

April 2005

**GUIDE TO
PERMIT TO TAKE WATER
APPLICATION FORM**

**Sections 34 and 98
Ontario Water Resources Act
R.S.O. 1990**

and

**Water Taking and Transfer Regulation
O. Reg. 387/04**

**CONTENTS OF THIS DOCUMENT ARE SUBJECT
TO CHANGE WITHOUT NOTICE**

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Protecting our environment.



Ontario

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FOREWORD

This guide outlines procedures for applying to the Ministry of the Environment for a Permit to Take Water (PTTW) and provides a step-by-step approach for filling in the required application form contained in this guide. It incorporates changes made to the Permit to Take Water program that have recently come into effect.

The requirements for this and other Ministry programs are continually updated, as environmental standards are modified to reflect changing needs of public health and environmental protection. **As a result, the Ministry will be updating this guide in the future to reflect the most current requirements.**

While every effort has been made to ensure the accuracy of the information contained in this guide, it should not be construed as legal advice. If you have any doubts or questions regarding the legal aspects of this guide, you should consult legal counsel.

For more information about the PTTW program and permit application requirements, contact the Ministry's regional office in the area of your water taking (see Appendix B for office locations).

Send the complete permit application form, required supported materials and payment to:

Ontario Ministry of the Environment
Attention: Permit to Take Water
Director, Environmental Assessment and Approvals Branch
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario M4V 1L5

Telephone: (416) 314-8001 or (Toll Free) 1-800-461-6290

Fax: (416) 314-8452

Email: EAABGen@ene.gov.on.ca

INTRODUCTION

Purpose of the Permit to Take Water (PTTW) Program

Under the *Ontario Water Resources Act* (OWRA), the Ministry of the Environment is responsible for the supervision of Ontario's ground and surface water supply. Of special concern is the taking of water in large quantities. Large water-takings are governed by Section 34 of the Act and the new Ontario Regulation 387/04 (Water Taking and Transfer) under the Act. Anyone taking more than 50,000 litres of water in a day, with some exceptions, must obtain a Permit to Take Water from the Ministry of the Environment.

The purpose of the Permit to Take Water (PTTW) program is to ensure the conservation, protection and wise use and management of the waters of the province. Permits are controlled and not issued if the taking of more water in a given area would adversely affect existing users or the environment.

The requirements of the attached application form for a Permit to Take Water reflect the Ontario government's continuing efforts to safeguard the province's water supply. Detailed information is requested about individual water takings so that Ontario's water resources may be protected for all users.

New Requirements of Ontario Regulation 387/04

Ontario Regulation 387/04 (Water Taking and Transfer) greatly strengthens the Ministry's role in protecting Ontario's water resources. It prohibits water transfers out of a water basin, as defined in the regulation, and sets out specific matters for the Ministry to consider when reviewing applications for a Permit to Take Water. It also contains other important provisions.

Protecting watersheds. The Ministry must refuse new and expanded takings that would remove water in especially large quantities from watersheds that already have high levels of use. All tertiary watersheds in Ontario have been classified as high-use, medium-use or low-use, based on average annual conditions and summer low flow conditions. Taking water in a high-use watershed, for example, could be temporarily suspended during summer low flow conditions.

Notifying others. The Ministry must notify all affected municipalities and conservation authorities of permit applications posted on the Environmental Bill of Rights Registry.

Water Conservation. Anyone applying for a permit required by the Ministry must document in the application all water conservation measures and practices that have been already undertaken or will be undertaken for the duration of the permit.

Reporting water takings. Permit holders will be required to keep track of the volume of water they take each day and to report these amounts on a yearly basis. As indicated by Section 9 of Ontario Regulation 387/04, the volume of water taken is to be measured using a flow meter or a method acceptable to the Director. Further details are provided on the Ministry's website (www.ene.gov.on.ca). The reporting of water use is being phased in over several years beginning in July 2005. By 2008, all permit holders will be required to report their water takings to the Ministry.

BASICS OF APPLYING FOR A PERMIT TO TAKE WATER

When a Permit Is Needed

With some exceptions, a Permit to Take Water (PTTW) is required when a person or organization wants to take more than 50,000 litres of water in a day. This includes the taking of water for any use, whether agricultural, commercial, construction, dewatering, industrial, institutional, recreational, remediation, water supply or other purposes.

Permits are not required for taking water:

- From wells constructed before March 29, 1961 (see the *Ontario Water Resources Act*);
- From surface water through an inlet constructed before March 29, 1961;
- From a storage or diversion structure constructed before March 29, 1961;
- For fire fighting;
- For domestic use;
- For farm use (with certain exceptions).

Taking water for farm use requires a permit if the water is:

- To be used for irrigating crops;
- To be stored for watering livestock or poultry.

In your application, you must state how much water you need to take. If you need to take more water at a later date, you must request an amendment to your permit to do so. The Permit to Take Water program is not intended for water reservation. There has to be a reasonable prospect that the water will be used in the near future. You cannot reserve water for future use ahead of time.

The Director cannot approve applications for new or expanded water takings of specific types in high-use watersheds. Please refer to the maps appended to Ontario Regulation 387/04 (Appendix A) to verify your location with respect to high-use watersheds, if you are applying for a new or expanded Permit to Take Water for:

- Beverage manufacturing
- Fruit or vegetable canning or pickling (but not washing)
- Ready-mix concrete (not portable)
- Aggregate processing (to form a slurry)
- Manufactured products, where water is incorporated into products (but not pulp and paper or ethanol plants)

Who Applies for the Permit

Anyone may apply for a Permit to Take Water (PTTW). Whoever has legal responsibility for the water taking becomes the “client” for the permit.

If you are applying for a permit for yourself, you are obviously the client. However, if you don't own the land on which you will be installing a pump or other equipment for taking water, you must obtain written permission from the landowner.

If you are applying as an agent for another person or organization, that person or organization becomes the client. You must include a letter with the application that authorizes you to act on their behalf.

If you are applying as a member of an organization (partnership, company, corporation), that organization becomes the client. In this case, you must have been specifically authorized by your organization to act in this capacity.

Review Process

Each Permit application undergoes a review process. You should therefore file an application for a Permit to Take Water several months ahead of the time when the water taking is intended to start.

Ministry staff check all permit applications, measuring them against a host of requirements. The Ministry will post designated PTTW applications on the Environmental Registry in accordance with the Environmental Bill of Rights and consider public comments in its decision.

Please take notice that permits come with terms and conditions that must be strictly followed. These conditions and the limited time periods allowed for permits are part of the Ontario government's efforts to protect water resources and to prevent interference with other water users. Additional conditions may be applied for water takings within the designated high and medium use watersheds.

Other Approvals

The granting of a Permit to Take Water only gives you approval to withdraw water from a water source or sources. It does not cover any other activities of your operations. In addition, the granting of a water taking permit does not imply that other governmental approvals are automatically forthcoming. It is your responsibility to obtain whatever other approvals, licenses or permissions you may need, such as the following:

- Permission from a local conservation authority or the Ministry of Natural Resources to construct a works within a watercourse or floodplain;
- Approval from the Ministry of the Environment to discharge water to a receiving water body or to the subsurface;

- Approval from the Ministry of the Environment to supply drinking water.

Ministry approvals take the form of a Certificate of Approval, which is obtained from the Ministry's Environmental Assessment and Approvals Branch (1-800-461-6290).

Categories of Proposals for Permits to Take Water

Proposals for water taking are classified according to their anticipated risk to the environment; the greater the anticipated risk, the more evaluation required. Three proposal categories have been established:

- **Category 1 applications** (unlikely to pose adverse environmental impacts)
- **Category 2 applications** (requiring a scoped assessment)
- **Category 3 applications** (requiring a detailed ecological/hydrological/hydrogeological study)

Table 1 summarizes the criteria for Category 1 and Category 2 PTTW applications. Applications not covered by any of these criteria are automatically considered to be Category 3 applications.

TABLE 1
PERMIT APPLICATION CATEGORY DESCRIPTIONS

Please refer to the *Permit to Take Water (PTTW) Manual* for more details.

Groundwater	Surface Water
Category 1	Category 1
Renewal (same or lesser amount, same purpose, same location, same source, no past interference/ impacts, and no scientific study required as part of renewal.	Renewal (same or lesser amount, same purpose, same location, same source, no past interference/ impacts, and no scientific study required as part of renewal.
Ponds (e.g. irrigation and agriculture) • not connected to, nor receiving water from surface water; and • <less than 4m deep and more than 100m from sensitive features; or • <less than 7m deep and more than 250m from sensitive features	Ponds less than 1500 cubic meters in volume that collect runoff and that are not drawing from groundwater, watercourses, wetlands, other lakes or ponds
	Great Lakes or connecting channel takings less than 1,000,000 L/day

Groundwater	Surface Water
Category 2	Category 2
Short-term, non-recurring taking less than 7 days (e.g. pumping test and hydrostatic test).	Great Lakes or connecting channels takings less than the Great Lakes Charter threshold (19,000,000L/day)
Short-term, non-recurring taking less than 30 consecutive days and less than 400,000 litres/day (e.g. construction dewatering and dust suppression).	Takings from sources with previous assessments (i.e. further to a previous study and implementing previously established controls)
	River and Streams (3rd order or higher order) takings less than 5% of 7Q20
	Transitional Permits where the Director previously required upgrades/modifications to water taking
	Takings and Returns where water is removed for a short time only and water is returned to a nearby point with no significant change to water quantity or quality (i.e. for cooling, hydrostatic testing, hydraulic lake dredging)
	Lakes and Ponds takings less than 1,000,000L/day once per week from water bodies greater than 10ha in size that are not on-stream and not part of the headwaters of any watercourse. More frequent takings require supporting studies.
Category 3	Category 3
All groundwater takings that do not meet Category 1 or Category 2 criteria.	All surface water takings that do not meet Category 1 or Category 2 criteria and new takings from 1 st or 2 nd order watercourses, wetlands, new on-stream reservoirs, impoundments and ponds, groundwater sources that potentially affect surface waters.

If your application does not meet the Category 1 or 2 descriptions above, you must provide a study prepared by a qualified professional to support your application under Category 3. Please refer to the *PTTW Manual* for details.

A Category 2 application requires a qualified person to conduct a technical review of the proposed water taking and to complete a schedule (see Appendix F) which is to be attached to the application. Please refer to the *PTTW Manual* for details.

Categories 2 and 3 applications require assessment by a qualified person, as follows:

- For groundwater studies, a licensed professional geoscientist or professional engineer as set out in the *Professional Geoscientists Act, 2000* of Ontario;
- For surface water studies, a professional engineer or a person with a degree in environmental science with specialization in hydrology, aquatic ecology, limnology, biology, physical geography and/or water resource management, as appropriate.

If your application is for more than one source, it will be classified according to the highest category of the individual sources. For example, if your application includes a Category 1 source and a Category 2 source, your application will be classified as Category 2.

TABLE 2
CATEGORY DOCUMENT REQUIREMENTS FOR SUBMISSION

Please refer to the *Permit to Take Water (PTTW) Manual* for more details.

Category	Documents Required with Submission
Category 1	• Completed Application Form. • Water Conservation Schedule 1 • Information required by conditions of previous permit. • Payment of \$750.
Category 2	• Completed Application Form. • Water Conservation Schedule 1 • Information required by conditions of previous permit. • Scientific evaluation (schedule 2 and/or 3) completed by a qualified person. • Payment of \$750.
Category 3	• Completed Application Form. • Water Conservation Schedule 1 • Information required by conditions of previous permit. • Scientific study (hydrogeological and/or hydroecological study) completed by a qualified person. • Payment of \$3000.

Expiry Dates

Permits to Take Water come with an expiry date. If you receive a permit, please take note of when it expires. Allow yourself ample time to apply for a renewal of your permit to ensure continuity in your water taking. Expired permits for the following purposes cannot be renewed in high-use watersheds:

- Beverage manufacturing
- Fruit or vegetable canning or pickling (but not washing)
- Ready-mix concrete (not portable)
- Aggregate processing (to form a slurry)
- Manufactured products, where water is incorporated into products (but not pulp and paper or ethanol plants)

For more information, review Ontario Regulation 387/04 (Appendix A).

Where to Get Help

If you have questions about the requirements of the Permit to Take Water program or filling in the application form, you may contact the Ministry of the Environment's regional office located in the area where you plan to take water. (See Appendix B for office locations).

As well as the regional offices, you may want to review:

- Section 34 of the *Ontario Water Resources Act*
- Ontario Regulation 387/04, Water Taking and Transfers, (see Appendix A)
- The Ministry of the Environment's website (www.ene.gov.on.ca)
- The *Permit To Take Water (PTTW) Manual*.

The *Permit to Take Water Manual*:

- Outlines the key components of the PTTW program;
- Describes the responsibilities of permit applicants, the Ministry of the Environment and other agencies;
- Classifies water takings under a risk-based approach;
- Provides background on how permit applications are reviewed.

The manual can be obtained from:

- The Ministry's Environmental Assessment and Approvals Branch (see address and phone number below)
- The Ministry's regional offices (see Appendix B)
- The Ministry's Web site (www.ene.gov.on.ca)
- Publications Ontario Bookstore (880 Bay St., Toronto, ON N7A 1N8)

Where to Send the Permit Application

Submit your completed application form, required supporting materials and payment to:

Ontario Ministry of the Environment
Attention: Permit to Take Water
Director, Environmental Assessment and Approvals Branch
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario M4V 1L5

COMPLETING THE APPLICATION FORM

General Information and Instructions

Appendix D contains a PTTW application form for completing and submitting to the Ministry. The approval of your application for a Permit to Take Water depends on your providing all of the information requested on this form. You must also supply all of the supporting information required and the proper payment as specified.

Use the letters "N.A." in sections that don't apply to your proposal for taking water.

For general guidance, see Appendix C for a sample application form that has been filled in as a Category 1 application for taking water.

If you have any questions about completing the application form, contact the Ministry's regional office in the area of your water taking (see Appendix B for office locations).

Part 1: Permit Administration

Check off the appropriate box to indicate whether you are applying for a new permit or are amending or renewing an existing permit. For an existing permit, check off "renewal" if you have no changes to report and simply want to extend the expiry date. Also provide a copy of your existing permit.

Part 2: Classification

Check off the appropriate boxes to classify your water taking and to indicate the fee required. For help in classifying your water taking, see "Table 1: Permit Application Category Descriptions."

Part 3: Client Information

Please identify yourself or the organization you represent as the client for the Permit to Take Water.

- **Client name.** This is the correct legal name of the individual or organization in whose name the Permit to Take Water is to be issued, as evidenced in legal documents.
- **Business name.** This is the name under which the client conducts business, and it must be provided if it is different from the client's legal name, as evidenced in a legal document.
- **Business Identification Number.** This is the number assigned to a registered business name in Ontario. It can be found on the client's Master Business Licence.
- **North American Industry Classification System (NAICS) code.** This is the same industry code number used to identify a business for income tax purposes. Enter the six-digit NAICS (2002) industry code that corresponds to your business. If more than one code describes your business, or if your business has more than one activity, use the code that **most closely** describes your **main business activity**. To determine your NAICS code, consult the following sources:
 - *Statistics Canada:*
<http://www.statcan.ca/english/Subjects/Standard/naics/2002/naics02-menu.htm>. This Web site has a listing of all NAICS codes by business activity.
 - *Your corporate income tax return.* Canada Revenue Agency (CRA) requires anyone who reports business income to submit an NAICS code (industry code), including the agricultural sector. For example, Form T2124, *Statement of Business Activities*, contains a field for "industry code."
- **Client type.** This is the type of legal entity that the client represents. Please check the box that applies to yourself, if you are the client, or the organization that you represent.
 - Corporation (Ontario)
 - Corporation (Canada)
 - Individual
 - Partnership (Limited)
 - Partnership (General)
 - Sole proprietor

Unless the client is a municipal, provincial or federal government, **proof of legal name must be submitted with all PTTW applications**. Depending on the type of client, different documents are required. Please attach the appropriate document to your application form:

- A photocopy of the most recent Corporate Profile Report, Master Business Licence, or "Initial Notice or Notice of Change," stamped "Received" or "Effective," by the Ministry of Consumer and Business Services (Form 1, 2, or 3 of Ontario Regulation 182) filed under the *Corporations Information Act*, or the most current registration filed under the *Business Names Act*, 1990; or
- A photocopy of the most recent registration filed under the *Business Names Act*, 1990; or
- A photocopy of the most recent Articles of Incorporation; and a Form 3 and Form 6 issued by Consumer and Corporate Affairs Canada; or
- A photocopy of the Extra-Provincial Licence (Form 2) issued by the Ministry of Consumer and Commercial Relations under the *Extra-Provincial Corporations Act*; or
- A photocopy of the appropriate business registration along with a copy of the client's birth certificate is required; or
- A copy of the client's birth certificate.

Part 4: Client Physical Address

This is the actual address at which you as the client or the organization you represent is located. You complete either:

- Part A of this section if you have a civic, or street address; or
- Part B if you have a survey, or rural address.

Part 5: Client Mailing Address

Your client mailing address is the address at which you receive mail. In many cases, the client's physical and mailing addresses will be the same; if so, check box.

Part 6: Project Technical Contact Information

If you have a consultant dealing with technical matters on your behalf, please provide their name, organization and contact information as indicated.

Part 7: Source(s) Information

Please provide basic information about the site where water taking occurs.

Multiple water taking locations. If your application is to include more than one location for taking water, you should make an **extra copy of this page** of the application form for each additional site and attach the extra copy or copies to this application. Additional copies may be obtained from the Ministry's website.

Water Taking Sources included in this application. This is the summary of the number of all sources by type.

Source Location Information.

- **Lot, Concession, Township, or City Street Address.** Please provide the lot and concession numbers in which the water source is located. If you do not know your lot and concession numbers, you should be able to determine this information by contacting your local municipal office, or by consulting certain road maps. If you live in an urban area, you may provide your city street address.
- **Original Geographic Township.** This refers to the original surveyed township in which the original lot and concession survey was made. It is the original township name, not the later name, for example, of a newer municipality created by the amalgamation of several older townships.

Geographic Coordinates. Please provide the Universal Transverse Mercator (UTM) coordinates for the source of your water taking. Typically, such coordinates are obtained using a Global Positioning System (GPS), or can be obtained from an Ontario Base Map for your area. Ontario Base Maps can be ordered by calling 1-800-667-1940 or online at <http://themnrstore.mnr.gov.on.ca/english/>

In the space provided, please include as much reference information as you can (see Appendix G for details). Also indicate the UTM coordinates on the topographic map you provide with your PTTW application.

Site ownership. Check “Yes” or “No” to show whether you or someone else as the client owns the land where the water taking will occur. If you are taking water from a water source located on land you do not own, the Ministry requires that you submit a letter from the landowner, authorizing you to take water from a source located on their property. A Permit to Take Water does not give permission to trespass or use equipment that you do not own.

Oak Ridges Moraine Conservation Act. (You only need to complete this section if your water taking is located near the Oak Ridges Moraine in south-central Ontario.) You can determine if your water source is located there by consulting maps of the area. There maps are available at several locations:

- Online at http://www.mah.gov.on.ca/userfiles/HTML/nts_1_7058_1.html
- Ministry of Municipal Affairs and Housing, 777 Bay St., Toronto
- Ontario Government Information Centre, 9090 Bay St., Toronto
- Ministry of Natural Resources, 50 Bloomington Rd. W., Aurora

Niagara Escarpment Planning and Development Act. (You only need to complete this section if your water taking is located near the Niagara Escarpment in south-central Ontario.) Please contact the Niagara Escarpment Commission to determine if your water source is located within the area controlled by this Act. Telephone 905-877-5191 or go on-line at www.escarpment.org

You may be required to show proof of a Niagara Escarpment Development Permit or similar approval when you submit an application for a Permit to Take Water. Any project that is subject to the *Niagara Escarpment Planning and Development Act* and has not received a development permit cannot be approved under the *Ontario Water Resources Act*.

Complaints resulting from water taking location. Please indicate whether you are aware of any complaints that have resulted from the taking of water at the location indicated in your application. (For example: complaints about interference with neighbouring wells, or complaints of downstream water use interference.)

Water in Containers. Please indicate whether water is placed in containers at the site or whether water is incorporated into a product. Ontario Regulation 387/04 limits the amount of water that can be transferred out of a water basin. If you are taking water for “containerization,” you should review the regulation or contact the Ministry’s regional office in the area of your water taking.

Well Location, municipal water availability. Please provide the distance to nearest well and whether municipal water is available within 500 metres of the water taking location.

Taking start dates and periods. Provide start date and length of taking (i.e., July 1/05 - Oct. 31/05 is a 4 month period.)

Environmental Assessment Act. If your activity is subject to the *Environmental Assessment Act*, you must identify this on your application. Certain activities, such as municipal undertakings or public or private water supplies, are subject to the Act. Certain other activities, such as water taking for agricultural use, are not subject to the Act. If you are unsure about your obligations under the *Environmental Assessment Act*, please contact your local office of the Ministry of the Environment.

Public consultation. Please indicate whether your proposed water taking has been the subject of public meetings or notification to other agencies.

Well. (You only need to complete this section if you are applying to take water from a well.)

- ***Name/identifier.*** Please provide a reference name for your well.
- ***Water well record number.*** If you know your well record number, please indicate it here. If you do not know your well record number, but know the last name of the owner of your property at the time that the well was drilled, please indicate it here. If you have a copy of the original well record prior to issuance of a reference number, please attach a copy of the well record with your application.
- ***Well deepening.*** Please note whether the well has been deepened and when this took place.

- *Type of well.* Please indicate the construction of your well. If it consists of a 15-to-25 cm (6-to-10 in) diameter steel casing, it is likely a drilled well. If it has a much larger diameter (e.g., 1 metre or 3 ft), and you can see water at the bottom of the well, it is likely a dug well.
- *Well depth.* If you have recently measured the depth-to-water in your well, please indicate this in the box marked "Depth to Static Water Level." If you are taking water from a well, the Ministry normally requires that the depth-to-water in the well be measured periodically. If you cannot measure the depth-to-water in your well(s), please indicate it here. The periodic measurement of the depth-to-water in your well provides useful information about your water resource as well as the sustainability of your proposed water taking.
- *Pumping test.* If you have ever had a pumping test completed at this well, please indicate it here. If a test has been completed, the results of the test will be very useful in our evaluation. Please submit the results with your application.

Lake. (You only need to answer this question if you are proposing to take water from a lake.) Where a particular lake is known by an official name on a map, but locally referred to by a different name, please indicate the official name.

Watercourse. (You only need to answer this question if you are proposing to take water from a watercourse.) For the purposes of the Permit to Take Water program, a watercourse is any above-ground feature of flowing water. This includes rivers, streams, drainage ditches and municipal drains.

- *Watercourse name.* Please indicate the name of the watercourse, if it has one, and the type of watercourse.
- *Tributary to.* If it is a tributary, indicate, if possible, the stream or river into which it flows.
- *Flow stop in watercourse.* If the flow in the watercourse normally stops sometime during the year, please indicate when this happens and for how long.
- *Pumping equipment.* Where portable pumping equipment is in use, please indicate if it is moved and relocated during water taking operations. Show pumping locations on the map required under Part 9 of this application.

Pond/Reservoir. (You only need to answer these questions if you are proposing to take water from a pond, pit or quarry.)

- *Name identifier.* Please provide a reference name for your pond.
- *Pond construction.* Please indicate whether the pond was constructed. If the pond is still undergoing construction (e.g., a quarry), make a note of it here.

You may be required to show proof of a Niagara Escarpment Development Permit or similar approval when you submit an application for a Permit to Take Water. Any project that is subject to the *Niagara Escarpment Planning and Development Act* and has not received a development permit cannot be approved under the *Ontario Water Resources Act*.

Complaints resulting from water taking location. Please indicate whether you are aware of any complaints that have resulted from the taking of water at the location indicated in your application. (For example: complaints about interference with neighbouring wells, or complaints of downstream water use interference.)

Water in Containers. Please indicate whether water is placed in containers at the site or whether water is incorporated into a product. Ontario Regulation 387/04 limits the amount of water that can be transferred out of a water basin. If you are taking water for “containerization,” you should review the regulation or contact the Ministry’s regional office in the area of your water taking.

Well Location, municipal water availability. Please provide the distance to nearest well and whether municipal water is available within 500 metres of the water taking location.

Taking start dates and periods. Provide start date and length of taking (i.e., July 1/05 - Oct. 31/05 is a 4 month period.)

Environmental Assessment Act. If your activity is subject to the *Environmental Assessment Act*, you must identify this on your application. Certain activities, such as municipal undertakings or public or private water supplies, are subject to the Act. Certain other activities, such as water taking for agricultural use, are not subject to the Act. If you are unsure about your obligations under the *Environmental Assessment Act*, please contact your local office of the Ministry of the Environment.

Public consultation. Please indicate whether your proposed water taking has been the subject of public meetings or notification to other agencies.

Well. (You only need to complete this section if you are applying to take water from a well.)

- ***Name/identifier.*** Please provide a reference name for your well.
- ***Water well record number.*** If you know your well record number, please indicate it here. If you do not know your well record number, but know the last name of the owner of your property at the time that the well was drilled, please indicate it here. If you have a copy of the original well record prior to issuance of a reference number, please attach a copy of the well record with your application.
- ***Well deepening.*** Please note whether the well has been deepened and when this took place.

- *Type of well.* Please indicate the construction of your well. If it consists of a 15-to-25 cm (6-to-10 in) diameter steel casing, it is likely a drilled well. If it has a much larger diameter (e.g., 1 metre or 3 ft), and you can see water at the bottom of the well, it is likely a dug well.
- *Well depth.* If you have recently measured the depth-to-water in your well, please indicate this in the box marked "Depth to Static Water Level." If you are taking water from a well, the Ministry normally requires that the depth-to-water in the well be measured periodically. If you cannot measure the depth-to-water in your well(s), please indicate it here. The periodic measurement of the depth-to-water in your well provides useful information about your water resource as well as the sustainability of your proposed water taking.
- *Pumping test.* If you have ever had a pumping test completed at this well, please indicate it here. If a test has been completed, the results of the test will be very useful in our evaluation. Please submit the results with your application.

Lake. (You only need to answer this question if you are proposing to take water from a lake.) Where a particular lake is known by an official name on a map, but locally referred to by a different name, please indicate the official name.

Watercourse. (You only need to answer this question if you are proposing to take water from a watercourse.) For the purposes of the Permit to Take Water program, a watercourse is any above-ground feature of flowing water. This includes rivers, streams, drainage ditches and municipal drains.

- *Watercourse name.* Please indicate the name of the watercourse, if it has one, and the type of watercourse.
- *Tributary to.* If it is a tributary, indicate, if possible, the stream or river into which it flows.
- *Flow stop in watercourse.* If the flow in the watercourse normally stops sometime during the year, please indicate when this happens and for how long.
- *Pumping equipment.* Where portable pumping equipment is in use, please indicate if it is moved and relocated during water taking operations. Show pumping locations on the map required under Part 9 of this application.

Pond/Reservoir. (You only need to answer these questions if you are proposing to take water from a pond, pit or quarry.)

- *Name identifier.* Please provide a reference name for your pond.
- *Pond construction.* Please indicate whether the pond was constructed. If the pond is still undergoing construction (e.g., a quarry), make a note of it here.

- *Pond size.* This information provides the Ministry with an approximate idea of the dimensions of the pond. In the case of an irregularly shaped pond, please choose the longest length and width. The average and maximum depths should be estimated when the pond is full.
- *Pond type.* The Ministry defines a pond in four ways. Select the diagram from the application form that most closely resembles your pond.
- *Source of Pond Water.* This information provides the Ministry with an understanding of the source of the water that fills your pond. Make your selection as follows:
 - Seepage/Springs/Groundwater, if the pond is not connected to a watercourse, but fills naturally without precipitation
 - Surface water runoff, includes tile drains or natural overland flow but not a watercourse or open channel.
 - Pumped water, if you are filling a pond with water pumped from another source. In this case, you would need to fill out an additional Part 7 for the other source. This option does not include ponds that are directly connected to a watercourse;
 - Flowing water, if your pond is filled by a direct connection to a watercourse, including open drainage ditches. If a permit is issued, it will limit the taking from the pond to a rate that does not adversely affect flow in the watercourse.
- *Inflow and outflow of water.* Please indicate whether water flows in and out of your pond and indicate the nature of the controlling structure (e.g., weir, dam).

You should be aware that if you are discharging water to a surface water body or to the subsurface, you may need to obtain a Certificate of Approval from the Ministry. If this is the case, please call the Ministry's Environmental Assessment and Approvals Branch at 1-800-461-6290.

Part 8: Water taking volumes (Table A)

This section requires you to identify the purpose or purposes for which you are proposing to take water. It also requires you to specify the maximum and typical rates of taking. If you are taking water for two or more purposes (e.g., crop irrigation and snow making) you should specify the rates for each purpose.

Water source information Table A (units in litres). This section requires you to indicate maximum rates and maximum durations of taking. It is understood that you may not always take water at the maximum rate or for the maximum duration. It is also understood that your taking can be dependent upon several factors, including the weather. Therefore, wherever you are asked to indicate the maximum rate or duration of taking, you should estimate what these values would be in the worst case scenario. (See Appendix G for definitions of column headings in Table A.)

The Ministry of the Environment works exclusively with metric units (see Appendix G for conversion factors). If you are unsure about performing the conversion calculations, you may include a note with your application that includes the imperial measurements.

Part 9: Attachments

Map. The Ministry requires that you indicate the location of your water taking(s) on a detailed topographic map. This allows the Ministry to make informed decisions on your application based on local and regional water resources. You may provide a photocopy of the appropriate portion of the map that covers your area provided it is legible (see Appendix C for a sample map).

If your water taking is located in southern Ontario, you should use the Ontario Base Map (OBM) 1:10,000 scale topographic map series. These maps are available from the Ministry of Natural Resources for a nominal fee. They can be ordered by calling 1-800-667-1940 or online at <http://themnrstore.mnr.gov.on.ca/english/>

If your water taking is located in Northern Ontario, you should use the OBM 1:10,000 or 1:20,000 scale topographic maps available for your area. Otherwise, you may use the 1:50,000 scale National Topographic System maps provided by Natural Resources Canada. These maps are available at selected local retailers (look under "Maps" in the Yellow Pages). Copies of these maps may also be available at public libraries.

On your map, please outline the property from which you will take water. Also mark and label:

- All existing and proposed water taking locations with names of sources;
- All designated features within 500 metres of the water taking location (see form).

Description of proposed water taking operations. The description of your water taking operations does not have to be long (about 100 words), but it must convey the essential facts required for the proper processing of your application. It should identify all operations, including those where multiple sources are used and/or where water is transferred from one source and stored in another. Two sample descriptions of water taking operations are provided below:

Example A (Groundwater): "I have two wells that I use to fill up a storage pond. I normally need to pump both wells at about 200 litres per minute each for 24 hours in order to fill up my pond. The pond receives some water from rain and runoff, but does not fill naturally by seepage. When I need to irrigate my crops, I pump water from the pond at about 1000 litres per minute. During dry periods, I may empty the pond about 3 times per week. Most of my irrigation occurs in July and August, though I may irrigate a few days in September if the weather is warm and dry."

Example B (Surface Water): "My company takes water from the Green River at a constant rate of about 2000 litres per minute. We estimate that about 25% of this water is incorporated into our product and the remaining 75% is used for closed circuit cooling and then discharged back to the river about 50 metres downstream of our intake. This plant operates 8 hours per day, 5 days per week for the whole year."

EBR Registry. The description you provide may be used for the Environmental Bill of Rights (EBR) Registry. Some applications for Permits to Take Water are posted to the EBR registry for a 30-day public comment period. Your application will not usually be posted if it meets one of the following criteria:

- Water takings for less than one year
- Water takings for irrigation or agricultural crops
- Water takings for activities subject to the *Environmental Assessment Act*
- Emergency takings

For further information on the Environmental Bill of Rights Registry, please consult the following link from the Ministry of the Environment Web site:

www.ene.gov.on.ca/envision/env_reg/ebr/english/index.htm

Water taking needs. Please provide a description (with calculations) of how you determined the volume of water requested (rates, amounts and time period). For example, is your rate of water taking based on your pump capacity, on irrigation demand calculations, on pressure required for proper water distribution, or some other means? You should be able to justify why you have requested the rates specified on your application.

Water Conservation. You are encouraged to take all reasonable and practical measures to conserve water and to be up-to-date with the best management practices for water conservation for your sector (for example, whether you are implementing or will implement water conservation best water management standards and practices relevant for your sector). Contact associations that represent your sector for information on published best practices, such as the Ontario Water Works Association for the municipal sector or the Audubon Cooperative Sanctuary Program (ACSP) for Golf Courses. Fact Sheets and guides on best management practices for the agricultural sector are available through the Ontario Ministry of Agriculture and Food and the Ontario Federation of Agriculture, including information on efficient irrigation systems, staggering irrigation schedules and preparing Environmental Farm Plans.

You are required to indicate what efforts you plan to make to conserve water. Please submit accurate information on water conservation measures and practices which you have undertaken or will undertake for the duration of the permit, including:

- ◆ A statement of your goal for reducing the use, loss and/or waste of water (e.g., percentage or litres per day or per unit of production);
- ◆ A description of the best management practices applied or to be applied;
- ◆ A schedule outlining when the best management practices will be applied;
- ◆ A description of equipment and processes, such as water used for industrial production and/or irrigation system(s);
- ◆ Related information used in determining water conservation and efficiency management practices and measures.

For example, water takings for irrigation should include information on the purpose of irrigation (e.g., crop or sod), total acreage irrigated, irrigation methods, pump specifications, and other information used in determining water use efficiency. If you have completed an Environmental Farm Plan, refer to it for the relevant information on water conservation.

Part 10: Statement/Signature of Client (Applicant)

In this section the client and the technical information contact declare and sign to the accuracy and completeness of the information supplied in the application form.

It is an offence under section 98 of the OWRA to knowingly give false information to the Ministry in respect to matters under the Act and regulations. Penalties for this and other violations could result in fines up to \$50,000 for the first conviction and up to \$100,000 for each subsequent conviction where the offence is committed by an individual and \$250,000 and \$500,000 respectively where the offence is committed by a corporation. [Section 98 is a tier two offence, see section 109 of the OWRA]

Part 11: Application Fee

The fee structure for a Permit to Take Water application is as follows:

- Category 1: \$750
- Category 2: \$750
- Category 3: \$3,000

Application fees came into effect on April 1, 2005. The fees were introduced to cover the costs to process, review and issue a permit.

The following permit adjustments are free of charge:

- Administrative amendments (e.g., name/address change)
- Amendments made necessary because of actions the Director may require of an applicant to meet permit requirements
- Revocation of an existing permit

The differences in fees reflect the time that Ministry staff need to complete reviews of different types of applications. Category 1 and Category 2 applications require relatively basic evaluations compared to Category 3 applications, which must undergo highly detailed technical reviews.

Water takings for irrigation and frost protection for agricultural purposes, including vegetable crops, fruit orchards, flowers, nurseries, tree and sod farms, tender fruit and aquaculture (fish farming), are exempt from permit fees. The exemption does not apply to agribusiness and food processing operations, including vegetable and fruit canning, processing, pickling, and beverage manufacturing, wine-making and water-bottling.

You can pay the PTTW fee with a certified cheque or money order, or by credit card (VISA, Master Card, American Express), in Canadian funds, payable to the *Minister of Finance*.

Failure to pay the required fee will result in the submitted application for a Permit to Take Water being cancelled and returned.

The Director may return the fee to the applicant if:

- the application is grossly incomplete
- the application is not accompanied by the appropriate fee
- where an application has been withdrawn or refused and in the opinion of the Director the amount of time spent by Ministry staff and the expenses incurred by the Ministry in the review of the application is insignificant

APPENDIX A

Ontario Regulation 387/04, Water Taking and Transfer

Ontario Water Resources Act / Loi sur les ressources en eau de l'Ontario

ONTARIO REGULATION 387/04 *No Amendments* WATER TAKING AND TRANSFER

This Regulation is made in English only.

GENERAL

Purpose

1. The purpose of this Regulation is to provide for the conservation, protection and wise use and management of Ontario's waters, because Ontario's water resources are essential to the long-term environmental, social and economic well-being of Ontario. O. Reg. 387/04, s. 1.

Definitions

2. In this Regulation,

"application" means an application to a Director under section 34 of the Act for a permit to take water;

"Average Annual Flow Map" means the map entitled "Water Use — Average Annual Flow Conditions", dated November, 2004 and on file in the offices of the Ministry of the Environment at Toronto;

"Drinking-Water Systems" means Ontario Regulation 170/03 (Drinking-Water Systems) made under the *Safe Drinking Water Act, 2002*;

"Great Lakes Charter" means the Great Lakes Charter signed by the premiers of Ontario and Quebec and the governors of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania and Wisconsin on February 11, 1985 and amended by the Great Lakes Charter Annex, dated June 18, 2001;

"Summer Low Flow Map" means the map entitled "Water Use — Summer Low Flow Conditions", dated November, 2004 and on file in the offices of the Ministry of the Environment at Toronto. O. Reg. 387/04, s. 2.

Maps

3. (1) Copies of the Average Annual Flow Map and the Summer Low Flow Map are available for public inspection,

- (a) at the Public Information Centre of the Ministry of the Environment located at 135 St. Clair Avenue West, Toronto; and
- (b) at the Ministry of the Environment regional offices located at,
 - (i) 5775 Yonge Street, North York,
 - (ii) 133 Dalton Avenue, Kingston,
 - (iii) 435 James Street South, Thunder Bay,
 - (iv) 733 Exeter Road, London, and
 - (v) 119 King Street West, Hamilton. O. Reg. 387/04, s. 3 (1).

(2) Whether water taking or proposed water taking is located in a high use watershed or medium use watershed as shown on the Average Annual Flow Map or on the Summer Low Flow Map is determined by reference to,

- (a) the Average Annual Flow Map or the Summer Low Flow Map, as the case may be;
- (b) the geographic co-ordinates of the location; and
- (c) the applicable watershed boundaries as defined in "Metadata Reference: Ministry of Natural Resources, Land Information Ontario, 2002, Watersheds, Tertiary, Queen's Printer for Ontario", which may be accessed at <http://www.mnr.gov.on.ca/edwin/EDWINCGL.exe?IHID=10002428&Theme=WATER>. O. Reg. 387/04, s. 3 (2).

PERMITS

Matters to be considered by Director

4. (1) This section applies when a Director,

- (a) is considering an application; or
- (b) is otherwise considering under section 34 of the Act whether to cancel, amend or impose conditions on a permit to take water. O. Reg. 387/04, s. 4 (1).

(2) The Director shall consider the following matters, to the extent that information is available to the Director, and to the extent that the matters are relevant to the water taking or proposed taking in the particular case:

1. Issues relating to the need to protect the natural functions of the ecosystem, including,
 - i. the impact or potential impact of the water taking or proposed water taking on,
 - A. the natural variability of water flow or water levels,
 - B. minimum stream flow, and
 - C. habitat that depends on water flow or water levels, and
 - ii. ground water and surface water and their interrelationships that affect or are affected by, or may affect or be affected by, the water taking or proposed water taking, including its impact or potential impact on water quantity and quality.
2. Issues relating to water availability, including,
 - i. the impact or potential impact of the water taking or proposed water taking on,
 - A. water balance and sustainable aquifer yield, and
 - B. existing uses of water for large municipal residential systems and small municipal residential systems, both as defined in subsection 1 (1) of Drinking-Water Systems, for sewage disposal, livestock and other agricultural purposes, for private domestic purposes, and for other purposes,
 - ii. low water conditions, if any,
 - iii. whether the water taking or proposed water taking is in a high use watershed or a medium use watershed,
 - A. as shown on the Average Annual Flow Map, or
 - B. as shown on the Summer Low Flow Map, and
 - iv. any planned municipal use of water that has been approved,
 - A. under a municipal official plan in accordance with Part III of the *Planning Act*, or
 - B. under the *Environmental Assessment Act*.
3. Issues relating to the use of water, including,
 - i. whether water conservation is being implemented or is proposed to be implemented in the use of the water, in accordance with best water management standards and practices for the relevant sector if these are available,
 - ii. the purpose for which the water is being used or is proposed to be used, and
 - iii. if the water is not currently being used, whether there is a reasonable prospect that the person will actually use the water in the near future.

4. Other issues, including,

- i. the interests of other persons who have an interest in the water taking or proposed water taking, to the extent that the Director is made aware of those interests, and
- ii. any other matters that the Director considers relevant. O. Reg. 387/04, s. 4 (2).

(3) If clause (1) (a) applies, the Director may, in order to be able to consider the matters set out in subsection (2), require the applicant to submit further information, including plans, specifications, reports and other materials and documents relating to the water taking or proposed water taking. O. Reg. 387/04, s. 4 (3).

High use watersheds

5. (1) Subsections (3) and (4) apply to applications that relate to water taking for a purpose described in subsection (5). O. Reg. 387/04, s. 5 (1).

(2) Subsections (3) and (4) do not apply,

(a) if the applicant is a municipality; or

(b) if the application relates to water taking from,

(i) Lake Ontario, Lake Erie, Lake Huron or Lake Superior or any of their connecting channels, namely the St. Mary's River, the St. Clair River, the Detroit River and the Niagara River,

(ii) the Welland Canal,

(iii) the St. Lawrence River, or

(iv) the Ottawa River. O. Reg. 387/04, s. 5 (2).

(3) If the proposed water taking is in a high use watershed as shown on the Average Annual Flow Map, the Director shall refuse the application unless,

(a) at the time of the application, the applicant or another person held an unexpired permit to take water; and

(b) the application is for a new permit to authorize the taking of the same or a lesser amount of water at the same location and for the same purpose as was authorized by the unexpired permit. O. Reg. 387/04, s. 5 (3).

(4) If the proposed water taking is in a high use watershed as shown on the Summer Low Flow Map, the Director shall refuse the application unless,

(a) the permit includes a condition prohibiting the person from taking water during the six-week period from August 1 to September 11, or during a specified longer period that includes the six-week period; or

(b) at the time of the application, the applicant or another person held an unexpired permit to take water, and the application is for a new permit to authorize the taking of the same or a lesser amount of water at the same location and for the same purpose as was authorized by the unexpired permit. O. Reg. 387/04, s. 5 (4).

(5) The purposes referred to in subsection (1) are:

1. Beverage manufacturing, including the manufacturing or production of bottled water or water in other containers.
2. Fruit or vegetable canning or pickling.
3. Ready-mix concrete manufacturing, not including concrete manufactured at a portable ready-mix concrete manufacturing facility.
4. Aggregate processing, if the aggregate and the water that is taken are incorporated into a product in the form of a slurry.
5. Product manufacturing or production, if, in the normal course of the manufacturing or production, more than a total of 50,000 litres of the water that is taken may be incorporated in a single day into the products being manufactured or produced. O. Reg. 387/04, s. 5 (5).

(6) Paragraph 2 of subsection (5) does not apply in respect of water that is taken only for washing in the course of the canning or pickling. O. Reg. 387/04, s. 5 (6).

(7) Paragraph 4 of subsection (5) does not apply in respect of the extraction of aggregates where the water taking is incidental. O. Reg. 387/04, s. 5 (7).

(8) Paragraph 5 of subsection (5) does not apply in respect of the manufacturing or production of,

- (a) pulp and paper; or
- (b) ethanol. O. Reg. 387/04, s. 5 (8).

(9) Subsection (5) does not apply in respect of water that is taken for agricultural purposes, including aquaculture, nurseries, tree farms and sod farms. O. Reg. 387/04, s. 5 (9).

Great Lakes Charter

6. A Director who is considering an application shall ensure that Ontario's obligations under the Great Lakes Charter with respect to the application are complied with. O. Reg. 387/04, s. 6.

Notice and consultation

7. (1) Subject to subsection (2), a Director who is considering an application shall give the following persons notice of the application:

- 1. The upper-tier and lower-tier municipalities or the single-tier municipality, as the case may be, within whose area of jurisdiction the proposed water taking is located.
- 2. Any conservation authority within whose area of jurisdiction the proposed water taking is located. O. Reg. 387/04, s. 7 (1).

(2) Subsection (1) does not apply if,

- (a) the application is for a permit to take water,
 - (i) over a period of less than one year, or
 - (ii) only for irrigation of agricultural crops;
- (b) in the Director's opinion, the delay involved in giving notice to the persons listed in subsection (1) would result in,
 - (i) danger to the health or safety of any person,
 - (ii) harm or serious risk of harm to the environment, or
 - (iii) injury or damage or serious risk of injury or damage to any property; or
- (c) in the Director's opinion, the persons listed in subsection (1) have already received the information that would be included in the notice. O. Reg. 387/04, s. 7 (2).

(3) Subsection (2) does not prohibit the Director from giving any person notice of an application if the Director is of the opinion that it is consistent with the purposes of this Regulation to do so. O. Reg. 387/04, s. 7 (3).

(4) The Director may require the applicant to,

- (a) notify or consult with other persons who have an interest in the proposed water taking, including,
 - (i) persons mentioned in subsection (1), and
 - (ii) governmental authorities for other jurisdictions;
- (b) provide the Director with information on the interests of and responses of the persons notified or consulted under clause (a);
- (c) provide the Director with information on the efforts that the applicant has made to resolve any concerns raised by the persons notified or consulted under clause (a); and
- (d) provide the Director with such other information as the Director specifies. O. Reg. 387/04, s. 7 (4).

(5) Subsection (4) applies despite subsection (2), and any notice required by the Director under subsection (4) is in addition to the notice given by the Director under subsection (1). O. Reg. 387/04, s. 7 (5).

(6) Subject to section 6, the Director may give governmental authorities for other jurisdictions notice of the application and consult them about it, even if notice and consultation are not required by the Great Lakes Charter. O. Reg. 387/04, s. 7 (6).

- (7) For the purposes of subsections (1) and (6), the Director may give a person notice of an application by,
- (a) sending the person a brief description or a copy of the application by mail, by fax, by e-mail or by other electronic means; or
 - (b) delivering a brief description or a copy of the application to the person. O. Reg. 387/04, s. 7 (7).

Transition

8. (1) This Regulation applies to applications received on and after January 1, 2005. O. Reg. 387/04, s. 8 (1).
- (2) An application that is received before January 1, 2005 shall be dealt with in accordance with Ontario Regulation 285/99 (Water Taking and Transfer) made under this Act, despite its revocation by section 11 of this Regulation. O. Reg. 387/04, s. 8 (2).
- (3) This Regulation applies to decisions under section 34 of the Act to cancel, amend or impose conditions on a permit to take water, whether the permit is issued before, on or after January 1, 2005. O. Reg. 387/04, s. 8 (3).

DATA AND REPORTING

Duties of permit holders

9. (1) Every person to whom a permit has been issued under section 34 of the Act shall collect and record data on the volume of water taken daily. O. Reg. 387/04, s. 9 (1).
- (2) The data collected under subsection (1) shall be measured by a flow meter or calculated using a method acceptable to a Director. O. Reg. 387/04, s. 9 (2).
- (3) On or before March 31 in every year, every person to whom subsection (1) applies shall submit to a Director, in the form and manner approved by the Director, the data collected and recorded under subsection (1) for the previous year. O. Reg. 387/04, s. 9 (3).
- (4) Subsections (1), (2) and (3) do not affect a Director's discretion, under subsection 34 (6) of the Act, to impose terms and conditions in issuing a permit and to alter the terms and conditions of a permit after it is issued. O. Reg. 387/04, s. 9 (4).
- (5) Subsections (1) and (3) are phased in as follows:
- 1. Persons described in subsection (6) are governed by subsection (1) on and after July 1, 2005 and by subsection (3) in and after the year 2006.
 - 2. Persons described in subsection (7) are governed by subsection (1) on and after January 1, 2006 and by subsection (3) in and after the year 2007.
 - 3. Persons described in subsection (8) are governed by subsection (1) on and after January 1, 2007 and by subsection (3) in and after the year 2008. O. Reg. 387/04, s. 9 (5).
- (6) Paragraph 1 of subsection (5) applies to every person to whom a permit has been issued under section 34 of the Act for taking water for any of the following purposes:
- 1. Large municipal residential systems and small municipal residential systems, both as defined in Drinking-Water Systems,
 - 2. The purposes listed in subsection 5 (5), subject to subsections 5 (6) to (9).
 - 3. The operation of a plant governed by any of the following regulations, made under the *Environmental Protection Act*:
 - i. Ontario Regulation 560/94 (Effluent Monitoring and Effluent Limits — Metal Mining Sector).
 - ii. Ontario Regulation 215/95 (Effluent Monitoring and Effluent Limits — Electric Power Generation Sector).
 - iii. Ontario Regulation 561/94 (Effluent Monitoring and Effluent Limits — Industrial Minerals Sector).
 - iv. Ontario Regulation 64/95 (Effluent Monitoring and Effluent Limits — Inorganic Chemical Sector).
 - v. Ontario Regulation 214/95 (Effluent Monitoring and Effluent Limits — Iron and Steel Manufacturing Sector).
 - vi. Ontario Regulation 562/94 (Effluent Monitoring and Effluent Limits — Metal Casting Sector).
 - vii. Ontario Regulation 63/95 (Effluent Monitoring and Effluent Limits — Organic Chemical Manufacturing Sector).

viii. Ontario Regulation 537/93 (Effluent Monitoring and Effluent Limits — Petroleum Sector).

ix. Ontario Regulation 760/93 (Effluent Monitoring and Effluent Limits — Pulp and Paper Sector). O. Reg. 387/04, s. 9 (6).

(7) Paragraph 2 of subsection (5) applies to every person to whom a permit has been issued under section 34 of the Act for taking water for any of the following purposes:

1. Any industrial or commercial purpose not described in subsection (6).
2. Wildlife and conservation purposes. O. Reg. 387/04, s. 9 (7).

(8) Paragraph 3 of subsection (5) applies to every person to whom a permit has been issued under section 34 of the Act for taking water for any of the following purposes:

1. Any of the following, as defined in subsection 1 (1) of Drinking-Water Systems:
 - i. A small municipal non-residential system.
 - ii. A large municipal non-residential system.
 - iii. A small non-municipal non-residential system.
 - iv. A large non-municipal non-residential system.
 - v. A non-municipal seasonal residential system.
 - vi. A non-municipal year-round residential system.
2. Agriculture.
3. Any purpose not described in subsection (6) or (7). O. Reg. 387/04, s. 9 (8).

WATER TRANSFER

Water transfer

10. (1) For the purposes of this section, Ontario is divided into the following three water basins:

1. The Great Lakes-St. Lawrence Basin, which consists of Lake Ontario, Lake Erie, Lake Huron, Lake Superior, the St. Lawrence River and the part of Ontario the water of which drains into any of them, including the Ottawa River and the part of Ontario the water of which drains into the Ottawa River.
2. The Nelson Basin, which consists of the part of Ontario the water of which drains into the Nelson River.
3. The Hudson Bay Basin, which consists of the part of Ontario, not included in the Nelson Basin, the water of which drains into Hudson Bay or James Bay. O. Reg. 387/04, s. 10 (1).

(2) No person shall use water by transferring it out of a water basin. O. Reg. 387/04, s. 10 (2).

(3) Subsection (2) does not apply to water that is used in the water basin to manufacture or produce a product that is then transferred out of the water basin. O. Reg. 387/04, s. 10 (3).

(4) For the purpose of subsection (3), potable or other water is not a manufactured or produced product. O. Reg. 387/04, s. 10 (4).

(5) Subsection (2) does not apply to water that is being transported and that is necessary for the operation of the vehicle, vessel or other form of transport that the water is being transported in, including water that is for the use of people or livestock in or on the vehicle, vessel or other form of transport. O. Reg. 387/04, s. 10 (5).

(6) Subsection (2) does not apply to water packaged in a container having a volume of 20 litres or less. O. Reg. 387/04, s. 10 (6).

(7) Subsection (2) does not apply to an undertaking that commenced before January 1, 1998 if the amount of water transferred out of a water basin by the undertaking in any calendar year after December 31, 1997 does not exceed the highest amount of water transferred out of the water basin by the undertaking in any calendar year after December 31, 1960 and before January 1, 1998. O. Reg. 387/04, s. 10 (7).

(8) Subsection (2) does not apply to water taken pursuant to the order of the Lieutenant Governor in Council dated October 2, 1913 respecting the Greater Winnipeg Water District. O. Reg. 387/04, s. 10 (8).

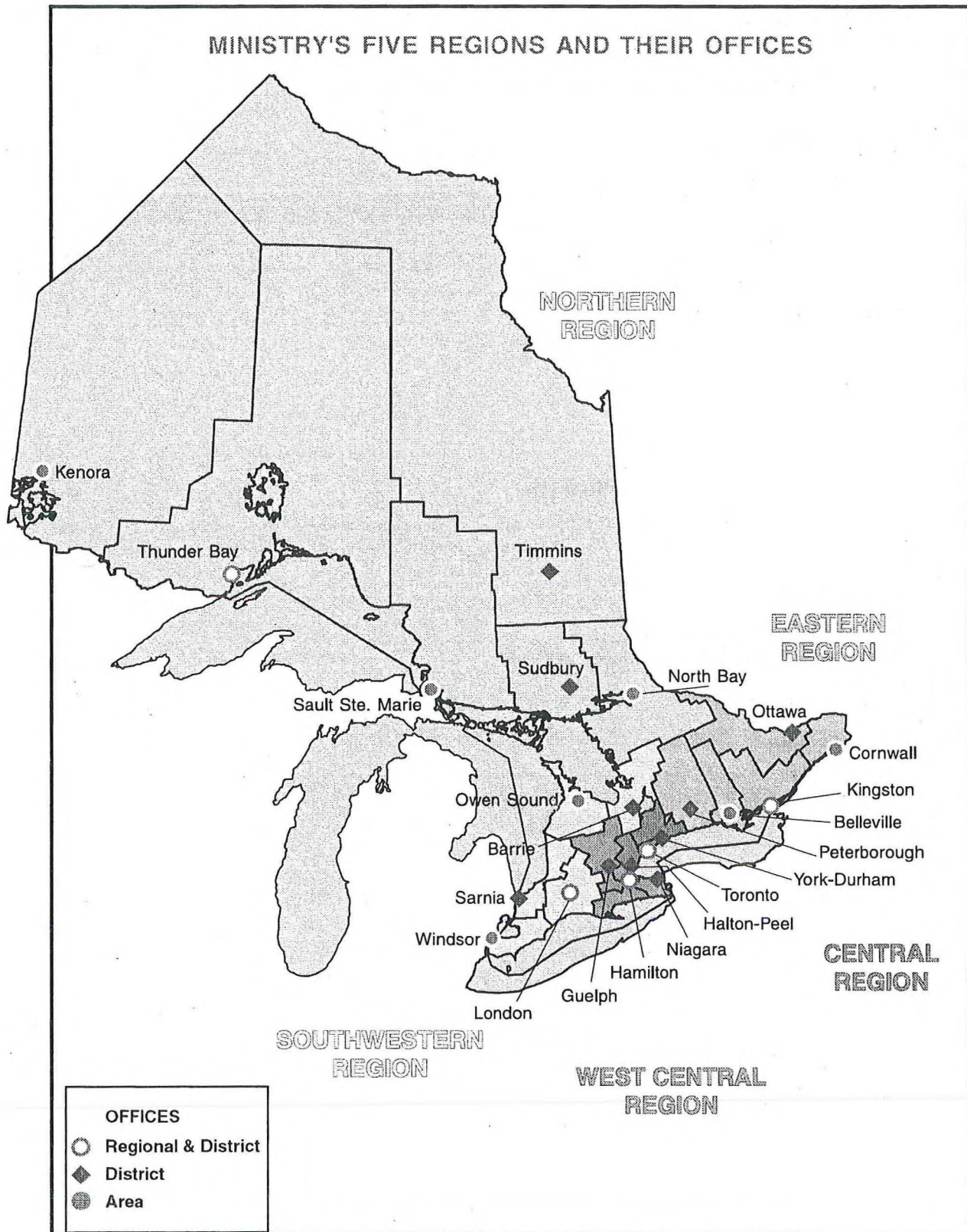
11. OMITTED (REVOKES OTHER REGULATIONS). O. Reg. 387/04, s. 11.

12. OMITTED (PROVIDES FOR COMING INTO FORCE OF PROVISIONS OF THIS REGULATION). O. Reg. 387/04, s. 12.

APPENDIX B

Location of Ministry of the Environment Regional Offices

Ministry of the Environment



The Ministry's Regional Offices are located as follows:

- **Eastern Region**
P.O. Box 820, 133 Dalton Ave.
Kingston, ON K7L 4X6
Telephone: 613-549-4000; 1-800-267-0974
Fax: 613-548-6908

- **Central Region**
5775 Yonge St., 8th Floor
Toronto, ON M2M 4J1
Phone: 416-326-6700; 1-800-810-8048
Fax: 416-325-6345

- **Northern Region**
435 James St. S., Suite 331
Thunder Bay, ON P7E 6S7
Telephone: 807-475-1205; 1- 800-875-7772
Fax: 807-475-1754

199 Larch St., Suite 1101
Sudbury, ON P3E 5P9
Telephone: 705-564-3237; 1-800-890-8516
Fax: 705-564-4180

- **West Central Region**
119 King St. W., 12th Floor
Hamilton, ON L8P 4Y7
Telephone: 905-521-7640; 1- 800-668-4557
Fax: 905-521-7820

- **Southwest Region**
733 Exeter Road
London, ON N6E 1L3
Telephone: 519-873-5000; 1-800-265-7672
Fax: 519-873-5020

Water Use - Summer Low Flow Conditions Consommation d'eau - Conditions du débit bas d'été

This map is intended to illustrate the water use classification of Ontario's tertiary watersheds only for the purposes of Ontario Regulation 387/04 (Water Taking and Transfer), made under the Ontario Water Resources Act. The Water Taking and Transfer Regulation is available at www.e-laws.gov.on.ca.

Cette carte est conçue seulement à titre d'illustration de la classification de la consommation d'eau des bassins hydrographiques tertiaires de l'Ontario, aux fins du règlement 387/04 (prise et transfert d'eau), en application de la loi sur les ressources en eau. Le règlement concernant la prise et le transfert d'eau est disponible en ligne à www.e-laws.gov.on.ca.



Water Use by Tertiary Watershed / Consommation d'eau par les bassins tertiaires

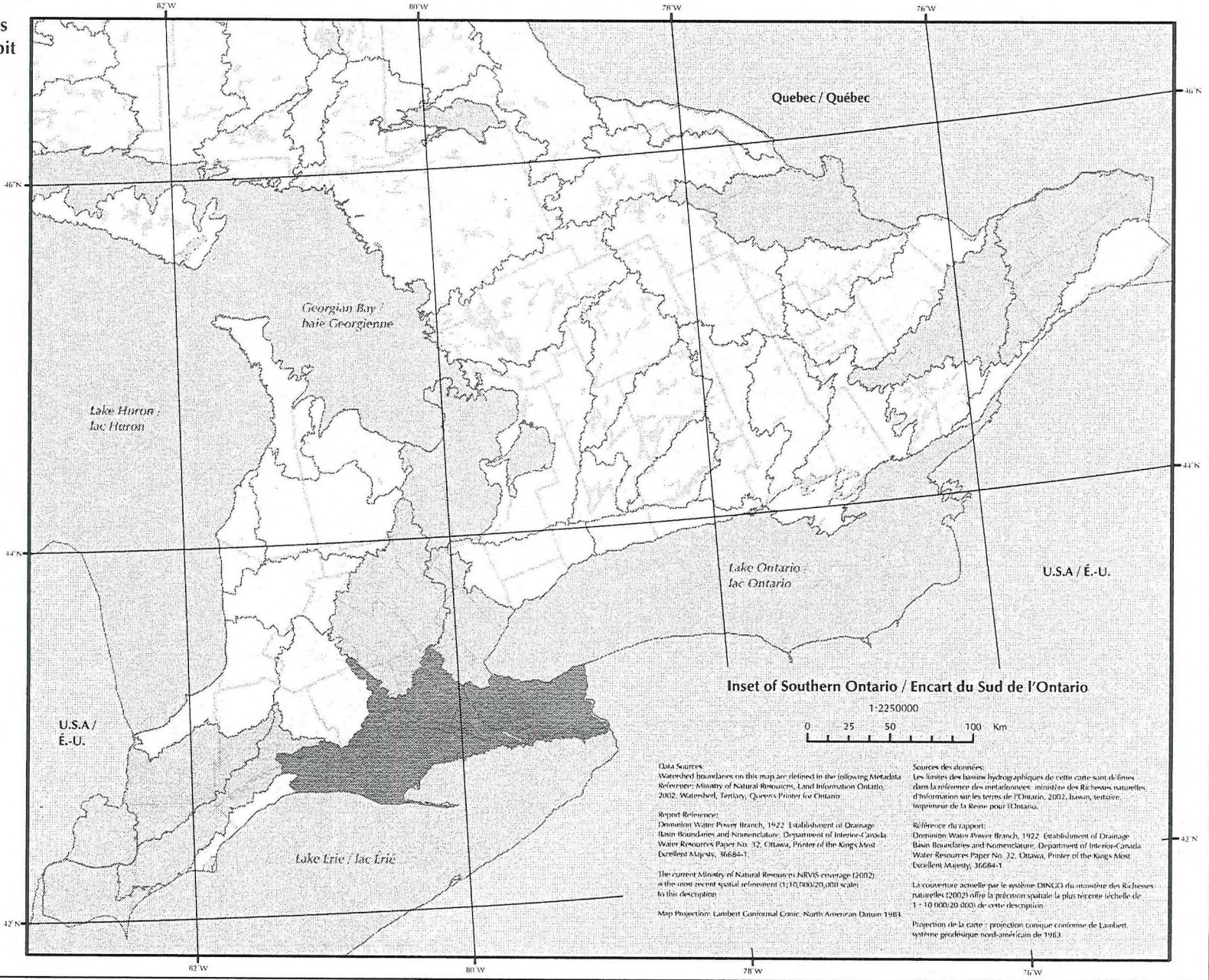
- Low / Basse
- Medium / Moyenne
- High / Forte
- Upper-Tier Municipal Boundary /
 Limite de la municipalité de palier supérieur

© 2004, Queen's Printer for Ontario. Published November 2004.

This map was produced by Water Resources Information,
 Ministry of Natural Resources.

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Cette carte a été produite par l'Information sur les ressources en eau, Ministère des
 Ressources naturelles.



Water Use - Average Annual Flow Conditions Consommation d'eau - Conditions du débit annuel moyen

This map is intended to illustrate the water use classification of Ontario's tertiary watershed only for the purposes of Ontario Regulation 387/04 (Water Taking and Transfer), made under the Ontario Water Resources Act. The Water Taking and Transfer Regulation is available at www.e-laws.gov.on.ca.

Cette carte a pour seul but d'illustrer la classification de la consommation d'eau des bassins hydrographiques tertiaires de l'Ontario, aux fins du règlement 387/04 (prise et transfert d'eau), en application de la Loi sur les ressources en eau. Le règlement concernant la prise et le transfert d'eau est disponible en ligne à www.e-laws.gov.on.ca.



Water Use by Tertiary Watershed / Consommation d'eau par les bassins tertiaires

- Low / Basse
- Medium / Moyenne
- High / Forte

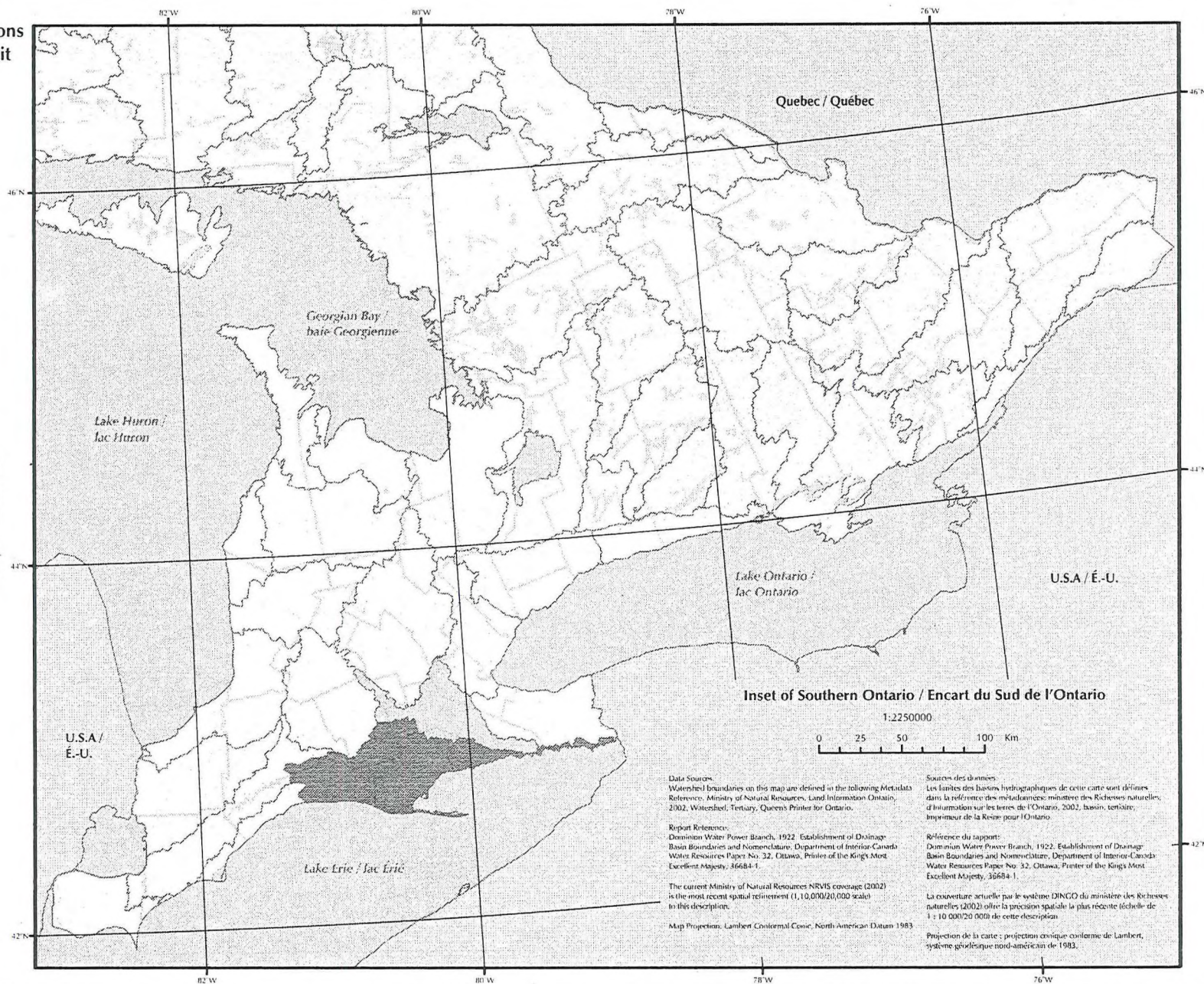
Upper-Tier Municipal Boundary /
Limite de la municipalité de palier supérieur

© 2004, Queen's Printer for Ontario. Published November 2004.

This map was produced by Water Resources Information,
Ministry of Natural Resources

© 2004, Imprimeur de la Reine pour l'Ontario. Publié en novembre 2004.

Carte produite par l'information sur les ressources en eau, Ministère des
Richesses naturelles



Inset of Southern Ontario / Encart du Sud de l'Ontario

1:2250000

0 25 50 100 Km

Data Sources:
Watershed boundaries on this map are derived in the following Metadata
Reference: Ministry of Natural Resources, Land Information Ontario,
2002, Watershed, Tertiary, Queen's Printer for Ontario.

Report References:
Dominion Water Power Branch, 1922, Establishment of Drainage
Basin Boundaries and Nomenclature, Department of Interior-Canada
Water Resources Paper No. 32, Ottawa, Printer of the King's Most
Excellent Majesty, 366B4-1.

The current Ministry of Natural Resources NRVS coverage (2002)
is the most recent spatial refinement (1:10,000/20,000 scale)
in this description.

Map Projection: Lambert Conformal Conic, North American Datum 1983

Sources des données:
Les limites des bassins hydrographiques de cette carte sont dérivées
dans la référence des métadonnées: ministère des Richesses naturelles,
d'information sur les terres de l'Ontario, 2002, bassins, tertiaire,
Imprimeur de la Reine pour l'Ontario.

Référence du rapport:
Dominion Water Power Branch, 1922, Establishment of Drainage
Basin Boundaries and Nomenclature, Department of Interior-Canada
Water Resources Paper No. 32, Ottawa, Printer of the King's Most
Excellent Majesty, 366B4-1.

La couverture actuelle par le système DINCOS du ministère des Richesses
naturelles (2002) offre la précision spatiale la plus récente (échelle de
1 : 10 000/20 000) de cette description.

Projection de la carte : projection conique conforme de Lambert,
système géodésique nord-américain de 1983.

APPENDIX C

Sample Application for Permit to Take Water



Ontario

Ministry of the
Environment

Ce formulaire est disponible en français

Application for Permit to Take Water

For Office Use Only			
Reference Number	Payment Received	Date (y/m/d)	Initials

General Information and Instructions

General:

Information requested in this form is collected under the authority of the *Ontario Water Resources Act, R.S.O. 1990 (OWRA)* and the *Environmental Bill of Rights, C. 28, Statutes of Ontario, 1993, (EBR)* and will be used to evaluate applications for a Permit to Take Water as required by Section 34 (OWRA).

Instructions:

- When completing this form, please refer to the "Guide to Permit to Take Water Application Form" (referred to as the Guide). Questions regarding completion and submission of the application should be directed to your local Regional Office of the Ministry of the Environment (see Guide for information).
- This form must be completed with respect to all the requirements of the Guide in order for it to be considered as an application for approval. **INCOMPLETE APPLICATIONS WILL BE RETURNED TO THE APPLICANT.**
- A complete application consists of:
 - a completed and signed application form,
 - all required supporting information identified in this form and the Guide, and
 - a certified cheque or money order, in Canadian funds, made payable to the Minister of Finance for the application fee when required. Payment may also be made by VISA, Mastercard or American Express.

The Ministry may require additional information during the technical review of any application initially accepted as complete.

- The original application, along with the supporting information and the application fee, must be sent to:

The Ministry of the Environment,
Attention: Permit to Take Water
Director, Environmental Assessment and Approvals Branch,
2 St. Clair Avenue West, Floor 12A, Toronto, Ontario M4V 1L5.

- Information contained in this application is not considered confidential and will be made available to the public upon request. Information submitted as supporting information may be claimed as confidential but will be subject to the Freedom of Information and Protection of Privacy Act (FOIPPA) and EBR. If you do not claim confidentiality at the time of submitting the information, the Ministry may make the information available to the public without further notice to you. If you are identifying confidential material, please indicate why you believe the information is confidential.

1. Permit Administration

Please indicate if this application is for a:

- ☐ New Permit
☐ Amendment to Permit, attach photocopy of permit.
☒ Renewal of Permit, attach photocopy of permit.

2. Classification

Classification	Fee Required	No Fee Required
☒ Category 1	☐ \$750	☒ Reason <u>Agriculture</u>
☐ Category 2	☐ \$750	☐ Reason _____
☐ Category 3	☐ \$3,000	☐ Reason _____

3. Client Information

Client Name (legal name of individual or organization as evidenced by legal documents) John Smith		Business Identification Number						
Business Name (the name under which the entity is operating or trading if different from the Client Name - also referred to as trade name)								
Client Type:	☐ Corporation ☒ Individual ☐ Partnership ☐ Sole Proprietor	☐ Federal Government ☐ Municipal Government ☐ Provincial Government ☐ Other (describe): _____						
		NAICS Code <table border="1"> <tr> <td>1</td> <td>1</td> <td>1</td> <td>9</td> <td>9</td> <td>3</td> </tr> </table>	1	1	1	9	9	3
1	1	1	9	9	3			

4. Client Physical Address Complete A, B and C

A. Civic Address - Street Information Street Number/Name/Type/Direction/Unit/Suite 5432 Hwy #53				
B. Municipality/Unorganized Township Dunnville	County/District Haldimand	Province/State Ontario	Country Canada	Postal Code L3H 5Y2
C. Telephone Number (including area code) (905) XYZ-5432	Extension	Fax Number (including area code) (905) XYZ-4321	E-mail Address	

5. Client Mailing Address ☐ Same as Client Physical Address, or complete A and B.

A. Civic Address - Street Information Street Number/Name/Type/Direction/Unit/Suite/Emergency (911) location number and street RR#2				
B. Municipality Dunnville	Province/State Ontario	Country Canada	Postal Code L3H 5Y2	

6. Project Technical Contact Information ☒ Same as Client Name, or complete below

A. Name		Company		
Contact Address - Street Information ☐ Same as Client Mailing Address, or complete A, B, C and D below				
B. Street Number/Name/Type/Direction/Unit/Suite				
C. Municipality	Province/State	Country	Postal Code	
D. Telephone Number (including area code)	Extension	Fax Number (including area code)	E-mail Address	

7. Source(s) Information. A separate Part 7 section must be completed for each source. Note: Photocopy blank Part 7 section prior to completion if your application includes more than one source (location where water taking occurs).

Water Taking sources included in this application: (Do not include domestic use wells that do not require a permit)				
Total number of wells 1	Total number of lake intakes	Total number of ponds	Total number of watercourse intakes 1	
Source Location Information (if multiple sources are included in application, provide information for each source)				
Street Number/Name/Type/Direction/Unit/Suite				
Lot Lot 1	Conc. Con 12	Part	Reference Plan	
Municipality/Unorganized Township Dunnville	County/District Haldimand	Original Geographic Township Dunn Township		
Geographic (GPS) Coordinates (to be provided in Datum NAD83)				
Method of Collection GPS	Accuracy Estimate 10m	UTM Zone 17	Easting 614,767.3	Northing 4,751,949.4
Is the Client the owner of the site(s) where the water taking will occur?		☒ Yes ☐ No If "No," attach the owner's name, address and consent for the applicant to access the water taking location.		
Is the Site located in the Oak Ridges Moraine Area as defined by the Ontario Regulation 01/02 made under the Oak Ridges Moraine Conservation Act (2001)? ☒ No ☐ Yes				
Is the Site located in an area of development control as defined by the Niagara Escarpment Planning Development Act (NEPDA)? ☒ No ☐ Yes				
Are you aware of any complaints or impacts resulting from water takings at this location? ☒ No ☐ Yes If "Yes," describe:				
Is water packaged into a container (bottled water, tanks)? ☒ No ☐ Yes If "Yes," size of containers: ☐ 20 litres or greater ☐ less than 20 litres				
If no wells are located within 500 m of the water taking location, provide the distance to the nearest well _____ m.		Is municipal water available to all dwellings within 500m of the water taking location? ☐ Yes ☒ No ☐ Unknown		
Estimated start date of taking June 15, 2005	Taking to extend for a period of 5 ☐ days ☐ weeks ☐ months ☒ years ☐ indefinite			
Is activity subject to the Environmental Assessment Act? ☒ No ☐ Yes If "Yes," attach approval or Notice of Completion.				
List any public consultation/notification (such as public hearings, notification of First Nations etc) that has occurred related to the proposed water taking.				

☒ Well:

Well Name / Identifier Well #1	Water Well Record Number 6801234	If not available, provide name of property owner at time of well construction		
Has this well been deepened?	☒ No ☐ Yes	If "Yes," Date of Deepening _____		
Type of Well:	☒ drilled ☐ bored ☐ dug ☐ driven or jetted (sandpoints/wellpoints) If "driven or jetted" is selected, Total number of sandpoints/wellpoints _____ Number of interconnected sandpoint/wellpoint systems _____			
Can you measure the depth to water in this well?	☐ No ☒ Yes	If Yes, Depth to Static Water Level 12 m	Date Measured March 12/05	Has a pumping test been done? ☒ No ☐ Yes If "Yes," attach report.

☐ Lake:

Lake Name

☐ Watercourse (stream, municipal ditch, open drain, etc):

Watercourse Name <u>Blue River</u>	Tributary to <u>Grand River</u>
Does flow in the watercourse stop at any time during the year? ☒ No ☐ Yes. If "Yes," during which months?	For what period of time?
Do you move/relocate the water intake (pump)? ☒ No ☐ Yes. If "Yes," show primary intake and any secondary locations on a map.	

☐ Pond/Reservoir:

Pond Name/Identifier	Was pond constructed (man-made)? If "Yes," date constructed. ☐ No ☐ Yes		
Pond Size: Average Length	Average Width	Average Depth of Water	Maximum Depth of Water
Pond Type: Select diagram which most closely resembles your pond.			
 ☐ online	 ☐ by-pass	 ☐ connected	 ☐ dugout
Source of pond water (How does water enter the pond?) (mark all that apply):			
☐ seepage / springs / groundwater			
☐ surface water runoff (including tile drains, does not include watercourse or open channel)			
☐ pumped water (if water is pumped into a pond, complete section information for source from which water is pumped (ie. well or lake or watercourse))			
☐ flowing water (watercourse, open drains, ditches, etc)			
If source,			
Does water flow into the pond (inflow)?	If "Yes," is there a control structure to regulate the inflow?	If "Yes," describe.	
☐ Yes ☐ No	☐ No ☐ Yes		
Does water flow out of the pond (outflow)?	If "Yes," is there a control structure to regulate the outflow?	If "Yes," describe.	
☐ Yes ☐ No	☐ No ☐ Yes		

Purpose Options

Water Source Information - Table A (Units in Litres)1895 (03/2005)

9. Attachments

The following must be attached for all applications (Category 1, 2 and 3) to be considered complete.



Map Requirements

On a 1:10 000 OBM (Ontario Base Map) (1:50 000 map only acceptable in locations where 1:10 000 is not obtainable), mark and label

- all existing and proposed water taking locations with sources corresponding with source name.
- all of the following features within 500m of each source: all environmental features including: existing wells (indicate use of existing well), springs, watercourses, wetlands, water bodies, property lines, locations and names of property owners, nearest road intersection, dwellings.



Describe in detail how, where and when all water is obtained, stored, transferred, used and returned to the environment (if applicable). Details must include the source of all water takings (and corresponding source name if applicable), purpose of the water taking, period of water taking, and maximum quantity requested (see Guide for further instruction).

Note: If your application is subject to posting on the Environmental Bill of Rights Registry, this description will be used to create the Proposal Notice. The ministry may change the wording as required, to meet the EBR posting requirements.



Describe how water taking needs (rates, amounts and time periods) were determined. Provide all relevant information and calculations to demonstrate the water takings requested are warranted. Calculation worksheets are available. Refer to Appendix E of guide.



Attach completed conservation schedule.

Category 2 Only



Completed schedule signed by a Qualified Person.

Category 3 Only



Study _____

10. Statement/Signature of Client (Applicant)

I, the undersigned hereby declare that to the best of my knowledge, the information contained herein and the information submitted in support of this application is complete and accurate in every way.

Print Name

John Smith

Signature

John Smith

Date

April 2/05

The project technical information contact identified in Section 6 of this form is authorized to act on my behalf for the purpose of obtaining this approval.

Print Name

Signature

Date



Key to the Map

- | | |
|--|---|
| ① My irrigation well
(water taking source #1) | ⑤ Wilson's home well |
| ② My irrigation taking
from the river
(water taking source #2) | ⑥ Schmidt's water
taking from the river. |
| ③ Johnson's livestock well | ⑦ Anderson's home well |
| ④ Martin's home well | ⑧ Chang's home |

APPENDIX D

Application Form for Permit to Take Water



Ce formulaire est disponible en français

For Office Use Only			
Reference Number	Payment Received	Date (y/m/d)	Initials

General Information and Instructions

General:

Information requested in this form is collected under the authority of the *Ontario Water Resources Act, R.S.O. 1990 (OWRA)* and the *Environmental Bill of Rights, C. 28, Statutes of Ontario, 1993, (EBR)* and will be used to evaluate applications for a Permit to Take Water as required by Section 34 (OWRA).

Instructions:

1. When completing this form, please refer to the "Guide to Permit to Take Water Application Form" (referred to as the Guide). Questions regarding completion and submission of the application should be directed to your local Regional Office of the Ministry of the Environment (see Guide for information).
2. This form must be completed with respect to all the requirements of the Guide in order for it to be considered as an application for approval. **INCOMPLETE APPLICATIONS WILL BE RETURNED TO THE APPLICANT.**
3. A complete application consists of:
 - (1) a completed and signed application form,
 - (2) all required supporting information identified in this form and the Guide, and
 - (3) a certified cheque or money order, in Canadian funds, made payable to the Minister of Finance for the application fee when required. Payment may also be made by VISA, Mastercard or American Express.

The Ministry may require additional information during the technical review of any application initially accepted as complete.

4. The original application, along with the supporting information and the application fee, must be sent to:

**The Ministry of the Environment,
Attention: Permit to Take Water
Director, Environmental Assessment and Approvals Branch,
2 St. Clair Avenue West, Floor 12A, Toronto, Ontario M4V 1L5.**

5. Information contained in this application is not considered confidential and will be made available to the public upon request. Information submitted as supporting information may be claimed as confidential but will be subject to the Freedom of Information and Protection of Privacy Act (FOIPPA) and EBR. If you do not claim confidentiality at the time of submitting the information, the Ministry may make the information available to the public without further notice to you. If you are identifying confidential material, please indicate why you believe the information is confidential.

1. Permit Administration

Please indicate if this application is for a:

- ☐ New Permit
- ☐ Amendment to Permit, attach photocopy of permit.
- ☐ Renewal of Permit, attach photocopy of permit.

2. Classification

Classification

Fee Required

No Fee Required

☐ Category 1

☐ \$750

☐ Reason _____

☐ Category 2

☐ \$750

☐ Reason _____

☐ Category 3

☐ \$3,000

3. Client Information

Client Name (legal name of individual or organization as evidenced by legal documents)		Business Identification Number	
Business Name (the name under which the entity is operating or trading if different from the Client Name - also referred to as trade name)			
Client Type:	☐ Corporation	☐ Federal Government	NAICS Code
	☐ Individual	☐ Municipal Government	
	☐ Partnership	☐ Provincial Government	
	☐ Sole Proprietor	☐ Other (describe): _____	

4. Client Physical Address Complete A, B and C

A. Civic Address - Street Information Street Number/Name/Type/Direction/Unit/Suite Emergency (911) location number and street					
B. Municipality/Unorganized Township		County/District	Province/State	Country	Postal Code
C. Telephone Number (including area code)		Extension	Fax Number (including area code)	E-mail Address	

5. Client Mailing Address ☐ Same as Client Physical Address, or complete A and B.

A. Civic Address - Street Information Street Number/Name/Type/Direction/Unit/Suite/Emergency (911) location number and street/P.O. Box/Rural Route Number				
B. Municipality		Province/State	Country	Postal Code

6. Project Technical Contact Information ☐ Same as Client Name, or complete below

A. Name		Company		
Contact Address - Street Information ☐ Same as Client Mailing Address, or complete A, B, C and D below				
B. Street Number/Name/Type/Direction/Unit/Suite				
C. Municipality		Province/State	Country	Postal Code
D. Telephone Number (including area code)		Extension	Fax Number (including area code)	E-mail Address

7. Source(s) Information. A separate Part 7 section must be completed for each source. Note: Photocopy blank Part 7 section prior to completion if your application includes more than one source (location where water taking occurs).

Water Taking sources included in this application: (Do not include domestic use wells that do not require a permit)			
Total number of wells	Total number of lake intakes	Total number of ponds	Total number of watercourse intakes
Source Location Information (if multiple sources are included in application, provide information for each source)			
Street Number/Name/Type/Direction/Unit/Suite			
Lot	Conc.	Part	Reference Plan
Municipality/Unorganized Township		County/District	Original Geographic Township
Geographic (GPS) Coordinates (to be provided in Datum NAD83)			
Method of Collection	Accuracy Estimate	UTM Zone	Easting Northing
Is the Client the owner of the site(s) where the water taking will occur?		If "No," attach the owner's name, address and consent for the applicant to access the water taking location.	
☐ Yes ☐ No			
Is the Site located in the Oak Ridges Moraine Area as defined by the Ontario Regulation 01/02 made under the <i>Oak Ridges Moraine Conservation Act</i> (2001)?			
☐ No ☐ Yes			
Is the Site located in an area of development control as defined by the Niagara Escarpment Planning Development Act (NEPDA)?			
☐ No ☐ Yes			
Are you aware of any complaints or impacts resulting from water takings at this location?			
☐ No ☐ Yes If "Yes," describe:			
Is water packaged into a container (bottled water, tanks)?			
☐ No ☐ Yes If "Yes," size of containers: ☐ 20 litres or greater ☐ less than 20 litres			
If no wells are located within 500 m of the water taking location, provide the distance to the nearest well _____ m.		Is municipal water available to all dwellings within 500m of the water taking location? ☐ Yes ☐ No ☐ Unknown	
Estimated start date of taking	Taking to extend for a period of _____ ☐ days ☐ weeks ☐ months ☐ years ☐ indefinite		
Is activity subject to the <i>Environmental Assessment Act</i> ? ☐ No ☐ Yes If "Yes," attach approval or Notice of Completion.			
List any public consultation/notification (such as public hearings, notification of First Nations etc) that has occurred related to the proposed water taking.			

☐ Well:			
Well Name / Identifier	Water Well Record Number	If not available, provide name of property owner at time of well construction	
Has this well been deepened?		If "Yes," Date of Deepening _____	
☐ No ☐ Yes			
Type of Well: ☐ drilled ☐ bored ☐ dug ☐ driven or jetted (sandpoints/wellpoints) If 'driven or jetted' is selected, Total number of sandpoints/wellpoints _____, Number of interconnected sandpoint/wellpoint systems _____.			
Can you measure the depth to water in this well?	If Yes, Depth to Static Water Level	Date Measured	Has a pumping test been done?
☐ No ☐ Yes			☐ No ☐ Yes If "Yes," attach report.

☐ Lake:

Lake Name

☐ Watercourse (stream, municipal ditch, open drain, etc):

Watercourse Name

Tributary to

Does flow in the watercourse stop at any time during the year?

☐ No

☐ Yes, If "Yes," during which months?

For what period of time?

Do you move/relocate the water intake (pump)?

☐ No

☐ Yes

If "Yes," show primary intake and any secondary locations on a map.

☐ Pond/Reservoir:

Pond Name/Identifier

Was pond constructed (man-made)? If "Yes," date constructed.

☐ No

☐ Yes

Pond Size:

Average Length

Average Width

Average Depth of Water

Maximum Depth of Water

Pond Type:

Select diagram which most closely resembles your pond.



☐ online



☐ by-pass



☐ connected



☐ dugout

Source of pond water (How does water enter the pond?) (mark all that apply):

☐

seepage / springs / groundwater

☐

surface water runoff (including tile drains, does not include watercourse or open channel)

☐

pumped water (if water is pumped into a pond, complete section information for source from which water is pumped (ie: well or lake or watercourse, etc.))

☐

flowing water (watercourse, open drains, ditches, etc)

If source,

Does water flow into the pond (inflow)?

☐ Yes

☐ No

If "Yes," is there a control structure to regulate the inflow?

☐ No

☐ Yes

If "Yes," describe.

Does water flow out of the pond (outflow)?

☐ Yes

☐ No

If "Yes," is there a control structure to regulate the outflow?

☐ No

☐ Yes

If "Yes," describe.

Purpose Options

Agriculture:	irrigation of (includes frost protection): field and pasture crops; fruit orchard; market garden/flowers; nursery; sod farm; tender fruits; tobacco, other (must specify)
Commercial:	aquaculture, bottled water, golf course irrigation, mall/business; snowmaking, other (must specify)
Dewatering:	pits and quarries; construction; other (must specify)
Industrial:	aggregate washing, brewing/soft drinks, cooling water, food processing, manufacturing; pipeline testing; power generation; other (must specify)
Institutional:	school, hospital, other (must specify)
Recreation:	aesthetic, fish pond, wetland, other (must specify)
Remediation:	groundwater; other (must specify)
Water Supply:	campground, communal, municipal, other (must specify)
Miscellaneous:	dam/reservoir, heat pump, wildlife conservation, pumping test, other (must specify)

[illegible]

9. Attachments

The following must be attached for all applications (Category 1, 2 and 3) to be considered complete.

☐

Map Requirements

On a 1:10 000 OBM (Ontario Base Map) (1:50 000 map only acceptable in locations where 1:10 000 is not obtainable), mark and label

- all existing and proposed water taking locations with sources corresponding with source name.
- all of the following features within 500m of each source: all environmental features including: existing wells (indicate use of existing well), springs, watercourses, wetlands, water bodies, property lines, locations and names of property owners, nearest road intersection, dwellings.

☐

Describe **in detail** how, where and when all water is obtained, stored, transferred, used and returned to the environment (if applicable). Details must include the source of all water takings (and corresponding source name if applicable), purpose of the water taking, period of water taking, and maximum quantity requested (see Guide for further instruction).

Note: If your application is subject to posting on the Environmental Bill of Rights Registry, this description will be used to create the Proposal Notice. The ministry may change the wording as required, to meet the EBR posting requirements.

☐

Describe how water taking needs (rates, amounts and time periods) were determined. Provide all relevant information and calculations to demonstrate the water takings requested are warranted. Calculation worksheets are available. Refer to Appendix E of guide.

☐

Attach completed water conservation Schedule 1.

Category 2 Only

☐

Completed Schedule 2 signed by a Qualified Person.

Category 3 Only

☐

Study _____

10. Statement/Signature of Client (Applicant)

I, the undersigned, hereby declare that to the best of my knowledge:

- The information contained herein and the information submitted in support of this application is complete and accurate in every way and I am aware of the penalties against providing false information.
- The project technical information contact identified in Section 6 of this form is authorized to act on my behalf for the purpose of obtaining this approval.
- I have used the most recent application form (as obtained from the Ministry of the Environment Internet site at <http://www.ene.gov.on.ca> (or the Environmental Assessment and Approvals Branch at 1-800-461-6290) and I have included all necessary information identified on this form and in the Guidance Material.

Print Name

Signature

Date

11. Application Fee

Application Category	Application Fee Amount		
Method of Payment	☐ Certified Cheque	☐ Money Order	☐ VISA ☐ Master Card ☐ American Express
Credit Card Information Name on Card (please print)	Credit Card Number	Expiry Date (mmm/year)	
Cardholder Signature		Date	

For Office Use Only			
Reference Number	Payment Received	Date (y/m/d)	Initials

APPENDIX E

Schedule for Water Conservation Measures

Schedule 1 – Implementation of Water Conservation in accordance with Best Management Practices and Standards for the Relevant Sector

General Information and Instructions

Section 1: General Information

Information on this Schedule is collected under the authority of the *Ontario Water Resources Act, R.S.O. 1990 (OWRA)*, and the new *Environmental Bill of Rights, C. 28. Statutes of Ontario, 1993*, and will be used to evaluate applications for a Permit to Take Water as required by Section 34 (OWRA).

Instructions:

1. This Schedule forms part of the Permit to Take Water application form and is subject to all provisions and instructions where applicable.
2. All questions of Section 2 of this Schedule must be answered for this Schedule to be considered complete.

Purpose:

The purpose of this Schedule is to allow persons applying for a permit required by the Ministry to document in the application all water conservation measures and practices that are currently being undertaken or that is anticipated to be undertaken for the duration of the permit.

Persons applying for a permit are encouraged to take all reasonable and practical measures to conserve water and to be up to date with sector-specific best management practices and standards for water conservation (i.e. whether you are currently implementing or anticipate implementing water conservation best water management standards and practices relevant to your sector).

Various sector associations publish information on best practices that may be useful in determining practices and standards for water conservation. Examples of these sector-specific associations include the following:

- **Municipal Sector** – Ontario Water Works Association
- **Agricultural Sector** – Ontario Ministry of Agriculture (Fact Sheets and Guides on Best Management Practices containing information on efficient irrigation systems, staggering irrigation schedules and preparing Environmental Farm Plans)
- **Other Sectors** – For information on up-to-date best management practices and measures for water conservation, contact your relevant sector association.

Section 2: Water Conservation Best Management Practices and Standards

Use this section of the Schedule to indicate what conservation measures and practices you are currently implementing or anticipate implementing. Where relevant, additional information can be attached as an appendix to this Schedule.

State your goals for reducing the use, loss or waste of water or for increasing the efficiency of water use (e.g., litres per day per unit of production or litres per day per capita for the residential sector).

Schedule 1 continued

Check off which of the following water conservation best management measures and practices that you have implemented or will implement for the duration of the permit:

	Implemented	To be Implemented
Water Use Audit	☐	☐
Universal metering of all users (municipalities)	☐	☐
Water Efficient Fixtures/Equipment/Technology	☐	☐
Develop and Implement an Overall Water Conservation and Efficiency Program	☐	☐
Leak Detection/Loss Prevention/Control Program	☐	☐
Public/Employee Information/Education/Outreach	☐	☐
Landscaping techniques/Site and Urban Design Principles	☐	☐
Water Efficient production processes/practices (e.g. re-use of water)	☐	☐
Economic Incentives/Cost-Share/Full Costing recovery/ tax credits/rebate programs	☐	☐

Other (please specify): _____

Of the measures and practices checked off above, provide specific details of the best management practices applied or to be applied including equipment (e.g. pump specification), processes, such as water used for industrial production and/or irrigation system(s), current and proposed technology, approach, processes and procedures:

For the above measures and practices, list information relevant for your sector and/or other sources of information used in determining water conservation and efficiency management practices and measures:

List dates of when the best management measures and practices were or will be applied for the duration of the permit:

Identify any approval or certification that you have received for implementing water conservation and efficiency best management practices, e.g. Environmental Farm Plan, Audubon Cooperative Sanctuary Program for Golf Courses:

APPENDIX F

Schedule for Category 2 Applications

- Schedule 2 – Qualified Person Certification for Category 2 Groundwater Takings
- Schedule 3 – Qualified Person Certification for Category 2 Surface Water Takings

Schedule 2 – Qualified Person Certification for Category 2 Groundwater Takings

General Information and Instructions

General:

Information on this Schedule is collected under the authority of the *Ontario Water Resources Act, R.S.O. 1990 (OWRA)* and the *Environmental Bill of Rights, C. 28. Statutes of Ontario, 1993*, and will be used to evaluate applications for a Permit to Take Water as required by Section 34 (OWRA).

Instructions:

1. This schedule forms part of the Permit to Take Water application form and is subject to all provisions and instructions where applicable.
2. A complete schedule consists of:
 - a) a completed and signed schedule attached to a completed application form.
 - b) confirmation that the proposed taking meets one of the technical screening criteria.
 - c) the qualified person to complete his/her contact information.
 - d) the qualified person to self declare that they meet the qualifications of a Qualified Person as set out in schedule.

Purpose:

A Category 2 taking will satisfy the scientific evaluation requirements where a qualified person has certified that the proposal meets the criteria for groundwater as specified below.

A qualified person for PTTW groundwater studies is a licensed Professional Geoscientist or exempted Professional Engineer as set out in the *Professional Geoscientists Act of Ontario*.

The qualified person will be required to consult with other agencies, as appropriate, to verify that the evaluation criteria are met. The Director will verify that a qualified person has confirmed that the proposed water taking meets the screening criteria.

Category 2 – Criteria for Groundwater Takings

A Category 2 hydrogeological assessment requires the qualified professional to confirm that the proposal meets one of the following [check appropriate box]:

☐ **Short-term, non-recurring takings less than 7 days (e.g. pumping tests and hydrostatic testing)**

OR

☐ **Short-term, non-recurring taking less than 30 consecutive days and less than 400,000 L/day (e.g. construction dewatering and dust suppression)**

This classification requires the qualified professional to design the taking to ensure that the withdrawal of water does not result in unacceptable impacts which may include but are not limited to the considerations outlined below. Where applicable, the qualified professional may recommend special conditions relating to the taking or considerations suggested below.

Geotechnical Impacts	Proximity to Other Water Uses and Surface Water	Proximity to Contaminant Sources	Discharge of Water
> geotechnically sensitive soils (i.e. marine clays) > areas where integrity of structures may be impaired by pumping induced drawdown	> proximity to surface water that is affected by and depends on groundwater > other permitted water takings, other wells or ponds that may be affected by taking	> potential to mobilize contamination > identify if taking is for remediation purposes	> required approvals (i.e. municipal sewer use, OWRA Section 53 sewage works approvals) > measures to minimize erosion, sedimentation, flooding or water quality impacts

Schedule 2 continued

Suggested Conditions

Please use this space to describe proposed conditions for this water taking.

Contact Information

Company Name (if applicable):			
Business Number (if applicable):		Professional Designation:	
Mr. ☐ Ms. ☐ Mrs. ☐ Other:		☐ Licensed Professional Geoscientist ☐ Exempted Professional Engineer	
First Name:	Middle Initial:	Last Name:	
Tel: () - Ext.	Fax: () - Ext.	E-mail:	
Street Address:			
Mailing Address (if different than street address):			
County:		City/Town:	
Province:	Postal Code:	Country:	

References

Please list all documents which were considered by the qualified person in the preparation of this schedule.

Note that all referenced documents must be retained by the applicant as these may be requested by the Ministry as part of the evaluation of this application and supporting schedule. The Permit may also include special conditions which require the applicant to retain these documents for a specified period.

Declaration

I, the undersigned hereby declare that to the best of my knowledge, the information contained herein and the information submitted in support of this schedule is complete and accurate in every way.

Qualified Person Signature: _____

Date (yyyy/mm/dd): _____

Name (Please print or type): _____

Schedule 3 – Qualified Person Certification for Category 2 Surface Water Takings

General Information and Instructions

General:

Information on this Schedule is collected under the authority of the *Ontario Water Resources Act, R.S.O. 1990 (OWRA)* and the *Environmental Bill of Rights, C. 28. Statutes of Ontario, 1993*, and will be used to evaluate applications for a Permit to Take Water as required by Section 34 (OWRA).

Instructions:

1. This schedule forms part of the Permit to Take Water application form and is subject to all provisions and instructions where applicable.
2. A complete schedule consists of:
 - 1) a completed and signed schedule attached to a completed application form.
 - 2) confirmation that the proposed taking meets one of the technical screening criteria.
 - 3) the qualified person to complete his/her contact information.
 - 4) the qualified person to self declare that they meet the qualifications of a Qualified Person as set out in schedule.

Purpose:

A Category 2 taking will satisfy the scientific evaluation requirements where a qualified person has certified that the proposal meets the criteria for surface water as specified below.

A qualified person for PTTW surface water studies is a person holding at minimum a bachelor degree with specialization in hydrology, aquatic ecology, limnology, biology, physical geography and/or water resource management or engineering. The type of scientific work that a qualified person performs must be consistent with that person's education and experience.

The qualified person will be required to consult with other agencies, as appropriate, to verify that the evaluation criteria are met. The Director will verify that a qualified person has confirmed that the proposed water taking meets the screening criteria.

Category 2 – Criteria for Surface Water Takings

A Category 2 surface water assessment requires the qualified professional to confirm that the proposal meets one of the following [check appropriate box]:

☐ **Great Lakes** or connecting channels takings less than the Great Lakes Charter threshold.

☐ **Takings from sources with previous assessments** (i.e. further to a previous study and implementing previously established controls)

☐ **River and Streams (3rd order or higher order)** taking <5% of 7Q₂₀

☐ **Transitional Permits** where the Director previously required upgrades/modifications to water taking

Transitional surface water Permits are issued when an existing water taker who has been asked by the Director to implement upgrades or modifications to their water taking facilities applies for a temporary short-term taking that would allow him/her to continue to operate while scientific studies are being finalized and improvement works are being implemented.

☐ **Takings and Returns** where water is removed for a short time only and water is returned to a nearby point with no significant change to water quantity or quality (i.e. for cooling, hydrostatic testing, hydraulic lake dredging)

☐ **Lakes and Ponds** takings <1,000,000L/day twice per week from water bodies >10ha in size that are not on-stream and not part of the headwaters of any watercourse. More frequent takings require supporting studies.

Schedule 3 continued

Suggested Conditions

Please use this space to describe proposed conditions for this water taking.

Contact Information

Company Name (if applicable):			
Business Number (if applicable):		Professional Designation: ☐ Bachelor degree Please specify area of study: ☐ Licensed Professional Engineer ☐ Exempted Professional Engineer	
Mr. ☐ Ms. ☐ Mrs. ☐ Other:			
First Name:	Middle Initial:	Last Name:	
Tel: () - Ext.	Fax: () - Ext.	E-mail:	
Street Address:			
Mailing Address (if different than street address):			
County:		City/Town:	
Province:	Postal Code:	Country:	

References

Please list all documents which were considered by the qualified person in the preparation of this schedule. Note that all referenced documents must be retained by the applicant as these may be requested by the Ministry as part of the evaluation of this application and supporting schedule. The Permit may also include special conditions which require the applicant to retain these documents for a specified period.

Declaration

I, the undersigned hereby declare that to the best of my knowledge , the information contained herein and the information submitted in support of this schedule is complete and accurate in every way.	
Qualified Person Signature: _____	Date (yyyy/mm/dd): _____
Name (Please print or type): _____	

APPENDIX G

Definitions, Conversion Factors and Georeferencing

Definitions

Maximum Rate Per Minute. This is typically the maximum capacity of your pumping equipment. You may be able to obtain pump output rates from the manufacturer. Tables at the end of this appendix provide information on how to estimate the rate of water taking by some common models of irrigation equipment.

Maximum Number of Hours Per day. This refers to the number of hours in a day in which you actually take water. It does not indicate the length of your potential period of water taking. For example, if you normally take water sometime between 8:00 a.m. and 8:00 p.m., but you only actually plan to take water for four hours during this period, you should specify four hours in this instance.

Maximum Volume Per Day. This is the maximum amount of water you might take in one given day. In some cases you may be able to determine this total by multiplying the maximum rate per minute by 60 (minutes per hour) and then by the maximum number of hours that you might operate your pumping equipment on any one day. In other cases, you may be able to determine the maximum rate by demand calculations. The maximum volume per day may be equal to, or less than, the rate per minute, multiplied by 60 (minutes per hour), multiplied by the number of hours that you operate your pumping equipment.

Typical Volume Per Day. You may feel that the maximum volume per day is not typical of your normal rate of withdrawal. Please specify a more "typical" rate of withdrawal. This may be equal to or less than the maximum volume per day.

Maximum Number of Days of Taking Each Year. This refers to the number of days in a year during which you actually take water. It does not include the length of your potential period of water taking. For example, if you normally take water sometime between May 1 and September 30, but you only actually plan to take water for 25 days during this period, you should specify 25 days.

Earliest Likely Calendar Date of Taking. This is the earliest day in the year on which you might start to take water. If you take water year-round, this date will likely be January 1. If you take seasonally for irrigation, this date might be June 1. It is understood that this date will vary from year to year, depending on climate and your own activities.

Latest Likely Calendar Date of Taking. This is the last day in the year on which you might take water. If you take water year-round, this date will likely be December 31. If you take seasonally for irrigation, this date might be October 1. It is understood that this date will vary from year to year, depending on weather conditions and your own activities.

Transitional Permits. These are permits where the Director has previously required upgrades/modifications to water taking. Transitional surface water Permits are issued when an existing water taker who has been asked by the Director to implement upgrades or modifications to their water taking facilities applies for a temporary short term taking that would allow him/her to continue to operate while scientific studies are being finalized and improvement works are being implemented.

Common Conversions and Calculations

To convert to litres:

If you have a value in imperial gallons, multiply by 4.546.

If you have a value in U.S. gallons, multiply by 3.785.

To convert to metres:

If you have a value in feet, divide by 3.280.

If you have a value in inches, divide by 39.37.

To convert to hectares:

If you have a value in acres, divide by 2.471.

If you have a value in square feet, divide by 107,639.

If you have a value in square metres, divide by 10,000.

To Convert a pump rating to the maximum volume of taking per day.

Example. If you have a pump rated at 300 U.S. gallons per minute and pump continuously for 12 hours per day, what is your maximum volume of taking per day?

Step 1: Convert US gallons to litres.

$$300 \times 3.785 = 1135.5 \text{ litres per minute}$$

Step 2: Multiply rate by number of minutes in 12 hours

$$1135.5 \text{ litre per minute} \times 60 \text{ minutes per hour} \times 12 \text{ hours} = 817,560 \text{ litres per day}$$

Therefore, if you pump at 300 U.S. gallons per minute for 12 hours per day, your maximum taking is 817,560 litres per day.

To estimate a daily water demand for irrigation.

Example. You have 20 acres of a crop that needs to be irrigated to a depth of 1 inch. How much water do you need for one application?

Step 1: Multiply the area by the depth of water to be applied

$$20 \text{ acres} \times 1 \text{ inch} = 20 \text{ acre-inches}$$

Step 2: Convert acre-inches to litres

$$20 \text{ acre-inch} \times 102,800 \text{ L/acre-inch} = 2,056,000 \text{ litres}$$

or

Step 1: Convert acres to hectares.

$$20 \text{ acres} / 2.471 = 8.1 \text{ hectares}$$

Step 2: Convert hectares to square metres.

$$8.1 \text{ hectares} \times 10,000 = 81,000 \text{ square metres}$$

Step 3: Convert inches to metres.

$$1 \text{ inch} / 39.37 = 0.0254 \text{ metres}$$

Step 4: Multiply the area by the depth of water to be applied.

$$81,000 \text{ square metres} \times 0.0254 \text{ metres} = 2057.4 \text{ cubic metres}$$

Step 5: Convert cubic metres to litres.

$$2057.4 \text{ cubic metres} \times 1000 = 2,057,400 \text{ litres}$$

Georeferencing

You must provide geographic coordinates for your water taking site on the topographic map you submit with your PTTW application. Specifically required are Universal Transverse Mercator (UTM) Northing and Easting coordinates as point(s) of reference. (See map provided in Appendix C as part of a sample application for a Permit to Take Water.)

Typically, such coordinates are obtained using a Global Positioning System (GPS). An example of the type of information required for the application form is as follows: NAD 83 [map datum], GPS [method of collection], +/- 10 m accuracy, Zone 17, 593159 m E, 4944010 m N.)

Map Datum. This is the UTM datum of the map or GPS (Global Positioning System) used to specify position of the point of reference. Currently, there are two map datums in use in North America, namely, the North American Datum 1927 (NAD27) and NAD83. The NAD83 is preferred, as the current Ontario Base Maps are constructed using this datum.

Zone. This is the UTM Zone within which the site is located. There are four UTM Zones within Ontario, namely 15, 16, 17 and 18.

Accuracy Estimate. This is the accuracy (+/- metres) of the provided UTM Northing and Easting coordinates for the point of reference. The accuracy of the data depends on the method used for generating the data. The accuracy of a direct geodetic survey, for example, may be less than 1 metre. A GPS may guarantee accuracy from 1-10 metres to more than 10-30 metres. A topographic map may provide accuracy of 10 -100 metres.

UTM Easting. This is the distance in metres east from the western delimiter of the UTM Zone to the point of reference.

UTM Northing. This is the distance in metres from the equator to the point of reference.

Estimating Water Taking Rates of Irrigation Equipment

IRRIGATION WATER USAGE CALCULATION SHEET

1) Volume Guns

Maximum # irrigation guns in service at one time: _____ (a)

Type/Size of Irrigation Gun: _____ (b) (eg. Nelson BigGun 150)

Type and diameter of nozzle: _____ (c) (Ring or taper and nozzle size eg. 1" taper)

Pressure at the gun head: _____ psi (d)

From (b), (c) and (d) use the table on the back of this page to determine:

Water usage per gun: _____ (e) This rate should be in litres/minute

Total rate of water taking: Multiply (a) _____ by (e) _____ = _____ (f)
Enter rate (f) in table A of application form (3rd column)

2) Sprinklers

Maximum # sprinklers in service at one time: _____ (g)

Type of Sprinkler: _____ (h) (Rainbird, Skinner, etc.)

Type & diameter of sprinkler nozzle: _____ (i) (Single/double & nozzle size eg. 1/4 x 3/16" double)

From the table on the back of this page determine:

Water usage per sprinkler: _____ (j) This rate should be in litres/minute

Total rate of water taking: Multiply (g) _____ by (j) _____ = _____ (k)
Enter rate (k) in table A of application form (3rd column)

3) Low Flow Systems

Maximum # emitters in service at one time: _____ (l)

rated flow rate per emitter: _____ (m) This rate should be in litres/minute

Total rate of water taking: Multiply (l) _____ by (m) _____ = _____ (n)
Enter rate (n) in table A of application form (3rd column)

Although we have attempted to select the most popular equipment specifications, if your equipment is not listed here, you should contact your equipment supplier to obtain the information. If multiple equipment is used on a source, select the equipment with the higher rate which would be used on that source for calculating rates for Table A.

Irrigation Equipment - Big Gun

Taper Bore Nozzle

SR Series		0.50"	0.55"	0.60"	0.65"	0.70"	0.75"	0.80"	0.85"	0.90"	1.00"
100	PSI	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM
	40	178	216	250	295	344	390	447	507	575	0
	50	189	242	280	329	379	435	492	568	625	772
	60	208	261	307	363	416	477	541	621	689	848
	70	227	284	333	390	454	515	587	670	746	920
	80	242	299	356	416	484	553	625	715	795	977
	90	257	314	379	443	511	587	662	761	844	1037
	100	273	329	401	466	541	617	700	802	889	1094
	110	288	348	420	488	568	647	738	840	935	1151

150	PSI	0.70"	0.80"	0.90"	1.00"	1.10"	1.2"	1.30"
		LPM	LPM	LPM	LPM	LPM	LPM	LPM
	50	379	492	625	776	965	1136	1325
	60	416	541	689	852	1041	1249	1457
	70	454	587	746	927	1117	1344	1571
	80	484	625	795	984	1192	1438	1684
	90	511	662	844	1041	1268	1533	1798
	100	541	700	889	1098	1344	1609	1893
	110	568	738	935	1154	1400	1684	1987
	120	594	772	977	1211	1457	1760	2063

200	PSI	1.05"	1.10"	1.20"	1.3"	1.40"	1.50"	1.60"	1.75"	1.90"
		LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM
	60	946	1079	1249	1457	1684	1949	2214	2631	3123
	70	1022	1173	1344	1571	1817	2101	2385	2858	3369
	80	1098	1249	1438	1684	1949	2233	2555	3047	3596
	90	1173	1325	1533	1798	2063	2366	2706	3236	3804
	100	1230	1400	1609	1893	2176	2498	2858	3407	4012
	110	1287	1476	1684	1987	2290	2631	2990	3577	4201
	120	1344	1609	1760	2063	2385	2744	3123	3728	4391
	130	1400	1703	1836	2139	2479	2858	3255	3880	4580

Ring Nozzle

SR Series		0.71"	0.77"	0.81"	0.86"	0.89"	0.93"	0.96"
100	PSI	LPM	LPM	LPM	LPM	LPM	LPM	LPM
	40	250	295	344	390	447	507	575
	50	280	333	379	435	488	568	632
	60	307	363	416	473	534	621	693
	70	333	394	447	511	575	670	749
	80	356	420	481	549	617	715	799
	90	375	443	507	583	655	761	848
	100	397	469	537	613	689	802	893
	110	416	492	564	643	723	840	939

150	PSI	0.86"	0.97"	1.08"	1.18"	1.26"	1.34"	1.41"
		LPM	LPM	LPM	LPM	LPM	LPM	LPM
	50	379	492	625	776	965	1136	1325
	60	416	541	689	852	1041	1249	1457
	70	454	587	746	927	1117	1344	1571
	80	484	625	795	984	1192	1438	1684
	90	511	662	844	1041	1268	1533	1798
	100	541	700	889	1098	1344	1609	1893
	110	568	738	935	1154	1400	1684	1987
	120	594	772	977	1211	1457	1760	2063

200	PSI	1.29"	1.46"	1.56"	1.66"	1.74"	1.83"	1.93"
		LPM	LPM	LPM	LPM	LPM	LPM	LPM
	50	871	1136	1325	1552	1779	2025	2422
	60	946	1249	1457	1684	1949	2214	2631
	70	1022	1344	1571	1817	2101	2385	2858
	80	1098	1438	1684	1949	2233	2555	3047
	90	1173	1533	1798	2063	2366	2706	3236
	100	1230	1609	1893	2176	2498	2858	3407
	110	1287	1684	1987	2290	2631	2990	3577
	120	1344	1760	2063	2385	2744	3123	3728
	130	1400	1836	2139	2479	2858	3255	3880

Water Usage for Single Nozzle Sprinklers (litres per minute)																
Size (in.)	1/16	5/64	3/32	7/64	1/8	9/64	5/32	11/64	3/16	13/64	7/32	1/4	9/32	5/16	11/32	3/8
Rainbird	4.5	4.5	4.5	9	9	14	18	23	27	32	36	55	68	91	114	132
Skinner	---	---	---	---	4.5	---	14	---	18	---	27	41	55	---	---	---

Water Usage for Double Nozzle Sprinklers (litres per minute)																		
Length (in)	1/8	5/32	5/32	11/64	5/32	11/64	3/16	3/16	3/16	13/64	13/64	7/32	7/32	1/4	1/4	7/32	1/4	7/32
Width (in)	1/8	1/8	3/32	3/32	5/32	1/8	3/32	1/8	5/32	1/8	5/32	1/8	5/32	5/32	1/8	3/16	3/32	11/64
Rainbird	---	---	23	27	27	32	36	36	41	45	45	55	50	---	64	68	59	64
Skinner	18	23	---	---	---	---	---	---	36	---	---	---	45	55	---	59	55	---

Length (in)	1/4	9/32	9/32	1/4	1/4	9/32	9/32	5/16	5/16	11/32	3/8	3/8	1/4	13/32	7/16	15/32	1/2	17/32
Width (in)	11/64	5/32	1/8	3/16	7/32	3/16	7/32	1/8	7/32	7/32	1/8	7/32	3/8	7/16	1/4	1/4	1/4	1/4
Rainbird	77	---	82	82	86	100	109	100	132	150	155	164	173	200	255	273	305	340
Skinner	---	68	---	68	---	86	---	---	109	---	---	150	---	---	---	---	---	---

