Province of Ontario
Ontario Water Management Program Report

The following information is submitted by the Province of Ontario to the Great Lakes Regional Body Secretariat in response to the Questionnaire for Preliminary Submittals by States and Provinces, in fulfillment of the five-year review of Ontario's Water Management Programs, pursuant to the requirements in Article 300 of the *Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement* (Agreement).

General Information

1. Lead agencies and contact(s):

The Ontario Ministry of Natural Resources (MNR) and the Ontario Ministry of the Environment, Conservation and Parks (MECP) share primary responsibility for water management at the provincial level. Generally, MNR is responsible for certain aspects of Provincial water quantity management, including the administration of the *Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement* (Agreement). MECP is responsible for water quality management and for the Permit to Take Water and the Water Taking Registration Programs.

Key Contacts:

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2. Provincial water management program implementing laws, regulations and policies –

The commitments of the Agreement are implemented in Ontario primarily through the Permit to Take Water Program under the *Ontario Water Resources Act* (OWRA), with contributions from a number of additional statutes, regulations and policies, as highlighted in the following table. A description of Ontario's key legislative and policy tools for water management follows the table.

Agreement Commitments (Articles)	***Ontario Water Resources Act*, Water Taking and Transfer Regulation (O. Reg. 387/04)**	**Additional Legislation, Regulation, Policy**
Prohibition of diversions, regulation of exceptions based on Exception Standard (Article 200, 201).	□ Ban on diversions out of Ontario's major water basins, including the Great Lakes Basin (OWRA s. 34.3).	□ *Environmental Assessment Act* - Technical Bulletin provides guidance for municipalities undertaking water, wastewater projects to meet Agreement standards, criteria for class EA

	□ Regulation of intra-basin transfers (OWRA s. 34.5-34.11; O. Reg 387/04). □ Environmental Compliance Approvals required for sewage works (return flow) (OWRA s. 53).	projects involving an intra-basin transfer. □ *Lakes and Rivers Improvement Act* – regulation of works forwarding, holding back, diverting water (location, design approval). □ Quality of return flow/effluent regulated under *Environmental Protection Act, Clean Water Act, Environmental Assessment Act,* Provincial Water Quality Objectives. □ *Clean Water Act* provides for the completion of water quality and quantity risk assessments, water budgets.
Regional review of significant diversion exceptions (Article 204).	□ Regional review for significant intrabasin transfers (OWRA s. 34.6, 34.1).	□ *Environmental Bill of Rights* provides for public consultation on water taking proposals.
Management, regulation of withdrawals, consumptive uses based on Decision-Making Standard (Article 200, par 3; 203; 206).	□ Permitting criteria reflect Agreement Decision Making Standard (OWRA s.34; O. Reg. 387/04). □ Environmental Compliance Approvals required for sewage works (return flow) (OWRA s. 53).	□ Quality of return flow/effluent regulated under *Environmental Protection Act, Clean Water Act, Environmental Assessment Act*, Provincial Water Quality Objectives. □ *Clean Water Act* provides for the completion of water quality and quantity risk assessments, water budgets. □ Provincial Planning Statement and Provincial Plans under the *Planning Act* currently provide for the minimizing of negative impacts and require planning for efficient, sustainable water use and conservation as part of planning and development decisions.
Prior Notice and Comment for significant consumptive uses (Article 205).	□ Prior Notice and Comment required for significant consumptive uses by regulation (s. 6; O. Reg. 387/04).	□ *Environmental Assessment Act* - Technical Bulletin provides guidance for municipalities undertaking water, wastewater projects to meet Agreement requirements for class EA projects. □ Environmental Bill of Rights provides for public consultation on water taking proposals.
Applicability, determining new/ increased diversions, consumptive uses, withdrawals (e.g. foundation for baseline setting, Agreement exemptions, regulation of bottled water) (Article 207, 208).	□ Exemptions from permitting for: livestock watering, household use, unless a new or increased transfer is established; firefighting or emergency purposes, wetland conservation; a weir that was constructed prior to March 29, 2016; passive and/or active instream diversions for construction purposes (OWRA s. 34); And constructing or operating a dam	□ As of March 29, 2016, certain routine and low risk water takings that meet the criteria in O. Reg. 63/16 under the *Environmental Protection Act* must be registered in the Environmental Activity and Sector Registry instead of requiring a Permit to Take Water.

	associated with the production of electricity. Exceptions to Ontario ban on diversions/transfers out of major water basins (OWRA s. 34.3). Regulation of bottled water under PTTW program; water bottling companies need to have the support of their local host municipality for new or increased groundwater takings in their community. Setting of a baseline for current water transfers (OWRA s. 34.8; O. Reg. 387/04).	
Review, possible amendment of standards based on periodic cumulative impact assessments (Article 209).	Posting of cumulative impact assessments for public input, ON government response (OWRA s. 34.6).	
Judicial Review (standing to other Parties to seek judicial review of Ontario decision under Agreement) (Articled 210).	Reciprocating jurisdictions entitled to hearing of Environmental Review Tribunal with respect to specified decisions (OWRA s. 34.9-34.10, O. Reg 387/04). Reciprocating jurisdictions entitled to seek judicial review of specified decisions (OWRA s. 34.9, 34.11, O. Reg. 387/04).	
Submission of water management, conservation program reviews every 5 years (Article 300).	Program reviews submitted voluntarily.	
Conservation goals, objectives, programs, annual assessment of conservation programs (Article 304). (Note: see Water Conservation & Efficiency Program Report for further description of contributing legislation, policies, programs).	Water conservation among the criteria considered in making decisions on a Permit to Take Water (OWRA O. Reg. 387/04). Permit application requires applicant to identify existing conservation measures. Annual Conservation Program Assessment, 5-year program reviews submitted voluntarily.	*Water Opportunities Act*, 2010 sets out a framework for water efficiency, conservation (e.g. Building Code requires regular review of water conservation standards, expand scope of Building Code Conservation Advisory Council). Ontario Water Conservation and Efficiency Goals, Objectives completed 2012. Broader water and ecosystem conservation commitments supported by a wide range of legislation, regulation, policies and programs e.g. Planning Act-Provincial Planning Statement, Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health, Ontario's Great Lakes Strategy.

Information Management commitments (mandatory reporting by water users, annual reporting of water use data to regional database) (Article 301).	□ O. Reg 387/04 requires annual reporting of water use by permit holders. □ O. Reg. 63/16 under the *Environmental Protection Act* requires annual reporting of water takings for activities registered in the Environmental Activity and Sector Registry.	

The primary provincial legislative and policy tools that contribute to Agreement implementation are listed below. Federal legislation and management activities may also apply (e.g. Fisheries Act) but are not outlined in this report.

The *Ontario Water Resources Act* (OWRA) provides for the conservation, protection and management of Ontario's waters and for their efficient and sustainable use. The Act provides the authority for the Permit to Take Water Program administered by the MECP. Essentially, and subject to limited exceptions, any person who takes more than 50,000 litres of water in any day by means of a well, intake, or other works (a taking includes the diversion of water) is required to obtain a Permit to Take Water from the MECP Director. In 2007 the OWRA was amended through the *Safeguarding and Sustaining Ontario's Water Act* (SSOWA) to incorporate key provisions of the Agreement. Some amendments came into force immediately (e.g. ban on out of basin diversions/transfers), others required supporting regulations before they could be brought into force (e.g. regulation of intra-basin transfers, consumptive uses in accordance with the Agreement). All remaining provisions of the Act came into force on of January 1, 2015.

- *Ontario Water Resources Act*, R.S.O. 1990, c. O.40: https://www.ontario.ca/laws/statute/90o40 *Safeguarding and Sustaining Ontario's Water Act,* S.O. 2007, c.12 – Bill 198: https://www.ontario.ca/laws/statute/s07012

The *Water Taking and Transfer Regulation* under the OWRA outlines matters that the MECP must consider when deciding upon an application for a Permit to Take Water. This regulation operationalizes key Agreement commitments (e.g. ban on intra-basin transfer and regulation of exceptions; application of decision-making standard, prior notice and comment process that is required by the Agreement for very large withdrawals, consumptive uses).

- Ontario Regulation 387/04 (Water Taking and Transfer): https://www.ontario.ca/laws/regulation/040387

The *Permit to Take Water Manual* (April 2005) sets out the decision-making process generally followed by the MECP when evaluating a proposed or existing water taking.

- *Permit to Take Water Manual* (April 2005): https://archive.org/details/permittotakewa4932ontauoft

Other supporting Permit to Take Water application policies and guidance materials are outlined in section 5 of the Water Management Program report.

The Lakes and Rivers Improvement Act, 1990 (LRIA), administered by the MNR, provides for the management, preservation and use of Ontario's lakes and rivers and the land under them, the protection of public rights and riparian interests, the management of fish and wildlife dependent on lakes and rivers, protection of natural amenities and the protection of people and property by ensuring that dams and diversions are suitably located, constructed and maintained.

- *Lakes and Rivers Improvement Act,* R.S.O. 1990, c. L.3*:* https://www.ontario.ca/laws/statute/90l03

- Ontario Regulation 454/96 (Construction): https://www.ontario.ca/laws/regulation/960454

The Clean Water Act, 2006, administered by the MECP, protects existing and future sources of Ontario's drinking water. A key component of the legislation is the preparation of locally developed, science-based risk assessment reports (quality and quantity risks) and source protection plans.

- *The Clean Water Act, 2006,* R. S.O. 2006, c. 22: https://www.ontario.ca/laws/statute/06c22

The Ontario *Environmental Assessment Act,* 1990 (EA Act) provides for two types of environmental assessment planning and approval processes:

Comprehensive Environmental Assessments (EA) are carried out by proponents for specific types of projects (e.g. large landfills, certain waterfront projects) and submitted to the Minister of the Environment, Conservation and Parks for review and approval.

There are also several streamlined EA processes as outlined in regulations and Class Environmental Assessments for project types that have fewer environmental impacts. Projects proceeding through a streamlined EA process are considered approved as long as they successfully complete the process that applies to them (e.g. Municipal Engineers Association Class EA for Municipal Infrastructure projects, including water and wastewater projects).

- *Ontario Environmental Assessment Act*, R.S.0. 1990, c. E.18: https://www.ontario.ca/laws/statute/90e18

Water Opportunities and Water Conservation Act, 2010 was passed on November 29th, 2010. The Act contains five schedules. Schedule 1 enacts a stand-alone Act, the *Water Opportunities Act,* 2010. Schedules 2 to 5 amend existing legislation in respect of water conservation and other matters. The Act builds upon Ontario's expertise in clean water technology and sets out a framework to make the province a North American leader in water innovation to help address global water challenges. Among other things, the Act sets the framework to encourage Ontarians to use water more efficiently by creating and implementing innovative approaches to protect water resources for current and future generations.

- *Water Opportunities and Water Conservation Act*, S.O. 2010, c. 19: https://www.ontario.ca/laws/statute/s10019

- *Water Opportunities Act*, S.O. 2010, c. 19, Sched. 1: https://www.ontario.ca/laws/statute/10w19

The *Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health* (COA) is the principal mechanism through which Ontario and Canada coordinate their work to address their respective and shared commitments to restore, protect and conserve the Great Lakes. In 2021, Ontario and Canada signed the ninth COA, effective from June 1, 2021 until May 31, 2026. This agreement marks 50 years of collaborative Great Lakes work between both governments since the first COA was signed in 1971. COA continues to build on Great Lakes restoration progress. Commitments in the most recent agreement are advancing new and ongoing actions to address a number of key areas, such as preventing toxic and nuisance algae, improving wastewater and stormwater management, reducing plastic pollution and excess road salt, restoring native species and habitats, and increasing resilience to climate change.

Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health, 2021: https://www.ontario.ca/document/canada-ontario-great-lakes-agreement The *Provincial Planning Statement* (PPS, 2024), under the authority of Section 3 of the *Planning Act,* administered by the Ministry of Municipal Affairs and Housing, provides policy direction on matters relating to land use planning that are of provincial interest, including protecting and restoring water quality and quantity, promoting efficient and sustainable use of water resources, including practices for water conservation and sustaining water quality, and protection from water-related natural hazards. Planning authorities that have authority to make decisions under the *Planning Act* must ensure their decisions are consistent with the Provincial Planning Statement, as well as designated provincial plans.

- *Provincial Planning Statement: https://www.ontario.ca/page/provincial-planning-statement-2024*

Currently, the Greenbelt Plan works to provide a framework to accommodate growth in the region. The Greenbelt Plan outlines where urbanization should not occur in order to provide protections for agricultural and ecologically sensitive lands. The Greenbelt Plan requires municipalities to consider the Great Lakes Strategy, targets and goals of the *Great Lakes Protection Act*, 2015, and any applicable Great Lakes agreements as part of watershed planning and coastal or waterfront planning initiatives.

- *Greenbelt Plan, 2017 (as of December 2023): https://www.ontario.ca/document/greenbelt-plan*

Water Management (1994, update 1998) establishes the Policies, Guidelines and Provincial Water Quality Objectives of the MECP and is based on the guiding principles related to the protection, preservation, and sustainability of the province's water resources for future generations. To effectively implement these principles, ecosystem and watershed management, how pollutants are controlled, and the inter-relationship of air, water and land management are all important considerations.

- *Water Management (1994, update 1998): https://www.ontario.ca/page/water-management-policies-guidelines-provincial-water-quality-objectives*

Ontario's Great Lakes Strategy, released in December 2012, provides a roadmap for how Ontario will focus action to protect the Great Lakes. The Strategy summarizes environmental conditions of the Great Lakes and Ontario's actions taken to date and identifies priorities for future action. Priorities for future action are described with respect to the six Great Lakes goals of engaging and empowering communities; protecting water for human and ecological health; improving wetlands, beaches, shorelines and coastal areas; protecting habitats and species; enhancing understanding and adaptation; and ensuring environmentally sustainable economic opportunities and innovation.

- *Ontario's Great Lakes Strategy*, 2012: https://www.ontario.ca/page/ontarios-great-lakes-strategy

3. Changes identified from the 2019 report

Water Management Programs Overview (Five-Year Review)

The information is limited to the provincial water management programs which contribute to the achievement of Ontario's Agreement commitments.

1. Summary description of Ontario's Water Management Program scope and thresholds –

The focus of the following summary is on the water taking and transfer regulation elements of Ontario's water management programs.

Water Taking and Transfer Regulation Overview

The *Ontario Water Resources Act* and its companion regulations are directed at the protection of the quality and quantity of Ontario's surface and groundwater resources. The purpose of the Act is to provide for the conservation, protection and management of Ontario's waters and for their efficient and sustainable use, in order to promote Ontario's long-term environmental, social and economic well-being. The legislation provides for:

- prohibitions related to the discharging of pollutants to surface or groundwater and the regulation of discharges from sewage works; and
- a permit system that governs the taking of surface or groundwater (>50,000 litres per day [over 13,000 U.S. Gallons per day]).

Water Quality (return flow) – Section 53 of the *Ontario Water Resources Act,* requires MECP approval to establish, alter extend or replace new or existing sewage works. Environmental Compliance Approvals are issued for approved 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 other matter or substance that is specified by regulation.

It is the responsibility of the proponent to assess the assimilative capacity of the receiver and determine the actual and potential uses of the intended receiver of the effluent from the

proposed works and derive from this analysis the effluent quality and discharge regimen criteria for the proposed works. Terms and conditions of the approval deal with the criteria for operation and performance of the sewage works, requirements for monitoring and recording of specific indicators of the environmental impact of the works, reporting on incidents, and provision of contingencies to prevent and deal with accidental spills or upsets.

Water Takings – Section 34 of the *Ontario Water Resources Act,* prohibits water takings over 50,000 litres per day without a permit subject to some specified exceptions. Water use reporting is required: permit holders are required to report annually the amounts of their daily water takings.

Exemptions from the requirement to obtain a permit include water takings for ordinary household purposes, watering of livestock or poultry and firefighting purposes. If a new or increased transfer of water of 379,000 litres (100,000 U.S. gallons) per day or more is established for household purposes or watering of livestock or poultry, a permit would be required. In 2016, the Water Taking and Transfer Regulation was amended also to exempt water takings for wetland conservation, a weir that was constructed prior to March 29, 2016 and passive and/or active in-stream diversions for construction purposes from the requirement to obtain a Permit to Take Water. In 2019, the *Ontario Water Resources Act* was amended to exempt waterpower facilities from the need to have a Permit to Take Water. Waterpower facilities continue to be regulated under the *Lakes and Rivers Improvement Act*, which is administered by MNR.

Enhancements to Ontario's Water Quantity Management Framework

The province completed a review of the state of water resources in key areas of Ontario and the effect water takings have on these resources. The review included examining water quantity-related policies and programs as they apply to water takers across the province, including water bottlers taking groundwater, as well as enhancing our understanding of how we can manage water takings to ensure we have sustainable water resources in the face of changing climate and continued population growth.

The province's review found that the government's current approach to managing water takings is effective. This included a panel of the Professional Geoscientists Ontario who reviewed and validated the government's findings that water takings for water bottling are managed sustainably in Ontario under existing legislation, regulation, and guidance. The review also identified opportunities to improve how water takings are managed in parts of Ontario where water availability is or could become a concern. All reports associated with the review are available at: "Updating Ontario's Water Quantity Management Framework."

Based on the findings of the review, the province made enhancements to its water taking framework, which came into effect on April 1, 2021. These changes include:

- requiring water bottling companies to have the support of their local host municipality for new or increased groundwater takings in their community.
- establishing priorities on how water should be shared among water users when there are competing demands for water. For example, restrictions on water

taking could be applied during a drought. MECP has published guidance to support the implementation of the new priorities of water use policy.

- putting in place a new, more flexible approach for the ministry and water users to better assess and manage multiple water takings in areas where water sustainability is a concern. The ministry has published guidance to support the implementation of the new area-based water quantity management policy.
- making water taking data available to the public to increase transparency of how Ontario manages water resources. Actual volumes of water taken by permitted water takers was made available to the public starting in July 2022.

Also in 2016, the government passed Ontario Regulation 63/16, Registrations under Part II.2 of the Act – Water Taking, under the *Environmental Protection Act*, requiring that as of March 29, 2016, water takings that meet the criteria in the regulation must be registered in the Environmental Activity and Sector Registry (EASR) instead of requiring a permit to take water. The EASR is an online self-registration system implemented by the MECP. The following water takings are prescribed activities under Ontario Regulation 63/16:

- short-term pumping tests (groundwater field experiments) conducted to obtain aquifer information that meet specified criteria about the water taking (greater than 50,000 L/day and less than 5,000,000 L/day) and taking time (seven or less days of taking within a 30-day period);
- surface water takings that are more than 50,000 L/day and are for highway and transit project purposes that meet specified criteria about the purpose, rate or location of the water taking; and
- construction site dewatering involving takings of more than 50,000 L/day and less than 400,000L/day of groundwater from each dewatered work area and its area of influence at the site.

Restriction:

- The taking of water must not involve transferring water out of the Great Lakes – St. Lawrence River Basin, the Nelson River Basin, or the Hudson Bay Basin, or transferring water from one Great Lake watershed to another.
- The volume of water taken daily shall be reported to the MECP on or before March 31 in each year, for each location from which water was taken in the previous calendar year. If no water is taken, then a “no taking” report must be entered. The water takings shall be reported online through the Regulatory Self-Reporting System (RSRS).

Water withdrawals from all Ontario water sources, including withdrawals from the Great Lakes, other surface waters, and groundwater, are regulated in Ontario.

Dams and water diversions are also regulated through the *Lakes and Rivers Improvement Act*, which regulates works forwarding, holding back or diverting water and is administered through the MNR.

Water Withdrawals and Consumptive Uses

Considerations – In making decisions on an application for a Permit to Take Water the following factors are considered:

- Protection of the natural functions of the ecosystem – e.g. potential impact of the natural variability of water flow or water levels, minimum stream flow, habitat that depends on water flow or water levels, interrelationships between groundwater and surface water, and the potential to restore source watershed hydrologic conditions and functions.
- Water availability – e.g. impact on water balance and sustainable aquifer yield, existing water uses, low water conditions, adversely impacting the sustainability of water resources in an area, any planned municipal use approved under the *Environmental Assessment Act* or under a Municipal Official Plan.
- Issues related to the use of water – e.g. whether water conservation is implemented in accordance with best water management standards for the relevant sector, the purpose for the water use including the amount of water lost through consumptive use, the manner and location to which the water will be returned, and other issues, including compliance with the *Boundary Waters Treaty* and the *International Boundary Waters Treaty Act of Canada.*

Water Taking Risk Classification – To assist in the evaluation of proposed water takings, permit applications are classified based on their potential risk to the environment or potential to interfere with other water users.

- Category 1 proposals have a lower risk of causing adverse environmental impacts or interference. They meet the following criteria:
    - Renewal of a previously issued permit that will expire, to allow the continuance of an existing taking with no changes and for which no past interference or impact problems have been reported.
    - Groundwater takings from dugout ponds not connected to or receiving water from surface water; the dugouts must satisfy depth and separation distance from other water sources.
    - Surface water takings from small ponds that collect only surface run-off or takings from a Great Lake or connecting channel less than 1 million litres (260,000 US gallons) per day.
- Category 2 and Category 3 proposals have a greater potential to cause adverse environmental impact or interference.
    - Applications for Category 2 takings require accreditation by a qualified person.
    - Applications for Category 3 takings are required to be supported by a detailed ecological/hydrological/hydrogeological study prepared by a qualified person. Among the water takings classified as a Category 3 are new or increased withdrawals from the Great Lakes or connecting channels which exceed 19 million litres per day consumptive use (5 million U.S. gallons per day), the threshold which triggers obligations under the Agreement.

Public Involvement – In Ontario, notifications of permit applications are required to be posted to the Environmental Registry of Ontario for public review and comment for a minimum of 30-days unless exempted from the registry posting requirement (e.g. exceptions include: proposals for which an equivalent public consultation process has been

provided, such as through an Environmental Assessment process, water takings that are less than one year, and agricultural irrigation, unless a new or increased water transfer is proposed). As well, municipalities and conservation authorities are given notice of Environmental Registry postings for permit proposals within their area of jurisdiction. The proponent of a water taking has the right to appeal the MECP decision on their permit application. In addition, the public may seek leave to appeal MECP decisions on proposals that are subject to registry posting.

Water Use Reporting – Ontario's *Water Taking and Transfer Regulation* requires every permit and water-taking EASR registration holder to collect and record data on the volume of water taken daily and to report the previous year's data to the MECP before March 31 of the following year. This requirement applies to all permitted water takers in Ontario. Water use data are submitted and stored on the internet-based Water Taking Reporting System or Regulatory Self Reporting System established to facilitate compliance and to inform provincial water management.

Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement (Agreement) – Ontario's *Water Taking and Transfer R*egulation requires that Ontario's obligations under the Agreement be met when considering a permit application. More specifically, this requirement relates to the need to ensure that Prior Notice and an opportunity to comment on the proposal is provided to Great Lakes jurisdictions before a decision is made for new or increased consumptive uses of Great Lakes – St. Lawrence River Basin water of over 19 million litres (5 million U.S. gallons) per day average over any 90-day period. In keeping with Agreement Article 205, comments will be considered from the other parties to the Agreement that address whether the proposal is consistent with the Decision-Making Standard established under Article 203 of the Agreement. A detailed analysis of how the provisions of the Decision-Making Standard are applied is provided under question 3 of the questionnaire.

To meet this requirement, estimated consumptive use associated with proposed new or increased water takings are screened using generally accepted consumptive use coefficients for 34 water use sectors/activities, developed through an MNR commissioned study in 2009. Proposed uses that may exceed the Agreement threshold are encouraged to conduct a site-specific consumptive use evaluation to confirm whether Prior Notice is required. Additional guidance will be provided as required to assist in determining the amount of water lost through consumptive use.

In determining whether a proposed new or increased water taking from the Great Lakes – St. Lawrence River Basin would result in a consumptive use of water in an amount that triggers obligations to provide Prior Notice and an opportunity to comment under Article 205 of the Agreement, consideration is given to:

- The baseline of the existing water withdrawal approval limits, as per the Agreement; and
- The volume of the proposed new or increased water taking and the associated consumptive use, including the amount of any related water taking supplying the same facility or common distribution system, approved within the ten years prior to the application.

Water Diversions, Transfers

Ban on Out of Basin Diversions/Transfers – In 1999, Ontario introduced a regulation under the *Ontario Water Resources Act* banning water diversions/transfers out of the province's three major water basins (Great Lakes – St. Lawrence River Basin, Hudson Bay Basin, and Nelson River Basin). This ban was elevated to legislation (i.e. placed into the *Ontario Water Resources Act)* through the *Safeguarding and Sustaining Ontario's Water Act*, 2007. The only exceptions to Ontario's ban on diversions are for transfers of water in containers 20 litres or less, water incorporated into a product that is transferred out of the basin, water required for the operation of a vehicle or vessel, water for firefighting or other emergency purposes, existing transfers commenced before January 1, 1998, and the transfer of water pursuant to the order of the Lieutenant Governor in Council dated October 2, 1913 respecting the Greater Winnipeg Water District. Therefore, in Ontario there are no exceptions to the ban on diversions for straddling communities or straddling counties.

Intra-Basin Transfers – The intra-basin transfer commitments of the Agreement is integrated into Permit to Take Water decision-making through the *Ontario Water Resources Act* which includes a ban on intra-basin water transfers from one Great Lake watershed to another and the regulation of exceptions, consistent with the straddling community and intra-basin transfer provisions of the Agreement and the Exception Standard criteria. A detailed analysis of how the provisions of the Exception Standard criteria are applied is provided under question 3 of the questionnaire.

In keeping with the Agreement, the intra-basin transfer provisions apply to new or increased transfers 379,000 litres (100,000 U.S. gallons) per day or more, average in any 90-day period, termed "the threshold amount" in the legislation. Permits for transfers involving a consumptive use of 19 million litres (5 million U.S. gallons) per day or more will be issued by the Minister of the Environment, Conservation and Parks (as opposed to a Director delegated authority under the *Ontario Water Resources Act*) following Regional Review, taking into consideration the declaration of finding issued by the Regional Body.

The legislation encourages municipal water uses that transfer 379,000 litres (100,000 U.S. gallons) of water per day or more to return water to the source Great Lake watershed and requires any new or increased transfers involving a consumptive use of 19 million litres (5 million U.S. gallons) per day or more to return water to the source Great Lake watershed, in keeping with the Agreement.

The legislative framework for regulating new or increased intra-basin transfers of water is outlined in the following table – all thresholds are based on a 90-day running average:

19+ MLD Consumptive Use	• Meets **exception criteria**, including **return flow** to source GL watershed. • No feasible alternatives to transfer, including conservation. • Proposal undergoes **Regional Review** & the Minister considers the Declaration of Finding by Regional Body before making a decision.

379,000+ L/Day (Consumptive Use less than 19 MLD)	***Municipal Drinking Water Systems:*** • Meets **exception criteria**, including return flow to source Great Lake watershed	***All Uses*** *(including Municipal Drinking Water Systems if return flow to source watershed cannot be met):* • Meets **exception criteria**, except return flow may be to another Great Lake watershed – if demonstrated that it is not feasible, environmentally sound or cost effective to return water to the source Great Lake watershed. • No feasible, environmentally sound, cost-effective alternatives to transfer, including conservation. • Ontario gives prior notice to other Parties to the Agreement.
50,000 L/Day to 379,000 L/Day	• Subject to Permit to Take Water requirements; not prohibited.	

In determining whether a proposed new or increased intra-basin transfer requires regulation under the above framework, consideration will be given to:

- The volume of water deemed to currently be transferred (baseline), according to approval limits, as per the Agreement;
- Whether the proposed transfer is from a Great Lakes watershed to the watershed of a downstream connecting channel of that Great Lake (exempt);
- Whether the proposed transfer is from the watershed of a downstream connecting channel of a Great Lake to the watershed of that Great Lake (exempt);
- Whether the proposed transfer involves water taken from a location within 10 kilometres (approximately 6 miles) of the point at which Lake Ontario flows into the St. Lawrence River and transferred to the St. Lawrence River watershed or the Lake Ontario watershed (exempt); and
- The volumes of any new or increased water transfers by the permit holder between the same Great Lakes watersheds to which the application relates that were approved within the ten years prior to the application.

In determining whether a proposed new or increased intra-basin transfer triggers the 19 million litre per day consumptive use threshold, estimated consumptive use associated with proposed new or increased water transfers will be screened using generally accepted consumptive use coefficients for 34 water use sectors/activities, developed through an MNR commissioned study in 2009. Proposals that may exceed the Agreement threshold will be encouraged to conduct a site-specific consumptive use evaluation to confirm whether Regional Review is required. Additional guidance will be provided as required to assist in determining the amount of water lost through consumptive use.

2. Description of how Ontario manages Water Withdrawals by sector, water source, quantity and location

Permitted water takings are managed by sector, source, quantity and location.

Sector:

The following table identifies the existing general purpose and specific purpose water taking categories under the Permit to Take Water program. Any sector-specific management requirements are noted.

Sector	Description	Management
ALL Sectors		• Permit to Take Water required for water takings over 50,000 litres per day by ALL water use sectors, with the exception of ordinary household purposes and watering of livestock or poultry (unless a new or increased intra-basin transfer 379,000 litres per day or more is proposed),firefighting purposes, wetland conservation, a weir that was constructed prior to March 29, 2016 passive and/or active in-stream diversions for construction purposes, and waterpower facilities.
Agriculture	Irrigation of (includes frost protection): field and pasture crop; fruit orchard; market garden/flowers; nursery; sod farm; tender fruits; tobacco	
Commercial	Aquaculture, bottled water, golf course irrigation, mall/business; snowmaking	• As of April 2021, water bottling companies need to have the support of their local host municipality for new or increased groundwater takings in their community. • As of December 2019, waterpower facilities are exempt from the requirement to have a Permit to Take Water; however, they continue to be subject to streamlined EA processes and regulated under the LRIA. • Bottled water transported in containers 20 litres or less are exempt from the prohibition of water transfers. • Effective August 1, 2017, water bottling companies that take groundwater and are required to have a permit under the Ontario Water Resources Act must pay an additional fee of $500 per million litres.
Construction	Dredging, road building, dewatering	• As of March 29, 2016, water takings (such as road construction and construction site dewatering projects) that meet the criteria in O. Reg. 63/16 under the *Environmental Protection Act* must be registered in the Environmental Activity and Sector Registry.
Dewatering	Pits and quarries	
Industrial	Aggregate washing, brewing/soft drinks, cooling water, food processing, manufacturing; pipeline testing; power generation	• • As of 2019, waterpower facilities are exempt from the requirement to have a Permit to Take Water; however, they continue to be subject to streamlined EA processes and regulated under the LRIA.
Recreation	Aesthetic, fish pond	
Remediation	Groundwater	
Water Supply	Campground, communal, municipal	

Miscellaneous	Dam/reservoir, heat pump, pump test	• As of April 19, 2021, water takings for pumping tests that meet the criteria in O.Reg. 63/16 under the *Environmental Protection Act* must be registered in the Environmental Activity and Sector Registry.
Each sector has the option of identifying 'other', with a requirement to specify use		

Source:

Water takings are also categorized according to the source – as surface water or ground water and by name of the source (e.g. watercourse name and tributary). Permits are required for water takings over 50,000 litres per day from a lake, stream, river, pond or groundwater.

To assist in evaluating proposed water takings, applications are classified based on their potential risk to the environment or potential to interfere with other water users. The table below outlines how applications are classified for groundwater and surface water takings. Applications for Category 2 takings would require a scoped hydrogeological (groundwater) or hydrological/ecological study (surface water), and applications for Category 3 takings would require a detailed hydrogeological (groundwater) or hydrological/ecological study due to their potential for greater environmental risk.

Classification Criteria for Categories for Groundwater and Surface Water Takings	
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 taking less than 19 million litres per day.
	Takings from sources with previous assessments (i.e. further to a previous study and implementing previously established controls).
	River and Streams (3rd order or higher order) taking ,5% of 7Q20.
	Transitional Permits where the Director previously required upgrades/modifications to water taking.

	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 < 1,000,000 L/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 1st or 2nd order watercourses, wetlands, intermittent streams, new onstream reservoirs, impoundments and ponds, groundwater sources that potentially affect surface waters.

Quantity:

When granted, a Permit to Take Water imposes terms and conditions that limit the amount of water the person can take by specifying a maximum rate for the water taking (litres per minute), duration (hours per day), and amount (litres per day).

In support of the Agreement, thresholds requiring regulation of new or increased intra-basin transfers in accordance with Agreement criteria and standards, and thresholds for consumptive uses requiring prior notice with Great Lakes jurisdictions are based on the average consumptive use in any 90-day period (rolling 90-day average).

Proposed water taking volumes are assessed against a series of considerations relating to the protection of natural ecosystem functions, water availability, the use of water (i.e. water conservation measures, the need and purpose for the water, the amount of water that may be lost through consumptive use), the return of water after use and other interests.

The risk classification criteria (i.e., Category 1, 2, or 3) for permits also reflect the quantity of water requested. For example, new or increased takings above 19 million litres/day from the Great Lakes or connecting channels are classified as a Category 3 taking, requiring more rigorous analysis than smaller takings.

Location:

The locations of takings are identified by their geographic coordinates (Datum NAD83) including UTM zone, easting and northing. An interactive map of all active Ontario permits can be found at https://www.ontario.ca/page/map-permits-take-water.An interactive map of registrations on the Environmental Activity and Sector Registry can be found at: https://www.accessenvironment.ene.gov.on.ca/AEWeb/ae/GoSearch.action?search=basic&lang=en.

To assist in meeting the requirements of the Agreement a Great Lakes Watershed locator map tool is also available and can be accessed athttps://www.ontario.ca/page/great-lakes-watershed-locator.

3. Description of how the provisions of the Standard of Review and Decision are applied. The description should include information on how each criterion of the Decision- Making Standard and Exception Standard is addressed.

The tables below highlight how the criteria of the Agreement Decision-Making Standard and Exception Standard are being implemented through the Permit to Take Water Program under the *Ontario Water Resources Act*.

In addition to the Permit to Take Water Program under the *Ontario Water Resources Act*, implementation of Agreement standards is also supported by other Ontario statutes, policies and programs, including, for example:

- Environmental impact assessment under the ***Environmental Assessment Act***, which provides for the completion of comprehensive assessments or streamlined/class assessments, such as the Class Environmental Assessment for Municipal Water and Wastewater Treatment projects. The municipal class environmental assessment references compliance with the *Ontario Water Resources Act* and the Agreement and a 2009 Technical Bulletin further guides municipalities in meeting the Agreement in conducting environmental assessments for projects involving an intra-basin transfer or large consumptive use of Great Lakes – St. Lawrence River Basin water;
- Completion of water budgets and water quantity risk assessments to support the development of Drinking Water Source Protection plans under the ***Clean Water Act****;*
- Location and design approval for works forwarding, holding back, or diverting water in accordance with the ***Lakes and Rivers Improvement Act***;
- Promotion of water conservation under the ***Water Opportunities Act***.

a. Decision-Making Standard (Water Withdrawals, Consumptive Uses)

Decision-Making Standard Criteria Article 203	**Permit to Take Water Program (PTTW) (*Ontario Water Resources Act*, As Amended by the Safeguarding & Sustaining *Ontario's Water Act*, 2005, Water Taking and Transfer Regulation O. Reg. 387/04)**
General	Under the OWRA a Permit to Take Water is required for water takings over 50,000 litres/day (over 13,000 U.S. gallons/day) (s. 34) with some exceptions. The criteria which form the foundation for issuing permits to take water in Ontario (which are enshrined in the Water Taking and Transfer Regulation O. Reg 387/04) (s.4) meet the Decision-Making Standard criteria of the Agreement (Article 203) and comply with the Prior Notice provisions (Article 205) of the Agreement for new or increased consumptive uses 19 million litres (5 million U.S. gallons) per day or more (s. 6). The OWRA also provides a permitting Director with authority to set additional terms and conditions on a permit e.g. limiting use, related to the return of water after use (location, quantity, quality), and the conservation of water including a conservation audit and/or plan.
1. Return flow to source watershed	OWRA requires separate Environmental Compliance Approval (ECA) for wastewater discharge. No explicit requirement to return water to source Great Lake watershed, although most water uses do not remove water from a Great Lake watershed.

	MECP considers issues related to return flow (e.g., manner of return, quality, location) when reviewing and issuing permits. In addition to regulation-making authority, OWRA amendments (s. 34.1 (9), (10) provide a permitting Director with authority to set additional terms and conditions on a permit governing the return of water after use (location, quantity, quality). Issues related to the return of water after use (i.e., manner returned, location of return) and the amount of water that may be lost through consumptive use have been added to permitting considerations in the regulation.
2. No significant adverse impacts	The regulation requires the permitting Director to consider issues related to protecting the natural functions of the ecosystem, water availability (e.g. water balance and sustainable aquifer yield, existing or planned uses of water, low water conditions or whether taking is from a ground or surface source of supply that the Director has determined to be under stress (s. 4(2), par. 1,2). PTTW Directors may also impose terms and conditions related to mitigating adverse impacts related to the water taking. PTTW Manual: Consideration of cumulative impacts of water takings is a principle of the PTTW program & water takings are classified into 3 categories according to the risk of environmental impact, with Category 3 takings subject to greater rigour including submission of supporting scientific studies. New or increased water takings from the Great Lakes or connecting channels that exceed 19 million litres 5 million U.S. gallons per day are Category 3 takings. The OWRA (s. 34.1 (9), (10)) provides a permitting Director with authority to set additional terms and conditions on a permit limiting use, governing the return of water after use or requiring implementation of measures to prevent or remedy interference with other uses.
3. Conservation measures	The regulation requires the permitting Director to consider whether water conservation is, or will be implemented, based on best management standards & practices of the sector (s. 4(2), par. 3i). Director may set terms and conditions on a permit requiring implementation of conservation measures, limiting use, related to the conservation of water including a conservation audit and/or plan.
4. Compliance with applicable laws, agreements, treaties	PTTW Directors will not issue a permit if an application is not in compliance with other laws (e.g. PTTW issuance follows other processes, e.g. completion of an environmental assessment under the *Environmental Assessment Act*). The regulation (s. 6) requires that Ontario's obligations under the Agreement are complied with (i.e. Prior Notice to Agreement Parties and an opportunity to comment for new or increased consumptive uses 19 million litres-5 million U.S. gallons per day or more). The regulation also require consideration of whether a proposed water taking is in compliance with the Boundary Waters Treaty or the *International Boundary Waters Treaty Act of Canada* (s. 4 (4ii). The regulation also requires compliance with the Prior Notice commitments of the Agreement for new or increased consumptive uses 19 million litres/day (5 million U.S. gallons/day) or more.

5. Reasonable use, with consideration of:	The purpose of the OWRA is to "…*provide for the conservation, protection and management of Ontario's waters and for their efficient and sustainable use, in order to promote Ontario's long-term environmental, social and economic well-being*."
a. Planned to provide for efficient use b. Efficient use of existing supply c. Balance between economic, social development, environmental, protection d. Supply potential of water source (quantity, quality, reliability, safe yield) e. Degree, duration of any adverse impacts & their avoidance/mitigation f. Restoration of hydrologic conditions, functions of source watershed	The regulation requires the permitting Director to consider issues related to protecting the natural functions of the ecosystem, water availability (e.g. water balance and sustainable aquifer yield, existing or planned uses of water, low water conditions or whether taking is from a ground or surface source of supply that the Director has determined to be under stress), and issues related to the use of water (e.g. water conservation measures, plan and/or audit), purpose, reasonable prospect that water will be used in the near future, return flow, among other matters (s. 4(2), par. 1, 2, 3). Together, these considerations are consistent with the "reasonable use" considerations of the Agreement. The PTTW Manual provides further guidance on balancing these interests, e.g., through considerations and guidance in evaluating PTTW from surface water and groundwater sources, assessing the water balance and sustainability, addressing low water conditions, and addressing aquatic habitat. The regulation includes consideration of the potential to restore hydrologic conditions and functions of the source watershed, the amount of water that may be lost through consumptive use, issues related to the return of water after use, and compliance with the Boundary Waters Treaty and the *International Boundary Waters Treaty Act of Canada* to the matters a permitting Director shall consider when reviewing a PTTW application.

b. Exception Standard (Water Diversions, Transfers)

Exception Standard Criteria Article 201, par. 4	**Permit to Take Water Program (PTTW) (*Ontario Water Resources Act*, as Amended by the Safeguarding & Sustaining *Ontario's Water Act*, 2005, Water Taking and Transfer Regulation O. Reg. 387/04)**
General	Under the OWRA a Permit to Take Water is required for water takings over 50,000 litres/day (over 13,000 U.S. gallons/day) (s. 34). Water transfers out of the Great Lakes – St. Lawrence River Basin, or Ontario's other major water basins, are prohibited (s. 34.3). Ontario has no exception to the ban for straddling communities or straddling counties. Therefore, Ontario is fully implementing the minimum standards in Article 201, par. 1, 3, 4 as they pertain to diversions out of the Great Lakes – St. Lawrence River Basin. Amendments to the OWRA passed in 2007 provide for the regulation of new or increased intrabasin transfers 379,000 litres/day or more, consistent with the criteria in Article 201 par. 1, 2, 4. (OWRA s.34.4-34.11), and provides authority to make regulations to support these provisions. The regulation provides further support to the regulation of intra-basin transfers (e.g. definition of Great Lakes watersheds and connecting channels, exemptions, determination of consumptive use amounts, setting the baseline for existing transfers). The legislation also requires that permit applications for large transfers (i.e. with consumptive use of 19 million litres [5 million U.S. gallons] per day or more) are to be referred to the Minister of the Environment, Conservation and Parks, who shall notify the Regional Body of the proposal and consider any Declaration of

	Finding issued by the Regional Body following Regional Review of the proposal.(s. 34.1 (12-14).
1. Efficient use, conservation of existing supplies	The regulation requires the permitting Director to consider whether water conservation is being implemented, based on best management standards & practices of the sector. (s. 4(2), par. 3i). Director may set conditions on a permit requiring implementation of conservation measures. Exception Standard criteria explicitly referenced in OWRA s. 34.6(3) for new or increased intra-basin transfers 379,000 litres/day or more. The OWRA (s.34.7) provides a permitting Director with authority to set additional conditions on a permit to regulate a transfer (e.g., governing return of water after use, the use and conservation of transferred water, monitoring and reporting).
2. Limited to reasonable quantities for proposed purpose	The regulation requires the permitting Director to consider issues related to protecting the natural functions of the ecosystem, water availability and the use of water (e.g. water conservation measures, plan and/or audit, the priorities of water use). (s. 4(2), par. 1,2, 3). Together, these considerations are consistent with the “reasonable use” considerations of the Agreement. The PTTW Manual provides further guidance on balancing these interests. Exception Standard criteria explicitly referenced in OWRA s. 34.6(3) for new or increased intra-basin transfers 379,000 litres/day or more. The OWRA (s. 34.7) provides a permitting Director with authority to set additional terms and conditions on a permit to regulate a transfer (e.g., governing return of water after use, the use and conservation of transferred water, monitoring and reporting).
3. Return flow to source watershed (no water from outside basin except if part of combined system, treated to prevent invasive species)	OWRA requires separate Environmental Compliance Approval (ECA) for wastewater discharge. The legislative framework encourages return flow for municipal transfers below the 19 million litres/day consumptive use threshold. All transfer proposals above the threshold require return flow to the source Great Lakes watershed. (s. 34.6). Exception Standard criteria explicitly referenced in OWRA s. 34.6(3) for new or increased intra-basin transfers 379,000 litres/day or more. The OWRA (s.34.7) also provides a permitting Director with authority to set additional terms and conditions on a permit to regulate a transfer (e.g., governing return of water after use, the use and conservation of transferred water, monitoring and reporting). The regulation also includes consideration of issues related to the return of water after use to the matters considered by a permitting Director.
4. No significant adverse impacts	The regulation requires the permitting Director to consider issues related to protecting the natural functions of the ecosystem, water availability (e.g. water balance and sustainable aquifer yield, existing or planned uses of water, low water conditions or whether the taking is adversely impacting the sustainability of water resources in an area. (s. 4(2), par. 1,2). PTTW Directors may also impose terms and conditions on a permit. OWRA (s.34.7) provides a permitting Director with authority to set additional terms and conditions on a permit to regulate a transfer (e.g., governing return of water after use, the use and conservation of transferred water, monitoring and reporting).

	PTTW Manual: Consideration of cumulative impacts of water takings is a principle of the PTTW program & water takings are classified into 3 categories according to the risk of environmental impact, with Category 3 takings subject to greater rigour including submission of supporting scientific studies. Water transfers from the Great Lakes or connecting channels 19 million litres -5 million U.S. gallons per day or more fall under Category 3. Exception Standard criteria explicitly referenced in OWRA s. 34.6(3) for new or increased intra-basin transfers 379,000 litres/day or more.
5. Conservation measures	The regulation requires the permitting Director to consider whether water conservation is, or will be implemented, based on best management standards & practices of the sector (s. 4(2), par. 3i). PTTW Directors may set conditions on a permit requiring implementation of conservation measures. OWRA amendments (s. 34.7) also provide a permitting Director with authority to set additional terms and conditions on a permit to regulate a transfer (e.g., governing return of water after use, the use and conservation of transferred water, monitoring and reporting). Exception Standard criteria explicitly referenced in OWRA s. 34.6(3) for new or increased intra-basin transfers 379,000 litres/day or more.
6. Compliance with applicable laws, agreements, treaties	PTTW Directors will not issue a permit if an application is not in compliance with other laws (e.g., PTTW issuance follows other processes, e.g. completion of an environmental assessment process under the *Environmental Assessment Act*). Exception Standard criteria explicitly referenced in OWRA s. 34.6(3) for new or increased intra-basin transfers 379,000 litres/day or more, including compliance with the *Boundary Waters Treaty* and the *International Boundary Waters Treaty Act* (Canada). New or increased intra-basin transfers are regulated in accordance with OWRA s. 34.4-34.8 and s. 34.1 (12-14) which reflect the Agreement.
7. All applicable criteria	OWRA s. 34.6 (2) sets out the criteria that must be met for new or increased intra-basin transfers 379,000 litres/day or more, consistent with Article 201, par. 2 of the Agreement. Some provisions of par. 1 pertaining to straddling communities are also reflected (e.g. return flow for smaller transfers encouraged). The Act also provides authority to make regulations to support these provisions. The regulation further supports to the management of intra-basin transfers (e.g. definition of Great Lakes watersheds and connecting channels, exemptions, determination of consumptive use amounts, setting the baseline for existing transfers). The OWRA (s. 34.7) provides a permitting Director with authority to set additional terms and conditions on a permit to regulate a transfer (e.g., governing return of water after use, the use and conservation of transferred water, monitoring and reporting).

4. Overview of Provincial reporting and database of Withdrawals, Consumptive Uses and Diversions

Annual Submission to Great Lakes Regional Water Use Database (https://waterusedata.glc.org/)

Provincial reporting of aggregated annual withdrawals, consumptive uses and diversions to the Great Lakes Commission's *Regional Water Use Database* is coordinated by the MNR with the support of the MECP.

To estimate water withdrawals and consumptive use in its annual data submissions, Ontario incorporates aggregated annual water withdrawal information primarily obtained from its Permit to Take Water program (see next section for more information). Estimates of consumptive water use are based on a comprehensive set of coefficients which can be found at https://waterusedata.glc.org/data_about_cuc.php. Aggregated withdrawal values reported for the hydropower sector were augmented by historical information collected through owner and operator surveys.

Water User Reporting under Ontario's Water Taking and Transfer Regulation

By regulation, permit to take water holders province-wide are required annually to report daily water taking volumes, electronically to the provincial *Water Taking Reporting System* or *Regulatory Self Reporting System* through an internet-based interface (https://www.lrcsde.lrc.gov.on.ca/wtrs/ or https://signin.ontario.ca/, respectively) or via hard copy prior to March 31 of the following year. The Water Taking Reporting System and Regulatory Self Reporting System databases represent the provincial warehouses for reported actual volumes of water taken by all permitted users in the province.

In addition, the *Permit to Take Water Database* is the primary warehouse of active permit holder information (permit number, owner name, address, water taking source information: water use sector, source coordinates, taking type and source name and maximum permitted volumes). A searchable map of active permits can be found at https://www.ontario.ca/page/map-permits-take-water. Enhancements to the databases may be required to warehouse information specifically related to applications that involve intra-basin transfers, return flow, and calculated or measured consumptive uses.

In 2021, Ontario made actual volumes of water taken by permitted holders available on the Open Data Catalogue website: https://data.ontario.ca/dataset/water-taking

By regulation, permit to take water holders are required to measure water taking/use by flow meter, or calculate it using a method acceptable to the program Director.

Permit holders are also required to comply with any additional data collection or monitoring and reporting conditions required by a permit such as specific monitoring methods, collection of information at a greater frequency, recording a daily maximum flow, and a requirement that all water taking information be analyzed by a qualified professional.

Water User Reporting under the *Registrations under Part II.2 of the Environmental Protection Act*

By regulation, registrants are required to report daily water taking amounts. Prior to March 31 of the following year, registrants are required to submit daily water taking volumes, electronically to the provincial Regulatory Self Reporting System (RSRS) which is accessed through the same online account used to register an eligible water-taking activity. The RSRS database houses reported actual volumes of water taken by all registered water takers in the province.

In addition, active EASR's can also be found through Access Environment at https://www.accessenvironment.ene.gov.on.ca/AEWeb/ae/GoSearch.action?search=basic&lang=en.

Note: The MECP has an online environmental permissions platform that applicants can use to apply for permits and register eligible water-taking activities. PTTWs and EASRs issued through the online platform require applicants to report water takings on the RSRS. These permits and EASRs are accessible to the public through Access Environment. If applicants are unable to submit an application for a PTTW online, they can submit their application via email to the MECP. PTTWs issued for emailed applications should continue to report water takings on the WTRS. Permit information will continue to be housed in the publicly accessible Permit to Take Water Database.

5. Ontario's Provincial withdrawal application documents

As part of the Permit to Take Water program, Ontario's *Application for Permit to Take Water* (May 2017) collects information from applicants under the authority of the *Ontario Water Resources Act*, the *Environmental Bill of Rights Act* and is used by the Province to evaluate applications under Section 34 of the Act (Water Taking). The application can be found at: https://forms.mgcs.gov.on.ca/en/dataset/012-2167.

Assistance is provided to applicants in completing the Application Form through local Regional Offices of the MECP, along with a published *Guide to Permit to Take Water Application Form* found at: https://www.ontario.ca/page/guide-permit-take-water-application-form

Information requested on the form is categorized as the application type (e.g. new, amended, or renewal), permit category classification, applicant information, water taking information (e.g. source, public consultation requirements, and water taking sector and volume information), and location mapping and supporting studies. Revisions to the form may be required to identify information specifically related to applications that involve intra-basin transfers, return flow, and consumptive uses.

The suite of permit to take water application resources can be found at: https://www.ontario.ca/page/permits-take-water

Links to related policies and manuals supporting permit to take water applicants, Environmental Activity Sector Registrants, proponents, and application reviewers:

a) *Permit to Take Water Manual* (April 2005): https://archive.org/details/permittotakewa4932ontauoft
This manual sets out the decision-making process generally followed by the Ministry and explains to applicants, proponents, and the public the requirements and considerations that are generally taken into account as reviewers are evaluating a proposed or existing water taking.

b) Application guide: Permit to Take Water: https://www.ontario.ca/page/guide-permit-take-water-application-form

c) *Technical Guidance Document for Surface Water Studies in Support of Category 3 Applications for Permit to Take Water* (April 2008): https://www.ontario.ca/page/technical-guidance-document-surface-water-studies-

support-category-3-applications
This document provides guidance and a consistent, structured approach for a surface water study (hydrological and or ecological) in support of Category 3 Permit to Take Water applications (or for Category 2 applications, where applicable).

d) *Technical Guidance Document for Hydrogeological Studies in Support of Category 3 Applications for Permit to Take Water* (April 2008): https://www.ontario.ca/page/technical-guidance-document-hydrogeological-studiessupport-category-3-applications
This document provides guidance and a consistent, structured approach for a hydrogeological study in support of Category 3 Permit to Take Water applications (or for Category 2 applications, where applicable).

e) *Great Lakes Watershed Locator Interactive Mapping Tool*: https://www.ontario.ca/page/great-lakes-watershed-locator
The web-based mapping tool assists applicants in determining the tertiary watershed and the classification of a proposed water taking location for the purposes of the *Water Taking and Transfer Regulation*.

Map identifies the boundaries of water basins and connecting channel watersheds to assist practitioners in identifying new or increased water transfers.

f) *Permits to Take Water Interactive Map:*
https://www.ontario.ca/page/map-permits-take-water

Map assists users in locating water taking locations specified in active permits across Ontario.

g) Access Environment:
https://www.accessenvironment.ene.gov.on.ca/AEWeb/ae/GoSearch.action
Map-based tool to search for various issued environmental permissions, including PTTWs.

h) Water taking user guide for environmental activity and sector registry:
https://www.ontario.ca/page/water-taking-user-guide-environmental-activity-and-sector-registry
Water taking and transfer user guide: clarifications and exemptions:
https://www.ontario.ca/page/water-taking-and-transfer-user-guide-clarifications-and-exemptions

i) Guidance to support the implementation of the priorities of water use
https://www.ontario.ca/page/guidance-support-priorities-water-use

j) Guidance to support area-based water quantity management
https://www.ontario.ca/page/guidance-support-area-based-water-quantity-management

k) Data Catalogue (Daily and annual water takings)
https://data.ontario.ca/dataset/water-taking

6. Description of Provincial initiatives that support an improved scientific understanding of the Waters of the Basin (including groundwater) in basin water resource management

Initiatives supporting improved scientific understanding of basin waters:

Ontario's **Provincial Surface Water Monitoring Centre** (MNR):
The MNR administers the bi-lateral 'Canada-Ontario Agreement on Hydrometric Monitoring' which funds stream flow monitoring infrastructure, technology and data collection protocols on behalf of the province. The MNR also collects, monitors, and analyzes stream flow and climate data from a network of over 650 observation stations. This information is used to provide early warnings for flooding and drought/low water to identify locations throughout the province where potential risks may exist. The mandate for this work is founded in Lieutenant Governor Order-in- Council under the *Emergency Management and Civil Protection Act* for the purposes of emergency planning and public safety. Additionally, this information supports a broad spectrum of water related decision-making for the management, use and sharing of water resources.

- http://ontario.ca/page/surface-water-monitoring
- https://www.lioapplications.lrc.gov.on.ca/webapps/swmc/flood-forecasting-and-warning-program/

Aquatic Research and Monitoring (MNR):
The MNR conducts research that contributes to a greater understanding of the waters of the Great Lakes – St. Lawrence basin and provides improved scientific information to support water resource decision making within the basin. Examples of research conducted or initiated over past several years include: examining flow and thermal regimes of Ontario's rivers and physical and ecological effects of alteration; understanding the ecology of rivers with waterpower facilities; investigating variability and change in water balance components of Great Lakes tributaries, including changes to snow accumulation and melt; developing hydrologic models; developing an aquatic ecosystem classification system; and developing and providing datasets and tools for practitioners to examine and assess change in flow and thermal regimes of rivers and the water balances of watersheds.

- https://www.ontario.ca/page/aquatic-research

The **Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health, 2021** (Environment and Climate Change Canada (federal lead), and Ministries of the Environment, Conservation and Parks (provincial lead), Natural Resources and Agriculture, Food and Agribusiness) supports the restoration, protection and conservation of Great Lakes water quality and ecosystem health. Improved understanding of adaptive management approaches to lake level regulation, nutrient management, groundwater and climate change impacts are areas supporting basin water resource management and water related actions.

- https://www.ontario.ca/document/canada-ontario-great-lakes-agreement

The **International Joint Commission (IJC) under the Boundary Waters Treaty** carries out **periodic science-based studies** in boundary waters along Ontario's borders. The MNR and the MECP participate as stakeholders in aspects of studies involving the IJC's review of its regulation of water levels and flows and associated water-related natural hazards and alterations along shorelines, hydroclimate, water use, and ecosystem impacts.

Geospatial Ontario (MNR):
Geospatial Ontario provides leadership and coordination to capture, create and maintain the province's foundation geospatial data (e.g., roads, water, utilities, wetlands, elevation and

aerial imagery) and works to ensure information about Ontario's water resources is available to provincial ministries, municipalities, conservation authorities and others to create maps, conduct geographic analysis and support decisions about the province's water resources. The Ontario Hydrology Network; Ontario Integrated Hydrology; provincial elevation and imagery layers; and enhanced watershed boundaries are all examples of datasets produced by Geospatial Ontario that can support the implementation of the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement. Geospatial Ontario has developed the **Ontario Watershed Information Tool** (OWIT) to allow water professionals in the public and private sectors and academia to analyze and understand water flow. The application allows for watersheds to be generated and characterized for any location in Ontario. Outputs from OWIT can be used as an input to hydrology models. The application allows access to standardized data that is used for a range of water management activities, such as water permitting, water use reporting and water quantity assessment.

- https://www.ontario.ca/page/geospatial-ontario
- https://www.ontario.ca/page/topographic-maps
- https://www.ontario.ca/page/watershed-flow-assessment-tool

The ***Conservation Authorities Act*** (MNR), provides a statutory framework for establishing and governing conservation authorities. The purpose of the *Conservation Authorities Act* is to provide for the delivery of programs and services that further the conservation, restoration, development and management of natural resources in watersheds in Ontario. Ontario's 36 conservation authorities were created at the request of municipalities and are governed by municipally appointed representatives to deliver resource management programs at a watershed scale for both provincial and municipal interests.

Conservation authorities are enabled to study and investigate the watershed(s) in their jurisdictions including development of watershed-based resource management strategies and technical studies to support understanding of local resource management interests, and to undertake provincial mandated programs and services for example related to the risks of natural hazards. Conservation authorities are currently involved in the delivery of several provincial programs that require data management and monitoring of water including the Provincial Flood Forecasting and Warning Program, Ontario's Low Water Response, the Provincial Groundwater Monitoring Network, and the Provincial Water Quality Monitoring Network.

The ***Clean Water Act*** (MECP) provides for a **source water protection program and local source water protection planning**. Local Source Protection Authorities (Conservation Authorities) with guiding support from the MECP develop supporting estimates of surface and groundwater supplies, water budgets, water use demand, and water quantity risks assessments. Locally, water use impacts are considered through Ontario's water use permitting application process.

- The Science Behind Drinking Water Source Protection: https://www.ontario.ca/page/source-protection
- Ontario's online Source Protection Information Atlas: https://www.lioapplications.lrc.gov.on.ca/SourceWaterProtection/index.html?viewer=SourceWaterProtection.SWPViewer&locale=en-CA

Ontario's Provincial Groundwater Monitoring Network (MECP) monitors ambient groundwater quantity and quality conditions in the province. The monitoring data provide indicators of aquifer conditions and supports studies and decisions around water-taking, drought management, land use planning decisions, climate change impacts, and water budget and cumulative impact studies. Ontario's 36 conservation authorities are involved in the delivery of the program.

- https://www.ontario.ca/page/map-provincial-groundwater-monitoring-network

The **Ministry of Natural Resources** integrates climate adaptation and mitigation into natural resource management across the ministry and with their partners by leading strategic projects in advance and incorporate climate considerations into policy, developing and communicating information and resources to support policy and science, and coordinating MNR actions within broader provincial climate priorities. This includes support to aquatic and terrestrial research and adaptation initiatives in the Great Lakes basin and beyond. Recent projects that support the implementation of the Agreement include modelling the relative risks of aquatic invasive species establishing and spreading in the Great Lakes under future climate change scenarios, assessing the vulnerability of species to climate change in the Ontario Great Lakes Basin, modelling temperatures in streams throughout the Great Lakes Basin and associated impacts on cold and cool-water species and continued enhancements to climate modelling and monitoring capacity.

Ontario Geological Survey (Ministry of Mines) implements a **Groundwater Geoscience Mapping Initiative** that contributes geoscience data and information to water management initiatives, including the development of GIS-based geological maps/databases, , regional (3-D) aquifer subsurface mapping in bedrock and surficial sediments, derivative maps showing depth to first significant aquifer, water table depth maps, karst mapping, watershed characterization, thematic studies, regional groundwater geochemistry studies, method/protocol and product development.

- https://www.geologyontario.mndm.gov.on.ca/ogsearth.html
- https://www.ontario.ca/page/geoscience-research-topics
- https://www.hub.geologyontario.mines.gov.on.ca/

7. Additional Information

N/A

Province of Ontario

Water Conservation and Efficiency Program Report

The following information is submitted by the Province of Ontario to the Great Lakes Regional Body Secretariat in response to the Questionnaire for Preliminary Submittals by States and Provinces, in fulfillment of the five-year review of Ontario's Water Conservation and Efficiency Programs, pursuant to the requirements in Article 304 of the *Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement* (Agreement)**.**

1. Lead agency and contact person:

Jennifer Keyes, Director

Development and Hazard Policy Branch

Ontario Ministry of Natural Resources

2. Status of Ontario's water conservation and efficiency goals and objectives consistent with the Basin-wide goals and objectives

In 2012 Ontario adopted water conservation and efficiency goals and objectives that are consistent with the Basin-wide goals and objectives. The goals and objectives were developed based on stakeholder consultation, Indigenous engagement, and public comments received.

Ontario adopted the water conservation and efficiency goals as set out in the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement (herein referred to as 'the Agreement'), and developed objectives consistent with the regional objectives adopted for the Basin that are tailored for Ontario to reflect the direction in the *Water Opportunities and Water Conservation Act*, 2010, and to address stakeholder and Indigenous community requests to emphasize the importance of taking ecological water needs into account in decision making, in keeping with the broader ecosystem protection and restoration goals of the Agreement.

Ontario's water conservation goals and objectives are available at:

Ontario's water conservation and efficiency goals, objectives and programs (in accordance with the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement) | ontario.ca

3. Ontario's water conservation and efficiency program overview

Ontario's water conservation and efficiency program consists of a wide variety of statutes, programs and policies administered across several Ontario ministries, as well as local governments and other organizations. See Appendix A for a detailed description of Ontario's forty-five contributing water management and conservation statues, programs and policies.

The foundation of the program is the *Ontario Water Resources Act* (OWRA) and the Water Taking and Transfer Regulation (Ontario Regulation 387/04). The purpose of the OWRA is to provide for the conservation, protection and management of Ontario's waters and for their efficient and sustainable use, in order to promote Ontario's long-term environmental, social

and economic well-being. Under the OWRA, a permit is required to withdraw more than 50,000 litres per day of ground or surface water, with a few exceptions.

Section 34.1 (9)(h) of the OWRA provides a permitting Director with authority to set terms and conditions on a permit governing the use and conservation of water taken under the permit, including requiring the holder to implement specified measures to promote the efficient use of the water or reduce the loss of water through consumptive use, conduct a water audit, and to prepare and implement a water conservation plan.

The *Water Taking and Transfer Regulation* outlines matters that the Director must consider when considering an application for a Permit to Take Water. Section 4(2).3.i. of the Regulation requires that the Director consider issues relating to the use of water, including whether water conservation measures are being implemented or are proposed to be implemented in the use of water, in accordance with best water management standards and practices for the relevant sector, if these are available.

Provincial land use planning statutes, such as the *Planning Act*, policies, such as those in the *Provincial Planning Statement, 2024,* and plans, such as the Greenbelt Plan*,* include some policy direction relating to water conservation in new developments. Section 3 of the *Planning Act* requires land use decisions to be consistent with the provincial policy statements and to conform to provincial plans. The *Clean Water Act,* 2006 requires that any significant threats to municipal drinking water sources, from a water quantity perspective, be identified through the preparation of water budgets and addressed in local source protection plans, such as through policies on water conservation.

The *Water Opportunities and Water Conservation Act*, 2010 builds upon Ontario's expertise in clean water technology and sets out a framework to make the province a continental leader in water innovation to help address global water challenges. Among other things, the Act sets the framework to encourage Ontarians to use water more efficiently by creating and implementing innovative approaches to protecting and conserving water resources for current and future generations.

4. Consistency with Regional Objectives

Ontario's program is consistent with the regional objectives in the promotion of environmentally sound and economically feasible water conservation measures. The programs (statutes, programs and policies) below may link to more than one objective. See Table 1 and Appendix A.

Table 1. Regional Objectives and Ontario's Water Conservation and Efficiency Program

REGIONAL OBJECTIVE	LEGISLATIVE AND PROGRAM CITATION
1) Guide programs toward long-term sustainable water use and management.	Ontario implements a range of adaptive programs and conservation and efficiency strategies that consider long-term sustainable water use while taking into account the importance of water to related ecosystems – such as through the assessment of water taking applications as described above, preparation of source protection plans to protect existing and future sources of drinking water in terms of both water quantity

REGIONAL OBJECTIVE	LEGISLATIVE AND PROGRAM CITATION
	and quality, development of water budgets to estimate surface and groundwater supplies, water use and water quantity risk assessments, and action to protect the Great Lakes. 1. *Ontario Water Resources Act* and Water Management: Policies, Guidelines, Provincial Water Quality Objectives 2. *Ontario Water Resources Act* and Regulations 3. *Clean Water Act*, 2006 4. *Conservation Authorities Act*, 1990 5. *Lakes and Rivers Improvement Act*, 1990
2) Adopt and implement supply and demand management to promote efficient use and conservation of water resources.	Ontario has a range of programs that manage water supply and demand to achieve efficient use and conservation of water resources - such as Ontario's *Provincial Planning Statement,* 2024 which requires local planning authorities to protect, improve or restore the quality and quantity of water, promote green infrastructure in planning for stormwater management and establishing water efficiency standards in Ontario's Building Code (O.Reg 163/24) and *Electricity Act*. 6. *Water Opportunities and Water Conservation Act*, 2010 7. Financial Plans Regulation under the *Safe Drinking Water Act*, 2002 8. *Municipal Act*, 2001 and *City of Toronto Act*, 2006 9. *Building Code Act*, 1992 and the Ontario Building Code (O.Reg 163/24) 10. *Electricity Act*, 1998 11. *Oak Ridges Moraine Conservation Act*, 2001 and Oak Ridges Moraine Conservation Plan, 2017 12. Growth Plan for Northern Ontario 13. *Planning Act* and Provincial Planning Statement, 2024 14. Municipal Stormwater Management Systems (e.g., Green Infrastructure, rainwater harvesting and reuse)
3) Improve monitoring and standardize data reporting among State and Provincial water conservation and	A range of Ontario programs and initiatives support improved monitoring and standardized data reporting related to water supply, water use and conservation/efficiency – for example, water use information for Permits to Take Water is collected, analyzed and reported, Ontario Surface Water Monitoring and Low Water Response, the Provincial Groundwater Monitoring Network, management of Ontario's foundation geospatial datasets and analysis to support decisions about water

REGIONAL OBJECTIVE	LEGISLATIVE AND PROGRAM CITATION
efficiency programs.	resources, and the Ontario Geological Survey's Groundwater Initiative. 15. Ontario Low Water Response 16. Ontario Surface Water Monitoring 17. Provincial Groundwater Monitoring 18. Water Use Reporting 19. Reporting of Energy Consumption and Water Use 20. Geospatial Ontario 21. The Ontario Geological Survey's Groundwater Initiative
4) Develop science, technology and research.	The following programs encourage science, technology and research to implement the best in water, wastewater and stormwater technology: 22. Ontario Clean Water Agency 23. Investment Accelerator Fund 24. Ontario Agri-Food Innovation Alliance and Ontario Agri-Food Research Initiative
5) Develop education programs and information sharing for all water users.	Ontario is implementing a range of education initiatives and programs that raise awareness of the importance of water conservation, efficiency and cost-saving approaches to promote the sharing of information on best management practices through the following programs: 25. Walkerton Clean Water Centre 26. Water Efficiency Labelling 27. Best Management Practices 28. Canada-Ontario Environmental Farm Plan Program and Sustainable Canadian Agricultural Partnership – Ontario Agricultural Sustainability Initiative suite of programming for Producers
Other programs:	In accordance with Ontario's water conservation and efficiency goals and objectives, the province's water conservation and efficiency program includes a range of environmental and resource management legislation, strategies and programs that align with the objectives by integrating water conservation and efficient water use with other environmental management practices and considerations, such as energy use, climate

REGIONAL OBJECTIVE	LEGISLATIVE AND PROGRAM CITATION
	change, and the protection and restoration of hydrological and ecological integrity: 29. *Endangered Species Act*, 2007 30. *Greenbelt Act*, 2005 and Greenbelt Plan, 2017 31. *Niagara Escarpment Planning and Development Act* and Plan 32. Ontario's Biodiversity Strategy, 2023 - 2030 33. Ontario's Great Lakes Strategy 34. Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health, 2021 35. *Great Lakes Protection Act*, 2015 36. Joint Strategic Plan for the Management of Great Lakes Fisheries 37. *Lake Simcoe Protection Act*, 2008 and Lake Simcoe Protection Plan, 2009 and associated Subwatershed Plans and Water Budgets 38. *The Crown Forest Sustainability Act*, 1994 39. Wetlands Conservation Partner Program 40. Ontario's Provincial Fish Strategy: Fish for the Future 41. Anishinabek/Ontario Fisheries Resource Centre 42. Ontario Parks Water Conservation Initiatives 43. Species at Risk Stewardship Program 44. Eastern Habitat Joint Venture 45. Great Lakes Local Action Fund

5. Ontario's water conservation and efficiency program implementation timeline and status

Ontario's water conservation and efficiency program is in place and being implemented.

Appendix A: Description of Ontario's Contributing Water Management and Conservation Statutes, Programs and Policies

The following statutes, programs and policies contribute to achieving Ontario's goals and objectives for water conservation and efficiency. The statutes, programs and policies may link to more than one goal or objective.

OBJECTIVE 1) GUIDE PROGRAMS TOWARD LONG-TERM SUSTAINABLE WATER USE AND MANAGEMENT

To achieve this objective, Ontario has a range of adaptive programs and conservation and efficiency strategies that consider the importance of water to related ecosystems, working with local stakeholders, and improving water demand forecasts, and water budgets.

1. *Ontario Water Resources Act* and Water Management: Policies, Guidelines, Provincial Water Quality Objectives

The legislative authority to manage water comes from the *Ontario Water Resources Act*, *Environmental Protection Act* and other legislation. Ontario's Water Management: Policies, Guidelines, Provincial Water Quality Objectives gives direction on how to manage the quality and quantity of both surface water and groundwater. Surface water and groundwater quantity is to be managed to ensure a fair sharing, conservation, and sustainability of the resource. Water conservation is defined as the preservation of the quantity of available water through judicious use, reuse and minimal wastage.

Water management: policies, guidelines, provincial water quality objectives | ontario.ca

2. *Ontario Water Resources Act* and Regulations

Water takings in Ontario are governed by the *Ontario Water Resources Act* and the Water Taking and Transfer Regulation (Ontario Regulation 387/04). The purpose of the *Ontario Water Resources Act* is to provide for the conservation, protection and management of Ontario's waters and for their efficient and sustainable use, to promote Ontario's long-term environmental, social and economic well-being.

Ontario Water Resources Act, R.S.O. 1990, c. O.40

According to the *Ontario Water Resources Act*, any person taking more than 50,000 litres of water on any day must first obtain a Permit to Take Water from the Ministry of the Environment, Conservation and Parks. Water taken for domestic uses, watering of livestock or poultry, firefighting, wetland conservation, a weir that was constructed prior to March 29, 2016, passive and/or active in-stream diversions for construction purposes and constructing or operating a dam associated with the production of electricity are exempted from the requirement to obtain a permit. The Ministry's guiding policy for issuing permits is to ensure the fair sharing, conservation, and sustainable use of the surface and ground waters in the province.

The Water Taking and Transfer Regulation and Permit to Take Water Manual outlines the specific requirements related to applying for and holding a permit and identifies the matters that the Ministry must consider when reviewing a permit application.

O. Reg. 387/04: WATER TAKING AND TRANSFER (ontario.ca)

Among the matters considered by the Ministry when reviewing a permit application is whether water conservation measures are to be implemented in the use of water, in accordance with sector best water management standards and practices, if these are available. As part of their permit application, proponents must complete and submit a "Schedule 1 – Implementation of Water Conservation in accordance with Best Management Practices and Standards for the Relevant Sector". This Schedule provides details about sector-specific best management practices (e.g., Environmental Farm Plan) to be applied to the proposed water taking and specifies the water conservation measures and practices they are currently anticipated to be implemented over the duration of the permit. Applicants must also state their goals for reducing the use, loss, or waste of water, or for increasing the efficiency of their water use (e.g., litres per day per unit of production or litres per day per capita for the residential use).

Enhancements to Ontario's Water Quantity Management Framework

The province completed a review of the state of water resources in key areas of Ontario and the effect water takings have on these resources. The review included examining water quantity-related policies and programs as they apply to water takers across the province, including water bottlers taking groundwater, as well as enhancing our understanding of how we can manage water takings to ensure we have sustainable water resources in the face of changing climate and continued population growth.

The province's review found that the government's current approach to managing water takings is effective. The analysis included a panel of the Professional Geoscientists Ontario who reviewed and validated the government's findings. They found that water takings for water bottling are managed sustainably in Ontario under existing legislation, regulation, and guidance. The review also identified opportunities to improve how water takings are managed in parts of Ontario where water availability is or could become a concern. All reports associated with the review are available for download from the supporting materials section of the Environmental Registry posting titled "Updating Ontario's Water Quantity Management Framework".

The Ontario government has moved forward with enhancements to the province's water taking program as part of its commitment to ensure our water resources are protected and used sustainably, now and for future generations.

The new rules apply to all permitted water users, including water bottlers, and came into effect on April 1, 2021.These changes include:

- requiring water bottling companies to have the support of their local host municipality for new or increase groundwater takings in their community.

- establishing priorities on how water should be shared among water users when there are competing demands for water. For example, restrictions on water taking could be applied during a drought. The ministry has published guidance to support the implementation of the new priorities of water use policy.
- putting in place a new, more flexible approach for the ministry and water users to better assess and manage multiple water takings in areas where water sustainability is a concern. The ministry has published guidance to support the implementation of the new area-based water quantity management policy.
- making water taking data available to the public to increase transparency of how Ontario manages water resources. Actual volumes of water taken by permitted water takers was made available to the public starting in July 2022.

3. *Clean Water Act*, 2006

The purpose of the *Clean Water Act* is to protect existing and future sources of drinking water in Ontario as it relates to both quality and quantity of water. It is part of the Ontario Government's commitment to ensure the sustainability of clean, safe drinking water for Ontario communities.

Source protection plans are in effect for drinking water systems across Ontario, covering an area where over 95 per cent of the province's population live. The plans are developed by local source protection committees across the province and administered by conservation authorities acting as 'source protection authorities' under the *Clean Water Act*. Source protection plans contain a series of locally developed policies such as prohibiting an activity or regulating it through risk management plans, provincial approvals, land use planning tools or non-regulatory approaches such as education and outreach programs. Plans may also include policies around water conservation and/or water efficiency. Municipalities, the Province, and others are implementing actions on the ground to protect the quality and quantity of sources of drinking water.

Science-based assessment reports were developed and are updated from time to time to identify where sources of drinking water are vulnerable to contamination and depletion. As part of the assessments, water budgets evaluate how much water exists both at the surface and below ground, how water moves and how much water is withdrawn, to identify potential water shortages on both a subwatershed scale, and for at-risk municipal drinking water systems. Part of this process is also looking at the long-term water supply and determining current or future water availability and ecological needs. Furthermore, these water budgets consider drought climate conditions and the potential impact on supplies of drinking water.

As a requirement under the *Clean Water Act*, source protection planning also considered several federal and provincial Great Lakes agreements, including the Great Lakes Charter and the Great Lakes-St Lawrence River Basin Sustainable Water Resources Agreement.

Clean Water Act, 2006, S.O. 2006, c. 22 (ontario.ca)

4. *Conservation Authorities Act*, 1990

The purpose of the *Conservation Authorities Act* is to provide for the organization and delivery of programs and services that further the conservation, restoration, development, and management of natural resources in watersheds in Ontario. Administration of the *Conservation Authorities Act* is the responsibility of the Ministry of Natural Resources.

The Act enables municipalities within a common watershed to petition the province to establish a conservation authority - a public sector organization, for the delivery of local resource management programs and services as prescribed by the province, or on behalf of its municipalities, or as decided by the authority itself. There are 36 conservation authorities in Ontario today.

The *Conservation Authorities Act* and corresponding regulations set out what conservation authorities are, including being governed by a membership of municipal representatives appointed by the municipalities that formed or later joined the conservation authority (the collective membership of appointed municipal representatives being the conservation authority). The Act also provides for optional advisory boards to the conservation authority that can include members of the public.

The *Conservation Authorities Act* provides what conservation authorities may do in resource management, including mandatory programs and services that each conservation authority must provide as well as other programs and services at the discretion of municipalities and the authorities.

Mandatory programs and services include, but are not limited to, those related to the risk of natural hazards, conservation and management of conservation authority owned lands, and an authority's legislative responsibilities as a source protection authority under the *Clean Water Act*. These mandatory programs and services support and contribute to Ontario's water conservation and efficiency goals under the Agreement. For example, related to the risk of natural hazards, conservation authorities operate flood control infrastructure (dams, reservoirs, channels) to manage water levels and flows for flood management and public safety as well as low flow augmentation in low water or drought circumstances. Programs and services related to the management of conservation authority lands protect significant natural heritage features such as wetlands, and with programs to control invasive species and support wildlife habitat that provide important contributions to hydrologic and ecosystem integrity in the province.

Conservation authorities are also key delivery agencies for several other government programs such as the Ontario Low Water Response Program, Provincial Groundwater Monitoring Network and Provincial Water Quality Monitoring Network.

Ontario Low Water Program (gov.on.ca)

Conservation Authorities | ontario.ca

5. *Lakes and Rivers Improvement Act*, 1990

The *Lakes and Rivers Improvement Act* (LRIA), administered by the Ministry of Natural Resources, provides a legislative framework for the regulation of construction,

alteration, decommissioning and operation of dams in Ontario. The LRIA defines a dam as a structure or work forwarding, holding back, or diverting water and includes: a dam, dam tailings, dike, diversion, channel alteration, artificial channel culvert or causeway.

The purposes of the Act are to provide for:

- the management, protection, preservation and use of waters of the lakes and rives of Ontario and the land under them;
- the protection and equitable exercise of public rights in or over waters of the lakes and rivers in Ontario;
- the protection of the interests of riparian owners;
- the management, perpetuation and use of the fish, wildlife and other natural resources dependent on the lakes and rivers;
- the protection of the natural amenities of the lakes and rivers and their shores and banks; and
- the protection of persons and of property by ensuring that dams are suitably located, constructed, operated and maintained and are of an appropriate nature with respect to the purposes of the above noted clauses.

Approval may be required for the construction of a new dam and for certain alterations improvements or repairs of to existing dams. The prescribed circumstances for which approval must be obtained by a dam owner within the Province can be found in Ontario Regulation 454/96 (Construction).

Ontario Regulation 102/20 Monitoring of Mercury Near Dams came into effect March 2020. This Minister's Regulation requires the owners of 12 dams that had mercury monitoring and reporting requirements established through a Permit to Take Water Program under the *Ontario Water Resources Act,* issued by the Ministry of Environment, Conservation and Parks, to maintain these requirements under the authority of the *Lakes and Rivers Improvement Act*, with reporting to MNR. This regulation ensures that potential changes in levels of methylmercury from existing waterpower dams are monitored, reported and potential impacts to people are mitigated.

To support the administration of the LRIA and dam safety in Ontario, the Ministry has produced a series of policies, technical bulletins and best management practices. The LRIA Administrative Guide and supporting Technical Bulletins outline ministry requirements and technical guidance for applicants seeking approval for dam related works. The Ministry also engages key dam owners through the Ministry of Natural Resources Dam Owners Advisory Committee to seek advice on government policies and initiatives related to the regulation and management of dams.

Dams may provide for a few objectives, including waterpower generation, municipal water supply, flood low water mitigation, wetland habitat management, navigation for commercial and recreational purposes, and other municipal, commercial and industrial use.

Lakes and Rivers Improvement Act, R.S.O. 1990, c. L.3 (ontario.ca)

Dam management | ontario.ca

OBJECTIVE 2) ADOPT AND IMPLEMENT SUPPLY AND DEMAND MANAGEMENT TO PROMOTE EFFICIENT USE AND CONSERVATION OF WATER RESOURCES

To achieve this objective, Ontario has a range of programs that manage water supply and demand to achieve efficient use and conservation of water resources — including promoting innovative water technologies, green infrastructure and water use efficiency.

6. *Water Opportunities and Water Conservation Act*, 2010

The *Water Opportunities and Water Conservation Act* was passed in November 2010. The fourth progress report on the implementation of the *Water Opportunities Act,* covering the period from 2020 to 2023, is available in the Minister's Annual Report on Drinking Water (2023) | ontario.ca.

Schedule 1 enacts a stand-alone Act, the *Water Opportunities Act,* 2010 (see below for details). Schedules 3 to 5 amend existing legislation within respect to water conservation and other matters. The Act builds upon Ontario's expertise in clean water technology and sets out a framework to make the province a North American leader in water innovation to help address global water challenges. Among other things, the Act sets the framework to encourage Ontarians to use water more efficiently by creating and implementing innovative approaches to protect water resources for current and future generations.

The *Water Opportunities Act,* 2010 also includes authority to require prescribed information on or with municipal water bills to promote transparency; authority to set aspirational targets for water conservation and other matters; and authority to require public agencies to prepare water conservation plans. This includes the authority to require public agencies to achieve water conservation targets and consider technologies, services and practices that promote the efficient use of water when making capital investments or purchasing goods and services.

The Act also amended the *Ontario Water Resources Act* to enable regulations for water efficiency standards or requirements for prescribed appliances and products. No person would be permitted to offer for sale, sell or lease a prescribed appliance or product unless it meets the water efficiency standard or requirement set out in the regulations. These are tools that will enable Ontarians to use water more efficiently to conserve and protect water resources.

The fourth progress report on the implementation of the *Water Opportunities Act,* covering the period from 2020 to 2023, can be found on Ontario.ca.

Water Opportunities Act, 2010, S.O. 2010, c. 19, Sched. 1 (ontario.ca)

7. Financial Plans Regulation under the *Safe Drinking Water Act*, 2002

Ontario put in place a licensing framework under the *Safe Drinking Water Act*, 2002 for municipal residential drinking water systems – the Municipal Drinking Water Licensing Program. Financial plans are one of the elements that the owner of a municipal drinking water system must have in place for a licence to be issued or renewed.

Ontario adopted the Financial Plans regulation (Ontario Regulation 453/07) and released a Financial Plans Guideline document in 2007. The regulation outlines requirements set out by the Minister of the Environment, Conservation and Parks for financial plans that are required to obtain a licence under the *Safe Drinking Water Act*, 2002. Taken together, the Financial Plans Regulation and Guideline are a key step in the province's long-term strategy to ensure the financial sustainability of municipal drinking water systems.

O. Reg. 453/07: FINANCIAL PLANS

8. *Municipal Act*, 2001 and *City of Toronto Act*, 2006

Under the *Municipal Act,* 2001 and *City of Toronto Act*, 2006 (and Ontario Regulations 599/06 and 609/06 respectively) municipalities may establish municipal or city services corporations to deliver water and wastewater services, subject to certain limitations and requirements. It is up to municipal councils to decide whether or not a corporation would be appropriate as the most efficient means of delivering water and wastewater services.

Shares in municipal water and wastewater corporations cannot be privately owned. Legislative requirements for a municipality, in terms of water delivery, apply to its municipally established water and wastewater corporation as well.

9. *Building Code Act*, 1992 and the Ontario Building Code (O. Reg 163/24)

Ontario's Building Code is a regulation under the *Building Code Act,* 1992 that sets out technical and administrative requirements that must be met when a building is constructed, renovated, demolished or undergoes a change of use.

One way to conserve water is to design buildings so that they use less water. Ontario's Building Code has been amended over the past 20 years to include increasingly progressive water conservation requirements.

Conservation is one of the objectives of the Building Code. Over time, water conservation requirements for plumbing fixtures have been enhanced so that today, very high-efficiency toilets (4.8 litres/flush, or a dual flush option or both 4.1 litres flush), urinals (1.9 litres/flush) and residential showerheads (7.6 litres/minute) are required as a minimum in new construction and renovations. Over time, the Building Code has also been amended to add to the ways that rainwater, storm sewage and greywater can be reused. By clarifying requirements for non-potable water systems and adding requirements for non-potable rainwater harvesting systems, the 2024 Code further enhances certainty in the building industry about how rainwater, storm sewage and greywater can be used, helping to make it a more mainstream practice.

Building Code Act, 1992, S.O. 1992, c. 23 (ontario.ca)

O. Reg. 163/24: BUILDING CODE (ontario.ca)

10. *Electricity Act*, 1998

The *Electricity Act,* 1998 prohibits the sale of products in Ontario that do not meet prescribed energy and water efficiency standards. Setting water efficiency standards reduces water and energy use and further lower greenhouse gas emissions. Water efficiency standards for products using both energy and water, such as dishwashers and clothes washers are set out in Energy and Water Efficiency – Appliances and Products regulation (O.Reg. 509/18).

Electricity Act, 1998, S.O. 1998, c. 15, Sched. A (ontario.ca)

11. *Oak Ridges Moraine Conservation Act*, 2021 and Oak Ridges Moraine Conservation Plan, 2017

The *Oak Ridges Moraine Conservation Act,* 2001 provides the legislative framework for the development and implementation of the Oak Ridges Moraine Conservation Plan, 2017. The Act requires all decisions under the *Planning Act* and *Condominium Act* to conform to the Oak Ridges Moraine Conservation Plan, 2017 and that municipalities bring their official plans and zoning by-laws into conformity with the Plan.

The Oak Ridges Moraine Conservation Plan, 2017 provides a long-term framework for land use designations and policies and requires that municipalities further implement these directions through their official plans and zoning by-laws. The Plan identifies a natural heritage system comprised of Core and Linkage Areas and goes on to define key natural heritage and hydrological features which are to be identified and protected, along with defined buffers. It also provides mapping of landform conservation areas and highly vulnerable aquifer areas. Watershed management plans, water conservation plans, and water budgets are required for the identification and protection of municipal well-head protection areas. The plan restricts certain types of stormwater management facilities in order to protect the ground water resources in the Moraine's aquifers, which are the regional groundwater divide for central Ontario. These aquifers provide the baseflow for the vast majority of streams running north and south off the Moraine.

The Oak Ridges Moraine Conservation Plan, 2017 requires that every upper-tier municipality and single-tier municipality within the designated Oak Ridges Moraine plan area have a water budget and water conservation plan in place for every watershed whose streams originate within the municipality's area of jurisdiction. The Plan prohibits major development unless the watershed plan for the relevant watershed has been completed; the major development conforms with the watershed plan; and a water budget and conservation plan are completed and demonstrates that the water supply required for the major development is sustainable.

Oak Ridges Moraine Conservation Act, 2001, S.O. 2001, c. 31 (ontario.ca)

Oak Ridges Moraine Conservation Plan | ontario.ca

12. Growth Plan for Northern Ontario

The Growth Plan for Northern Ontario, 2011 is a 25-year plan to guide decisions and investments to build a globally competitive northern economy that is resilient and sustainable. The Plan includes a chapter on the environment which sets out policies to encourage municipalities to contribute to the protection of surface water and ground water features. Additionally, Northern economic and service hubs are encouraged to identify environmental sustainability objectives and develop policies and programs to achieve water conservation.

Growth Plan for Northern Ontario | Ontario.ca

13. *Planning Act* and Provincial Planning Statement, 2024

The *Planning Act* provides the legislative basis for the land use planning system in Ontario. Municipalities are the main implementers of provincial land use planning policies through their official plans and zoning by-laws and their decisions on planning applications. Their decisions and plans are required by the *Planning Act* to conform (or not conflict) with provincial plans and to be consistent with provincial policy statements such as the Provincial Planning Statement, 2024. A variety of other legislation may also apply when municipalities are making decisions on planning matters.

The *Planning Act* contains the process requirements for public notice and consultation rules governing municipal processing of land use proposals or documents and the framework for appeals to the Ontario Land Tribunal. The planning process provides an opportunity for an inter-disciplinary assessment of matters pertaining to land use, including the integration of water-related considerations.

Issued under the authority of section 3 of the *Planning Act*, provincial policy statements such as the Provincial Planning Statement, 2024 provides policy direction on matters relating to land use planning that are of provincial interest. Among other matters, it provides some direction to protect water resources. For example, policy 3.6.1 of the Provincial Planning Statement, 2024 states that planning for water and sewage services shall promote water conservation and water use efficiency. In addition, policy 3.6.8 states that planning for stormwater management shall promote best management practices, which include water conservation and water use efficiency. Lastly, policy 4.2.1 states that planning authorities shall protect, improve or restore the quality and quantity of water by, among other things, “planning for efficient and sustainable use of water resources, through practices for water conservation and sustaining water quality” and using the watershed as the ecologically meaningful scale for integrated and long-term planning, which can be a foundation for considering cumulative impacts of development. It calls for planning authorities to identify water resource systems, including ground and surface water features and functions necessary for ecological and hydrological integrity of the watershed, and to maintain linkages among hydrologically connected water-based and terrestrial-based features. Under the new PPS 2024, municipalities in the Greater Golden Horseshoe are no longer mandated to create water/wastewater master plans. However, they are encouraged, and large, fast-growing municipalities are required, to conduct watershed planning. This planning informs sewage, water services, stormwater management, low impact development, and the protection and improvement of water quality and quantity.

Under the *Clean Water Act*, source protection plans are developed and updated locally based on scientific assessments that identified vulnerable areas related to the drinking water systems included in the plans that must be considered by planning authorities when implementing policy 4.2.1 of the Provincial Planning Statement, 2024. These source protection plans also identify areas where water supplies are vulnerable to depletion and may include policies to find efficiencies in the use of water including developing water conservation plans to address these water supply risks.

Provincial Planning Statement, 2024

Planning Act, R.S.O. 1990, c. P.13 (ontario.ca)

14. Municipal Stormwater Management Systems

The Ministry of the Environment, Conservation and Parks has created several documents for municipalities, businesses and anyone who is responsible for managing stormwater and reducing pollution at its source. They include the Stormwater Management Planning and Design Manual, March 2003; Understanding Stormwater Management: An Introduction to Stormwater Management Planning and Design; and summaries of several stormwater projects completed with provincial assistance.

Several objectives for stormwater management as stated in the 2003 Stormwater Management Planning and Design Manual support the efficient use and conservation of water resources:

- Preserve groundwater and baseflow characteristics, protect water quality;
- Reduce occurrences of undesirable geomorphic change (e.g., stream erosion);
- Reduce flood damage potential;
- Maintain appropriate diversity of aquatic life and opportunities for human uses; and
- Protect the ecosystem by maintaining the natural hydrologic cycle to the greatest extent possible.

By better managing the rain where it falls and snow melts using stormwater green infrastructure will help to steadily replenish groundwater, local streams, wetlands, and lakes making more water available when needed. Stormwater green infrastructure (and low impact development by another name) also includes rainwater harvesting systems that offer opportunities for human uses and thereby conserve water resources.

Stormwater Management Planning and Design Manual | ontario.ca

In 2010, Ontario completed a review of the need for a new policy, Act or regulation to deal with municipal stormwater management systems in Ontario municipalities considering climate change. The review identified a need for a stormwater management policy framework, with emphasis on improving stormwater management at the source through green infrastructure and low impact development practices to reuse the water or infiltrate into the ground. Further, increased collaboration for source control practices

is needed between all partners including residents, businesses, conservation authorities and all levels of governments.

Ontario is committed to improving municipal wastewater and stormwater management and reporting, by increasing transparency through real-time reporting of sewage overflows from municipal wastewater systems into Ontario's lakes and rivers, and updating policies related to municipal wastewater and stormwater to make them easier to understand.

Policy Review of Municipal Stormwater Management in the Light of Climate Change | ontario.ca

Ontario has developed a draft Low Impact Development Stormwater Management Guidance Manual, which was posted for consultation on the Environmental Registry of Ontario. The document provides technical guidance that will assist proponents to protect the environment, manage rain where it calls, reuse and conserve water and increase resiliency to climate change.

Low Impact Development Stormwater Management Guidance Manual | Environmental Registry of Ontario

A Discussion Paper on Wastewater and Stormwater Management in Ontario was posted early in 2022 to seek public feedback on potential policy approaches for a variety of topics related to wastewater and stormwater management and water conservation. The feedback will help inform any potential future policy proposals (e.g., policy updates, regulations) that would help to further protect communities and water resources in Ontario.

Municipal Wastewater and Stormwater Management in Ontario Discussion Paper | Environmental Registry of Ontario

OBJECTIVE 3) IMPROVE MONITORING AND STANDARDIZE DATA REPORTING AMONG STATE AND PROVINCIAL WATER CONSERVATION AND EFFICIENCY PROGRAMS

To achieve this objective, Ontario has a range of programs that improve monitoring of water supply, use and conservation/efficiency and standardizing data reporting among states and provinces.

15. Ontario Low Water Response

The Ministry of Natural Resources oversees the Ontario Low Water Response program which provides a framework to enable local response in the event of a drought/low water. The Ministry of Natural Resources collects, monitors and analyzes stream flow and climate data to provide early warnings, and to support local drought response. The early warning framework utilizes three levels of drought/low water status, based on precipitation and stream flow deficit conditions. Local Water Response Teams are encouraged to outline voluntary contingency measures within the watershed to achieve water use reduction targets. Water permit holders may be contacted to help achieve

water reduction targets and are formally regulated through the Ministry of the Environment, Conservation and Parks Permit-to-Take-Water Program. Increasing water conservation is strongly encouraged and communicated as water scarcity increases. The program is currently being modernized to streamline the response process, clarify roles and responsibilities and allow for increased autonomy in local decision making.

Surface Water Monitoring Centre, low water response program | ontario.ca

16. Ontario Surface Water Monitoring

The Ministry of Natural Resources administers the bi-lateral 'Canada-Ontario Agreement on Hydrometric Monitoring' which funds stream flow monitoring infrastructure, technology and data collection protocols on behalf of the province. The Ministry of Natural Resources collects, monitors and analyzes stream flow and climate data from a network of over 650 observation stations. This information is used to provide early warnings for flooding and drought/low water to identify locations throughout the province where potential risks may exist. The mandate for this work is founded in Lieutenant Governor Order-in-Council under the *Emergency Management and Civil Protection Act* for the purposes of emergency planning and public safety. Additionally, this information supports a broad spectrum of water-related decision-making for the management, use and sharing of water resources.

Surface Water Monitoring Centre | ontario.ca

Flood Forecasting and Warning Program (gov.on.ca)

17. Provincial Groundwater Monitoring

The Ministry of the Environment, Conservation and Parks' Provincial Groundwater Program consists of the Provincial Groundwater Monitoring Network (PGMN) and the Integrated Water Climate Change Initiative. The PGMN monitors and reports on groundwater levels at over 490 wells across the province with a subset of 380 wells being monitored for groundwater quality. The data allows for the recognition of spatial and temporal trends and correlations, informs assessments of water taking applications, supports drought response assessments, and provide information on how various aquifers are responding to dry years and changing weather patterns. Data collected through rain gauges established at 15% of the monitoring sites allow for assessments of how groundwater levels are responding to precipitation. Six of the PGMN sites are located at Integrated Water-Climate Change Initiative monitoring sites, where stream water and groundwater levels and quality are monitored along with weather.

Map: Provincial Groundwater Monitoring Network | ontario.ca

18. Water Use Reporting

Under Ontario Regulation 387/04, every holder of a Permit to Take Water is required to report daily water use for each calendar year by March 31 of the following year. This also applies to water taking activities prescribed under the Registrations Under Part II.2

of the Act – Water Taking (Ontario Regulation 63/16). These datasets are used to inform the broad water management programs for the province.

O. Reg. 63/16: REGISTRATIONS UNDER PART II.2 OF THE ACT - WATER TAKING (ontario.ca)

Permits to take water | ontario.ca

Provincial reporting of withdrawals, consumptive uses and diversions to the Great Lakes Commission's Regional Water Use Database is coordinated by the Ministry of Natural Resources in collaboration with the Ministry of the Environment, Conservation and Parks. Investments continue to be made to enhance the regional data processing and assessment.

Great Lakes Regional Water Use Database - Great Lakes Commission (glc.org)

19. Reporting of Energy Consumption and Water Use

Ontario Regulation 506/18: Reporting of Energy Consumption and Water Use (EWRB), made under the *Electricity Act*, 1998, requires owners of prescribed properties that are 50,000 square feet or larger to report their buildings' annual energy and water use to the Ministry of Energy and Electrification by July 1 of each year. In addition, the Ministry of Energy and Electrification collects Greenhouse Gas emissions associated with these buildings.

The EWRB initiative helps large building owners and managers better understand and manage energy and water use within their facilities, and supports informed engagement in energy efficiency programming and other energy efficiency actions.

Under this Regulation, exemptions to reporting are established for eligible reporters who meet specific exemption criteria. Exemptions are available for a single calendar year, or ongoing year-over-year.

Portions of the data are publicly disclosed on the Ontario Data Catalogue. Making the information publicly available can help building owners better manage energy and water use and costs.

O. Reg. 506/18: REPORTING OF ENERGY CONSUMPTION AND WATER USE (ontario.ca)

Report energy and water use in large buildings | ontario.ca

20. Geospatial Ontario

Geospatial Ontario provides leadership and coordination to capture, create and maintain the province's foundation geospatial data (e.g., roads, water, utilities, wetlands, elevation and aerial imagery) and, through Ontario GeoHub, works to ensure information about Ontario's water resources is available to provincial ministries, municipalities, conservation authorities and others to create maps, conduct geographic analysis and support decisions about the province's water resources. The Ontario

Hydrology Network; Ontario Integrated Hydrology; provincial elevation and imagery layers; and enhanced watershed boundaries are all examples of datasets produced by Geospatial Ontario that can support the implementation of the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement.

Geospatial Ontario has developed the Ontario Watershed Information Tool (OWIT) to allow water professionals in the public and private sectors and academia to analyze and understand water flow. The application allows for watersheds to be generated and characterized for any location in Ontario. Outputs from OWIT can be used as an input to hydrology models. The application allows access to standardized data that is used for a range of water management activities, such as water permitting, water use reporting and water quantity assessment.

Geospatial Ontario | ontario.ca

Ontario GeoHub (gov.on.ca)

Ontario Watershed Information Tool (OWIT) | ontario.ca

21. The Ontario Geological Survey's Groundwater Initiative

The Ontario Geological Survey's groundwater initiative contributes geoscience data and information to water management initiatives, including the development of GIS-based geological maps/databases, groundwater vulnerability maps, regional (3-D) aquifer subsurface mapping in bedrock and surficial sediments, karst mapping, watershed characterization, thematic studies, regional groundwater geochemistry studies, method/protocol and product development.

OGSEarth (gov.on.ca)

Geoscience research topics | ontario.ca

OBJECTIVE 4) DEVELOP SCIENCE, TECHNOLOGY AND RESEARCH

To achieve this objective, Ontario has a range of programs that encourage science, technology and research to implement the best in water, wastewater and stormwater technology.

22. Ontario Clean Water Agency (OCWA)

OCWA was established as a provincial agency in 1993 to provide water, wastewater, and related services to clients in a manner that protects human health and the environment and encourages the conservation of water resources. Four and a half million Ontarians rely on OCWA for clean water.

The core business is the operation and maintenance of water and wastewater treatment facilities and their associated distribution and collection systems on behalf of municipalities, First Nations communities, institutions, and private sector companies.

OCWA also offers a broad array of related services, including engineering, training, technical and advisory solutions, process optimization, and energy and asset management.

OCWA's First Nations Advisory Circle augments understanding of the broader water issues facing First Nations, from an Indigenous perspective. Reporting to OCWA's Board of Directors, through the Board's First Nations Committee, participation includes a diverse group of individuals who identify as Indigenous, representing a variety of backgrounds, experiences and communities.

The goal is to advise OCWA, integrate First Nation perspectives into the Agency's strategies and provide a better understanding of the challenges that First Nations face, not only with respect to addressing water and wastewater treatment in their communities, but also in the context of their unique experiences, culture and history in Canada.

The *Water Opportunities and Water Conservation Act,* 2010 enabled the Ontario Clean Water Agency to finance and promote the development, testing, demonstration and commercialization of technologies and services for the treatment and management of water, wastewater and stormwater.

Capital Investment Plan Act, 1993, S.O. 1993, c. 23 (ontario.ca)

23. Investment Accelerator Fund

The Investment Accelerator Fund helps accelerate the growth of new technology companies (including companies focused on water conservation technologies) being established in Ontario and positions them for further investment by angels and venture capitalists. The Fund invests up to $1,500,000 in companies that have the potential to be global leaders in their field and provide sustainable economic benefits to Ontario.

A new seed-stage fund known as Graphite IAF IV was launched in fall 2021 to provide even more VC support for early-stage Ontario technology companies- including cleantech and water technology companies. This private, $100M fund provides up to $4.5 million in VC support to rapidly amplify the growth of early-stage technology companies.

24. Ontario Agri-Food Innovation Alliance (Alliance) and Ontario Agri-Food Research Initiative (OAFRI)

The Ministry of Agriculture, Food and Agribusiness invests in research in eleven research priority areas (including soil health, water quantity and quality, and sustainable production systems) through a partnership agreement (known as Ontario Agri-Food Innovation Alliance) with the University of Guelph. The Alliance supports agricultural research centre infrastructure, applied research and knowledge translation and transfer (KTT) projects through various programs. Soil health, water quality and quantity and sustainable production systems research and knowledge transfer projects aim to protect and enhance agricultural soil health and water quality & quantity, thereby supporting improved public confidence in the sector to deliver on sustainability expectations.

Funded projects strengthen the sustainability of the agri-food sector through soil health and conservation, improved water quality (e.g., reduced nutrient runoff and pesticides), increased water/waste/energy efficiency and reduced GHG emissions, and increased utilization of science-based nutrient management best practises.

The Alliance research program has funded research projects related to water management in agriculture and food. These projects specifically targeted water use efficiency and water quality (e.g., technologies for greenhouse, microbrewery and fruit processing wastewater treatment, evaluation of the implications of private water supply and wastewater systems for rural Ontario municipalities, groundwater recharge and modeling water use efficiency in agriculture). Water efficiency continues to be a priority for the Alliance.

Ontario Agri-Food Innovation Alliance (uoguelph.ca)

The Ontario Agri-Food Innovation Research Initiative is a research and innovation program launched in October 2023 that supports applied research, KTT, pilot and demonstration, and commercialization projects through Canada-Ontario Sustainable Canadian Agricultural Partnership (2023-28) funding. Agricultural water quality and quantity is one of the ten agri-food research and innovation priorities that will likely attract water efficiency and quality projects from various research institutions of Ontario.

Ontario Agri-food Research Initiative | ontario.ca

OBJECTIVE 5) DEVELOP EDUCATION PROGRAMS AND INFORMATION SHARING FOR ALL WATER USERS

To achieve this objective, Ontario has a range of education initiatives and other programs that raise awareness of the importance of water and the value of conservation, efficiency and cost-saving, and to share information on best management practices.

25. Walkerton Clean Water Centre

The Walkerton Clean Water Centre was established in 2004. The Centre provides training for drinking water operators across Ontario. The Centre's Technology Demonstration Facility, with its leading-edge drinking water technologies, is a platform for hands-on training and research on cost-effective solutions for small drinking water systems. The Centre is also responsible for delivering education, information and advice on water treatment, equipment, technology and operational requirements, and environmental issues related to drinking water. Currently, the Centre offers content on water conservation as part of the Mandatory Certificate Renewal Course (2024-26), which must be completed by all drinking water operators and water quality analysts to renew their certificates. Course participants learn key concepts of source water protection including the guiding principles of the ministry's permit to take water program, and the promotion of water conservation and stewardship.

Walkerton Clean Water Centre – Ontario's Water Centre (wcwc.ca)

26. Water Efficiency Labelling

The Ministry of the Environment, Conservation and Parks has a promotional partnership agreement with the U.S. Environmental Protection Agency to be part of their WaterSense Program, a water efficiency labelling program for products such as showerheads, faucets, toilets, and pre-rinse spray valves. As a promotional partner, Ontario can share information about the program and promote WaterSense. The WaterSense label lets consumers know they are buying products tested and proven to use 20 per cent less water and will make it easier for Ontarians to make green choices every day. WaterSense also gives tips for saving water around the house. Ontario-based manufacturers can get their water efficient products certified and promoted under the program. Retailers, municipalities and other organizations in Ontario can also participate in WaterSense and help promote the label. More information is available at:

WaterSense | US EPA

27. Best Management Practices

For the agricultural sector, the Ministry of Agriculture, Food and Agribusiness has released over 25 books on best management practices (BMPs), also referred to as environmentally sustainable agricultural practices. BMPs are consensus-based documents developed by multi-disciplinary and multi-agency project teams. This series offers proven, practical and affordable approaches to conserving soil, water and other natural resources in agricultural and rural areas. Four books - Irrigation Management, Water Management, Water Wells and Cropland Drainage - address, among other things, efficient use of water/water conservation, (e.g. water efficient irrigation systems and staggered irrigation schedules, water quality tile drainage installation, maintenance and outlet protection for erosion control and subsurface drainage). The BMP series can be found here:

Agricultural best management practices | (bmpbooks.com)

For the municipal sector, the Ministry of the Environment, Conservation and Parks provided funding to the Ontario Water Works Association (OWWA) to prepare “Water Efficiency: Best Management Practice” as well as “Outdoor Water Use Reduction Manual” and associated seminars, with order information available through OWWA’s Water and Energy Efficiency Committee:

Water Energy and Efficiency Committee (owwa.ca)

28. Canada-Ontario Environmental Farm Plan Program and Sustainable Canadian Agricultural Partnership – Ontario Agricultural Sustainability Initiative suite of programming for Producers

The Ontario Ministry of Agriculture, Food and Agribusiness, in partnership with Agriculture and Agri-Food Canada supports the development and delivery of the Canada-Ontario Environmental Farm Plan program. The Environmental Farm Plan (EFP) is a confidential, voluntary self-assessment that farmers undertake to review potential environmental risks associated with their farm operations. Farmers attend an

EFP educational workshop, complete a review of their operation, and develop an individualized Action Plan to address identified concerns. Action Plans may be submitted for independent review to verify appropriateness of the actions proposed for mitigating identified areas of risk. The EFP promotes water conservation and water efficiency, raising farmers' awareness of legislative requirements, and best practices.

Participation in EFP and completion of a reviewed plan are required prior to a producer applying for cost-share funding for environmental projects under the Sustainable Canadian Agricultural Partnership – Ontario Agricultural Sustainability Initiative suite of programming for producers.

The Ontario Agricultural Sustainability Initiative, funded under the Sustainable Canadian Agricultural Partnership provides cost-share or acreage-based funding to support a range of best management practices project categories aimed at improving soil health and water quality, reducing greenhouse gas emissions and sequestering carbon.

Funding support for both programs is currently provided by the Ministry of Agriculture, Food and Agribusiness and Agriculture and Agri-Food Canada under the federal-provincial Sustainable Canadian Agricultural Partnership. Both programs are delivered locally to producers, on behalf of government, by the Ontario Soil and Crop Improvement Association.

Canada-Ontario Environmental Farm Plan (EFP) | ontario.ca

OTHER PROGRAMS

In accordance with Ontario's water conservation and efficiency goals, objectives, and the provinces water conservation and efficiency program includes a range of legislation, strategies and programs that align with these objectives by integrating water conservation and efficient water use with other environmental management practices and considerations such as energy use, climate change, and the protection and restoration of hydrological and ecological integrity.

29. *Endangered Species Act*, 2007

With the passage of the *Endangered Species Act, 2007*, Ontario became a North American leader in protection and recovery for the province's more than 260 species at risk and their habitats. Many species at risk and their habitats in the Great Lakes Basin are now legally protected under the Act. Some of these protected species, including Lake Sturgeon and American Eel, are also the focus of rehabilitation efforts under the Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health, 2021.

The key to protecting many species at risk is protecting and restoring their habitats. Effective water management helps to maintain habitat conditions for many species at risk and can aid in their recovery.

Endangered Species Act, 2007, S.O. 2007, c. 6 (ontario.ca)

Species at risk | ontario.ca

30. *Greenbelt Act*, 2005 and Greenbelt Plan, 2017

The *Greenbelt Act,* 2005 provides the legislative framework for the development and implementation of the Greenbelt Plan, 2017. The Act sets out the objectives of the Greenbelt Plan including protection of the land base needed to maintain, restore and improve the ecological and hydrological functions of the Greenbelt Area. The *Greenbelt Act,* 2005 requires municipal decisions under the *Ontario Planning and Development Act,* 1994 and the *Planning Act* or the *Condominium Act* to conform with the policies of the Greenbelt Plan. The *Greenbelt Act,* 2005 also requires municipalities to amend their official plans to conform with the Greenbelt Plan.

The Greenbelt Plan, 2017, requires municipalities contribute to a comprehensive, integrated, and long-term approach to managing water resource systems and natural heritage systems that are comprised of key natural heritage and key hydrological features and areas that are to be identified and protected from development and site alteration, along with appropriate buffers.

The area under the Greenbelt Plan, 2017, contains numerous watersheds, subwatersheds, groundwater and surface water resources, and several river valleys identified in the Plan. These resources are critical to the long-term health and sustainability of the Greater Golden Horseshoe's water resources, biodiversity and overall ecological integrity.

The policies of the Greenbelt Plan, 2017, recognize the importance of key hydrologic areas and how these areas contribute to the health and integrity of the water resource system in the GGH. These policies help align the Greenbelt Plan with source protection plans developed under the *Clean Water Act,* 2006.

Key water resource protection policies in the Greenbelt Plan include those related to: requirements for watershed planning to inform development and infrastructure planning and the identification of a water resource system; and requirements for municipalities to protect, improve or restore the water resource system including key hydrologic areas (e.g. significant groundwater recharge areas, highly vulnerable areas) and features (e.g. wetlands, permanent/ intermittent streams).

Amendment 4c to the Greenbelt Plan took effect at the same time the Provincial Planning Statement, 2024 on October 20, 2024. This amendment maintains policy protections in the Greenbelt that rely on the Provincial Policy Statement, 2020 and A Place to Grow 2019 for lands designated as Protected Countryside in the Greenbelt Plan. This amendment does not affect the lands covered by the Niagara Escarpment Plan or Oak Ridges Moraine Conservation Plan.

Greenbelt Act, 2005, S.O. 2005, c. 1 (ontario.ca)

Greenbelt Plan (2017) | ontario.ca

31. *Niagara Escarpment Planning and Development Act* and Niagara Escarpment Plan

The *Niagara Escarpment Planning and Development Act* sets out the legislative framework for the Niagara Escarpment Plan (NEP) and its implementation through a system of development control that is administered by the Niagara Escarpment Commission, a regulatory agency of the Ontario Government. The purpose of the Act and the NEP is to provide for the maintenance of the Niagara Escarpment and land in its vicinity substantially as a continuous natural environment, and to ensure that only such development occurs as is compatible with that natural environment.

The Plan identifies several land use designations which direct how land can be used throughout the NEP Area and includes development criteria policies that are applied to all proposed development. The NEP includes policies related to development affecting water resources (part 2.6). The objective of these policies is to ensure key hydrological features and functions including the quality, quantity and character of groundwater and surface water, at the local and watershed level, are protected and where possible enhanced.

Niagara Escarpment Plan (NEP) - Niagara Escarpment Commission (NEC)

Niagara Escarpment Planning and Development Act, R.S.O. 1990, c. N.2 (ontario.ca)

32. Ontario’s Biodiversity Strategy, 2023-2030

Ontario’s Biodiversity Strategy is the guiding framework for coordinating the management of Ontario’s biodiversity. Implementation and reporting (through the State of Ontario’s Biodiversity report) on progress towards achievement of the strategy’s 13 targets is guided by the Ontario Biodiversity Council with membership from government, conservation stakeholders, Indigenous organizations and industry. Ontario’s Biodiversity Strategy includes actions to reduce threats and enhance the resilience of the Great Lakes through activities including reducing pollution, preventing the introduction and spread of invasive species, identifying and prioritizing restoration areas, implementing policies to better protect species at risk and their habitats, enhancing a system of protected areas representative of Ontario’s ecosystems, and encouraging private land and water resources stewardship. On an international scale, Ontario participates in efforts to conserve the diversity of species and ecosystems of the Great Lakes Basin through binational projects that developed biodiversity conservation strategies for each of the Great Lakes.

Ontario Biodiversity Council | Ontario's Strategy - Ontario Biodiversity Council

State of Ontario’s Biodiversity | why reporting on biodiversity is important (sobr.ca)

Great Lakes Biodiversity Conservation Strategies (conservationgateway.org)

33. Ontario’s Great Lakes Strategy

Ontario's Great Lakes Strategy, released in 2012, provides a roadmap for how Ontario will focus action to protect the Great Lakes. The Strategy summarizes environmental conditions of the Great Lakes and Ontario's actions taken to date and identifies priorities for future action.

Goal 2 of Ontario's Great Lakes Strategy (protecting water for human and ecological health) includes actions to improve water quantity management such as fulfilling Ontario's commitments under the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement and promoting water conservation and efficiency under the *Water Opportunities and Water Conservation Act*.

In 2016, Ontario published a progress report that outlines some of the key accomplishments and new scientific findings established during the first three years of Ontario's Great Lakes Strategy. In 2022, the second report was released.

Ontario's Great Lakes Strategy | ontario.ca

Archived - Ontario's Great Lakes Strategy 2016 progress report | ontario.ca

Ontario's Great Lakes Strategy: Second progress report | ontario.ca

34. Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health, 2021

For over 50 years the Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health (COA) has been the principal mechanism through which Ontario and Canada coordinate their work to address their respective and shared commitments to restore, protect and conserve the Great Lakes. Since 1971, a series of COAs have enabled both governments, together with local partners, to address the most significant challenges facing the Great Lakes region. COA supports Ontario's implementation of the Great Lakes Strategy and Canada's commitments under the 2012 Canada-U.S. Great Lakes Water Quality Agreement.

In 2021 Ontario and Canada signed the ninth COA, effective from June 1, 2021 until May 31, 2026. This agreement marks 50 years of collaborative Great Lakes work between both governments since the first COA was signed in 1971.

The 2021 COA continues to build on the successes and achievements of the 2014-2019 COA and includes continued commitments to enhance knowledge and understanding through sharing data and expertise on water levels and water budgets of the Great Lakes and supporting the development and implementation of regional Great Lakes adaptive management initiatives, including initiatives related to lake level uncertainties, vulnerabilities and risks.

The 2021 COA incorporates feedback received from engagement with the public, First Nations, Métis and the broader Great Lakes community.

Other provincial Great Lakes priorities addressed in the 2021 COA include improving municipal wastewater and stormwater management, reducing plastic pollution and

excess road salt, restoring native species and habitats, improving climate resilience, and reducing excess nutrients and algal blooms.

Ontario is committed through the Great Lakes Protection Act, 2015 (GLPA) and COA to establish phosphorus load reduction targets and implement an action plan for the Lake Erie basin. The Canada-Ontario Lake Erie Action Plan (LEAP) is Canada and Ontario's domestic action plan to reduce phosphorus loads to Lake Erie by 40 per cent. Released in 2018, the LEAP identified more than 120 actions to help achieve the Lake Erie phosphorus load reduction targets to reduce harmful and nuisance algal blooms and decrease low oxygen zones. Ontario is working with Canada and partners including municipalities, conservation authorities, agricultural organizations, conservation organizations, and Indigenous communities to implement the LEAP. This includes actions to better manage wastewater and stormwater discharges; keep phosphorus on farmland and out of waterways through best management practices; restore natural heritage features such as wetlands; improve monitoring and science; and enhance communication and outreach.

2021 Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health:
Canada-Ontario Great Lakes agreement | ontario.ca

COA Summary:
Summary of the Canada-Ontario Great Lakes agreement | ontario.ca

Canada-Ontario Lake Erie Action Plan
Canada-Ontario Lake Erie Action Plan | ontario.ca

35. *Great Lakes Protection Act*, 2015

The *Great Lakes Protection Act,* 2015 (GLPA) strengthens the province's ability to restore and protect the Great Lakes and St. Lawrence River, as well as the waterways that flow into them.

Ontario's Great Lakes Strategy was first released in 2012. The GLPA requires Ontario to report on progress made under Ontario's Great Lakes Strategy every three years. The first progress report was published in 2016 and the second progress report was published in 2023. Under the GLPA, Ontario is also required to undertake a review of its Great Lakes Strategy every six years.

Protecting the Great Lakes | ontario.ca

Great Lakes Protection Act, 2015, S.O. 2015, c. 24 (ontario.ca)

Ontario's Great Lakes Strategy | ontario.ca

Archived - Ontario's Great Lakes Strategy 2016 progress report | ontario.ca

Ontario's Great Lakes Strategy: Second progress report | ontario.ca

36. Joint Strategic Plan for the Management of Great Lakes Fisheries

The Joint Strategic Plan for the Management of Great Lakes Fisheries is a world-renowned model for ensuring that Canada and the U.S. agree on how best to manage and sustain common Great Lakes fish stocks. The Great Lakes Fishery Commission, a secretariat that coordinates fisheries management and research on the Great Lakes, coordinates implementation of this historic plan, originating in the 1950s and last revised in 1997. The Ministry of Natural Resources represents Ontario on four out of five Great Lakes Fishery Commission lake committees and on the Council of Lake Committees. The lake committees are responsible for developing fish-community goals and objectives for each Great Lake, as well as plans for managing, preserving and restoring Great Lakes fish species and their habitats.

The Joint Strategic Plan identifies the need for an ecosystem approach to Great Lakes fishery management, recognizing the impact of water quality and water use on fish habitat. This includes the potential for large-scale water diversions to impact fish populations in the Great Lakes. As a result, the plan sets out an Ecosystem Management Strategy for the Great Lakes which has unique strategic procedures requiring the identification and resolution of environmental issues such as water uses that may impede the achievement of the individual Great Lakes Fish-Community Objectives.

Great Lakes Fishery Commission - Home (glfc.org)

37. *Lake Simcoe Protection Act*, 2008 and Lake Simcoe Protection Plan, 2009

The *Lake Simcoe Protection Act,* 2008 provides the legislative framework for the development and implementation of the Lake Simcoe Protection Plan. The delivery of Lake Simcoe Protection Plan policies is a shared responsibility led by provincial ministries, including the lead ministry, the Ministry of the Environment, Conservation and Parks, with the Ministry of Natural Resources and the Ministry of Agriculture, Food and Agribusiness, in collaboration with the federal government, municipalities, Indigenous communities, the Lake Simcoe Region Conservation Authority and others to improve the health of the watershed.

Ontario undertakes or supports monitoring and research in the Lake Simcoe watershed to track changes in water quality and tributary flow over time.

Ontario is also supporting actions from other water use sectors by encouraging the development and implementation of water conservation practices in the agricultural, tourism and construction sectors. For example, the Lake Simcoe Region Conservation Authority and local municipalities require new development to be accompanied by plans and studies that minimize changes to the water balance and protect recharge functions.

38. *Crown Forest Sustainability Act*, 1994

In Ontario, the *Crown Forest Sustainability Act* provides the legislative framework to sustainably manage public forests. Direction and tools in the framework maintain oversight and protect the environment.

The Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales requires forest managers to prevent or minimize adverse effects from forest operations. For example, when operating in proximity to a wetland or waterbody, the type and timing of road construction/ maintenance, renewal, harvest, and tending is prescribed to maintain water quality and wildlife habitat.

Specifically, section 4.1 of the Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales provides direction to maintain ecological functions of aquatic and wetland ecosystems and shoreline forest, including habitat suitability and productive capacity by:

- protecting the water quality, hydrology, and biota of lakes, ponds, rivers, and streams and the composition, pattern, and structure of the associated shoreline forest; and
- minimizing adverse effects from forest operations on provincially significant wetlands, rich lowland hardwood-dominated forest, non-forested wetlands, and woodland pools.

Forest policies are regularly reviewed and revised to improve their effectiveness and ensure direction is based on the most current science and knowledge available. The Forest Management Guide for Conserving Biodiversity at the Stand and Site Scales was recently reviewed and is being revised to address aquatic and wetland ecosystems by:

- revising the potential sensitivity classification of lakes, ponds, rivers, and streams;
- increasing the protection of smaller, headwater streams during forest operations;
- integrating the standard wetland classification by providing wetland class-specific direction; and

ensuring hydrological flow in wetlands is maintained during road construction.

Crown Forest Sustainability Act, 1994, S.O. 1994, c. 25 (ontario.ca)

Forest Management Guides

39. Wetlands Conservation Partner Program

The Wetlands Conservation Partner Program has invested $31M in capital funding over 5 years for wetland restoration and enhancement projects. The funding focuses on restoring and enhancing wetlands in priority areas across Ontario and supporting municipalities with stormwater management.

Since the program launched in 2020, about 560 wetland restoration and enhancement projects have been funded covering approximately 9,100 acres of wetlands in the Great Lakes watershed and connecting lakes and rivers. These projects are implemented by several conservation organizations, municipalities and Indigenous communities,

including Ducks Unlimited Canada, ALUS Canada, the Ontario Federation of Anglers and Hunters, Toronto Region Conservation Authority, Royal Botanical Gardens, Bruce Peninsula Biosphere Association and the City of Brampton.

These projects are helping to improve water quality, mitigate excess stormwater flow, preserve and increase habitats for endangered species, prevent flooding, build climate change resiliency in the Great Lakes watersheds connect waterways, and increase economic activity throughout Ontario.

All program funds have been allocated to wetland projects ongoing until March 31, 2025.

Wetlands Conservation Partner Program

40. Ontario's Provincial Fish Strategy: Fish for the Future

Ontario's abundant aquatic resources support a diverse range of year-round recreational, commercial and First Nation and Métis fisheries. Together, these activities and their supporting industries are estimated to contribute more than $1.74 billion annually to Ontario's economy. The province's Provincial Fish Strategy outlines goals, objectives and tactics for the dual purposes of improving the conservation and management of fisheries and the ecosystems on which fish communities depend, and promoting, facilitating and encouraging fishing as a social, economic and cultural activity in the province.

A Key Management Approach of the Provincial Fish Strategy is the ecosystem-based approach, where all ecosystem components, including humans and their interactions, are considered. In keeping with this, one of the goals of the Provincial Fish Strategy is 'Healthy Ecosystems that Support Self-Sustaining Native Fish Communities'. There are five objectives under this goal aimed at protecting and managing native fish populations and the diversity, connectivity, structure, and function of Ontario's aquatic ecosystems, as well as restoring or rehabilitating them where they are degraded. The objectives and tactics are also aimed at mitigating or adapting to large scale environmental changes and minimizing cumulative environmental effects of multiple stressors which can be much greater than any single stressor operating alone.

This goal is supported by the Ministry of Natural Resources' broad-scale monitoring program for inland lakes which aims to: describe the distribution of aquatic resources in Ontario lakes; identify stresses on these resources; track trends in indicators of the health of Ontario's fisheries, lake ecosystems and aquatic biodiversity; and assess and report on the status of fisheries in Ontario. A wide range of variables are monitored including: fish abundance, sex, length and weight; fish contaminant levels (in collaboration with the Ministry of the Environment, Conservation and Parks, Fish Contaminant Monitoring Program); lake temperature, oxygen levels, and overall water quality; presence and abundance of invasive species; and estimated fishing effort.

Intensive monitoring occurs on each of the Great Lakes to provide information on the fish communities and fisheries they support. These monitoring programs support decision-making used in managing the sustainability of recreational fisheries resources

and to inform the development of lake-specific Fish Community Objectives under the Joint Strategic Plan for Management of Great Lakes Fisheries and establish allowable harvest levels for fisheries within the lakes.

Fishing | ontario.ca

Ontario's provincial fish strategy | ontario.ca to go directly to the Strategy.

41. Anishinabek/Ontario Fisheries Resource Centre (AOFRC)

The Anishinabek/Ontario Fisheries Resource Centre, established in 1995, continues to serve as an independent source of information on fisheries assessment, conservation, and management, promoting the value of both Western science and Indigenous knowledge of the land and water. Since its establishment, the AOFRC has completed over 500 fisheries projects with First Nations and government agencies across the province, including creel surveys, index netting projects, tagging studies, fish habitat inventories, and syntheses of fisheries data for formulating resource management plans. This type of information contributes to measuring the success of water conservation and fisheries management efforts.

Anishinabek/Ontario Fisheries Resource Centre (aofrc.org)

42. Ontario Parks Water Conservation Initiatives

Ontario Parks is responsible for the operation and protection of 638 protected areas including 342 provincial parks and 296 conservation reserves. This land area covers 9.8 million hectares and is 9% of the province’s land area and inland waters.

Over the last few years, Ontario Parks has undertaken several initiatives to conserve water use within parks. Initiatives include the use of low-flow fixtures in park washrooms, variable frequency driven distribution pumps, propane water heaters to reduce reliance on hydroelectric power, cold water meters in new buildings to monitor water usage, the use of polyethylene piping in water distribution systems where possible to reduce leakage, monitoring for water system leakage, identifying and making timely repairs, and during infrastructure renewal reducing the number of public water taps and locating them in more convenient spots for the public. While several of our operating parks are municipally connected to sewerage, most parks rely on septic treatment systems to safely return the water to the local environment.

Ontario Parks permanently protects thousands of square kilometres of water including lakes, rivers and wetlands. These areas are managed with a priority on ecological integrity, or environmental health, for the benefit of Ontarians and their visitors. This priority on ecological integrity is demonstrated at multiple scales; through a robust policy framework that outlines permitted activities, to protected area classifications that protect aquatic features (such as waterway class parks), to protected area-specific management plans that document values, pressures, vision, site objectives, and management direction in the form of site-specific management policies and implementation actions (e.g. wetland restoration).

43. Species at Risk Stewardship Program

The Species at Risk Stewardship Program is a funding program established under the *Endangered Species Act,* 2007 to encourage and support the protection and recovery of species at risk and their habitats through stewardship and research activities. Since 2007, Ontario has supported over 1,200 stewardship projects through the program. Program funding is available to a wide variety of individuals and groups. Examples of eligible aquatic-related activities could include inventory, monitoring, researching or education and outreach work related to aquatic species at risk, enhancing and protecting aquatic habitat of species at risk or the development and implementation of Best Management Practices to help avoid or mitigate threats to species such as American Eel, Redside Dace, or Spotted Gar.

Species at Risk Stewardship Program | ontario.ca

44. Eastern Habitat Joint Venture

The Eastern Habitat Joint Venture (EHJV) is a collaborative partnership of government and non-government organizations that work together to conserve wetlands and other habitats that are important to waterfowl and other migratory birds. Officially formed in 1989, the EHJV has helped to implement habitat conservation programs that support continental waterfowl objectives identified under the North American Waterfowl Management Plan (NAWMP). The EHJV also supports the mission of the North American Bird Conservation Initiative (NABCI), an inter-governmental and inter-agency initiative to conserve all native birds and the habitats that support them.

The EHJV, one of 25 Joint Ventures in North America, spans the six eastern-most Canadian provinces: Ontario, Québec, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador. Ontario EHJV partners include the Government of Canada (Environment and Climate Change Canada – Canadian Wildlife Service), the Government of Ontario (Ministry of Natural Resources), Ducks Unlimited Canada, the Nature Conservancy of Canada and Birds Canada. The Ontario government, through the Ministry of Natural Resources has provided annual financial and/or in-kind support for wetland conservation by Ontario EHJV partners since 1994.

The Eastern Habitat Joint Venture – Partners conserving habitat for migratory birds and people (ehjv.ca)

45. Great Lakes Local Action Fund

The Great Lakes Local Action Fund was launched in 2020 and supports local projects that protect and restore coastal, shoreline and nearshore areas of the Great Lakes and the rivers and streams that flow into them. In the first funding round of the Great Lakes Local Action Fund, the Ontario government provided $1.9 million in funding to 44 community-based projects that had a positive environmental impact on the Great Lakes, as well as social and/or economic benefits for communities.

In February 2022, Ontario launched the second round of the Fund. $1.8 million was provided to 36 recipients, for projects that helped protect and improve the health of the Great Lakes and benefit local communities.

On June 5, 2024, Ontario launched another round of funding. This round will provide up to $1.8M in 2025 to community-based projects working to increase climate change resiliency and protect or improve water quality in the Great Lakes.

Projects that contribute to Great Lakes protection and restoration support improved water quality and ecosystem health, which could also help to achieve water conservation and efficiency goals.

Great Lakes Local Action Fund | ontario.ca