

## RECOMMENDED ENGINEER'S REPORT FORMAT For NYSDEC Water Withdrawal Applications

The regulations at 6 NYCRR Part 601 (<http://www.dec.ny.gov/regs/4445.html>) were revised effective on April 1, 2013 to implement the Department's expanded statutory authority to permit all (with some exceptions) water withdrawal systems with the capacity to withdraw 100,000 gallons per day. Subpart 601.10 (e) provides the minimum requirements for the Engineer's Report that must accompany a water withdrawal permit application. The following is a recommended format for the Engineer's Report.

All items in § 601.10(e) should be addressed in an Engineer's Report. If an applicant decides an item is inapplicable to a particular water withdrawal project (for example, a reservoir safe yield analysis is not required for a water withdrawal system that only uses groundwater wells), then the applicant is still to specifically address the item in the Engineer's Report by describing it as "inapplicable" and providing the applicant's technical and/or legal rationale for the decision.

It is also suggested that exhibits to the complete application other than the Engineer's Report (e.g., § 601.10(b) – General Map) be incorporated into the Engineer's Report as outlined below.

**All Engineer's Reports must be signed and sealed by a Professional Engineer licensed by the State of NY.**

### **Section I: General Description and History of Proposed project**

In this section provide a description of the existing and/or proposed project, including history of operation, location, type of water use(s) and treatment.  
*See, § 601.10(e)(1).*

### **Section II: General Map of Project and Land Acquisition Maps (if applicable)**

In the Maps, show the locations of all sources of water supply and any groundwater well head protection areas. Show also any dams, water regulating or intake or diversion structures associated with the proposed water withdrawal system or project.

For public water supply systems, include existing and proposed water district or service area boundaries.

*See, § 601.10(b), § 601.10(h).*

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**Section III: Water Source Capacities and System Demand Calculations**

**Sources:** In this section, discuss the existing and proposed sources of supply:  
*See, § 601.10(e)(2,4,5-11), § 601.10(j)*

a. Identify and list all existing and proposed supplies of water (surface water bodies, groundwater wells, water purchases, etc.) including the individual and total system capacities along with the capacity of any water treatment facilities. For new public water supply systems, source redundancy is required by the NYS Department of Health (NYSDOH).

b. For public water supply systems, identify the area owned or controlled for wellhead protection. A minimum 200 foot radius of protection is required. Deviations from this amount must be approved by the NYSDOH. Include parcel/tax maps to assist in identifying these areas.

c. For ground water sources, provide an evaluation of the well(s) to be used. Include: historical data, well drilling logs, monitoring well locations and pump test data and analyses of results. (See Pumping Test Procedures For Water Withdrawal Permitting: <http://www.dec.ny.gov/lands/86950.html>). A separate, detailed report can be included as an attachment or exhibit as needed

d. For surface water sources, provide all necessary information to substantiate the use of the supply at the proposed withdrawal rate. See **§ 601.10 (e) 11** for all required information. A separate, detailed report can be included as an attachment or exhibit as needed.

e. Describe any dams, water regulating or intake structures associated with the water withdrawal system.

**Water Demands:** Show calculations for 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. Please provide citations for any references used to estimate water demands.

**Public Water System Demands:** Show calculations for 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 new systems, use NYS DEC Design Standards for Wastewater Treatment Plants 1988 (or latest revision) for acceptable water demand quantities. For existing systems, historical production and customer demand may be used to estimate future water demands.

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**Annual Water Withdrawal Reporting Form:** At a minimum, provide the previous year's completed Annual Reporting Form that was submitted to DEC. For Initial Permit Applications, the Reporting form submitted for Operating Year 2011, submitted prior to February 15, 2012, must also be included. *See*, § 601.7

**Section IV: Evaluation of Alternatives and Project Justification**

**Evaluation of Alternatives:** Discuss all of the water source alternatives that were evaluated for this project. *See*, § 601.10(e)(3).

For Initial Permit Applications pursuant to ECL § 15-1501.9 for existing water withdrawals that were reported prior to February 15, 2012 for operating year 2011, an evaluation of alternatives and project justification are unnecessary. In general, an initial permit may only be issued for the volume reported for 2011.

**Project Justification** *See*, § 601.10(k): Include a discussion of:

1. why the proposed project was selected from the evaluated alternatives;
2. why increased water conservation or efficiency measures cannot negate or reduce the need for the proposed water withdrawals;
3. why the proposed water withdrawal quantity is reasonable for the proposed use;
4. why the proposed water conservation measures are environmentally sound and economically feasible;
5. whether the proposed water supply is adequate;
6. whether the proposed project is just and equitable to other municipalities and their inhabitants in regards to present and future needs for sources of potable water;
7. whether the proposed withdrawal will result in no significant individual or cumulative adverse environmental impacts on the quantity or quality of the water source and water dependent natural resources; and
8. whether the proposed withdrawal will be consistent with all applicable municipal, state and federal laws as well as regional interstate and international agreements.

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**Section V: Water Conservation**

This section should discuss any and all water conservation measures that have or will be undertaken to minimize the water withdrawal referring to the completed Water Conservation Program form as needed. This must include a discussion of how water withdrawn is or will be measured (e.g. master meters) and any additional metering within the system or facility.

**Water Conservation Program Form:** Include completed and signed Water Conservation Program Form. If available, include a more detailed water conservation program as an attachment or exhibit.  
*See, § 601.10(f).*

**Section VI: Other Approvals or Requirements (if applicable)**

**Water Analyses Results and Project Plans** – Include only plans for proposed water withdrawal portions of the facility (e.g. intakes, wells, reservoirs, springs etc.) including water metering locations. For public water supply systems, do not send water analysis results or detailed plans and specifications of the treatment and distribution system to DEC. Send these directly to NYSDOH. § 601.10(d,i).

**New York State Canal Withdrawals** – water withdrawals from the NYS Canal system also require the approval of the NYS Canal Corporation.  
*See, § 601.10(l).*

**Great Lakes – St. Lawrence River Basin Compact Requirements**  
Diversions of water from the GL-SLR are prohibited by the Compact. Limited exceptions exist only for public water supply diversions. *See, § 601.10(n).*