JC1B	49.7500	89.3333		16.8	16.05	2.10	11.52					Northern River Policy Area	1	Check location of Site
91	ALBANY RIVER	WHITE RIVER	AT MOUTH	4JC7	49.8300	84.5050	3240	10.7	46.78	3.90	16.08	2.21				Northern River Policy Area / Provincial Park (existing)	1	
92	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	12.8KM ABOVE PEBBLE RIVER	4FB2	52.1550	87.5150	21600	1.2	382.24	3.58	17.55			Woodland Caribou (Fed. Threatened - SARA Sch. 1)		Northern River Policy Area / Provincial Park (existing)	1	
93	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	9.6KM BELOW CHANNEL JUNCTION	4FB5	52.1217	87.2783	24087	1.2	426.15	3.99	19.57			Woodland Caribou (Fed. Threatened - SARA Sch. 1)		Northern River Policy Area / General Use	1	
94	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	11.2KM BELOW MONUMENT CHANNEL	4FB8	52.0883	87.0797	3651	14.6		4.36		222.27		Woodland Caribou (Fed. Threatened - SARA Sch. 1)		Northern River Policy Area	1	
95	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	72KM BELOW MUKETEI RIVER	4FC2	52.8895	85.8430	4363	14.6		5.03		333.33		Woodland Caribou (Fed. Threatened - SARA Sch. 1)		Northern River Policy Area / Provincial Park (existing)	1	
96	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	24KM ABOVE NORTH CHANNEL	4FB10	52.3250	86.2479	4063	20.7		6.87		284.27		Woodland Caribou (Fed. Threatened - SARA Sch. 1)		Northern River Policy Area / Provincial Park (existing)	1	
97	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	116.8KM BELOW MUSKETEI RIVER	4FC1	52.7965	85.9120	4305	20.7		7.03		324.66		Woodland Caribou (Fed. Threatened - SARA Sch. 1)		Northern River Policy Area / Provincial Park (existing)	1	
98	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	4.8KM ABOVE PEBBLE RIVER	4FB4	52.1197	87.4189	5045	18.3		7.53		201.27		Woodland Caribou (Fed. Threatened - SARA Sch. 1)		Northern River Policy Area / Provincial Park (existing)	1	
99	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	OUTLET KABANIA LAKE	4FB6	52.2267	88.1350	19360	3.0	342.49	8.01	39.31			Woodland Caribou (Fed. Threatened - SARA Sch. 1)		Northern River Policy Area / General Use	1	
100	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	48KM BELOW MUKETEI RIVER	4FC3	53.0347	84.6314	6078	17.7	55.56	8.47		273.92		Woodland Caribou (Fed. Threatened - SARA Sch. 1)		Northern River Policy Area	2	
101	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	108.8KM BELOW OUTLET	4FC5	52.9340	83.3544	7051	29.9	64.45	9.20		192.93		Wolverine (Prov. Threatened) Woodland Caribou (Fed. Threatened)		Northern River Policy Area	2	
102	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	46.4KM ABOVE MUKETEI RIVER	4FC4	52.8596	83.8624	6530	20.7	59.69	9.85		218.85		Woodland Caribou (Fed. Threatened - SARA Sch. 1)		Northern River Policy Area	2	
103	ATTAWAPISKAT RIVER	OTOSKWIN RIVER	OUTLET BADESDAWA LAKE	4FA2	51.8533	89.5950	9026	1.8	115.19	1.62	8.29	56.44		Woodland Caribou (Fed. Threatened - SARA Sch. 1)		Northern River Policy Area / Provincial Park (existing)	1	
104	ATTAWAPISKAT RIVER	OTOSKWIN RIVER	9.6KM BELOW BADESDAWA LAKE	4FA4	51.8650	89.4917	9065	3.7	112.56	3.25	16.65	62.43				Northern River Policy Area / Provincial Park (existing)	1	
105	ATTAWAPISKAT RIVER	OTOSKWIN RIVER	OUTLET KAKAGIWIZIDA LAKE	4FA6	51.9483	89.1633	9311	6.7	117.05	6.12	31.35	85.74		Woodland Caribou (Fed. Threatened - SARA Sch. 1)		Northern River Policy Area / Provincial Park (existing)	1	
106	ATTAWAPISKAT RIVER	OTOSKWIN RIVER	1.6KM ABOVE KAKAGIWIZIDA LAKE	4FA5	51.8617	89.4333	9090	7.6	114.49	6.79	34.78	65.11		Woodland Caribou (Fed. Threatened - SARA Sch. 1)		Northern River Policy Area / Provincial Park (existing)	1	
107	ATTAWAPISKAT RIVER	OTOSKWIN RIVER	OUTLET OZHISKI LAKE	4FA8	52.0317	88.4533	11745	10.7	94.67	7.90	49.84	131.73		Woodland Caribou (Fed. Threatened - SARA Sch. 1)		Northern River Policy Area / Provincial Park (existing)	1	
108	ATTAWAPISKAT RIVER	OTOSKWIN RIVER	6.4KM BELOW BADESDAWA LAKE	4FA3	51.8783	89.5367	9052	9.1	114.25	8.11	41.56	61.25		Woodland Caribou (Fed. Threatened - SARA Sch. 1)		Northern River Policy Area / Provincial Park (existing)	1	
109	ENGLISH AND RAINY RIVERS	ATIKWA RIVER	ABOVE OUTFLOW LAKE				528	27.0		1.04	6.61						3	
110	ENGLISH AND RAINY RIVERS	BERENS RIVER	OTTER FALLS	5RC10	51.7900	93.4933	2965	4.6	33.18	1.19	5.84					General Use	1	
111	ENGLISH AND RAINY RIVERS	BERENS RIVER	WOMAN FALLS	5RC6	51.7350	92.9283	1533	13.7	13.63	1.46	7.15	74.68				General Use	1	
112	ENGLISH AND RAINY RIVERS	BERENS RIVER	OUTLET BERENS LAKE	5RC12	51.7733	93.8133	6721	3.4	74.66	1.98	9.71	84.39				General Use	1	
113	ENGLISH AND RAINY RIVERS	BERENS RIVER	MIKAIAMI FALLS	5RC11	51.8083	93.5733	5687	9.1	64.35	4.57	22.41	90.23				General Use	1	
114	ENGLISH AND RAINY RIVERS	BERRY LAKE	DRYBERRY LAKE				700	22.0		1.11	7.07						1	
115	ENGLISH AND RAINY RIVERS	CHUKUNI RIVER	19.2KM BELOW GULLROCK LAKE	5QC43	50.8717	93.4867	4636	5.2	35.61	1.44	7.40	1.89				General Use	1	
116	ENGLISH AND RAINY RIVERS	CHUKUNI RIVER	JOYCE RIVER				1414	16.0		1.63	10.38						3	
117	ENGLISH AND RAINY RIVERS	CHUKUNI RIVER	ABOVE SNAKE FALLS				4636	5.0		1.67	10.64						3	
118	ENGLISH AND RAINY RIVERS	CHUKUNI RIVER	BIG FALLS				2452	18.0		3.18	20.26						3	
119	ENGLISH AND RAINY RIVERS	DOWLING	ABOVE HORNBLENDITE LAKE				1275	20.0		1.73	10.40						3	
120	ENGLISH AND RAINY RIVERS	DOWLING	4.8KM ABOVE DOWLING LAKE	5RC17	51.6550	94.0700	1823	18.3	16.20	2.31	11.34					General Use	1	
121	ENGLISH AND RAINY RIVERS	ENGLISH RIVER	FIFTEENTH RAPID	5QA11	49.8817	91.5583	5698	3.0	57.78	1.35	6.93	29.14				Provincial Park (new)	1	
122	ENGLISH AND RAINY RIVERS	ENGLISH RIVER	TENTH RAPID	5QA12	49.8933	91.6950	7213	3.0	73.11	1.71	8.77	31.95				Provincial Park (new)	2	
123	ENGLISH AND RAINY RIVERS	ENGLISH RIVER	SEVENTEENTH RAPID	5QA2	49.8550	91.5467	3405	7.2	32.82	1.84	9.45	26.73				Provincial Park (new)	1	
124	ENGLISH AND RAINY RIVERS	ENGLISH RIVER	THIRD RAPID	5QA13	49.9283	91.7467	7666	4.6	76.03	2.73	13.98	26.60				Provincial Park (new)	1	
125	ENGLISH AND RAINY RIVERS	ENGLISH RIVER	SOWDEN LAKE	5QA32	49.5507	91.2904	7213	6.0		3.11	19.87	8.57		Rare to Uncommon (S3) dragonfly		Within a Regulated Park or Protected Area	3	

Table A1.1 - Greenfield Waterpower Sites - >1MW to <10MW

No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
126	ENGLISH AND RAINY RIVERS	ENGLISH RIVER	ELEVENTH RAPID	5QA3	49.8817	91.6050	7161	6.7	71.50	3.74	19.15	31.86				Provincial Park (new)	1	
127	ENGLISH AND RAINY RIVERS	ENGLISH RIVER	SEPARATION RAPIDS	5QE8	50.2517	94.4817	49572	1.2	417.05	3.90	24.62	30.79				General Use	1	
128	ENGLISH AND RAINY RIVERS	ENGLISH RIVER	FOURTH RAPID	5QA4	49.9250	91.7317	7498	7.3	74.96	4.27	21.87	27.65				Provincial Park (new)	1	
129	ENGLISH AND RAINY RIVERS	ENGLISH RIVER	FIRST RAPID	5QA5	49.9317	91.7650	7705	8.5	77.18	5.12	26.22	25.38				Provincial Park (new)	1	
130	ENGLISH AND RAINY RIVERS	ENGLISH RIVER	LOWER OAK FALLS	5QE6	50.4500	93.8050	38720	2.7	385.46	8.12	51.20					Provincial Park (new)	1	
131	ENGLISH AND RAINY RIVERS	INT. BOUNDARY WATERS	UPPER BASSWOOD FALLS	5PA3	48.1067	91.6450	4972	7.6	55.11	3.27	16.03	68.09				Provincial Park (new)	1	
132	ENGLISH AND RAINY RIVERS	INT. BOUNDARY WATERS	LOWER BASSWOOD FALLS	5PA4	48.1133	91.7100	5102	7.6	56.54	3.35	16.44	69.08				Provincial Park (new)	1	
133	ENGLISH AND RAINY RIVERS	INT. BOUNDARY WATERS	CURTAIN FALLS	5PA5	48.2383	91.9067	5439	8.5		3.38		54.61				Provincial Park (new)	1	
134	ENGLISH AND RAINY RIVERS	INT. BOUNDARY WATERS	REBECCA FALLS	5PA6	48.2467	91.9317	5594	9.1	62.15	4.41	21.64	53.64				Provincial Park (existing)	1	
135	ENGLISH AND RAINY RIVERS	LITTLE TURTLE RIVER	BETWEEN MUD & DOVETAIL LAKES	5PB20	48.9317	92.0300	600	22.6	6.55	1.15	5.66	17.70				General Use	1	
136	ENGLISH AND RAINY RIVERS	LITTLE TURTLE RIVER	3.2KM BELOW DOVETAIL LAKE	5PB22	48.9000	92.0750	673	23.8	7.35	1.36	6.69	13.04				General Use	1	
137	ENGLISH AND RAINY RIVERS	MALIGNE RIVER	OUTLET SAGANAGA LAKE	5PA1	48.2333	91.0567	2059	7.9	22.83	1.41	6.90	47.62				Provincial Park (existing)	1	
138	ENGLISH AND RAINY RIVERS	MALIGNE RIVER	SNAKE FALLS	5PA13	48.4517	91.2250	2525	8.8	28.03	1.92	9.44	25.59				Provincial Park (new)	1	
139	ENGLISH AND RAINY RIVERS	MALIGNE RIVER	AT MOUTH	5PA16	48.3667	91.9333	6824	6.1	75.40	3.59	17.60	40.99				Provincial Park (new)	1	
140	ENGLISH AND RAINY RIVERS	MALIGNE RIVER	BELOW STURGEON LAKE	5PA15	48.4167	91.7333	6254	6.7	69.20	3.62	17.74	36.08				Provincial Park (new)	1	
141	ENGLISH AND RAINY RIVERS	MALIGNE RIVER	WHITE FALLS	5PA14	48.4783	91.4417	4519	10.1	49.75	3.92	19.23	24.30				Provincial Park (new)	1	
142	ENGLISH AND RAINY RIVERS	MALIGNE RIVER	KENNEBAS FALLS	5PA21	48.3256	91.1345	2512	25.9		4.69		37.61				Provincial Park (existing)	1	
143	ENGLISH AND RAINY RIVERS	MALIGNE RIVER	BETWEEN SAGANAGA & KAWINIPI	5PA12	48.3117	91.1117	2512	30.5	27.75	6.60	32.39	39.02				Provincial Park (new)	1	
144	ENGLISH AND RAINY RIVERS	RAINY RIVER	LONG SAULT	5PC2	48.6433	94.0800	50712	3.4	285.58	7.57	47.77	32.46				General Use	1	
145	ENGLISH AND RAINY RIVERS	ROOT RIVER	6.4KM ABOVE LYNX PORTAGE	5QB27	50.8217	91.4567	611	1.2	114.01	1.07	5.24					General Use	1	
146	ENGLISH AND RAINY RIVERS	ROOT RIVER	LYNX PORTAGE	5QB29	50.7917	91.4200	779	1.8	115.59	1.62	7.96					General Use	1	
147	ENGLISH AND RAINY RIVERS	ROOT RIVER	NATTAWAY FALLS	5QB35	50.7248	91.4803	12940	3.0		1.87		49.57					3	
148	ENGLISH AND RAINY RIVERS	ROOT RIVER	12.0KM ABOVE LYNX PORTAGE	5QB24	50.8600	91.4583	77	2.7	109.41	2.30	11.30	34.72				General Use	1	
149	ENGLISH AND RAINY RIVERS	ROOT RIVER	4.0KM ABOVE LYNX PORTAGE	5QB28	50.8150	91.4317	699	3.0	114.88	2.69	13.19	39.83				General Use	1	
150	ENGLISH AND RAINY RIVERS	ROOT RIVER	9.6 KM ABOVE LYNX PORTAGE	5QB26	50.8450	91.4600	88	3.4	106.24	2.82	13.82	36.39				General Use	1	
151	ENGLISH AND RAINY RIVERS	ROOT RIVER	FLOWER FALLS II				12416	5.0		3.00	19.10						3	
152	ENGLISH AND RAINY RIVERS	ROOT RIVER	FLOWER FALLS I				12406	5.5		3.29	21.00						3	
153	ENGLISH AND RAINY RIVERS	RUSHING RIVER	OUTLET DOGTOOTH LAKE	5PD1	49.6817	94.2300	466	21.3	6.42	1.07	5.24					Provincial Park (new)	1	
154	ENGLISH AND RAINY RIVERS	SEINE RIVER	ABOVE FIRESTEEL RIVER	5PB2	48.9967	90.8333	1877	7.6	15.82	1.01		35.81				General Use	2	FALLS
155	ENGLISH AND RAINY RIVERS	SEINE RIVER	LONG RAPIDS	5PB4	48.9533	91.1267	2823	6.7	22.67	1.18	6.07	26.79				General Use	1	
156	ENGLISH AND RAINY RIVERS	SEINE RIVER	BELOW LAC DES MILLE LACS	5PB1	48.9883	90.7550	1813	11.0	14.52	1.25	6.39	35.38				General Use	1	
157	ENGLISH AND RAINY RIVERS	SEINE RIVER	BELOW FIRESTEEL RIVER	5PB3	49.0033	91.0800	2810	7.6	22.62	1.34	6.87	33.28				General Use	1	
158	ENGLISH AND RAINY RIVERS	STURGEON RIVER	12TH FALLS	5QA9	50.1767	91.2533	2745	4.0	36.43	1.14	5.58					General Use	1	
159	ENGLISH AND RAINY RIVERS	STURGEON RIVER	5TH FALLS	5QA7	50.1117	91.0700	1761	6.4	23.58	1.18	5.78					General Use	1	
160	ENGLISH AND RAINY RIVERS	STURGEON RIVER	7TH FALLS	5QA8	50.1283	91.1283	1787	9.1	24.06	1.71	8.38	29.29				General Use	1	
161	ENGLISH AND RAINY RIVERS	STURGEON RIVER	ABOVE SINGAPORE LAKE				2486	14.0		2.51	15.98						1	
162	ENGLISH AND RAINY RIVERS	TROUT LAKE	25.6KM BELOW TROUT LAKE	5QC15	50.9133	93.0983	2437	4.6	31.46	1.13	5.54					General Use	1	
163	ENGLISH AND RAINY RIVERS	TROUT LAKE	6.4KM BELOW TROUT LAKE	5QC20	51.0467	93.1150	1284	13.4	16.69	1.74	8.56	10.56				General Use	1	
164	ENGLISH AND RAINY RIVERS	TROUT LAKE	19.2KM BELOW TROUT LAKE	5QC14	50.9367	93.0933	2408	15.4	18.00	2.30	14.51					General Use	1	
165	ENGLISH AND RAINY RIVERS	TROUT LAKE	27.2KM BELOW TROUT LAKE	5QC17	50.9050	93.0917	2452	18.3	31.82	4.54	22.28	0.36				Private/Federal Land	1	MNR's Competitive Site Release, CRP-01-05

Table A1.1 - Greenfield Waterpower Sites - >1MW to <10MW

No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
166	ENGLISH AND RAINY RIVERS	TROUT RIVER	BELOW OTUKAMAMOAN LAKE	5PB30	48.8833	92.8383	1100	20.1	7.59	1.19	5.84	15.42				General Use	1	
167	ENGLISH AND RAINY RIVERS	TURTLE RIVER	BELOW WHITE OTTER LAKE	5PB9	49.2017	91.9517	971	13.7	10.80	1.15	5.66					Provincial Park (existing)	1	
168	ENGLISH AND RAINY RIVERS	TURTLE RIVER	ABOVE LITTLE TURTLE LAKE	5PB17	48.8467	92.5733	3341	5.2	36.97	1.50	7.36	9.74					1	
169	ENGLISH AND RAINY RIVERS	TURTLE RIVER	RAPIDS	5PB14	49.1800	92.3867	2292	9.1	25.56	1.81	8.90	43.50					1	
170	ENGLISH AND RAINY RIVERS	TURTLE RIVER	OTTER TAIL FALLS	5PB18	48.8900	92.7317	4895	4.9	54.08	2.07	10.14	14.46					1	
171	ENGLISH AND RAINY RIVERS	TURTLE RIVER	BELOW ROBINSON LAKE	5PB16	48.9233	92.4467	2965	8.2	33.04	2.11	10.37	20.26					1	
172	ENGLISH AND RAINY RIVERS	TURTLE RIVER	RAPIDS	5PB13	49.1900	92.3450	2240	11.6	24.83	2.25	11.02	40.30					1	
173	ENGLISH AND RAINY RIVERS	TURTLE RIVER	BELOW ELTRUT LAKE	5PB15	48.9583	92.4333	2874	12.2	31.90	3.04	14.89	24.12					1	
174	ENGLISH AND RAINY RIVERS	WABIGOON RIVER	4.8KM FROM MOUTH	5QD18	50.2550	93.9200	8585	2.4	59.93	1.12	5.75	46.47				General Use	1	
175	ENGLISH AND RAINY RIVERS	WABIGOON RIVER	BELOW CANYON LAKE				668	33.0		1.59	10.12						3	
176	ENGLISH AND RAINY RIVERS	WABIGOON RIVER	LOT 2 CON III WABIGOON TWP.	5QD4	49.9250	93.3533	6319	3.0	78.59	1.84	9.02	7.08				General Use	1	SHARP STUDY CONDUCTED (UNAVAILABLE)
177	ENGLISH AND RAINY RIVERS	WABIGOON RIVER	LOT 6 CON V WABIGOON TWP.	5QD5	49.9583	93.4033	6449	7.9	36.00	2.37	15.35	10.31		Extremely Rare (S1) dragonfly Quibell Lake Provincially Significant Wetland u/s		General Use	1	
178	ENGLISH AND RAINY RIVERS	WABIGOON RIVER	BALL LAKE	5QE36	50.2628	93.9795	8585	10.0		6.18							1	
179	ENGLISH AND RAINY RIVERS	WENASAGA RIVER	OUTLET BUFFY LAKE	5QB13	50.7983	93.0583	2634	6.1	27.09	1.29	6.32	6.16				General Use	1	
180	ENGLISH AND RAINY RIVERS	WENASAGA RIVER	BELOW BUFFY LAKE	5QB14	50.7967	93.0633	2634	9.1	27.21	1.93	9.48	5.77				General Use	1	
181	ENGLISH AND RAINY RIVERS	WENASAGA RIVER	ABOVE WENASAGA LAKE	5QB36	50.7748	93.0896	2634	15.0		2.85	18.14						3	
182	ENGLISH AND RAINY RIVERS	WOMAN RIVER	JUNCTION WITH TROUTLAKE RIVER	5QC13	50.9717	93.0583	826	15.3	10.69	1.28	6.26					General Use	1	
183	LAKE ERIE	GRAND RIVER	3.2KM BELOW BRANTFORD	2GB10	43.1000	80.2300	5340	7.9	3372.93	3.37	15.69						1	
184	LAKE ONTARIO	BURNT RIVER	THREE BROTHERS FALLS.	2HF18	44.8133	78.6367	1113	15.3	17.93	2.14	10.12	8.84				Private/Federal Land	1	
185	LAKE ONTARIO	CROWE RIVER	TOWN LINE	2HK22	44.4417	77.6917	1945	7.9	23.33	1.44	6.80	8.70				Private/Federal Land	1	
186	LAKE ONTARIO	MOIRA RIVER	U/S BELLEVILLE				2795	4.3		1.05	5.25						3	
187	LAKE ONTARIO	SKOOTAMATTA RIVER	HIGH FALLS	2HL1	44.5643	77.3273	668	15.3		1.08		2.35				Private/Federal Land	1	
188	LAKE ONTARIO	TRENT CANAL SYSTEM	SAWER CREEK				7401	3.7		1.95	9.77						3	
189	LAKE ONTARIO	TRENT CANAL SYSTEM	DOURO				7401	3.7		2.38	11.91						3	
190	LAKE ONTARIO	TRENT CANAL SYSTEM	OTONABEE				7401	3.7		2.38	11.91						3	
191	LAKE ONTARIO	TRENT CANAL SYSTEM	NASSAU MILLS				7415	4.3		2.78	13.92						3	
192	LAKE SUPERIOR	AGAWA RIVER	FALLS AT MOUTH	2BE7	47.3583	84.6367	1147	27.4	16.00	3.47	15.06	45.14				Provincial Park (existing)	1	
193	LAKE SUPERIOR	AGAWA RIVER	NEAR MOUTH				1140	48.8		4.45	26.24	Assume 45					3	
194	LAKE SUPERIOR	AGUASABON RIVER	0.5KM BELOW DAM	2BA10	48.7817	87.1217	2	2.1	98.60	1.62	7.64						1	
195	LAKE SUPERIOR	AGUASABON RIVER	30.4 - 28.8KM FROM MOUTH	2BA13	48.9650	87.0900	440	4.6	96.50	3.46	16.38	14.97		Woodland Caribou (Fed. Threatened) potentially in area		General Use	1	
196	LAKE SUPERIOR	AGUASABON RIVER	1.6KM BELOW DAM	2BA11	48.7817	87.1217	15	4.6	96.80	3.47	16.43						1	
197	LAKE SUPERIOR	BATCHAWANA RIVER	FIRST FALLS	2BF2	46.9779	84.5110	1241	10.4		1.80		66.34				Provincial Park (new)	1	
198	LAKE SUPERIOR	BATCHAWANA RIVER	SECOND FALLS	2BF1	46.9716	84.5023	1243	10.7		1.85		66.36					1	
199	LAKE SUPERIOR	BLACK STURGEON RIVER	4.8 - 5.6KM BELOW ESKWANONWATON	2AC7	49.1183	88.6183	2134	6.4	21.91	1.09	5.61	18.43				Provincial Park (new)	1	
200	LAKE SUPERIOR	BLACK STURGEON RIVER	ABOVE NONWATON LAKE	2AC3	49.2633	88.7000	1515	24.4	15.56	2.96	15.17	24.47				Provincial Park (new)	1	
201	LAKE SUPERIOR	BLACKWATER	NEAR MOUTH	2AD65	49.5201	88.1425	624	23.2		1.16	6.82	9.95					3	
202	LAKE SUPERIOR	CURRENT RIVER	5.6KM FROM MOUTH	2AB5	48.5067	89.2250	663	30.5	4.48	1.06	5.46	1.79				Private/Federal Land	1	
203	LAKE SUPERIOR	GOULAIS RIVER	54.4KM BELOW GOULAIS LAKE	2BF9	46.8583	83.9700	1111	8.2	1136.74	1.14	5.38	45.61				General Use	1	
204	LAKE SUPERIOR	GOULAIS RIVER	VAN KOUGHNET	2BF14	46.7449	84.2898	1423	18.3		2.08		71.89					1	
205	LAKE SUPERIOR	GOULAIS RIVER	SECOND FALLS	2BF10	46.8083	83.9883	1346	15.0	2100.00	2.10	12.04	50.40				Provincial Park (new)	1	

Table A1.1 - Greenfield Waterpower Sites - >1MW to <10MW

No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
206	LAKE SUPERIOR	GOULAIS RIVER	FIRST FALLS	2BF11	46.8083	83.9883	1346	22.9	4218.33	4.22	19.95						1	Approximate location
207	LAKE SUPERIOR	GRAVEL RIVER	AT E-W TIE				678	45.7		2.48	14.63						3	
208	LAKE SUPERIOR	GULL RIVER	22.4KM FROM MOUTH (W. DETOUR LAKE)	2AD37	49.8467	89.2467	3126	25.9	28.00	6.48	38.23	89.91				Provincial Park (new)	3	
209	LAKE SUPERIOR	HARMONY RIVER	AT MOUTH	2BF3	46.9300	84.4250	777	18.6	12.42	1.80	8.52	65.37		Blue wild rye (S1 - Extremely rare) in area		Private/Federal Land	1	
210	LAKE SUPERIOR	KAMINISTIQUIA RIVER	CROOKED RAPIDS	2AB6	48.6150	89.5983		3.8	35.00	1.00	5.87					Private/Federal Land	1	
211	LAKE SUPERIOR	KAMINISTIQUIA RIVER	KAM #1	2AB1A	48.5333	89.5833	6660	6.1	40.00	1.97	14.25						1	Approximate Location
212	LAKE SUPERIOR	KAMINISTIQUIA RIVER	KAM 4		48.4000	89.2167			70.00	2.20	12.91						1	Approximate Location
213	LAKE SUPERIOR	KAMINISTIQUIA RIVER	KAM #2	2AB18	48.5333	89.5833	6655	6.0	70.00	3.30	19.37						1	Approximate Location
214	LAKE SUPERIOR	KAMINISTIQUIA RIVER	KAM 5		48.4000	89.2167	683		84.00	4.80	28.17						1	Approximate Location
215	LAKE SUPERIOR	KOPKA RIVER	SITE D		50.2000	89.2500		12.0	15.40	1.40	6.87						1	HEAD CALCULATED ASSUMING FUTURE DAM
216	LAKE SUPERIOR	LITTLE JACKFISH RIVER	SOUTH SUMMIT LAKE OUTLET	2AD49	50.6117	88.2267	7	3.0	160.34	3.75	18.41	109.96				General Use	1	
217	LAKE SUPERIOR	LITTLE JACKFISH RIVER	STORK LAKE OUTLET	2AD50	50.5667	88.2717	113	3.0	161.50	3.78	18.54	106.08				General Use	1	
218	LAKE SUPERIOR	LITTLE JACKFISH RIVER	TETTARES LAKE OUTLET	2AD53	50.4367	88.3033	277	3.7	158.91	4.59	22.50	93.13				General Use	1	
219	LAKE SUPERIOR	LITTLE JACKFISH RIVER	MILEAGE 7.5	2AD57	50.3867	88.3333	406	3.7	160.33	4.63	22.62	88.83				General Use	1	SHARP STUDY CONDUCTED (UNAVAILABLE)
220	LAKE SUPERIOR	LITTLE JACKFISH RIVER	MILEAGE 4	2AD59	50.3367	88.3350	455	3.7	160.85	4.64	22.69	83.76				General Use	1	SHARP STUDY CONDUCTED (UNAVAILABLE)
221	LAKE SUPERIOR	LITTLE JACKFISH RIVER	ZIG ZAG LAKE OUTLET	2AD52	50.4533	88.3000	269	5.2	160.07	6.49	31.85	94.87				General Use	1	
222	LAKE SUPERIOR	LITTLE JACKFISH RIVER	FIRST LEVEL LAKE OUTLET	2AD55	50.4000	88.3117	308	6.1	160.98	7.66	37.57	89.72				General Use	1	
223	LAKE SUPERIOR	LITTLE JACKFISH RIVER	MILEAGE 8.5	2AD56	50.3967	88.3150	404	6.1	162.03	7.71	37.82	89.34				General Use	1	
224	LAKE SUPERIOR	LITTLE JACKFISH RIVER	THRIDDA LAKE OUTLET	2AD54	50.4250	88.3167	279	6.7	160.91	8.41	41.25	92.38				General Use	1	
225	LAKE SUPERIOR	LITTLE PIC RIVER	VEIN CREEK	2BA18	49.0157	86.4146	494	34.7		1.37	8.10	22.63					3	
226	LAKE SUPERIOR	MAGPIE RIVER	CEDAR FALLS	2BD11	48.2050	84.6767	1468	5.8	22.69	1.03	4.86	29.24				Private/Federal Land	1	
227	LAKE SUPERIOR	MAGPIE RIVER	16KM ABOVE STEEP HILL FALLS	2BD29	48.1683	84.7067	1657	7.6	25.70	1.52	7.21	24.69				Private/Federal Land	1	
228	LAKE SUPERIOR	MAGPIE RIVER	THIRD FALLS	2BD13	47.9433	84.8317	1867	14.9	28.94	3.36	15.91	0.58				General Use	1	
229	LAKE SUPERIOR	MAGPIE RIVER	FOURTH FALLS	2BD12	47.9600	84.8300	1864	22.3	28.77	5.00	23.67	1.10				General Use	1	
230	LAKE SUPERIOR	MICHIPICOTEN RIVER	E. MANESS				2019	6.4		1.03	6.10						3	
231	LAKE SUPERIOR	MICHIPICOTEN RIVER	STONEY PORTAGE FALLS	2BD19	48.2533	84.2250	1300	13.1	14.46	1.48	10.10	32.02				Private/Federal Land	1	HELD UNDER LICENCE OF OCCUPATION BY GREAT LAKES POWER LTD AS A CONTROL STRUCTURE
232	LAKE SUPERIOR	MICHIPICOTEN RIVER	SCOTT FALLS TO SUPERIOR	2BD21	47.9200	84.7800	5418	8.5	60.49	4.01	27.41	1.72				Conservation Reserves (new)	1	
233	LAKE SUPERIOR	NAMAKAN RIVER	LADY RAPIDS	5PA9	48.4467	92.3900	14504	3.0	170.95	4.00	19.62	31.91				General Use	1	
234	LAKE SUPERIOR	NAMAKAN RIVER	SNAKE FALLS	5PA7	48.3883	92.1717	13377	4.9	154.50	5.90	28.97	38.00				Private/Federal Land	1	
235	LAKE SUPERIOR	NAMEWAMINIKAN RIVER	MARTIN RAPIDS	2AD27	49.7897	87.6969	2104	10.0		1.69	9.99	13.39					3	
236	LAKE SUPERIOR	NAMEWAMINIKAN RIVER	TWIN FALLS	2AD5	49.7417	87.8917	2336	10.5	22.00	1.93	11.14	10.76					1	SHARP HEAD AND FLOW VALUES MUST BE ENTERED
237	LAKE SUPERIOR	OMBABIKA RIVER	NEAR MOUTH				1186	12.2		1.16	6.82						3	
238	LAKE SUPERIOR	ONAMAN RIVER	BELOW HIGHWAY				1200	13.1		1.26	7.42						3	
239	LAKE SUPERIOR	ONAMAN RIVER	9.6KM FROM MOUTH	2AD9	49.8050	87.8833	1199	32.9	10.75	2.76	13.54	34.79				General Use	1	
240	LAKE SUPERIOR	PIC RIVER	SHUSHKWAIBEGA LAKE	2BB15	49.4277	86.2014	836	15.2		1.02		40.75					2	
241	LAKE SUPERIOR	PIC RIVER	WHITE OTTER FALLS (MIDDLE FALLS)	2BB3	49.3150	86.0267	1113	9.1	14.38	1.02	4.83					General Use	1	NO FURTHER HYDRO PROPOSALS DUE TO THE UNSTABLE NATURE OF THE SOILS AND FISHERY ISSUES
242	LAKE SUPERIOR	PIC RIVER	SITE B		49.2700	86.1000		35.4	4.07	1.13	5.31						1	NO FURTHER HYDRO PROPOSALS DUE TO THE UNSTABLE NATURE OF THE SOILS AND FISHERY ISSUES
243	LAKE SUPERIOR	PIC RIVER	MACENTAGON				1200	15.2		1.47	8.63						3	
244	LAKE SUPERIOR	PIC RIVER	LAKE SUPERIOR PORTAGE	2BB4	49.2083	86.0817	2356	13.2	15.15	1.50	9.30	18.66		International Biological Programme Site		General Use	1	NO FURTHER HYDRO PROPOSALS DUE TO THE UNSTABLE NATURE OF THE SOILS AND FISHERY ISSUES
245	LAKE SUPERIOR	PIC RIVER	KAWEPITI RAPIDS				945	21.3		1.61	9.52						3	

Table A1.1 - Greenfield Waterpower Sites - >1MW to <10MW

No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
246	LAKE SUPERIOR	PIC RIVER	GROUP OF RAPIDS..	2BB5	49.3845	86.0957	836	19.8	9.61	1.64		32.14				General Use	3	
247	LAKE SUPERIOR	PIC RIVER	DYING PORTAGE RAPIDS	2BB1	49.3758	86.0819	945	29.0	10.86	2.72		30.77				General Use	2	
248	LAKE SUPERIOR	PIC RIVER	BLACK RIVER FALLS	2BB6	48.6644	86.2308	1682	23.5		3.16	18.63						3	
249	LAKE SUPERIOR	PIC RIVER	SANDHILL FALLS (HIGH FALLS)	2BB2	49.3417	86.0383	1087	34.9	7.60	4.00	12.09	25.89				General Use	1	NO FURTHER HYDRO PROPOSALS DUE TO THE UNSTABLE NATURE OF THE SOILS AND FISHERY ISSUES. MNR's Competitive Site Release, CRP-09-05
250	LAKE SUPERIOR	PIC RIVER	LITTLE BLACK RIVER	2BB14	48.6450	86.2419	1900	30.5		4.63	27.33	0.04		Black River Gorge International Biological Programme Site			2	
251	LAKE SUPERIOR	PIGEON RIVER	ARROW FALLS				865	16.8		1.16	6.84						3	
252	LAKE SUPERIOR	PIGEON RIVER	SOUTH FOWL RAPIDS	2AA2	48.0304	89.9948	310	45.8		1.20		50.24				Provincial Park (new)	1	
253	LAKE SUPERIOR	PIGEON RIVER	MIDDLE FALLS	2AA7	48.0100	89.6117	1626	18.6	10.45	1.52	7.44	43.49				Provincial Park (new)	1	
254	LAKE SUPERIOR	PIGEON RIVER	BELOW ARROW RIVER	2AA5	48.0117	89.7183	1541	24.4	9.90	1.89	9.25	44.81				Provincial Park (new)	1	
255	LAKE SUPERIOR	PIGEON RIVER	HIGH FALLS	2AA4	48.0150	89.8217	569	83.9	2.98	1.95	9.58	46.24				Provincial Park (new)	1	
256	LAKE SUPERIOR	PIGEON RIVER	ARROW RAPIDS				600	45.7		2.19	12.95						3	
257	LAKE SUPERIOR	PIGEON RIVER	THE CASCADES				570	60.9		2.78	16.40						3	
258	LAKE SUPERIOR	PIGEON RIVER	LITTLE FALLS	2AA12	48.0127	89.6160	1629	27.4		3.58	21.09	43.45				Provincial Park (new)	3	
259	LAKE SUPERIOR	PIGEON RIVER	BIG FALLS	2AA8	48.0050	89.5983	1626	46.4	10.44	3.78	18.54	43.57				Provincial Park (new)	1	
260	LAKE SUPERIOR	PIGEON RIVER	HORN FALLS	2AA6	48.0065	89.6549	1626	36.6		4.76	28.07	44.84					3	
261	LAKE SUPERIOR	PIGEON RIVER	PIGEON FALLS				1632	44.2		5.77	34.04						3	
262	LAKE SUPERIOR	PIKITIGUSHI RIVER	GOOSENECK RAPIDS	2AD64	50.4482	88.6608	870	17.1		1.19	7.00	104.96		Woodland Caribou (Fed. Threatened - SARA Sch. 1)		Provincial Park (existing)	3	
263	LAKE SUPERIOR	PUKASKWA RIVER	W. PUKASKWA LAKE				647	21.3		1.10	6.52			Woodland Caribou (Fed. Threatened - SARA Sch. 1)			3	
264	LAKE SUPERIOR	PUKASKWA RIVER	NEAR MOUTH (SCHIST FALLS)	2BC19	48.0050	85.8867	852	16.8	10.92	1.43	6.77	39.57		Woodland Caribou (Fed. Threatened - SARA Sch. 1)		National Park	1	
265	LAKE SUPERIOR	PUKASKWA RIVER	E. PUKASKWA				515	76.2		3.14	18.52			Woodland Caribou (Fed. Threatened - SARA Sch. 1)			3	
266	LAKE SUPERIOR	PUKASKWA RIVER	16KM FROM MOUTH	2BC16	48.0717	85.7950	756	60.4	9.71	4.57	21.63	29.86		Woodland Caribou (Fed. Threatened - SARA Sch. 1)		National Park	3	Listed as Parry Creek in ONTARIO HYDRO REPORT No. 87360
267	LAKE SUPERIOR	ROARING RIVER	3.2KM FROM MOUTH	2AD38	49.6517	89.5333	1162	68.6	10.42	5.57	27.34	95.07				General Use	1	
268	LAKE SUPERIOR	SAND LAKE	1.6KM ABOVE MOUTH	2BE6	47.4417	84.7217	398	29.0	6.35	1.44	6.79	43.56				Provincial Park (existing)	1	
269	LAKE SUPERIOR	SHEBANDOWAN RIVER	SHEBANDOWAN 1	2AB16	48.6200	90.0600	44	9.1	10.00	1.40	8.22						1	
270	LAKE SUPERIOR	SHIKWAMKWA RIVER	JANE FALLS	2BD17	48.0517	84.3000	1999	4.6	30.71	1.10	5.21	12.67				Private/Federal Land	1	
271	LAKE SUPERIOR	SHIKWAMKWA RIVER	JANE FALLS TO DONNA FALLS	2BD18	48.0483	84.3083	2020	6.4	31.25	1.56	7.38	12.31				Private/Federal Land	1	
272	LAKE SUPERIOR	SHIKWAMKWA RIVER	SHIKWAMKWA LAKE TO JANE FALLS	2BD16	48.0833	84.1700	1994	16.8	30.77	4.03	19.07	18.22				General Use	1	
273	LAKE SUPERIOR	STEEL RIVER	41.6KM ABOVE SANTOY LAKE	2BA1	49.1000	86.7783	1243	16.8	17.34	2.27	10.75	31.66				Provincial Park (existing)	1	
274	LAKE SUPERIOR	UNIVERSITY RIVER	BELOW KNIFE LAKE	2BD1	48.2719	85.1064	510	16.2		1.01		16.67					1	
275	LAKE SUPERIOR	UNIVERSITY RIVER	S. LAGARDE				888	30.5		2.17	12.77						3	
276	LAKE SUPERIOR	UNIVERSITY RIVER	E.ST. GERMAIN	2BD44	48.0030	85.2155	960	91.4		7.02	41.43					Provincial Park (existing)	3	
277	LAKE SUPERIOR	WABINOSH RIVER	BETWEEN KENAKSKANISS & WIGWASA	2AD36	50.1050	89.4050	642	76.3	5.75	3.42	16.78	115.23				Provincial Park (existing)	1	
278	LAKE SUPERIOR	WHITE RIVER	BAPTISMON RAPIDS	2BC6	48.5833	85.8933	4532	3.0	57.90	1.35	6.91	12.04				Provincial Park (new)	1	
279	LAKE SUPERIOR	WHITE RIVER	7.2KM BELOW WHITE LAKE	2BC3	48.6200	85.8183	4221	4.6	52.73	1.89	9.65	9.81				Provincial Park (new)	1	
280	LAKE SUPERIOR	WHITE RIVER	CHICAGONCE FALLS	2BC4	48.6017	85.8633	4480	4.6	55.97	2.01	10.24	10.20				Provincial Park (new)	1	
281	LAKE SUPERIOR	WHITE RIVER	1.6KM BELOW BAPTISMON RAPIDS	2BC7	48.5767	85.8950	4584	4.6	57.27	2.05	10.48	12.74				Provincial Park (new)	1	
282	LAKE SUPERIOR	WHITE RIVER	TURNBULL RAPIDS	2BC8	48.5583	85.9250	4610	6.1	57.90	2.75	14.05	12.39				Provincial Park (new)	1	
283	LAKE SUPERIOR	WHITE RIVER	3.2KM BELOW UMBATA FALLS	2BC10	48.5400	86.1833	5270	10.7	66.05	5.51	28.12	2.04		Woodland Caribou (Fed. Threatened - SARA Sch. 1)		National Park	1	
284	MOOSE RIVER	ABITIBI RIVER	BUCKDEER RAPIDS	4MC4	48.8674	80.7692	13297	1.5	215.00	2.52	15.06	5.24				General Use	1	
285	MOOSE RIVER	FIRE RIVER	PUSKATA	4LH10	48.8000	83.6400	1100	12.2		1.34	7.92	92.68					3	

Table A1.1 - Greenfield Waterpower Sites - >1MW to <10MW

No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
286	MOOSE RIVER	FIRE RIVER	FIRE JUNCTION	4LH9	48.7500	83.6000		12.2		1.46	8.64	82.75				Provincial Park (new)	1	
287	MOOSE RIVER	GROUNDHOG RIVER	WAKUSIMI CASSELMAN	4LD6	49.0833	82.2500	860	13.7	11.04	1.18	6.96	29.49		Extremely Rare (S1) sedge in area			1	
288	MOOSE RIVER	GROUNDHOG RIVER	NEAR NORTH BOUNDARY OF TWP.	4LC3	48.3117	82.1200	3387	3.0	54.84	1.28	5.28	14.87				Provincial Park (new)	1	
289	MOOSE RIVER	GROUNDHOG RIVER	WAKUSIMI JUNCTION	4LD7	49.0900	82.0700	940	16.2	12.01	1.52	8.96	16.41		Groundhog River Waterway Provinical Park immed. d/s			1	
290	MOOSE RIVER	GROUNDHOG RIVER	UPPER FALLS, TWP. REEVES	4LC1	48.2367	82.1633	3387	6.1	35.00	1.74	10.82	16.77				Provincial Park (new)	1	
291	MOOSE RIVER	GROUNDHOG RIVER	LOWER RAPIDS TWP. MELROSE	4LC6	48.4467	82.0417	3874	3.7	61.05	1.76	7.25	22.53				Provincial Park (new)	1	
292	MOOSE RIVER	GROUNDHOG RIVER	MIDDLE RAPIDS TWP. MELROSE	4LC5	48.3833	82.0617	3781	4.0	59.74	1.86	7.67	16.84				General Use	1	
293	MOOSE RIVER	GROUNDHOG RIVER	UPPER RAPIDS TWP. MELROSE	4LC4	48.3383	82.0833	3781	9.1	60.57	4.30	17.70	14.24				Provincial Park (new)	1	
294	MOOSE RIVER	GROUNDHOG RIVER	SOUTH CREEK	4LD10	49.0900	82.1000		7.3	138.41	7.88	46.50	16.92					1	
295	MOOSE RIVER	KAMISKOTIA	KAMISKOTIA FALLS		48.5667	81.5367		14.6	9.48	1.08	6.37						1	
296	MOOSE RIVER	KAPUSKASING RIVER	NORTH LINCOLN		48.2583	82.0000		8.5	20.65	1.37	8.08						1	
297	MOOSE RIVER	KAPUSKASING RIVER	TWP. LINCOLN	4LE4	48.7429	82.8401	1670	8.5	22.06	1.46	6.02	77.65				General Use	1	
298	MOOSE RIVER	KAPUSKASING RIVER	LOON RAPIDS TWP. DAVIN	4LE2	48.7050	82.8183	3936	4.9	50.24	1.92	11.33	81.10				General Use	1	
299	MOOSE RIVER	KAPUSKASING RIVER	LOST RAPIDS		47.8000	83.4167		7.6	38.38	2.28	13.42						1	
300	MOOSE RIVER	KAPUSKASING RIVER	OUTLET KAPUSKASING LAKE	4LE1	48.5333	82.8967	3662	7.0	47.01	2.57	15.15	75.80		Nemegosenda River Wetlands Provincial Park u/s, Candidate Life Science ANSI		Private/Federal Land	1	
301	MOOSE RIVER	KAPUSKASING RIVER	NEAR NORTH BOUNDARY TWP. BUCHAN	4LE6	48.8383	82.8367	4636	8.8	49.31	3.38	15.66					General Use	1	
302	MOOSE RIVER	KAPUSKASING RIVER	STURGEON FALLS TWP. O'BRIEN	4LF4	49.4467	82.4483	6902	5.5	85.00	3.79	18.61	0.47				General Use	1	
303	MOOSE RIVER	KAPUSKASING RIVER	NEAR NORTH BOUNDARY TWP BUCHAN	4LF9	48.8409	82.8375	4315	8.8		4.06		67.62					1	
304	MOOSE RIVER	KAPUSKASING RIVER	CEDAR RAPIDS		48.8333	82.8333		8.8	59.70	4.10	24.18						1	
305	MOOSE RIVER	KAPUSKASING RIVER	MIDDLE TWP BUCHAN	4LE5	48.7669	82.8471	4040	11.3	51.01	4.43		75.39				General Use	2	RAPIDS
306	MOOSE RIVER	KAPUSKASING RIVER	CLOUSTON RAPIDS		48.7700	82.8500	4040	11.3	51.69	4.56	26.88						1	
307	MOOSE RIVER	KAPUSKASING RIVER	LAPINIGAM RAPIDS TWP. BUCHAN	4LE3	48.7167	82.8317	3978	19.8	42.14	6.51	30.12	80.23				General Use	1	
308	MOOSE RIVER	KAPUSKASING RIVER	BUCHAN FALLS	4LE11	48.7167	82.8333		19.8	51.04	7.88	46.50	80.05					1	
309	MOOSE RIVER	KAPUSKASING RIVER - DUNRANKIN RIVER	DUNRANKINE JUNCTION	4LE10	48.7833	82.8500	540	24.4	6.92	1.32	7.77	74.19					3	
310	MOOSE RIVER	LITTLE ABITIBI RIVER	70.4KM FROM MOUTH	4ME29	49.8000	81.1500	2654	4.4	38.12	1.31	4.93					Moose River Basin Policy Area	1	
311	MOOSE RIVER	LITTLE ABITIBI RIVER	67.2-68.8KM FROM MOUTH	4ME30	49.8100	81.1600	2678	7.0	38.33	2.09	7.88					Moose River Basin Policy Area	1	
312	MOOSE RIVER	LITTLE ABITIBI RIVER	100.8-114.0KM FROM MOUTH	4ME23	49.6400	80.8400	2167	9.1	31.15	2.21	8.33					Moose River Basin Policy Area	1	
313	MOOSE RIVER	LITTLE ABITIBI RIVER	HARIS LAKE FALLS		49.5833	80.8333		17.0	24.90	3.30	19.48					Moose River Basin Policy Area	1	
314	MOOSE RIVER	MATTAGAMI RIVER	BEAR RAPIDS	4LB5	49.5317	81.6783	11831	1.5	97.51	1.14	6.99	12.25				Moose River Basin Policy Area / General Use	1	
315	MOOSE RIVER	MISSINAIBI RIVER	DEADWOOD PORTAGE & RAPIDS ABOVE	4LH3	48.7117	83.3800	2975	4.0	37.79	1.18	6.96	96.16				Provincial Park (existing)	1	
316	MOOSE RIVER	MISSINAIBI RIVER	TWO PORTAGES	4LJ1	49.2067	83.3750	6153	2.1	80.56	1.32	5.43	47.98				Provincial Park (new)	1	
317	MOOSE RIVER	MISSINAIBI RIVER	WAVY RAPIDS	4LH4	48.6833	83.4117	2975	4.6	37.96	1.36	8.04	93.07				Provincial Park (existing)	1	
318	MOOSE RIVER	MISSINAIBI RIVER	ROCK ISLAND RAPIDS TWP. EIBER	4LJ6	49.6533	83.2517	9111	1.5	119.19	1.39	5.74	1.83		Several Very Rare to Uncommon plant species		Provincial Park (existing)	1	
319	MOOSE RIVER	MISSINAIBI RIVER	BEAM FALLS TWP. SANKEY	4LJ8	49.7733	83.2200	9406	1.8	123.06	1.73	7.11	15.24				Provincial Park (existing)	1	
320	MOOSE RIVER	MISSINAIBI RIVER	JACKPINE & ST PETERS	4LH6	48.7417	83.4500	3571	4.9	45.80	1.75	7.21	98.99		Life Science Site		Provincial Park (existing)	1	
321	MOOSE RIVER	MISSINAIBI RIVER	SPLIT ROCK	4LH7	48.7783	83.4517	3675	4.9	47.10	1.80	7.41	94.99		Life Science Site		Provincial Park (existing)	1	
322	MOOSE RIVER	MISSINAIBI RIVER	LANG RAPIDS & RAPIDS BELOW	4LH2	48.5017	83.3133	2675	9.1	34.46	2.45	14.43	73.16				Provincial Park (new)	1	
323	MOOSE RIVER	MISSINAIBI RIVER	DEVIL CAP & DEVIL SHOE PACK	4LJ3	49.2417	83.3567	6376	4.3	81.46	2.73	11.25	43.89				Provincial Park (new)	1	
324	MOOSE RIVER	MISSINAIBI RIVER	GREENHILL RAPIDS	4LH5	48.7267	83.4400	3180	10.1	40.59	3.20	18.87	97.93		Life Science Site		Provincial Park (existing)	1	
325	MOOSE RIVER	MISSINAIBI RIVER	POND FALLS	4LJ2	49.2333	83.3583	6322	5.2	81.12	3.29	13.55	44.81				Provincial Park (new)	1	

Table A1.1 - Greenfield Waterpower Sites - >1MW to <10MW

No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
326	MOOSE RIVER	MISSINAIBI RIVER	THUNDER OR MAY FALLS	4LH8	48.8267	83.3617	3750	9.1	48.30	3.43	20.23	87.74		Life Science Site		Provincial Park (existing)	1	
327	MOOSE RIVER	MISSINAIBI RIVER	GLASSY FALLS TWP. STAUNTON	4LJ5	49.4967	83.3167	8956	4.9	114.80	4.39	18.06	16.29				Provincial Park (existing)	1	
328	MOOSE RIVER	MISSINAIBI RIVER	BEAVER FALLS TWP. STAUNTON	4LJ4	49.4583	83.3783	8376	6.7	107.95	5.64	23.23	21.63				Provincial Park (existing)	1	
329	MOOSE RIVER	MISSINAIBI RIVER	STONE PORTAGE TO HEAD OF LONG	4LK5	50.0917	83.2117	12196	7.3	157.41	8.96	36.90	49.32		Very Rare (S2) plant species		Provincial Park (existing)	1	
330	MOOSE RIVER	OPASATIKA RIVER	4.8KM BELOW THREE BROTHERS	4LL3	49.3214	82.9724	1295	7.6	15.94	1.05						General Use	2	RAPIDS
331	MOOSE RIVER	OPASATIKA RIVER	WRIGHT		50.1500	82.5667		18.0	7.69	1.08	6.37						1	Approximate Location
332	MOOSE RIVER	OPASATIKA RIVER	BETWEEN MAREVA FALLS & CHRISTOPH	4LL9	50.0233	82.4700	3281	12.2	16.46	1.57	6.45	19.45				Moose River Basin Policy Area / General Use	1	
333	MOOSE RIVER	OPASATIKA RIVER	ABOVE WAXATIKA CR	4LL7	49.9179	82.5346	2452	6.4		1.67		21.64				Moose River Basin Policy Area	1	
334	MOOSE RIVER	OPASATIKA RIVER	BETWEEN ZADI & NESHIN LAKES	4LL4	49.7051	82.6015	2032	9.5		2.05		17.44				Moose River Basin Policy Area	1	
335	MOOSE RIVER	OPASATIKA RIVER	MAREVA FALLS & RAPIDS ABOVE	4LL8	50.0017	82.4733	3250	17.4	15.97	2.17	12.79	19.02				Moose River Basin Policy Area / General Use	1	
336	MOOSE RIVER	OPASATIKA RIVER	OPASATIKA CANYON	4LL5	49.8189	82.4676	2319	9.1		2.24		14.78				Moose River Basin Policy Area	1	
337	MOOSE RIVER	OPASATIKA RIVER	INDIAN SIGN FALLS	4LL6	49.8478	82.4682	2322	9.1		2.24		15.43				Moose River Basin Policy Area	1	
338	MOOSE RIVER	OPASATIKA RIVER	CHRISTOPHER RAPIDS	4LL10	50.0533	82.4750	2975	22.9	16.82	7.23	12.37	19.70				Moose River Basin Policy Area / General Use	1	
339	MOOSE RIVER	PATTEN RIVER	9.6KM FROM MOUTH	4NB2	49.3000	79.6333	984	15.3	13.70	1.64	6.73					General Use	1	
340	MOOSE RIVER	TURGEON	PATTEN		49.4583	79.5583		13.0	12.62	1.28	7.55						1	
341	NORTHERN LAKE HURON	AUX SABLES RIVER	MCKEE FALLS	2CE11	46.4100	82.1433	1157	11.9	16.85	1.56	7.40	4.61				Provincial Park (new)	1	
342	NORTHERN LAKE HURON	AUX SABLES RIVER	MEAREAU FALLS	2CE15	46.3117	82.1133	1432	11.0	20.83	1.79	8.45	6.52				Provincial Park (new)	1	
343	NORTHERN LAKE HURON	AUX SABLES RIVER	SPANISH CHUTE	2CE19	46.2267	82.0733	1471	11.9	21.41	1.99	9.40	1.15		Several provincially rare species in area		Provincial Park (new)	1	
344	NORTHERN LAKE HURON	AUX SABLES RIVER	HIGH FALLS	2CE10	46.4317	82.1483	1129	15.6	16.40	2.00	9.44	6.95				Provincial Park (new)	1	
345	NORTHERN LAKE HURON	AUX SABLES RIVER	FALLS	2CE14	46.3650	82.1150	1398	13.7	20.40	2.18	10.31	0.56				Provincial Park (new)	1	
346	NORTHERN LAKE HURON	AUX SABLES RIVER	GRAVEYARD CHUTE	2CE18	46.2350	82.0850	1468	16.5	21.35	2.75	13.00	0.16	1			Private/Federal Land	1	
347	NORTHERN LAKE HURON	AUX SABLES RIVER	DERBY ISLAND RAPIDS	2CE17	46.2617	82.1167	1465	12.5	31.60	3.25	13.38	3.23				Provincial Park (new)	1	
348	NORTHERN LAKE HURON	LITTLE FRENCH RIVER	FIVE FINGERS	2DD1A	46.1000	80.1667		6.4	30.00	1.50	9.86						1	
349	NORTHERN LAKE HURON	LITTLE WHITE RIVER	BELL FALLS	2CC8	46.3917	83.2867	1958	6.5	30.00	1.65	8.53	1.52		Little White River Waterway Provincial Park d/s		Private/Federal Land	1	
350	NORTHERN LAKE HURON	MISSISSAGI RIVER	HELLGATE PORTAGE	2CB2	46.9417	82.6600	678	17.7	10.90	1.50	7.12	42.06				Provincial Park (existing)	1	REMAINING HYDRO POTENTIAL ON THIS RIVER IS RESERVED TO ONTARIO HYDRO
351	NORTHERN LAKE HURON	MISSISSAGI RIVER	McGAULEY'S CHUTE				9143	1.8		1.61	10.27						3	
352	NORTHERN LAKE HURON	MISSISSAGI RIVER	6.4KM BELOW AUBINADONG RIVER	2CC9	46.8100	83.3850	6120	3.4	94.93	2.52	13.89	10.12				Provincial Park (new)	1	REMAINING HYDRO POTENTIAL ON THIS RIVER IS RESERVED TO ONTARIO HYDRO
353	NORTHERN LAKE HURON	MISSISSAGI RIVER	4KM ABOVE AUBINADONG RIVER	2CB9	46.8100	83.3333	4247	8.8	67.12	4.61	25.43	6.98				Provincial Park (new)	1	REMAINING HYDRO POTENTIAL ON THIS RIVER IS RESERVED TO ONTARIO HYDRO
354	NORTHERN LAKE HURON	SOUTH RIVER	COX'S INCLUDING DAVIDSON'S CHUTE	2DD4	45.9133	79.4167	450	18.3	8.19	1.17	5.53	46.86				General Use	1	
355	NORTHERN LAKE HURON	SPANISH RIVER	6.4KM BELOW FORKS STATION	2CE4	47.0100	81.8183	3405	3.0	44.30	1.04	5.72	44.49				General Use	1	
356	NORTHERN LAKE HURON	SPANISH RIVER	3.2KM BELOW METAGAMA STATION	2CE3	47.0867	81.8850	3307	4.9	42.10	1.61	8.88	47.84				Provincial Park (new)	1	
357	NORTHERN LAKE HURON	SPANISH RIVER	3.2KM ABOVE METAGAMA STATION	2CE2	47.1483	81.9367	3281	5.5	41.89	1.80	9.92	49.19				Provincial Park (new)	1	
358	NORTHERN LAKE HURON	SPANISH RIVER	SPANISH CHUTES	2CE48	47.3245	82.3888	1470	11.9		1.96		76.27					1	
359	NORTHERN LAKE HURON	SPANISH RIVER	6.4KM BELOW AGNES RIVER	2CE7	46.6383	81.8217	4734	4.3	60.11	2.02	11.13	25.38		Spanish River Valley and Old Pine Life Science Site		Provincial Park (new)	1	
360	NORTHERN LAKE HURON	SPANISH RIVER	1.6KM BELOW FLUORITE STATION	2CE5	46.9650	81.8100	3631	7.3	46.56	2.65	14.63	45.04				Provincial Park (new)	1	
361	NORTHERN LAKE HURON	SPANISH RIVER	BELOW BISCOTASI LAKE	2CE1	47.2733	82.0017	2356	12.2	39.06	3.72	17.58	49.42				Provincial Park (new)	1	
362	NORTHERN LAKE HURON	SPANISH RIVER	5.6KM ABOVE AGNES RIVER	2CE6	46.6300	81.7267	4276	10.7	54.55	4.55	25.13	22.58				Provincial Park (new)	1	
363	NORTHERN LAKE HURON	STURGEON RIVER	UPPER GOOSE FALLS	2DC13	46.9700	80.4583	1165	7.6	19.55	1.16	5.48	36.23				Provincial Park (existing)	1	
364	NORTHERN LAKE HURON	STURGEON RIVER	SANDY FALLS	2DC8	46.3967	79.8633	6863	2.4	97.80	1.83	10.10	4.83				General Use	1	
365	NORTHERN LAKE HURON	STURGEON RIVER	KETTLE FALLS	2DC11	47.1117	80.6950	582	25.9	9.75	1.97	9.32	20.70				Provincial Park (existing)	1	

Table A1.1 - Greenfield Waterpower Sites - >1MW to <10MW

No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
366	NORTHERN LAKE HURON	STURGEON RIVER	LOWER GOOSE FALLS	2DC14	46.9367	80.4317	1831	12.2	30.61	2.91	13.78	37.88				Enhanced Management Area	1	
367	NORTHERN LAKE HURON	TIMAGAMI RIVER	THISTLE LAKE	2DC9	46.6583	80.0500	2390	13.4	50.57	5.29	25.00	14.09	15			Provincial Park (new)	1	
368	NORTHERN LAKE HURON	TIMAGAMI RIVER	RAGGED CHUTE	2DC10	46.6567	80.1000	2416	13.4	51.12	5.34	25.27	17.81	1.5			Provincial Park (new)	1	
369	NORTHERN LAKE HURON	VERMILION RIVER	CPR BRIDGE				3074	3.4		1.15	7.39						3	
370	NORTHERN LAKE HURON	VERMILION RIVER	ISLAND RAPID				3843	3.4		1.44	9.24						3	
371	NORTHERN LAKE HURON	VERMILION RIVER	WABAGESHIK RAPID	2CF12	46.2700	81.6183	4493	6.5	35.00	1.85	11.02	5.43				General Use	1	
372	NORTHERN LAKE HURON	VERMILION RIVER	MCPHERSON FALLS	2CF19	46.7167	81.1333	3778	8.2	34.11	2.18	12.04						1	Approximate Location
373	NORTHERN LAKE HURON	WANAPITEI RIVER	RAGGED CHUTE	2DB8	46.3167	80.8367	3245	7.0	21.59	1.18	6.51	7.82				Private/Federal Land	1	
374	NORTHERN LAKE HURON	WANAPITEI RIVER (ALLEN)	LOT 12 CON VI TWP. ALLEN	2DB13	46.0867	80.8233	3682	3.0	57.20	1.34	6.33	20.06		Massasauga Rattlesnake (Fed. Threatened - SARA Sch. 1) d/s		General Use	1	
375	NORTHERN LAKE HURON	WANAPITEI RIVER (ALLEN)	LOT 1 CON V TWP. STRUTHERS	2DB14	46.0717	80.8317	3682	3.0	57.20	1.34	6.33	21.46		Massasauga Rattlesnake (Fed. Threatened - SARA Sch. 1) d/s		General Use	1	
376	OTTAWA RIVER	AMABLE DU FOND RIVER	THE CASCADE	2JE21	46.1524	78.9313	811	9.5		1.04		22.91				Provincial Park (new)	1	
377	OTTAWA RIVER	AMABLE DU FOND RIVER	OUTLET MANITOU LAKE	2JE20	46.0467	78.9800	259	30.2	4.44	1.05	4.95	33.90				Provincial Park (existing)	1	
378	OTTAWA RIVER	AMABLE DU FOND RIVER	LONG SLIDE	2JE18	46.1750	78.9217	875	9.6	14.70	1.27	7.12	20.12				Provincial Park (new)	1	
379	OTTAWA RIVER	AMABLE DU FOND RIVER	BOULOUX CHUTE	2JE23	46.1683	78.9267	849	12.2	14.56	1.39	6.56	20.74				Provincial Park (new)	1	
380	OTTAWA RIVER	AMABLE DU FOND RIVER	SAND CHUTE	2JE22	46.1667	78.9267	846	14.4	13.40	1.74	9.75	21.14				Provincial Park (new)	1	
381	OTTAWA RIVER	AMABLE DU FOND RIVER	GRAVELLE CHUTE	2JE17	46.1467	78.9333	771	24.1	12.80	2.79	15.74	23.47				Private/Federal Land	1	
382	OTTAWA RIVER	BARRON RIVER	SQUIRREL RAPIDS	2KB35	45.8710	77.5577	388	39.6		1.35		7.00				Provincial Park (new)	1	
383	OTTAWA RIVER	BLANCHE RIVER	LOT 12 CON V PACAUD TWP.	2JC4	47.9899	80.0116	752	20.1		1.51		6.80				Private/Federal Land	1	
384	OTTAWA RIVER	BLANCHE RIVER	LOT 12 CON V MARTER TWP.	2JC17	47.9067	79.8800	1134	10.4	21.63	1.76	7.23	1.64				Private/Federal Land	1	
385	OTTAWA RIVER	BLANCHE RIVER	LOT 10 CON II PACAUD TWP.	2JC12	47.9500	79.9933	932	26.2	11.62	2.30	8.85	7.49				Private/Federal Land	1	SHARP (ENERGY VALUE OR CAPACITY FACTOR TO BE INPUTTED)
386	OTTAWA RIVER	BONNECHERE RIVER	DOUGLAS				2021	6.1		1.08	6.94						3	
387	OTTAWA RIVER	BONNECHERE RIVER	FIRST CHUTE	2KC11	45.5017	76.5550	2421	9.0	24.00	1.50	8.28	11.00		Bonnechere Rivermouth Provincially Significant Wetland immed. downstream		Private/Federal Land	1	
388	OTTAWA RIVER	BONNECHERE RIVER	RABBITTAIL CASCADES	2KC9	45.7083	77.8200	199	128.1	1.80	1.80	8.51	14.86				Provincial Park (existing)	1	
389	OTTAWA RIVER	ENGLEHART	LOT 2 CON IV DACK TWP.	2JC9	47.7994	79.9177	1070	10.4		1.11		9.16				Provincial Park (existing)	1	
390	OTTAWA RIVER	JOCKO RIVER	11.2KM ABOVE MOUTH	2JE15	46.6003	79.1196	438	20.1		1.09		21.02				Provincial Park (existing)	1	
391	OTTAWA RIVER	JOCKO RIVER	AT MOUTH	2JE16	46.5633	79.0050	735	38.1	9.91	2.94	12.12	22.31				Private/Federal Land	1	
392	OTTAWA RIVER	LADY EVELYN RIVER	FRANK FALLS	2JD11	47.3067	80.3033	694	9.1	15.83	1.12	5.32					Provincial Park (existing)	1	
393	OTTAWA RIVER	LADY EVELYN RIVER	CENTRE FALLS	2JD6	47.2950	80.3217	686	10.7	15.54	1.30	6.13					Provincial Park (existing)	1	
394	OTTAWA RIVER	LADY EVELYN RIVER	HELEN FALLS	2JD5	47.2917	80.3450	681	24.4	15.45	2.94	13.91	43.98				Provincial Park (existing)	1	
395	OTTAWA RIVER	MADAWASKA RIVER	VICTORIA LAKE	2KD52	45.6345	77.9978	637	21.3		1.20	7.65	5.90				Provincial Park (existing)	3	
396	OTTAWA RIVER	MADAWASKA RIVER	GREAT BEND 1				1335	10.4		1.22	7.79						3	
397	OTTAWA RIVER	MADAWASKA RIVER	5.3KM ABOVE MCAULAY CREEK	2KD7	45.4933	78.0950	1235	8.2	20.27	1.30	6.13	6.36				General Use	1	
398	OTTAWA RIVER	MADAWASKA RIVER	0.53KM BELOW AMABLE CREEK	2KD6	45.4950	78.1000	1232	10.7	20.10	1.68	7.94	6.12				General Use	1	
399	OTTAWA RIVER	MADAWASKA RIVER	LONG RAPIDS	2KD4	45.5100	78.1300	1131	18.6	18.50	2.68	12.70	3.11				Provincial Park (existing)	1	
400	OTTAWA RIVER	MADAWASKA RIVER	2 KM BELOW BARK LAKE	2KD12	45.4133	77.7633	2701	10.1	37.58	2.96	14.01	24.66				General Use	1	
401	OTTAWA RIVER	MADAWASKA RIVER	3 KM BELOW BARK LAKE	2KD13	45.4083	77.7533	2709	10.7	37.74	3.15	14.90	25.57				Private/Federal Land	1	
402	OTTAWA RIVER	MADAWASKA RIVER	RACKET RAPIDS	2KE1	45.2300	77.3267	6218	15.3	73.19	8.73	48.20	24.24				Provincial Park (existing)	1	
403	OTTAWA RIVER	MATTAWA RIVER	LES ESPINES RAPIDS	2JE13	46.3017	78.8767	2027	5.2	38.18	1.55	7.33	7.53				Provincial Park (existing)	1	
404	OTTAWA RIVER	MATTAWA RIVER	PARESSEUX CHUTE	2JE12	46.3000	78.9717	885	12.8	16.74	1.67	7.91	6.94				Provincial Park (new)	1	
405	OTTAWA RIVER	MATTAWA RIVER	TALON CHUTE	2JE11	46.2817	79.0033	859	13.1	18.68	1.91	9.03					Provincial Park (new)	1	SHARP STUDY CONDUCTED (UNAVAILABLE)

Table A1.1 - Greenfield Waterpower Sites - >1MW to <10MW

No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
406	OTTAWA RIVER	MISSISSIPPI RIVER	ISLAND RAPID	2KF4	44.9417	76.7283	1015	11.6	11.03	1.00		4.50				Private/Federal	1	
407	OTTAWA RIVER	MISSISSIPPI RIVER	RAGGED RAPID	2KF5	44.9450	76.7250	1023	11.6	11.12	1.01	4.76	4.15				Private/Federal Land	1	
408	OTTAWA RIVER	MISSISSIPPI RIVER	INNISVILLE	2KF6	45.0517	76.2517	2686	4.0		1.09		13.73					1	
409	OTTAWA RIVER	MISSISSIPPI RIVER	ALMONTE	2KF20	45.2267	76.2000		3.7	46.78	1.35	6.03					Private/Federal Land	1	SHARP HEAD AND FLOW VALUES MUST BE ENTERED
410	OTTAWA RIVER	MONTREAL RIVER	LONG RAPIDS	2JD2	47.9183	80.5600	2802	6.1	23.77	1.13	6.24	0.13				General Use	1	
411	OTTAWA RIVER	PETAWAWA RIVER	BATTERY RAPIDS	2KB34	45.9888	78.2520	2068	5.5		1.00		27.45				Provincial Park (existing)	1	
412	OTTAWA RIVER	PETAWAWA RIVER	3RD RAPID BELOW WHITE PARTRIDGE	2KB12	45.9533	78.0817	2737	4.9	28.21	1.08	5.95	15.49				Provincial Park (existing)	1	
413	OTTAWA RIVER	PETAWAWA RIVER	2ND RAPID BELOW CATFISH LAKE	2KB3	45.9933	78.4733	836	12.5	11.21	1.09	5.17	30.04				Provincial Park (existing)	1	
414	OTTAWA RIVER	PETAWAWA RIVER	1ST RAPID ABOVE BARRON RIVER	2KB18	45.8983	77.4083	3638	4.0	37.29	1.16	6.42	2.88				Private/Federal Land	1	ALIAS SITE NAME - HALFMILE RAPIDS
415	OTTAWA RIVER	PETAWAWA RIVER	1ST RAPID BELOW RADIANT LAKE	2KB8	45.9800	78.2233	2069	5.5	27.68	1.19	5.62	26.86				Provincial Park (existing)	1	
416	OTTAWA RIVER	PETAWAWA RIVER	1ST RAPID BELOW TRAVERSE LAKE	2KB16	46.0367	77.9967	3045	4.9	31.36	1.20	6.61	13.98				Provincial Park (existing)	1	
417	OTTAWA RIVER	PETAWAWA RIVER	1ST RAPID BELOW BARRON RIVER	2KB19	45.8800	77.3467	4123	4.0	42.28	1.32	7.28	1.34				Private/Federal Land	1	
418	OTTAWA RIVER	PETAWAWA RIVER	1ST RAPID BELOW CEDAR LAKE	2KB5	46.0067	78.4050	1468	8.8	19.80	1.36	6.43	27.26				Provincial Park (existing)	1	
419	OTTAWA RIVER	PETAWAWA RIVER	2ND RAPID BELOW CEDAR LAKE	2KB6	46.0117	78.3750	1478	10.1	19.76	1.56	7.37	26.23				Provincial Park (existing)	1	
420	OTTAWA RIVER	PETAWAWA RIVER	5TH RAPID BELOW WHITE PARTRIDGE	2KB14	45.9600	78.0667	2742	7.3	28.44	1.62	8.94	14.83				Provincial Park (existing)	1	
421	OTTAWA RIVER	PETAWAWA RIVER	2ND RAPID BELOW WHITE PARTRIDGE	2KB11	45.9483	78.1033	2714	7.6	28.17	1.67	9.22	16.68				Provincial Park (existing)	1	
422	OTTAWA RIVER	PETAWAWA RIVER	3RD RAPID BELOW CEDAR LAKE	2KB7	46.0133	78.3567	1502	11.0	20.10	1.72	8.16	25.81				Provincial Park (existing)	1	
423	OTTAWA RIVER	PETAWAWA RIVER	WAGTAIL CREEK	2KB31	45.9503	78.1507	2712	7.6		1.82		19.99				Provincial Park (existing)	1	
424	OTTAWA RIVER	PETAWAWA RIVER	4TH RAPID BELOW WHITE PARTRIDGE	2KB13	45.9650	78.0750	2740	8.2	28.46	1.82	10.05	15.48				Provincial Park (existing)	1	
425	OTTAWA RIVER	PETAWAWA RIVER	2ND RAPID BELOW BARRON RIVER	2KB20	45.8867	77.3083	4131	5.5	42.65	1.83	10.10	2.77		Earth Science ANSI		Private/Federal Land	1	ALIAS SITE NAME - BIG EDDY RAPIDS
426	OTTAWA RIVER	PETAWAWA RIVER	3RD RAPID BELOW CATFISH LAKE	2KB4	46.0050	78.4850	839	24.4	11.25	2.14	10.13	29.02				Provincial Park (existing)	1	
427	OTTAWA RIVER	PETAWAWA RIVER	AT C.P.R. BRIDGE	2KB21	45.9000	77.2883	4162	6.4	43.09	2.15	11.87	2.23				Private/Federal Land	1	
428	OTTAWA RIVER	PETAWAWA RIVER	1ST RAPID ABOVE MOUTH	2KB23	45.9033	77.2733	4172	6.4	43.19	2.16	11.90	1.17				Private/Federal Land	1	
429	OTTAWA RIVER	PETAWAWA RIVER	2ND RAPID ABOVE MOUTH	2KB22	45.9033	77.2783	4169	7.3	43.26	2.46	13.59	1.34				Private/Federal Land	1	
430	OTTAWA RIVER	PETAWAWA RIVER	6TH RAPID BELOW WHITE PARTRIDGE	2KB15	45.9600	78.0617	2742	13.4	28.41	2.97	16.39	14.45				Provincial Park (existing)	1	
431	OTTAWA RIVER	PETAWAWA RIVER	1ST RAPID BELOW CATFISH LAKE	2KB2	45.9800	78.4967	828	36.3	11.11	3.15	14.88	32.03				Provincial Park (existing)	1	
432	OTTAWA RIVER	PETAWAWA RIVER	2ND RAPID BELOW TRAVERSE LAKE	2KB17	46.0483	77.8867	3211	12.5	33.24	3.24	17.88	6.96				Provincial Park (existing)	1	
433	OTTAWA RIVER	PETAWAWA RIVER	FIVE MILE RAPIDS	2KB32	46.0110	77.7296	3209	12.5		3.53		5.71				Provincial Park (existing)	1	
434	OTTAWA RIVER	YORK RIVER	0.3KM BELOW BAPTISTE LAKE	2KD19	45.1183	77.9167	704	11.3	11.49	1.01	4.79					Private/Federal Land	1	
435	OTTAWA RIVER	YORK RIVER	15.2KM BELOW BANCROFT	2KD22	45.0683	77.7333	1336	10.4	21.78	1.77	8.36	31.65				Provincial Park (new)	1	
436	SEVERN RIVER	FLANAGAN RIVER	NEAR MOUTH	4CA30	52.8333	93.4679	2849	8.2	23.25	1.64						Northern River Policy Area / General Use	2	
437	SEVERN RIVER	SEVERN RIVER	17.6KM BELOW DEER LAKE	4CA5	52.7067	94.1317	4496	3.7	50.02	1.44	7.08					Northern River Policy Area / General Use	1	
438	SEVERN RIVER	SEVERN RIVER	6.4KM ABOVE FAVOURABLE LAKE	4CA8	52.8383	94.1133	4747	3.7	52.82	1.52	7.48					Northern River Policy Area / General Use	1	
439	SEVERN RIVER	SEVERN RIVER	9.6KM BELOW DEER LAKE	4CA3	52.6900	94.0383	4405	4.9	49.38	1.89	9.26					Northern River Policy Area / General Use	1	
440	SEVERN RIVER	SEVERN RIVER	6KM BELOW MUSKRAT DAM LAKE	4CC17	53.4977	91.4506	36855	0.9	287.44	2.23		234.82		Wolverine (Prov, Threatened) Earth Science Site		Northern River Policy Area	2	
441	SEVERN RIVER	SEVERN RIVER	10KM BELOW MUSKRAT DAM LAKE	4CC18	53.5217	91.4117	37037	0.9	288.86	2.24		236.53		Wolverine (Prov, Threatened) Earth Science Site		Northern River Policy Area	2	
442	SEVERN RIVER	SEVERN RIVER	20.8KM ABOVE SEVERN LAKE	4CC23	53.7826	91.0753	39251	0.9	306.13	2.38		259.04		Wolverine (Prov, Threatened) Earth Science Site		Northern River Policy Area	1	
443	SEVERN RIVER	SEVERN RIVER	8KM ABOVE FAVOURABLE LAKE	4CA7	52.8317	94.1150	4739	6.1	53.33	2.54	12.45	202.94				Northern River Policy Area / General Use	1	
444	SEVERN RIVER	SEVERN RIVER	14.4KM BELOW FAVOURABLE LAKE	4CA12	53.1117	93.8450	7140	4.6	79.92	2.87	14.07	233.14				Northern River Policy Area / General Use	1	
445	SEVERN RIVER	SEVERN RIVER	8KM BELOW ASIPOQUOBAH LAKE	4CC22	53.7200	91.1536	39134	1.2	305.22	3.16		253.29				Northern River Policy Area	2	

Table A1.1 - Greenfield Waterpower Sites - >1MW to <10MW

No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
446	SEVERN RIVER	SEVERN RIVER	1.6KM ABOVE SEVERN LAKE	4CC26	53.9088	90.8820	40287	1.2	314.21	3.25		270.80				Northern River Policy Area	2	
447	SEVERN RIVER	SEVERN RIVER	17.6KM ABOVE SEVERN LAKE	4CC24	53.8346	91.0775	39323	1.5	306.69	3.96		264.75				Northern River Policy Area	1	
448	SEVERN RIVER	SEVERN RIVER	3.2KM BELOW FAVOURABLE LAKE	4CA11	53.0100	93.8617	5925	7.6	66.90	3.97	19.45	221.95				Northern River Policy Area / General Use	1	
449	SEVERN RIVER	SEVERN RIVER	9.6KM ABOVE SEVERN LAKE	4CC25	53.8818	90.9740	39373	1.5	307.08	3.97		268.73				Northern River Policy Area	2	
450	SEVERN RIVER	SEVERN RIVER	6KM BELOW MUSKRAT DAM LAKE	4CA17	53.4983	91.4517	36855	0.9	580.85	4.08	20.00			Wolverine (Prov, Threatened) Earth Science Site		Northern River Policy Area / General Use	1	
451	SEVERN RIVER	SEVERN RIVER	10KM BELOW MUSKRAT DAM LAKE	4CA18	53.5217	91.4117	37037	0.9	583.59	4.10	20.10			Wolverine (Prov, Threatened) Earth Science Site		Northern River Policy Area / General Use	1	
452	SEVERN RIVER	SEVERN RIVER	20.8KM ABOVE SEVERN LAKE	4CA23	53.7867	91.0800	39251	0.9	618.51	4.34	21.30					Northern River Policy Area / General Use	1	
453	SEVERN RIVER	SEVERN RIVER	OUTLET ASIPOQUOBAH LAKE	4CC20	53.6800	91.2094	38922	1.8	303.57	4.71		249.80		Wolverine (Prov, Threatened) Earth Science Site		Northern River Policy Area	2	
454	SEVERN RIVER	SEVERN RIVER	8KM BELOW ASIPOQUOBAH LAKE	4CA22	53.7200	91.1500	39134	1.2	616.65	5.77	28.31			Wolverine (Prov, Threatened) Earth Science Site		Northern River Policy Area / General Use	1	
455	SEVERN RIVER	SEVERN RIVER	1.6KM ABOVE SEVERN LAKE	4CA26	53.9100	90.8800	40287	1.2	635.00	5.94	29.16			Wolverine (Prov, Threatened) Earth Science Site		Northern River Policy Area / General Use	1	
456	SEVERN RIVER	SEVERN RIVER	17.6KM ABOVE SEVERN LAKE	4CA24	53.8383	91.0767	39323	1.5	619.66	7.25	35.57			Wolverine (Prov, Threatened) Earth Science Site		Northern River Policy Area / General Use	1	
457	SEVERN RIVER	SEVERN RIVER	9.6KM ABOVE SEVERN LAKE	4CA25	53.8817	90.9750	39373	1.5	620.48	7.26	35.61			Wolverine (Prov, Threatened) Earth Science Site		Northern River Policy Area / Private/Federal Land	1	
458	SEVERN RIVER	SEVERN RIVER	80KM BELOW WITEGOO RIVER	4CC31	54.2570	90.2536	6583	19.2		8.50		307.25				Northern River Policy Area / Provincial Park (existing)	1	
459	SEVERN RIVER	SEVERN RIVER	OUTLET ASIPOQUOBAH LAKE	4CA20	53.6800	91.2050	38922	1.8	613.42	8.61	42.25			Wolverine (Prov, Threatened) Earth Science Site		Northern River Policy Area / General Use	1	
460	SEVERN RIVER	SEVERN RIVER	62.4KM BELOW WITEGOO RIVER	4CC32	54.3748	89.7945	6646	20.7	51.84	9.27		322.46				Northern River Policy Area	2	
461	SEVERN RIVER	SEVERN RIVER	8.8KM ABOVE FAWN RIVER	4CC35	55.3180	88.4157	5515	25.3	43.01	9.38		442.17				Northern River Policy Area	2	
462	SEVERN RIVER	SEVERN RIVER	123.2KM BELOW WITEGOO RIVER	4CC30	54.1670	90.4395	6531	22.3		9.77		297.22				Northern River Policy Area / Provincial Park (existing)	1	
463	SEVERN RIVER	SEVERN RIVER	14.4KM BELOW SANDY LAKE	4CA14	53.1733	92.3983	24431	3.4	373.72	9.91	48.62	221.93				Northern River Policy Area / General Use	1	
464	SEVERN RIVER	WINDIGO RIVER	SAWASO LAKE				10541	11.0		6.03	33.16					Northern River Policy Area	3	
465	SOUTHERN LAKE HURON	BEAVER RIVER	0.0 - 4.8KM BELOW EUGENIA FALLS	2FB1	44.3301	80.5426	270	34.8		1.02		17.48					1	
466	SOUTHERN LAKE HURON	BLACK RIVER	RAGGED RAPIDS	2EC14	44.8117	79.0783	727	23.5	12.03	2.21	10.43	3.00				Provincial Park (new)	1	SHARP STUDY CONDUCTED (UNAVAILABLE)
467	SOUTHERN LAKE HURON	MAGNETAWAN RIVER	ABOVE C.N.R. BRIDGE	2EA23	45.7441	80.3350	2648	2.9		1.09		5.84				Provincial Park (new)	1	
468	SOUTHERN LAKE HURON	MAGNETAWAN RIVER	DEAR LAKE 1				398	25.9		1.16	6.71						3	
469	SOUTHERN LAKE HURON	MAGNETAWAN RIVER	THREE-SNYE RAPIDS & FALLS	2EA15	45.7417	80.3100	2672	3.7	42.56	1.23	5.81	4.25				Provincial Park (new)	1	
470	SOUTHERN LAKE HURON	MAGNETAWAN RIVER	ABOVE BYNG INLET	2EA18	45.7650	80.4633	2747	4.3	43.92	1.47	6.97	13.60		Several Provincially Threatened species in area	Within Magnetawan River First Nation Reserve	Enhanced Management Area	1	
471	SOUTHERN LAKE HURON	MAGNETAWAN RIVER	6.4KM BELOW PERRY LAKE	2EA5	45.5517	79.3050	398	25.9	7.82	1.58	7.47	38.69				Private/Federal Land	1	
472	SOUTHERN LAKE HURON	MAGNETAWAN RIVER	LOWER BURNT CHUTE	2EA12	45.7167	79.9300	2092	8.7	27.52	1.80	11.14	20.44		Several Prov. Threatened species in area		Private/Federal Land	1	
473	SOUTHERN LAKE HURON	MAGNETAWAN RIVER	ABOVE BYNG INLET	2EA17	45.7533	80.4433	2719	5.6	42.60	1.86	8.80	12.79				Private/Federal Land	1	
474	SOUTHERN LAKE HURON	MAGNETAWAN RIVER	UPPER BURNT CHUTE	2EA11	45.7100	79.9150	2084	5.8	43.44	1.97	9.30	21.16		Several Prov. Threatened species in area		Private/Federal Land	1	
475	SOUTHERN LAKE HURON	MAGNETAWAN RIVER	ELBOW RAPIDS	2EA8	45.0750	79.7783	1844	7.3	38.55	2.20	10.38	29.80				General Use	1	
476	SOUTHERN LAKE HURON	MAGNETAWAN RIVER	CODY'S RAPIDS	2EA10	45.6950	79.8400	1851	7.6	38.76	2.30	10.87	25.45		Within MNR Deer wintering yard		Private/Federal Land	1	
477	SOUTHERN LAKE HURON	MAGNETAWAN RIVER	BELOW POVERTY BAY	2EA7	45.6850	79.7517	1833	9.5	38.06	2.82	15.56	31.12				Private/Federal Land	1	
478	SOUTHERN LAKE HURON	MAGNETAWAN RIVER	CANAL RAPIDS	2EA13	45.7417	80.1017	2517	7.6	52.67	3.12	17.23	10.05				Conservation Reserves (new)	1	
479	SOUTHERN LAKE HURON	MAITLAND RIVER	BLACK HOLE	2FE1	43.7217	81.6533	2460	24.4	25.22	4.80	22.33	0.68				Private/Federal Land	1	
480	SOUTHERN LAKE HURON	MUSKOKA MUSQUASH	RAGGED FALLS				504	23.8		1.34	7.79						3	
481	SOUTHERN LAKE HURON	OXTONGUE RIVER	1.6KM ABOVE OXTONGUE LAKE	2EB5	45.3917	78.9050	505	23.8	8.73	1.62	7.67	40.10		Oxttongue River Life Science Site		Provincial Park (existing)	1	
482	SOUTHERN LAKE HURON	SAUGEEN RIVER	NEAR SOUTHAMPTON	2FC3	44.4983	81.3250	4032	9.1	59.74	4.24	19.73	9.60				Private/Federal Land	1	
483	SOUTHERN LAKE HURON	SEGUIN RIVER	HIGH FALLS (MOUNTAIN CHUTE)	2EA1	45.4000	79.9933	833	8.8	17.00	1.25	6.75	0.15				Private/Federal Land	1	
484	SOUTHERN LAKE HURON	SEVERN RIVER	WASHAGO				3794	2.4		1.04	6.01						3	
485	SOUTHERN LAKE HURON	SOUTH MUSKOKA RIVER	SLATERS CHUTE	2EB13	45.0850	79.1500	1468	7.9	32.22	1.99	10.96	8.91				Private/Federal Land	1	

Table A1.1 - Greenfield Waterpower Sites - >1MW to <10MW

No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
486	SOUTHERN LAKE HURON	SOUTH MUSKOKA RIVER	CROZIER CHUTE	2EB14	45.0400	79.1250	1468	12.2	32.11	3.06	16.86	9.26				Private/Federal Land	1	
487	WINISK RIVER	WINISK RIVER	44.8KM ABOVE LAST CEDAR LAKE	4DB32	53.4999	87.2296	3220	16.2		4.20		299.37				Northern River Policy Area / Provincial Park (existing)	1	
488	WINISK RIVER	WINISK RIVER	41.6KM BELOW TABASAKWIA CHANNEL	4DB3	53.6185	87.1695	3233	16.2		4.22		311.83				Northern River Policy Area / Provincial Park (existing)	1	
489	WINISK RIVER	WINISK RIVER	33.3KM ABOVE LAST CEDAR LAKE	4DB1	53.2752	87.3271	3198	20.7		5.35		276.84				Northern River Policy Area / Provincial Park (existing)	1	
490	WINISK RIVER	WINISK RIVER	3.2KM ABOVE TABASAKWIA CHANNEL	4DB5	53.9292	87.1093	3832	17.7		5.47		340.92				Northern River Policy Area / Provincial Park (existing)	1	
491	WINISK RIVER	WINISK RIVER	35.2KM BELOW TABASAKWIA CHANNEL	4DB4	53.6540	87.1255	3243	23.8		6.23		316.72				Northern River Policy Area / Provincial Park (existing)	1	
									Subtotal Remaining Sites =		**1367 MW**							
									Total 1MW to 10MW =		**1685 MW**							

* References:

1. NRCAN, 2005
2. MNR, 2004
3. OH, 1987
4. Interal Reports by Hatch Acres
5. OPG, 2003

Table A1.2 - Greenfield Waterpower Sites - >10MW to <100MW

No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
Probable and Committed Projects																		
1	LAKE SUPERIOR	AGUASABON RIVER	25.6 - 19.2KM FROM MOUTH	2BA14	48.9350	87.0500	647	12.8	101.40	10.00	47.87	12.28	0	remnant brook trout population		General Use	1	MNR's Competitive Site Release, CRP-07-05
2	LAKE SUPERIOR	LITTLE JACKFISH RIVER	MILEAGE 2.5	2AD72	50.3169	88.3505	14821	9.1		22.11	94.50						3	Including Ogoki Diversion
3	LAKE SUPERIOR	LITTLE JACKFISH RIVER	MILEAGE 12.5				14765	25.6		61.60	253.73						3	Including Ogoki Diversion
4	LAKE SUPERIOR	LITTLE JACKFISH RIVER	MILEAGE 7.9				14821	32.0		77.60	329.26						3	Including Ogoki Diversion
5	LAKE SUPERIOR	WHITE RIVER	1.6KM BELOW CHICAGONCE FALLS	2BC5	48.5983	85.8817	4506	12.2	56.61	11.50	27.48	10.42				Provincial Park (new)	1	
6	LAKE SUPERIOR	WHITE RIVER	UMBATA FALLS	2BC9	48.5375	86.1401	5195	44.2		22.00		0.59				Provincial Park (new)	4	From RFP I
							Subtotal Probable and Committed Projects =			**205**	**MW**							
Practical Projects																		
1	ALBANY RIVER	ALBANY RIVER	ACHAPI LAKE				3393	28.4		15.75	82.87					Northern River Policy Area	3	Net after Lake St. Joseph Diversion
2	ALBANY RIVER	ALBANY RIVER	MIMINIAKA LAKE				8832	13.1		15.83	83.22					Northern River Policy Area	3	Net after Lake St. Joseph Diversion
3	ALBANY RIVER	ALBANY RIVER	BUFFALOSKIN	4GD13	51.7000	86.0000	22194	13.1		76.00	235.00	232.34				Northern River Policy Area / General Use	3	Net after Lake St. Joseph Diversion
4	ALBANY RIVER	KABINAKAGAMI	LOWER LIMESTONE RAPIDS	4JB7	50.0734	84.1167	4250	30.5		10.37		36.39				Northern River Policy Area	2	
5	ENGLISH AND RAINY RIVERS	ENGLISH RIVER	UPPER OAK FALLS	5QE5	50.4600	93.8167	38720	4.0	375.83	11.73	73.96	28.84				Provincial Park (new)	1	
6	ENGLISH AND RAINY RIVERS	ENGLISH RIVER	MAYNARD FALLS	5QE7	50.3433	93.9450	39368	9.8	842.18	46.60	233.20	43.53				Provincial Park (new)	3	SHARP STUDY CONDUCTED (UNAVAILABLE)
7	LAKE SUPERIOR	KAMINISTIQUIA RIVER	MOKOMAN FALLS	2AB3	48.4483	89.5800	6734	18.3	75.87	10.83	55.50	4.33				General Use	1	
8	MOOSE RIVER	ABITIBI RIVER	SEXTENT RAPIDS	4ME9	50.2039	81.6444	18309	7.9		16.14		0.27				Moose River Basin Policy Area	1	
9	MOOSE RIVER	ABITIBI RIVER	NEWPOST @ PARLIAMENT				3048	68.0		26.40	175.76					Moose River Basin Policy Area	3	Including Newpost Creek Diversion
10	MOOSE RIVER	ABITIBI RIVER	SAND AND ADJACENT RAPIDS	4ME56	50.8502	81.1084	47366	12.5		64.64		8.19				Moose River Basin Policy Area	1	
11	MOOSE RIVER	GROUNDHOG RIVER	WHIST FALLS	4LD4	49.5417	81.9450	12027	10.4	153.70	12.47	73.54	25.03				Moose River Basin Policy Area / Provincial Park (new)	1	
12	MOOSE RIVER	GROUNDHOG RIVER	UPPER TEN MILE RAPIDS				10541	15.2		16.07	94.79						3	
13	MOOSE RIVER	GROUNDHOG RIVER	LOWER TEN MILE RAPIDS				10567	18.3		19.33	627.25						3	
14	MOOSE RIVER	GROUNDHOG RIVER	16KM RAPIDS TWPS HICKS, STRINGER & MCVICAR	4LD3	49.0211	82.1485	10387	25.9		28.41		33.05				Provincial Park (new)	1	
15	MOOSE RIVER	MISSINAIBI RIVER	GLASS FALLS	4LJ5	49.5000	83.0167		11.6	114.64	10.37	61.20					Provincial Park (existing)	1	
16	MOOSE RIVER	MISSINAIBI RIVER	THUNDER HOUSE FALLS & CHUTE	4LK3	50.0533	83.1833	11878	25.0	152.43	42.00	176.08	45.69		Life Science Site 33, Regionally Rare plant species		Provincial Park (existing)	3	
17	MOOSE RIVER	NEWPOST CREEK	AT MOUTH	4ME54	49.9903	81.5305	318	67.1		26.83		6.53				Moose River Basin Policy Area / Provincial Park (existing)	1	
18	MOOSE RIVER	NORTH FRENCH RIVER	FIRST RAPIDS	4MF2	51.1067	80.7617	6809	9.1	144.52	10.26	60.53	8.98				Moose River Basin Policy Area / General Use	1	
19	NORTHERN LAKE HURON	FRENCH RIVER	DALLES	2DD3	45.9700	80.8800	19088	6.4	17236.45	17.24	95.12	30.55				Provincial Park (existing)	1	
20	NORTHERN LAKE HURON	FRENCH RIVER	FIVE MILE RAPIDS	2DD2	46.0485	80.2494	13346	12.8		20.92		15.70	18			Enhanced Management Area	1	
							Subtotal Practical Projects =			**498**	**MW**							
Remaining Sites (Not Practical Projects)																		
1	ALBANY RIVER	ALBANY RIVER	WASHI				17394	16.2		39.15	205.77					Northern River Policy Area	3	Net after Lake St. Joseph Diversion
2	ALBANY RIVER	ALBANY RIVER	FRENCHMAN'S RAPIDS	4GD3	51.3800	87.7900	14921	48.2		42.90	225.48	164.42				Northern River Policy Area / Provincial Park (existing)	3	Net after Lake St. Joseph Diversion
3	ALBANY RIVER	ALBANY RIVER	MARTIN FALLS AND RAPIDS ABOVE	4GD2	51.5333	86.5167	18897	16.2		42.93	225.66	206.90				Northern River Policy Area / Provincial Park (existing)	3	Net after Lake St. Joseph Diversion
4	ALBANY RIVER	ALBANY RIVER	ESKAKWA FALLS AND RAPID ABOVE	4GC6	51.4917	88.9183	7387	48.2		46.68	245.37	85.83				Northern River Policy Area / Provincial Park (existing)	3	Net after Lake St. Joseph Diversion
5	ALBANY RIVER	ALBANY RIVER	NOTTIK ISLAND	4GD14	51.6611	86.3885	19984	17.7		50.00	262.80	222.44				Northern River Policy Area / Provincial Park (existing)	3	Net after Lake St. Joseph Diversion

Table A1.2 - Greenfield Waterpower Sites - >10MW to <100MW

No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
6	ALBANY RIVER	ALBANY RIVER	KAGIAMI FALLS AND RAPIDS ABOVE	4GD1	51.4501	86.7334	18340	26.8		68.95	362.40	194.85				Northern River Policy Area / Provincial Park (existing)	3	Net after Lake St. Joseph Diversion
7	ALBANY RIVER	LITTLE CURRENT RIVER	11.2-16KM ABOVE NOMUNHEKA RIVER	4JF7	50.8700	85.1317	8062	6.1	217.75	10.36	50.83	125.80				Northern River Policy Area / General Use	1	
8	ALBANY RIVER	LITTLE CURRENT RIVER	LOUELLO FALLS	4JF31	50.7217	86.0683	5379	10.7	144.97	12.10	59.35	131.12				Northern River Policy Area / Provincial Park (existing)	1	
9	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	32KM BELOW OUTLET	4FC7	52.9049	82.7101	7226	16.2	66.06	10.67		156.12				Northern River Policy Area / Provincial Park (existing)	2	
10	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	8.0KM ABOVE PEBBLE RIVER	4FB3	52.1550	87.4633	21691	4.6	375.41	13.47	66.08	199.07				Northern River Policy Area / Provincial Park (existing)	1	
11	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	OUTLET ATTAWAPISKAT LAKE	4FB7	52.1600	87.5900	21380	5.5	371.37	15.93	78.16	191.92				Northern River Policy Area / Provincial Park (existing)	1	
12	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	75.2KM BELOW OUTLET	4FC6	52.9335	83.0386	7068	17.7	64.61	16.60		175.39				Northern River Policy Area	2	
13	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	BETEAU LAKE I				24493	11.6		21.52	118.34					Northern River Policy Area	3	
14	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	STREATFEILD I				28881	14.6		32.75	180.10					Northern River Policy Area	3	
15	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	STREATFEILD II				29270	17.7		40.17	220.92					Northern River Policy Area	3	
16	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	BETEAU LAKE II				25436	20.7		40.20	221.09					Northern River Policy Area	3	
17	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	PYM ISLAND				27257	20.7		43.49	239.17					Northern River Policy Area	3	
18	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	STREATFEILD VI				47413	14.6		56.54	310.94					Northern River Policy Area	3	
19	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	STREATFEILD VII				48474	16.2		63.77	350.73					Northern River Policy Area	3	
20	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	STREATFEILD III				40769	20.7		68.00	374.00					Northern River Policy Area	3	
21	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	STREATFEILD V				47300	17.7		68.01	374.04					Northern River Policy Area	3	
22	ATTAWAPISKAT RIVER	OTOSKWIN RIVER	4.8 KM ABOVE KABANIA LAKE	4FA10	52.0900	88.3900	11758	22.9	95.11	16.99	107.15	138.91				Northern River Policy Area / Provincial Park (existing)	1	
23	ATTAWAPISKAT RIVER	OTOSKWIN RIVER	64.0KM BELOW KAKAGIWIZIDA LAKE	4FA7	51.9401	88.9256	9945	24.4		17.47	96.09	98.89				Northern River Policy Area / Provincial Park (existing)	3	
24	LAKE SUPERIOR	LITTLE JACKFISH RIVER	MOULE LAKE OUTLET	2AD51	50.5217	88.2950	155	8.5	160.05	10.61	52.06	101.90				General Use	1	
25	LAKE SUPERIOR	LITTLE JACKFISH RIVER	MILEAGE 4 TO 7.5	2AD58	50.3500	88.3317	455	9.8	161.94	12.38	60.51	85.20				General Use	1	SHARP STUDY CONDUCTED (UNAVAILABLE), RAPIDS
26	LAKE SUPERIOR	PIC RIVER	MANITOU FALLS	2BB4	49.2086	86.0810	2355	56.4		58.00	87.60			International Biological Programme Site			3	
27	LAKE SUPERIOR	PIC RIVER	ABOVE HWY 17				3000	32.0		65.20	105.12						3	
28	LAKE SUPERIOR	UNIVERSITY RIVER	DENISON FALLS	2BD10	47.9783	85.2050	1157	79.2		35.50	91.10	14.49	30			Provincial Park (new)	1	SHARP STUDY CONDUCTED (UNAVAILABLE)
29	LAKE SUPERIOR	WHITE RIVER	CHIGAMIWINIGUM FALLS	2BC11	48.5617	86.2350	5283	52.1	70.75	56.60	202.36	4.17		Woodland Caribou (Fed. Threatened - SARA Sch. 1)		National Park	3	SHARP STUDY CONDUCTED (UNAVAILABLE)
30	MOOSE RIVER	CORNER RIVER	LOW SHOAL ISLAND	4NC1	50.9780	79.5774	13779	7.6		22.77		82.78					1	
31	MOOSE RIVER	GROUNDHOG RIVER	LA DUKE FALLS TWP. BEARDMORE	4LD2	49.4983	81.9533	12027	7.9	192.38	11.85	48.81	20.72				Provincial Park (new)	1	
32	MOOSE RIVER	GROUNDHOG RIVER	8KM RAPIDS TWP. S. STRACHAN &	4LC7	48.5667	82.1600	4265	25.9	68.04	13.75	56.59	37.86				Provincial Park (new)	2	SUBJECT TO A DESIGNATION REQUEST FROM MOOSE FACTORY & NEWPOST FIRST NATIONS, ALL APPROVAL PROCESS WERE [illegible]
33	MOOSE RIVER	MATTAGAMI RIVER	CYPRESS FALLS	4LB7	49.6967	81.8917	11831	11.7	95.12	42.40	106.44	24.21				General Use	3	
34	MOOSE RIVER	MISSINAIBI RIVER	LONG RAPIDS TO BEND	4LK7	50.1283	83.1967	12292	8.2	158.89	10.16	41.84	53.68		Very Rare (S2) plant species in area		Provincial Park (existing)	1	
35	MOOSE RIVER	MISSINAIBI RIVER	CONQUERING HOUSE RAPIDS & RAPI	4LK2	50.0533	83.1917	11877	10.4	152.42	12.36	50.91	45.66				Provincial Park (existing)	1	
36	MOOSE RIVER	MISSINAIBI RIVER	STONE PORTAGE RAPIDS	4LK4	50.0717	83.2117	11890	11.0	152.75	13.11	53.96	47.13		Very Rare (S2) plant species in area		Provincial Park (existing)	1	
37	MOOSE RIVER	MISSINAIBI RIVER	MILEAGE 25				18125	21.3		79.70	278.10					Provincial Park (existing)	3	
38	MOOSE RIVER	MISSINAIBI RIVER	MILEAGE 66				12292	32.0		81.20	284.50					Provincial Park (existing)	3	
39	MOOSE RIVER	NETTOGAMI RIVER	NETTOGAMI FALLS	4MF1	50.7375	80.7750	1230	73.2	21.47	12.26	46.18	20.21					1	Approximate location
40	NORTHERN LAKE HURON	ONAPING RIVER	HIGH FALLS	2CF5	46.5917	81.3783	1833	38.7	34.39	10.38	57.28	5.67				Private/Federal Land	1	
41	NORTHERN LAKE HURON	SPANISH RIVER	SITE 1					21.3		40.00	131.40						1	

Table A1.2 - Greenfield Waterpower Sites - >10MW to <100MW

No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
42	NORTHERN LAKE HURON	SPANISH RIVER	SITE 4					51.8		80.00	262.80						1	
43	OTTAWA RIVER	MADAWASKA RIVER	HIGHLAND FALLS	2KE3	45.2533	77.1950	6565	25.9	77.27	94.10	145.30	19.58	0.5			Provincial Park (existing)	3	
44	OTTAWA RIVER	OTTAWA RIVER	PAQUETTE RAPIDS	2KC2	45.8778	76.9229	65476	6.1		29.20	0.76						3	
45	SEVERN RIVER	SEVERN RIVER	19KM BELOW MUSKRAT DAM LAKE	4CC19	53.5952	91.3401	37697	4.0	294.01	10.14		242.94		Wolverine (Prov. Threatened) Earth Science Site		Northern River Policy Area	2	
46	SEVERN RIVER	SEVERN RIVER	36.8KM FROM MOUTH	4CC37	55.7583	88.0368	5809	26.8	45.31	10.48		496.17		Wolverine (Prov. Threatened) Earth Science Site		Northern River Policy Area	2	
47	SEVERN RIVER	SEVERN RIVER	3KM BELOW MUSKRAT DAM LAKE	4CC16	53.4817	91.4700	36676	3.0	578.01	13.53	66.35	233.54				Northern River Policy Area / General Use	1	
48	SEVERN RIVER	SEVERN RIVER	8 KM FROM MOUTH	4BA2	55.9583	87.7087	14714	14.6	111.72	14.10		523.83		Yellow Rail (SARA Sch. 1) observed in area		Northern River Policy Area	2	
49	SEVERN RIVER	SEVERN RIVER	12.8KM BELOW SANDY LAKE	4CA13	53.1600	92.3650	23934	5.5	370.34	15.89	77.94	222.56				Northern River Policy Area / General Use	1	
50	SEVERN RIVER	SEVERN RIVER	9.6KM BELOW WITEGOO RIVER	4CC33	54.7771	89.0007	7702	32.9	60.07	17.05		374.47				Northern River Policy Area	2	
51	SEVERN RIVER	SEVERN RIVER	16KM ABOVE SACHIGO RIVER	4BA1	55.8257	87.9440	13877	20.7	105.37	18.83		505.11		Several rare to uncommon (S3) plant species in area		Northern River Policy Area	2	
52	SEVERN RIVER	SEVERN RIVER	56KM BELOW NORTH CHANNEL	4CC34	55.1479	88.7009	10931	26.8	85.25	19.72		419.14		Wolverine (Prov. Threatened) Earth Science Site		Northern River Policy Area	2	
53	SEVERN RIVER	SEVERN RIVER	5.2KM BELOW ASIPOQUOBAH LAKE	4CC21	53.6835	91.1787	38883	7.6	303.26	19.88		249.71				Northern River Policy Area	2	
54	SEVERN RIVER	SEVERN RIVER	2KM ABOVE NORTH CHANNEL	4CC36	55.4136	88.2578	13563	32.9		30.03		455.24				Northern River Policy Area	1	
55	SEVERN RIVER	SEVERN RIVER	SEVERN LAKE I				43810	19.2		44.28	243.53					Northern River Policy Area	3	
56	SEVERN RIVER	SEVERN RIVER	ABOVE SEVERN LAKE				38969	22.3		44.56	245.06					Northern River Policy Area	3	
57	SEVERN RIVER	SEVERN RIVER	SEVERN LAKE II				44160	20.7		48.28	265.52					Northern River Policy Area	3	
58	SEVERN RIVER	SEVERN RIVER	SEVERN LAKE III				44584	32.9		85.91	472.51					Northern River Policy Area	3	
59	SEVERN RIVER	SEVERN RIVER	SEVERN LAKE IV				44683	26.8		87.85	483.20					Northern River Policy Area	3	
60	SEVERN RIVER	SEVERN RIVER	BEAVER RIVER				98702	14.6		98.17	539.92					Northern River Policy Area	3	
61	WINISK RIVER	WINISK RIVER	WUNNUMMIN LAKE 2	4DA1	52.8830	88.9479	12665	16.2		14.12	77.67	176.02				Northern River Policy Area	3	
62	WINISK RIVER	WINISK RIVER	HODGE LAKE				19052	16.2		21.81	119.93					Northern River Policy Area	3	
63	WINISK RIVER	WINISK RIVER	WYE RAPIDS				21598	16.2		24.99	137.43					Northern River Policy Area	3	
64	WINISK RIVER	WINISK RIVER	TASHKA RAPIDS				21686	16.2		25.10	138.04					Northern River Policy Area	3	
65	WINISK RIVER	WINISK RIVER	WINISK LAKE				21455	20.7		31.84	175.12					Northern River Policy Area	3	
66	WINISK RIVER	WINISK RIVER	GNEISS RAPIDS	4DB6	53.8277	87.0286	25706	17.7		32.88	180.85	335.53				Northern River Policy Area / Provincial Park (existing)	3	
67	WINISK RIVER	WINISK RIVER	SEASHELL RAPIDS	4DB7	53.7015	87.0354	21756	23.8		37.05	203.76	324.63				Northern River Policy Area / Provincial Park (existing)	3	
68	WINISK RIVER	WINISK RIVER	142.2KM FROM MOUTH (ATIK ISLAND)	4DC1	54.7766	86.6736	52043	17.1		64.34	353.88	434.08				Northern River Policy Area / Provincial Park (existing)	3	
69	WINISK RIVER	WINISK RIVER	12.8KM FROM MOUTH (WINISK P.O.)	4DC4	55.2234	85.2288	67622	19.2		94.74	521.09	457.64		Yellow Rail (SARA Sch. 1) observed in area, Several S3 plants, one S1 moss		Northern River Policy Area	3	
										Subtotal Northern Rivers =	**2556 MW**							
										Total 10MW to 100MW =	**3259 MW**							

* References:

1. NRCAN, 2005
2. MNR, 2004
3. OH, 1987
4. Interal Reports by Hatch Acres
5. OPG, 2003

Table A1.3 - Greenfield Waterpower Sites - >100MW

No.	Drainage Region	Name of River	Name of Site	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
					Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
					DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
Practical Projects																		
1	ALBANY RIVER	ALBANY RIVER	WABIMEIG CREEK	4GF2	51.6459	85.6472	33750	20.7		185.0	555.00	219.08		Wabimeig Creek Life Science Site Extremeley Rare (S1) species		Northern River Policy Area	3	Net after Lake St. Joseph & Ogoki Diversion
2	ALBANY RIVER	ALBANY RIVER	STOOPING	4HA1	52.2512	81.7573	103133	11.6		285.00	887.00	61.10				Northern River Policy Area	3	Net after Lake St. Joseph, Ogoki, & Longlac Diversion
3	ALBANY RIVER	ALBANY RIVER	CHARD	4GF1	51.2927	85.0079	37806	45.1		370.0	1114.00	168.33				Northern River Policy Area	3	Net after Lake St. Joseph & Ogoki Diversion
4	ALBANY RIVER	ALBANY RIVER	BIGLOW	4HA2	52.0958	82.2226	96684	20.7		480.0	1444.00	86.04				Northern River Policy Area	3	Net after Lake St. Joseph, Ogoki, & Longlac Diversion
5	ALBANY RIVER	ALBANY RIVER	BLACKBEAR ISLAND	4HA3	51.7237	83.1369	95322	22.3		490.0	1484.00	150.96				Northern River Policy Area	3	Net after Lake St. Joseph, Ogoki, & Longlac Diversion
6	ALBANY RIVER	ALBANY RIVER	HAT ISLAND	4HA4	51.3433	83.8051	86697	23.8		490.0	1485.00	173.71				Northern River Policy Area	3	Net after Lake St. Joseph, Ogoki, & Longlac Diversion
7	MOOSE RIVER	ABITIBI RIVER	ALLAN RAPIDS	4ME57	51.0503	80.9074	29086	11.5		131.00	351.76	7.01				Moose River Basin Policy Area	3	Including Newpost Creek Diversion
8	MOOSE RIVER	ABITIBI RIVER	SAND RAPIDS		50.8502	81.1084	28982	11.5		131.00	350.77					Moose River Basin Policy Area	3	Including Newpost Creek Diversion
9	MOOSE RIVER	ABITIBI RIVER	BLACK SMITH RAPIDS	4ME55	50.6067	81.4100	27273	10.7	382.00	140.00	368.80	0.65		Williams Island Prov. Nature Reserve u/s		Moose River Basin Policy Area / General Use	3	Including Newpost Creek Diversion
10	MOOSE RIVER	ABITIBI RIVER	CORAL RAPIDS	4ME10	50.2422	81.6632	22833	13.2		192.00	314.48	1.30		Coral Rapids Prov. Nature Reserve and Sextant Rapids Prov. Nature		Moose River Basin Policy Area	3	Including Newpost Creek Diversion
11	MOOSE RIVER	ABITIBI RIVER	NINE MILE RAPIDS	4ME11	50.3812	81.5860	22971	25.6		295.20	726.20	1.69		Williams Island Prov. Nature Reserve, Coral Rapids Wetland		Moose River Basin Policy Area	3	Including Newpost Creek Diversion
12	MOOSE RIVER	MOOSE RIVER	RENISON				60200	12.8		135.0	554.80					Moose River Basin Policy Area	3	
13	MOOSE RIVER	MOOSE RIVER	GREY GOOSE	4LG8	50.7772	81.3957	60100	13.4		140.4	589.30	5.32				Moose River Basin Policy Area	3	
14	MOOSE RIVER	MISSINAIBI RIVER	LONG RAPIDS	4LK6	50.1023	83.2092	12196	57.9		126.00	481.80	50.56		Very Rare (S2) vegetation species		Moose River Basin Policy Area / Provincial Park (existing)	3	
										Total Practical Projects =		**3591 MW**						
Remaining Sites (Not Practical Projects)																		
1	ATTAWAPISKAT RIVER	ATTAWAPISKAT RIVER	STREATFEILD IV				43802	29.9		105.76	581.69					Northern River Policy Area	3	
2	LAKE ONTARIO	NIAGARA RIVER	GORGE				660000	29.0		345.00	1997.00						3	
3	MOOSE RIVER	MATTAGAMI RIVER	GRAND RAPIDS	4LG7	50.4029	81.8162	35742	24.4		174.00	627.25	14.58				Moose River Basin Policy Area	3	Including Opasatika Diversion
4	NORTHERN LAKE HURON	MISSISSAGI RIVER	PATTEN POST	2CC16	46.7580	83.3922	6366	61.0		250.0	379.20	9.97				Provincial Park (existing)	3	
5	SEVERN RIVER	SEVERN RIVER	SACHIGO RIVER				73325	20.7		104.44	674.43					Northern River Policy Area	3	
6	SEVERN RIVER	SEVERN RIVER	BLACKBEAR RIVER				51665	32.9		123.35	678.41					Northern River Policy Area	3	
7	SEVERN RIVER	SEVERN RIVER	LIMESTONE RAPIDS I				90979	25.3		157.55	866.55					Northern River Policy Area	3	
8	SEVERN RIVER	SEVERN RIVER	LIMESTONE RAPIDS II				93087	26.8		170.73	939.00					Northern River Policy Area	3	
9	WINISK RIVER	WINISK RIVER	33.6KM FROM MOUTH (SHAMATTAWA RIVER)	4DC3	54.9954	85.4144	64343	23.8		111.57	613.65	446.31				Northern River Policy Area / Provincial Park (existing)	3	
10	WINISK RIVER	WINISK RIVER	59.2KM FROM MOUTH (MAMINISKA RIVER)	4DC2	54.8293	85.5597	57115	31.4		130.15	715.82	439.55				Northern River Policy Area / Provincial Park (existing)	3	
										Total Remaining Sites =		**1673 MW**						
										Total >100MW =		**5263 MW**						

* References:

1. NRCAN, 2005
2. MNR, 2004
3. OH, 1987
4. Interal Reports by Hatch Acres
5. OPG, 2003

Table A2 - Potential New Powerhouses at Existing Dams

No.	Drainage Region	Name of River	Name of Site	Name of Owner	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
						Lat	Long						Distance from Transmission Line	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
						DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)	(km)						
Probable and Committed Projects																			
1	LAKE ERIE	GRAND RIVER	GALT (PARKHILL C.A. DAM)	GRCA	2GA35			3402	3.0		1.10		2.09				Private/Federal Land	4	
2	LAKE ONTARIO	TRENT CANAL SYSTEM	LOCK 25		2HJ1	44.4000	78.2617	7410	3.0	80.68	3.40	10.42	2.27				Private/Federal Land	4	
3	LAKE ONTARIO	TRENT CANAL SYSTEM	LOCK 23		2HJ14	44.3717	78.2883	7405	3.7	79.42	3.40	12.65	0.94				Private/Federal Land	4	
4	LAKE ONTARIO	TRENT CANAL SYSTEM	LOCK 24		2HJ7			7411	3.7		3.40		1.50					4	
5	LAKE ONTARIO	TRENT CANAL SYSTEM	LOCK 22		2HJ3	44.3650	78.2883	7423	4.3	79.77	3.50	14.77	0.16				Private/Federal Land	4	
6	LAKE ONTARIO	WELLAND CANAL	LAKE GIBSON	OPG		43.1300	79.2500	N/A	3.5	190.00	5.00	37.20	1.00	0.5	Provincially Significant Wetland threatened/endangered species		Private/Federal Land	1	
7	LAKE ONTARIO	WELLAND CANAL	3 WEIRS AT 2MW EACH	SLSMC							6.00							4	
8	SOUTHERN LAKE HURON	MUSKOKA MUSQUASH	NORTH BALA DAM	MNR	2EB4	45.0283	79.6100	4651	6.0	51.28	4.00	15.71	9.95					4	MNR's Site Release
											Subtotal Probable and Committed Projects =		**30 MW**						
Practical Projects																			
1	LAKE ERIE	CROWE RIVER	CORDOVA LAKE DAM		2HK21	44.5567	77.8250	844	22.0	8.50	1.41	8.00	2.03				Private/Federal Land	1	
2	LAKE ONTARIO	GULL RIVER	HORSESHOE LAKE DAM		2HF26	44.9683	78.6833	1041	12.2	25.88	2.46	13.59	0.47				Private/Federal Land	1	
3	LAKE ONTARIO	TRENT CANAL SYSTEM	GLEN ROSS LOCK 7 DAM 7		2HK2	44.2633	77.6033	12003	3.0	145.07	3.76	18.74	4.31				Private/Federal Land	1	
4	LAKE ONTARIO	TRENT CANAL SYSTEM	BURLEIGH FALLS DAM , LOCK 28		2HH2	44.5550	78.2050	6593	8.2	105.78	5.85	9.93	13.17				Private/Federal Land	1	SHARP OUTPUT AVAILABLE, BUT NOT USED
5	LAKE ONTARIO	TRENT CANAL SYSTEM	TRENTON LOCK 1 DAM 1		2HK17	44.1200	77.5900	12547	5.2	149.09	6.81	33.37	0.98				Private/Federal Land	1	
6	LAKE ONTARIO	WELLAND CANAL	THOROLD	SLSMC	2HA11	43.1033	79.1983	N/A	3.6	177.00	4.35	20.23					Private/Federal Land	1	DIVERSION HERE TO DECEW FALLS ON TWELVE MILE CREEK
7	LAKE SUPERIOR	BLACK RIVER	BLACK RIVER FALLS		2BB6	48.6633	86.2317	1683	23.0	26.00	5.00	21.90	1.82				General Use	1	Site could be Wawatay Plant, needs to be verified.
8	LAKE SUPERIOR	CURRENT RIVER	PORT ARTHR DAM	CTB	2AB15						4.80	28.17	1.25				General Use	2	
9	MOOSE RIVER	FREDERICKHOUSE RIVER	FREDERICKHOUSE LAKE DAM	OPG	4MD1	48.7917	81.0150	2921	14.0	37.09	4.05	23.90	12.29				General Use	1	
10	MOOSE RIVER	GROUNDHOG RIVER	HORWOOD LAKE DAM	OPG	4LC11	48.1000	82.2700	3522	6.1	56.14	2.67	11.00	29.38				General Use	1	
11	NORTHERN LAKE HURON	FRENCH RIVER	BIG CHAUDIERE DAM	HO	2DD1	46.1267	80.0200	12276	4.6	7917.91	7.92	43.70	31.76	0.5			Private/Federal Land	1	
12	NORTHERN LAKE HURON	WHITEFISH RIVER	WHITEFISH FALLS, FROOD LAKE DAM	MNR	2CF16	46.1183	81.7283	945	14.3	18.20	1.40	6.99	0.09				Enhanced Management Area	2	SHARP HEAD AND FLOW VALUES MUST BE ENTERED
13	NORTHERN LAKE HURON	WHITEFISH RIVER	BELOW CROSS LAKE/LANG LAKE DAM		2CF14/15	46.1500	81.6833		N/A		1.40	8.09					General Use	2	SHARP HEAD AND FLOW VALUES MUST BE ENTERED
14	OTTAWA RIVER	MADAWASKA RIVER	ARNPRIOR WEIR		2KE20	45.4350	76.3500	8500	5.2	86.16	3.49	19.29	1.78				Private/Federal Land	4	
15	OTTAWA RIVER	MISSISSIPPI RIVER	BLAKENEY	OPG	2KF10			3286	6.7		2.23		8.50					3	
16	OTTAWA RIVER	MONTREAL RIVER	LATCHFORD DAM		2JD9	47.3217	79.8100	6234	4.6	52.58	1.89	10.41	16.35				General Use	1	
17	OTTAWA RIVER	OTTAWA RIVER	PAQUETTE & ALLUMETTE		2KC2			65527	4.6		33.61		19.60					1	
18	OTTAWA RIVER	OTTAWA RIVER	LITTLE CHAUDIERE		2LA1			91271	4.9		38.11		1.88					1	
19	OTTAWA RIVER	RIDEAU RIVER, CANAL	HOGS BACK DAM		2LA34	45.3700	75.6967	3786	15.3	29.15	3.48	19.20	1.89				Private/Federal Land	1	
20	SOUTHERN LAKE HURON	MUSKOKA MUSQUASH	GO HOME LAKE DAM	MNR	2EB12	45.0150	79.8850	4957	9.5	109.42	8.11	44.75	8.64				Conservation Reserves (new)	2	
21	SOUTHERN LAKE HURON	SEVERN RIVER	WASDELL FALLLS DAM	MNR		44.7817	79.2933	5332	3.4	58.50	1.53	9.17						1	MNR's Site Release
22	SOUTHERN LAKE HURON	SOUTH MAGNETAWAN RIVER	AMERICAN TRAIL DAM	MNR	2EA35			2699	10.7		4.10		8.69					2	
23	SOUTHERN LAKE HURON	TRENT-SEVERN WATERWAY	COUCHICHING LOCK 42		2EC42	44.7694	79.3506	3800	6.2	28.78	1.39	9.27	1.18					1	SHARP STUDY CONDUCTED (UNAVAILABLE)
											Subtotal Practical Projects =		**150 MW**						
Remaining Sites (Not Practical Projects)																			

Table A2 - Potential New Powerhouses at Existing Dams

No.	Drainage Region	Name of River	Name of Site	Name of Owner	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
						Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
						DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
1	ALBANY RIVER	OGOKI RIVER	WABOOSE (OGOKI DIVERSION) DAM		4GB47			13427	19.8		20.43	107.27	122.08					3	
2	ENGLISH AND RAINY RIVERS	CHUKUNI RIVER	LITTLE VERMILION LAKE DAM					2132	7.0		1.07	6.85						3	
3	ENGLISH AND RAINY RIVERS	MANITOU	SPHENE LAKE DAM & DEVILS CASCADE	MNR	5PB33			940	15.9		1.03		32.39					2	
4	ENGLISH AND RAINY RIVERS	ROOT RIVER	ROOT RIVER DIVERSION DAM	OPG	5QB34	50.8700	91.4517	12328	4.3	74.40	2.50	12.24	33.58				General Use	1	
5	ENGLISH AND RAINY RIVERS	SEINE RIVER	RAFT LAKE DAM	AC	5A207	49.9172	91.5450	5	4.1	83.13	2.66	13.04						1	DRAINAGE AREA HAS TO BE VERIFIED
6	ENGLISH AND RAINY RIVERS	STURGEON RIVER	13TH FALL MCDOUGALL MILLS	MNR	5QA31			4462	4.9		1.57		35.55					2	
7	LAKE ERIE	GRAND RIVER	ELORA (BRIMMIE MILL DAM)	GRCA	2GA37			814	12.8		1.02		5.15				Private/Federal Land	1	
8	LAKE ERIE	GRAND RIVER	PARIS (PENMANS C.A. DAM)	GRCA	2GA40			3612	3.0		1.07		3.03				Private/Federal Land	1	
9	LAKE ERIE	GRAND RIVER	CALEDONIA (C.A. DAM)	GRCA	2GB3	43.0733	79.9567	5954	2.8	1395.00	1.40	7.94	1.01		Fish migration issues		Private/Federal Land	1	
10	LAKE ERIE	GRAND RIVER	WILKES DAM	BPUC	2GB9	43.1500	80.2950	5180	4.6	2079.00	2.08	11.87	3.64				Private/Federal Land	1	
11	LAKE ERIE	THAMES RIVER	SPRINGBANK DAM	UTRCA	2GE1	42.9600	81.3250	3284	3.7	36.40	1.08	5.41	4.00		Fish Species at Risk in Area fish migration issues		Private/Federal Land	1	
12	LAKE ONTARIO	CREDIT RIVER	ERINDALE.		2HB10			844	15.3		1.10		2.77				Private/Federal Land	1	
13	LAKE ONTARIO	MOIRA RIVER	LOST CHANNEL		2HL12			2202	4.3		1.00		4.46				Private/Federal Land	1	
14	LAKE ONTARIO	MOIRA RIVER	0.8KM ABOVE BELLEVILLE (LAZIER DAM)		2HL4			2736	4.3		1.24		0.39				Private/Federal Land	1	
15	LAKE ONTARIO	TRENT CANAL SYSTEM	YOUNG'S POINT, LOCK 27		2HJ6 OR 2HH22	44.4867	78.2333	7237	2.2	79.28	1.72	7.51	8.53				Private/Federal Land	1	
16	LAKE ONTARIO	TRENT CANAL SYSTEM	LOCK 19		2HJ21	44.2867	78.3083	7639	2.4	84.37	1.85	8.72	1.89				Private/Federal Land	1	
17	LAKE ONTARIO	TRENT CANAL SYSTEM	BUCKHORN LOCK 31		2HH1	44.5550	78.3450	5993	3.4	63.03	2.20	9.22	19.97				Private/Federal Land	1	
18	LAKE ONTARIO	TRENT CANAL SYSTEM	HASTINGS LOCK 18.		2HK3			8987	2.7		2.54		9.15				Private/Federal Land	1	
19	LAKE SUPERIOR	AGUASABON RIVER	LONG LAC DIVERSION CONTROL DAM	OPG	2BA9	49.0667	87.0717	4273	14.6	69.60	7.93	37.50	26.13		Woodland Caribou (Fed. Threatened - SARA Sch. 1)		General Use	1	HELD BY ONTARIO HYDRO AS A CONTROL STRUCTURE FOR THE AGUASABON HYDRO STATION
20	LAKE SUPERIOR	BLACK STURGEON RIVER	ESKWANONWATON LAKE (DOLAN) DAM		2AC6	49.1517	88.6117	2082	7.0	21.42	1.17	5.99	18.07	1.5			Provincial Park (new)	1	
21	LAKE SUPERIOR	BLACK STURGEON RIVER	TWIN RAPIDS DAM (3.2 KM ABOVE HWY 17)	MNR	2AC10			2617	9.1		2.09		0.16	1.5				1	
22	LAKE SUPERIOR	CURRENT RIVER	ONION LAKE DAM	MNR	2AB14	48.6267	89.1917	362	8.5	3.41	2.20	7.71					General Use	2	SHARP HEAD AND FLOW VALUES MUST BE ENTERED Dam being considered for removal by MNR
23	LAKE SUPERIOR	LITTLE JACKFISH RIVER	SUMMIT CONTROL DAM	OPG	2AD48	50.6367	88.2067	14361	5.5	151.00	6.48	31.78	112.20				General Use	1	
24	LAKE SUPERIOR	MCINTYRE RIVER	MCINTYRE RIVER DAM		2A220	48.4203	89.2631	155	2.0	155.00	2.42	11.86						1	
25	LAKE SUPERIOR	NAMAKAN RIVER	KETTLE FALLS DAM								4.03	27.90						3	
26	LAKE SUPERIOR	NAMAKAN RIVER	NAMAKAN LAKE DAM		5PA19 OR 5PB43	48.4933	92.6417	18648	2.4	219.88	4.12	20.19	29.03				General Use	1	
27	LAKE SUPERIOR	NAMEWAMINIKAN RIVER	HIGH FALLS		2AD7	49.7083	87.9683	2499	8.1	33.00	2.00	9.95					General Use	1	
28	LAKE SUPERIOR	WHITE RIVER	WHITE LAKE DAM	MNR	2BC1	48.6567	85.7383	4102	2.7	52.42	1.10	5.63	7.50				Provincial Park (new)	2	MNR MAY MAKE THIS SITE AVAILABLE THROUGH A REQUEST FOR PROPOSAL PROCESS IN THE FUTURE
29	MOOSE RIVER	MATTAGAMI RIVER	MATTAGAMI LAKE DAM / KENONGAMISSI DAM	MNR	4LA4	48.0133	81.5567	3084	10.1	37.90	2.99	18.29	2.55				General Use	1	
30	NORTHERN LAKE HURON	GOUGH RIVER	BELOW GOUGH LAKE		2CE30			149	76.3		1.25		0.47					1	
31	NORTHERN LAKE HURON	MISSISSAGI RIVER	ROCKY ISLAND LAKE DAM	OPG	2CB4	46.8667	83.1550	2144	15.3	45.56	5.44	25.72	6.27				Provincial Park (new)		REMAINING HYDRO POTENTIAL ON THIS RIVER IS RESERVED TO ONTARIO HYDRO, USES AS STORAGE DAM BY ONTARIO HYDRO
32	NORTHERN LAKE HURON	PICKEREL RIVER	LE GROU LAKE DAM	MNR	2DD35	45.8633	79.9017	271	12.0	11.11	1.00	4.10					Enhanced Management Area	4	NO FURTHER SMALL HYDRO PROPOSALS UNTIL A MANAGEMENT STUDY OF THE WATERSHED HAS BEEN COMPLETED
33	NORTHERN LAKE HURON	SPANISH RIVER	RAMSEY LAKE DAM		2CE22	46.4628	80.9933	1450	7.6	24.11	1.43	6.76	65.42				Provincial Park (new)	1	
34	NORTHERN LAKE HURON	SPANISH RIVER	BISCOTASI LAKE DAM		2CE23	47.2933	82.0017	2356	7.6	39.18	2.32	10.99	48.61		Central Biscotasi Lake Life Science Site		Provincial Park (new)	1	
35	NORTHERN LAKE HURON	TIMAGAMI RIVER	RED CEDAR LAKE DAM		2DC18			2295	6.1		1.52		10.49					1	
36	NORTHERN LAKE HURON	WANAPITEI RIVER	WANAPITEI LAKE DAM	OPG	2DB15	46.6650	80.6717	2434	5.5	50.54	2.17	10.26	13.60				General Use	1	

Table A2 - Potential New Powerhouses at Existing Dams

No.	Drainage Region	Name of River	Name of Site	Name of Owner	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Published Estimated Installed Capacity (IC)	Published Estimated Energy	Potential Project Constraints/Limitations					* Ref. #	Comments
						Lat	Long						Distance from Transmission Line (km)	Access to Site Location (km)	Natural Heritage Features	First Nations (Issues/Proximity)	Policy/Planning Issues		
						DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(GW.h)							
37	OTTAWA RIVER	BONNECHERE RIVER	FOURTH CHUTE		2KC10	45.5050	77.0100	1947	11.9	21.50	2.00	8.76	13.61				Private/Federal Land	1	
38	OTTAWA RIVER	LADY EVELYN RIVER	LADY EVELYN LAKE DAM	OPG	2JD8	47.4600	79.9950	1569	7.0	28.98	1.58	7.48					Private/Federal Land	1	
39	OTTAWA RIVER	MADAWASKA RIVER	KAMANISKEG LAKE DAM	OPG	2KD34	45.3300	77.5450	5791	3.0	62.96	1.47	8.13	42.16				General Use	1	
40	OTTAWA RIVER	MADAWASKA RIVER	BARK LAKE DAM	OPG	2KD33	45.4167	77.7867	2685	12.2	37.50	3.57	16.88	22.86				Private/Federal Land	1	
41	OTTAWA RIVER	MATTAWA RIVER	TALON LAKE DAM	MNR	2JE26	46.2850	79.0150	854	10.5	14.90	1.20	6.88					Provincial Park (new)	1	SITE IS WITHIN A PROVINCIAL PARK, NO DEVELOPMENT IS PERMITTED
42	OTTAWA RIVER	MATTAWA RIVER	TALON CHUTE	MNR	2JE11	46.2817	79.0033	859	13.1	18.68	1.91	9.03	8.79				Provincial Park (new)	1	SHARP STUDY CONDUCTED (UNAVAILABLE)
43	OTTAWA RIVER	MISSISSIPPI RIVER	PAKENHAM		2KF11			3516	4.3		1.53		4.73					3	
44	OTTAWA RIVER	OTTAWA RIVER	TIMISKAMING LAKE DAM		2JE14			45998	5.5		24.48		25.29					3	
45	OTTAWA RIVER	OTTAWA RIVER	ROCHER FENDU		2KC3			74281	19.8		165.12		4.34					1	
46	OTTAWA RIVER	OTTAWA RIVER	CARILLON		2LB7			142993	19.2		235.10		20.02					1	
47	OTTAWA RIVER	RIDEAU RIVER, CANAL	BLACK RAPIDS DAM		2LA31			3808	3.0		1.22		0.71					1	
48	OTTAWA RIVER	RIDEAU RIVER, CANAL	LONG ISLAND LOCK		2LA21	45.2517	75.7033	3084	5.9	25.00	1.23	6.14	4.62				Private/Federal Land	1	
49	OTTAWA RIVER	WEST MONTREAL RIVER	MISTINIKON LAKE DAM		2JD22			2243	4.9		1.12		12.16					1	
50	OTTAWA RIVER	WEST MONTREAL RIVER	BELOW MISTINIKON LAKE DAM		2JD23	48.0400	80.7033	1771	12.5	23.86	2.33	11.00	12.16				Private/Federal Land	1	AREA OF NATIVE LAND CLAIM
51	SEVERN RIVER	FLANAGAN RIVER	OUTLET NORTHWIND LAKE DAM		4CA27	52.8167	93.4417	2849	17.4	10.80	1.50	12.61					General Use	1	
52	SEVERN RIVER	SEVERN RIVER	OUTLET MUSKRAT DAM LAKE		4CA15	53.4750	91.5050	36519	1.2	575.62	5.39	26.43	233.67		Wolverine (Prov. Threatened) Earth Science Site		General Use	1	
53	SEVERN RIVER	WINDIGO RIVER	8KM ABOVE MACDOWELL RIVER		4CB20	52.7467	91.9167	3126	2.4	62.57	1.17	5.75					General Use	1	
54	SEVERN RIVER	WINDIGO RIVER	6.4KM ABOVE MACDOWELL RIVER		4CB21	52.7217	91.9667	3224	2.4	64.53	1.21	5.93					General Use	1	
55	SEVERN RIVER	WINDIGO RIVER	12.8KM ABOVE MACDOWELL RIVER		4CB19	52.7500	91.8433	3095	3.7	60.25	1.74	8.53					General Use	1	
56	SEVERN RIVER	WINDIGO RIVER	DAWES FALLS BELOW MACDOWELL RIVE		4CB22	52.7567	91.9900	6190	3.7	120.49	3.48	17.06					General Use	1	
57	SEVERN RIVER	WINDIGO RIVER	FALLS NEAR MOUTH		4CB24	53.3517	91.7917	10774	6.1	212.08	10.09	49.50	228.45				General Use	1	
58	SEVERN RIVER	WINDIGO RIVER	CANYON 19.2KM ABOVE MOUTH		4CB23	53.1533	91.8667	10541	11.0	207.10	17.77	87.17	211.41				General Use	1	
59	SOUTHERN LAKE HURON	MAGNETAWAN RIVER	AHMIC LAKE DAM AND KNEOPPLE'S RAPIDS	MNR	2EA26			1800	7.0		1.79		32.17					2	
60	SOUTHERN LAKE HURON	MAITLAND RIVER	PIPERS		2FE2	43.7367	81.6700	2460	9.1	25.36	1.80	8.37	0.83				Private/Federal Land	1	
61	SOUTHERN LAKE HURON	SAUGEEN RIVER	2.4KM ABOVE WALKERTON		2FC4			2245	3.7		1.02		10.71					1	
62	SOUTHERN LAKE HURON	SAUGEEN RIVER	WALKERTON		2FC42	44.1300	81.1433	2305	4.3	34.13	1.14	5.33	9.03				Private/Federal Land	1	
63	SOUTHERN LAKE HURON	SAUGEEN RIVER	DENNY'S DAM	MNR	2FC28	44.5050	81.3300	4032	2.7	57.30	1.16	6.20	10.21				Private/Federal Land	2	
64	SOUTHERN LAKE HURON	SIX MILE LAKE	WHITES PORTAGE DAM		2A219	44.7539	79.3436	58	6.4	21.00	1.05	4.30						1	
											Subtotal Remaining Sites =	**593 MW**							
											Total Potential New Powerhouses at Existing Dams =	**773 MW**							

MNR - Ministry of Natural Resources
OPG - Ontario Power Generation
SLSMC - St. Lawrence Seaway Management Corporation
BPC - Brascan Power Corporation
UTRCA - Upper Thames River Conservation Authority'

AC - Abitibi Consolidated
GRCA - Grand River Conservation Authority
HO - Ottawa Hydro
CTB - City of Thunder Bay
BPUC - Brantford Public Utility Commission

* References:
1. NRCAN, 2005
2. MNR, 2004
3. OH, 1987
4. Interal Reports by Hatch Acres
5. OPG, 2003

Table A3 - Redevelopment / Expansion Opportunities

No.	Drainage Region	Name of River	Name of Site	Name of Owner (Existing Facilities)	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Existing Installed Capacity (IC)	Potential Additional Capacity (IC)	Estimated Additional Energy	* Ref. #	Comments
						Lat	Long								
						DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(MW)	(GW.h)		
Group A - Redevelopments / Extensions to Existing Powerhouses															
Probable and Committed Projects															
1	ENGLISH AND RAINY RIVERS	ENGLISH RIVER	EAR FALLS	OPG	5QE1	49.1520	88.3413	26544	9.5		17.48	12.5	52.00	5	
2	LAKE ONTARIO	TRENT CANAL	GLEN MILLER - LOCK 3	Sonoco/Algonquin Power Corp. Inc.	2HK12	44.0187	79.8050	12509	8.2		1.30	8.0	36.00	4	
3	LAKE ONTARIO	TRENT RIVER	HEALY FALLS	OPG	2HK7	44.3833	77.7667	9134	22.3		11.67	6.0	42.00	5	
4	LAKE SUPERIOR	NAMEWAMINIKAN RIVER	HIGH FALLS - BEARDMORE	EXTRUDEX	2AD7	47.9070	84.7393	2525			5.20	5.5		4	Redevelopment
5	MOOSE RIVER	MATTAGAMI RIVER	SMOKY FALLS	OPG	4LG1	44.2423	77.8000	34637	34.5		54.72	160.0	440.00	5	
6	MOOSE RIVER	MATTAGAMI RIVER	LITTLE LONG RAPIDS	OPG	4LG2	42.6520	80.4677	34624	27.4		135.92	61.0	103.73	5	
7	MOOSE RIVER	MATTAGAMI RIVER	HARMON	OPG	4LG3	44.4670	80.8010	34656	30.8		140.20	68.0	115.63	5	
8	MOOSE RIVER	MATTAGAMI RIVER	KIPLING	OPG	4LG4			34674	30.8		140.96	68.0	115.63	5	
9	NORTHERN LAKE HURON	SPANISH RIVER	ESPANOLA	DOMTAR	2CE46	45.0560	79.3040	11611	19.2		16.30	5.0		4	
10	NORTHERN LAKE HURON	VERMILION RIVER	WABAGISHIK RAPIDS	INCO	2CF1	47.8383	80.4412	4340	21.3		3.74	8.0	32.00	4	
11	NORTHERN LAKE HURON	WANAPITEI RIVER	MCVITTIE	OPG	2DB2	43.0757	79.0737	3262	12.8		2.30	2.2	18.60	5	
12	OTTAWA RIVER	MONTREAL RIVER	RAGGED CHUTE	CHD	2JD3	45.0510	78.4717	6418	14.6		6.60	4.0		4	
13	OTTAWA RIVER	OTTAWA RIVER	CHAUDIERE FALLS	Ottawa Hydro	2LA6	45.3187	76.7060	23313	11.6		7.92	7.4	36.00	5	Extension
14	SOUTHERN LAKE HURON	SEQUIN RIVER	PARRY SOUND	Parry Sound PUC	2EA50	43.9687	78.7393	1035	10.4		1.34	2.8		4	
											Subtotal Probable and Committed Projects =		**418 MW**		
Practical Projects															
1	LAKE ONTARIO	TRENT RIVER	SILLS ISLAND	OPG	2HK06	44.1520	77.5747	12224	4.3		1.60	0.7	4.38	3	
2	OTTAWA RIVER	OTTAWA RIVER	CHATS FALLS	OPG	2KF32	45.2383	76.7550	89704	16.2		96.92	20.3	41.17	3	
3	SOUTHERN LAKE HURON	NORTH MUSKOKA RIVER	HIGH FALLS	Bracebridge Hydro	2EB22	44.2080	81.2687	1559	13.4		0.80	0.80	5.86	3	
											Subtotal Practical Projects =		**22 MW**		
Remaining Sites (Not Practical Projects)															
1	LAKE SUPERIOR	NIPIGON RIVER	ALEXANDER FALLS	OPG	2AD2	47.9030	84.6697	24661	18.3		66.47	18.9	17.52	3	
2	LAKE SUPERIOR	NIPIGON RIVER	CAMERON FALLS	OPG	2AD1	47.9050	84.7090	24446	22.0		79.82	18.1	17.52	3	
3	LAKE SUPERIOR	NIPIGON RIVER	PINE PORTAGE	OPG	4AD3	47.2363	84.6403	24391	32.0		130.50	27.6	8.76	3	
4	MOOSE RIVER	ABITIBI RIVER	OTTER RAPIDS	OPG	4ME3	43.9727	78.1757	18022	32.6		189.40	174.0	42.92	3	

Table A3 - Redevelopment / Expansion Opportunities

No.	Drainage Region	Name of River	Name of Site	Name of Owner (Existing Facilities)	MNR's Site ID	Location		Published Drainage Area	Published Gross Head	Published Flow	Existing Installed Capacity (IC)	Potential Additional Capacity (IC)	Estimated Additional Energy	* Ref. #	Comments
						Lat	Long								
						DEG	DEG	(km^2)	(m)	(m^3/s)	(MW)	(MW)	(GW.h)		
5	MOOSE RIVER	ABITIBI RIVER	ABITIBI CANYON	OPG	4ME2	46.3090	83.2883	17402	72.3		308.00	462.6	110.38	3	
6	NORTHERN LAKE HURON	MISSISSAGI RIVER	RED ROCK FALLS	BPC	2CC2	44.3070	78.3167	5131535	28.4		41.50	36.2	17.52	3	
7	OTTAWA RIVER	OTTAWA RIVER	CHENAUX	OPG	2KC6	45.4117	76.3423	7722	12.2		66.42	196.0	87.60	3	
8	OTTAWA RIVER	OTTAWA RIVER	OTTO HOLDEN	OPG	2JE2	43.9090	78.6883	14723	23.5		121.48	203.0	56.06	3	
9	OTTAWA RIVER	OTTAWA RIVER	DES JOACHIMS	OPG	2KA3	44.9863	79.2697	1496	39.6		217.48	348.0	156.80	3	
											Subtotal Remaining Sites =	**1484 MW**			
											Total Group A - Redevelopments / Extensions =	**1925 MW**			
Group B- Efficiency Upgrades															
Probable and Committed Projects															
1	ENGLISH AND RAINY RIVERS	ENGLISH RIVER	CARIBOU FALLS	OPG	5QE1	48.6560	89.6000	52251	17.7		86.62	4.9		5	
2	LAKE ONTARIO	NIAGARA RIVER	SIR ADAM BECK No.1 (UNITS 3-6, 8, 9)	OPG	2HA34	43.1450	77.6237		89.7		497.90	10.0		5	
3	LAKE ONTARIO	NIAGARA RIVER	SIR ADAM BECK No.1 (FREQUENCY CONVER.) G7 & G8	OPG	2HA34	43.1450	77.6237		89.7		497.90	14.0		5	
4	LAKE ONTARIO	TRENT RIVER	RANNEY FALLS	OPG	2HK30	44.3353	78.3070	11222	14.6		8.77	1.5		5	
5	LAKE SUPERIOR	NIPIGON RIVER	ALEXANDER FALLS	OPG	2AD2	47.9030	84.6697	24661	18.3		66.47	0.6		5	
6	LAKE SUPERIOR	NIPIGON RIVER	CAMERON FALLS	OPG	2AD1	47.9050	84.7090	24446	22.0		79.82	4.0		5	
7	MOOSE RIVER	ABITIBI RIVER	ABITIBI CANYON	OPG	4ME2	46.3090	83.2883	17402	72.3		308.00	30.0		5	
8	MOOSE RIVER	MATTAGAMI RIVER	SMOKY FALLS	OPG	4LG1	44.2423	77.8000	34637	34.5		54.72	16.0		5	
9	MOOSE RIVER	MATTAGAMI RIVER	LITTLE LONG RAPIDS	OPG	4LG2	42.6520	80.4677	34624	27.4		135.92	10.0		5	
10	MOOSE RIVER	MATTAGAMI RIVER	HARMON	OPG	4LG3	44.4670	80.8010	34656	30.8		140.20	12.0		5	
11	NORTHERN LAKE HURON	WANAPITEI RIVER	MCVITTIE	OPG	2DB2	43.0757	79.0737	3262	12.8		2.30	0.3		5	
12	OTTAWA RIVER	MADAWASKA RIVER	MOUNTAIN CHUTE	OPG	2KE10	44.9090	75.8353	7307	45.8		169.98	4.0		5	
											Subtotal Probable and Committed Projects =	**107 MW**			
											Total Group B - Efficiency Upgrades =	**107 MW**			

* References:

1. NRCAN, 2005
2. MNR, 2004
3. OH, 1987
4. Interal Reports by Hatch Acres
5. OPG, 2003

Table A4 - Pumped Storage Projects

No.	Drainage Region	Name of River	Name of Site	Estimated Installed Capacity (IC) (MW)	* Ref. #	Comments
Probable and Committed Projects						
1	ENGLISH AND RAINY RIVERS	SEINE RIVER	STEEP ROCK MINE AREA (Stage 1)	250	4	MNR's - CFP, (in 250MW increments/stages)
			Subtotal Probable and Committed Projects =	**250 MW**		
Practical Projects						
1	OTTAWA RIVER	MATABITCHUAN RIVER	FOURBASS LAKE	235	4	Matabitchuan Study by Acres, February 1979 for Ontario Hydro. 2005 MNR's Competitive Site Release, CRP-11-05
2	ENGLISH AND RAINY RIVERS	SEINE RIVER	STEEP ROCK MINE AREA (Stage 2,3, & 4)	750	4	MNR's - CFP, (in 250MW increments/stages)
			Subtotal Practical Projects =	**985 MW**		
Remaining Sites (Not Practical)						
1	LAKE ONTARIO	LAKE ONTARIO	UNDERGROUND PUMPED STORAGE	500	2	Range between 500MW to 2000MW
2	LAKE SUPERIOR	MAGPIE RIVER	HELEN AND MACLEOD MINES	138	4	Range between 138MW to 510MW
1	OTTAWA RIVER		PLAUNTS MOUNTAIN		4	
2	SOUTHERN LAKE HURON		BLUE MOUNTAIN		4	
3	LAKE SUPERIOR		HAVILLAND BAY		4	
4	LAKE SUPERIOR		GRIFFIN LAKE / BATCHAWANA MOUNTAIN		4	
5	LAKE SUPERIOR		MOUNT GWYNNE		4	
6	LAKE SUPERIOR		NISHIN LAKES		4	
7	LAKE SUPERIOR	MONTREAL RIVER	MACKAY	500	4	
8	LAKE SUPERIOR	MONTREAL RIVER	MACKAY	40	4	
9	LAKE ONTARIO		MARMORA	100	4	
10	NORTHERN LAKE HURON	EUGENIA RESERVOIR - BEAVER RIVER	EUGENIA	91	2	
11	NORTHERN LAKE HURON	FAIRBANK LAKE - VERMILLION LAKE	FAIRBANK	172	2	
12	LAKE ONTARIO	LAKE ERIE - LAKE ONTARIO	JORDAN-ERIE	1090	2	
13	NORTHERN LAKE HURON	KAGAWONG LAKE - LAKE HURON	KAGAWONG	94	2	
14	LAKE SUPERIOR	LOCH LOMOND - STURGEON BAY	LOCH LOMOND	138	2	
15	NORTHERN LAKE HURON	MOUNTAIN LAKE - GEORGIAN BAY	MEAFORD	33	2	
16	LAKE ONTARIO	LAKE ON THE MOUNTAIN - LAKE ONTARIO	PICTON	36	2	
17	NORTHERN LAKE HURON	LAKE BASSWOOD - BRIGHT LAKE	SOWERBY	268	2	
18	NORTHERN LAKE	DELPHI POINT - GEORGIAN BAY	DELPHI POINT	2080	2	
19	LAKE ONTARIO	GRIMSBY - LAKE ONTARIO	GRIMSBY	65	2	
20	LAKE SUPERIOR	KAMA HILL - LAKE SUPERIOR	KAMA HIL	743	2	
			Subtotal Remaining Sites =	**6088 MW**		
			Total Pumped Storage Projects =	**7323 MW**		

* References:

1. NRCAN, 2005
2. MNR, 2004
3. OH, 1987
4. Interal Reports by Hatch Acres
5. OPG, 2003