

QUESTIONNAIRE FOR PRELIMINARY SUBMITTALS BY STATES AND PROVINCES

This Questionnaire is provided as a guide to assist the States and Provinces in gathering the information necessary to prepare their Five-Year Reports and to enable the Compact Council and Regional Body to undertake their required review, declaration of findings and recommendations under the Compact and the Agreement.

General Information

1. Lead agency/agencies and contact person(s) and contact information.

Lead agency: NYS Department of Environmental Conservation (NYS DEC)
DOWinformation@dec.ny.gov

Contact person:

Diane English, P.E Chief, Water Quantity Management Section
New York State Department of Environmental Conservation
Bureau of Water Resource Management
Division of Water
625 Broadway, Albany NY 12233-3508
diane.english@dec.ny.gov

2. Identify all laws, statutes, rules, regulations, executive orders, administrative orders or other similarly enforceable documents (collectively, “Laws”) that establish or implement programs meeting the requirements of the following provisions of the Compact or Agreement. In particular, ensure that all such citations address the following sections and articles of the Compact and Agreement. Include a brief lay person description for each section of the program and weblink for more information (registration, reporting, diversion, decision making standard for water use permits, water conservation program, science and research, etc.)

Weblinks:

- NYS Environmental Conservation Law (NYS ECL):
<http://public.leginfo.state.ny.us/lawssrch.cgi?NVLWO:>
- 6 NYCRR §601:
[https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=If8c9ea40b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=If8c9ea40b5a011dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default))

a. Compact Section 3.4/Agreement Article 300

Statute:

- New York State Environmental Conservation Law (NYS ECL) §21-1001: adopts Compact into New York State’s Environmental Conservation Law;
- NYS ECL §15-1501: sets forth New York's statewide water withdrawal permit program and water conservation and efficiency program with specified goals.

Regulation:

- 6 NYCRR §601(1): provides that 6 NYCRR Part 601 implements New York's obligation under the Compact to create a regulatory program for water withdrawals in the Great Lakes St. Lawrence River Basin (Basin) pursuant to NYS ECL 21, title 10;
- 6 NYCRR §601.5: provides annual reporting requirements for water withdrawals;
- 6 NYCRR §601.10(k): requires applicants for water withdrawal permits to submit a project justification that shows, among other things, why increased water conservation and efficiency measures cannot negate or reduce the need for the proposed water withdrawal;
- 6 NYCRR §601.10(n): provides that diversions of any quantity out of the Basin are prohibited by the Compact, subject to limited exceptions and that an applicant for an exception must provide NYS DEC with information in a timely manner to respond to requests by the Council and Regional Body;
- 6 NYCRR §601.11(c): requires, among other things, that in making a determination to grant or deny a water withdrawal permit or to grant a permit with exceptions, NYS DEC determine whether the need for all or part of the proposed water withdrawal cannot reasonably be avoided through the efficient use and conservation of existing water supplies;
- 6 NYCRR §601.11(d): states that when a proposed water withdrawal for public water supply also constitutes a diversion out of the Basin that is subject to the Compact, NYS DEC will determine whether all withdrawn water that is not lost to reasonable consumptive use will be returned to the Basin.

b. Compact Section 4.1/Agreement Article 301**Statute:**

- NYS ECL §21-1001: adopts Compact into New York State's Environmental Conservation Law;
- NYS ECL §15-1501(4): directs NYS DEC to promulgate regulations regarding monitoring, reporting and recordkeeping requirements for water withdrawals equal to or greater than the threshold volume;
- NYS ECL §15-1502(14): establishes regulatory threshold volume of water for potable and non-potable withdrawals subject to permit and registration/reporting consistent with Compact;
- NYS ECL §15-1501(6): sets forth the annual water withdrawal reporting requirement;
- NYS ECL §15-1503(4): authorizes NYS DEC to set permit conditions, including reporting requirements;

- NYS ECL §15-1504: establishes water withdrawal requirements for agricultural withdrawals;
- NYS ECL §15-1505(6): prohibits diversions from the Basin with limited exceptions when in compliance with the Compact.

Regulation:

- 6 NYCRR §601.1: states that 6 NYCRR Part 601 implements New York’s obligations under the Compact;
- 6 NYCRR §601.5: implements statewide annual water withdrawal reporting requirements;
- 6 NYCRR §601.12: set forth provisions of water withdrawal permits, including a requirement that the permittee comply with all terms and conditions of the permit;
- 6 NYCRR §601.17: describes statewide requirements for annual registration of agricultural withdrawals;
- 6 NYCRR §601.18(j): prohibits diversions from the Basin with limited exceptions when in compliance with the Compact;
- 6 NYCRR §601.20(a)(1): requires water withdrawal permittees statewide to comply with all monitoring, recording and reporting requirements specified in the permit.

c. Compact Sections 4.2(2), 4.2(4) and 4.2(5)/Agreement Article 304

Statute:

- NYS ECL §21-1001: adopts Compact into New York State’s Environmental Conservation Law;
- NYS ECL §15-1501(6): mandates annual reporting of water conservation measures;
- NYS ECL §15-1501(8): sets forth New York's statewide water conservation and efficiency program with specified goals;
- NYS ECL §15-1503(1)(f): delineates elements of mandatory water conservation program that incorporates environmentally sound and economically feasible water conservation measures;
- NYS ECL §15-1503(2): sets forth determinations for NYS DEC to make when deciding whether or not to issue a water withdrawal permit, including whether all or part of the proposed withdrawal cannot be reasonably avoided through the efficient use and conservation of existing water supplies and whether the proposed withdrawal

incorporates environmentally sound and economically feasible water conservation measures.

Regulation:

- 6 NYCRR §601.5(5): mandates annual reporting of consumptive use;
- 6 NYCRR §601.7(e): establishes 10-year term for permits and incorporates a requirement for environmentally sound and economically feasible water conservation measures;
- 6 NYCRR §601.10(e): requires permit applications to include an engineer's report that, among other things, evaluates all practicable alternatives to a proposed source, including analysis of increased water conservation measures as a means to reduce or eliminate the need for the proposed source;
- 6 NYCRR §601.10(f): describes required measures and use of statewide reporting form for a water conservation plan;
- 6 NYCRR §601.10(k)(2): requires permit applications to include a project justification showing why increased water conservation or efficiency measures cannot negate or reduce the need for the proposed water withdrawal;
- 6 NYCRR §601.10(k)(4): requires permit applications to include a project justification showing why the proposed water conservation measures are environmentally sound and economically feasible;
- 6 NYCRR §601.11(c): sets forth determinations for NYS DEC to make when granting or denying a permit application, including, but not limited to, determining whether the need for all or part of the proposed withdrawal cannot reasonably be avoided through the efficient use and conservation of existing water supplies and whether the proposed water withdrawal will be implemented in a manner that incorporates environmentally sound and economically feasible water conservation measures;
- 6 NYCRR §601.11(d): states that when a proposed water withdrawal for public water supply also constitutes a diversion out of the Basin that is subject to the Compact, NYS DEC will determine whether all withdrawn water that is not lost to reasonable consumptive use will be returned to the Basin;
- 6 NYCRR §601.12(g): provides that if a withdrawal originates within the jurisdiction of a compact basin commission, the withdrawal must comply with applicable water withdrawal standards or requirements of that compact basin commission.

d. Compact Section 4.3/Agreement Article 200

Statute:

- NYS ECL §21-1001: adopts Compact into New York State's Environmental Conservation Law;

- NYS ECL §15-1503: describes authority to regulate new and increased withdrawals by permit;
- NYS ECL §15-1504: outlines authority to manage existing agricultural withdrawals by registration and provides an exemption from reporting requirements for registered withdrawals;
- NYS ECL §15-1505(6): delineates the prohibition on diversions from the Basin subject to exceptions in compliance with the Compact.

Regulation:

- 6 NYCRR §601.4(a): implements prohibition on diversions consistent with Compact;
- 6 NYCRR §§601.6 through 601.10: delineates water withdrawal permit requirements;
- 6 NYCRR §601.10(n): sets forth the prohibition on diversions from the Basin other than in accordance with exceptions in compliance with the Compact;
- 6 NYCRR §601.16(a)(6): authorizes NYS DEC to deny a permit application that has not been approved by the Council;
- 6 NYCRR §601.16(b)(6): authorizes NYS DEC to suspend or revoke a water withdrawal permit if the permittee is out of compliance with the requirements of the Compact or any other compact basin commission;
- 6 NYCRR §§601.19 and 610.20: set forth monitoring, recording and reporting requirements.

e. Compact Section 4.8, 4.9 and 4.13/Agreement Articles 200, 201 and 208

Statute:

- NYS ECL §21-1001: adopts Compact into New York State’s Environmental Conservation Law;
- NYS ECL §15-1501(7): provides exemptions from water withdrawal permits consistent with the Compact;
- NYS ECL §15-1505(6): prohibits diversions, subject to exceptions in compliance with the Compact.

Regulation:

- 6 NYCRR §601.4(a): implements the prohibition on withdrawals and diversions that are not in compliance with the Compact;
- 6 NYCRR §601.9: establishes permit exemptions;

- 6 NYCRR §601.10(n): implements prohibition on any new or increased diversions, subject to exceptions in compliance with the Compact;
- 6 NYCRR §601.11(d): establishes return flow requirement for all unused water if diverted from the Basin;
- 6 NYCRR §601.18(j): prohibits interbasin diversions unless an exception is authorized in compliance with the Compact.

f. Compact Section 4.10/Agreement Article 206

Statute:

- NYS ECL §21-1001: adopts Compact into New York State’s Environmental Conservation Law;
- NYS ECL §15-1502(14): defines threshold volume for management and regulation;
- NYS ECL §15-1503: authorizes regulatory permit program.

Regulation:

- 6 NYCRR §601.2(p): defines threshold volume in regulations;
- 6 NYCRR Part 601: sets forth implementing measures consistent with the Compact.

g. Compact Section 4.11/Agreement Article 207

Statute:

- NYS ECL §21-1001: adopts Compact into New York State’s Environmental Conservation Law;
- NYS ECL §15-1503(2): sets forth the decision-making standard, consistent with the Compact;

Regulation:

- 6 NYCRR §601.2: provides definitions consistent with Compact;
- 6 NYCRR §601.5: implements mandatory reporting requirements for water withdrawals;
- 6 NYCRR §601.10(k): incorporates elements of decision-making standard into permit application process;
- 6 NYCRR §601.11: implements process for taking action on permit applications.

h. Agreement Article 304

Statute:

- NYS ECL §21-1001: adopts Compact into New York State’s Environmental Conservation Law;
- NYS ECL §15-1501(6): mandates annual reporting of water conservation measures for all permitted withdrawals;
- NYS ECL §15-1501(8): establishes goals of water conservation and efficiency program;
- NYS ECL §15-1503(1)(f): delineates elements of mandatory water conservation program.

Regulation:

- 6 NYCRR §601.5(a)(5): provides for annual reporting of consumptive use;
- 6 NYCRR §601.7(e): establishes 10-year term for permits and incorporates requirement for environmentally sound and economically feasible water conservation measures;
- 6 NYCRR §601.10(f): describes required measures and use of statewide reporting form for water conservation plan.

- 3. Identify any changes from the 2014 report, highlighting in particular major changes from 2014 throughout the response. If there are no changes, please indicate accordingly.**

Both houses of the New York State Legislature have recently passed two new bills that will further the goals of the Compact and Agreement. The first will amend NYS ECL §15-0314 to raise standards for water-efficient plumbing and appliances to align with federal standards issued by the Environmental Protection Agency (EPA). The second, recently signed into law, will amend NYS ECL §15-1503 to require NYS DEC to post information regarding public water supply permits to the DEC website including information on water usage and water conservation.

Water Management Program Report

- 1. Summary description of the State’s or Province’s Water management program scope and thresholds, including the current status of program implementation and a description of which New or Increased Withdrawals, Consumptive Uses and Diversions are subject to the program. The summary should include information on registration (if applicable), management and regulation, and reporting elements of the program.**

New York State was among the first states to adopt the Compact into state Environmental Conservation Law (NYS ECL) on March 4, 2008. The NYS ECL was updated in 2011 to further protect New York's waters, incorporating the obligations of the Compact into a statewide regime, by requiring a NYS DEC permit for any type of water withdrawal system having the maximum capacity to withdraw 100,000 gallons per day (gpd) or more of surface water or groundwater. By basing the threshold on system capacity of at least 100,000 gpd rather than volume withdrawn,

New York's threshold encompasses a greater number of withdrawals and consumptive uses. Previously, this law applied only to public water supplies. The law covers the following areas:

- Non-agricultural water withdrawal reporting and permitting
- Agricultural water withdrawal reporting, registration, and permitting
- Water well contractor program
- Drought information
- Scientifically sound and economically feasible water conservation and efficiency plans including a Water Conservation Manual and Certification Information For NYS Water Saving Plumbing Fixtures law
- Interbasin diversions and registration including the Compact's prohibition and exceptions for diversions.

Because the law expanded management and regulation of water withdrawals to a broader number of facilities having existing permits or registrations and to all new or increased withdrawals, it established two types of permits:

- "New Permits" are required before a new water withdrawal system, or an increase in taking at an existing system, can be put into operation; or if the facility did not previously report its withdrawal above the threshold volume. Some currently operating facilities that previously did not require a permit may fall under the "New Permits" definition.
- "Initial Permits" were required of *any type* of existing water withdrawal having the capacity to withdraw 100,000 gallons per day or more where the withdrawal was previously reported. Consequently, a large number of existing water withdrawals that were not previously required to obtain permits needed to do so. In order to manage permitting of all these existing facilities in a coordinated fashion, the regulations contained a 5-year schedule for application submissions to DEC, beginning with the largest (greater or equal to 100 million gallons per day) due in 2013 and the smallest by February 15, 2017. The Initial Permit Program has been successfully concluded.

The law also requires statewide registration and reporting of existing (in existence before February 15, 2012) agricultural withdrawals that are greater than 100,000 gpd (30 day average) and major basin water diversions of greater than 1,000,000 gpd. The law became effective on February 15, 2012 and final implementing regulations became effective on April 1, 2013.

In addition, all water withdrawal permits require annual reporting of the following information:

- The water source, the location of the water source and the source capacity;
- The amount of water withdrawn for the calendar year including the average and peak withdrawals;
- A description of the use of the water withdrawn;
- The estimated amounts of water returned, if any, the locations of such returns, and the method of such returns;
- The actual or estimated average monthly and annual volumes and rates of water lost or consumptively used from the withdrawal;
- The water conservation and efficiency measures undertaken during the reporting period; and
- Any water user that purchased water from the facility during the previous year.

2. Describe specifically how Water Withdrawals in the State or Province are managed by:

- a. Sector (public water supply, self-supply commercial and institutional, self-supply irrigation, self-supply livestock, self-supply industrial, self-supply thermoelectric power production (once-through cooling), self-supply thermoelectric power production (recirculated cooling), off-stream hydroelectric power production, in-stream hydroelectric power production (voluntary), and other self-supply;**

As described above, NYS DEC's Division of Water regulates by permit and registration, all water withdrawals (with some exceptions) within the Basin greater than or equal to 100,000 gpd.

A typical permit application must include, but is not limited to:

- General and Detailed Maps
- Contract Plans
- Engineer's Report
- Water Conservation Program
- Latest Annual Water Reporting Form
- Project Justification
- Compliance with the Compact

In making its decision to grant or deny a permit or to grant a new permit with conditions, the Department shall determine whether:

- the proposed water withdrawal takes proper consideration of other sources of water supply that are or may become available;
- the quantity of supply will be adequate for the proposed use;
- the proposed project is just and equitable to all affected municipalities and their inhabitants with regard to their present and future needs for sources of potable water supply;
- the need for all or part of the proposed water withdrawal cannot be reasonably avoided through the efficient use and conservation of existing water supplies;
- the proposed water withdrawal is limited to quantities that are considered reasonable for the purposes for which the water use is proposed;
- the proposed water withdrawal will be implemented in a manner to ensure it will result in no significant individual or cumulative adverse impacts on the quantity or quality of the water source and water dependent natural resources, including aquatic life, this determination may include an evaluation of whether all withdrawn water that is not lost to reasonable consumptive use will be returned to its source New York major drainage basin;
- the proposed water withdrawal will be implemented in a manner that incorporates environmentally sound and economically feasible water conservation measures; and
- the proposed water withdrawal will be implemented in a manner that is consistent with applicable municipal, state and federal laws as well as regional interstate and international agreements.

Permit exemptions, listed 6 NYCRR §601.9 and paragraph (e), below, include an exemption for withdrawals by hydropower facilities operating under a valid Federal Energy Regulating Commission license. Such facilities are subject to the requirements of a 401 Water Quality Certification which may include conditions such as the incorporation of conservation releases to protect downstream habitat. The Division annually monitors and reports water use by this sector

to the Great Lakes Commission for incorporation into the Great Lakes Regional Water Use Database.

b. Water source (groundwater, surface water (Great Lakes-St. Lawrence River), surface water other than Great Lakes-St. Lawrence River);

New York specifically considers the source of all water withdrawals (groundwater, surface water (Great Lakes-St. Lawrence River), surface water other than Great Lakes-St. Lawrence River).

All water withdrawal applications for new or increased withdrawals must submit hydrological data to confirm dependable water supply yields while adequately protecting water levels and in-stream flows for habitat. Such applications must include, among other things:

- a general description of the project and the engineering features of the existing or proposed water withdrawal system;
- a listing of all existing sources of water supply, including wells, surface withdrawals, and any purchases, sales or transfers of water;
- the general character and extent and essential design features of proposed controlling, diverting or regulatory works;
- the proposed instantaneous and maximum daily rates of withdrawal; the existing and projected daily average, daily maximum, and 30-day maximum water demands of the water withdrawal system;
- for groundwater sources: well drilling logs, monitoring well locations and pump test data and analyses of results; and
- for surface water sources: information on rainfall, stream flows and classifications, contributing watershed size, location of the nearby USGS stream gages, other upstream water withdrawals, safe yield analyses or passby flow calculations and proposed withdrawal methods including intake structure design and screening.

c. Quantity (regulatory thresholds, volumes, rates, and reporting requirements);

New York specifically considers the quantity of all water withdrawn (regulatory thresholds, volumes, rates, and reporting requirements).

Any person who is engaged in, or proposes to engage in, the construction, operation or maintenance of a water withdrawal system that withdraws water of a volume equal to or greater than the threshold volume must obtain a permit or agricultural registration. ‘Threshold volume’ means the withdrawal of water of a volume of one hundred thousand gallons or more per day, determined by the limiting maximum capacity of the water withdrawal system; except that for withdrawals for agricultural purposes the threshold volume shall mean the withdrawal of water of a volume in excess of an average of one hundred thousand gallons per day in any consecutive thirty-day period.

An annual report must be submitted on a form available from NYS DEC, based on the water withdrawals for the previous calendar year, and shall include all information requested by the Division of Water. See response in item 1 of the Water Management Program Report section, above, for reporting requirement details. Monthly and annual volumes are reported, and the Division has the authority to request more detailed information on a case-by-case basis.

d. Location (Statewide/Province-wide or Great Lakes-St. Lawrence River Basin); and

Permitting and registration requirements are applicable throughout New York State's portion of the Great Lakes-St. Lawrence River Basin.

e. Any specific exemptions as allowed in the Agreement and the Compact.

All New York State Exemptions are compliant with the Compact and Agreement. A complete listing of these exemptions can be found at: <http://www.dec.ny.gov/permits/6379.html>.

The following exemptions are valid within the Basin:

- Withdrawals for agricultural purposes that have been registered or their annual water usage reported pursuant to the requirements of ECL 15, title 16 or title 33 as of February 15, 2012;
- Withdrawals of hydropower facilities operating under a valid Federal Energy Regulating Commission license;
- Withdrawals from the New York State Canal System, as defined by Subdivision 1 of Section 2 of the Canal Law, that are used by the New York State Canal Corporation for purposes authorized by law;
- Closed loop, standing column or similar non-extractive geothermal systems;
- On-site water withdrawal systems for approved inactive hazardous waste remedial site programs conducted pursuant to state or federal court order or state or federal government agency agreement or order;
- Withdrawals used for fire suppression or other public emergency purposes;
- The extension of supply or distributing mains or pipes within a previously-approved water service area that remains within the amount authorized in a water supply permit or water withdrawal permit for the purpose of supplying potable water;
- The reconstruction of facilities in an existing water withdrawal system when the capacity of such system is in no way altered (reconstruction does not include constructing an adjacent withdrawal structure);
- The construction of filtration or other treatment facilities that will not in any way alter the amount of water which can be made available from the present source of supply;
- Water withdrawals to supply ballast water necessary for lawful and normal vessel activity;
- Water withdrawal directly related to routine maintenance and emergency repairs of dams;
- Temporary water withdrawals for the purposes of construction, dewatering, hydrostatic testing, or aquifer testing, where the volume withdrawn is less than an average of 100,000 gallons per day in any consecutive thirty-day consecutive period (3 million gallons during a 30-day period).

Note: Address all sectors and sources in your descriptions even if one or more sector or source is not currently managed by your State or Province.

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.

a. Decision Making Standard for Withdrawals, Consumptive Uses.

NYS ECL 15-1503 specifies the requirements of an application for a water

withdrawal permit and the criteria that must be met. These criteria include consideration of other sources of supply, the implementation of water conservation measures, limiting the withdrawal to a reasonable usage and protection against adverse environmental impacts on the quality and quantity of the water source.

Furthermore, 6 NYCRR Part 617 implements the New York's **State Environmental Quality Review Act** (SEQR) (NYS ECL 8) and specifically states in 6 NYCRR §617.1(d) that:

"[i]t was the intention of the Legislature that the protection and enhancement of the environment, human and community resources should be given appropriate weight with social and economic considerations in determining public policy, and that those factors be considered together in reaching decisions on proposed activities. Accordingly, it is the intention of this Part that a suitable balance of social, economic and environmental factors be incorporated into the planning and decision-making processes of state, regional and local agencies."

In addition, 6 NYCRR §601.11(c) specifically addresses Section 4.11 of the Compact by requiring that:

- the proposed water withdrawal takes proper consideration of other sources of water supply that are or may become available;
- the quantity of supply will be adequate for the proposed use.
- the proposed project is just and equitable to all affected municipalities and their inhabitants with regard to their present and future needs for sources of potable water supply;
- the need for all or part of the proposed water withdrawal cannot reasonably be avoided through the efficient use and conservation of existing water supplies
- the proposed water withdrawal is limited to quantities that are considered reasonable for the purposes for which the water use is proposed;
- the proposed water withdrawal will be implemented in a manner to ensure it will result in no significant individual or cumulative adverse impacts on the quantity or quality of the water source and water dependent natural resources, including aquatic life; this determination may include an evaluation of whether all withdrawn water that is not lost to reasonable consumptive use will be returned to its source New York major drainage basin;
- the proposed water withdrawal will be implemented in a manner that incorporates environmentally sound and economically feasible water conservation measures; and
- the proposed water withdrawal will be implemented in a manner that is consistent with applicable municipal, state and federal laws as well as regional interstate and international agreements.

New York has recently issued two policy documents in the Division of Water's Technical and Operational Guidance Series (TOGS) that provide guidance for consistent implementation of the standards for issuance.

- TOGS 3.2.1 Processing Water Withdrawal Permit Applications (issued May 25, 2017) provides procedures for staff to follow in the review of water withdrawal permit applications filed in accordance with NYS ECL §15-1501 and 6 NYCRR Part 601. It provides updated guidance on the amended statute, its applicability, and its implementation within the revised regulatory framework. (See http://www.dec.ny.gov/docs/water_pdf/togs321.pdf.)

- TOGS 1.3.12 Incorporation of Flow-Related Conditions in Water Withdrawal Permits (issued April 12, 2017) describes the policies and procedures for incorporating flow-related conditions when issuing Water Withdrawal Permits. In particular, the policy addresses the procedures that should be followed to ensure that the proposed water withdrawal will be implemented in a manner to ensure it will result in no significant individual or cumulative adverse impacts on the quantity or quality of the water source and water dependent natural resources, including aquatic life. (See http://www.dec.ny.gov/docs/water_pdf/flowtogsfinal.pdf.)

b. Exception Standard for Diversions.

NYS ECL 15-1505(6) states that diversions from the Basin are prohibited except for limited public water supply projects that are in compliance with the Compact. 6 NYCRR §601.10(n) also sets forth this prohibition.

4. Overview of State/Provincial reporting and database of Withdrawals, Consumptive Uses and Diversions including implementation status and database elements and capabilities, and reporting mechanisms (e.g., electronic submission, etc.). The overview should include methods of measurement (e.g., flow volume or rate meters, flow gauging, timing devices, etc.) approved by the State/Province for measuring Water volumes.

6 NYCRR §601.5 requires any individual or legal entity whatsoever submit an annual water withdrawal report to the NYS DEC's Division of Water if its water withdrawal system has a capacity to withdraw 100,000 gpd or more. These reports include withdrawal locations, average and peak day amounts, the usage sector, the location and amounts of water returned and the resulting consumptive losses. <http://www.dec.ny.gov/lands/86940.html>. Annual reports may be submitted electronically or in hardcopy.

The annual report shall be submitted on a form available from NYS DEC, based on the water withdrawals for the previous calendar year, and shall include all information requested by NYS DEC including, but not be limited to, the following:

- the water source, the location of the water source and the source capacity if known;
- the amount of water withdrawn for the reporting period, including the average and peak withdrawals, for monthly or other intervals specified by NYS DEC;
- a description of the use of the water withdrawn;
- the estimated amounts of water returned, if any, the locations of such returns, and the method of such returns;
- the actual or estimated average monthly and annual volumes and rates of water lost or consumptively used from the withdrawal; and
- the water conservation and efficiency measures undertaken during the reporting period.

The NYS DEC's Division of Water, in turn, annually reports water use by sector to the Great Lakes Commission for incorporation into the **Great Lakes Regional Water Use Database**.

The NYS DEC's Division of Water maintains databases of Water Withdrawal Permits, annual reports, and water wells. All permitted and registered water withdrawals are included

in a Google Earth data layer within the NYS GIS Clearinghouse and are available to the public at <http://www.dec.ny.gov/pubs/42978.html#waterwith>. Preparations are also underway to post annual reports on NYS DEC's new InfoLocator, an online, interactive map that provides access to many DEC documents, permits, and public data related to the environmental quality of specific sites in New York State. With more than 50 data layers available, this application shows both environmental quality monitoring and natural resource information together in one place. InfoLocator can be found on NYS DEC's public website at <http://www.dec.ny.gov/pubs/109457.html>.

- 5. Include a web link to the State or Province's Withdrawal application form(s). In addition, include a section on web access to additional information on the program, link to any application forms and links to tools for improving the management of water resources or sharing information about water withdrawals.**

Copies of the related regulations, policies and manuals with the various permit application form, annual reporting form and related forms can be found on NYS DEC's public website at: <http://www.dec.ny.gov/lands/94327.html>. Additional information on water withdrawals, conservation, interbasin diversions, water wells, drought management, and NYS DEC's Water Management Programs can be found on NYS DEC's public website at <http://www.dec.ny.gov/lands/313.html> and pages linked therefrom.

- 6. Summary description of the State's or Province's initiatives to support an improved scientific understanding of the Waters of the Basin and an improved understanding of the groundwater of the Basin and the role of groundwater in Basin water resource management. A description of State or Provincial initiatives or mechanisms to support an improved understanding of individual or cumulative impacts of Withdrawals, Consumptive Uses and Diversions on the Basin ecosystem should also be provided.**

New York State is working to improve the scientific basis for water management on numerous programmatic levels. Examples include:

- Across New York's portion of the Basin, stakeholders are working collaboratively under an *Interim Great Lakes Action Agenda* that includes the goal, "Conserve Great Lakes water supplies in a manner that recognizes the renewable but finite supply of waters of the Basin for the long-term sustainable use and enjoyment of the public." A cross-cutting objective to implementing this goal is to enhance coordinated science, monitoring and information management. Opportunities for water users, researchers and other stakeholders to annually pursue competitive small grants for related scientific research, demonstration and applications are now available through New York Sea Grant. (See <http://www.dec.ny.gov/lands/91881.html>)
- New York has established the *Climate Smart Communities Guide to Local Action* that contains overviews of possible community actions, how-to's, and case studies to help communities adapt to the risks posed by climate change. Many of these risks affect vulnerable water supplies, water conveyance infrastructure systems and increased water demands especially during drought periods. A clearinghouse of climate and water-based scientific materials, methods and technologies has been developed to assist local communities in adaptation planning. (See <https://www.dec.ny.gov/energy/50845.html>.)
- New York is also promoting ecosystem-based management approaches for more informed decision-making processes regarding groundwater withdrawals. In partnership with the U.S.

Geological Survey's New York Office, an innovative aquifer quantity and quality characterization study focusing on the very high quality and threatened Tug Hill Aquifer near eastern Lake Ontario was conducted to test aquifer vulnerabilities and re-charge capabilities.

- New York State is improving the scientific understanding of the groundwater resources of the Basin in cooperation with the USGS. Detailed aquifer mapping projects are ongoing in the following Basin locations: Fairport Lyons Glacial Drainage Channel Aquifer (Wayne, Ontario, and Seneca Counties); Owasco Inlet Valley (Cayuga and Tompkins Counties); Malone (Franklin County); and Springview (Erie County).
- New York State continues its partnership with USGS in the operation and expansion of a statewide groundwater monitoring network. The USGS continues to collect, process, and disseminate groundwater level data from the Cooperative Network that currently includes 103 observation wells statewide. As part of the network expansion, bedrock wells in Monroe, Erie, and Yates Counties have been added to the network since 2014. USGS is currently investigating potential bedrock wells in Wayne and Washington Counties.
- All water withdrawal applications for new or increased groundwater withdrawals require the submittal of a long-term pumping test. Each test is assessed for potential impacts to other water users and the surrounding resources. 6 NYCRR §601.11(c) states that in making its decision to grant or deny a permit or to grant a permit with conditions, NYS DEC shall determine whether (6) the proposed water withdrawal will be implemented in a manner to ensure it will result in no significant individual or cumulative adverse impacts on the quantity or quality of the water source and water dependent natural resources, including aquatic life; this determination may include an evaluation of whether all withdrawn water that is not lost to reasonable consumptive use will be returned to its source New York major drainage basin.
- Water conservation and efficient use measures and methods vary considerably between different types of users, facilities, seasons, and locations. New York believes no "one size fits all" water conservation plan can apply universally. Consequently, the NYS DEC has devised an innovative guidance to assist potable and non-potable water permit applicants in developing their water conservation plans through an online tool that seeks to match possible methods to water uses. As permitted water users gain experience with the water conservation and efficient use methods, the tools can be adapted to enhance efficiency and effectiveness of future plans. (See <http://www.dec.ny.gov/lands/86945.html>.)
- New York State's Water Quality Rapid Response Team, national experts, and local stakeholders collaboratively developed Harmful Algal Bloom (HAB) Action Plans for twelve priority lakes that are vulnerable to HABs and are critical sources of drinking water. Each action plan supports an improved scientific understanding of the Waters of the Basin by identifying contributing factors fueling HABs and immediate actions that can be taken to reduce the sources of pollution that spark algal blooms. In the Great Lakes Basin, Action Plans have been developed for Cayuga Lake, Conesus Lake, Honeoye Lake, Owasco Lake, Skaneateles Lake, Lake Champlain, and Lake George.

7. Additional information.

Water Conservation and Efficiency Program Report

- 1. Status of the State or Province's Water conservation and efficiency goals and objectives consistent with the Basin-wide goals and objectives. If developed, include State or Provincial goals and objectives or link to electronic version.**

Since 1989, New York State has required all public water supply systems in the Basin to

develop and submit water conservation programs when applying for new or increased water withdrawals. Each conservation program must specifically address:

- Source and customer metering;
- System water auditing to identify water losses and inefficiencies;
- System leakage and repair, and;
- Water use reduction particularly during the summer and drought conditions.

Based upon these programs, water withdrawal permits implement environmentally sound and economically feasible water conservation practices.

In 2011, New York's program was expanded to cover other sectors of water withdrawal in addition to public water supply. Again, water conservation programs are required to discuss and implement the best management practices for water conservation and reuse measures that apply to that sector of usage. These programs, in turn, lead to permit conditions in each water withdrawal approval.

In the spring of each year, water withdrawers are required to submit an annual report for the previous calendar year that includes a discussion and questions regarding compliance and progress with water conservation programs and conditions.

2. Water Conservation and Efficiency Program Overview.

DEC regulates water withdrawals, interbasin diversions, collects and evaluates water withdrawal data, registers water well contractors, monitors and reports on regional drought conditions and provides technical guidance on water conservation. All permit applicants are required to have a water conservation plan consistent with goals and objectives of the Compact (See <http://www.dec.ny.gov/lands/86945.html>.)

a. Citations to State/Provincial Water Conservation and Efficiency Program implementing laws, regulations and policies.

The Water Withdrawal, Conservation and Drought program page references the Water Resources Law, which is part of NYS ECL 15, Title 15, and is derived from the Compact. (See <http://www.dec.ny.gov/lands/313.html>.)

Both houses of the New York State Legislature have recently passed two bills that will promote water conservation and efficiency. The first will amend NYS ECL §15-0314 to raise standards for water-efficient plumbing and appliances to align with federal standards issued by the Environmental Protection Agency (EPA). The second, recently signed into law, will amend NYS ECL §15-1503 to require NYS DEC to post information regarding public water supply permits to the DEC website including information on water usage and water conservation.

b. Summary description of the State's or Province's Water Conservation and Efficiency Program including what elements are voluntary and mandatory.

All applications for water withdrawal permits require a Water Conservation Program that demonstrates an applicant's water conservation and efficiency measures. These must be environmentally sound, economically feasible and minimize inefficiencies and water losses.

Such measures must include, but are not limited to: source and customer metering; frequent system water auditing; system leak detection and repair; recycling and reuse, and reductions during drought. (See <http://www.dec.ny.gov/lands/86945.html>.)

3. For each of the regional objectives, identify how the State/Provincial program is consistent with the regional objective, and a description of how the State or Province promotes Environmentally Sound and Economically Feasible Water Conservation Measures. More details for each objective are available at http://www.glsregionalbody.org/Docs/Resolutions/GLSLRWRRB_Resolution_6-Conservation-Efficiency.pdf and can be provided in the table below.

OBJECTIVES	LEGISLATIVE OR PROGRAM CITATION
<p>➤ Guide programs toward long-term sustainable water use.</p>	<p>NYS ECL §1501(8) requires the NYS DEC to establish a water conservation and efficiency program based on the Compact’s five water conservation goals to assure consistency; NYS ECL §1503(2) enacts the Compact’s decision-making criteria for permit approval, including implementation in a manner that incorporates environmentally sound and economically feasible water conservation measures; and 1503(3) requires the DEC to publish a water conservation manual. Guidance (TOGS 3.2.1) for consistent implementation of these statutes was issued May 25, 2017 (See http://www.dec.ny.gov/docs/water_pdf/togs321.pdf.)</p> <p>Flow-related guidance (TOGS 1.3.12) considering pass-by flows and reservoir releases to ensure that water withdrawals will result in no significant or cumulative adverse impacts to the quantity and quality of the water source and water dependent natural resources was issued April 12, 2017. (See http://www.dec.ny.gov/docs/water_pdf/flowtogsfinal.pdf.)</p>
<p>➤ Adopt and implement supply and demand management to promote efficient use and conservation of water resources.</p>	<p>Water Conservation Manuals [NYS ECL §15-1503(3)] have been developed by NYS DEC to address various components of this objective which will be incorporated into conservation plans developed by all new water permit applicants.</p> <ul style="list-style-type: none"> - Water conservation plans are required to provide annual water audit data which compares produced water to metered usage. - All water withdrawal permit applications for new or increased groundwater withdrawals must submit the results of a pumping test. - All water withdrawal applications for new or increased surface withdrawals must submit hydrological data to confirm dependable water supply yields while adequately protecting water levels and in-stream flows for habitat.
<p>➤ Improve monitoring and</p>	<p>All water withdrawers with the capacity to withdraw 100,000 gallons per day or more are required to report their</p>

<p>standardize data reporting among State and Provincial water conservation and efficiency programs.</p>	<p>average monthly water withdrawals and types of use on an annual basis. Standard reporting forms for the submittal of this data have been developed. (See http://www.dec.ny.gov/lands/86940.html.) Information required is consistent with guidance developed by Compact Council/Regional Body. The NYS DEC's Division of Water annually reports this information to the Great Lakes Commission for incorporation into the Great Lakes Regional Water Use Database.</p> <p>New York's Great Lakes Action Agenda, an ecosystem-based management strategy for protecting, restoring and conserving natural resources, includes a goal to "Conserve Great Lakes Water Supplies" with nine specific priority actions designed to focus state policies, programs and ongoing funding opportunities. (See https://www.dec.ny.gov/lands/91881.html.)</p>
<p>➤ Develop science, technology and research.</p>	<p>In developing an additional Water Conservation Manual for non-potable uses, the DEC has worked to identify best management practices (BMPs) and state of the art technologies for consideration by various water user categories. This manual will continue to be updated as additional technologies and efficiencies are learned through consultation with entities such as AWWA.</p> <p>New York's Great Lakes Action Agenda, an ecosystem-based management strategy for protecting, restoring and conserving natural resources, includes a goal to "Conserve Great Lakes Water Supplies" with nine specific priority actions designed to focus state policies, programs and ongoing funding opportunities. (See https://www.dec.ny.gov/lands/91881.html.)</p>
<p>➤ Develop education programs and information sharing for all water users.</p>	<p>NYS DEC's current public guidance information is available on NYS DEC's website:</p> <ul style="list-style-type: none"> - Annual Water Withdrawal Reporting: http://www.dec.ny.gov/lands/86940.html - Water Conservation Tips for the Public: http://www.dec.ny.gov/lands/5009.html <p>The Water Conservation Manuals have been designed specifically to enhance public understanding and user access to best management practices for assisting various water users in developing their required plans. The manuals can be found at: http://www.dec.ny.gov/lands/86945.html</p>

	<p>All permitted and registered water withdrawals are included in a Google Earth data layer within the NYS GIS Clearinghouse and are available to the public at: http://www.dec.ny.gov/pubs/42978.html#waterwith</p> <p>Preparations are underway to post annual reports on NYS DEC's new InfoLocator, an online, interactive map that provides access to many NYS DEC documents, permits, and public data. InfoLocator can be found on NYS DEC's public website at http://www.dec.ny.gov/pubs/109457.html.</p> <p>New York's Great Lakes Action Agenda, an ecosystem-based management strategy for protecting, restoring and conserving natural resources, includes a goal to "Conserve Great Lakes Water Supplies" with nine specific priority actions designed to focus state policies, programs and ongoing funding opportunities. (See https://www.dec.ny.gov/lands/91881.html.)</p>
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4. Description of the State or Provincial Water conservation and efficiency program implementation timeline and status.

NYS DEC's Division of Water currently regulates by permit or registration all water withdrawal systems with the capacity to withdraw 100,000 gallons per day or more within the Basin. Since 1988, NYS ECL §15-1503 has required the submittal of a water conservation plan with each new application for a permit for a public water supply system. The main objective of the plans is to promote implementation of the most environmentally sound and economically feasible water conservation measures. Components of these plans must include, at a minimum, 1) customer and source metering, 2) water auditing, 3) leak detection and repair and 4) outdoor water use management.

Amendments to NYS ECL §15-1501, et seq. were passed into law in 2011 and became effective on February 15, 2012. The new law extended NYS DEC's permitting and registration authority throughout the state and includes registration of existing agricultural withdrawals that are greater than 100,000 gpd (30-day average) and of major basin water diversions outside of the Basin of greater than 1,000,000 gpd. Implementing regulations (6 NYCRR Part 601) took effect on April 1, 2013 that included a five-year schedule, completed in 2017, to permit all existing withdrawals that meet the threshold volume. The statute and regulations strengthen the existing water conservation and efficient use provisions by including two objectives in addition to those stated above: (1) recycling and reuse, and (2) reductions during drought. On May 25, 2017, NYS DEC issued Technical & Operational Guidance Series (TOGS) 3.2.1 to promote consistent implementation of these statutes and regulations. (See http://www.dec.ny.gov/docs/water_pdf/togs321.pdf.) On April 12, 2017, the NYS DEC issued Technical & Operational Guidance Series (TOGS) 1.3.12 that includes procedures to ensure that water withdrawals will result in no significant or cumulative adverse impacts to the quantity and quality of the water source and water dependent natural resources. (See http://www.dec.ny.gov/docs/water_pdf/flowtogsfinal.pdf.)

In the final report, please provide an overview of any public outreach activities undertaken, as well as a summary of any comments received and changes made in response to comments received.

NYS DEC Division of Water conducted an outreach effort targeting golf courses and water parks to ensure that they are aware of their potential reporting requirements. The Division also provides reminders of annual report deadlines and regularly assists permittees improve the quality, accuracy, and timeliness of their reports. Additional outreach activities have been focused on increasing the volume and variety of water management information available to the public on the Department's website. Specific examples have been cited above.