
Excerpt

Tucked amid dense foliage between Highland Park and the cemetery belt of the Brooklyn-Queens border, Ridgewood Reservoir occupies a hilltop location on the glacial terminal moraine. Between 1858 and 1898, this reservoir stored the water that flowed from collection reservoirs on Long Island’s South Shore. Following the consolidation of Brooklyn into New York City, the reservoir served as backup storage for the borough’s water supply until its abandonment in 1990. In 2004, the Parks Department was assigned responsibility for the reservoir site.

In its heyday, the reservoir was operated by Brooklyn Water Works, receiving up to 10 million gallons of water every day. The conduit originating in Nassau County terminated at Atlantic Avenue and Logan Street in East New York, where a steam-powered pumping station forced the water uphill through a “force tube” toward Ridgewood Reservoir. The pumping station was demolished in the 1960s, but the tunnels connecting it to the reservoir are remembered on the map as Force Tube Avenue.

In 1917 and 1936, tunnels were constructed to connect the reservoir with the city’s Catskill-based aqueduct. The reservoir’s function was reduced to backup storage, and two of its three basins were drained.

Left to its own devices, the stagnant pool of water turned into a wetland; the National Audobon Society recorded that it was a habitat for 137 birds. Around its perimeter, invasive plant species colonized the size, hiding the brickwork beneath thick vegetation. In 1990, the city’s Department of Environmental Protection decommissioned the reservoir.
1. What does this map illustrate?

2. Find Ridgewood Reservoir on this map. What neighborhood is it close to?

3. Find the illustration at the top: East and West Section Illustrating the Mode of Supply. According to this, what connected the Ridgewood Engine House and the Ridgewood Reservoir?

4. What other names on this map do you recognize?
The Water Committee, to whom was referred the annexed resolution, beg leave respectfully to report: That in the discharge of their duty they have given a full consideration to the various plans heretofore proposed for supplying the city with water. The subject has not now for the first time engaged the attention of the Common Council. It has for years been evident, that for protection against fire, the interests of our citizens required a more adequate supply of water than it was possible to obtain from the wells and cisterns in ordinary use. It has more recently become apparent that as our city increases, the water furnished from these wells will deteriorate; and it has therefore been considered as of great importance to devise a system which will afford, not only a more abundant supply for the purpose of preventing the ravages of fire, but also of furnishing our citizens with pure and wholesome water for domestic uses.

The Special Committee having the subject in

1. According to this excerpt, what is the duty of the Water Committee?

2. What TWO places are listed as the current supply of water for “ordinary use”?

3. List two reasons that are given for providing a more abundant supply of water.

4. This report was written in 1851. List three things that you imagine people used water for most in 1851:
OUTLINE OF PLAN FOR SUPPLYING 
THE CITY OF BROOKLYN, WITH WATER. 

The Common Council of the city of Brooklyn, in pursuance 
of an Act of the Legislature, entitled "An Act for the supply 
of the city of Brooklyn with Water, passed 3rd June, 1853," 
have provisionally adopted a plan for such supply, of which 
the following is an outline:—

The sources from which the Water will be obtained are East 
Meadow Brook, in the town of Hempstead. Parsonage Creek, 
also in said town, and intermediate streams, which have been 
or may be hereafter purchased for said purpose, and which 
are estimated to furnish Water sufficient for the supply of a 
population four times as great as that contained in the city of 
Brooklyn at the present time.

The analysis of the Water, which has been made, shows it 
to be purer than that supplied to any other city in the country, 
(Boston only excepted.)

Suitable Dams or Reservoirs will be constructed on said 
Streams, and the Water will be brought thence in a conduit 
or partly in a conduit, and partly in an open canal, at or near 
to the base of the line of hills forming the back bone of the 
Island, where the pump well will be located, and the neces-
sary steam engines and the machinery erected to elevate the 
Water to a Reservoir, to be located upon the summit of said 
line of hills, which Reservoir will be of ample capacity to 
contain a supply beyond the daily wants of the city; and from 
there the Water will be distributed by Iron Pipes throughout 
the city, as the wants of the citizens, and the location of 
the population may require.

The Conduit or Canal will be constructed of suitable ca-
pacity to carry Water sufficient, for at least four times our 
present population.

The estimated cost of bringing from the farthest point 
named, a sufficient supply of Water for the present wants of 
the city, including the cost of streams, land, damages, conduit, 
pumps, well, steam engine and machinery, reservoirs and 
eighty miles of distribution pipes, hydrants and all other 
things necessary to complete the work in the best manner, is 

Four Millions of Dollars.

The additional cost as the population of the city increases, 
will consist of such further steam power as might be neces-
sary to elevate the additional quantity of Water which might 
be required, and of such further distribution pipes as would 
be necessary to furnish the same to the consumers.

It is estimated that the cost of supplying a population 
double our present numbers, will, when required, add to the 
original cost of the work, One and a-half Millions of Dollars.

JOSEPH HEGEMAN, City Clerk.

EDWARD A. LAMBERT, Mayor.

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Outline of Plan for Supplying the City of Brooklyn with Water.

The Common Council of the city of Brooklyn, in pursuance of an Act of the Legislature, entitled “An Act for the supply of the city of Brooklyn with Water, passed 3rd June 1853,” have provisionally adopted a plan for such supply, of which the following is an outline:

- The sources from which the water will be obtained are East Meadow Brook, in the town of Hempstead. Parsonage Creek, also in that town, and other streams, which have been or may be purchased for that purpose, and which are estimated to supply enough water for a population four times as great as that contained in the city of Brooklyn at the present time.

- The analysis of the Water, which has been made, shows it to be purer than that supplied to any other city in the country (Boston only excepted).

- Suitable dams or reservoirs will be constructed on these streams, and the water will be brought there partly in a conduit, and partly in an open canal, at or near the base of the line of hills forming the back bone of the island, where the pump well will be located. Steam engines and machinery will be built to raise the water to a reservoir, to be located at the top of that line of hills. The reservoir will have capacity to contain a supply beyond the daily needs of the city; and from there the Water will be distributed by Iron Pipes throughout the city.

- The conduit or canal will be constructed to carry sufficient water for at least four times the present population.
1. According to this article, what group has organized a plan for a water supply to Brooklyn?

2. What TWO places are listed as where water will be obtained from?

3. According to this article, what is the only city in the country with purer water than Brooklyn?

4. According to this article, something will be needed to raise water from conduits and canals to the reservoir that will be built. What will be used?
Document 4A - “View Taken from the Ridgewood Reservoir” and “General View of the Ridgewood Reservoir.”
DISTRIBUTING RESERVOIRS.

These will be located as above stated, the formation in the vicinity of Cypress Hill, being admirably adapted to the economical construction of as many Reservoirs, as may be required through all time.

The Reservoir to be built in connection with the plan for the daily supply of 9,000,000 of gallons, will require but a small amount of excavation, and to be puddled and lined with concrete. This Reservoir will have a surface of 17 acres, a depth of 25 feet, and a height at the surface of water of 172 feet above high tide.

As your Company have purchased 47 acres altogether, for the sites of your Reservoirs, you will not want for room to accumulate supplies of water, in order to guard against the contingency of accidents to your machinery.

In the extended plan of the work I have estimated for the construction of two other Reservoirs, having an united surface of about 15 acres more. Another may still be built on the same grounds, if required at some future day, of about 6 acres, so that you can have a Reservoir surface, when desirable, of about 38 acres, at the height of 172 feet above high tide; or 79
1. Look at DOCUMENT 4A. These images show Ridgewood Reservoir. List three things that you see in these images.

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________________________________________

________________________________________

2. Read DOCUMENT 4B. Where does DOCUMENT 4B say that the reservoirs for water will be located?

________________________________________

________________________________________

________________________________________

3. According to DOCUMENT 4B, how deep will the reservoir be?

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________________________________________

4. DOCUMENT 4B describes the work needed to build the reservoir. Looking at the images in DOCUMENT 4A, what kind of building material did they use for the reservoir?

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Document 5A – “The Biological Laboratory” and “Corner of the Chemical Laboratory”. In “Mount Prospect Laboratory,” Scientific American Supplement No. 1278. 31 June, 1900, page 1. Print. Brooklyn Collection, Brooklyn Public Library.
Document 5B – “Plan of Laboratory”. In “Mount Prospect Laboratory,” *Scientific American Supplement* No. 1278. 31 June, 1900, page 2. Print. Brooklyn Collection, Brooklyn Public Library.


Document 5C – “Apparatus for Collecting Bacteria Samples”. In “Mount Prospect Laboratory,” *Scientific American Supplement* No. 1278. 31 June, 1900, page 2. Print. Brooklyn Collection, Brooklyn Public Library.
1. DOCUMENT 5A shows a biological laboratory and a chemical laboratory. List THREE types of equipment you see in these laboratories.
   i. 
   ii. 
   iii. 

2. Why do you think a water reservoir would have a laboratory?
   
   

3. DOCUMENT 5B shows a map of the laboratory for a different Brooklyn reservoir. Circle two work tables and two desks.

4. Write down two words on DOCUMENT 5B that you do not know the meaning of:
   i. 
   ii. 

5. DOCUMENT 5C shows a piece of laboratory equipment. What is it used for?
   
   

6. DOCUMENT 5D shows a list of cities in the United States, with information about how many grains (of bacteria) are in each gallon of water in that city. Which city has less grains in a gallon than Brooklyn?
1. According to the caption below the image in DOCUMENT 6, what is the purpose of this building?

2. Describe the land you see in front of the building on DOCUMENT 6.

3. On the right of the building in this image, we see a tall tower. This is a smoke stack. Why would this building need a smoke stack?

4. This image comes from an article about the Brooklyn Waterworks Celebration. What would you do for a party to celebrate the Ridgewood Reservoir?
WATER
FOR BROOKLYN AND WILLIAMSBURGH.

A VISIT TO THE SOURCES OF SUPPLY.

[From the Williamsburgh Daily Independent Press, August 26th.]

YESTERDAY, in company with a number of gentlemen from New York, this city and Brooklyn, we visited several of the streams which the Long Island Water Works Company have secured for the purpose of supplying the cities of Brooklyn and Williamsburgh with water. The result of the examination made of them was to satisfy every gentleman present that not only was the supply adequate, but far greater than is needed, of pure and wholesome water for the wants of Brooklyn and Williamsburgh for many years to come. The water is cold and exceedingly pure and limpid, and the flow, to the amount calculated on by the Engineers, seems to be inexhaustible.

We congratulate our citizens upon the prospect which opens to them at last, of having an abundant supply of the element so essential to their health and comfort. All that is required of them, is that they should second the effort now being made by the enterprising gentlemen interested in the Company, and success is certain to crown their exertions. We shall thus secure a blessing which will promote the health of the city, increase the comfort and convenience of the citizens, and tend greatly to enhance their general business and the value of their property. It is a blessing, too, which they can enjoy at a cost to individuals not exceeding the rates paid in New York, and without the fear of any increase of the burthen of general taxation.

We shall make no extended description of the incidents of the excursion, preferring to call attention to the clear and cogent speech of Nicholas Dean, Esq., (late the head of the Croton Water Department in New York,) as a complete and convincing exposition of the whole subject. A full report of it will be found appended.

THE JOURNEY.

The first place visited was the site of the Receiving Reservoir, near the Cypress Hills Cemetery. It is admirably adapted for the purpose, there being three natural reservoirs—one a valley of 17 acres, having a depth of 25 feet and a height of 172 feet above mean tide. This is thought sufficient as a distributing reservoir for several years to come; but the ground (in all 47 acres) of the adjacent sites has been purchased, to be taken in when required—so that, when thought desirable, a reservoir surface of 33 acres may be obtained. The site of the engine house, from which water is to be forced through two thousand feet of 26-inch pipe to the reservoir, is below; on the other side of the road.—Thence the company drove on to Baisley’s Pond, 5½ miles, having an area of 26 acres, and discharging daily 5,400,000 gallons in the driest season, according to General Burnett’s report. After partaking of luncheon here, the party proceeded to Simonson’s Pond, West Branch Hook Creek, having an area of fourteen acres, and giving a minimum discharge of 3,600,000 gallons daily. L. Cornwall’s Pond, East Branch Hook Creek, was next visited. This is about 14 miles from the reservoir, and covers an area of 32 acres, which it is proposed to increase to 52. The minimum daily discharge is set down at 9,300,000 gallons. Several smaller ponds of considerable capacity were passed along the line, all of which can be brought into use.

DOCUMENT 7: Adaptation

Water for Brooklyn and Williamsburgh. A Visit to the Sources of Supply.

[From the Williamsburgh Daily Independent Press, August 26th.]

Yesterday, in the company of a number of gentlemen from New York, this city and Brooklyn, we visited several of the streams which the Long Island Water Works Company have secured for the purpose of supplying the cities of Brooklyn and Williamsburgh with water. The result of this trip was that every gentleman present was satisfied that not only was the supply adequate, but far greater than is needed, of pure and wholesome water for Brooklyn and Williamsburgh for many years to come. The water is cold and exceedingly pure, and the flow, as calculated by the Engineers, seems to be inexhaustible.

The Journey

The first place visited was the site of the Receiving Reservoir, near the Cypress Hills Cemetery. It is admirably adapted for the purpose, there being three natural reservoirs – one a valley of 17 acres, 25 feet deep and 172 feet above sea level. This is thought to be sufficient as a distributing reservoir for several years to come, but the land around has also been purchased so that, when needed, an additional 38 acres of reservoir may be added. The site of the engine house, from which water is to be forced through two thousand feet of 26-inch pipe to the reservoir, is below.
According to DOCUMENT 7, what trip is this article about?

What did the gentlemen in this article decide about the amount of water now available for Brooklyn and Williamsburgh?

The water reservoir described here is Ridgewood Reservoir. What other landmark is it located close to?

The engine house is located near the reservoir, to force water uphill through a pipe to the reservoir. What is the length of the pipe?

1. DOCUMENT 8A is a newspaper ad for a house to rent. What is this house a five minute walk from?

2. DOCUMENT 8A lists the utilities that come with this house. Where does the water come from?

3. DOCUMENT 8B is a letter from the Department of Water Supply, Gas, and Electricity. According to this letter, what was not paid?

4. According to DOCUMENT 8B, what days of the week could this bill be paid?
1. DOCUMENT 9 is a map. According to the caption, what does this map show?

2. The thick red line on DOCUMENT 9 is a tunnel bringing water to Brooklyn. Do you see Ridgewood Reservoir along this tunnel?

3. Why do you think Ridgewood Reservoir might no longer supply water to Brooklyn?

4. What other landmarks do you recognize on this map?
A Wilderness, Lost in the City


MANY people are astounded to learn that there is a teeming wildlife preserve in New York City. Ridgewood Reservoir on the Brooklyn-Queens border is an oasis where an amazing range of plant and animal species thrive in a verdant landscape of steep hills and narrow valleys amid the city's paved sidewalks.

But what's more astounding, the city's Parks Department could wind up destroying it.

Ridgewood is an accidental wilderness, tucked alongside the Jackie Robinson Parkway. Built in 1938 to provide drinking water to Brooklyn, the reservoir was abandoned in 1989.

As the 50 acres reverted to wetlands, meadows and forests, tens of thousands of plants and trees took root and flourished. Turtles, fish, frogs and millions of insects moved in. Songbirds nested in the glades, transforming the area into a migratory rest stop. According to the National Audubon Society, 127 species of birds use the reservoir, including eight rare species. It is a place as close to unspoiled nature as you're likely to find anywhere within city limits.

Yet, the New York City Parks Department is considering a $50 million "renovation" project that would cover more than 20 acres of the reservoir with athletic fields and facilities.

This plan flies in the face of Mayor Michael Bloomberg's widely hailed environmental blueprint, which bemoans the loss of the city's natural areas. The Parks Department's own scientific consultants have warned against disturbing the reservoir, an area they call "highly significant for the biodiversity of New York City and the region."

The parks commissioner has said the city needs the athletic fields to combat childhood obesity. This is an important objective, but the money that would be used to destroy this extraordinary natural habitat could be better spent improving Highland Park, next to Ridgewood Reservoir. Highland Park has plenty of ball fields to serve its neighborhood, but they are in such deplorable condition that few people use them.

Ridgewood's natural preserve is a great place for people of all ages to walk and hike. Its trails should be upgraded with benches and rest areas as well as markers pointing out unique flora and fauna. The Parks Department should also open areas of the reservoir for guided nature walks, a great educational tool.

Ridgewood Reservoir offers visitors a rare chance to lose themselves in a forest, to hear bird song, to touch wildness and to sense the divine. The city shouldn't let that slip away.

William C. Thompson Jr. is the comptroller of the City of New York. Robert F. Kennedy Jr. is a lawyer for Riverkeeper, an environmental group.

1. DOCUMENT 10 is a newspaper article from 2008. It describes Ridgewood Reservoir as a “wildlife preserve”. According to the article, what kinds of things thrive there?

2. According to this article, what year was the water reservoir abandoned?

3. How many species of bird use the reservoir now as their home?

4. Do you think that wildlife preserves should be kept in the big city, or should the land be converted for new uses – like sports facilities, housing, or something else?
GLOSSARY

**abundant** – to have a lot of something

**aqueduct** – a channel for transporting water, often in the form of a bridge across a valley

**canal** – a man-made waterway

**capacity** – the maximum amount that something can hold

**colonize** – to take over

**conduit** – a pipe

**consolidation** – to combine things, or to join things together

**decommission** – to withdraw something from service; to stop something from operating

**foliage** – leaves

**glacial terminal moraine** – a hill of rocks and other debris pushed by a glacier; the terminal moraine forms at the end of a glacier, marking how far the glacier moved.

**heyday** – a person or thing’s greatest success or popularity

**inexhaustible** – something that can’t be used up because there is so much of it

**in pursuance of** – according to

**perimeter** – the edge of something

**provisional** – something that just exists for now, until there is further confirmation

**smoke stack** – a chimney for taking smoke out of a building

**stagnant** – a body of water that does not flow or move, and that usually smells because of this

**wetland** – land consisting of swamps and/or marshes

**wildlife preserve** – a naturally occurring space that provides protection to animals from hunting, predators, and human interference