

**PUBLIC DOCUMENT NO. 57;
FOURTH ANNUAL REPORT OF
THE METROPOLITAN WATER
BOARD, JANUARY 1, 1899**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649057887

Public Document No. 57; Fourth Annual Report of the Metropolitan Water Board, January 1, 1899 by Metropolitan Water Board

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

METROPOLITAN WATER BOARD

PUBLIC DOCUMENT NO. 57; FOURTH ANNUAL REPORT OF THE METROPOLITAN WATER BOARD, JANUARY 1, 1899



SITE OF WACHUSETT RESERVOIR—FROM HILL ON ESTATE OF DANIEL W. CARVILL IN CLINTON.

UNIVERSITY
OF
MICHIGAN

PUBLIC DOCUMENT

. . . . No. 57.

FOURTH ANNUAL REPORT

Dup. 17
D. of D.

OF THE

of Massachusetts

METROPOLITAN WATER BOARD.

JANUARY 1, 1899.

BOSTON:
WRIGHT & POTTER PRINTING CO., STATE PRINTERS,
18 POST OFFICE SQUARE.
1899.



METROPOLITAN WATER BOARD.

To the Honorable the Senate and House of Representatives of the Commonwealth of Massachusetts in General Court assembled.

The Metropolitan Water Board, established under the provisions of chapter 488 of the Acts of the year 1895, respectfully submits its

FOURTH ANNUAL REPORT,

being a report of the work and operations of the Board for the year 1898.

I. ORGANIZATION.

(1) Administration.

Henry P. Walcott, M.D., whose term of service expired, was reappointed a member of the Board for the term of three years, beginning with the first Monday in May, 1898; and the Board has continued as follows: Henry H. Sprague, chairman, Wilmot R. Evans and Henry P. Walcott, M.D. William N. Davenport has continued as the secretary of the Board, and has acted as its executive officer; and Alfred F. Bridgman has also continued as auditor and accountant.

There has been a slight increase in the number of employes in the administration department, and the office force now comprises a book-keeper, an assistant book-keeper, an assistant in auditing, a paymaster, three stenographers, two messengers and a janitor.

The addition of a stenographer and messenger has not, however, been commensurate with the increase in the amount of work required in the department. The assumption of the operation of the water works acquired from the city of Boston and the beginning of the maintenance of the works constructed by the Board have added largely to the accounts and pay rolls to be kept by the auditor, and have involved many additional details in labor.

The duties of the secretary, as the executive officer of the Board, have likewise much increased. He has been called upon to take

part not only in negotiations for the purchase of lands and in the settlement of damages for lands taken by the Board, but also in the investigation of many claims which have been brought for damages to business in West Boylston, Boylston and Sterling, and for loss of wages by employes in West Boylston, whose employment has been taken away by the operations of the Board. The secretary has likewise been called upon to represent the Board in hearings and conferences at the State House, and also before boards and committees in the different towns where the operations of the Board are carried on.

(2) *Engineering Department.*

The engineering department, comprising both the construction of new works and the maintenance of the works of water supply, has been under the direction of Frederic P. Stearns, the chief engineer.

The principal engineers in service have been as follows:—

Chief Engineer, FREDERIC P. STEARNS.
Consulting Engineers, JOSEPH P. DAVIS, ALPHONSE FTELEY.
Engineer of Distribution Department, DEXTER BRACKETT.
Engineer of Sudbury Department, DESMOND FITZGERALD.
Engineer of Dam and Aqueduct Department, THOMAS F. RICHARDSON.
Engineer of Reservoir Department, HIRAM A. MILLER.
Principal Office Assistant, REUBEN SHIRREFFS.

Hiram F. Mills of Lawrence has acted during the year as a consulting engineer in the matter of the construction of the North Dike connected with the Wachusett Reservoir at Clinton.

There have also been employed during the year in the engineering force the following:—

Department engineers,	4
Assistant engineers,	29
Draftsmen,	23
Engineering assistants,	103
Inspectors,	13
Foremen,	1
Clerks,	4
Stenographers,	9
Messengers,	4
	—
A total of	190

The maximum number employed at any one time was 165.

Beside the engineers who have been detailed for purposes of inspection of work, other inspectors, over pipe-making, pipe-laying, machinery, masonry and earthwork, have been employed, to the maximum number of 19.

Laborers have been employed, under the charge of foremen and under the general direction of the engineers, for the construction of a temporary dam and conduit at Clinton, for the clearing of portions of the land comprised within the limits of the Wachusett Reservoir, for the making of borings at the location of the dikes, for the completion of the embankments and the improvement of the lands along the Wachusett Aqueduct, for the digging of drainage ditches in swamps and for work at the pipe yards, in various numbers according to the requirements from time to time, the maximum number at any one time being 291.

Beside those who have been employed in the work of construction, a considerable maintenance force has been employed. The organization at the end of the year included, beside engineers, employes as follows: dam and aqueduct department, 11; Sudbury department, including Sudbury Reservoir, Lake Cochituate and the Sudbury and Cochituate aqueducts, 50; distribution department, including pumping stations, pipe lines and reservoirs, 60; a total maintenance force of 121.

Special engineers, experts, appraisers and others have been employed from time to time in various branches of investigation and service.

There have also been employed by the contractors, in the different works of construction carried on, considerable numbers of men, the largest number at one time being 1,264.

The detailed report of the doings of the engineering department is contained in the report of the chief engineer.

(3) *Conveyancing Department.*

Alfred C. Vinton has continued in the supervision of the conveyancing department, with George D. Bigelow as assistant conveyancer. In the main office there have been regularly employed, in addition, Miss Alline E. Marcy, title examiner, and two stenographers and typewriters. Others have occasionally been employed for special work, as the demand has made necessary.

During the earlier part of the year Charles T. Davis continued as the chief examiner of titles, in charge of the branch office at the Worcester Registry of Deeds. When he entered upon his duties as one of the judges of the new court of registration, the office was placed in charge of Miss Celia M. Tibbetts, who had previously been the chief conveyancing clerk in that office, subject to the more immediate supervision of the assistant conveyancer from the Boston office. Two conveyancing clerks, a stenographer and a messenger have also been employed, under the charge of Miss Tibbetts.

The preliminary work in the Registry of Deeds at Worcester for the examination of the titles of lands in the Wachusett basin was substantially completed early in the year. During the remainder of the year that office has been engaged in the completion of the abstracts of title and in making reports for settlements of titles in the Wachusett basin; and also in examination of titles to additional tracts of land needed for the new sewer line to be completed in Clinton, and for the pumping station and the filtration beds which are to form a part of the Clinton Sewerage System; of the titles for the Crane Swamp improvement, undertaken in order to preserve the purity of the water flowing into the Sudbury Reservoir; and the titles to additional tracts, principally in Lancaster and Clinton, needed for roads, cemetery and other like purposes. This work was greatly facilitated by the efficiency of the chief examiner, Mr. Davis.

Complete titles to the number of 164 have been finished and reported upon during the year, in addition to a large amount of miscellaneous work. Beside performing the work required in the settlement for titles in the Worcester district, the force at that registry is to be continued upon the preparation of such data as is needed for satisfactory information relative to the ownership of estates which may be entitled to damages on account of depreciation in value, but which are not taken for the purposes of the work. There are about three hundred estates outside of the limits of the proposed reservoir embraced in the district from which such claims may be made.

The Boston office, which is required to pass upon the titles, to do the work necessary for the perfection of titles and to prepare the necessary instruments, has acted upon 113 settlements with land owners during the year. These settlements have covered 165 titles,

many of which have, however, covered several original titles uniting in a single title at a later date.

During the year the department has drafted, including the takings of January 1, 1898, 18 instruments of takings of lands under the right of eminent domain. These takings embraced parcels in the counties of Worcester, Middlesex, Norfolk and Suffolk, and not only lands taken in fee, but also various other rights and easements in lands, and also the waters of the South Branch of the Nashua River, of Sandy Pond and of a part of Coachlace Pond, with the waters of their various tributaries.

The conveyancing department has, in addition, been called upon to draft various releases of rights and damages and other agreements with parties in relation to real estate, and the necessary instruments for the location of new highways, one to take the place of the River Road in Clinton and Boylston at the south of the new reservoir, and another to extend from Clinton through Sterling to West Boylston upon the north side of the reservoir, and for the discontinuance of portions of the two existing roads.

The department has also been called upon to furnish to the Attorney-General considerable reports for assistance in the suits in court in which petitions for damages have been brought, and also to furnish a good deal of miscellaneous information to the engineers for their guidance in the various parts of their work.

(4) *Police.*

The completion of the Sudbury Reservoir and of the Wachusett Aqueduct has enabled the Board to diminish to a considerable extent the number of officers employed for the police protection of the localities in which the operations of the Board have been carried on. During the early part of the year there was employed a maximum number of 15 officers in Southborough and of 9 in Marlborough, and also 8 officers were employed in Berlin and 7 in Northborough.

The police service in Berlin and Northborough was terminated on March 1, 1898, the force in Southborough was discharged on June 25, 1898, and the police stations maintained in South Berlin and in Fayville were given up. Owing to the work which had to be performed in the northern part of the Sudbury Reservoir for its final completion, the police force in Marlborough was continued until