

**MEMORANDUM OF AGREEMENT
CONCERNING THE CONTINUED OPERATION
OF JEROME PARK RESERVOIR
AFTER LISTING TO THE NEW YORK STATE
AND NATIONAL REGISTERS OF HISTORIC PLACES**

WHEREAS, the New York State Historic Preservation Officer (the "SHPO") hereby confirms that Jerome Park Reservoir was determined by the Commissioner of the New York State Office of Parks, Recreation and Historic Preservation ("NYSOPRHP") to be eligible for listing on the New York State and National Registers of Historic Places on November 4, 1994; and

WHEREAS, NYSOPRHP and SHPO brought the nomination of the area denominated as Jerome Park Reservoir (the "Reservoir") for listing on the New York and National Registers of Historic Places before the State Board for Historic Preservation (the "Board") on June 9, 2000. As of such date, the Board decided to list the Reservoir on the New York State Register of Historic Places and recommended listing of the Reservoir on the National Register of Historic Places. (see attached Exhibit A for a description of the proposed site as listed); and

WHEREAS, the City of New York (the "City") and the New York City Department of Environmental Protection (the "NYCDEP") have expressed concern over the potential impact of such listing on the ability of the City to operate and maintain the Jerome Park Reservoir, including but not limited to the reservoir, the bed of the reservoir, surrounding and dividing stone-masonry walls, the gate houses, and associated piping and appurtenances, as integral parts of the City's water supply system (see attached Exhibit B for a description of the existing functioning facilities); and

WHEREAS, NYSOPRHP and SHPO acknowledge that the Jerome Park Reservoir is an integral part of the City's water supply system and that NYCDEP must operate and maintain the Reservoir in a manner to ensure the wholesome and plentiful supply of water to New York City consumers as well as to ensure that the City's water supply system generally, and Jerome Park Reservoir specifically, be operated and maintained in a manner consistent with all applicable laws and regulations including, but not limited to the federal Safe Drinking Water Act and the New York State Sanitary Code; and

WHEREAS, NYSOPRHP and SHPO acknowledge that NYCDEP has in the past, and will, in the future, need to rehabilitate, modify, upgrade, expand and/or make additions to the Reservoir and/or its structures or appurtenances, or a part thereof, that are the subject of the listing in order to ensure they continue to function in accordance with the best engineering practice, water supply requirements, and applicable public health laws and regulations; and

WHEREAS, NYSOPRHP, SHPO and NYCDEP agree that the proposed listing is intended to recognize the historic significance of the Jerome Park Reservoir without

jeopardizing the ability of NYCDEP to operate and maintain the Reservoir as a part of the New York water supply system for the benefit of the City of New York; and

WHEREAS, title 9 of the New York Code Rules and Regulations ("NYCRR") section 428.12 provides for the designation of certain categories of undertakings as being exempt from review when it has been determined that such undertakings are not likely to change the quality of an historic resource; and

WHEREAS, NYSOPRHP, SHPO and NYCDEP agree that compliance with the stipulations set forth below in this Memorandum of Agreement (the "Agreement") will satisfy NYCDEP's obligations under Article 14 of the Parks, Recreation, and Historic Preservation Law and 9 NYCRR section 428 et seq. resulting from the determination that the Reservoir is eligible for listing, and its subsequent listing, on the New York State Register of Historic Places, and that no further actions with respect to certain rehabilitations, modifications, upgrades, expansions and/or additions which have been determined to be exempt from review under 9 NYCRR 428.12 will be required as a result of such determination and listing;

NOW, THEREFORE, NYSOPRHP, SHPO and NYCDEP agree that such rehabilitations, modifications, upgrades, expansions, and/or additions to the Reservoir shall be administered in accordance with the following Stipulations.

STIPULATIONS

I. Role of Jerome Park Reservoir within the New York Water Supply System.

The City and NYCDEP represent that the following is an accurate description of the role of Jerome Park Reservoir within the New York water supply system.

Three separate watershed systems, the Croton, Catskill, and Delaware, are each provided with separate aqueducts that convey water flow to New York City. Jerome Park Reservoir functions as a balancing reservoir to absorb the inflow from upstate reservoirs in the Croton System and meet the outflow demands primarily of the Bronx and lower Manhattan through gravity. During times of drought, utilizing a pumpage system, the Reservoir can provide up to 30% of the drinking water for all of New York City.

Water flows by gravity from upstate reservoirs of the Croton System to the City's distribution system, which includes Jerome Park Reservoir. There are controlled, steady inflows from upstate aqueducts into Jerome Park Reservoir from the Croton System and variable outflows resulting from the instantaneous demand in the water distribution systems. Imbalances between inflows and outflows are compensated for by a rise or fall in reservoir levels. Instantaneous water demands from the distribution system vary with the time of day, season, weather, and numerous other factors. The system operator at Jerome Park Reservoir reacts to the resulting water level changes by requesting an increase or decrease in the flow being withdrawn from the New Croton Reservoir upstream.

The New Croton Reservoir has a spillway at elevation 195.2 feet and the Jerome Park Reservoir, encompassing 94 acres, has a maximum water level of 134.5 feet. The system is operated based upon hourly observations of the water level at Jerome Park Reservoir, since the New Croton Aqueduct operates by gravity as an open channel. At a flow rate of 150 mgd, it takes about sixteen hours for a change made at the Croton Lake Gate House to affect the Jerome Park Reservoir. Changes in the rate of withdrawal from the New Croton Reservoir are normally made once daily based upon the observed trend of the water level at Jerome Park Reservoir, the projected demands of the Bronx and lower Manhattan, and, if required, pumpage into the Intermediate and High Level Systems of New York City for the following day.

Distribution of the flow through Jerome Park Reservoir involves a complicated system of piping, tunnels, pumps, and drains, connected by a series of gate houses. Exhibit B provides a concise description of the existing functioning facilities at Jerome Park Reservoir, which must be operated, maintained, and over time, upgraded, expanded, and/or modified in order to properly serve the water needs of New York City and comply with applicable State and Federal clean water, public health, and sanitary laws and regulations.

II. Activities which are predetermined not to require consultation with SHPO.

To the extent NYCDEP proposes to engage in activities which modify, upgrade, expand, and/or add to Jerome Park Reservoir, or a part thereof, that is listed on the State Register of Historic Places, and such activities are to be either undertaken, funded, or approved by a State Agency, as those terms are defined in Article 14 of the Parks, Recreation, Historic Preservation Law and the New York State Historic Preservation Act of 1980, such activities listed in this section of the Agreement are hereby considered not to adversely impact or change the quality of the Reservoir as an historic resource and are thus designated as undertakings exempt from review according to 9 NYCRR section 428.12 and thus require no consultation with SHPO ("Exempt Undertakings"). Notwithstanding the activities listed below, except for Exempt Undertakings pursuant to Section II G, nothing contained in Section II shall be deemed to affect NYCDEP's obligations to consult with SHPO, and obtain SHPO review of any activity otherwise requiring such consultation and review pursuant to Section III hereof. (i.e., if, in the course of conducting an activity on a structure or facility which is an Exempt Undertaking, NYCDEP employs a method of work which results in an alteration or change to the historic character of another structure or facility where such alteration or change would not be an Exempt Undertaking, consultation and review would be required for the latter, in accordance with Section III.). -

- A. Purchase of equipment.
- B. Public Service programs.
- C. Repair, Replacement, and/or Routine Operation of the Reservoir.
 - 1. Resurfacing of roads where no change in width, surface material, depth of roadbed, vertical alignment or drainage is to occur.

2. Repair/replacement of underground utility lines in existing trench.
3. Repair/replacement of existing curbing or sidewalks in kind.
4. Repair/replacement of vegetation landscaping in kind.
5. Repair/replacement of existing waterworks or sewer systems, storm drainage, chemical or fuel storage where significant site features such as mature vegetation are not impacted.
6. Repair/replacement of existing passageways and/or tunnels between any and/or all of the following facilities: Gate House Nos. 2, 3, 5, 6, 7, Shafts 3, 4, 21, 33, and the Mosholu Pumping Station.
7. In kind repair of the Reservoir retaining walls, including masonry and fencing. For masonry repointing, in kind is understood to include strength and color of mortar, and width, profile, tooling and texture of joint. In performing repointing hand-held, non-power tools will be used to the greatest extent possible.
8. Repair/replacement of dividing wall separating the North and South basins of the Reservoir including masonry and seven existing intake pipes with sluice gates.
9. Repair/replacement of existing underground masonry aqueducts leading to Shafts 21 and 33 of the New Croton Aqueduct running underneath the Reservoir.
10. Repair/replacement of sluice gates connecting the New Croton Branch Aqueduct, Shaft 21, and 205th Street water main to Gate House No. 5.
11. Repair/replacement of cast iron mains secured by concrete cradles to the Reservoir bottom connecting Gate House Nos. 2 and 3 to the Reservoir and to Gate House No. 5.
12. Repair/replacement of open drain installed under Gate House No. 2 connected to sewer system leading to a combined sewer system along Broadway, west of the Reservoir serving the overflow weir.
13. Repair/replacement of overflow weir.
14. Repair/replacement of the system of Reservoir dewatering pipes.
15. Repair/replacement of reinforced concrete cylindrical pipe connecting Gate House No. 6 to the Reservoir dividing wall.
16. Repair/replacement of underground cast iron main at Reservoir Avenue serving the southeast Bronx.
17. Repair/replacement of cast iron main in Reservoir retaining wall connecting Gate House No. 6 to the Reservoir.
18. Repair/replacement of chlorination facilities and/or equipment at Gate House Nos. 5, 6, and 7.
19. Repair/replacement of the Microstrainer Building adjacent to Gate House No. 6.
20. Repair/replacement of connections between Gate House No. 7 and the Mosholu Pumping Station.
21. Repair/replacement of the three pumps at Mosholu Pumping Station underneath Gate House No. 7.
22. Repair/replacement of waterway screens.
23. Repair/replacement of valves.

24. Draining and dredging of either or both the North or South Basin of the Reservoir for inspection, cleaning, and repairs to maintain water flow and quality.
25. Raising or lowering the water level within the Reservoir as needed based on observed water needs for New York City and projected flow trends from the New Croton Aqueduct and New Croton Branch Aqueduct serving the New Croton Reservoir.
26. In kind roof repair and/or replacement of roofing material.
27. In kind repair/replacement of gutters and downspouts using colors complementing building facades.
28. Window and door repair/replacement using in kind materials and matching original details, including replacement of isolated wooden members, glazing and hardware, and replacement or addition of window screens.
29. In kind replacement of missing or broken glass.
30. Minor wood repair/replacement of structural elements and isolated trim sections provided new material matches original in material and detail.
31. Masonry repair/replacement using in kind materials and methods. For masonry repointing, in kind is understood to include strength and color of mortar, and width, profile, tooling and texture of joint. In performing repointing hand-held, non-power tools will be used to the greatest extent possible.
32. Repair/replacement of concrete floors.
33. Repair/replacement in kind of concrete block foundations, minor repairs to parget foundations to match existing, and repointing in kind of all foundations. For repointing, in kind is understood to include strength and color of mortar, and width, profile, tooling and texture of joint. In performing repointing hand-held, non-power tools will be used to the greatest extent possible.
34. Repair/replacement of signs.
35. Storm windows:
 - a. Exterior: New wood or aluminum exterior storm windows provided they completely fill the window opening without the use of spacers or panels; mullions and meeting rails match those of prime window; and color matches that of prime sash and trim.
 - b. Interior: Interior storms where units are installed within existing opening; match interior trim color; are reversible and do not cause damage to existing trim; and have structural elements that align with those of prime window. Windows should be installed to completely fill existing opening and with a seal so as to protect prime window from condensation.
36. Caulking and weather-stripping, utilizing a color complementary to the subject structure.
37. Wrapping of heating pipes and ducts.

Unless otherwise indicated, the term "in-kind" shall mean using materials that match the original in color, texture and detail.

NYCDEP reserves the right to present to SHPO, and the SHPO agrees to consider in good faith, alternative materials in the event that matching materials are

(i) unavailable, or

(ii) cannot fulfill the operational function in question at the Reservoir (e.g., are not sufficiently strong, durable or watertight, or cannot be used in combination with existing materials on site, or do not meet relevant federal or state requirements),

D. Modifications, upgrades, expansions, and/or additions of subsurface structures, including but not limited to:

1. Removal of the chemical feed facilities in Gate House Nos. 5, 6, and 7 and decommission of the Mosholu Pumping Station after completion of the Croton Water Treatment Plant (WTP).
2. Construction of a new shaft and tunnel from Croton WTP to the Reservoir to convey filtered and disinfected water from the Croton WTP to the distribution connections at the Reservoir and the trunk mains connected to City Water Tunnel Nos. 1 and 3.
3. Enlargement of the Reservoir storage capacity by lowering the depth of the Reservoir floor, provided that the work does not require removal or destruction of and/or alterations to the existing Reservoir retaining wall (underpinning that does not affect the integrity of the existing retaining wall shall not be deemed work requiring removal, destruction, and/or alterations to such wall).

E. Modifications, upgrades, expansions, and/or additions of above surface structures essential to maintenance of quantity and quality of New York City Water Supply.

1. Demolition of Demonstration Water Treatment Plant.
2. Demolition of Microstrainer Building.

F. Rehabilitation, modification, upgrade, expansion, and/or addition to surface structure interiors of the Gate Houses serving the Reservoir including, but not limited to, alterations and/or removals of existing cast iron floor plates and valve assemblies in Gate Houses 2, 3, 6 & 7. Alterations and/or removals of existing cast iron floor plates and valve assemblies at Gate House 5 are not included in this exclusion.

G. Any undertaking which is a necessary to prevent an immediate and imminent threat to life or property in accordance with the New York State Historic Preservation Act of 1980 (9 NYCRR section 428.11).

III. Review Procedure for Activities Involving Significant Alterations to Listed Surface Structures.

A. Except for the activities listed in Section II above, to the extent NYCDEP proposes to significantly modify, upgrade, expand, and/or add to surface structures of Jerome Park Reservoir, or a part thereof, as it is listed on the New

York State and National Registers of Historic Places, and such modifications, upgrades, expansions, and/or additions are to be either undertaken, funded, or approved by a State Agency, as those terms are defined in Article 14 of the Parks, Recreation, and Historic Preservation Law and the New York State Historic Preservation Act of 1980, NYCDEP will undertake such modifications, upgrades, expansions, and/or additions in accordance with "The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings" (Standards).

1. NYCDEP will apply the Standards in consultation with the New York SHPO on a case-by-case basis.
2. To begin consultation with the SHPO, prior to initiating activities involving significant alterations to listed surface structures, covered by this section of the Agreement, NYCDEP will provide documentation for SHPO review which includes the following:
 - a. A description of the undertaking.
 - b. Original photographs, not photocopies, of the project site that completely describe existing conditions. In the case of buildings, all exterior elevations should be photographed. All photographs should be clearly labeled as to location of view, and keyed to existing condition floor/site plans.
 - c. Photographs (labeled) of all architectural details, keyed to existing condition floor/site plans.
 - d. Streetscape photographs taken of properties in both directions of the property affected.
 - e. Architect's floor plans or sketches of both existing and proposed conditions.
 - f. Specifications for proposed work to fully describe methods and materials proposed for repair or replacement.
 - g. Site plan/elevation drawings where exterior changes or new construction is proposed. Drawings must fully describe existing and proposed conditions, materials, and finishes.
 - h. A "Survey of Architectural Conditions" to fully describe both existing and proposed conditions, where floor plan changes or removals are to occur.
 - i. Description of any building additions.
3. The SHPO will respond in accordance with Section V.

- B. For those activities involving significant modifications, upgrades, expansions, and/or additions to the surface structures at the Reservoir, undertaken, funded, or approved by a State Agency, as those terms are defined in Article 14 of the Parks, Recreation, and Historic Preservation Law and the New York State Historic Preservation Act of 1980 and covered by this section of the Agreement, where the Standards cannot be met and SHPO has made an assessment that the activities will cause an adverse impact on the Reservoir in accordance with 9 NYCRR section 428.7, NYCDEP will consult with the SHPO and prior to taking any

further action, will initiate the process set forth at 9 NYCRR sections 428.8 through 428.10 to obtain SHPO's comments.

- C. Documentation of the work (project files), including "before" photographs, will be retained and will be available to the SHPO.

IV. Archeology.

NYSOPRHP and SHPO acknowledge that NYCDEP has determined, through an extensive archeological survey conducted as part of the Environmental Impact Study (EIS) completed for the Croton Water Treatment Plant, that the Jerome Park Reservoir does not contain archeological resources which require further review.

V. Responsibilities of the SHPO.

Within thirty (30) days of receipt of notification of any proposed activities subject to Section III above, SHPO will review the documentation for the proposed project and may:

- A. Request additional information and/or provide recommendations.
- B. Provide a project effect finding in writing which may:
 - 1. make an assessment of no adverse impact in accordance with 9 NYCRR section 428.7, concluding the consultation process, or
 - 2. require continued consultation with the SHPO, or
 - 3. establish conditions for project approval, which may require that the SHPO be informed in writing that conditions will be incorporated into the project and that the SHPO be provided with revised documents incorporating these conditions.

VI. Amendments; Termination.

The SHPO may monitor activities carried out pursuant to this Agreement, and the SHPO will review such activities if so requested. NYCDEP will cooperate with the SHPO in carrying out their monitoring and review responsibilities.

This Agreement will continue in force for the duration of the listing of Jerome Park Reservoir on the New York State and National Registers of Historic Places. Any party to this Agreement may request that it be amended, whereupon the parties will consult to consider such amendment. No amendment shall be effective unless set out in a writing executed by all of the parties hereto.

Any party to this Agreement may terminate it by providing thirty (30) days notice to the other parties, provided that the parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. In the event of termination, NYCDEP will comply with 9 NYCRR sections 428.4 through

428.10 with respect to activities undertaken at the Reservoir to which such regulations are applicable.

Execution and implementation of this Agreement satisfies the responsibilities of NYCDEP, and of the State agencies undertaking, funding, or approving any project or other action, under Article 14 of the Parks, Recreation, and Historic Preservation Law and 9 NYCRR Part 428 with respect to Jerome Park Reservoir.

In the event that a federal agency undertakes a review pursuant to section 106 of the National Historic Preservation Act of 1966 with respect to Jerome Park Reservoir, SHPO will make this document available and recommend its adoption as a document which satisfies the responsibilities of NYCDEP and the state agencies undertaking, funding, or approving any undertaking listed in section II of this Agreement.

VII. Miscellaneous.

- A. This Agreement may not be assigned except pursuant to written instrument executed by all of the parties hereto.
- B. This Agreement shall be governed by, and construed in accordance with, the laws of the State of New York.
- C. All notices required or permitted hereunder shall be in writing, and shall be delivered by hand, or by certified mail, return receipt requested, addressed as follows:

If to NYCDEP, to

New York City Department of Environmental Protection
59-17 Junction Boulevard, 19th Floor
Corona, New York 11368
Attention: General Counsel

If to NYSOPRHP or SHPO, to

Commissioner of Parks, Recreation and Historic Preservation
Attention: Historic Preservation Field Services Bureau
Agency Building 1, Empire Plaza
Albany, New York 12238

Any party may change its address for notices hereunder by providing written notice of the change to the other parties in the manner specified in this paragraph C.

- D. Nothing contained herein shall be deemed to create or confer any benefit or interest in this Agreement in any third party.

- E. This Agreement sets out the complete understanding between the parties with respect to the subject matter hereof, and supersedes all prior agreements or understandings with respect to such subject matter.

The New York State Office of Parks, Recreation and Historic Preservation

By: JW. Alden Date: 11 July '00
For Bernadette Castro, Commissioner

New York State Historic Preservation Officer

By: JW. Alden Date: 16 July '00
Deputy Commissioner for Historic Preservation

New York City Department of Environmental Protection

By: [Signature] Date: 7/24/00
Commissioner, Joel A. Miele Sr., P.E.

[Signature]