

FORM F - STRUCTURE

2286

MDC - 1111, MASS.

DEC 05 1989

AREA

FORM NO.

6-2

MASSACHUSETTS HISTORICAL COMMISSION
80 BOYLSTON STREET
BOSTON, MA 02116

Town Marlborough, SouthboroughAddress Framingham RoadName Marlborough Brook Filter BedsOwnership: Metro. Dist. Comm. PublicPrivate

Type of Structure (check one):

bridge	_____	pound	_____
canal	_____	powder house	_____
dam	_____	street	_____
fort	_____	tower	_____
gate	_____	tunnel	_____
kiln	_____	wall	_____
lighthouse	_____	windmill	_____

other gravity filter

DESCRIPTION

Date 1895-99Source Metro. Water Board, Annual Report,
1899

Architect Engineer/Designer (if known):

Metropolitan Water BoardConstruction material concrete, granite, sand,
tile, gravelAlterations (with dates) spillway added 1955for flood controlCondition fairMoved no Date _____Acreage approx. 16 acresSetting residentialRecorded by Martha BowersOrganization Louis Berger & AssociatesDate March 1984; revised 1989

Photo (3"x3" or 3"x5" black and white)
Indicate address on back of photo.
Staple to left side of form.

Sketch Map: Draw map showing structure's location
in relation to nearest cross streets, buildings
and/or geographical features. Indicate all
buildings between inventoried property and nearest
intersection.
Indicate north.

See attached maps

A 19290740/4689690
B 19291110/4689000
C 19291310/4689180

UTM REFERENCE _____

USGS QUADRANGLE Marlborough, Mass.SCALE 1:25,000

NATIONAL REGISTER CRITERIA STATEMENT (if applicable)

The Marlborough Brook Filter Beds are significant for their association with the metropolitan Boston water supply system, specifically development of Sudbury Reservoir in the late 1890's. The presence of these beds represents an effort on the part of the Metropolitan Water Board to ensure that water entering the reservoir from Marlborough and Walker brooks would be of good quality. One of two sets of filter beds originally in the system (the 1893 Pegan Brook filters at Lake Cochituate in Natick were damaged during a hurricane and later partly filled in), the Marlborough filters are no longer in service but their original contours and control systems

(see continuation sheet)

ARCHITECTURAL SIGNIFICANCE Describe important design features and evaluate in terms of other structures within the community.

The Marlborough filters occupy about 16 acres straddling the town line between Marlborough and Southborough, on the western edge of Sudbury Reservoir. The roads that frame the beds (Maple, Walker, and Framingham roads) are primarily residential in character. The beds consists basically of 28 irregularly -shaped shallow basins, with tile drains beneath layers of sand or gravel. The beds, built in terraces, are delineated by narrow channels formed by low earthen berms, the area between which is lined with gravel. Concrete sluices, controlled by wooden stop planks, are positioned at various points along the channels to control flow. A 30-foot concrete spillway and waste channel, at the lower end of the settling reservoir were constructed in 1955. Near the spillway are three small wood-frame buildings, with clapboarded walls and composition shingle roofs, formerly used for offices and maintenance activities. These non-contributing structures have been excluded from the boundaries.

HISTORICAL SIGNIFICANCE Explain historical importance of structure and how the structure relates to the development of the community.

Sudbury Reservoir was initially begun by the City of Boston in 1893, and was completed by the Metropolitan Water Board, which was created in 1895. Among the numerous streams which fed Sudbury Reservoir were Marlborough and Walker brooks. The quality of water in these streams was below the Board's standards, so the filter beds were constructed to provide purification. The beds were designed by Metropolitan Water Board engineering staff under Frederic P. Stearns. The first contracts were let in 1895, and the beds completed in 1899. The filters operated by gravity, with the general direction of flow from north to south. Passing beneath Walker Street, Marlborough brook entered a 1.5 acre settling reservoir. Water was then diverted over a small concrete and stone weir into the main channel, which extended about 1/2 mile along the eastern perimeter of the beds. At the first main channel dam, water could be diverted into a set of 17 "artificial" beds, occupying about 5.36 acres, where it was filtered through 2 feet of sand set above tile drains. Alternatively, water could continue down the main channel to a second dam, where some could be drawn off into a 1.22 acre storage bed or conveyed further to 10 "natural beds" (so-called because existing gravel constituted the filter medium), from which it drained into the reservoir in a suitably pure condition.

For further information on filter beds in the metropolitan Boston water system, please refer to Overview, Section 8, p.9.

BIBLIOGRAPHY and/or REFERENCES

Metropolitan Water Board Annual Reports, 1899, 1900.

INVENTORY FORM CONTINUATION SHEET

MASSACHUSETTS HISTORICAL COMMISSION
Office of the Secretary, Boston

Community: Marlborough, Southborough	Form No: 6-2
Property Name: Marlborough Brook Filter Beds	

Indicate each item on inventory form which is being continued below.

NATIONAL REGISTER CRITERIA STATEMENT

remain largely intact, providing the best example of this type of property in the metropolitan Boston water system. The Marlborough Brook Filter Beds possess integrity of location, design, setting (within the resource), materials, workmanship and association. They meet criteria A and C of the NRHP. The boundaries of the resource are outlined in red on the accompanying map entitled "Marlborough Brook Filter Beds", a record plan dated November, 1902 with a scale of 1" = 80'. On the south, the boundaries follow the waterline of Sudbury Reservoir; on the east they follow Framingham Road to the Main Channel which they follow to the Settling Reservoir at the north end of the resource; they follow the contours of the Settling Reservoir to the Marlborough Brook Channel which they follow back to the Sudbury Reservoir. These bounds encompass the filterbeds while excluding later development that has encroached upon them.

Staple to Inventory form at bottom

United States Department of the Interior
National Park ServiceNational Register of Historic Places
Continuation Sheet

Section number _____ Page _____

SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 89002286Date Listed: 01/18/90Marlborough Brook Filter Beds
Property NameMiddlesex
CountyMA
StateWater Supply System of Metropolitan Boston MPS
Multiple Name

This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.

of Beth L. Sarge
Signature of the Keeper

01-18-90
Date of Action

=====

Amended Items in Nomination:

Section 3: Classification

Number of Resources within the Property: The property is most appropriately classified as 1 contributing structure. It is comprised of several different components which function as one integrated structural system.

This information was confirmed with Betsy Friedberg, National Register Director, MASHPO, by telephone.

DISTRIBUTION:

National Register property file
Nominating Authority (without nomination attachment)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY NAME: Marlborough Brook Filter Beds

MULTIPLE NAME: Water Supply System of Metropolitan Boston MPS

STATE & COUNTY: MASSACHUSETTS, Worcester

DATE RECEIVED: 12/05/89 DATE OF PENDING LIST: 12/19/89
DATE OF 16TH DAY: 1/04/90 DATE OF 45TH DAY: 1/19/90
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 89002286

NOMINATOR: STATE

REASONS FOR REVIEW:

APPEAL: N DATA PROBLEM: N LANDSCAPE: N LESS THAN 50 YEARS: N
OTHER: N PDIL: N PERIOD: N PROGRAM UNAPPROVED: N
REQUEST: N SAMPLE: N SLR DRAFT: Y NATIONAL: N

COMMENT WAIVER: N

☒ ACCEPT ☐ RETURN ☐ REJECT 1/18/90 DATE

ABSTRACT/SUMMARY COMMENTS:

Locally significant engineering structure associated with development of the Sudbury Reservoir as part of Boston's metropolitan water supply system in the 1890s.

RECOM./CRITERIA Accept A+C
REVIEWER Savage
DISCIPLINE Architectural History
DATE 01-18-90

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

CLASSIFICATION

☐ count ☐ resource type

STATE/FEDERAL AGENCY CERTIFICATION

FUNCTION

☐ historic ☐ current

DESCRIPTION

☐ architectural classification
☐ materials
☐ descriptive text

SIGNIFICANCE

Period Areas of Significance--Check and justify below

Specific dates Builder/Architect
Statement of Significance (in one paragraph)

☐ summary paragraph
☐ completeness
☐ clarity
☐ applicable criteria
☐ justification of areas checked
☐ relating significance to the resource
☐ context
☐ relationship of integrity to significance
☐ justification of exception
☐ other

BIBLIOGRAPHY

GEOGRAPHICAL DATA

☐ acreage ☐ verbal boundary description
☐ UTMs ☐ boundary justification

ACCOMPANYING DOCUMENTATION/PRESENTATION

☐ sketch maps ☐ USGS maps ☐ photographs ☐ presentation

OTHER COMMENTS

Questions concerning this nomination may be directed to

Signed _____ Phone _____

Date _____



Marlborough Filter

Marlborough Brook Filter Beds

Water Supply System of Metropolitan Boston MAs



MDC - TRA, MASS.

Marlborough Brook Filter Beds 6-2

Jane Carolan, Martha Bowers 1984

Louis Berger Ass., Inc.

Water Supply System of Metropolitan Boston MAS



MDC - TRA, MASS.

Marlboro Brook Filter Beds 6-2

Jane Carolan, Martha Bowers 1984

Louis Berger Ass, Inc.

Water Supply System of Metropolitan Boston Area



- Conventional Signs.
- Weir Chamber
 - △ Outlet to Channel
 - " " Ditch
 - " " Reservoir
 - Inlet
 - Manhole
 - Lamp Holes
 - Dam
 - Vitriified Pipes laid with Cement Joints.
 - Underdrains laid with Open Joints.
 - Collecting Pipes Laid with Filter Joints.

(NOTE)

ARTIFICIAL FILTER BEDS ARE NUMBERED FROM 1 TO 17 INCLUSIVE.

NATURAL FILTER BEDS ARE NUMBERED FROM 18 TO 26 INCLUSIVE.

MDC - TRA, MASS.

COMMONWEALTH OF MASSACHUSETTS.

METROPOLITAN WATER WORKS.

MARLBOROUGH BROOK FILTER BEDS.

#6-2

SCALE 1 INCH = 80 FEET

November 1902

RECORD PLAN

Upper.

Lower.

WATERWAYS IN THE
MARLBOROUGH BROOK
FILTER BEDS
AND THE
ADJACENT
LANDS
AND
THE
ADJACENT
LANDS
AND
THE
ADJACENT
LANDS



Please refer to the map in the
Multiple Property Cover Sheet
for this property

Multiple Property Cover Sheet Reference Number: 64500254