Evolution of New York City’s Water Supply

- **1600s:**
  Main water source was a 48-acre pond in lower Manhattan

- **1700s:**
  Water hauled from Brooklyn to supply Manhattan’s growing population

- **Early 1800s:**
  Inadequate supply leads to health and safety problems
1830s: City begins construction of the Croton Water Supply System in Westchester County

1842: Water flows from upstate New York through the Croton Aqueduct

1880s and 1890s: Croton System Expanded
Great Fire of 1835

- Consumed over 700 buildings in a 17 square block area
- Increased demand for reliable water supply / increased the pace of Croton development
New reservoirs constructed to increase supply

- 1870 Controlled Lakes (3)
- 1873 Boyd’s Corner
- 1878 Middle Branch
- 1891 East Branch
- 1892 Bog Brook
- 1893 Titicus
- 1895 West Branch
- 1897 Amawalk
- 1905 New Croton Reservoir
- 1905 Muscoot Reservoir

New Croton Aqueduct placed in service in 1890 to serve the Greater New York Area
Croton System Today
West of the Hudson Expansion

- 1905 Board of Water Supply created
  - Catskill region plan submitted
  - Department of Water Supply, Gas, and Electricity operated system
- Esopus and Schoharie Watersheds selected
- Construction started 1907
- Ashokan Reservoir and Catskill Aqueduct were placed in service in 1915
The Catskill Watershed (1905-1928)

Development began in the early 1900’s as the city’s population grew at a rapid rate.

Comprised of:

• 2 reservoirs
• Shandaken Tunnel
• Catskill Aqueduct
• Kensico Reservoir
• Hillview Reservoir
• City Tunnel # 1
• Richmond Tunnel

Provides 40% of the water supply.
The Delaware Watershed (1937-1965)

Created in accordance with the Supreme Court Decree of 1931 (amended 1954) which formulated a water rights agreement between NYC, NY, NJ, PA and DE.

Comprised of:

• 4 reservoirs

• Delaware Aqueduct

Provides 50% of the water supply.
Delaware System

- 1928- NYC moves forward
- 1930 New Jersey to stop NYC development
- In 1931 Supreme Court upheld the right of New York City to develop Delaware supply
- 1954 Supreme Court Decree amended allowing Cannonsville development
Delaware System was completed in several stages.

- Delaware Aqueduct - 1944
- Rondout Reservoir - 1950
- Neversink Reservoir - 1954
- Pepacton Reservoir - 1955
- Cannonsville Reservoir – 1964
NYC Water Supply

Today

- Primarily a surface water supply
- 19 reservoirs & 3 controlled lakes
- System Capacity: 550 billion gallons
- Serves 9 million people (1/2 of population of New York State)
- Delivers approx. 1.3 billion gallons per day to the City
- Source of water is a 2,000 square mile watershed in parts of 8 upstate counties
Improvements in Water Supply Infrastructure

New disinfection & filtration facilities will increase the flexibility of our water supply system

Catskill/Delaware Ultraviolet Disinfection Facility

Croton Water Filtration Plant
Filtration of the Croton System is required under the Surface Water Treatment Rule and a subsequent federal Consent Order.

Filtration of the Croton supply will:

- significantly enhance the reliability of the Croton system in meeting downstate water needs in the 21st century
- reduce the formation of disinfection by-products and seasonal problems with color, odor and taste
- significantly reduce the potential threats posed by microbial contaminants

Filtration in conjunction with a strong watershed protection program is the most effective way to protect the public and increase the reliability of the water supply.
Filtration Plant will be located at the Mosholu Golf Course in Van Cortland Park.

Filter process:
- stacked dissolved air flotation above filters
- UV disinfection
- Design flow of 290 mgd

To compensate for the lost parkland, 70 Bronx parks reconstruction projects, at a cost of $220 million from DEP and the Municipal Water Finance Authority, will be completed over the next five years.