

Permit To Take Water (PTTW) Manual

April 2005

Protecting our environment.



Ontario

Permit To Take Water (PTTW) Manual

Ministry of the Environment

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PTTW Guidelines and Procedures Manual

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Introduction

Water takings in Ontario are governed by the *Ontario Water Resources Act* (OWRA) and the Water Taking and Transfer 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 and Transfer Regulation. The Regulation also addresses water takings in high use watersheds and the Great Lakes Basin.

The manual sets out the decision making process generally followed by the Ministry and it is intended to explain to applicants, proponents, and the public the requirements and considerations that are generally taken into account when a S. 34 Director and Ministry reviewers are evaluating a proposed or existing water taking. However, each taking must be evaluated on a case-by-case basis through the exercise of professional judgement based on the requirements of the Water Taking and Transfer Regulation and the principles set out in this document.

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The review and approval of water takings are governed by section 34 of the *Ontario Water Resources Act* (OWRA). Based on this legislation, water taking is regulated through a permit system to achieve environmental objectives. The program is also designed to minimize water supply and water quality interference problems and to provide for the settlement of interference complaints if they do occur.

While section 34 of the OWRA is designed to control the taking of water in the province, there are also common-law rights to the use of water. Section 34 is an added control mechanism, and a person must comply with both the legislation and common law precedents and would generally be subject to the more limiting provisions. Thus, while common law rights are not superseded, they will likely be limited by the permit legislation.

In addition, the Water Taking and Transfer Regulation, made under the OWRA prohibits water transfers out of a water basin (as defined in the regulation) and sets out matters for a Director to consider when dealing with permits to take water.

What are commonly regulated water takings?

Major water uses, including takings for agricultural, municipal, commercial, construction, dewatering, industrial, institutional, recreational, remediation, water supply or other purposes, are subject to section 34, provided that a taking is in excess of 50,000 litres in a day, and the pump intakes or the works were installed or constructed after March 29, 1961.

Here's what Section 34 of the OWRA says on the "Taking of Water" ...

Interpretation

34. (1) *In this section, reference to the taking of water for use for domestic or farm purposes means the taking of water by any person other than a municipality or a company public utility for ordinary household purposes or for the watering of livestock, poultry, home gardens or lawns, but does not include the watering or irrigation of crops grown for sale.*

(2) *In subsection (4), the reference to the taking of water for the watering of livestock or poultry does not include the taking of surface water into storage for the watering of livestock or poultry.*

Taking of Water Regulated

(3) *Despite any general or special Act or any regulation or order made thereunder and subject to subsection (5), no person shall take more than a total of 50,000 litres of water in a day,*

- a. by means of a well or wells that are constructed or deepened after the 29th day of March, 1961; or*
- b. by means of an inlet or inlets from a surface source of supply, where the inlet or inlets is or are installed in the source of supply or is or are enlarged after the 29th day of March, 1961; or*
- c. by means of a structure or works constructed after the 29th day of March, 1961 for the diversion or storage of water; or*
- d. by any combination of the means referred to in clauses (a), (b) and (c),*

without a permit issued by a Director.

Interference with Other Person's Interest

(4) *Despite any general or special Act or any regulation or order made thereunder, where the taking of water for any purpose, other than the taking of water by any person except a municipality or company public utility for use for ordinary household purposes or for the watering of livestock or*

Introduction

Permits are not typically issued for sewage works (e.g. storm water management ponds) where these facilities are regulated under Section 53 of the OWRA.

What are the exemptions from Section 34 of OWRA?

Takings that are exempt from the requirement to obtain a permit, regardless of the date of construction or the amount of water taken, are as follows:

- ♦ takings by an individual for ordinary household purposes;
- ♦ takings for the direct watering of livestock or poultry; or
- ♦ takings for firefighting.

Takings that are normally exempt from the requirement to obtain a Permit To Take Water include:

- ♦ takings by means of works installed prior to March 29, 1961, and not enlarged or deepened since; and
- ♦ takings of less than 50,000 litres in a day on any day.

If in the opinion of a Director, a taking in this latter category interferes with any public or private interest in any water, a Notice can be issued under Section 34(4) prohibiting the taking without a permit. The taking in question can then be handled in the same manner as takings normally requiring authorization by permit.

poultry and other than the taking of water by any person for firefighting, interferes, in the opinion of a Director, with any public or private interest in any water, the Director may, by notice served on or sent by registered mail to the person who is taking or is responsible for the taking of water that so interferes, prohibit the person from so taking water without a permit issued by the Director.

Domestic, Farm Use and Firefighting

(5) Subsection (3) does not apply to the taking of water by any person for use for domestic or farm purposes or for firefighting.

Permits

(6) A Director may in his or her discretion issue, refuse to issue or cancel a permit, may impose such terms and conditions in issuing a permit as he or she considers proper and may alter the terms and conditions of a permit after it is issued.

Flowing or Leaking of Water

(7) Where the flowing or leaking of water from a well, or the diversion, flowing or release of water from or by means of a hole or excavation made in the ground for any purpose other than the taking of water, interferes, in the opinion of a Director, with any public or private interest in any water, the Director may, by notice served on or sent to the person who constructed or made such well, hole or excavation or to the registered owner of the land in which such well, hole or excavation is located, require the person or owner to stop or regulate such flowing, leaking, diversion or release of water in such manner and within such time as the Director may direct, or require such person or owner to take such measures in relation to such flowing, leaking, diversion or release of water as the notice may require.

Offences

(8) Every person who contravenes,

- a. subsection (3) or (4);*
- b. a notice served on him, her or it or received by him, her or it or on his, her or its behalf under subsection (4) or (7); or*
- c. any of the terms and conditions of a permit issued by a Director,*

is guilty of an offence.

Here's what the Water Taking and Transfer Regulation says ...

Purpose

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

(Note, the relevant text from the Water Taking and Transfer Regulation is placed in sidebars in the appropriate sections of this manual.)

Principles of the PTTW Program

The Ministry has built on existing water management principles specified in the *Ontario Water Resources Act*, the Ministry's *Statement of Environmental Values* under the *Environmental Bill of Rights* and *Water Management Policies, Guidelines, Provincial Water Quality Objectives of the Ministry of Environment*. The principles provide a scientifically based, consistent approach to managing water takings in Ontario and guide the application and regulatory review of Permits To Take Water. Applicants are encouraged to consult with the Ministry prior to submitting a permit application if they are unsure how to interpret or apply these principles.

The Ministry's water quantity management policy is to ensure the fair sharing, conservation and sustainable use of the waters of the Province.

Consistent with this policy, the Ministry has adopted the following principles.

Principle #1:

The Ministry will use an ecosystem approach that considers both water takers' reasonable needs for water and the natural functions of the ecosystem.

The ecosystem approach recognizes the physical, chemical and biological components of water resources and their inter-relationships. Water takings will be managed to protect the natural functions of the ecosystem.

The Ministry's environmental protection strategy places highest priority on preventing significant environmental harm. Water takings are managed to ensure sustainability of the resource.

The Ministry recognizes that there are limits to the amount of water that can be taken without causing unacceptable adverse impacts. Permits will be controlled or not issued if current science standards indicate that additional or current takings will adversely impact existing users or the environment.

Principle #2:

Water takings are controlled to prevent unacceptable interference with other uses of water, wherever possible, and to resolve such problems if they do occur.

Water takers are encouraged to take all reasonable and practical measures to manage their takings efficiently to maximize the availability of water for existing or potential uses and to sustain ecosystem integrity. To foster fair sharing, reviews of new applications will consider the potential impacts on existing uses of water.

Principle #3:

The Ministry will employ adaptive management to better respond to evolving environmental conditions.

Adaptive management is a process that explicitly recognizes changes in natural systems, stresses learning from experience and monitoring, and revisiting management goals and objectives to adapt them as required in light of new information gained. As applied to the PTTW program, it comprises evaluating permit applications in light of available information on potential impacts, setting of permit conditions, monitoring, evaluating, and adjusting of water taking and permit conditions, as necessary.

In cases where the Director believes that the taking poses an unacceptable adverse effect, or where there is no additional water available, the Director may refuse to issue the permit in response to an application, or curtail or revoke an existing permit.

Principle #4:

The Ministry will consider the cumulative impacts of water takings.

Where relevant information about watershed/aquifer conditions ex-

ists, (e.g. water availability and potential impacts to the environment and other uses) the Ministry will take this into account when reviewing individual permit applications. Where the Ministry believes that cumulative impacts need to be considered, the Ministry may initiate a watershed scale or aquifer scale assessment beyond a local-scale impact assessment, and may engage water takers to collectively reduce the burden on the watershed and to better manage the demand for water.

Principle #5:

The Ministry will incorporate risk management principles into the permit application/review process.

The level of scientific evaluation applied to a water taking will be commensurate with the potential for environmental impact and interference with other uses. Risk management allows both permit applicants and the Ministry to focus technical and scientific resources where they are most warranted. The permit classification system reflects the differing nature and potential impacts of various water takings.

Where the Ministry believes the risks associated with the taking are not acceptable, a permit will not be issued.

Principle #6:

The Ministry will promote public and local agency involvement.

The Ministry values public and local agency involvement in the process of managing water takings at the local level. The Minis-

Principles of the PTTW Program

try, therefore, fosters an open and consultative process in the PTTW program and makes information publicly available on permitted water takings and water resource availability.

The Ministry will post designated applications on the Environmental

Registry, in accordance with the *Environmental Bill of Rights*, and consider public comments in its decision.

The Ministry will provide notice to municipalities and conservation authorities of designated permit applications in order to increase

local awareness of permit activities and consider their advice. The Ministry will also consult with other agencies which have expertise or mandate in certain areas such as fish and terrestrial habitat.

Classification of Permits To Take Water

The Ministry will provide a clear, consistent and structured approach to managing water takings by incorporating risk management principles into the permit application/review process. A risk-based assessment system has been developed and applied to typical types of water takings in order to identify the relative risk of the various types. Those proposed water takings with the greatest potential for impact will receive a higher level of evaluation.

This section describes the Ministry's Permit To Take Water (PTTW) application classification framework. Category 1 water takings are anticipated to have a lower risk of causing adverse environmental impact/interference, and Category 2 and Category 3 takings are anticipated to have a relative higher risk of causing environmental impact/interference.

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Why classify PTTW applications?

Not all water takings pose the same level of risk in terms of causing adverse environmental impact or interference. By classifying permits using a risk-based approach, the Ministry can focus resources on those applications with a higher potential for impact.

How does the classification system work?

The Ministry makes available to permit applicants an application form and guide with schedules for completing the application. Applicants are required to classify their proposed water taking using the criteria listed in Table 1. The criteria are described and explained more fully in the "Evaluating PTTW – Groundwater" and "Evaluating PTTW – Surface Water" sections in this manual. The Ministry will confirm the classification of applications using the same criteria during the application and regulatory screening phase of the PTTW review process.

Table 2 entitled "Category Screening and Evaluation" presents a summary of the information the applicant is required to submit by Category and the corresponding action taken by the Ministry.

What are Category 1 Water Takings?

Category 1 water takings are anticipated to have a lower risk of causing adverse environmental impact/interference.

Typically, permit renewals of **existing takings** (see side bar) are classified as Category 1. Existing takings have undergone prior evaluation and review by the Ministry. Through the technical screening applied to these applications the Ministry will consider whether an existing water taking is having unacceptable impacts. The following will be considered as part of the technical screening and evaluation of the permit application:

- ♦ there are no known interferences or adverse impacts caused by the taking in the past; and

What is the duration of a PTTW?

The duration of a permit issued by the Ministry is based on the water taking's known or predicted level of risk to the environment. The Director applies an adaptive management approach. Factors considered by the Director include matters such as:

- ♦ the type and purpose of the taking;
- ♦ watershed conditions;
- ♦ the sensitivity of the environmental setting; and
- ♦ other factors, such as the requirement for periodic scientific evaluations of submitted environmental data in order to demonstrate that the water taking is sustainable and/or not having an adverse environmental impact.

Typically, for renewals of existing takings with known and acceptable levels of environmental impact (i.e. Category 1), permits will be issued for a maximum period of up to 10 years.

Category 2 and Category 3 permits may be issued for a shorter duration, based on consideration of the factors listed above.

When the Director is satisfied that the level of understanding of the potential impact associated with the taking is adequate, upon renewal, the director may issue the permit for a relatively longer duration not exceeding 10 years.

Existing taking

Means where a previously permitted taking exists in this location and the permit application is submitted to take water from the same source, same or lesser amount, and for the same purpose. This includes whether the applicant is the person who the existing permit had been issued to or a different person (for example, a new property owner). The director has the discretion to accept the taking as "existing" in cases where the permit has lapsed.

Note that more restrictive requirements ap-

Classification of Permits To Take Water

- the Ministry has not previously requested the permit holder to submit additional studies that require the Ministry's scientific review.

New takings from some ponds (e.g. irrigation and agriculture) and takings of less than 1 million litres/day from the Great Lakes or its connecting channels may also be classified as Category 1 provided they meet the criteria listed in Table 1 in this section. Please refer to the "Evaluating PTTW – Groundwater" and "Evaluating PTTW – Surface Water" sections in this manual for a more detailed description and explanation of the criteria.

If these criteria for existing and new takings are not met then the proposed water taking will be treated as either a Category 2 or Category 3. A Director may reclassify any Category 1 permit to a Category 2 or Category 3 with a specific reason.

Applicants for Category 1 water takings are required to submit detailed information about the proposed water taking, the water source, and related factors such as water conservation measures as part of their permit application.

Category 1 water takings do not require the applicant to undertake additional work or submit supporting scientific studies for review by the Ministry.

The Ministry will perform a series of checks as part of its technical screening and evaluation of the application. This includes checking whether existing permit requirements and screening criteria are met and checking to ensure conformity with O. Reg. 387/04 requirements

(e.g. High Use Watersheds, Great Lakes Charter, water conservation and complete required notifications); and confirming there have been no documented incidents of interference or other concerns associated with the taking. If the Director is not satisfied that the application meets the Category 1 screening criteria, the Director may require further evaluation by the Ministry or may reclassify the proposed taking to either a Category 2 or 3 which will require the applicant to undertake additional work.

Conditions will be imposed on Category 1 permits to prevent serious interference with other water users and to minimize environmental impacts. In the case of existing permitted takings, appropriate existing site-specific conditions will be retained and adjusted accordingly.

What are Category 2 and Category 3 Water Takings?

Category 2 and 3 water takings have a greater potential to cause adverse environmental impact or interference. These include:

- new and increased water takings that do not meet the criteria for Category 1.
- existing takings where the Director required additional work/study(s) to be submitted upon renewal of the permit.
- existing takings that a Director has determined may be causing or is likely to cause adverse environmental impact or interference.

Category 2 Water Takings

An application is considered Category 2 if a qualified person certifies that the water taking meets the criteria listed

in Table 1. Please refer to the "Evaluating PTTW – Groundwater" and "Evaluating PTTW – Surface Water" sections in this manual for a more detailed description and explanation of the criteria. The applicant will be required to submit this information together with the application.

New taking

Means a permit issued to take water where there is no existing permit or for a new purpose or from a new location.

Increased taking

Means a permit application from the same source and for the same purpose for a higher rate or volume than that of the existing taking.

What is the distinction between groundwater and surface water takings?

The hydrologic cycle is a very complex system of interactions between the atmosphere, biosphere and geosphere. For operational purposes, the Ministry typically classifies water takings as either ground water takings or surface water takings. This provides a pragmatic approach to the administration of the PTTW program by having the scientific evaluation of the proposal led by either a groundwater specialist or surface water specialist. However, Ministry technical reviewers will be cautious to consider potential impacts to both surface and subsurface water resources, since these two resources may be intricately connected in some watersheds.

The distinction between "surface water" and "groundwater" is normally made by identifying the source from which the water is taken. For example, a water abstraction from a stream is classified as a "surface water" taking. This implies that the impacts of the withdrawal can be properly evaluated by understanding the flow regime of the stream network. In some landscapes, however, the amount of water available in a stream may be entirely dependent upon the discharge of groundwater to the watercourse. In this case, management of surface water resources also requires an understanding of groundwater processes.

The proposed taking will be subject to the same technical screening and

Classification of Permits To Take Water

evaluation carried out by the Ministry as described for Category 1 permits.

In addition, the Ministry will: check the information submitted by the applicant for completeness; check the scientific evaluation prepared by a qualified person for completeness; and may undertake audits to determine if the requirements are being met.

Category 3 Water Takings

Applicants for all other takings that do not meet the Category 2 criteria will be required to submit scientific studies for review by the Ministry to assess the potential impacts of the proposed taking. In addition, the proposed taking will also be subject to the same technical screening and evaluation carried out by the Ministry as described for Category 1 and Category 2 permits.

The sections on "Evaluating PTTW – Surface Water" and "Evaluating PTTW – Groundwater" identify the components of the scientific studies and the Ministry's review.

What discretion is the Director afforded?

The Director has the discretion to reclassify any proposed water taking to a Category 2 or Category 3. Factors that a Director may consider include (but are not limited to):

- ♦ the scale of the taking;
- ♦ cases where a sensitive area (i.e., stream or well) may be impacted;
- ♦ known or documented interference; or
- ♦ watershed conditions.

In addition, the Director may reclassify a group of permits or

applications within a watershed, subwatershed or aquifer as subject to a Category 3 permit review. For example, the Director may at any time identify an application for an existing taking to be subject to a Category 3 review based on changes in watershed or water use conditions or to account for new scientific standards or methods.

What is the Ministry's role in pre-submission consultation (PSC)?

The applicant is encouraged to consult with the Ministry prior to submitting a permit application to initially confirm the classification for the proposed taking and to determine if other approvals may be required for the proposed water taking, e.g., Certificates of Approval for waste water discharge under the *Ontario Water Resources Act*. It is the responsibility of the applicant to ensure that all other approvals related to the undertaking are secured.

For Category 2 and 3 type water takings, pre-submission consultation may assist the applicant by helping to identify:

- a) potential concerns with the proposed water taking; and,
- b) approvals for other agencies that may be required for the proposed undertaking (e.g., the Department of Fisheries and Oceans [DFO], local conservation authorities [CA's] and the Ministry of Natural Resources [MNR]).

Once the Ministry has received a complete application and the permit evaluation is underway, the Ministry may seek additional input from appropriate agencies about specific concerns that need to be addressed by the applicant prior to issuance of the permit.

Applicants and the Ministry may need to consult with:

- ♦ municipalities with respect to well-head protection areas, planned municipal water uses, and other issues of concern to municipalities;
 - ♦ CA's with respect to screening for Department of Fisheries and Oceans, watershed information, and other issues of concern to CA's.
- Note: In areas where CA's do not exist, the Ministry or applicant will consult with the DFO directly.*
- ♦ MNR with respect to fisheries management, wetlands, habitat and dams, and other issues of concern to MNR.

Classification of Permits To Take Water

Table 1: Classification Criteria for Categories for Groundwater and Surface Water Takings

(Note for more complete description of the criteria, please refer to the appropriate sections on groundwater and surface water.)

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 ♦ <4m deep and >100m from the nearest stream or wetland; or ♦ <7m deep and >250m from the nearest stream or wetland	Ponds <1,500 cubic metres in volume that collect runoff and that are not drawing from groundwater, watercourses, wetlands, other lakes or ponds.
	Great Lakes or connecting channel takings <1,000,000 litres/day
Category 2	Category 2
Short-term, non-recurring taking less than 7 days (e.g. pumping test or hydrostatic test).	Great Lakes or connecting channels takings less than the Great Lakes Charter threshold
Short-term, non-recurring taking less than 30 consecutive days and less than 400,000 litres/day (e.g. construction dewatering and dust suppression).	Takings from sources with previous assessments (i.e. further to a previous study and implementing previously established controls)
	River and Streams (3rd order or higher order) taking <5% of 7Q ₂₀
	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 <1,000,000L/day twice per week or less 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.
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, intermittent streams, new on-stream reservoirs, impoundments and ponds, groundwater sources that potentially affect surface waters.

Classification of Permits To Take Water

Table 2: Category Screening and Evaluation

Category	Applicant Submits	Ministry Action
1	- Completed Application Form. - Information required by conditions of previous permit.	- Ministry staff will check the information submitted by the applicant for completeness. - Technical Screening: Check whether existing permit requirements and screening criteria are met. Check to ensure conformity with O. Reg. 387/04 requirements (e.g., High Use Watersheds, Great Lakes Charter, water conservation and complete required notifications).
2	- Completed Application Form. - Information required by conditions of previous permit. - Scientific evaluation completed by a qualified person.	- Ministry staff will check the information submitted by the applicant for completeness. - Technical Screening (as in Category 1). - Ministry staff will check the scientific evaluation (schedule 2 and/or 3) prepared by a qualified person for completeness and may undertake audits to determine if the requirements are being met.
3	- Completed Application Form. - Information required by conditions of previous permit. - Scientific study (hydrogeological and/or hydroecological study) completed by a qualified person.	- Ministry staff will check the information submitted by the applicant for completeness. - Technical Screening (as in Category 1). - Ministry staff will conduct a scientific review of studies prepared by a qualified person.

Considerations for Evaluating Permits To Take Water

This section outlines the matters that the Director must consider when considering a Permit To Take Water (PTTW) application or is otherwise considering a decision under Section 34 of the OWRA to cancel, amend, or impose conditions on a PTTW. In accordance with Section 4 of the Water Taking and Transfer Regulation, the Director must consider the following matters to the extent information is available to the Director and to the extent that the matters are relevant to the water taking: natural functions of the ecosystem, water availability, use of water, and other issues.

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What factors must a Director consider?

In evaluating an application, the Director must consider the following matters to the extent that they are relevant and information is available to the Director:

1. Natural functions of the ecosystem, including:

- ♦ potential impact on: the natural variability of water flow or water levels, minimum stream flow, and habitat that depends on water flow or water levels; and
- ♦ interrelationships between groundwater and surface water, including impact or potential impact on water quantity and quality.

2. Water availability, including:

- ♦ potential impacts on:
 - water balance and sustainable yield;
 - existing uses of water for municipal water supply and sewage disposal, livestock, private domestic, agricultural purposes, and for other purposes;
- ♦ low water conditions;

- ♦ whether the water taking or proposed water taking is in a high use watershed or a medium use watershed; and
- ♦ planned municipal use of water that has been approved under a municipal official plan or an Environmental Assessment.

3. Use of Water, including:

- ♦ whether water conservation in accordance with best water management practices for the relevant sector is being implemented or is proposed to be implemented;
- ♦ the purpose for which the water is being used or is proposed to be used; and
- ♦ 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:

- ♦ the interests of other persons who have an interest in the water taking, to the extent that the Director is made aware of those interests; and
- ♦ any other matters that the Director considers relevant.

Here's what the Water Taking and Transfer Regulation says ...

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.

(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. groundwater 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 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,

Considerations for Evaluating Permits To Take Water

The Director will consider the interests of others as they relate to matters set out in the Regulation.

Guidance and direction on the above factors for both ground-water and surface water takings is provided in the subsequent sections.

How do the above requirements apply to Category 1, 2, and 3 proposals?

The above requirements apply to all water takings to the extent that they are relevant and information is available to the Director.

Typical information sources are:

- ♦ data and information submitted by the applicant

including scientific evaluations and studies prepared by a qualified person;

- ♦ provincial data sets;
- ♦ information on Ministry file;
- ♦ data and information provided by other agencies that were notified and consulted; and
- ♦ comments submitted in response to postings on the environmental registry.

The Director will impose standard conditions as well as site-specific conditions where appropriate to address protection of the natural functions of the ecosystem, water availability, use of water and other issues.

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.*

(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.

Evaluating PTTW – Surface Water

This section provides a procedure that will be used to guide the scientific evaluation of proposed water takings from surface water sources. The guidance is based on: past experience, procedures used in other jurisdictions, and a methodology based on a defensible and scientific approach. Ministry staff undertake a scientific evaluation of proposals to take water from surface water sources to determine if the proposals are consistent with the policies and principles of the PTTW program.

To aid the reader in applying this section, explanations of key terms and concepts, including the types of surface waters, the types of surface water taking, properties of flows or water levels and qualified person are provided in the sidebars to this section.

Part A: What are Category 1 Surface Water Takings?

Proposals that will be processed as Category 1 are:

- ♦ applications to renew Permits for **existing surface water takings**, provided that the Director has not previously requested the permit holder to submit additional scientific/technical studies and/or interpretation of monitoring data;
- ♦ applications for new or increased takings from the Great Lakes and their connecting channels at rates of less than 1 million litres per day; and
- ♦ the collection of surface runoff into **isolated** storage ponds that require permitting (such as recreation/aesthetic ponds) where the pond holding capacity is less than 1,500 cubic metres. Isolated ponds are ponds that do not draw water from groundwater, watercourses, wetlands or other lakes and ponds.

A properly completed application form provides all of the information (including information about the source and the proposed taking) needed by the Ministry to process a Category 1 surface water application. Applications submitted as Category 1 are screened by the Ministry to

confirm that they meet one of the above criteria. Approved Category 1 Permits are issued with standard conditions. In the case of applications to renew Permits for existing takings which are considered Category 1, the renewed Permits will retain any previously developed site-specific special conditions that are still valid.

Note that, in some cases, the existing level of water taking in an area may pose a risk to the integrity of the aquatic ecosystem. In such cases, the Director may determine, through consultation with Ministry staff and other regulatory agencies such as the Ministry of Natural Resources (MNR), the Department of Fisheries and Oceans (DFO) and local conservation authorities (CA's), that applications to renew Permits for certain types of existing takings and/or proposed new takings within a given geographic area or watershed require further evaluation by qualified person(s) and must be submitted as Category 2 or 3 applications. Applicants may be notified of such decisions during pre-submission consultation or following screening of applications submitted as Category 1.

What are Category 2 and 3 Surface Water Taking Applications?

Proposals that cannot be classified as Category 1 will be

Types of Surface Waters

Surface water sources include: lakes; ponds that have a connection to a watercourse or receive water mostly from runoff (including artificial ponds); impoundments formed by damming flowing rivers to retain the water (including large reservoirs and small on-stream ponds); wetlands; springs; and permanent, intermittent and ephemeral watercourses of all sizes (including constructed channels). The above sources can be divided into two broad groups as: standing water bodies (e.g., lakes, ponds and wetlands) and flowing water bodies (e.g., rivers). Permits are not typically issued for sewage works (e.g. storm water management ponds) where these facilities are regulated under Section 53 of the OWRA. Note that, in some cases, the collection of runoff may be considered a taking from a surface water source – particularly if the collected water is to be subsequently withdrawn from storage for other uses.

The different types of surface waters listed above as well as individual sources within each type of surface water exhibit great diversity in their physical, chemical, biological, hydrological characteristics and the dynamic interactions between these. As a result, a given proposal will pose different levels of risk to different surface waters. Surface waters also differ in many other aspects, such as the type of primary use they serve, the degree of modification by human actions, and position in the watershed. These factors also influence the level of risk posed by a given taking.

Types of Surface Water Taking

*Water taking from surface waters mostly occurs in two ways as: (a) the withdrawal or diversion of water from a source by pumping or by gravity (**extraction**) or (b) the taking of water into storage within a flowing water body by damming and/or excavating the bed of the flowing water body (**on-stream storage**). A third kind of surface water taking may be identified as the*

Evaluating PTTW – Surface Water

either Category 2 or Category 3. Note that new or increased takings from sensitive areas, including wetlands, intermittent watercourses, and headwater lakes, ponds, and streams are classified as Category 3. Therefore, the following section on Category 2 and Category 3 should be read in its entirety prior to making a determination on the appropriate category for a given water taking.

Category 2 Surface Water Taking

Surface water applications may be processed as Category 2, provided that a qualified person certifies that the proposed taking will meet one of the following screening criteria:

- ♦ extractions from the Great Lakes and their connecting channels at rates of less than the Great Lakes Charter threshold. Note that new or increased takings above the threshold may require multi-jurisdictional review;
- ♦ extractions at rates of less than 1 million litres per day from lakes and ponds of 10 ha or greater in size that are not on-stream and which do not form the headwater of any watercourse. If the proposal is to take more than twice per week (a maximum of 2 million litres per week), the qualified person must undertake additional analysis (through modeling or other water balance assessment methods) to demonstrate that the total amount of water extracted in any month by the taking will not exceed 5% of the net input (inflow) into the lake or pond in that month. The qualified person must also

recommend any special conditions necessary to ensure that these requirements are met;

- ♦ extractions from 3rd or higher order watercourses where the instantaneous rate of taking is much smaller than even the lowest flows. Unless, the Director has specified a different percentage for a specific watercourse, the instantaneous rate of taking must be less than 5% of the $7Q_{20}$ **at the point of taking**. To make use of this criterion, a qualified person must use accepted hydrologic analysis methods to determine the flow statistic at the site. If streamflow data collected at a Water Survey Canada gauging station that is located on the same watercourse are available, these data should be used. If no gauges are located on the same watercourse, other methods such as modeling or estimations using other gauged streams of similar characteristics may be used. The methods used to prorate or transfer the data from the gauged location to the site must be verified by field data. The determination of the $7Q_{20}$ at the point of taking and the comparison of rates of taking to flow statistic must be done by a qualified person;
- ♦ applications for transitional surface water Permits. 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

capture of overland runoff into storage facilities (storage of runoff). Water takings also vary in the rates, amounts, timing, durations and frequency of the taking.

Section 53 Requirements

*Section 53 under the Ontario Water Resources Act, requires MOE approval to establish, alter, extend or replace new or existing sewage works. **Sewage works** means any works for the collection, transmission, treatment and disposal of sewage or any part of any such works. **Sewage** includes drainage, storm water, commercial wastes and industrial wastes and any such matter or substance as is specified by regulation.*

Qualified Person

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.

and improvement works are being implemented. The applicant must submit a detailed workplan to obtain a transitional permit. The deliverables and timelines proposed in the workplan will become Special Conditions in the transitional Permit. Once the studies are completed and the required changes/upgrades are implemented, the applicant may submit an application for a long-term permit which will be processed as Category 3;

- ♦ extractions from standing water or flowing water sources that remove the water for short durations only. The water is returned back to the same source unchanged in quality beyond acceptable limits and at rates and amounts similar to the rate of taking and reasonably close to the point of withdrawal. Examples of such takings include: diversions during construction activities, water taking for cooling purposes, hydrostatic testing and water taking during hydraulic dredging in lakes and channels. The applicant is responsible to address any issues related to the quality of the return water and erosion/siltation. The acceptable water quality limits may be

Evaluating PTTW – Surface Water

covered under the Certificate of Approval process;

- ♦ extractions from flowing water sources where the necessary assessments have been completed as part of a previously approved surface water taking study or watershed study. A common example is where an applicant proposes to implement previously approved or established water taking controls such as minimum in-stream flow, maximum allowable rates of taking, etc., as demonstrated to the Ministry during a pre-submission consultation.

Applications that do not meet the Category 2 criteria are considered Category 3.

Category 3 Surface Water Taking

Proposals that fall into one of the following groups will be processed as Category 3:

- ♦ any taking (whether extraction or on-stream storage) from 1st or 2nd order watercourses or lakes and ponds that are sources of 1st or 2nd order watercourses. The reason for this criterion is that headwater ecosystems of first and second order streams are typically adapted to a seasonally-predictable, narrow range of environmental conditions and are less resilient in the face of environmental

disturbance than areas further downstream. In other words, they are more sensitive to daily and seasonal fluctuations in flow, and water taking may pose a relatively higher level of risk to these ecosystems than the mid or lower reaches of a stream system. Stream order is primarily defined using Ontario Base Maps (OBM) that are available at scales of 1:10,000 (for Southern Ontario) and 1:20,000 (for Northern Ontario);

- ♦ any taking (whether extraction or on-stream storage) from intermittent streams. These types of surface water bodies generally have a greater sensitivity to change and a reduced ability to accommodate water takings. For example, intermittent streams may provide flows to maintain the connection between a permanently flowing stream and a temporarily connected wetland habitat during the spring and the fall periods. Organisms utilize the connecting intermittent stream to access the wetland habitat for spawning and rearing of young-of-the-year, who then will migrate from the wetland during the following fall period when sufficient flow is again present in the intermittent stream;

- ♦ any taking (whether extraction or on-stream storage) directly from wetlands;
- ♦ applications for on-stream storage facilities such as new reservoirs/impoundments behind dams and new on-stream ponds created by restricting the flow and/or deepening or widening the channel. It should be noted that scientific reports completed for other governmental agencies' approvals processes (such as approval under the *Lakes and Rivers Improvement Act*) may be used as supporting documentation. Note that construction of on-stream structures requires approval by the MNR and/or conservation authorities. The Permit to Take Water issued by the Ministry of the Environment only authorizes the taking of water into storage;
- ♦ applications to renew Permits for existing surface water takings where the Director has previously requested the permit holder to submit additional scientific/technical studies and/or interpretation of monitoring data; and
- ♦ applications from groundwater sources that have been determined to potentially affect surface waters.

The Director may elevate certain types of proposals and/or proposals within a given geographic area or watershed from Category 1 or Category 2 to Category 3. Applicants may find out about these during pre-submission consultations or by calling Ministry Regional staff before making a submission. If a Category 1 or 2 submission is elevated to Category 3, applicants will be informed of this decision during pre-submission consultations or following screening of the application.

Evaluating PTTW – Surface Water

Part B:

Scope of Scientific Work Required for Category 2 and Category 3 Takings

Category 2 Proposals

The scientific work undertaken by qualified persons for Category 2 surface water takings is focused on (a) confirming that the proposed water taking meets the criteria for category 2, and (b) designing the water taking activities to prevent unacceptable adverse environmental impact or interference with other users.

Confirming that the Category 2 criteria are met may be as simple as certifying that the proposed new taking is from the Great Lakes at a rate less than the Great Lakes Charter Threshold, or may involve more complex work such as determining the $7Q_{20}$ at the proposed point of taking. In the case of transitional permits, the work involves preparing a work plan that clearly indicates the timelines for completing the future studies. In cases where the applicant is going to simply implement previously established (and Ministry approved) water taking control measures (such as in-stream flow requirements; maximum pumping rates and volumes, durations, timing, etc.), the supporting document must indicate where these are found or reproduce them.

Designing the water taking activities involves determining the exact location, rate, volume, timing and duration of taking; selecting and designing proper intakes; evaluating the need for storage facilities and their size; identifying monitoring requirements, and formulating recommended site-specific Permit conditions.

Generally, Category 2 proposals are not required to be supported by detailed studies. Exceptions are proposals to implement previously established water taking control measures. In such cases, the impact assessment and water availability studies will have been completed as part of a previous study.

Category 3 Proposals

Scientific work for Category 3 proposals involves assessing in detail the impact of the proposed taking on aquatic ecosystems or other users and assessing the availability of water to meet the demand.

The impact assessment component attempts to answer the questions: what is the potential impact of the proposed taking on the aquatic ecosystem and other established in-stream uses and how should the proposed taking be designed and controlled to prevent or minimize the impact? The water availability assessment evaluates whether the source water body has sufficient water available to meet the new demand in a reliable manner, while continuing to satisfy the water needs of the aquatic ecosystem and the needs of established existing uses.

Assessing the potential impact of a proposed taking on aquatic ecosystems and established in-stream uses means determining the water requirements of the ecosystem and the water requirements for established in-stream uses and evaluating how the proposed taking would affect these water requirements. The ecological and in-stream use water requirements are known as the in-stream flow requirements (for flowing

What are the properties of flow or water level?

In considering issues relating to the need to protect the natural functions of the ecosystem, it is important to consider the potential impacts of a proposed water taking on water flows or water levels.

The hydrology of a flowing watercourse, such as a river, or a standing water body, such as a lake, at any given location can be fully described by quantifying how the following five properties of flow or water level vary over time:

- ♦ the **magnitude** of flow or water level at the location;
- ♦ the **frequency** with which a given magnitude of flow or water level occurs over a given period of time;
- ♦ the **duration** for which a given magnitude of flow or water level persists;
- ♦ the **timing** of a given flow or water level (a measure of when and how regularly a condition occurs – e.g. seasonality); and
- ♦ the **rate of change** of flow or water level.

Note that the properties of flow and water level vary both within a year (intra-annual variation) and over long periods (inter-annual variation).

In practice, the above properties are quantified using statistics to summarize long-term data for flow or water levels (e.g. statistics may include: mean monthly flows or water levels, mean annual flows, etc.) There are many statistics that can be generated, but often a few key ones are adequate to fully describe both the intra-annual and inter-annual variability of flow and water level.

- ♦ *Depending on its nature, a water taking could potentially affect one or more of the above properties. The scientific study undertaken for Category 3 water takings should assess the potential impact of the proposed water taking on the relevant properties of flow or water level.*

systems, such as rivers) or water level requirements (for standing waters such as lakes). The term in-stream flow requirement is used to indicate: (a) the target flow regime that is required to be maintained in the watercourse downstream of impoundments/reservoirs; and (b) the target flow regime that is required to be left in the watercourse without diversion or

Evaluating PTTW – Surface Water

extraction. Similarly, the term water level requirement is used to indicate the target water level regime that is required to be maintained in standing water systems such as lakes and ponds without extraction. Note that in cases where the proposed taking is from a lake or pond from which watercourses emerge, it may be necessary to evaluate both the in-stream flow requirements of the flowing watercourse as well as the water level requirements of the standing water body.

It is important to note that the scale of water taking also determines the extent to which it may potentially alter the flow regime. As such, the level of detail in the water requirement (in-stream flow/water level requirement) analysis and the exact methodology used varies from project to project. For example, many water takings are seasonal and intermittent in nature and therefore do not have the potential to affect the entire flow regime of a watercourse such as the timing and frequency of flood flows or flows required for maintaining geomorphic processes. In such cases, the focus of assessment will likely be the magnitude and (possibly) duration of low flows. On the other hand, the creation of a major impoundment on a watercourse has the potential

to affect most aspects of the flow regime and assessment should consider the effects on the entire flow regime. The qualified persons undertaking scientific studies of the proposed taking are required to use their professional judgement to determine the level of detail in the assessment.

Category 3 applications that are for extraction of water are also required to evaluate the availability of water to meet the new demand in a reliable way. Once the in-stream flow/water level requirements necessary to protect ecological functions and in-stream uses have been determined, a water availability assessment follows to quantify the available water yield above these requirements. This assessment looks at how much of the available yield is allocated to existing extractive takings and whether the additional demand can be met in a reliable way. Ideally, this kind of assessment should make use of data on existing extractions and should be undertaken on a watershed or sub-watershed basis.

The scientific review by the Ministry of a Category 3 proposal involves reviewing the work of the qualified person submitted in support of the application and developing conditions to be imposed on the permit. Note that the purpose of the Ministry's

review of the water availability assessment is not to guarantee that water for the new taking can be obtained by the proponent at all times, it is to make sure that the design and operation of the new taking take into consideration other water uses, thereby avoiding unacceptable interference in the future between various human water users/uses that rely on the same source.

Approved Category 2 and Category 3 Permits are prepared with standard conditions and any additional site-specific special conditions recommended by the qualified person(s) who prepared the scientific report(s) in support of the proposed taking. Ministry staff may recommend to the Director to remove or modify site-specific special conditions proposed by the qualified person or add new ones. The main difference between Category 2 and Category 3 applications is that, the review of Category 2 applications is focused on confirming that the proposal meets the criteria for Category 2, whereas the review of Category 3 applications entails evaluating the potential impact of the proposal in a detailed way. This distinction will have implications on the scope of the scientific work required to be undertaken. For example, if a qualified person can demonstrate that a proposed taking from a 3rd or higher order stream is less than 5% of the $7Q_{20}$, there would normally be no need to undertake studies to establish minimum flow requirements or develop operational controls such that the taking ceases when flows fall below the minimum instream flow threshold.

This section outlines the matters a Director must consider regarding "habitat that depends on water flow or water levels." While the Ministry considers the impact of water availability and stream flow on habitat in its review of permit applications, it also relies on other agencies for advice and information.

How does the Ministry evaluate impacts on habitat?

When considering the need to protect the natural functions of the ecosystem, the Director considers the impact of the proposed water taking on habitat that depends on water flow or water levels. In its review of permits to take surface water, the Ministry may impose conditions related to the variability of water flow or water levels in order to protect habitat. In its review of permits to take groundwater, the Ministry may impose conditions related to maintenance of water levels, maintenance of base flow quantity and quality to protect habitat. Note that in reviewing the water taking proposal the Director may consider the project's net benefit impact on water flow and water levels.

What other information does the Director consider?

As part of its review, the Ministry will rely on responsible

agencies to provide comment and recommendations on individual permit applications related to potential impact on habitat. Conditions recommended by those agencies may be incorporated into the permit.

In Ontario, the Ministry of Natural Resources (MNR) is responsible for natural resources management and may be consulted on impacts to:

- ♦ fisheries management
- ♦ wetlands
- ♦ habitat of endangered species, protected species or species at risk.
- ♦ dams

The applicable conservation authority (CA) is notified by the Ministry of every water taking application posted on the Environmental Registry. The CA has responsibility for screening with respect to sec-

According to the federal Fisheries Act, there must be no harmful alteration, disruption or destruction of fish habitat. This Act plays a pivotal role in permitting of water takings that have the potential to affect fish habitat in Ontario and will continue to do so.

The Department of Fisheries and Oceans (DFO) administers Canada's Fisheries Act, which pertains to fish habitat protection and fish passage at dams, among other things. In Ontario, CA's have service agreements with DFO and undertakes screening of projects under S. 35 of the Act. Fish habitat protection related to water takings from rivers and lakes may include restrictions on withdrawals, or withdrawal rates, to protect fish habitat. Conditions provided by the CA's may be included in the permit.

tion 35 of the *Fisheries Act*. Those conditions recommended by the CA may be incorporated in the PTTW.

In areas where CA's do not exist, the Ministry will consult as necessary the *Department of Fisheries and Oceans* (DFO) directly.

The information will be considered when the Director is making a decision on whether to issue a permit or whether to impose specific conditions regarding habitat on a permit, or whether to revoke a permit.

Evaluating PTTW – Groundwater

This section provides a procedure that will be used to guide the technical screening, scientific evaluation and scientific review of proposed water takings from groundwater sources. This procedure is based on past experience, procedures used in other jurisdictions, and science-based assessments of the scope and magnitude of potential impacts. Ministry staff undertake a scientific evaluation of proposals to take water from groundwater sources to determine if the proposals are consistent with the policies and principles of the PTTW program. To aid the reader in applying this section, explanations of key terms and concepts, including "preventive action," "qualified person" and an explanation of Section 53 requirements under the OWRA, are provided in the sidebars to this section.

What are Category 1 groundwater takings?

Existing groundwater takings will, as a general rule be treated as Category 1, provided that the Director is satisfied that the continued taking is not likely to have adverse environmental impact/interference, or has not required that additional studies be submitted upon renewal of the permit.

To be considered Category 1, new water takings from some ponds (e.g. irrigation or agriculture) must meet the following criteria:

1. the pond is not connected to any surface watercourses nor does it receive water from other surface watercourses; and
2. the pond is either:
 - a) less than 4 metres deep and is located more than 100 metres from the nearest stream or wetland and from any dug well or dugout pond owned by a different person; or
 - b) less than 7 metres deep and is located more than 250 metres from the nearest stream or wetland and from any dug well or dugout pond owned by a different person.

The above criteria were developed to apply to a broad range of geological settings

and based on a conservative assumption of high conductivity, sandy soils which would experience the a higher drawdown in response to these takings. Significant drawdown beyond the specified distances is unlikely, particularly since pond takings are usually not continuous, but occur intermittently over a limited growing or operation season. Additional protection for Category 1 takings will be provided by including site-specific permit conditions.

The Director may recognize that some pond takings or geological settings are not appropriately captured in this Category 1 classification where the associated impact from the taking may be more pronounced or the setting more sensitive. The Director has the discretion to reclassify these applications.

How are Category 2 and Category 3 takings classified?

Any groundwater taking that is not listed as a Category 1 taking will be deemed to be a Category 2 or Category 3 taking.

Category 2 applications will require the applicant to submit a scientific evaluation conducted by a qualified person to certify that the proposed taking meets the criteria presented below. In addition, the proposed taking will be subjected to a technical screening and evaluation by the Ministry

Key Terms and Concepts:

Preventive Action

Preventive action can include re-designing well field configuration, modifying pumping systems, or monitoring observation wells during pumping to maintain pre-established static water levels to prevent interference impacts.

Qualified Person

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

Note that the applicant may require the services of other qualified persons such as a PEng specializing in geotechnical engineering where the evaluation of impacts to the integrity of structures is required.

Section 53 Requirements

*Section 53 under the Ontario Water Resources Act, requires MOE approval to establish, alter, extend or replace new or existing sewage works. **Sewage works** means any works for the collection, transmission, treatment and disposal of sewage or any part of any such works. **Sewage** includes drainage, storm water, commercial wastes and industrial wastes and any such matter or substance as is specified by regulation.*

Sustainable Yield

Means the maximum rate of taking from an aquifer that can be sustained without:

- ♦ causing unacceptable impact on other users;
- ♦ resulting in unacceptable impacts on natural system functions; and
- ♦ causing unacceptable degradation of water quality in the aquifer.

Advice to Applicants

Applicants are encouraged to consult with the Ministry's regional hydrogeologists before making application subject to a detailed hydrogeological study.

Evaluating PTTW – Groundwater

which is described in more detail in the "Classification of Permits" section in this manual.

Category 3 applications for all other groundwater takings will require the applicant to submit a scientific study(s) prepared by a qualified person for review by the Ministry to assess the potential impacts of the proposed taking.

Review criteria are based on:

- ♦ the amount of water taken;
- ♦ the duration of the water taking;
- ♦ the nature of the aquifer (confined or unconfined);
- ♦ the proximity of surface water that is likely to be affected and depends on water flow or water levels, other water uses, or sensitive areas; and
- ♦ proximity of potential contaminant sources.

In addition, the proposed taking will also be subject to the same technical screening and evaluation carried out by the Ministry for Category 1 and Category 2 water taking proposals.

What is a scoped Category 2 hydrogeological assessment?

A scoped hydrogeological assessment involves a qualified professional confirming that the proposal meets the following:

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

OR

- ♦ **Short-term, non-recurring taking less than 30 consecutive days and less than 400,000 litres/day** (e.g. construction

dewatering and dust suppression);

AND,

For all short-term, non-recurring takings, the proposal is to be designed to: ensure that the withdrawal of water does not result in unacceptable impacts; and to minimize or mitigate any potential impacts, including geo-technical effects, interference with other users, mobilization of contamination, and impacts to the environment. In addition, the water taking plan must include provisions for water discharge, including any required approvals as well as measures to minimize erosion, sedimentation, flooding or water quality impacts.

Because these are short-term takings, anticipated impacts can be addressed through the water taking design, development of a monitoring program or specialized conditions proposed by the qualified person.

What are the duties of a qualified person?

For Category 2 takings, the qualified person must confirm:

- 1) The proposed taking is unlikely to result in significant impacts to the environment. This may include consideration of potential effects on **surface water** that depends on water flow or water levels, **other water uses** and **sensitive areas** in the proximity of the taking, and the potential impacts from **potential contaminant sources**.

Terms indicated in italics and bold in the bullet above are described in the side bar.

It should be noted that if pumping effluent is to be discharged into sanitary or storm sewers, the PTTW application will not be deemed to be complete until the proponent demonstrates that they have obtained approval for this discharge from appropriate municipal/regional governments.

Considerations for the MOE Reviewer and the Qualified Person include:

Surface water that is likely to be affected and depends on water flow or water levels includes, but is not limited to:

- ♦ lakes
- ♦ streams
- ♦ wetlands
- ♦ headwater areas
- ♦ springs
- ♦ fish habitat, habitat of endangered species, protected species or species at risk.

Other water uses include, but are not limited to:

- ♦ municipal wellhead protection areas;
- ♦ water wells owned by others;
- ♦ groundwater fed livestock watering pond or aquaculture pond.

Sensitive areas include, but are not limited to:

- ♦ delineated regional groundwater recharge areas;
- ♦ geotechnically sensitive soils (such as marine clays);
- ♦ areas where the integrity of structures may be impaired by pumping induced drawdown.

Potential contaminant sources include, but are not limited to:

- ♦ landfill sites;
- ♦ exfiltration lagoons;
- ♦ large subsurface sewage disposal systems; and
- ♦ water bearing zones which are known to have naturally occurring poor quality water.

Note that the Ministry recognizes that some water takings are intended to contain or remediate contaminated groundwater; and circumstances where treatment may be proposed to address water quality issues and should not preclude the use of an aquifer (i.e. naturally hard groundwater is commonly addressed with water softeners). The Ministry may also recognize instances where water quality is not relevant to the end use of the water (i.e. industrial takings).

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Where the proposed taking is intended to remediate groundwater contamination, this should be clearly identified by the qualified person.

- 2) The discharge of water from the taking will not result in significant impacts. This should include any required approvals (i.e. municipal sewer use approval, OWRA section 53 approvals) or proposed measures to minimize erosion, sedimentation, flooding or water quality impacts.

In addition, the qualified person may also recommend specific permit conditions for the taking, discharge or monitoring that will then be incorporated into the permit where applicable.

The Ministry will check the information submitted by the applicant for completeness and will check the scientific evaluation prepared by a qualified person for completeness and may undertake audits to determine if the requirements are being met.

For scoped hydrogeological evaluations, natural functions of the ecosystem are protected by:

- ♦ using buffers between the taking and other water users, surface water habitat, sensitive areas and potential contaminant sources; and
- ♦ using specific permit conditions such as ensuring that the discharge of water does not cause excessive erosion, sedimentation, flooding or water quality impacts. This does not replace the

need for Section 53 waste water approvals where applicable.

What does a Category 3 detailed hydrogeological study involve?

Where Category 2 evaluation criteria are not met, the applicant must proceed with a detailed hydrogeological study prepared by a qualified person which will undergo a full scientific review by the Ministry. These hydrogeological studies must address issues such as protection of natural functions of the ecosystem, prevention of significant interference with other users, and assessment of water quality issues such as induced groundwater quality issues related to potential contaminant sources.

Proponents are encouraged to consult with the Ministry to discuss study requirements prior to commencing any detailed hydrogeological studies. Detailed hydrogeological studies will typically include the following steps:

1. Calculate the area of influence. Applicants are responsible for assessing the direct impact of their taking as defined by the radius of influence projected after 20 years of pumping at the maximum daily rate for the maximum requested number of days.
2. Determine if there are other water uses, sensitive areas, or potential contaminant sources within the area of influence relative to any sensitive features, water users or potential contaminant sources.
3. Assess the impact on these receptors and determine whether there will be significant interference problems.

4. Assess connectivity between groundwater and surface water and evaluate potential impacts such as reduction of baseflow, reduction of upwellings and associated water quality changes (including temperature). This may involve tracer tests, isotope analysis or installing piezometers in the bed of nearby surface water and monitoring them during pumping tests.

5. Evaluate whether measures must be taken to avoid significant impacts and define appropriate preventative actions, initiate monitoring programs, establish trigger limits and contingency plans.

Based on the results of the hydrogeological study, additional studies, such as hydrological or hydroecological assessments, may be required to address potential adverse impacts. For example, such studies could be required where the taking is predicted to adversely impact sensitive areas.

For detailed hydrogeological studies, natural functions of the ecosystem are protected by:

- ♦ predicting long-term changes in surface water quality, reductions in water levels and reductions in base flow discharge to surface water and habitat resulting from the taking, as evaluated by a qualified person;
- ♦ the assessment of physical changes in the groundwater flow system and interconnection between the groundwater flow system and the surface water body, as evaluated by a qualified person for groundwater. This evaluation may include consulting with relevant government agencies (DFO, MNR, CA);
- ♦ assessing, where deemed necessary by the Director, sustainable yield, the amount of water required to protect natural ecosystem functions, and the amount of water that can be safely allocated to new uses.

Evaluating PTTW – Groundwater

How are water quality concerns addressed?

Water quality concerns are addressed by ensuring that takings do not cause contaminated groundwater to mix with uncontaminated water or otherwise worsen the extent of off-site impacts from a contaminant source, and that the discharge of pumping effluent does not cause water quality problems in surface water. For example, where a taking is in close proximity to an area of known groundwater contamination, permit conditions could require monitoring in wells located between the taking and the contaminated area. Such monitoring would typically focus on sampling for contaminant-related parameters prior to and after water taking begins.

When do Ministry groundwater staff consult with surface water staff?

For Category 3 reviews conducted by the Ministry, groundwater staff will typically consult with surface water staff whenever takings impinge on habitat, either through the taking or dis-

charge of groundwater. Surface water staff may in turn consult with relevant government agencies (DFO, MNR, CA) on surface water related issues.

What happens if a new taking interferes with existing uses?

The objective is to put measures in place to prevent serious interference prior to issuing the permit. However, if a new permitted taking interferes with an existing taking, the Ministry uses the procedures in Guideline B-9 to respond to interference complaints.

Where a new (or increased) permit interferes with another water supply obtained from an adequate source which was in use prior to the issuance of the new permit, the new permit holder will be required to restore the supply or reduce the taking so as to alleviate the interference. Restoration of a water supply is not required where interference is caused by an operation associated with community improvement and the affected property has community water service available. Flow from an artesian well is not protected in the

event of interference by another water taking.

Preventing Serious interference

In cases where interference can be predicted before the issuance of a permit based on information from prior testing, the applicant proposing the water taking may be required to take preventive action such as changing the extraction rate. These requirements can be set out in the terms and conditions of the permit.

If data are insufficient to predict the extent and amount of interference but the potential for interference exists, a site-specific condition can be included in the permit requiring water levels to be measured and data to be interpreted by a qualified person and submitted to the Ministry. In addition, the special permit condition may stipulate minimum observation well levels at which the taking would be cut back in order to alleviate interference. Such contingency plans should be worked out beforehand with the applicant to ensure their understanding of obligations under the PTTW program and continued co-operation with Ministry objectives.

The information provided by the applicant will be considered when the Director is making a decision on whether to issue a permit or whether to impose specific conditions regarding groundwater and/or interference on a permit.

Evaluating PTTW – Water Balance and Sustainability

Where appropriate, the Ministry will undertake to evaluate proposed and existing water takings on a geographic basis and consider the cumulative impacts of water takings within a watershed or aquifer. Where information about watershed conditions exist, the Ministry will take this into account when reviewing individual permit applications. The Ministry may initiate a watershed scale assessment beyond the local-scale impact assessment conducted by the applicant.

What is the purpose of this section?

In most cases an applicant is not responsible for larger scale assessments that extend beyond the individual water takings' area of impact. However, the Director may consider the need for a larger scale assessment to be conducted based on impacts to:

- ♦ natural functions of the ecosystem,
- ♦ water availability,
- ♦ use of water, and
- ♦ other issues as relevant.

Using the above criteria and other relevant information, the Director may determine the subwatershed, watershed or other water management units defined by the Ministry to be a high priority and begin to initiate a strategy for managing water takings and if this cannot be achieved a strategy for assessing environmental impacts.

Considerations of water balance and sustainable yield are intended to address large scale issues of water availability and the cumulative impact of multiple takings. At the largest scale, it can constitute an assessment of the watershed/aquifer.

When does this section apply?

Where the Ministry believes that additional information is needed, the Director has the

discretion to initiate or cause to initiate an assessment of the impact of a group of takings on water balance or sustainable yield to better understand the cumulative impact of these takings on surface water and groundwater resources. For example the Director may initiate a water budget to be conducted or require a collective of water takers to develop a strategy to manage their takings (e.g. stagger their takings). This requirement may be triggered where the Director has information available confirming the following conditions:

- ♦ if a surface water taking, Level II or III low water conditions has been declared in 2 of the previous 5 years (see next Section "Evaluating PTTW – Low Water");
- ♦ if a groundwater taking, if there is a pattern of significant decline in hydraulic head in the aquifer over the previous 5 years;
- ♦ watershed is classified as high or medium water use for summer low flow conditions (see Section "Evaluating PTTW – High and Medium Use Watersheds"); or
- ♦ high density of permitted takings within any given area.

In addition, the Director may consult with other agencies regarding watershed conditions and will consider information that comes to his/her attention regarding the same.

Water Balance

Means a quantification of water input and output and changes in storage of the various components of the hydrologic cycle.

In the absence of the above conditions, it is unlikely that there are significant cumulative impacts at the large scale. Consequently, the Director need take no further action in consideration of water balance and sustainable yield.

How does this section apply?

A geographically-based approach improves the Ministry's ability to assess the cumulative environmental impact of the collective water takings by allowing the Ministry and its partners to collect and review and apply all current relevant information prior to issuing permits.

In considering a water balance, the Ministry and applicant will use available information from current science standards. Available data and analyses differ among watersheds, and science is continuously evolving. The Ministry will consider the following tools:

1. numerical models (the impact of the taking on the water balance may be modelled);
2. water budget based on analytical methods; or
3. water use maps of Ontario for average annual and summer low flow conditions.

The information provided by the applicant will be considered when the Director is making a decision on whether to issue a permit or whether to impose specific conditions regarding water balance and sustainability on a permit.

Evaluating PTTW – Low Water

This section outlines the matters a Director must consider when considering “issues relating to water availability, including low water conditions, if any.”

The *Ontario Low Water Response* (OLWR) outlines a methodology to determine a range of low water levels in a watershed, including the means for measuring and quantifying drought, the conditions leading up to it and recommended action that should be taken. For more information, go to http://www.mnr.gov.on.ca/mnr/water/publications/OLWR_2002.pdf. The table on the next page describes the goals and targets associated with the OLWR. *Ontario Low Water Response* builds on existing relationships between provincial and local agencies. The province provides policy direction, science and information systems and local agencies play multiple roles collecting information, interpreting policy and delivering programs to minimize the effects of low water conditions. The local Conservation Authority (CA) and/or Ministry of Natural Resources (MNR) district office is the lead agency responsible for confirming a watershed condition and for establishing a Water Response Team (WRT) which consists of local water users and other representatives (e.g., First Nations, provincial, municipal and conservation authority representatives).

Thresholds and indicators, such as precipitation and streamflow indicators, are used to determine whether a watershed is in a Level I, II or III. Water Response Teams, as described in the OLWR, must take appropriate action and document information on the conditions in the watershed. A Level III declaration represents the most severe condition.

What is the purpose of this section?

Occurrence of a number of years of below average precipitation, resulting in low water levels in

streams, rivers and lakes and aquifers, and an increased reliance on water takings leads to interests in water availability and the PTTW program. Since low water conditions develop over time, the permit process allows water users and the Ministry to be proactive in reducing the likelihood of low water conditions recurring in watersheds or sub-watersheds that have had low water levels. Water conservation, scheduling of water takings and water-efficient technologies can be effective in averting and reducing the severity of low water conditions. (Please refer to the “Evaluating PTTW – Water Conservation” section.)

When does this section apply?

Consideration of low water conditions generally applies when the Director is considering whether to issue or refuse a permit or impose conditions on a permit.

What is required?

The lead agency responsible for confirming a watershed condition (either the local Conservation Authority and/or Ministry of Natural Resources district office) prepares the available information on low water conditions.

The Director will consider whether to issue or refuse the permit and/or may impose specific conditions on a permit, including requiring the applicant to develop a schedule for water takings, conditions on the storage of water, and a 10% to 20% reduction in the water taking, should a Level I, II or III be declared according to OLWR.

If the proposed water taking is in a watershed or part of a watershed that is in a Level I, II or III or has been declared to be in a Level I, II or III for at least two years during the five years prior to

when the water taking is to commence, the following action may be taken:

- ♦ All applicants will be required to document water efficiency and conservation practices that the permit holder has applied or will apply for the duration of the permit.
- ♦ Outline contingency measures the permit holder will adopt to achieve the 10% to 20% water use reduction target should a Level I, II or III be declared according to OLWR.

Note that the Director has the discretion not to require contingency measures for certain types of water takings where appropriate (e.g. quarry dewatering).

The information provided by the applicant will be considered when the Director is making a decision on whether to issue or refuse a permit or whether to impose specific conditions regarding low water on a permit. In addition, the Director will consider recommendations from the Ontario Low Water Response team regarding potential conditions to impose on new or existing permits.

Using an adaptive management approach, the Director has the discretion to issue a permit for a shorter duration and/or modify the conditions on the permit as necessary to remedy problems or potential problems that may occur.

Evaluating PTTW – Low Water

Description of Level	Level I Voluntary Conservation	Level II Conservation and Restrictions on Non-Essential Use	Level III Conservation, Restriction, Regulation
Goal	Promote voluntary water conservation and management among all users to reduce further water shortages.	Target further water conservation and management messages more directly. Publicize water use restrictions. Ensure compliance with restrictions. Consider priorities for water restrictions and other water use reductions at Level III.	Develop and implement priorities on water management strategies and water use reductions.
Target	10% voluntary reduction in water use among all sectors.	Further 10% water use reduction (20% total).	Reduce and manage water use demands to the maximum extent. Response designed to mitigate impending impacts of an escalated drought condition.

Evaluating PTTW – High & Medium Use Watersheds

This section outlines how the Director must consider High and Medium use watersheds as it relates to water availability. Also see the section of this manual that covers "High Use Watersheds."

Where does this section apply?

This section applies to every watershed that is classified as high or medium use during Average Annual conditions or Summer Low Flow conditions.

Water use has been calculated and classified as high, medium or low in every watershed in Ontario. The watersheds are the tertiary watersheds defined by MNR and adopted by Environment Canada. The Director will refer to the Average Annual Flow map or the Summer Low Flow map as defined in the Water Taking and Transfer Regulation. For illustrative purposes, these maps appear in the "High Use Watershed" section of this manual.

The section entitled "High Use Watersheds" of this manual describes mandatory requirements for new and increased takings for uses that remove water from a high use watershed.

When the Director is considering permit applications for uses other than those prohibited under Section 5 of the Water Taking and Transfer Regulation, the Director will take into consideration whether the proposed taking is in a high use watershed or medium use watershed.

How does this section apply?

The Director may apply one or more of the following requirements to the permit:

- ♦ applicant may be required to demonstrate whether the taking can be reduced through efficient use and conservation of water as described in the section "Water Conservation."
- ♦ applicant may be required to conduct environmental effects monitoring during a shortened permit period as part of an adaptive management approach to future renewals.

When the Director is considering permit applications for takings other than those prohibited under Section 5 that are within a watershed defined as **high** or **medium** use, the Director also may initiate or cause to initiate a water balance or sustainable yield assessment to better understand and manage the cumulative impact of existing and proposed new water takings (see section on "Evaluating PTTW – Water Balance and Sustainability"). Water takings may be subject to more stringent requirements in these areas because in the Province's opinion, these watersheds have a higher water use relative to supply.

The long-term goal is to ensure that we are doing everything we can to manage, conserve and use the water efficiently to lessen the demand.

Evaluating PTTW – Water Conservation

Water takers are encouraged to take all reasonable and practical measures to conserve water and to maximize its availability for existing or potential uses and to sustain ecosystem integrity. This section outlines the matters a Director must consider when considering “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.”

What is the purpose of this section?

Water conservation will be considered as a factor in decisions regarding permits to take water. Whether water conservation in accordance with published best water management standards and practices for the relative sector is being implemented or will be implemented will be considered.

When does this section apply?

When applying for a new taking or an increased taking, the applicant will document water conservation measures and practices that the applicant has undertaken or will undertake for the duration of the permit. The information provided by the applicant will be considered when the Director is making a decision on whether to issue a permit or whether to impose specific conditions regarding water conservation on permits.

For all existing takings regardless of what Category they are classified as, permit holders will be encouraged to adopt water conservation best practices. Additional requirements may be placed on existing takings to which any one of the following conditions apply:

- ♦ the water taking is in a high or medium use watershed (see section on “Evaluating PTTW – High and Medium Use Watersheds”);
- ♦ the water taking is in a watershed or parts of a watershed with low water condi-

tions (see section on “Evaluating PTTW – Low Water” of this manual);

- ♦ the water taking triggers the Great Lakes Charter;
- ♦ the water taking is a large municipal residential supply; and/or
- ♦ where the Director has information regarding water quantity supply issues.

Prior to issuing a permit for a new or an increased taking or by placing conditions on a permit, such as monitoring and reporting actual water takings, the Director may require applicants to demonstrate whether the need for the increased water taking can be reduced or avoided through efficient use and conservation of water under the existing permitted volume.

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.

How does this section apply?

When applying for a permit the applicant must submit accurate information on water conservation measures and practices which the applicant has undertaken or will undertake for the duration of the permit. The information is to include, where applicable, the following:

- ♦ **a statement for reducing the use, loss and/or waste**

Key definitions ...

Water Conservation

Means a reduction in the use, loss or waste of water or an increase in the efficiency of water use.

of water or an increase in the efficiency of water use (e.g., percentage or litres per day or per unit of production), including existing and proposed water takings;

- ♦ **water conservation and water efficiency best management practices** which are being utilized or will be utilized for the duration of the permit to take water, including:
 - a description of the best management practices implemented or to be implemented;
 - the time period for when the best management practices will be applied;
 - details of the proposed water takings (time and volume, including average and peak water withdrawals);
 - a description of equipment and processes, such as water used for industrial production and/or irrigation system(s);
 - information relevant for your sector and/or other sources of information used in water conservation and efficiency management practices and measures;

For example, water takings for irrigation should provide information on the irrigation methods and Best Management Practices used. Where an Environmental Farm Plan has been completed, it may provide relevant information.

The information provided by the applicant will be considered when the Director is making a decision on whether to issue a permit or whether to impose

Evaluating PTTW – Water Conservation

specific conditions regarding water conservation on a permit.

Examples of conditions that may be included in order to ensure water efficiency and conservation include requiring an applicant to develop a schedule of water takings, conditions on the storage of water, a schedule for monitoring and reporting water use, conducting water efficiency audits, and/or certification of conservation plans by an association or authority.

Why is water conservation being applied based on sectors?

The Ministry recognizes that different sectors use different technology, systems and practices to achieve water efficiency and conservation. The Ministry will build on the knowledge and experience of

representatives from different sectors to provide consistent water efficiency and conservation best management practices which are appropriate for different sectors.

What is “water conservation in accordance with best water management standards and practices for the relevant sector”?

A best management standard or practice is a conservation measure or system of procedures that achieve water conservation where these are published by the association(s) for a relevant sector.

Many associations actively promote and participate in advancing water efficiency and conservation for specific sectors. For example, the Ontario Water Works Association's guidebooks on principles and practices related to planning

and implementing a municipal water efficiency program. Water conservation will be considered by the Director when making a decision on a permit application.

Where will information on water conservation be available?

Applicants are expected to contact associations which represent their sector for information on published best practices, e.g., 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 on preparing Environmental Farm Plans.

Evaluating PTTW – Water Use

This section outlines the matters a Director must consider when considering "the purpose for which the water is being used or is proposed to be used, and 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."

How is water use considered?

The "consideration of water use purpose" is important because it provides information to the Director concerning:

- ♦ The amount of water likely to be needed and when during the year it is needed;
- ♦ The potential requirement for other approvals such as a waste water discharge; and
- ♦ Identification of uses that remove water from the watershed

A person who is applying for a Permit to Take Water should have a reasonable intention to use the water requested during the duration of the permit. If a Permit has

been issued and the water is not being used, the Director will consider whether to cancel, amend or impose conditions on the Permit. This would occur in cases where a Permit is issued and there does not appear to be a reasonable intention to use the water.

It is not the intention of the Director to discourage the efficient use of water. The Director recognizes that there are situations where there is an intention to use the water, yet the water is not used or not used for the full permitted volume due to a number of circumstances. For example, a permit for irrigation may not use the total permitted volume in a given season due to above normal levels of

precipitation. However, there could be a reasonable intention to use the water in the future, as required.

This section is also not intended to set out a hierarchy of water users rather our interest is in the purpose as it relates to timing, quantity and consumption.

The information provided by the applicant will be considered when the Director is making a decision on whether to issue a permit or whether to impose specific conditions regarding water use on a permit.

High Use Watersheds

This section prohibits new and increased permits for takings that remove water from the watershed, in those watersheds classified as "high use." These applications are screened out before the scientific evaluation process is initiated.

In this section ...

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To what uses does this section apply?

Section 5 of the Water Taking and Transfer Regulation has special requirements for new and increased takings that remove water from the watershed. Where there is high water use in the tertiary watershed, the Director will refuse permit applications for new or expanding water takings for the following uses that remove water from the watershed:

- ♦ beverage manufacturing, including the manufacturing or production of bottled water or water in other containers;
- ♦ fruit or vegetable canning or pickling, not including water that is taken only for washing in the course of the canning or pickling;
- ♦ ready-mix concrete manufacturing, not including concrete manufactured at a portable ready-mix concrete manufacturing facility;
- ♦ aggregate processing, if the aggregate and the water that is taken are incorporated into a product in the form of a slurry; and
- ♦ 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.

What exemptions apply?

The requirement to refuse certain applications to take water does not apply to the following types of takings:

- ♦ by a municipality;
- ♦ for agricultural purposes, including aquaculture, nurseries, tree farms, and sod farms;
- ♦ extraction of aggregates where the water taking is incidental;
- ♦ manufacturing or production of pulp and paper, or ethanol.

How are existing permits treated?

Existing permitted water takings for uses that remove water from the watershed may be allowed to continue, provided that at the time of application the applicant holds an unexpired permit to take water and the application is for the same or lesser amount of water at the same location and for the same purpose. Nevertheless, the Director must take into consideration the high use watershed during the scientific evaluation of the permit.

How are other uses treated?

In reviewing applications for all uses other than those that remove water from a high use watershed, the Director is re-

Here's what the Water Taking and Transfer Regulation says ...

High use watersheds

5. (1) Subsections (3) and (4) apply to applications that relate to water taking for a purpose described in subsection (5).

(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.

(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.

(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.

High Use Watersheds

quired to take into consideration the classification of the watershed.

How is water use assessed?

The water use classifications were determined by comparing water demand to water supply less a reserve for instream needs. Water use has been calculated and classified as high, medium or low in every watershed in Ontario. Watershed boundaries are the tertiary watersheds defined by MNR and adopted by Environment Canada. **Takings outside a tertiary watershed boundary include any taking with an intake in a Great Lake or any of their connecting channels (St. Mary's River, St. Clair River, Detroit River, Niagara River and St. Lawrence River), or the Ottawa River. Takings from the Welland Canal are treated in the same manner.**

The Director will refer to specific maps published by the Queen's Printer for Ontario to determine a watershed's water use classification. The two maps provided below (for illustrative purposes only) present the water use classification under each of two conditions: average annual and summer low flow.

If a watershed is **high use** for average annual conditions, applications for specified uses (see sidebar) will be refused regardless of the time of year that the water taking is proposed to occur.

If a watershed is **high use** only for summer low flow conditions, a permit may be granted, provided that it includes a prohibition on water taking during the 6 week period from August 1 to September 11, or a longer period specified by the Director that includes this 6 week period.

How is Section 5 applied to applications?

Step 1. Prior to accepting an application or initiating a review of the application, the Director must determine whether the watershed where the proposed water taking would be located is categorized as high, medium or low water use, by consulting the specific maps published by the Queen's Printer for Ontario.

- ♦ To classify watersheds for proposed water takings that would include at least one day during the summer low flow period from August 1 to September 11
- ♦ To classify watersheds for proposed water takings that do not occur during the period of August 1 to September, use the Water Use – Average Annual conditions map.

Step 2. Where the proposed water taking would be in a **high use watershed**, it is likely that the cumulative impact of existing water taking is already significant.

If the proposal is for a new or increased taking and for a use that removes water from the watershed (Section 5(5) use), the Director must refuse the application unless the proposed water taking would be located in a watershed classified as high use on the Summer Low Flow map, but not high use on the Average Annual map, and a condition is added to the permit prohibiting water taking during the 6 week period from August 1 to September 11, or a longer period specified by the Director that includes this 6 week period.

Step 3. If the application for a water taking was not refused in Step 2 above, the Director may proceed with a

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

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

(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.

(7) Paragraph 4 of subsection (5) does not apply in respect of the extraction of aggregates where the water taking is incidental.

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

- a. pulp and paper; or
- b. ethanol.

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

review of the application as described in Section 3.

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

This map is intended to illustrate the water use classification of Ontario's tertiary watersheds under the provisions of Ontario Regulation 287/04 (Water Taking and Transfer, made under the Ontario Water Resources Act). The Water Taking and Transfer Regulation is available at www.ontario.ca/owr.

Cette carte a pour but d'illustrer la classification de la consommation d'eau des bassins hydrographiques tertiaires de l'Ontario aux fins du Règlement 287/04 pris en vertu de la Loi sur les ressources en eau. Le règlement sur la prise et le transfert d'eau est disponible en ligne à www.ontario.ca/owr.



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

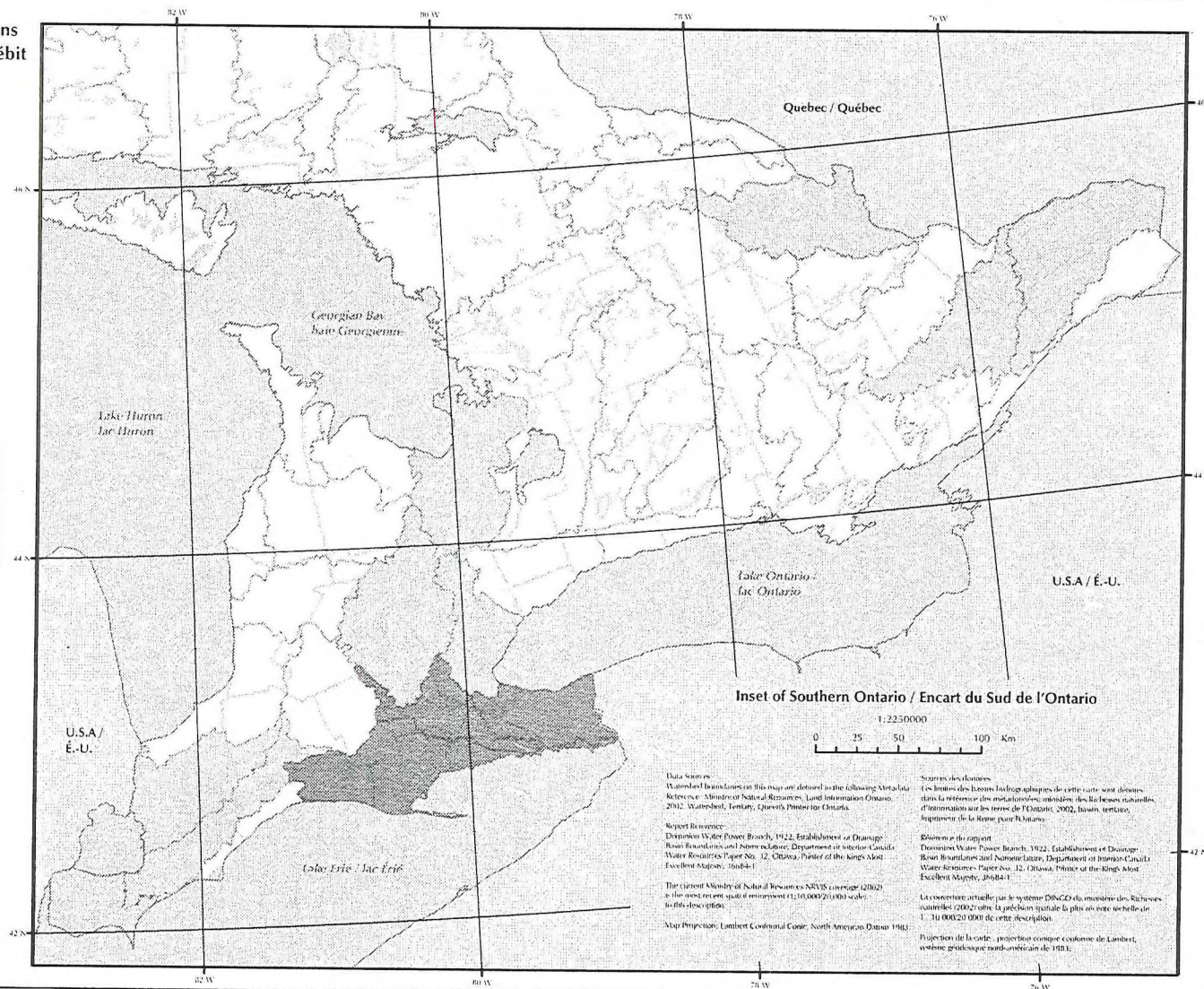
- Low / Basse
- Medium / Moyenne
- High / Forte
- Upper-Tier Municipal Boundary /
Limite de la municipalité de palier supérieur

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

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



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

1:2250000
0 25 50 100 Km

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

Report Reference:
Dominion Water Power Survey, 1922, Establishment of Drainage
Basin Boundaries and Name Labels, Department of Interior, Canada,
Water Resources Paper No. 12, Ottawa, Printer of the King's Most
Excellent Majesty, 1964-1.

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

Map Projection: Lambert Conformal Conic, North American Datum 1983.

Sources des données:
Les limites des bassins hydrographiques de cette carte sont définies
dans la référence des ministères, ministère des Ressources naturelles,
d'information sur les terres de l'Ontario, 2002, bassins, territoire,
Imprimerie de la Reine pour l'Ontario.

Référence de rapport:
Dominion Water Power Survey, 1922, Establishment of Drainage
Basin Boundaries and Name Labels, Département de l'Intérieur, Canada,
Water Resources Paper No. 12, Ottawa, Imprimerie du Roi, Most
Excellent Majesty, 1964-1.

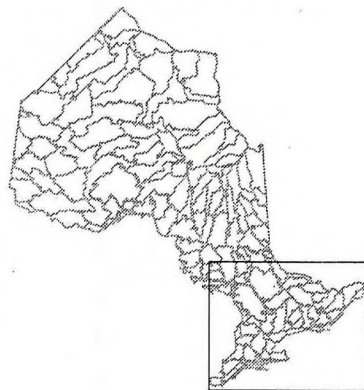
La couverture actuelle par le système DBOIS du ministère des Ressources
naturelles (2002) offre la représentation spatiale la plus récente de cette
description.

Projection de la carte: projection conique conforme de Lambert,
origine géographique nord-américain de 1983.

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

This map is intended to illustrate the water use classification of tertiary watersheds only for the purposes of Ontario Regulation 267/04. It does not constitute a statement of fact. The Water Taking and Transfer Regulation is available at www.ontario.ca/water.

Cette carte vise uniquement à illustrer la classification de la consommation d'eau des bassins hydrographiques tertiaires de l'Ontario, aux fins du règlement 267/04 qui régit l'usage de l'eau, en application de la Loi sur les ressources en eau. Le règlement est disponible en français et en anglais sur le site www.ontario.ca/water.



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

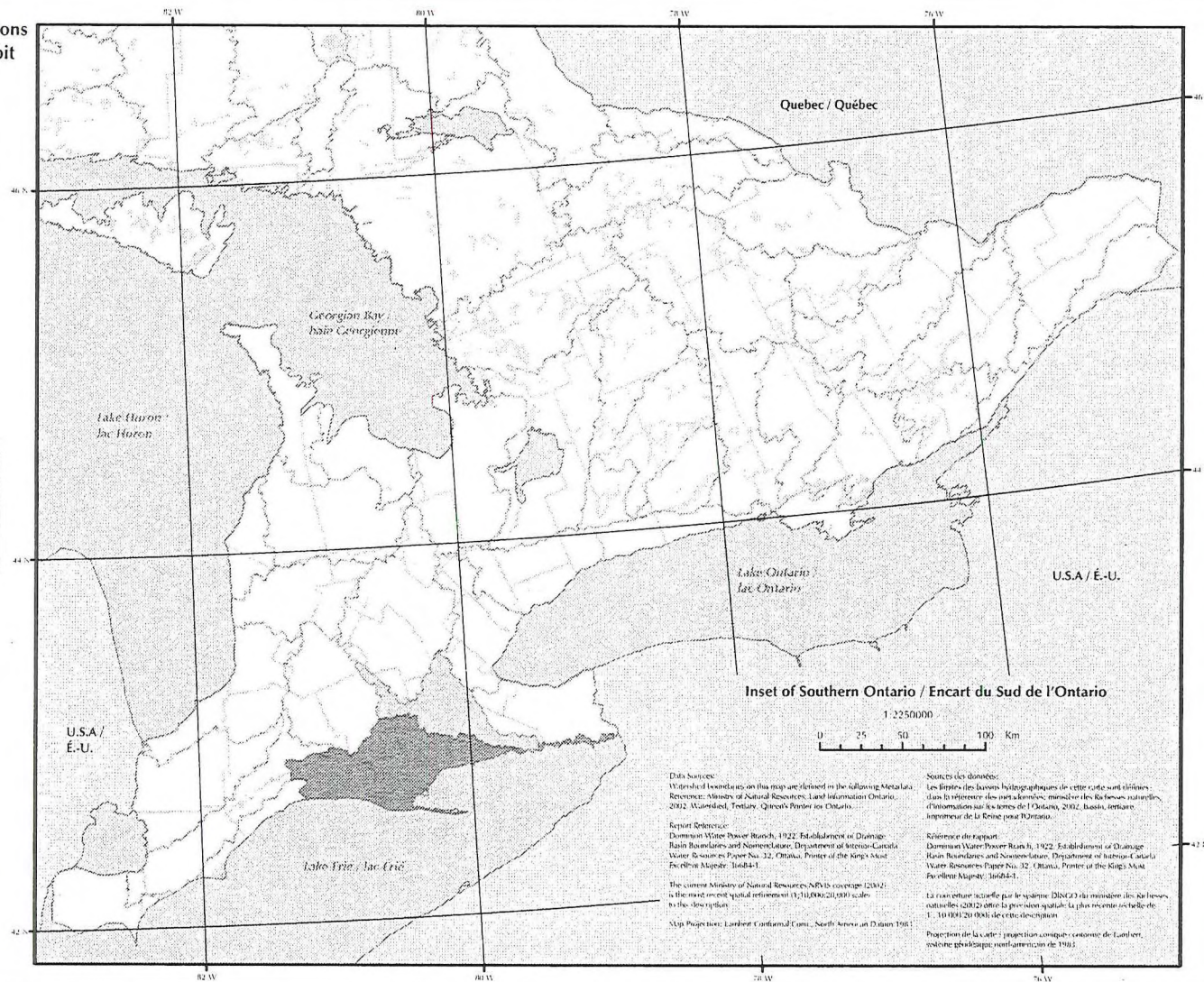
- Low / Basse
- Medium / Moyenne
- High / Forte
- Upper-Tier Municipal Boundary /
Limite de la municipalité de palier supérieur

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Ressources naturelles.



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

1:2250000

0 25 50 100 Km

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

Report Reference:
Dominion Water Power Branch, 1922. Establishment of Drainage
Basin Boundaries and Numericalities. Department of Interior, Canada
Water Resources Paper No. 32. Ottawa, Printer of the King's Most
Excellent Majesty. 16484-1.

The current Ministry of Natural Resources (MNR) coverage (2002)
is the most recent spatial information (1:250,000/250,000 scale)
in the description.

Map Projection: Lambert Conformal Conic, North America Datum 1983.

Sources des données:
Les limites des bassins hydrographiques de cette carte sont définies
dans la référence des méta-données, ministère des Ressources naturelles,
d'informations sur les terres de l'Ontario, 2002, bassin, tertiaire,
Impression de la Reine pour l'Ontario.

Référence du rapport:
Dominion Water Power Branch, 1922. Establishment of Drainage
Basin Boundaries and Numericalities. Département de l'Intérieur, Canada
Ressources en eau, Paper No. 32. Ottawa, Imprimeur de la Reine
Sa Majesté. 16484-1.

La couverture actuelle par le système DMS23 du ministère des Ressources
naturelles (2002) offre la plus récente spatialité la plus récente échelle de
1:250,000/250,000 de cette description.

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

Great Lakes Charter

The Great Lakes Charter sets forth the principles for the management of the water resources of the Great Lakes Basin. Under the Charter, the signatories are responsible for: compiling and providing data on current and projected water use and diversion; undertaking prior notification and consultation on any new or increased diversion or consumptive use of the water resources of the Great Lakes Basin which exceeds the threshold specified by the Charter; developing a cooperative water resources management program; and undertaking research on lake levels and flows.

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What is the Great Lakes Charter?

On February 11, 1985, the Premiers of Ontario and Quebec and the Governors of the eight States in the Great Lakes Basin (i.e., Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania and Wisconsin) signed *The Great Lakes Charter*. In June 2001, the Premiers and the Great Lake Governors signed *The Great Lakes Charter Annex*, which committed their jurisdictions to develop binding agreements to further protect, conserve, restore, improve and manage the use of the Waters of the Great Lakes Basin. Great Lakes States and Provinces are currently working on developing such agreements.

Management of the water resources of the Great Lakes Basin is subject to the jurisdiction, rights and responsibilities of the signatory States and Provinces. Under the Charter, the Great Lakes States and Provinces have reaffirmed the mutual rights and obligations

of all Basin jurisdictions to use, conserve, and protect Basin water resources, as expressed in the *Boundary Waters Treaty of 1909*, the *Great Lakes Water Quality Agreement of 1978*, and the principles of other applicable international agreements.

What is the role of the Ministry?

Where an application for a new or increased diversion or consumptive use (taking) is greater than the threshold specified in the Charter the Ministry will refer the proposed water taking application to the Ministry of Natural Resources to determine whether the Charter applies.

Note that by separate agreement, mutually agreed to consultation levels have been established between the two Ministries to ensure that the Charter is adhered to.

Responsibility for administering the provisions of the Great Lakes Charter rests with the Ministry of Natural Resources.

Here's what the Water Taking and Transfer Regulation says ...

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.

Definitions of Charter terms ...

Withdrawal

The removal or taking of water from surface or groundwater.

Consumptive Use

That portion of water withdrawn or withheld from the Great Lakes Basin and assumed to be lost or otherwise not returned to the Great Lakes Basin due to evaporation, incorporation into products, or other processes.

Diversion

A transfer of water from the Great Lakes Basin into another watershed, or from the watershed of one of the Great Lakes into that of another.

Interbasin Diversion

A transfer of water from the Great Lakes Basin into another watershed.

Intrabasin Diversion

A transfer of water from the watershed of one Great Lake into that of another Great Lake.

Great Lakes Basin

The watershed of the Great Lakes and the St. Lawrence River upstream from Trois Rivières, Quebec.

Great Lakes Basin Water Resources

The Great Lakes and all streams, rivers, lakes, connecting channels, and other bodies of water, including tributary groundwater, within the Great Lakes Basin.

Great Lakes Basin Ecosystem

The interacting components of air, land, water and living organisms, including humankind, within the Great Lakes Basin.

Great Lakes States and Provinces

The States of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, and Wisconsin, the Commonwealth of Pennsylvania, and the Provinces of Ontario and Quebec.

Notice and Consultation

The Ministry recognizes the value of public and local agency involvement in the process of managing water takings at the local level. The Ministry, therefore, fosters an open and consultative process in the PTTW program and makes information publicly available on permitted water takings and water resource availability. The Ministry will also consult with other agencies which have expertise or mandate in certain areas such as fish and terrestrial habitat.

Section 7 of the regulation requires the Director to notify municipalities and conservation authorities of PTTW applications. This provision applies to applications that are subject to posting on the Environmental Registry under the *Environmental Bill of Rights, 1993*. The means by which the Director may provide notice include mail, fax, e-mail, other electronic means, or in person. This section also makes explicit the Director's authority to require an applicant to report to the Ministry on efforts that the applicant has made to resolve any concerns raised by persons or governmental authorities who are notified or consulted.

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What is the purpose of this section?

Notice is given to municipalities and conservation authorities and, where appropriate, the Ministry may also consult, recognizing the value of the information that may be provided by these agencies with first-hand knowledge and understanding of their local area.

Municipalities and conservation authorities are notified of PTTW applications posted on the Environmental Registry in order to increase local awareness of permit activities. This enables municipalities and watershed-based authorities to serve as local sources of information about PTTWs for persons and groups in the community who have a strong interest in such matters.

The Director can also require an applicant to notify or consult with interested parties, and require the applicant to report to the Director on how the applicant has (or has attempted to) resolve any concerns raised by persons or governmental authorities who were notified or consulted.

Which PTTW applications are posted on the EBR?

This section applies to applications that are subject to posting on the Environmental Registry under the *Environmental Bill of Rights, 1993*.

The posting of PTTW notices on the Environmental Registry will continue as is currently required, and applies to all applications under consideration by the Director, except when:

1. the application is for a permit to take water issued for less than one year or for irrigation of agricultural crops;
2. in the Director's opinion, the delay involved in giving notice 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;
3. in the Director's opinion, the persons listed in subsection (1) have already received

Here's what the Water Taking and Transfer Regulation says ...

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.

(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.

(3) Subsection (2) does not prohibit the Director from giving any person notice of an application if the Director is of the opinion

Notice and Consultation

the information that would be included in the notice (e.g., water takings that are undertaken to implement an approved environmental assessment).

Notwithstanding these situations, the Director can give any person notice of an application if s/he is of the opinion that it is consistent with the purposes of the regulation to do so.

Who is notified?

The Director will be required to notify each municipality (upper-tier, lower-tier or single-tier, as the case may be) and the local conservation authority, within whose area of jurisdiction the proposed water taking is located.

At the Director's discretion, s/he may also notify and consult municipalities and conservation authorities outside the location of taking (e.g., in cases where the projected impact may extend outside the municipality or conservation authority where the taking occurs).

How is this section of the Regulation to be applied?

The Director will notify municipalities and conservation

authorities of a posting on the Environmental Registry by:

- ♦ 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
- ♦ delivering a brief description or a copy of the application to the person.

An applicant may be required to notify or consult with interested parties, and report to the Director on efforts that the applicant has made to resolve any concerns raised by persons or governmental authorities who are notified or consulted.

The discretion of the Director to notify other interested parties.

The Ministry may inform other interested parties where requested, such as First Nations communities, when in the opinion of the Director the proposed water taking may impact upon an existing taking or may have a related adverse environmental impact.

that it is consistent with the purposes of this Regulation to do so.

(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.*

(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).

(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.

(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.*

Data and Reporting

This section outlines the requirements for data collection, recording and reporting for all permit holders. Permit holders will be required to collect and record data on the volumes of water taken daily. Data collected will be measured by a flow meter or calculated using a method acceptable to a Director. Data for the previous year must be submitted to the Ministry on or before March 31 in every year in the form and manner approved by the Director. More frequent reporting can be required where needed.

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What is the purpose of this section?

Section 9 outlines the requirements for persons to whom a permit to take water has been issued under Section 34 of the *Ontario Water Resources Act*, as specified below, to collect and record data on the volume of water taken daily, and report them to a Director.

The requirements stated in this section do not affect a Director's discretion under subsection 34 (6) of the *Ontario Water Resources Act* to impose terms and conditions in issuing a permit and to alter the terms and conditions of a permit after it is issued.

To whom does it apply?

This section applies to persons to whom a permit to take water has been issued under Section 34 of the *Ontario Water Resources Act*. The requirements are to be phased in in three stages.

Who is covered under Phase 1 of the reporting requirements?

1. Use in a municipal residential water supply;
2. The purposes of:
 - i. Beverage manufacturing, including the manufacturing or production of bottled water or water in other con-

tainers;

- ii. Fruit or vegetable canning or pickling;
 - iii. Ready-mix concrete manufacturing, not including concrete manufactured at a portable ready-mix concrete manufacturing facility;
 - iv. Aggregate processing, if the aggregate and the water that is taken are incorporated into a product in the form of a slurry; and
 - v. 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; and
3. The operation of a facility governed by any of the following regulations, made under the *Environmental Protection Act*:
 - i. O. Reg. 560/94 (Effluent Monitoring and Effluent Limits – Metal Mining Sector).
 - ii. O. Reg. 215/95 (Effluent Monitoring and Effluent Limits – Electric

Here's what the Water Taking and Transfer Regulation says ...

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.

(2) The data collected under subsection (1) shall be measured by a flow meter or calculated using a method acceptable to a Director.

(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.

(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.

(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.

(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*:

Data and Reporting

- Power Generation Sector).
- iii. O. Reg. 561/94 (Effluent Monitoring and Effluent Limits—Industrial Minerals Sector).
- iv. O. Reg. 64/95 (Effluent Monitoring and Effluent Limits – Inorganic Chemicals Sector).
- v. O. Reg. 214/95 (Effluent Monitoring and Effluent Limits – Iron and Steel Manufacturing Sector).
- vi. O. Reg. 562/94 (Effluent Monitoring and Effluent Limits – Metal Casting Sector).
- vii. O. Reg. 63/95 (Effluent Monitoring and Effluent Limits – Organic Chemical Manufacturing Sector).
- viii. O. Reg. 537/93 (Effluent Monitoring and Effluent Limits – Petroleum Sector).
- ix. O. Reg. 760/93 (Effluent Monitoring and Effluent Limits – Pulp and Paper Sector).

Permit holders in Phase 1 will be required to start collecting

and recording data on the volume of water taken daily on July 1, 2005, and to report on or before March 31, 2006.

Who is covered under Phase 2?

The remaining industrial/commercial takers and takings for recreation and wildlife conservation purposes are covered under Phase 2.

Permit holders in Phase 2 will be required to start collecting and recording data on the volume of water taken daily on January 1, 2006, and to report such data by March 31, 2007.

Who is covered under Phase 3?

Municipal non-residential drinking-water systems, non-municipal residential and non-municipal non-residential drinking-water systems, agricultural takers, and all other remaining water takers will be covered under Phase 3.

Permit holders in Phase 3 will be required to start collecting and recording data on the volume of water taken daily on January 1, 2007, and to report such data by March 31, 2008.

- 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).

(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.

(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).

Water Transfer

The purpose of this section clarifies provisions in the Regulation that prohibit the transfer of water from one water basin to another. Water transfer includes both the physical withdrawal and the diversion of water. The regulation divides Ontario into three water basins: the Great Lakes-St. Lawrence Basin, the Nelson Basin, and the Hudson Bay Basin. Certain exemptions are provided, and direction is provided for additional information required by a proponent preparing a PTTW application.

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What is the purpose of this section?

The purpose of this section clarifies provisions in the Regulation that prohibit the transfer of water from one water basin to another. Water transfer includes both the physical withdrawal and the diversion of water.

The regulation divides Ontario into the following three water basins:

1. the Great Lakes-St. Lawrence Basin, which consists of Lake Ontario, Lake Erie, Lake Huron, Lake Superior, the St. Lawrence River and the part of Ontario the water of which drains into any of them, including the Ottawa River and the part of Ontario the water of which drains into the Ottawa River;
2. the Nelson Basin, which consists of the part of Ontario the water of which drains into the Nelson River; and
3. the Hudson Bay Basin, which consists of the part of Ontario, not included in the Nelson Basin, the water of which drains into Hudson Bay or James Bay.

The water transfer prohibition applies to potable water or any other water that is not incorporated into a manufactured or produced product. However, the prohibition does not apply

to water that is taken and used at a location within the water basin to manufacture or produce a product that is subsequently transported out of the water basin. Common examples of manufactured or produced products include beer, juices, canned fruit and vegetables, ready-mix concrete, and slurries.

What exemptions are provided?

The water transfer prohibition does not apply in a number of specific circumstances that are described in the Regulation. The exemptions include the following:

- ♦ water transported in a container having a volume of 20 litres or less;
- ♦ water that is necessary for the operation of the vehicle, vessel or other form of transport in which water is being transported;
- ♦ water transfers that commenced prior to January 1, 1998, where the annual quantity transferred does not exceed the maximum annual transfer that occurred between December 31, 1960, and January 1, 1998;
- ♦ water taken pursuant to the order of the Lieutenant Governor in Council dated October 2, 1913, respecting the Greater Winnipeg Water District.

Here's what the Water Taking and Transfer Regulation says ...

Water transfer

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

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

(2) No person shall use water by transferring it out of a water basin.

(3) Subsection (2) does not apply to water that is used in the water basin to manufacture or produce a product that is then transferred out of the water basin.

(4) For the purpose of subsection (3), potable or other water is not a manufactured or produced product.

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

(6) Subsection (2) does not apply to water packaged in a container having a volume of 20 litres or less.

(7) Subsection (2) does not apply to an undertaking that commenced before January 1, 1998 if the amount of water transferred out of a water basin by the undertaking in any calendar year after December 31, 1997 does not exceed the highest amount of water transferred out of the water basin by the undertaking in any

Water Transfer

What information must be supplied by a proponent?

To ensure compliance with the regulation, the following information should be provided by the proponent in addition to the completed PTTW application:

- ♦ the geo-referenced location of both the water taking/diversion location and any relevant bottling/manufacturing plant locations;
- ♦ proof that the proponent owns or has legal access to the land on which the bottling/manufacturing plant or dam, in the case of a diversion, is to be constructed;
- ♦ if water is to be transferred in bulk, the size of containers to be used and a list of the destinations where water will be transported; and
- ♦ the date that water taking/diversion activities are anticipated to commence.

calendar year after December 31, 1960 and before January 1, 1998.

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

Step-by-Step PTTW Assessment Process

The following section describes the steps followed to process and review applications for a Permit To Take Water received by the Ministry of the Environment. A flow chart, illustrating the process in a graphic format, is also provided.

Step 1: Application Screening

Is the application form complete?

Persons who are proposing to take water that require a permit must submit an application to the Ministry. Following submission, the application is reviewed to determine whether it has been properly completed. If the application has been completed properly, it moves to the next step in the process. If the results of this preliminary screening are negative or the Ministry determines that a permit application is not required, the application is returned to the applicant.

Step 2: Regulatory Screening

Is the taking from a high use watershed?

Where the watershed in which the taking is proposed is categorized as a high use watershed, proposals for new and increased takings that remove water from the watershed are refused by the director.

See "High Use Watershed" section of this Manual.

Step 3: Consultation and Scientific Evaluation

Does the application trigger the Great Lakes Charter?

If the taking entails any new or increased diversion or consumptive use from the Great Lakes Basin which exceeds a designated amount, prior notice and consultation is required under the Charter. Notification must be provided to MNR, who has responsibility for implementing the Great Lakes Charter.

See "Great Lakes Charter" section of this Manual.

Is public notice required under the *Environmental Bill of Rights, 1993*?

If according to Section 7 of Water Taking and Transfer Regulation notification is required, the appropriate notice is posted on the province's Environmental Registry for public review and comment. In addition, notice of these postings must be provided to the appropriate municipalities and conservation authorities within whose area of jurisdiction the proposed water taking is located.

See "Notice and Consultation" section of this Manual.

Is the application subject to a Category 1, Category 2 or Category 3 review?

The applicant is required to classify the proposed water taking as either Category 1 (technical screening and evaluation), Category 2 (scientific evaluation by a qualified person) or Category 3 (scientific review by the Ministry). The Ministry will then confirm the classification. The classification determines the depth and complexity of the subsequent review process.

See "Classification of Permits To Take Water" section of this Manual.

Does a Category 1 taking meet the standard criteria for permit approval?

The Ministry will perform a series of checks on the application as part of its technical screening and evaluation to confirm relevant information concerning the water source, surrounding water uses, local sensitive receptors and major pollution sources. This includes checking whether existing permit requirements and screening criteria are met and

checking to ensure conformity with O. Reg. 387/04 requirements (e.g. High Use Watersheds, Great Lakes Charter, water conservation and complete required notifications); and confirming there have been no documented incidents of interference or other concerns associated with the taking.

See "Classification of Permits To Take Water" section of this Manual.

Does a Category 2 taking meet the scientific evaluation criteria for permit approval?

The applicant will be required to have a qualified person certify that the proposed taking meets the criteria for Category 2 groundwater or surface water takings and submit the information with their application form.

If the application does not meet the criteria the proposal is subject to a **Category 3** scientific review by the Ministry. The applicant is required to submit the appropriate scientific study(s) prepared by a qualified person and the Ministry will review the proposed in accordance with Section 4 of the Water Taking and Transfer Regulation. This review will include the assessment, as relevant, of the taking's effects on: the natural functions of the ecosystem, water availability, water use and conservation, and other issues that the Director considers relevant.

See sections on "Evaluating PTTW – Groundwater" and "Evaluating PTTW – Surface Water" of this Manual.

Step 4: Director's Decision

Does the application meet the relevant criteria?

If a Category 1 taking meets criteria, the Ministry performs a

Step-by-Step PTTW Assessment Process

technical screening and evaluation of the proposed taking as described in the "Classification of Permits" and prepares a permit with general standard conditions that appear on all permits. If a Category 2 and Category 3 taking is acceptable, the Ministry prepares a permit with additional site-specific conditions, as necessary.

See "Classification of Permits To Take Water" section of this Manual.

Is the application for the taking approved or denied?

The Director provides his/her decision to the applicant and other interested parties, and posts the decision on the Environmental Registry if the taking is subject to the requirements of the EBR, 1993.

Rights to Appeal

There are 3 types of appeals of PTTWs: Applicant or Permit-holder Appeals; Third Party Appeals; and Appeals to the Minister or a Court.

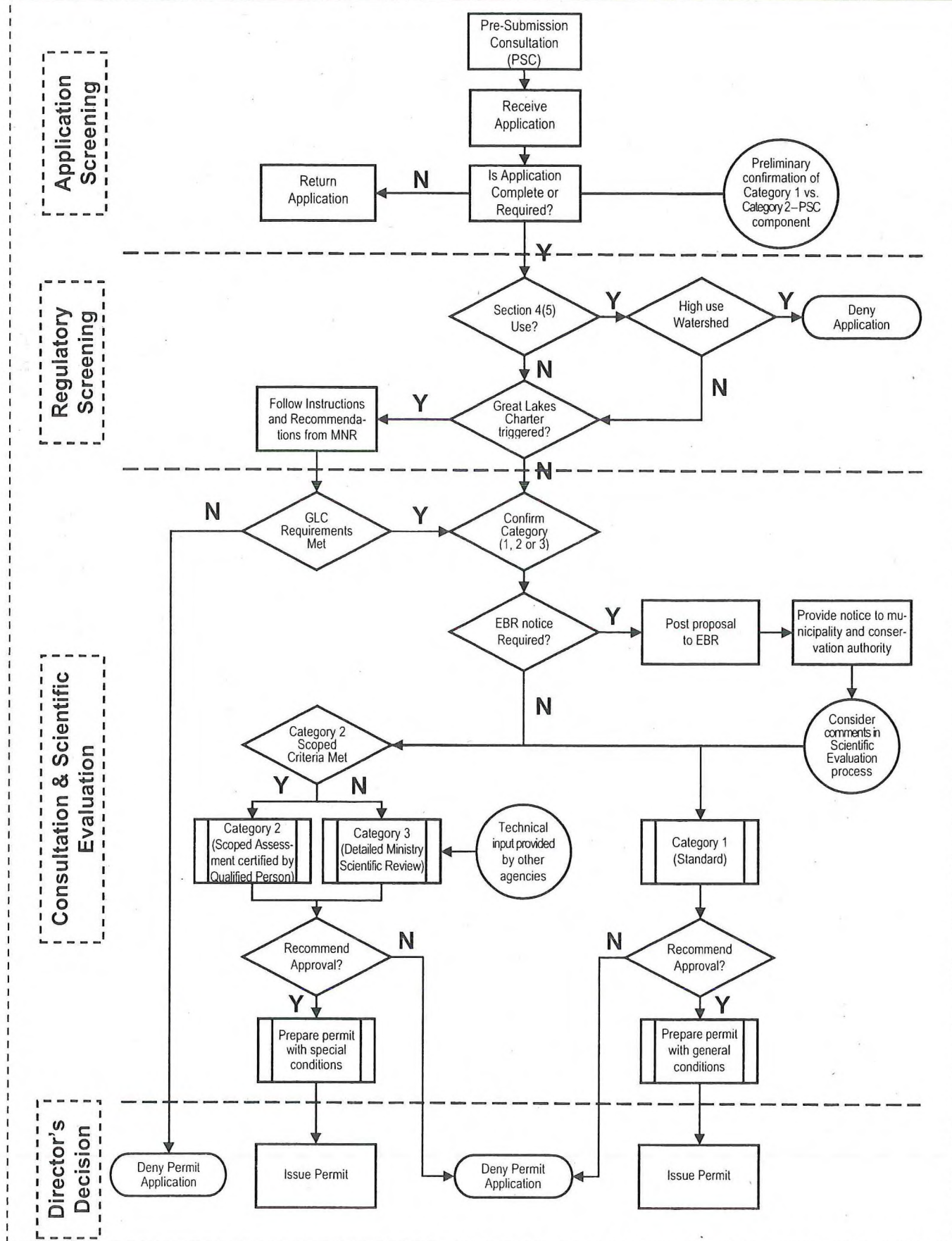
The issuance of or decision to deny a PTTW may always be appealed by the applicant or permit-holder. Unlike applicant appeals, Third-parties may only initiate an appeal with respect to certain PTTWs – those that are designated as Class I or II instruments that are required to be posted on the Environmental Bill of Rights (EBR) Registry as designated in O. Reg. 681/04. A Third-party appeal is a two-step process – the applicant must first obtain leave to have their appeal heard. Permit-holder and Third-Party appeals must be initiated by filing the necessary documentation with the En-

vironmental Review Tribunal within 15 days of the decision being appealed.

Appeals to the Minister or the Court can only be initiated once a decision on an appeal has been rendered by the Environmental Review Tribunal (ERT). The decision to deny leave to appeal cannot be appealed. Decisions of the ERT can be appealed to the Divisional Court on a question of law or to the Minister of the Environment on any other question (fact, mixed fact and law).

For more information on Applicant Appeals and Third-party appeals, please consult the Environmental Review Tribunal website at www.ert.gov.on.ca and the Environmental Commissioner of Ontario's Website at www.eco.on.ca.

How an Application is Processed



Responsibilities of the Ministry and the Applicant

Responsibilities of the Ministry

The Ministry will assist the applicant in classifying the proposed water taking and help identify issues that may need to be addressed and other responsible agencies who should be consulted, such as conservation authorities.

The Ministry is responsible for screening the application to ensure it is complete and has the appropriate supporting information it needs to conduct a review of the application. Where applications are deficient, applicants will be required to resubmit.

The Ministry will ensure that the interests of others are considered by posting proposals on the Environmental Registry, notifying CA's and municipalities of the postings, and by considering the comments received from municipalities, conservation authorities and other agencies, and the public.

The Ministry will evaluate all water taking proposals, performing a series of checks including: conformity with O. Reg. 387/04 requirements and existing permit conditions; and, confirming there have been no documented incidents of interference or other concerns associated with the taking period.

The Ministry will evaluate supporting hydrogeological, hydrological and/or hydro-ecological studies prepared by a qualified person in support of a water taking proposal in accordance with any technical Terms of Reference established.

The Ministry may seek clarification from appropriate agencies about specific concerns that need to be addressed by the applicant prior to issuance of the permit. The Ministry will aid the applicant in addressing concerns raised by the municipalities and the CA's.

The Ministry will coordinate consultations with other agencies on matters that are directly related to the permit application.

The Ministry is responsible for ongoing compliance and enforcement of the PTTW program.

Responsibilities of Applicants

Applicants are responsible for assessing the broad feasibility of the proposed taking prior to initiating site-specific investigations (i.e., the physical setting, the potential environment affected, etc.).

Applicants are expected to consult with the Ministry prior to submitting a permit application to identify issues that may need to be addressed as directed by the Ministry. Applicants may also consult with other responsible agencies who have an interest in the taking, such as conservation authorities.

Applicants are responsible for classifying the proposed water taking and determining whether additional supporting information is required upon completing and submitting a detailed permit application. Where applications are deficient, applicants will be required to resubmit.

Applicants that are not required to submit supporting information or studies prepared by qualified persons (i.e., Category 1 takings), will still be required to provide detailed information about: the water source, surrounding water uses, local sensitive receptors and major pollution sources in their PTTW applications.

In addition to completing the application form, Category 2 applicants must have a qualified person certify that the proposed taking meets the required Category 2 scientific evaluation criteria. Category 3 applications must include supporting hydrogeological, hydrological and/or hydro-ecological studies prepared by a qualified person. The study will be carried out in accordance with any technical Terms of Reference provided by the Ministry. The study will address the local area or reach impacted by the taking.

Applicants are responsible for the management/stewardship of water after the permit is granted. They must fulfill permit conditions, undertake standard environmental protection requirements for environmental monitoring, report on the water taking, and be proactive about opportunities to further reduce impacts, and increase water use efficiencies.

An applicant may be required to report to the Director on the efforts an applicant has made to resolve any concerns raised by persons or governmental authorities who are notified or consulted on the proposed water taking.

Definitions

Application

Means an application to a Director under section 34 of the OWRA for a permit to take water.

CA

Conservation Authority.

DFO

Department of Fisheries and Oceans Canada.

EBR

Environmental Bill of Rights.

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.

Large Municipal Residential System

Means a municipal drinking-water system that serves a major residential development and serves more than 100 private residences. The term has the same meaning as in Ontario Regulation 170/03 (Drinking-Water Systems) made under the *Safe Drinking Water Act, 2002*.

MNR

Ministry of Natural Resources.

Municipal Water Supply

Means the water supply of a large municipal residential system or of

a small municipal residential system.

PSC

Pre-submission Consultation.

Small Municipal Residential System

Means a municipal drinking-water system that serves a major residential development but serves fewer than 101 private residences. Has the same meaning as in Ontario Regulation 170/03.

Summer Low Flow Period

Means the six-week period that starts on August 1 and ends on September 11. The Director can extend the period in either direction.

Sustainable Yield

Means the maximum rate of taking from an aquifer that can be sustained without:

- ♦ causing unacceptable impact on other users;
- ♦ resulting in unacceptable impacts on natural system functions; and
- ♦ causing unacceptable degradation of water quality in the aquifer.

Water Balance

Means a quantification of water input and output and changes in storage of the various components of the hydrologic cycle.

Water Conservation

Means a reduction in the use, loss or waste of water or an increase in the efficiency of water use.

Waters

In the OWRA, "waters" means a well, lake, river, pond, spring, stream, reservoir, artificial watercourse, intermittent watercourse, groundwater or other water or watercourse.

Watershed

Means the land drained by a river and its tributaries.

Qualified Person

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.

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.

