

GUIDE TO PERMIT TO TAKE WATER APPLICATION FORM

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

Water Taking Regulation O. Reg. 387/04

CONTENTS OF THIS DOCUMENT ARE SUBJECT TO CHANGE WITHOUT NOTICE

PIBS 5046e



Addendum:

This document is updated regularly by the Ministry of the Environment (MOE) to ensure that it provides accurate guidance relating to current policies, acts, regulations and application requirements. To obtain an updated copy of this document, please refer to the "publications" section of the MOE Internet site at www.ene.gov.on.ca or contact the MOE regional office located in the area where you plan to take water. (See Appendix B for office locations and contact information).

Version History:

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1.0	February 2006	
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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.

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).

The complete permit application form, required supporting materials and applicable payment should be sent to:

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

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INTRODUCTION

Purpose of the Permit to Take Water (PTTW) Program

Water takings in Ontario are governed by the *Ontario Water Resources Act* (OWRA) and the Water Taking Regulation (O. Reg. 387/04) a regulation under the Act. Section 34 of the OWRA requires anyone taking more than a total of 50,000 litres of water in a day, with some exceptions, to obtain a Permit from a Director appointed by the Minister for the purposes of Section 34. Requirements of the permit system, including the factors a Director must consider in issuing a permit, notification and consultation, data collection and reporting, are contained in Section 34 of the OWRA and the amended Water Taking Regulation. The Regulation also addresses water takings in high use watersheds and the Great Lakes Basin.

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.

Requirements of the Water Taking Regulation (O. Reg. 387/04)

The Water Taking Regulation enhances 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 their application all water conservation measures and practices that have already been undertaken or will be undertaken for the duration of the permit.

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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 the Water Taking Regulation, the volume of water taken is to be measured using a flow meter or a method acceptable to the Director. Additional information is available on the Ministry of the Environment Internet at 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:

- For fire fighting;
- For domestic use:
- For farm use (with certain exceptions), and
- For some water takings where the means of water taking was constructed prior to March 29, 1961. These once "grandfathered" water takings are being phased-in to require a permit. Ontario Regulation 451/07 requires phase 1 industrial or commercial water users, who were previously grandfathered from the requirement to obtain a PTTW, to make an application for a permit by June 30, 2008.

Regulation 450/07 identifies the following water takings as phase 1 industrial or commercial water takings:

- 1. Facilities that manufacture or produce bottled water or water in other containers, whether or not for use as a beverage.
- 2. Beverage manufacturing facilities, where water is incorporated into a produce.
- 3. Fruit and vegetable canning or pickling facilities, where water is incorporated into a product.
- 4. Ready-mix concrete manufacturing facilities.
- 5. Non-metallic mineral product manufacturing facilities, other than those facilities described in paragraph 4, where water is incorporated into a product.
- 6. Pesticide, fertiizer and other agricultural chemical manufacturing facilities, where water is incorporated into a product.
- 7. Inorganic chemical manufacturing facilities, other than those described in paragraph 6, where water is incorporated into a product.

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

• To be used for irrigating crops being grown for sale;

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. 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.

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 the Water Taking Regulation (see 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 "applicant" for the permit.

If you are applying for a permit for personal use, you are the applicant. Please note: 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 applicant. Your application must include a letter 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 applicant. In this case, you must have been specifically authorized by your organization to act in this capacity.

Review Process

Ministry staff review all permit applications, measuring them against a number of requirements. Applications should typically be filed well in advance of the time that water taking is intended to start. 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 note 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

A Permit to Take Water authorizes you to withdraw water from a water source or water sources according to the terms and conditions on the permit. It does not authorize or extend to any other activities of your operation. The granting of a Permit to Take Water does not imply that other Federal, Provincial or Municipal approvals have been received or will be issued. It is your responsibility to obtain any other approvals, licenses or permissions that may be required. Examples of other approvals that may be required include 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.
- Requirements of municipalities such as planning approvals (e.g., zoning bylaw, official plan amendments) or business licences, etc. where applicable.

Ministry of the Environment approvals take the form of Certificates of Approval. More information about Certificates of Approval is available on the Ministry of the Environment Internet site at www.ene.gov.on.ca or from the Environmental Assessment and Approvals Branch at 1-800-461-6290 (locally at 416-314-8001).

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 (requires a scoped assessment)
- Category 3 applications (requires 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.

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TABLE 1 PERMIT APPLICATION CATEGORY DESCRIPTIONS

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 (3 rd 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 twice 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.

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Groundwater	Surface Water
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

^{*} For more information about application categories and requirements, please refer to the *Permit to Take Water Manual*.

** a sensitive feature includes a stream and/or wet-land and/or dug well or dugout pond owned by a different person.

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.

A Category 2 application requires a qualified person to conduct a technical review of the proposed water taking. A complete "Schedule 2 – Qualified Person Certification for Category 2 Groundwater Takings" or "Schedule 3 – Qualified Person Certification for Category 2 Surface Water Takings" must be attached to all Category 2 applications. These schedules are attached in Appendix F of this guide.

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

- For groundwater studies, a licensed professional geoscientist or accepted 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.

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TABLE 2 CATEGORY DOCUMENT REQUIREMENTS FOR SUBMISSION

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.	

For more information about application categories and requirements, please refer to the *Permit to Take Water Manual*.

Expiry Dates

Permits to Take Water are issued with an expiry date. If you receive a permit, please take note of when it expires. Allow yourself enough 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, please refer to the Water Taking Regulation (Appendix A).

Updating Information

Applicants should report any change of address or other updated information to the Ministry of the Environment within 30 days of any such change. Failure to do so could delay your application or cause a permit to be cancelled.

Updated information should be sent to:

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

Section 34 of the OWRA authorizes the issuing of Permits to a specific person or organization. Permits are not transferable. If the person responsible for the water taking changes, the person taking over the operation must apply for a new Permit.

Example:

John Smith owns a 50 Acre fruit orchard. John has been issued a Permit to Take Water for irrigating his crops. If John decides to sell his orchard to his neighbor, Bill Smyth, the Permit to Take Water cannot be transferred from John to Bill. Bill would have to apply for a new Permit to Take Water if he planned to continue water taking operations after purchasing the orchard.

When applying for a Permit to Take Water under these circumstances, please include the following information in addition to your completed application form:

- A signed letter from the previous Permit Holder (or the Permit Holder's authorized representative) confirming that there is no objection to the previous Permit being cancelled and a new Permit being issued. Please note: if this letter can not be obtained, the Director will send a notice to the Permit Holder revoking the old Permit. A new Permit can not be issued until the old Permit has been revoked and a 15 day appeal period has elapsed;
- A letter from the applicant explaining that the application is for a change in person or organization responsible for water taking (i.e., change in ownership of the property for which the water is being taken);
- Proof of legal name of the applicant (see Part 3: Applicant Information for examples);
- A copy of the old Permit to Take Water.

Please note: the Ministry does not charge a fee for issuing a new Permit when the application represents a request to change the name or address of the Permit Holder shown on the Permit.

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Where to Get Help

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

Additional information is available in:

- Section 34 of the *Ontario Water Resources Act*
- The Water Taking Regulation, O.Reg. 387/04 (see Appendix A)
- The Ministry of the Environment Internet site (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 of the Environment regional offices (see Appendix B)
- The Ministry of the Environment Internet site (www.ene.gov.on.ca)
- Publications Ontario Bookstore (880 Bay St., Toronto, ON N7A 1N8)

Where to Send the Permit Application

The complete permit application form, required supporting materials and applicable payment should be sent to:

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 you 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, please contact the Ministry of the Environment regional office in the area of your water taking (see Appendix B for office locations).

Part 1: Permit Administration

In this section of the form you should identify 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. Please provide a copy of your existing permit if you are applying for an amendment or for a renewal.

Part 2: Classification

In this section of the form you should classify your water taking and indicate whether or not a fee is required for the application. For additional information about the three classification categories, please refer to "Table 1: Permit Application Category Descriptions" or to the *Permit to Take Water Manual*.

Part 3: Applicant Information

This section of the form is used to identify the person or organization that is applying for the Permit to Take Water. If you are an individual applying for a permit for your own use, you are the applicant. If you represent an organization that is applying for a permit, the organization is the applicant.

• *Applicant name*. This is the correct legal name of the individual or organization in whose name the Permit to Take Water is to be issued. Legal documents evidencing this name must be submitted with the application form.

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- **Business name.** This is the name under which the applicant conducts business, and it must be provided if it is different from the applicant'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 applicant'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 Internet 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."
- *Applicant type*. This is the type of legal entity that the applicant represents. Please check the box that applies to yourself, if you are the applicant, or the organization that you represent.
 - o Corporation (Ontario)
 - o Corporation (Canada)
 - o Individual
 - o Partnership (Limited)
 - o Partnership (General)
 - o Sole proprietor

Unless the applicant is a municipal, provincial or federal government, **proof of legal name must be submitted with all PTTW applications**. Depending on the type of applicant, 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

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- 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 applicant's birth certificate is required; or
- A copy of the applicant's birth certificate or Driver's Licence.

Part 4: Applicant Physical Address

This is the actual address at which you as the applicant (or the organization you represent) is located. The applicant's physical address must identify the physical location of the applicant or organization and rural route number or P.O. Box.

Part 5: Applicant Mailing Address

This is the address at which you as the applicant (or the organization you represent) receive mail. In many cases, the applicant physical and mailing addresses will be the same. If so, please indicate this on the form

Part 6: Project Technical Contact Information

If you have a consultant dealing with technical matters on your behalf, please indicate this on the form and provide their name, organization and contact information as indicated. If you do not have a consultant dealing with technical matters on your behalf, please indicate this on the form.

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 the Source Information section (pages 3 and 4 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 of the Environment Internet site at www.ene.gov.on.ca.

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

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- 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 the applicant 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.

Niagara Escarpment Planning and Development Act. 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*.

Oak Ridges Moraine Conservation Act. You can determine if your water source is located within the Oak Ridges Moraine Conservation Area by consulting maps of the area. These maps are available online at http://www.mah.gov.on.ca/userfiles/HTML/nts_1_7058_1.html or by requesting publication number 5461 from the Ministry of the Environment Public Information Centre at 1-800-565-4923.

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. The Water Taking Regulation (O.Reg. 387/04) limits the

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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.

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.

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

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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.

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:

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- 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: Public Consultation / Environmental Bill of Rights Requirements

This section requires you to answer two questions that will help you determine whether or not the application may be subject to posting and/or public consultation requirements under the Environmental Bill of Rights. For more information about the Environmental Bill of Rights and the Environmental Bill of Rights Registry, please visit the Ministry of the Environment Environmental Registry Internet site at

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

Part 9: 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.)

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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 10: 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/.

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

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a 30-day public comment period. Your application will <u>not</u> usually be posted if it meets one of the following criteria:

- Water takings for less than one year
- Water takings for irrigation of 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 Internet 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.

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Please note that this section may not be directly applicable to certain takings, such as pumping tests, instream uses, site dewatering and certain industrial processes. In these cases, consideration must be given to the fate of the water or system design requirements.

Part 11: Statement/Signature of Applicant

In this section the **applicant** must 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 12: Application Fee

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

Category 1: \$750Category 2: \$750Category 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.

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Effective September 1, 2007, water takings for wetland and wildlife conservation purposes are exempt from permit fees. The exemption applies to projects for which the primary purpose is protecting, enhancing, restoring or establishing wildlife habitat or wetlands.

Also effective September 1, 2007, the PTTW administrative fee will be waived for first time permit applications by previously grandfathered water takers that are now required to obtain a permit. Upon renewal, these applicants will be required to pay the fee.

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 *Ontario 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 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

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Appendix A

Ontario Regulation 387/04, Water Taking

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

ONTARIO REGULATION 387/04

WATER TAKING

Last amendment: O. Reg. 451/07.

This Regulation is made in English only.

GENERAL

1. Revoked: O. Reg. 415/07, s.2.

Definitions

2. In this Regulation,

- "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) 1259 Gardiners Road, 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).

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

- (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/EDWINCGI.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 aguifer 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).

Prescribed water takings

- **4.1** (1) The taking of water by any of the means described in subsection 34 (3.1) of the Act by a person who takes the water for use in a facility that falls into a class described in subsection 3 (1) of Ontario Regulation 450/07 is a prescribed taking for the purposes of section 34 of the Act and subsection 34 (3) of the Act applies to the person as of January 1, 2009.
- (2) A person whose taking of water is prescribed by subsection (1) shall apply to the Director for a permit under subsection 34 (6) of the Act on or before June 30, 2008.

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:
 - 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

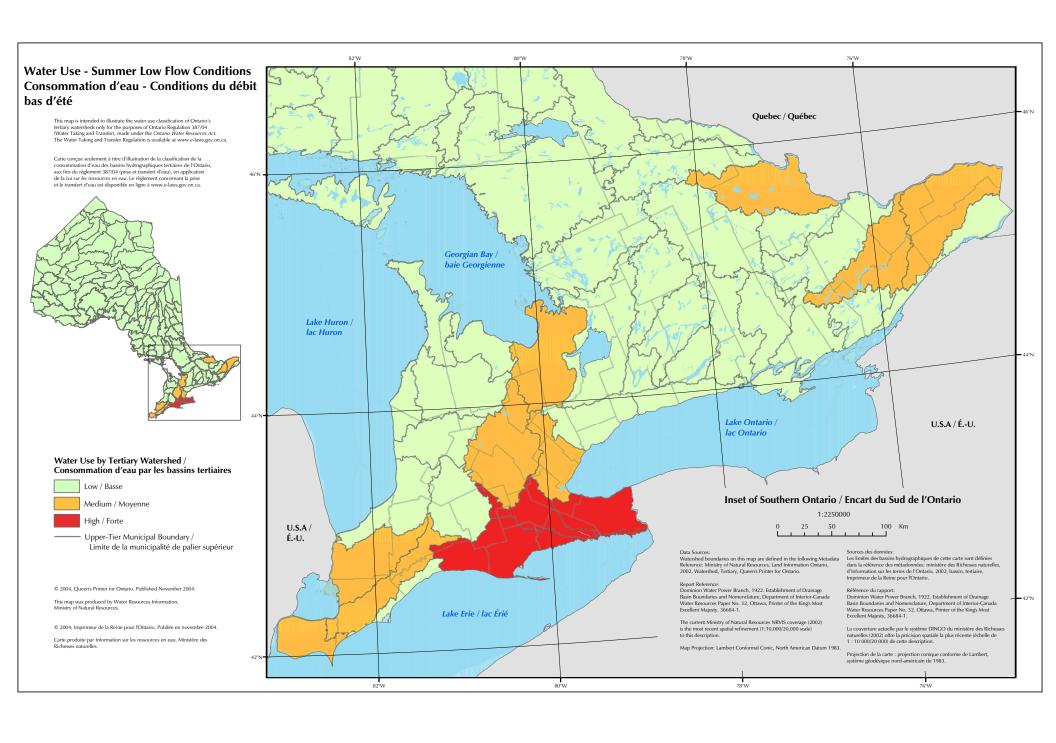
- 8. (1) This Regulation applies to applications received on and after January 1, 2005. O. Reg. 387/04, s. 8 (1).
- (2) An application that is received before January 1, 2005 shall be dealt with in accordance with Ontario Regulation 285/99 (Water Taking and Transfer) made under this Act, despite its 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).

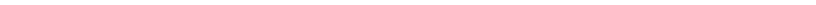
DATA AND REPORTING

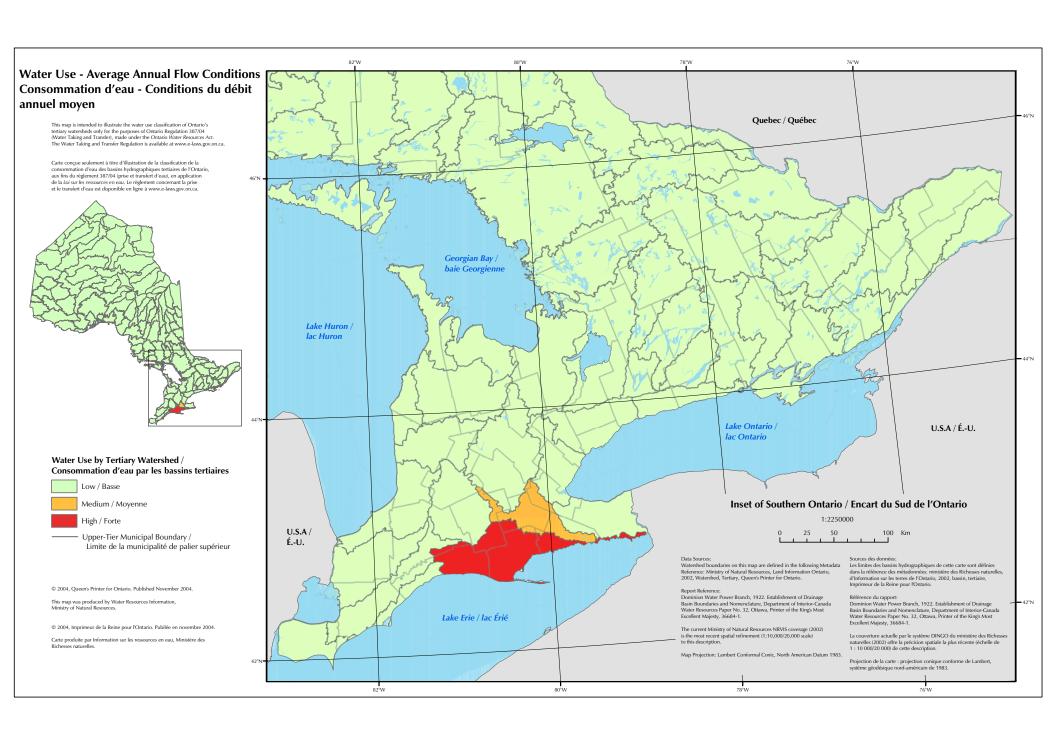
Duties of permit holders

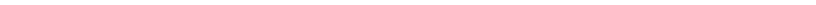
- **9.** (1) Every person to whom a permit has been issued under section 34 of the Act shall collect and record data on the volume of water taken daily. O. Reg. 387/04, s. 9 (1).
- (2) The data collected under subsection (1) shall be measured by a flow meter or calculated using a method acceptable to 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).
 - 10. Revoked: O. Reg. 415/07, s.4.
 - 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

The Ministry's Regional Offices are located as follows:

• Eastern Region

1259 Gardiners Road, Unit 3 P.O. Box 22032 **Kingston**, ON K7M 8S5

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

• Southwestern Region

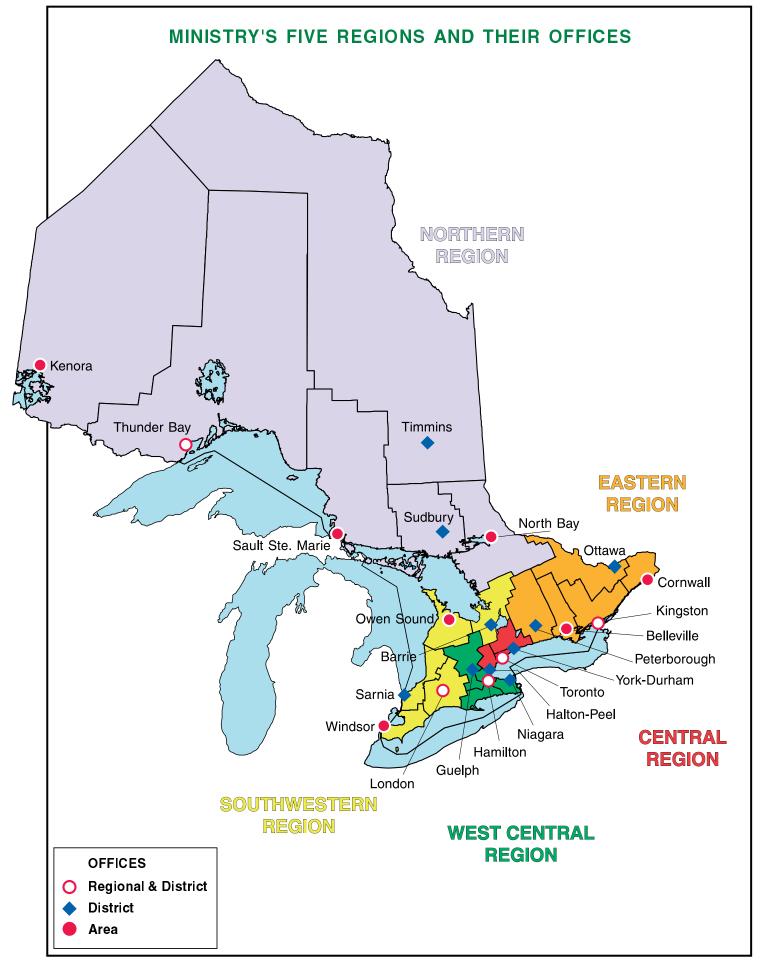
733 Exeter Road

London, ON N6E 1L3

Telephone: 519-873-5000; 1-800-265-7672

Fax: 519-873-5020





Appendix C

Sample Application for Permit to Take Water



Application 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. Applicants are responsible for ensuring that they complete the most recent application form. When completing this form, please refer to the "Guide to Permit to Take Water Application Form" (referred to as the Guide). Application forms and supporting documentation are available from your local Regional or District Office of the Ministry of the Environment, and in the "Publications' section of the Ministry of the Environment website at http://www.ene.gov.on.ca/envision/gp/index.htm.
- Questions regarding completion and submission of this application should be directed to local Regional Office of the Ministry of the Environment. Contact information for these offices is available in the Guide or on the Ministry of the Environment website at http://www.ene.gov.on.ca/envision/org/op.htm
- This form must be completed with respect to all the requirements of the Guide for it to be considered an application for approval. Incomplete applications will be returned to the applicant.
- A complete application consists of:
 - (1) a completed, 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 Ontario 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 supporting information and the application fee should be sent to:

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

Information contained in this application form 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 the EBR. If you do not claim confidentiality at the time of submitting the information, the Ministry of the Environment 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.

i. Permit Administration	
Please indicate if this is an application for a:	 New Permit Amendment to Permit (attach a photocopy of permit) X Renewal of Permit (attach a photocopy of permit)
2 Classification	

2. Ciassilication		
Classification	Fee Required	No Fee Required
Category 1	\$750	Reason Agriculture
Category 2	\$750	Reason
Category 3	\$3,000	Reason

1895 (08/2007) Page 1 of 7 PIBS 5046e02 3. Applicant Information Applicant Name **Business Identification Number** (legal name of individual or organization as evidenced by legal documents such as a copy of Driver's Licence or Master Business Licence) John Smith Business Name (the name under which the entity is operating or trading if different from the Applicant Name - also referred to as trade name) Applicant Type: North American Industry Classification System (NAICS) Code Corporation Federal Government 1 1 1 3 X Individual **Municipal Government** Partnership **Provincial Government** Sole Proprietor Other (describe): 4. Applicant Physical Address Civic Address - Street information (street number/name/type/direction/unit/suite/emergency 911 location number and street) 5432 Hwy #53 County/District City / Town Province/State Postal Code Country **Dunnville** Halimand Ontario Canada L3H 5Y2 Telephone Number (including area code) Fax Number (including area code) E-mail Address (905) XYZ - 4321 (905) XYZ - 5432 Same as Applicant Physical Address? Yes No If no, complete below 5. Applicant Mailing Address Civic Address - Street information (street number/name/type/direction/unit/suite/emergency 911 location number and street/P.O.Box/Rural Route Number) **RR #2** City / Town Province/State Country Postal Code **Dunnville** Ontario Canada L3H 5Y2 X Yes Same as Applicant? No If no, complete below 6. Project Technical Information Contact Name Company Address Information: Same as Applicant Mailing Address? Yes No If no, please provide technical information contact mailing address below Civic Address - Street information (street number/name/type/direction/unit/suite/emergency 911 location number and street/P.O.Box/Rural Route Number) City / Town Province/State Country Postal Code E-mail Address Telephone Number (including area code & extension) Fax Number (including area code)

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7. Source Information – Note: Source Information must be provided separately for each source. Please complete and submit multiple copies of this Source Information section (pages 3 and 4 of this form) if your application includes more than one source. Number of Water Taking Sources Included in this Application (do not include domestic uses 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) Civic Address - Street information (street number/name/type/direction/unit/suite/emergency 911 location number and street) Part I of Reference Plan Concession 1 12 County/District Municipality/Unorganised Township Original Geographic Township Dunnville Halimand **Dunn Township** Geographic (GPS) Coordinates (to be provided in Datum NAD83) Method of Collection Accuracy Estimate **UTM Zone** Easting Northing 614,767 4,751,949 **GPS** 10m 17 Is the Applicant the owner of the site where water taking will occur? No if no, attach the owner's name, address and a signed letter granting consent for the applicant to access the water taking location Is the site where water taking will occur located in an area of development control as defined by the Niagara Escarpment Planning & Development Act? Is the site where water taking will occur located on the Oak Ridges Moraine Conservation Area as defined by the Oak Ridges Moraine Conservation Plan (a regulation made under the Oak Ridges Moraine Conservation Act)? **Please Note:** Yes Are you aware of any complaints or impacts resulting from water takings at the site? This sample application includes one copy Yes if yes, please describe: of the Source Information section (page 3 and page 4) of the form because only one Will water from the site be packaged in a container (bottled water, tanks)? source is identified for water taking. If you If yes, what size of containers? greater than 20 litres are applying to take water from more than one source, you will need to complete the Are wells located within 500 m of the site where water taking will occur? Source Information section for EACH X Yes source. No if no, what is the distance to the nearest well? Is municipal water available to all dwellings within 500m of the site where water taking will occur? X Yes No Unknown Estimated start date of water taking Water taking to ☐ days weeks × years months I indefinite extend for a period of: 5 June 15, 2005 Is activity subject to the Environmental Assessment Act? Yes if yes, please attach approval or Notice of Completion Nο If yes, did the project receive any Part II Orders / Bump-Up requests? Yes if yes, what was the date of the Minister's Decision? Decision pending List any public consultation/notification that has occurred related to the proposed water taking (i.e., public hearings, notification of First Nations, etc.) Watercourse - please complete this table if applying to take water from a watercourse (i.e., stream, municipal ditch, open drain, etc.) Watercourse Name Tributary to Does flow in the watercourse stop at any time during the year? Yes if yes, during which months? For what period of time? No Do you move/relocate the water intake (pump)? Yes if yes, please provide primary and secondary locations on attached map

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■ Well - please complete t	his table if applying to take w	ater from a well (includes	sumps for mines and quarrie	es)
Well Name / Identifier Well #1	Water Well Record Number 6801234	If not available, provid	de name of property owner at tir	ne of well construction
Has the well been deepened?				
Yes if yes, wha	t was the date of deepening?			
X No				
Type of Well: X Drilled	Bored Dug	Driven or Jetted (sandpoin	nts/wellpoints)	
		If 'Driven or Jetted', pro-	vide the following:	
		Total number of sa	andpoints/wellpoints:	
		Number of intercor	nnected sandpoint/wellpoint syst	ems:
Can you measure the depth to	water in this well?			
Yes if yes, wha	t is the depth to static water le	vel? 12m	Date Measured: March	12. 2005
Has a pumping test been done	?			
	se attach report			
No No				
	Alain Anh In Managhain a An Anton	water from a late		
Lake - please complete Lake Name	this table if applying to take v	vater from a lake		
Lake name				
Pond/Reservoir - pleas	se complete this table if apply	ing to take water from a p	ond/reservoir	
Pond Name / Identifier				
Was the pond constructed (mar	n made)?			
Yes if yes, plea	se provide date of construction	n		
☐ No				
Pond Size	Average NACelth	range Double of Wicker	Marriagona Danth of Water	Annuacinate Values of Dand
Average Length	Average Width Av	verage Depth of Water	Maximum Depth of Water	Approximate Volume of Pond
Pond Type				
Select the diagram that most ac	ccurately resembles your pond:			
→()→	·	(()
		→ _	\longrightarrow	
online	by-pass	·	connected	dugout
Source of pond water (select al				
Seepage / springs / grou				
Surface water runoff (inc	luding tile drains, does not includ	le watercourse or open chanr	nel)	
=	s pumped into a pond, complete			i.e., well, lake or watercourse)
	rse, open drains, ditches, etc.)			,,
If "flowing water",	es, sport aramo, attorios, oto.)			
_	the nond (inflow)?	□ Ves □ No		
1. Does water flow into		∐ Yes ∐ No		
If yes, is there a struc	ture to regulate the inflow?	∐ Yes ∐ No	If yes, describe:	
2. Does water flow out	of the pond (outflow)?	Yes No		
If you is there a cent	rol structure to regulate the outflo	ow? Yes No	If yes, describe:	

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8. Publi	B. Public Consultation / Environmental Bill of Rights (EBR) Requirements				
Is this ap	plication	for water	taking	g to extend for a period of less than one year?	
	Yes No If no, this application may be subject to posting and/or public consultation requirements under the Environmental Bill of Rights. For more information, please refer to the Guide.				
Is this ap	Is this application for agricultural use or aquaculture?				
X	Yes		No	If no, this application may be subject to posting and/or public consultation requirements under the Environmental Bill of Rights. For more information, please refer to the Guide.	

9. Water Taking Volumes

	Purpose Options for Water Taking				
	Purpose				
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)				
Construction	Dredging, road building, 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)				

Water Source Information – Table A (Units in Litres)

water Source Information	Tuble A (Ollies	iii Lities)				[
Source Name	Purpose (select from "purpose" column in table above)	Maximum rate per minute	Maximum number of hours of taking a day	Maximum volume per day	Typical volume per day	Maximum number of days of taking in a year	Earliest calendar date of taking (mm/dd)	Latest calendar date of taking (mm/dd)
Well #1	Fruit Orchard	100	10	60,000	30,000	30	June 15	Sept. 30

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10. At	tachments
The fo	llowing must be attached for all applications (Category 1, 2 and 3) to be complete:
X	Map Requirements On a 1:10 000 OBM (Ontario Base Map) (1:50 000 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: existing wells (indicate use of existing well, springs, watercourses, wetlands, water bodies, property lines, locations and name of property owners, nearest road intersection, dwellings.
\boxtimes	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 (EBR) 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.
X	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 the Guide.
X	Attach completed water conservation Schedule 1.
The fo	llowing must be attached for all Category 2 applications:
	Completed Schedule 2 and/or Schedule 3 signed by a Qualified Person.

11. Statement/Signature of Applicant

Study

ı.	the undersigned,	hereby declare	that to the b	est of my	knowledae:
٠,	the unacrongines,	noicely accianc	tildt to tile b		mionicage.

The following must be attached for all Category 3 applications:

- 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 if this form is authorized to act on my behalf for the purpose of obtaining this approval.

Print Name Signature Date (yyyy/mm/dd)

John Smith 2005/04/02

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Application for Permit to Take Water

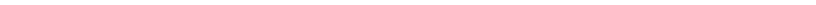
Ce formulaire est disponible en français

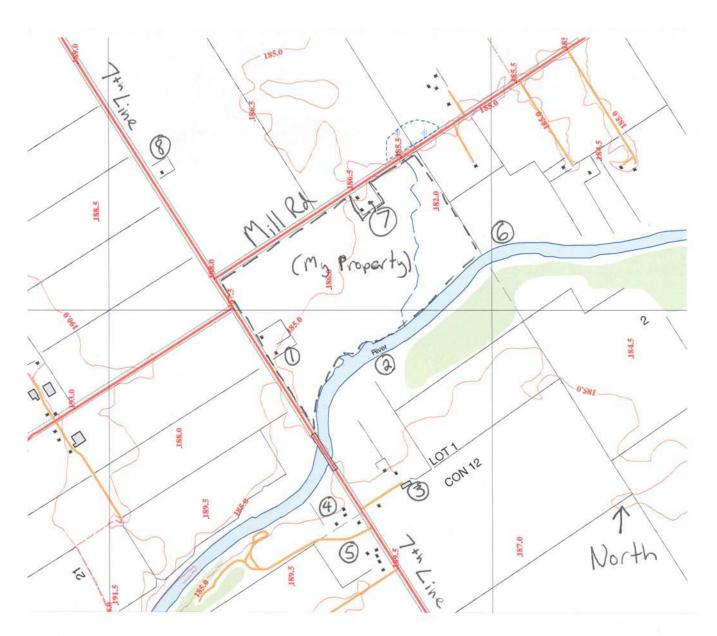
For Office Use Only					
Reference Number	Payment Received	Date (y/m/d)	Initials		
	\$				

12. Payment Information Application Category Amount Enclosed X Category 1 (\$750) Category 2 (\$750) Category 3 (\$3000) \$ 0.00 no fee required Method of Payment Certified Cheque Money Order ☐ VISA MasterCard American Express Credit Card Information (if paying by VISA, MasterCard or American Express)* Name on Card (please print) Credit Card Number Expiry Date (yy/mm) Cardholder Signature Date (y/m/d)

*NOTE: credit card accepted for payments UNDER \$10,000.00 only.

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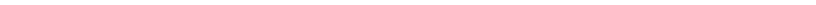


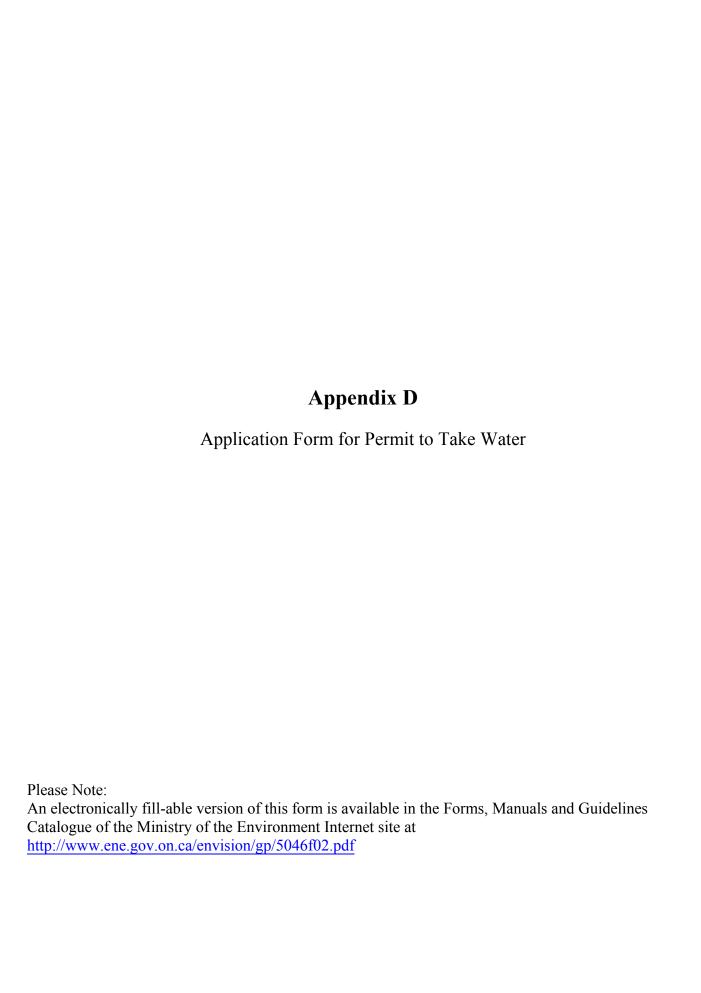


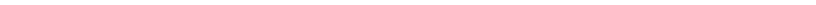
Key to the Map

- (Water taking Source#1)
- (2) Watt's irrigation taking from the river
- 3) Johnson's livestock well
- 4 Martin's home well

- 6 Wilson's home well
- 6 Schmidt's water taking from the river-
- 1 Anderson's Lome well
- 8 Chang's home









Application 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. Applicants are responsible for ensuring that they complete the most recent application form. When completing this form, please refer to the "Guide to Permit to Take Water Application Form" (referred to as the Guide). Application forms and supporting documentation are available from your local Regional or District Office of the Ministry of the Environment, and in the "Publications" section of the Ministry of the Environment website at http://www.ene.gov.on.ca/envision/gp/index.htm.
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- 4. A complete application consists of:
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 - (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 **Ontario 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.

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

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

6. Information contained in this application form 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 the *EBR*. If you do not claim confidentiality at the time of submitting the information, the Ministry of the Environment 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 is an application for a:	New Permit Amendment to Permit (attach a photocopy of permit) Renewal of Permit (attach a photocopy of permit)
. Classification	

Classification	Fee Required	No Fee Required
Category 1	\$750	Reason
Category 2	\$750	Reason
Category 3	\$3,000	Reason

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3. Applicant Information Applicant Name **Business Identification Number** (legal name of individual or organization as evidenced by legal documents such as a copy of Driver's Licence or Master Business Licence) Business Name (the name under which the entity is operating or trading if different from the Applicant Name - also referred to as trade name) Applicant Type: North American Industry Classification System (NAICS) Code Federal Government Corporation Individual **Municipal Government** Partnership **Provincial Government** Sole Proprietor Other (describe): 4. Applicant Physical Address Civic Address - Street information (street number/name/type/direction/unit/suite/emergency 911 location number and street) City / Town County/District Province/State Postal Code Country Telephone Number (including area code) Fax Number (including area code) E-mail Address Same as Applicant Physical Address? Yes No If no, complete below 5. Applicant Mailing Address Civic Address - Street information (street number/name/type/direction/unit/suite/emergency 911 location number and street/P.O.Box/Rural Route Number) City / Town Province/State Postal Code Country ☐ Yes Same as Applicant? No If no, complete below 6. Project Technical Information Contact Name Company Address Information: Same as Applicant Mailing Address? Yes No If no, please provide technical information contact mailing address below Civic Address - Street information (street number/name/type/direction/unit/suite/emergency 911 location number and street/P.O.Box/Rural Route Number) City / Town Province/State Country Postal Code E-mail Address Telephone Number (including area code & extension) Fax Number (including area code)

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7. Source Information – Note: Source Information must be provided separately for each source. Please complete and submit multiple copies of this Source Information section (pages 3 and 4 of this form) if your application includes more than one source. Number of Water Taking Sources Included in this Application (do not include domestic uses 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) Civic Address - Street information (street number/name/type/direction/unit/suite/emergency 911 location number and street) Reference Plan Lot Part Concession Municipality/Unorganised Township County/District Original Geographic Township Geographic (GPS) Coordinates (to be provided in Datum NAD83) Method of Collection UTM Zone Accuracy Estimate Easting Northing Is the Applicant the owner of the site where water taking will occur? No if no, attach the owner's name, address and a signed letter granting consent for the applicant to access the water taking location Is the site where water taking will occur located in an area of development control as defined by the Niagara Escarpment Planning & Development Act? Is the site where water taking will occur located on the Oak Ridges Moraine Conservation Area as defined by the Oak Ridges Moraine Conservation Plan (a regulation made under the Oak Ridges Moraine Conservation Act)? Yes Are you aware of any complaints or impacts resulting from water takings at the site? if yes, please describe: Yes Will water from the site be packaged in a container (bottled water, tanks)? If yes, what size of containers? greater than 20 litres 20 litres or less Yes Are wells located within 500 m of the site where water taking will occur? Yes No if no, what is the distance to the nearest well? Is municipal water available to all dwellings within 500m of the site where water taking will occur? Unknown Yes Nο Estimated start date of water taking Water taking to days weeks months vears I indefinite extend for a period of: Is activity subject to the Environmental Assessment Act? Yes if yes, please attach approval or Notice of Completion No If yes, did the project receive any Part II Orders / Bump-Up requests? Yes if yes, what was the date of the Minister's Decision? Decision pending List any public consultation/notification that has occurred related to the proposed water taking (i.e., public hearings, notification of First Nations, etc.) Watercourse - please complete this table if applying to take water from a watercourse (i.e., stream, municipal ditch, open drain, etc.) Watercourse Name Tributary to Does flow in the watercourse stop at any time during the year? Yes if yes, during which months? For what period of time? Do you move/relocate the water intake (pump)? Yes if yes, please provide primary and secondary locations on attached map

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Well - please complete thi	s table if applying to tak	e water from a	well (includes	sumps for mines and quarries	s)	
Well Name / Identifier	Water Well Record Num		•	de name of property owner at tim		
Has the well been deepened?						
Yes if yes, what w	was the date of deepening	g?				
☐ No						
Type of Well: Drilled	Bored Dug	Driven or .	letted (sandpoin	ts/wellpoints)		
		If 'Drive	n or Jetted', prov	vide the following:		
		То	tal number of sa	ndpoints/wellpoints:		
		Nu	mber of intercon	nected sandpoint/wellpoint syste	ems:	
Can you measure the depth to water a Yes if yes, what in No	ater in this well? s the depth to static wate	r level?		Date Measured:		
Has a pumping test been done?						
Yes if yes, please	e attach report					
☐ No						
□ Lake nloops somplete ti	ais table if annlying to to	les motor from	loko			
Lake - please complete the Lake Name	пѕ тарге п арргуту то та	ke water ironi a	таке			
				.,		
Pond/Reservoir - please Pond Name / Identifier	complete this table if ap	plying to take i	vater from a po	ond/reservoir		
Pond Name / Identine						
Was the pond constructed (man i	 nade)?					
	provide date of construc	ction				
☐ No						
Pond Size						
Average Length A	Average Width	Average Depth	of Water	Maximum Depth of Water	Approximate Volume of Pond	
D I.T						
Pond Type Select the diagram that most acc	urately resembles your por	ıd:				
\rightarrow \rightarrow)				
		→		<u> </u>		
online		oass		connected	dugout	
Source of pond water (select all t						
Seepage / springs / ground						
Surface water runoff (included)	_					
Pumped water (if water is p	oumped into a pond, compl	ete section inforr	nation for source	from which water is pumped - i.	e., well, lake or watercourse)	
Flowing water (watercourse	e, open drains, ditches, etc	.)				
If "flowing water",						
1. Does water flow into the	e pond (inflow)?		es No			
If yes, is there a structu	re to regulate the inflow?	Y	es No	If yes, describe:		
2. Does water flow out of	the pond (outflow)?		es No			
If yes, is there a control structure to regulate the outflow? \(\sum \) Yes \(\sum \) No. If yes, describe:						

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8. Pub	lic Cor	isuitati	on /	Environmental Bill of Rights (EBR) Requirements			
Is this a	Is this application for water taking to extend for a period of less than one year?						
	Yes No If no, this application may be subject to posting and/or public consultation requirements under the Environmental Bill of Rights. For more information, please refer to the Guide.						
Is this application for agricultural use or aquaculture?							
	Yes		No	If no, this application may be subject to posting and/or public consultation requirements under the Environmental Bill of Rights. For more information, please refer to the Guide.			

9. Water Taking Volumes

	Purpose Options for Water Taking						
	Purpose						
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)						
Construction	Dredging, road building, 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)						

Water Source Information – Table A (Units in Litres)

water Source Information – Table A (Units in Litres)								
Source Name	Purpose (select from "purpose" column in table above)	Maximum rate per minute	Maximum number of hours of taking a day	Maximum volume per day	Typical volume per day	Maximum number of days of taking in a year	Earliest calendar date of taking (mm/dd)	Latest calendar date of taking (mm/dd)
				<u> </u>				
						1		

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10. At	tachments						
The fo	ollowing must be attached for all applications (Category 1, 2 and 3) to be c	omplete:					
	Map Requirements On a 1:10 000 OBM (Ontario Base Map) (1:50 000 only acceptable in lo all existing and proposed water taking locations with sources of all of the following features within 500m of each source: existing wetlands, water bodies, property lines, locations and name of property lines.	orresponding with source name g wells (indicate use of existing well, springs, watercourses,					
	Describe in detail how, where and when all water is obtained, stored, tr applicable). Details must include the source of all water takings (and cotaking, period of water taking, and maximum quantity requested (see Governorm to the Environmental Bill coreate the Proposal Notice. The ministry may change the wording as re-	rresponding source name if applicable), purpose of the water uide for further instruction). f Rights (EBR) Registry, this description will be used to					
	Describe how water taking needs (rates, amounts and time periods) we calculations to demonstrate the water takings requested are warranted. of the Guide.						
	Attach completed water conservation Schedule 1.						
The fo	ollowing must be attached for all Category 2 applications:						
	Completed Schedule 2 and/or Schedule 3 signed by a Qualified Person						
The fo	ollowing must be attached for all Category 3 applications:						
	Study						
11. Sta	atement/Signature of Applicant						
l, the ι	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. 							
	he Project Technical Information Contact identified in Section 6 if this form btaining this approval.	is authorized to act on my behalf for the purpose of					
Print Na	ame Signature	Date (yyyy/mm/dd)					

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Cardholder Signature

Application for Permit to Take Water

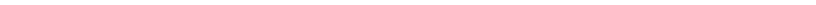
Ce formulaire est disponible en français

	For Office Use Only				
F	Reference Number		Payment Received	Date (y/m/d)	Initials
			\$		
2. Payment Information					
Application Category	•	Amount Enclosed			
Category 1 (\$750) Category 2 (\$750) Category	<i>y</i> 3 (\$3000)	\$		no fee require	d
Method of Payment					
Certified Cheque Money Order VISA .	MasterCard Ame	erican Express			
Credit Card Information (if paying by VISA, MasterCard or American	n Express)*				•
Name on Card (please print)	Credit Card Number		Expiry Date (yy/m	m)	

Date (y/m/d)

*NOTE: credit card accepted for payments UNDER \$10,000.00 only.

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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.

Please note that this schedule may not be directly applicable to certain takings, such as pumping tests, instream uses, site dewatering and certain industrial processes. In these cases, consideration must be given to the fate of the water or system design requirements.

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

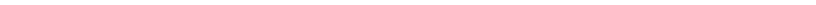
Check off which of the following water conservation best management measures and practices that you have implemented or will implement for the duration of the permit:						
	Implemented	To be Implemented				
Water Use Audit						
Universal metering of all users (municipalities)						
Water Efficient 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 speci practices applied or to be applied including equipment (e.g. pump water used for industrial production and/or irrigation system(s), c approach, processes and procedures:	p specification), p	rocesses, such as				
For the above measures and practices, list information relevant f information used in determining water conservation and efficience measures:						
List dates of when the best management measures and practice of the permit:	s were or will be a	applied for the duration				
Identify any approval or certification that you have received for in	nplementing wate	er conservation and				
efficiency best management practices, e.g. Environmental Farm 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 -								
	ecurring taking less than ction dewatering and dus		less than 400,000					
withdrawal of water doe the considerations outli	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 geotechnically sensitive soils (i.e. marine clays) areas where integrity of structures may be impaired by pumping induced drawdown 	Proximity to Other Water Uses and Surface Water > 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	Proximity to Contaminant Sources > potential to mobilize contamination > identify if taking is for remediation purposes	Pischarge of Water 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 De	signation:					
☐ Mr. ☐ Ms. ☐ Mrs. ☐	Other:	Licensed P	rofessional Geoscientist Professional Engineer					
First Name:	Middle Initial:	Last Name:						
Tel: () - Ext.	Fax: ()	- Ext.	E-mail:					
Street Address:								
Mailing Address (if different than s	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 and the information submitted in s								
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

ategory 2 surface water assessment requires the qualified professional to confirm that the proposal ets 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 (3 rd order or higher order) taking <5% of 7Q ₂₀
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 De						
☐ Mr. ☐ Ms. ☐ Mrs. ☐	Other:	Bachelor de	egree cify area of study:					
		Licensed Pr	ofessional Engineer					
			Professional Engineer					
First Name:	Middle Initial:	Last Name:	1					
Tel: () - Ext.	Fax: () -	Ext.	E-mail:					
Street Address:								
Mailing Address (if different than s	treet address):	T						
County:	T	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 and the information submitted in s								
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. $300 \times 3.785 = 1135.5$ litres per minute

Step 2: Multiply rate by number of minutes in 12 hours 1135.5 litre per minute x 60 minutes per hour x 12 hours = 817,560 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 acres x 1 inch = 20 acre-inches

Step 2: Convert acre-inches to litres 20 acre-inch x 102,800 L/acre-inch = 2,056,000 litres

or

- Step 1: Convert acres to hectares. 20 acres / 2.471 = 8.1 hectares
- Step 2: Convert hectares to square metres. 8.1 hectares x 10,000 = 81,000 square metres
- Step 3: Convert inches to metres. 1 inch / 39.37 = 0.0254 metres
- Step 4: Multiply the area by the depth of water to be applied. 81,000 square metres x 0.0254 metres = 2057.4 cubic metres
- Step 5: Convert cubic metres to litres. 2057.4 cubic metres x 1000 = 2,057,400 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.)

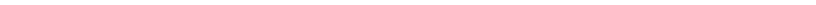
Map Datum. This is the UTM datum of the map or GPS (Global Positioning System) used to specify position of the point of reference. Currently, there are two map datums in use in North America, namely, the North American Datum 1927 (NAD27) and NAD83. The NAD83 Is preferred, as the current Ontario Base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

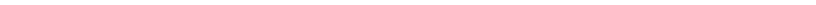
UTM Easting. This is the distance in metres east from the western delimiter of the UTM Zone to the point of reference.

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 Maximum # irrigation guns in service at one time:_____(a) 1) Volume Guns Type/Size of Irrigation Gun:______(b) (eg. Nelson BigGun 150) Type and diameter of nozzle:_____(c) (Ring or taper and nozzle size eg. 1" 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: _____(I) rated flow rate per emitter: (m) This rate should be in litres/minute Total rate of water taking: Multiply (I)_____ 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.



				Big (
Taper I	Bore N	ozzle									
SR Series		0.50"	0.55"	0.60"	0.65"	0.70"	0.75"	0.80"	0.85"	0.90"	1.00"
	PSI	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM	LPM
100	40	178 189	216 242	250 280	295 329	344 379	390 435	447 492	507 568	575 625	772
	50 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
		0.70"	0.80"	0.90"	1.00"	1.10"	1.2"	1.30"			
	PSI	LPM	LPM	LPM	LPM	LPM	LPM	LPM			
ŀ	50	379	492	625	776	965	1136	1325			
ŀ	60	416	541	689	852	1041	1249	1457			
150	70 80	454 484	587 625	746 795	927 984	1117 1192	1344 1438	1571 1684			
130	90	511	662	844	1041	1268	1533	1798			
ŀ	100	541	700	889	1098	1344	1609	1893			
ŀ	110	568	738	935	1154	1400	1684	1987			
	120	594	772	977	1211	1457	1760	2063			
		1.05"	1.10"	1.20"	1.3"	1.40"	1.50"	1.60"	1.75"	1.90"	
	PSI	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	
200	90	1173	1325	1533	1798	2063	2366	2706	3236	3804	
ŀ	100	1230	1400	1609	1893	2176	2498	2858	3407	4012	
	110	1287 1344	1476 1609	1684 1760	1987 2063	2290	2631 2744	2990 3123	3577	4201 4391	
ŀ	120 130	1400	1703	1836	2139	2385			3728 3880		
						2479	2858				
					2133	2479	2858	3255	3000	4580	
Ring No	ozzle				2139	2479	2858	3255	3600	4580	
	ozzle								3860	4580	
Ring No		0.71" LPM	0.77"	0.81"	0.86"	0.89"	0.93"	0.96"	3880	4580	
	PSI	LPM	0.77" LPM	0.81" LPM	0.86" LPM	0.89" LPM	0.93" LPM	0.96" LPM	3000	4580	
			0.77"	0.81"	0.86"	0.89"	0.93"	0.96"	3000	4580	
	PSI 40	LPM 250	0.77" LPM 295	0.81" LPM 344	0.86" LPM 390	0.89" LPM 447	0.93" LPM 507	0.96" LPM 575	3000	4580	
SR Series	PSI 40 50	LPM 250 280	0.77" LPM 295 333	0.81" LPM 344 379	0.86" LPM 390 435	0.89" LPM 447 488	0.93" LPM 507 568	0.96" LPM 575 632	3000	4580	
	PSI 40 50 60	250 280 307	0.77" LPM 295 333 363	0.81" LPM 344 379 416	0.86" LPM 390 435 473	0.89" LPM 447 488 534	0.93" LPM 507 568 621	0.96" LPM 575 632 693	3880	4580	
R Series	PSI 40 50 60 70	250 280 307 333	0.77" LPM 295 333 363 394	0.81" LPM 344 379 416 447	0.86" LPM 390 435 473 511	0.89" LPM 447 488 534 575	0.93" LPM 507 568 621 670	0.96" LPM 575 632 693 749	3000	4580	
R Series	PSI 40 50 60 70 80 90 100	250 280 307 333 356 375 397	0.77" LPM 295 333 363 394 420 443	0.81" LPM 344 379 416 447 481 507	0.86" LPM 390 435 473 511 549 583 613	0.89" LPM 447 488 534 575 617 655	0.93" LPM 507 568 621 670 715 761	0.96" LPM 575 632 693 749 799 848	3000	4580	
R Series	PSI 40 50 60 70 80 90	250 280 307 333 356 375	0.77" LPM 295 333 363 394 420 443	0.81" LPM 344 379 416 447 481 507	0.86" LPM 390 435 473 511 549 583	0.89" LPM 447 488 534 575 617 655	0.93" LPM 507 568 621 670 715 761	0.96" LPM 575 632 693 749 799 848	3000	4580	
R Series	PSI 40 50 60 70 80 90 100	250 280 307 333 356 375 397	0.77" LPM 295 333 363 394 420 443	0.81" LPM 344 379 416 447 481 507	0.86" LPM 390 435 473 511 549 583 613	0.89" LPM 447 488 534 575 617 655	0.93" LPM 507 568 621 670 715 761	0.96" LPM 575 632 693 749 799 848	3000	4580	
R Series	PSI 40 50 60 70 80 90 110 PSI	250 280 307 333 356 375 397 416	0.77" LPM 295 333 363 394 420 443 469 492	0.81" LPM 344 379 416 447 481 507 537 564	0.86" LPM 390 435 473 511 549 583 613 643	0.89" LPM 447 488 534 575 617 655 689 723	0.93" LPM 507 568 621 670 715 761 802 840	0.96" LPM 575 632 693 749 799 848 893 939	3000	4580	
R Series	PSI 40 50 60 70 80 90 110 PSI 50	250 280 307 333 356 375 397 416 0.86" LPM	0.77" LPM 295 333 363 394 420 443 469 492 0.97" LPM	0.81" LPM 344 379 416 447 481 507 537 564 1.08" LPM 625	0.86" LPM 390 435 473 511 549 583 613 643 1.18" LPM	0.89" LPM 447 488 534 575 617 655 689 723	0.93" LPM 507 568 621 670 715 761 802 840 1.34" LPM 1136	0.96" LPM 575 632 693 749 799 848 893 939	3000	4580	
R Series	PSI 40 50 60 70 80 90 110 PSI 50 60	250 280 307 333 356 375 397 416 0.86" LPM 379 416	0.77" LPM 295 333 363 394 420 443 469 492 0.97" LPM 492 541	0.81" LPM 344 379 416 447 481 507 537 564 1.08" LPM 625 689	0.86" LPM 390 435 473 511 549 583 613 643 1.18" LPM 776	0.89" LPM 447 488 534 575 617 655 689 723 1.26" LPM 965	0.93" LPM 507 568 621 670 715 761 802 840 1.34" LPM 1136 1249	0.96" LPM 575 632 693 749 799 848 893 939 1.41" LPM 1325	3000	4580	
100	PSI 40 50 60 70 110 PSI 50 60 70	250 280 307 333 356 375 397 416 0.86" LPM 379 416 454	0.77" LPM 295 333 363 394 420 443 469 492 0.97" LPM 492 541	0.81" LPM 344 379 416 447 481 507 537 564 1.08" LPM 625 689 746	0.86" LPM 390 435 473 511 549 583 613 643 1.18" LPM 776 852	0.89" LPM 447 488 534 575 617 655 689 723 1.26" LPM 965 1041	0.93" LPM 507 568 621 670 715 761 802 840 1.34" LPM 1136 1249	0.96" LPM 575 632 693 749 799 848 893 939 1.41" LPM 1325 1457	3000	4580	
R Series	PSI 40 50 60 70 80 110 PSI 50 60 70 80	250 280 307 333 356 375 397 416 0.86" LPM 379 416 454 484	0.77" LPM 295 333 363 394 420 443 469 492 0.97" LPM 492 541 587 625	0.81" LPM 344 379 416 447 481 507 537 564 1.08" LPM 625 689 746 795	0.86" LPM 390 435 473 511 549 583 613 643 1.18" LPM 776 852 927 984	0.89" LPM 447 488 534 575 617 655 689 723 1.26" LPM 965 1041 1117 1192	0.93" LPM 507 568 621 670 715 761 802 840 1.34" LPM 1136 1249 1344 1438	0.96" LPM 575 632 693 749 799 848 893 939 1.41" LPM 1325 1457 1571	3000	4580	
100	PSI 40 50 60 70 80 110 PSI 50 60 70 80 90 90	250 280 307 333 356 375 397 416 0.86" LPM 379 416 454 484 511	0.77" LPM 295 333 363 394 420 443 469 492 0.97" LPM 492 541 587 625 662	0.81" LPM 344 379 416 447 481 507 537 564 1.08" LPM 625 689 746 795	0.86" LPM 390 435 473 511 549 583 613 643 1.18" LPM 776 852 927 984 1041	0.89" LPM 447 488 534 575 617 655 689 723 1.26" LPM 965 1041 1117 1192 1268	0.93" LPM 507 568 621 670 715 761 802 840 1.34" LPM 1136 1249 1344 1438 1533	0.96" LPM 575 632 693 749 799 848 893 939 1.41" LPM 1325 1457 1571 1684	3000	4580	
100	PSI 40 50 60 70 80 110 PSI 50 60 70 80 90 100	250 280 307 333 356 375 397 416 0.36" LPM 379 416 454 484 511 541	0.77" LPM 295 333 363 394 420 443 469 492 0.97" LPM 492 541 587 625 662 700	0.81" LPM 344 379 416 447 481 507 537 564 1.08" LPM 625 689 746 795 844 889	0.86" LPM 390 435 473 511 549 583 613 643 1.18" LPM 776 852 927 984 1041 1098	0.89" LPM 447 488 534 575 617 655 689 723 1.26" LPM 965 1041 1117 1192 1268 1344	0.93" LPM 507 568 621 670 715 761 802 840 1.34" LPM 1136 1249 1344 1438 1533 1609	0.96" LPM 575 632 693 749 799 848 893 939 1.41" LPM 1325 1457 1571 1684 1798 1893	3000	4580	
100	PSI 40 50 60 70 80 110 PSI 50 60 70 80 90 90	250 280 307 333 356 375 397 416 0.86" LPM 379 416 454 484 511	0.77" LPM 295 333 363 394 420 443 469 492 0.97" LPM 492 541 587 625 662	0.81" LPM 344 379 416 447 481 507 537 564 1.08" LPM 625 689 746 795	0.86" LPM 390 435 473 511 549 583 613 643 1.18" LPM 776 852 927 984 1041	0.89" LPM 447 488 534 575 617 655 689 723 1.26" LPM 965 1041 1117 1192 1268	0.93" LPM 507 568 621 670 715 761 802 840 1.34" LPM 1136 1249 1344 1438 1533	0.96" LPM 575 632 693 749 799 848 893 939 1.41" LPM 1325 1457 1571 1684	3000	4580	
100	PSI 40 50 60 70 80 90 110 FSI 80 90 100 110 110	250 280 307 333 356 375 397 416 0.86" LPM 379 416 454 484 511 568 594	0.77" LPM 295 333 363 394 420 443 469 492 0.97" LPM 492 541 587 625 662 700 738 772	0.81" LPM 344 379 416 447 481 507 537 564 1.08" LPM 625 689 746 795 844 889 935	0.86" LPM 390 435 473 511 549 583 613 643 1.18" LPM 776 852 927 984 1041 1098 1154 1211	0.89" LPM 447 488 534 575 617 655 689 723 1.26" LPM 965 1041 1117 1192 1268 1344 1400 1457	0.93" LPM 507 568 621 670 715 761 802 840 1.34" LPM 1136 1249 1344 1438 1533 1609 1684 1760	0.96" LPM 575 632 693 749 799 848 893 939 1.41" LPM 1325 1457 1571 1684 1798 1893 1987 2063	3000	4580	
100	PSI 40 50 60 70 80 90 110 FSI 80 90 100 110 110	250 280 307 333 356 375 397 416 0.86" LPM 379 416 454 484 511 541 568	0.77" LPM 295 333 363 394 420 443 469 492 0.97" LPM 492 541 587 625 662 700 738	0.81" LPM 344 379 416 447 481 507 537 564 1.08" LPM 625 689 746 795 844 889 935	0.86" LPM 390 435 473 511 549 583 613 643 1.18" LPM 776 852 927 984 1041 1098 1154	0.89" LPM 447 488 534 575 617 655 689 723 1.26" LPM 965 1041 1117 1192 1268 1344 1400	0.93" LPM 507 568 621 670 715 761 802 840 1.34" LPM 1136 1249 1344 1438 1533 1609 1684	0.96" LPM 575 632 693 749 848 893 939 1.41" LPM 1325 1457 1571 1684 1798 1893	3000	4580	
100	PSI 40 50 60 70 80 90 100 110 120	250 280 307 333 356 375 397 416 0.86" LPM 379 416 454 484 511 541 568 594	0.77" LPM 295 333 363 394 420 443 469 492 0.97" LPM 492 541 587 625 662 700 738 772	0.81" LPM 344 379 416 447 481 507 537 564 1.08" LPM 625 689 746 795 844 889 935	0.86" LPM 390 435 473 511 549 583 613 643 1.18" LPM 776 852 927 984 1041 1098 1154 1211	0.89" LPM 447 488 534 575 617 655 689 723 1.26" LPM 965 1041 1117 1192 1268 1344 1400 1457	0.93" LPM 507 568 621 670 715 761 802 840 1.34" LPM 1136 1249 1344 1438 1533 1609 1684 1760	0.96" LPM 575 632 693 749 799 848 893 939 1.41" LPM 1325 1457 1571 1684 1798 1893 1987 2063	3000	4580	
100	PSI 40 50 60 70 80 90 100 110 120 PSI PSI	250 280 307 333 356 375 397 416 0.86" LPM 379 416 454 484 511 541 568 594 1.29" LPM	0.77" LPM 295 333 363 394 420 443 469 492 0.97" LPM 492 541 587 625 662 700 738 772 1.46" LPM	0.81" LPM 344 379 416 447 481 507 537 564 1.08" LPM 625 689 746 795 844 889 935 977 1.56" LPM	0.86" LPM 390 435 473 511 549 583 613 643 1.18" LPM 776 852 927 984 1041 1098 1154 1211 1.66" LPM	0.89" LPM 447 488 534 575 617 655 689 723 1.26" LPM 965 1041 1117 1192 1268 1344 1400 1457	0.93" LPM 507 568 621 670 715 761 802 840 1.34" LPM 1136 1249 1344 1438 1533 1609 1684 1760	0.96" LPM 575 632 693 749 799 848 893 939 1.41" LPM 1325 1457 1571 1684 1798 1893 1987 2063	3000	4580	
100	PSI 40 50 60 70 80 90 100 110 120 PSI 50	250 280 307 333 356 375 397 416 0.86" LPM 379 416 454 484 511 541 568 594 1.29" LPM 871	0.77" LPM 295 333 363 394 420 443 469 492 0.97" LPM 492 541 587 625 662 700 738 772 1.46" LPM 1136	0.81" LPM 344 379 416 447 481 507 537 564 1.08" LPM 625 689 746 795 844 889 935 977	0.86" LPM 390 435 473 511 549 583 613 643 1.18" LPM 776 852 927 984 1041 1098 1154 1211 1.66" LPM	0.89" LPM 447 488 534 575 617 655 689 723 1.26" LPM 965 1041 1117 1192 1268 1344 1400 1457 1.74" LPM	0.93" LPM 507 568 621 670 715 761 802 840 1.34" LPM 1136 1249 1344 1438 1533 1609 1684 1760 1.83" LPM 2025	0.96" LPM 575 632 693 749 799 848 893 939 1.41" LPM 1325 1457 1571 1684 1798 1893 1987 2063 1.93" LPM	3000	4580	
100.	PSI 40 50 60 70 80 90 100 110 120 PSI 50 60 60	250 280 307 333 356 375 397 416 0.86" LPM 379 416 454 484 511 541 568 594 1.29" LPM 871 946	0.77" LPM 295 333 363 394 420 443 469 492 0.97" LPM 492 541 587 625 662 700 738 772 1.46" LPM 1136 1249	0.81" LPM 344 379 416 447 481 507 537 564 1.08" LPM 625 689 746 795 844 889 935 977 1.56" LPM 1325 1457	0.86" LPM 390 435 473 511 549 583 613 643 1.18" LPM 776 852 927 984 1041 1098 1154 1211 1.66" LPM 1552 1684	0.89" LPM 447 488 534 575 617 655 689 723 1.26" LPM 965 1041 1117 1192 1268 1344 1400 1457 1.74" LPM 1779	0.93" LPM 507 568 621 670 715 761 802 840 1.34" LPM 1136 1249 1344 1438 1533 1609 1684 1760 1.83" LPM 2025	0.96" LPM 575 632 693 749 799 848 893 939 1.41" LPM 1325 1457 1571 1684 1798 1893 1987 2063 1.93" LPM 2422 2631	3000	4580	
100	PSI 40 50 60 70 80 90 100 110 120 PSI 50 60 70 60 70	250 280 307 333 356 375 397 416 0.86" LPM 379 416 454 484 511 541 568 594 1.29" LPM 871 946	0.77" LPM 295 333 363 394 420 443 469 492 0.97" LPM 492 541 587 625 662 700 738 772 1.46" LPM 1136 1249	0.81" LPM 344 379 416 447 481 507 537 564 1.08" LPM 625 689 746 795 844 889 935 977 1.56" LPM 1325 1457	0.86" LPM 390 435 473 511 549 583 613 643 1.18" LPM 776 852 927 984 1041 1098 1154 1211 1.66" LPM 1552 1684 1817	0.89" LPM 447 488 534 575 617 655 689 723 1.26" LPM 965 1041 1117 1192 1268 1344 1400 1457 1.74" LPM 1779 1949 2101	0.93" LPM 507 568 621 670 715 761 802 840 1.34" LPM 1136 1249 1344 1438 1533 1609 1684 1760 1.83" LPM 2025 2214	0.96" LPM 575 632 693 749 799 848 893 939 1.41" LPM 1325 1457 1571 1684 1798 1893 1987 2063 1.93" LPM 2422 2631 2858	3000	4580	
100 150	PSI 40 50 60 70 80 90 100 110 120 PSI 50 60 70 80 90 100 110 120 PSI 50 60 70 80 90 100 100 100 100 100 100 100 100 100	250 280 307 333 356 375 397 416 0.36" LPM 379 416 454 484 511 541 568 594 1.29" LPM 871 946 1022 1098 1173 1230	0.77" LPM 295 333 363 394 420 443 469 492 0.97" LPM 492 541 587 625 662 700 738 772 1.46" LPM 1136 1249 1344 1438 1533 1609	0.81" LPM 344 379 416 447 481 507 537 564 1.08" LPM 625 689 935 977 1.56" LPM 1325 1457 1571 1684 1798 1893	0.86" LPM 390 435 473 511 549 583 613 643 1.18" LPM 776 852 927 984 1041 1098 1154 1211 1.66" LPM 1552 1684 1817 1949 2063 2176	0.89" LPM 447 488 534 575 617 655 689 723 1.26" LPM 965 1041 1117 1192 1268 1344 1400 1457 1.74" LPM 1779 1949 2101 2233 2366 2498	0.93" LPM 507 568 621 670 715 761 802 840 1.34" LPM 1136 1249 1344 1438 1533 1609 1684 1760 1.83" LPM 2025 2214 2385 2555 2706 2858	0.96" LPM 575 632 693 749 799 848 893 939 1.41" LPM 1325 1457 1684 1798 1893 1987 2063 1.93" LPM 2422 2631 2858 3047 3236 3407	3000	4580	
100 150	PSI 40 50 60 70 80 90 100 110 120 PSI 50 60 70 80 90 90 90 90 90 90 90 90 90 90 90	250 280 307 333 356 375 397 416 0.86" LPM 379 416 454 484 511 541 568 594 1.29" LPM 871 946 1022 1098 1173	0.77" LPM 295 333 363 394 420 443 469 492 0.97" LPM 492 1.46" 587 625 662 700 738 772 1.46" LPM 1136 1249 1344 1438 1533	0.81" LPM 344 379 416 447 481 507 537 564 1.08" LPM 625 746 795 844 889 935 977 1.56" LPM 1325 1457 1571 1684 1798	0.86" LPM 390 435 473 511 549 583 613 643 1.18" LPM 776 852 927 984 1041 1098 1154 1211 1.66" LPM 1552 1684 1817 1949	0.89" LPM 447 488 534 575 617 655 689 723 1.26" LPM 965 1041 1117 1192 1268 1344 1400 1457 1.74" LPM 1779 1949 2101 2233 2366	0.93" LPM 507 568 621 670 715 761 802 840 1.34" LPM 1136 1249 1344 1438 1533 1609 1684 1760 1.83" LPM 2025 2214 2385 2555	0.96" LPM 575 632 693 749 799 848 893 939 1.41" LPM 1325 1571 1684 1798 1893 1987 2063 1.93" LPM 2422 2631 2858 3047 3236	3000	4580	

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						