

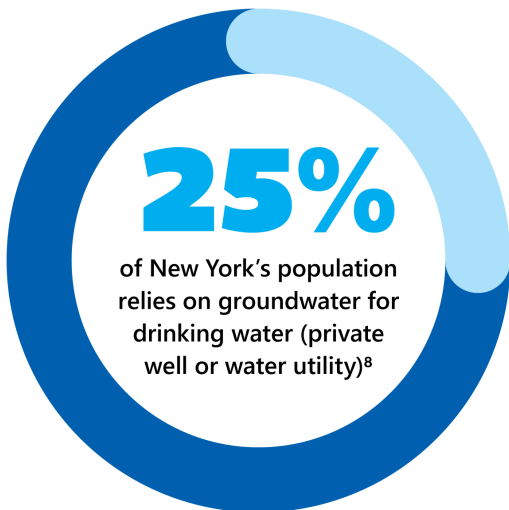
Background

The Great Lakes Commission (GLC) passed a policy resolution in March 2024 which called upon partners and agencies to engage with the GLC toward a better understanding of the current state of groundwater management in the Great Lakes basin.¹ Then, in December 2024, the GLC received funding from the Joyce Foundation to develop groundwater management summaries for each Great Lakes jurisdiction, building upon previous reports supported by the Joyce Foundation.² This report summarizes groundwater management in New York, both statewide and within the Great Lakes-St. Lawrence River basin.

State Agency Authority

The New York State (NYS) Department of Environmental Conservation (DEC) oversees groundwater quality management,³ including remediating groundwater contamination.⁴ The DEC also regulates groundwater withdrawal permitting and reporting. The DEC has the authority to restrict groundwater withdrawals by

determining if proposed wells will adequately meet the needs of the permit applicant and if others who may rely on the same aquifer will be adversely affected.⁵



The NYS Department of Health (DOH) and DEC work in partnership with local officials to ensure that underground aquifers, rivers, and lakes used for public water are protected from contamination.⁶ New York's Drinking Water Source Protection Program, or DWSP2, is a four agency initiative co-led by the DEC and DOH, in collaboration with the Department of Agriculture and Markets and the Department of State that empowers municipalities to take action to improve and protect their public drinking water sources and surrounding environment.⁷ **Table 1** highlights the state agencies in New York which play a role in managing groundwater in the state.

¹ Great Lakes Commission. March 6, 2024. [Understanding Impacts to Great Lakes Agriculture and Water Use Under Changing Climate Conditions.](#)

² The Joyce Foundation. [Groundwater Governance in EPA Region 5.](#)

³ New York State Department of Environmental Conservation. [Groundwater.](#)

⁴ Consolidated Laws of New York. Chapter 43-B Article 15 Title 31. <https://www.nysenate.gov/legislation/laws/ENV/A15T31>

⁵ New York State Department of Environmental Conservation. [Pumping Test Procedures For Water Withdrawal Permit Applications.](#)

⁶ New York State Department of Health. [New York's Public Water Systems.](#)

⁷ New York State Department of Environmental Conservation. [Drinking Water Source Protection Program \(DWSP2\).](#)

⁸ New York State Department of Environmental Conservation. [Groundwater Resources of New York.](#)

Table 1. New York state agency authorities on groundwater management priority areas.

Agency	New York State Dept. of Environmental Conservation	New York State Dept. of Health	New York State Dept. of Agriculture and Markets	New York State Dept. of State
Groundwater Priority Area	Groundwater quality oversight Groundwater availability and ecological impacts Groundwater appropriation or permitting Source water protection State and regional water supply planning	Drinking water supply Source water protection	Source water protection	Source water protection

Groundwater Science and Knowledge Production

The NYS Museum Geology Department and New York State Geological Survey (NYSGS) work to conduct geologic research and make data available to state agencies, educational institutions, and the public.⁹ The NYS Museum also shares datasets and maps that document and display surface and subsurface geologic data.¹⁰

Since 1980, the DEC has partnered with other state agencies like NYSDOH and with the U.S. Geological Survey (USGS) to map major stratified-drift aquifers throughout New York State. Mapped project areas, project reports, and data releases are available online via the USGS Upstate New York Aquifer Viewer 2.0 tool.¹¹

The NYS DECinfo Locator is an interactive map that allows users to access public data on public wells throughout the state. The Water Withdrawal Annual Report category in the Permits and Registrations information layer displays all permitted water withdrawal facilities and whether they use surface water or groundwater.¹²

The State of New York maintains a GIS Clearinghouse that includes a map of unconsolidated aquifers throughout Upstate New York.¹³ Together with the NYSGS surficial and bedrock geology maps, these maps form a consistent set of geologic and groundwater maps for use in regional management of the groundwater resources of the state.

Legislation and Regulations

New York State’s Groundwater Protection and Remediation Program was created to protect groundwater for its classified use – the highest of which being drinking water. It also calls upon the DEC to develop a strategy to address contaminated groundwater and implement a program to remediate and manage groundwater resources to ensure their long-term sustainability.¹⁴

⁹ New York State Museum. Research & Collections. [Geology](#).

¹⁰ New York State Museum. Publication. [Map & Chart Series](#).

¹¹ U.S. Geological Survey. [Upstate New York Aquifer Viewer 2.0](#).

¹² New York State Department of Environmental Conservation. [DECinfo Locator](#).

¹³ NYS GIS Clearinghouse. [Unconsolidated Aquifers 250K Upstate NY](#).

¹⁴ Consolidated Laws of New York. Chapter 43-B Article 15 Title 31. <https://www.nysenate.gov/legislation/laws/ENV/A15T31>

The DEC also regulates groundwater withdrawal permitting and reporting, requiring all non-agricultural water withdrawal systems with the capacity to withdraw 100,000 gallons per day or more to obtain a Water Withdrawal Permit and agricultural users that withdraw an average of 100,000 gallons per day in any 30-day period to obtain a Water Withdrawal Permit or Agricultural Registration.¹⁵

New York manages groundwater according to the reasonable use doctrine wherein groundwater must be put to a reasonable use and must be used on the overlying land. Under this doctrine, landowners may withdraw an unlimited amount of groundwater from beneath their land, even if to the detriment of a neighboring landowner, qualified by the requirement that the use of the groundwater be “reasonable.”¹⁶

It does not appear that New York has extended the public trust doctrine¹⁷ to apply to groundwater.

Great Lakes-St. Lawrence River Basin Groundwater Management

New York codified the Great Lakes-St. Lawrence River Basin Water Resources Compact (Compact) into state Environmental Conservation Law (NYS ECL) on March 4, 2008. The NYS ECL was updated in 2011 to require permits for non-agricultural users with the capacity to withdraw 100,000 gallons per day and for agricultural users that withdraw an average of 100,000 gallons per day in any 30-day period.

New York has adopted the water conservation and efficiency provisions of the Compact. The State of New York’s program is consistent with, and fully supports, the goals and objectives of the Compact, including promoting the efficiency of use and reducing losses and waste of water in the basin and retaining the quantity of surface water and groundwater in the Basin.

Per the Compact, its party states commit to the development of a collaborative strategy to guide the collection and application of scientific information to support the “improved understanding of the role of groundwater in basin water resources management.”

Great Lakes-St. Lawrence River Basin Groundwater Usage

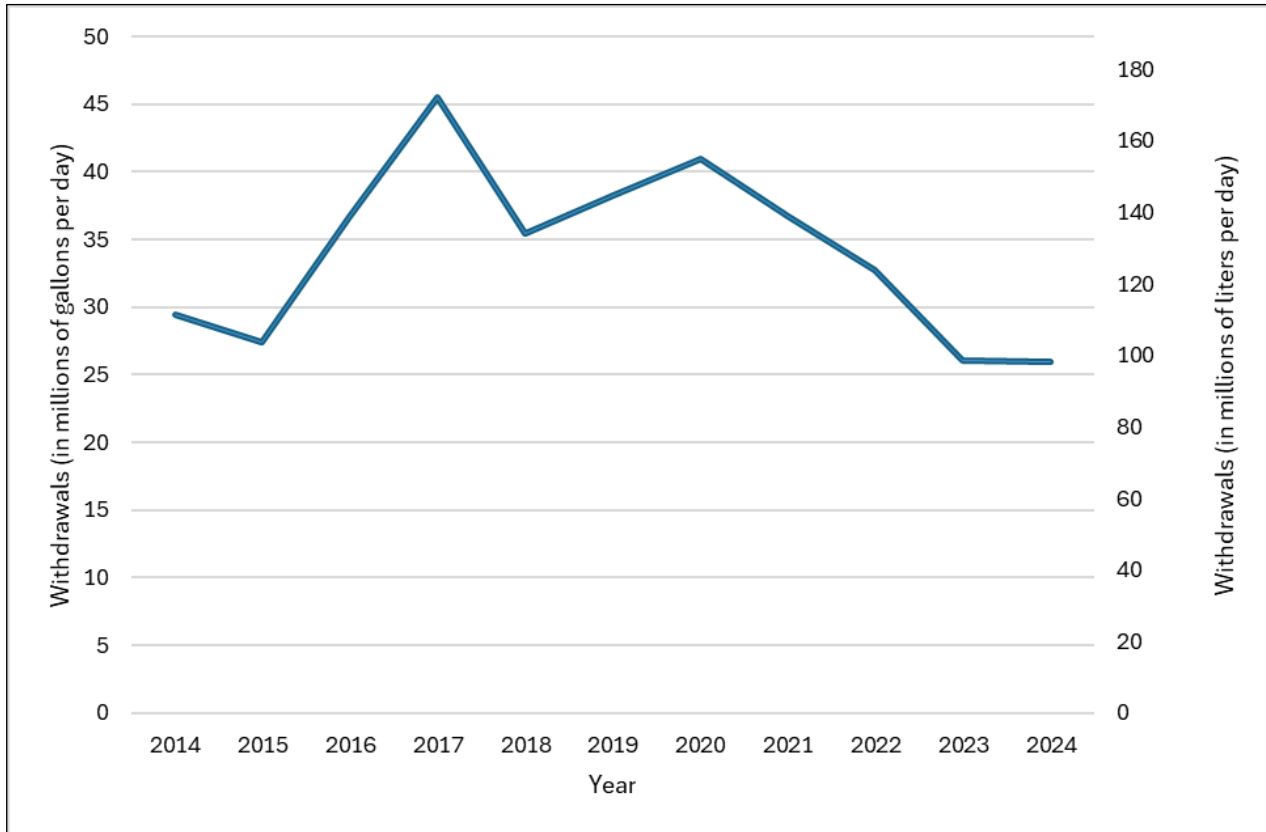
New York’s groundwater withdrawals from the Great Lakes basin have varied in volume over the last decade. The leading contributor to this variation is the self-supply livestock sector. See **Figure 1** below to view trends in New York’s reported groundwater withdrawals within the Great Lakes basin from each facility withdrawing at least 100,000 gallons per day between the years of 2014 and 2024.

¹⁵ New York State Department of Environmental Conservation. [Water Withdrawal Permits and Reporting](#).

¹⁶ Linda Reid et al. (n.d.). High-Capacity Wells: A Survey of Groundwater Withdrawal Rights and Regulations. In <https://nationalaglawcenter.org>. The National Agricultural Law Center. Retrieved July 2, 2025, from <https://nationalaglawcenter.org/wp-content/uploads/assets/articles/highcapacity-wells-report-reid.pdf>

¹⁷ National Sea Grant Law Center. [Overview of the Public Trust Doctrine](#).

Figure 1. New York State Great Lakes-St. Lawrence River Basin Groundwater Withdrawals from 2014-2024.¹⁸



Statewide Definitions

Groundwater: When rain falls to the ground, some of it is carried away as runoff down-slope into streams, lakes, and other bodies of water or into sewers. But some of it travels downward into the ground and through the underlying sediment, the upper part of which is not completely filled with water (the "unsaturated zone"). Continuing its downward route through the unsaturated zone, it moves through the interconnected openings of sand, gravel, silt, and clay or openings in rock until it reaches the "saturated zone" where it becomes groundwater.¹⁹

High-capacity well: wells with the capacity to withdraw at least 100,000 gallons per day.

¹⁸ As reported to the [Great Lakes Regional Water Use Database](#).

¹⁹ NYSDEC. [What is Groundwater?](#)