MASSACHUSETTS WATER RESOURCES AUTHORITY

Charlestown Navy Yard
100 First Avenue
Boston, Massachusetts 02129

Telephone:
(617) 242-6000

OFFICE OF THE SECRETARY
FILED
1988 NOV -4 PM 2:40
FEDERAL ENERGY
REGULATORY
COMMISSION

November 1, 1988

Board of Directors
James S. Hoyte, Chairman
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John J. Carroll
Robert J. Ciolek
Lorraine M. Downey
Anthony V. Fletcher
Charles Lyons
Samuel G. Mygatt
Margaret A. Riley
Walter J. Ryan, Jr.
Jonathan Z. Souweine

Executive Director
Paul F. Levy

J. Mark Robinson
Director, Division of Project Compliance & Administration
Federal Regulatory Commission
825 North Capital Street, N. E.
Washington, D.C. 20426

P-10688.000

Attn: Judy Gantt, Room 3110

Re: UL-88-5 COSGROVE - MASSACHUSETTS - MASSACHUSETTS WATER RESOURCES AUTHORITY

Gentlemen:

Enclosed are 14 copies of our Exemption Application for Exemption for Small Conduit Hydroelectric Facility - Cosgrove Intake and Power Plant, Clinton, MA Project. This completes the fifteen sets required by FERC.

If there are any further questions, please contact Thomas S. Baron, P.E., Director, Water Supply Department, Telephone # (617) 242-7110 X 4611.

Very truly yours,

Thomas S. Baron, P.E.
Director, Water Supply Department

/br

Encl.

001

FERC - DOCKETED
NOV -4 1988

8811120164

3090 2428

MASSACHUSETTS WATER RESOURCES AUTHORITY
Charlestown Navy Yard
100 First Avenue
Boston, Massachusetts 02129

Telephone:
(617) 242-6000

FILED
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1988 NOV -4 PM 2:49
FEDERAL ENERGY
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COMMISSION

October 19, 1988

P-10688-000

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Jonathan Z. Souweine

Executive Director
Paul F. Levy

J. Mark Robinson
Director, Division of Project Compliance & Administration
Federal Regulatory Commission
825 North Capital Street, N. E.
Washington, D.C. 20426

RE: UL88-5 COSGROVE - MASSACHUSETTS - MASSACHUSETTS WATER RESOURCES AUTHORITY

Dear Sir:

Enclosed for filing in the above-referenced matter, please find the Massachusetts Water Resources Authority's application for exemption for its small conduit hydroelectric facility. By copy of this letter, copies of this application are being served by MWRA upon the consulted agencies pursuant to 18 CFR 4.38(3).

Please do not hesitate to contact Thomas S. Baron, Director, Water Supply Department, (617) 242-6000, Ext. 4611 if you have any questions regarding this application. Thank you for your assistance in this matter.

Very truly yours,

William P. Brutsch

William Brutsch, Director
Waterworks Division

WB/BHT/jef

cc: Thomas S. Baron, Director, Water Supply Department
Bruce H. Tobey, Associate General Counsel
Consultation Agencies

Enclosure

3090 2429

Consultation Agencies

Distribution List

Mr. Robert Gift
National Park Service
Midatlantic Region
143 South Third Street
Philadelphia, PA 19016

Mr. Christopher Mantzaris
Department of Commerce
National Oceanic and
Atmospheric Administration
National Marine Fisheries Serv.
2 State Fish Pier
Gloucester, MA 01930-3097

Mr. Alex Hoyt
Endangered Species Specialist
U. S. Fish and Wildlife Service
1 Gateway Center, Suite 700
Newton Corner, MA 02109

Department of the Interior
Director, North Atlantic Office
National Park Service
15 State Street
Boston, MA 02109

Mr. William P. Patterson
Department of the Interior
Regional Environmental Officer
15 State Street
Boston, MA 02109

Mr. Dave Clark
Regional Envir. Coordinator
Department of the Interior
National Park Service
15 State Street
Boston, MA 02109

3090 2430

Ms. Elizabeth A. Higgins
Environmental Protection Agency
Room 2203
John F. Kennedy Federal Building
Boston, MA 02203

Ms. Margarite Donnelly, Director
Department of Interior
U. S. Fish and Wildlife Service
Gateway Cener, Suite 700
Newton Corner, MA 02158

Mr. Walter Bickford
Commonwealth of Massachusetts
Dept. of Fisheries, Wildlife,
& Recreational Vehicles
100 Cambridge Street
Boston, MA 02202

Ms. Valerie Talmage
MA. Historical Commission
80 Boylston Street
Boston, MA 02116

Mr. Gilbert Bliss
Commonwealth of Massachusetts
Dept. of Environ. Management
Division of Forests and Parks
100 Cambridge Street
Boston, MA 02202

Mr. Thomas McMahon
Commonwealth of Massachusetts
Department of Environ.
Quality Engineering
Division of Water
Pollution Contol
1 Winter Street, 7th Floor
Boston, MA 02108

3090 2431

Mr. James O'Connell
Executive Office of
Environmental Affairs
Coastal Zone Management
100 Cambridge Street
Boston, MA 02202

Col. Thomas Rhen
U. S. Army Corps of Engineers
The Division Engineer
U. S. Army Engineer Division
424 Trapelo Road
Waltham, MA 02154

Ms. Catherine Morris
Massachusetts Department of
Public Utilities
100 Cambridge Street
Boston, MA 02202

Mr. William Febiger
Energy Facilities Siting Council
21st Floor
Boston, MA 02202

Mr. Phil Nadeau
Department of Environ.
Quality Engineering
Central Region
75 Grove Street
Worcester, MA 01605

Mr. Steven M. Henry
Division of Fisheries & Wildlife
Field Headquarters
Westborough, MA 01581

Mr. Stephen Davis
Executive Office of
Environmental Affairs
Environmental Impact
Review Division
100 Cambridge Street, 20th Floor
Boston, MA 02202

3090 2432

Mr. Gordon E. Beckett
c/o of U. S. Fish/Wildlife ENHN
222 Bridge St. PILL BLD STE 400
Concord, N.H. 03301-49999

CLINTON

Mr. Jack Graves
Planning Board
c/o Town Hall
242 Church Street
Clinton, MA 01510

Mr. Paul Colombo, Clerk
Clinton Conservation Commission
c/o Town Hall
Church Street
Clinton, MA 01510

WEST BOYLSTON

Mr. Ken Angel
West Boylston Conservation
Commission
c/o Town Hall
120 Prescott Stree
West Boylston, MA 1583

Ms. Kathy Foreman
Planning Board
c/o Town Hall
120 Prescott Street
West Boylston, MA 1583

3090.2433

Before the Federal Energy Regulatory Commission

APPLICATION FOR EXEMPTION
FOR SMALL CONDUIT HYDROELECTRIC FACILITY
PROJECT NO. UL88-5

COSGROVE INTAKE AND POWER PLANT
CLINTON, MASSACHUSETTS

OCTOBER 1988

MASSACHUSETTS WATER RESOURCES AUTHORITY
BOSTON, MASSACHUSETTS

3090 2434

INTRODUCTORY STATEMENT

3090.2435

BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

APPLICATION FOR EXEMPTION FOR

SMALL CONDUIT HYDROELECTRIC FACILITY

1. Massachusetts Water Resources Authority, Waterworks Division, applies to the Federal Energy Regulatory Commissioln for an exemption for the Cosgrove Intake and Power Plant, a small conduit hydroelectric facility that meets the requirements of Para. 4.30(b) (26) of this subpart, from certain provisions of Part I of the Federal Power Act.

2. The location of the facility is:

State: Massachusetts

County: Worcester

Town: Clinton

The exact name and business address of the applicant is:

Massachusetts Water Resources Authority

Waterworks Division

100 First Avenue, Charlestown Navy Yard

Boston, Massachusetts 02129

COS

3090 2436

3. The exact name and business address of each person authoized to act as agent for the applicant in this application are:

Mr. William A. Brutsch, P.E.
Director
Massachusetts Water Resources Authority
Waterworks Division
100 First Avenue, Charlestown Navy Yard
Boston, Massachusetts 02129

4. The Massachusetts Water Resources Authority is an agency of the Commonwealth of Massachusetts.

5. The Massachusetts Water Resources Authority requests to be exempted from all of the provisions of Part I of the Federal Power Act.

COS

3090 2437

This Application is executed in the

Commonwealth of Massachusetts)

) ss.

County of Suffolk)

By: WILLIAM A BRUTSCH, P.E.

Director

Massachusetts Water Resources Authority

Waterworks Division

100 First Avenue, Charlestown Navy Yard

Boston, Massachusetts 02129

Being duly sworn, deposes and says that the contents of this Application are true and to the best of his knowledge or belief. The undersigned applicant has signed this Application this 20th day of October, 1988.

Massachusetts Water Resources Authority

Waterworks Division

Applicant

By: William A. Brutsch

COS

3090 2438

Subscribed and sworn to before me, a _____ notary public, of the Commonwealth of Massachusetts, this 20th day of October, 1988.

/Seal/(if any)

Robert R. Wagner
ROBERT R. WAGNER
Notary Public, or other authorized official -

My commission expires: January 6, 1995

OAK

3090 2439

EXHIBIT A

A.1 FACILITY DESCRIPTION

The Cosgrove Intake and Power Plant facility, a free standing structure not integral to any dam structure, utilizes the direct intake of water from the Wachusett Reservoir as it enters the water supply aqueduct system supplying water to the Boston Metropolitan region. The facility is located on the Wachusett Reservoir in the Town of Clinton, Worcester County, Massachusetts, and is owned by the Metropolitan District Commission (MDC), but operated and maintained by the Massachusetts Water Resources Authority (MWRA).

Construction of the Cosgrove facility was completed in 1967. The facility houses two vertical shaft Kaplan Type turbine-generator units, each rated at 1700 KW; four by-pass units of which three incorporate pressure reducing valves which are operated to augment flow into the aqueduct system or to completely by-pass the generating units; and associated hydraulic, electrical and mechanical equipment.

Each turbine is rated at 80 feet head for a rated discharge of 315 MGD (487 cfs). Each turbine is directly coupled to a 1700 KW

3090 2441

synchronous generator running at 450 RPM and rated for three-phase, 60 HZ, 4160 V operation. Total plant capacity is rated at 3400 KW at 630 MGD (975 cfs).

The power produced at the Cosgrove Intake and Power Plant is sold under joint contract to the New England Power Company and the Boston Edison Company.

A.2 WATER SOURCE

The land within the Cosgrove facility boundary is owned by the MDC, with all appurtenant facilities operated and maintained by the MWRA. The source of water incident to the power facility is the public water supply of MWRA in transit from its supply sources to its member communities in Metropolitan Boston. The origin of these flows are the Quabbin and Wachusett Reservoirs of the MDC system located at Belchertown and Clinton, Massachusetts, respectively. The facility is located on the Wachusett Reservoir and is the sole intake structure to the Cosgrove Aqueduct. This intake, which presently serves a 300 MGD demand, represents the total water supply to the 39 communities within Boston Metropolitan Region that are served by the MWRA/MDC water system. The Cosgrove facility utilizes the intake flows to generate power

3090 2442

without any interference to the water supply [illegible] case of any scheduled or unscheduled outages of the power plant or in times of high water consumption, water flow can completely by-pass the generator units or additional water can augment the flow to the aqueduct through the by-pass facilities.

A.3 CONDUIT USE

The purpose of the Cosgrove Aqueduct is as a Public Water Supply Conduit within the MWRA/MDC system.

A.4 GENERATING UNITS

Two generating units of approximately 1700 KW capacity each are existing. No auxiliary units are envisioned on either the short or long term.

A.5 HYDRAULIC TURBINE

Unit No. 1

Turbine - Leffel Kaplan Type

3090 2443

Generator - Electric Machinery Mfg. Co.

Minneapolis, Minnesota

Synchronous Generator S/N 164153211

RPM 450

2000 KVA, 4160 Volts, 278 AMPS

D-C Excitation, 115 AMP, 125 Volts

Phase - 3

Power Factor - 0.8

Unit No. 2

Turbine - Leffel Kaplan Type

Generator - Electric Machinery Mfg. Co.

Minneapolis, Minnesota

Synchronous Generator S/N 264153211

RPM 450

2000 KVA, 4160 Volts, 278 AMPS

D-C Excitation, 115 AMPS, 125 Volts

Phase - 3

Power Factor - 0.8

COS

3090 2444

A.6 PLANT OPERATION

Cosgrove Intake and Power Plant is staffed continuously, 7 days per week through out the year.

The present average intake flow is 300 MGD (465 cfs) with maximum flows ranging between 380 to 420± MGD (590 - 650 cfs±) during July and August. Minimum flows range between 255 to 265 MGD± (395-410 cfs±).

A.7 ENERGY ESTIMATES AND HYDRAULIC CHARACTERISTICS

i. Average Annual Generation:

23,500,000 KWH --- (80% rated output)

ii. Average Head: 80 ft.

iii. Hydraulic Capacity (Max.) 630 MGD (970 cfs)

iv. Cosgrove Aqueduct Tunnel (Average): 300 MGD (465 cfs)
(Maximum): 630 MGD (970 cfs)

3090.2445

Flow estimates are based on actual flow records of the aqueduct system. Data for the average demand in the system is gathered by the MWRA/MDC via a venturi meter and is recorded on a circular chart. The data is then summarized as a daily average.

A.8 CONSTRUCTION DATE

Not Applicable - (Existing Facility)

A.9 DISCHARGE INTO NATURAL BODY OF WATER

There will be no discharge to a natural body of water.

A.10 DISCHARGE TO POINT OF CONSUMPTION

There is no discharge to a point of agricultural or industrial consumption. The Cosgrove Aqueduct is part of the MWRA/MDC Water Supply System and is part of direct service to numerous opportunities for municipal consumption enroute and interface directly with the regional distribution pipe network of the Metropolitan Boston Area.

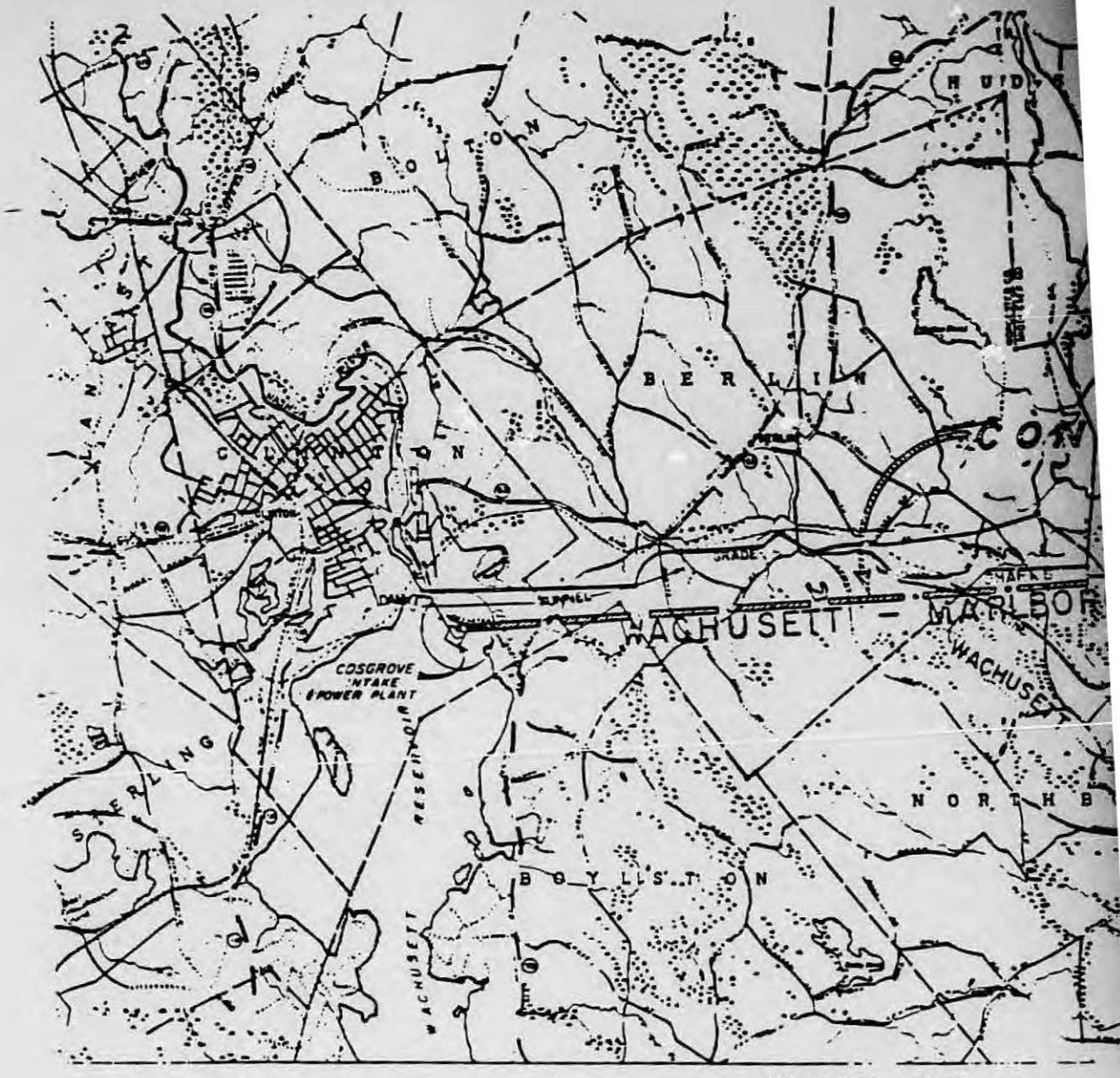
3090 2446

A.11 DAM CONSTRUCTION

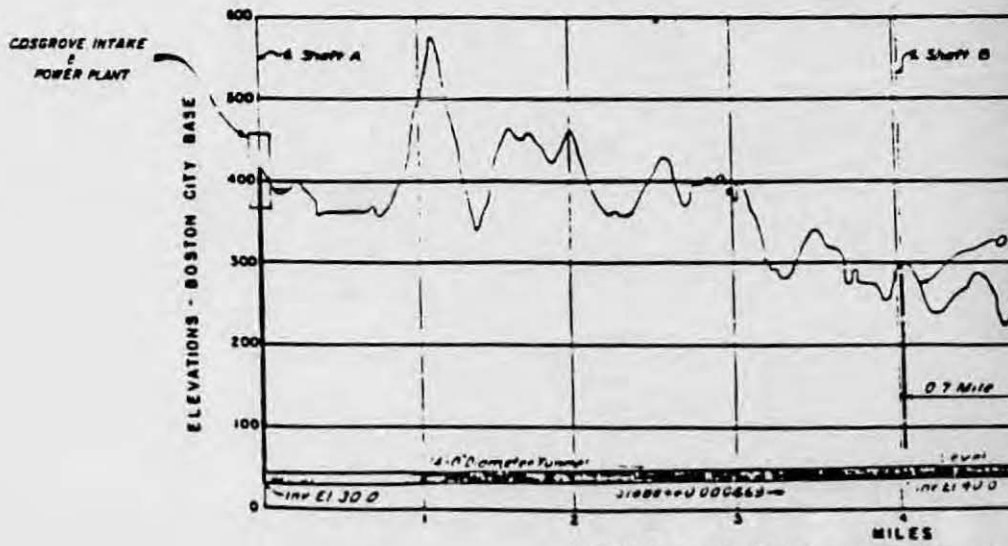
The Cosgrove Intake and Power Plant is a free standing structure on the Wachusett Reservoir and is not integral to any dam structure establishing that reservoir. Intake flow from the reservoir into the Cosgrove Aqueduct is a part of normal water supply operation required by the MWRA/MDC. This flow would occur with or without the hydroelectric generation. The inclusion of the hydroelectric generation constitutes an alternative management choice while meeting the primary public water supply obligation of the MWRA/MDC.

3090 2447

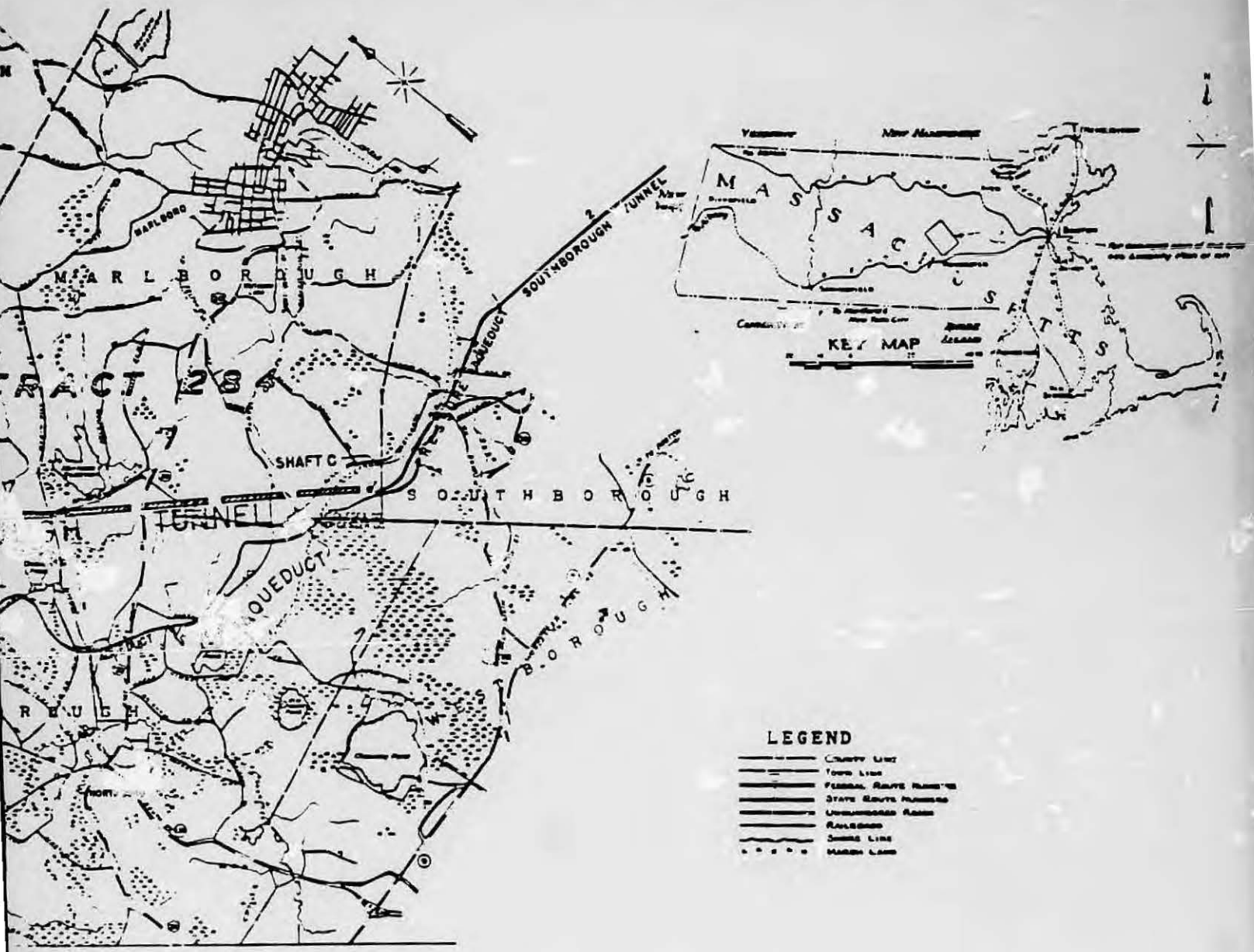
EXHIBIT B

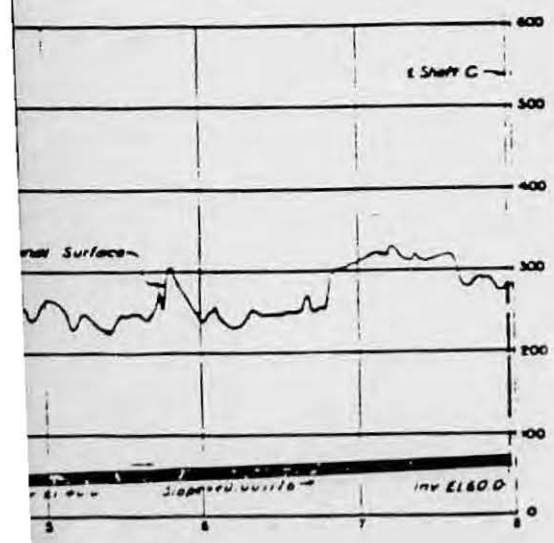


LOCALITY PLAN



PROFILE OF WACHUSETT-MARL





ROUGH TUNNEL

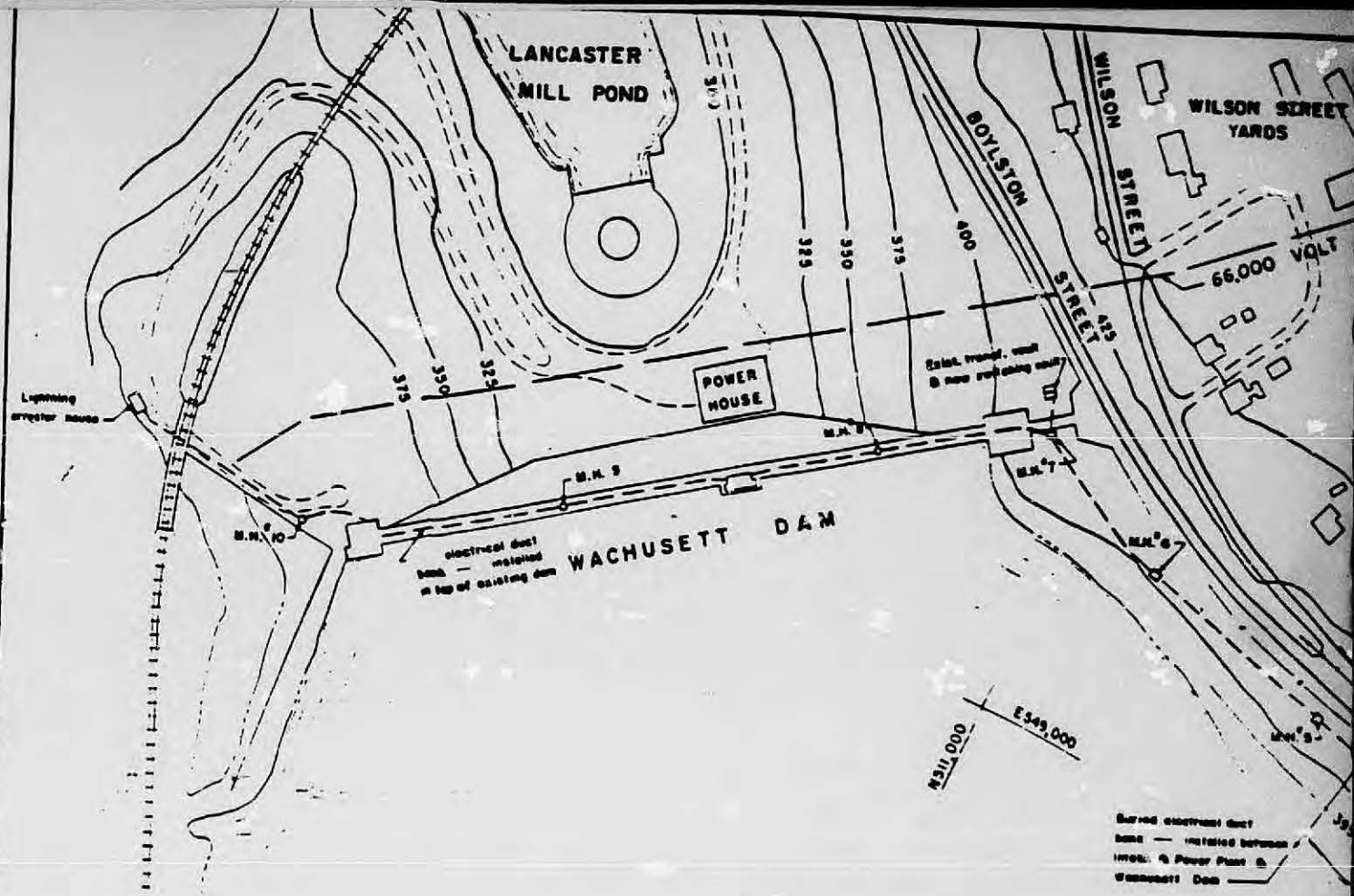
EXHIBIT- B-1

MASSACHUSETTS WATER RESOURCES AUTHORITY

COSGROVE INTAKE & POWER PLANT

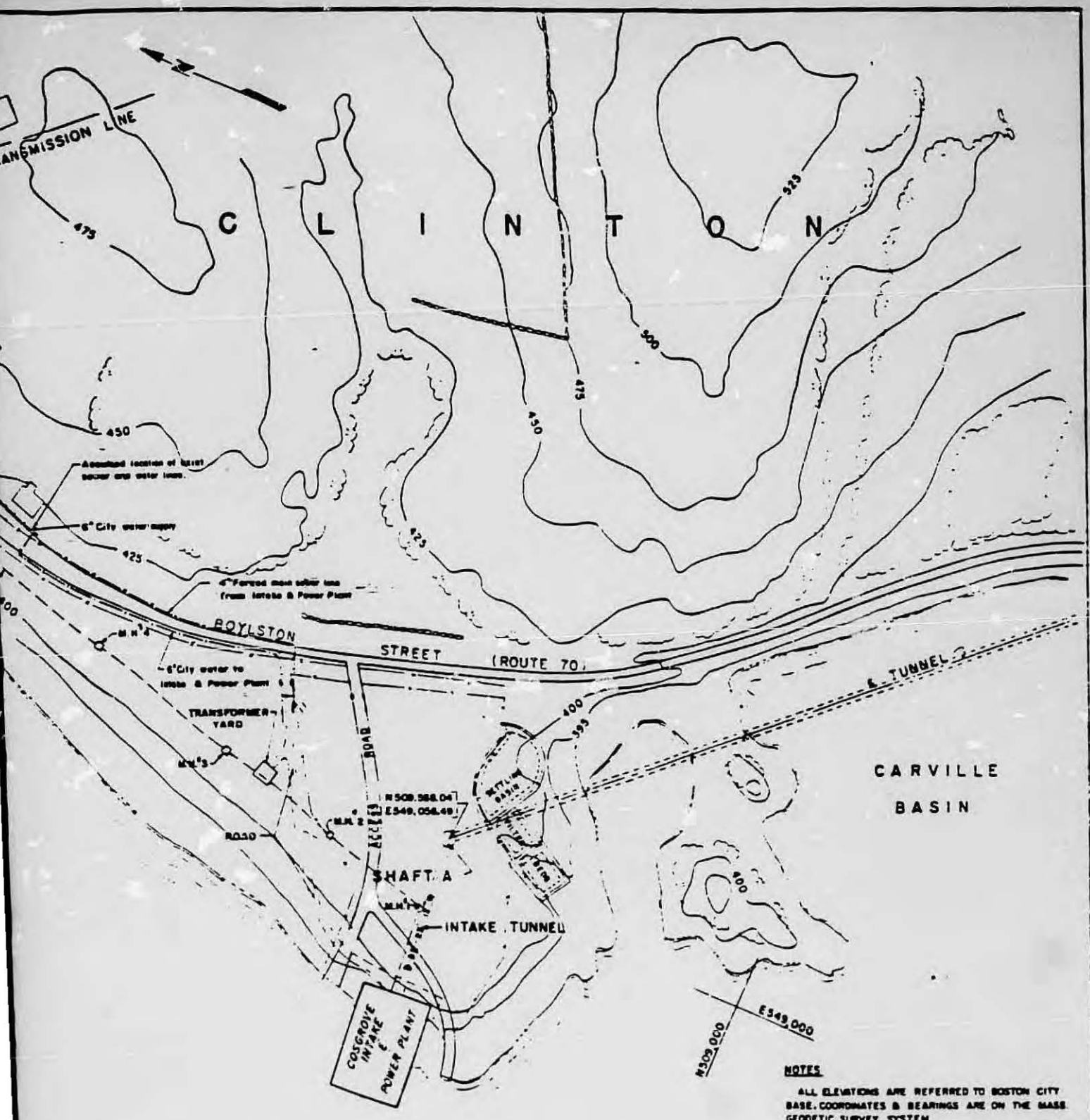
KEY MAP AND LOCALITY PLAN

SCALES AS SHOWN



WACHUSETT

RESERVOIR



NOTES

ALL ELEVATIONS ARE REFERRED TO BOSTON CITY BASE. COORDINATES & BEARINGS ARE ON THE MASS. GEODETIC SURVEY SYSTEM

CONTOURS SHOWN ARE TAKEN FROM PHOTOGRAMMETRIC MAPS

EXHIBIT- B-2

MASSACHUSETTS WATER RESOURCES AUTHORITY

COSGROVE INTAKE & POWER PLANT

GENERAL

LOCALITY PLAN

SCALE 1" = 100'-0"

EXHIBIT E

E.1 ENVIRONMENTAL SETTING

E.1.1 Project Facilities

The present environmental setting of the site is best described as a park-like setting, within the properties of the MWRA/MDC, adjacent to the Wachusett Reservoir. This is shown in Photo E-1. (Also, see Exhibit B.) The Cosgrove facility is the intake works for water entering from the reservoir into the Cosgrove (Wachusett-Marlboro) Aqueduct. This facility houses the entire power generating facility and was designed in order to maintain the original character of the site.

E.1.2 Vegetative Cover

The nearest private residences are more than one half mile from the site. As shown in Photo E-1, the facility is set in off the main road and is in an area camouflaged by trees and landscaping consisting of mown grass and formal shrubs. This camouflaging, as well as the reservoir abutting along the rear of the site, affords privacy to both facility and its surrounding environment.

E.1.3 Fish and Wildlife Resources

The Cosgrove facility is located on the Wachusett Reservoir, and utilizes the intake flow from the reservoir to generate power. The facility is equipped with fine and coarse screens to minimize the risk of fish from being drawn in. The facility has been in operation since 1967 with negligible impact on fish and wildlife.

3090 2454

The facility utilizes water that flows from Wachusett Reservoir through an aqueduct and pipeline system to the Metropolitan Boston region and does not alter the design flow regime. Also, since this is an existing facility not requiring new construction work on the waters of the Commonwealth, no involvement of the Division of Water Pollution Control concerning certification of water quality is necessary.

E.1.5 Land, Water, and Recreational Use

This facility's scope is limited to the development of hydroelectric generating facilities at the immediate location of the site and is not designed to accommodate commercial, industrial, residential, or recreational uses. Access to the site is limited to a single entrance off of Boylston Street (Route 70) approximately 500 feet distant.

E.1.6 Socioeconomic Conditions

The hydroelectricity developed at this facility has neither social nor economic impact on the surrounding area other than supplying jobs during operation.

E.1.7 Historical and Archeological Resources

This is an existing facility which does not require any work that would have an effect on any architectural or historical characteristics of either the building or the site where it is located.

3090 2455

The power plant is completely located inside the existing building, with all piping buried. The switching equipment is housed in a stone and masonry building off site and the connector lines between the two are buried.

E.2 EXPECTED ENVIRONMENTAL IMPACTS

there are no expected environmental impacts since this is an existing facility which does not require any additional construction work. Neither continuing nor discontinuing the operation of the facility's hydroelectric generation capacity would give rise to any environmental impact, except to the extent that discontinuance might result in further fossil fuel consumption.

E.2.1 Operation

The Cosgrove facility utilizes the water intake flow from the Wachusett Reservoir as it enter the aqueduct system and does not alter the design flow regime. No interference with water supply operation requirements of the MWRA occur as a result of the utilization of this flow to generate power. Existing bypass facilities ensure against interruptions as a result of scheduled or unscheduled outages of the power plant.

E.2.2 Construction

This is an existing facility which does not require any additional construction work.

E.3 ALTERNATIVE POWER SOURCES

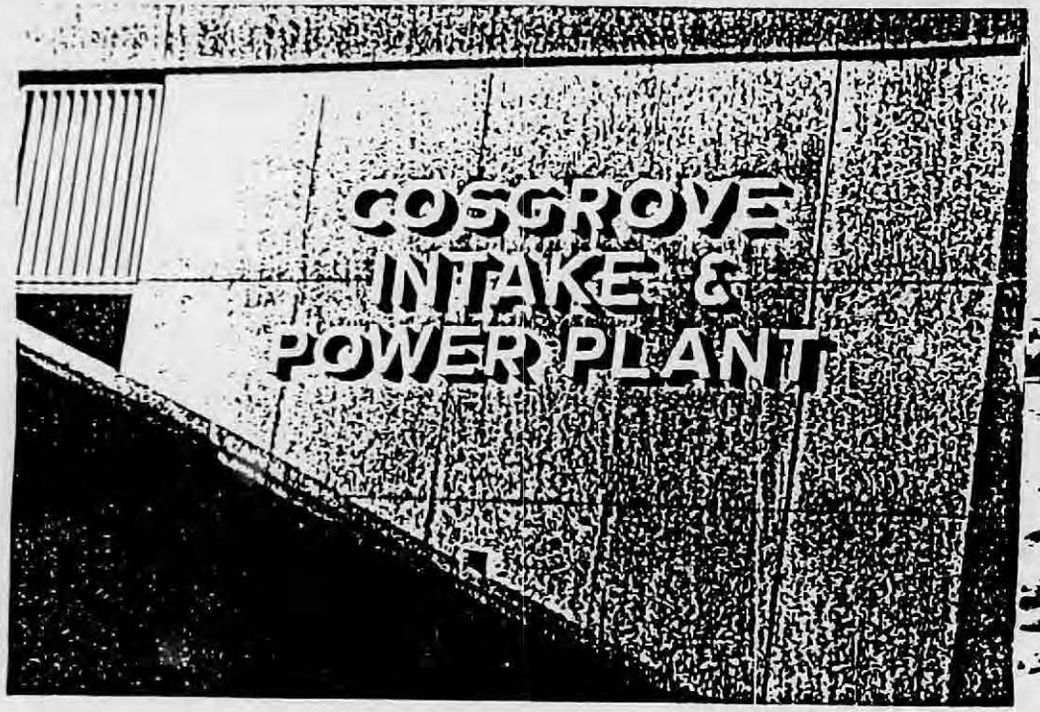
Power generated at the Cosgrove Intake and Power Plant is sold under joint contract to the New England Power Company and the Boston Edison Company. It displaces power otherwise generated from fossil fuel.

3090 2456

E.4 AGENCY CONSULTATION

This is an existing facility not requiring a formal agency consultation process. The Applicant did contact the Massachusetts Energy Facilities Siting Council, which issued a notice stating that agency's non-involvement in a license exemption application for existing facilities. (See Exhibits E.2 and E.3)

3090.2457





WACHUSETT RESERVOIR
(View from rear of building)





COSGROVE INTAKE & POWER PLANT

Energy Facilities Siting Council
Room 2109, 100 Cambridge Street, Boston, Massachusetts 02202 · (617) 727-1136

March 7, 1988

Celia E. Strickler
Senior Staff Counsel, Environmental Law
Massachusetts Water Resources Authority
Charlestown Navy Yard
100 First Avenue
Boston, MA 02129

Dear Ms. Strickler:

I am writing in response to your recent letter requesting clarification of the Siting Council's role in licensing of hydroelectric facilities. In particular, you have requested clarification of the Siting Council's role in the case of an application which has been filed with the Federal Energy Regulatory Commission ("FERC") for an exemption from filing provisions for an existing hydroelectric facility.

G.L. c. 164, s. 69H1/2 provides that:

> [The Siting Council] shall coordinate the permitting and licensing of hydropower generating facilities by simplifying requirements for permits and licenses.
>
> Said council, after consultation with the permitting and licensing agencies, shall establish a preliminary notification form and other forms to be employed by such agencies for permitting and licensing review of proposed hydropower generating facilities.

The application for exemption from filing provisions filed by the Massachusetts Water Resources Authority ("MWRA") with FERC regards existing, rather than proposed, facilities. Accordingly, the provisions of G.L. c. 164, s. 69H1/2 do not apply to the application for exemption filed by the MWRA.

Furthermore, 980 C.M.R. 11.00, the regulations of the Siting Council which implement G.L. c. 164, s. 69H1/2, define a developer as:

> any person, corporation, partnership, municipality, utility or other entity which is attempting to obtain the permits and licenses required prior to or for the construction or start-up of a hydropower generating facility.

The Commonwealth of Massachusetts

Michael S. Dukakis, Governor
Sharon M. Pollard, Chairperson, Secretary of Energy Resources
James S. Hoyte, Secretary of Environmental Affairs
Joseph D. Alviani, Secretary of Economic and Manpower Affairs
Paula W. Gold, Secretary of Consumer Affairs
Dennis J. LaCroix, Public Member, Gas
Susan Fallows Tierney, Executive Director
Joseph W. Joyce, Public Member
Stephen D. Umans, Public Member
Public Member
Public Member
Madeline Varitimos, Public Member

EXHIBIT 5

3090 2459

Because the MWRA is not proposing to construct or start-up a hydropower generating facility, the MWRA is not a developer under 980 C.M.R. 11.00. Accordingly, the MWRA is not required under the provisions of 980 C.M.R. 11.00 to submit a preliminary notification form to the Siting Council with regard to the MWRA's application for exemption from FERC filing provisions for existing hydroelectric facilities.

If you have any further questions, please do not hesitate to contact me.

Very truly yours,

Robert D. Shapiro

Robert D. Shapiro
General Counsel

3090 2460

3090 2461

Appendix E-1

TO: MEMO FOR RECORD

FROM: Thomas S. Baron, Dir., Water Supply Dept., Waterworks Div.

DATE: October 19, 1988

SUBJECT: FERC Comment Responses

This Memo shall consolidate the responses to comments received through the 2nd Round of Resource Agency Consultation for the Draft License Exemption Application for FERC Docket No. UL88-5 Cosgrove Intake and Power Plant, Clinton, MA. All agency responses are attached.

All resource Agencies who received copies of the Draft Application are listed in the enclosed list and Record of Agencies Response (Appendix E-2). All agencies not responding in writing were contacted by telephone. Those call results are attached.

		Date of Letter	Date Received
1.	Mr. Steve Davis Executive Office of Environmental Affairs Review Division, 100 Cambridge St., Boston, MA 02202	9/6/88	9/14/88
	COMMENT - No Adverse Comment		
2.	Catherine A. Morris Director Electric Power Division DPU 100 Cambridge St. Boston, MA 02202	9/7/88	9/13/88
	COMMENT - No Comment		
3.	Gilbert A. Bliss Executive Office of Envir. Affairs Dept. of Environmental Management 100 Cambridge St. Boston, MA 02202	9/19/88	9/22/88
	COMMENT - No Comment		

3090 2462

	Date of Letter	Date Received
4. Robert P. Madore Division of Fisheries and Wildlife Field Headquarters Westborough, MA 01581	9/19/88	9/21/88

COMMENT
1st Round/No Comment
2nd Round - No Comment

5. Mr. Ken Angel, Chairman West Boylston Conservation Commission West Boylston, MA 01583		9/15/88 9/20/88

COMMENT - If changes from Statement - Conservation Commission needs notice.

6. Mr. William P. Patterson Department of the Interior Regional Envir. Officer 15 State Street Boston, MA 02109	9/16/88	9/20/88

RESPONSE - Mr. Patterson referred his agency responses to the following agencies:

U.S. Fish and Wildlife Service
4th Floor, Ralph Pill Marketplace
22 Bridge Street, Jct 1-93
Concord, N.H. 03301-4901

National Park Service
143 South Third Street
Philadelphia, PA 19106

3090 2463

		Date of Letter	Date Received
7.	Gordon E. Beckett United States Dept. of Interior Fish & Wildlife Service 400 Ralph Pill Marketplace 22 Bridge St. Concord, N.H. 03301		9/26/88

RESPONSE - No adverse Comment - Fisheries and Wildlife rescurces described by Appendix E-3.

Sec. E.1.5
The limited prohibition area extends only 250 from the Outlet Building, 150 ft of which are fenced due to the outlet training walls, and were intended for the angler's safety near a turbulent "Standing hydraulic jump" which some non-hydro operations may produce. All other shore areas of some 15 miles of Wachusett Reservoir, except the Dam in Clinton, are open to shore fishing opportunities.

8.	Robert F. Gift,Chief Environmental and Recreation Division Nationa Park Service 143 South Third Street Philadelphia, PA 19106	10/6/88	10/11/88

RESPONSE - All shore areas of some 15 miles of Wachusett Reservoir are presently accessible for pedestrian anglers, except that near the Oakdale Power Station, Shaft 1, which outlets the waters from Quabbin Reservoir and the area near the Wachusett Dam and Cosgrove Intake in Clinton there are areas restricted to mainstream public safety and protect these civil works as part of a Public Water Supply. This is consistent with a U.S. F&WS condition that:

"1. The Exemptee shall permit access to the project area wherever possible to allow for public utilization of fish and wildlife resources, taking into consideration any necessary restrictions to maintain public safety and protect project civil works."

9.	Deirdre Brotherson Preservation Planner Technical Serv. Division Mass. Historical Comm. 80 Boylston St. Boston, MA 02116	10/3/88	10/7/88

COMMENT - No Adverse Comment

3090 2464

		Date of Letter	Date Received
10	Dept. of the Army New England Division Corps of Engineers 424 Trapelo Road Waltham, MA 02254	9/29/88	10/3/88

COMMENT - All project features and operations are extant and pre-dated Clean Water Act - No changes are anticipated by MDC or MWRA.

3090 2485

242-7110

TELEPHONE CALL RECORD

INITIATED CALL PHONE NO. B. REGAN x4624

AFFILIATION

RECEIVED CALL PHONE NO. M. DONNELLY 965-5100

AFFILIATION

DATE 10/11/88 TIME 2:30 PROJ. NO.

SUMMARY OF TELECON

Do You INTended to SEND A LETTER Regarding Second Round of EXEMPTION APPLICATIONS FOR SMALL CONDUIT HYDROELECTRIC FACILITY At COSUMNES INTAKE AND ALSO OAKDALE?

ACTION/AGREEMENTS Sent To Concord Field office

3098 2466

243-7110

TELEPHONE CALL RECORD

INITIATED CALL B. REGAN
PHONE NO. -X4624
AFFILIATION

Thomas McMahon's
RECEIVED CALL Secretary
PHONE NO. 292-5500
AFFILIATION

DATE 10/11/88 TIME 3:35 PROJ. NO.

SUMMARY OF TELECON

Do You intended to send a letter Regarding Second Round of EXEMPTION APPLICATION FOR SMALL CONDUIT HYDRO ELECTRIC FACILITY At Cosgrove Intake AND ALSO OAKDALE?

ACTION/AGREEMENTS Steve LIPMAN will call Back
10/12/88 No Comments

3090 2467

242-7110

TELEPHONE CALL RECORD

INITIATED CALL B. REGAN AFFILIATION
PHONE NO. - 14624

RECEIVED CALL W. FEBIGER AFFILIATION
PHONE NO. 727-1136

DATE 10/11 TIME 2:40 PROJ. NO.

SUMMARY OF TELECON

Do You INTended to SEND A LETTER Regarding Second Round of EXEMPTION APPLICATION FOR SMALL CONDUIT HYDROELECTRIC FACILITY At Cosgrove INTAKE AND ALSO OAKDALE?

ACTION/AGREEMENTS No Comments

TELEPHONE CALL RECORD

INITIATED CALL PHONE NO. B. REGAN x4624 AFFILIATION

RECEIVED CALL PHONE NO. Kathy Foreman 835-3304 AFFILIATION

DATE 10/11/88 TIME 3:15 PROJ. NO.

SUMMARY OF TELECON

Do You intended to send a letter Regarding Second Round of EXEMPTION APPLICATION For SMALL CONDUIT HYDROELECTRIC FACILITY At Cosgrove Intake And also OAKDALE ?

ACTION/AGREEMENTS No Comments

3090 2469

242-7110

TELEPHONE CALL RECORD

INITIATED CALL PHONE NO. B. Regan x4624 — AFFILIATION

RECEIVED CALL PHONE NO. James O'Connell Secretary 727-9530 — AFFILIATION

DATE 10/1/88 — TIME 3:30 — PROJ. NO.

SUMMARY OF TELECON

Do You intended to send A Letter Regarding Second Round of EXEMPTION APPLICATION FOR SMALL CONDUIT HYDROELECTRIC FACILITY at Cosgrove Intake AND ALSO OAKDA. - ?

ACTION/AGREEMENTS Will Call Back

10/12 Will Call Back

10/18 (Rose Bordonaro (Receptionist) Will Call Back

10/19 Out of Coastal Zone No Comments

3090:2470

TELEPHONE CALL RECORD

INITIATED CALL B. Regan AFFILIATION
PHONE NO.
Secretary (Diane)

RECEIVED CALL 10/11/88 AFFILIATION
PHONE NO. 727-16121

DATE 10/11/88 TIME 2:40 PROJ. NO.

SUMMARY OF TELECON

Do You intended to send a letter Regarding Second Round of EXEMPTION APPLICATION FOR SMALL CONDUIT HYDROELECTRIC FACILITY AT COSGROVE INTAKE AND ALSO OAKDALE?

ACTION/AGREEMENTS 10/19 11:50

Spoke w/ Judy Wagner "Riverways" 727-6278
No Comments

3090 2471

242-7110

TELEPHONE CALL RECORD

INITIATED CALL B. Regan
PHONE NO. 4624
AFFILIATION

RECEIVED CALL Jack Graves
PHONE NO. 365-3562
(H) 365-4877
(O) 467-7327
AFFILIATION

DATE 10/12/88 TIME 11:30 PROJ. NO.

SUMMARY OF TELECON

Do You intended to send a letter Regarding Second Round of EXEMPTION APPLICATION FOR SMALL CONDUIT HYDROELECTRIC FACILITY At Cosgrove Intake And also OAKDALE?

ACTION/AGREEMENTS 10/12 Left Message with Wife
10/18 Left Message with Receptionist
10/19 JACK GRAVES — NO Comments

3090:2472

242-7110

TELEPHONE CALL RECORD

INITIATED CALL B. REGAN AFFILIATION
PHONE NO. X4624

RECEIVED CALL Phil Nadeau AFFILIATION
PHONE NO. 792-7650

DATE 10/11/88 TIME 2:50 PROJ. NO.

SUMMARY OF TELECON

Do You intended to send a letter Regarding Second Round of EXEMPTION APPLICATIONS FOR SMALL CONDUIT H/d ELECTRIC FACILITY At Cosgrove Intake and also OAKDALE?

ACTION/AGREEMENTS WILL CALL TOM BARON TOMORROW To DISCUSS EXEMPTION PROCESS.
10/19 Tom talked w/ Jim Fuller " PHIL NOT AVAILABLE TO EXPRESS

3090 2433

242-7110

TELEPHONE CALL RECORD

INITIATED CALL: B. REGAN — AFFILIATION:
PHONE NO.: 4624

RECEIVED CALL: ELIZABETH Niggin's Secretary (Don is Carlino) — AFFILIATION:
PHONE NO.: 565-3715

DATE 10/11/88 TIME 11:50 PROJ. NO.:

SUMMARY OF TELECON

Do You intended to send A Letter Regarding Second Round of EXEMPTION APPLICATION FOR SMALL CONDUIT HYDROELECTRIC FACILITY At Cosgrove Intake And also OAKDALE?

ACTION/AGREEMENTS Don Cooke working on this — will call back tomorrow.

10/12 No answer

10/18 Gone for the day (Receptionist)

10/19 Elizabeth Niggins - will have Don Cooke call Tomorrow

10/20 [Don Cooke returned call] " Letter going out Monday - Does not expect any problems.

3090 2474

242-7110

TELEPHONE CALL RECORD

INITIATED CALL B. REGAN AFFILIATION
PHONE NO. x4624

RECEIVED CALL PAUL COLOMBO AFFILIATION
PHONE NO. 365-3905

DATE 10/12/81 TIME 11:20 PROJ. NO.

SUMMARY OF TELECON

DO YOU INTENDED TO SEND A LETTER REGARDING SECOND ROUND OF EXEMPTION APPLICATION FOR SMALL CONDUIT HYDROELECTRIC FACILITY AT COSGROVE INTAKE AND ALSO OAKDALE?

ACTION/AGREEMENTS LEFT MESSAGE ON TAPE RECORDER.
10/13/81 DRAFTING A LETTER WILL BE SIGNED AT WED. EVENING MTG (10/19) HAVE NO OBJECTIONS BUT WANT REPLY ON THEIR STATIONERY

3090.2475

TELEPHONE CALL RECORD

INITIATED CALL B. REGAN AFFILIATION
PHONE NO. X4624

RECEIVED CALL CHRISTOPHER MANTZARIS AFFILIATION
PHONE NO. (617) 281-3600

DATE 10/11/88 TIME 11:30 PROJ. NO.

SUMMARY OF TELECON

Do You intended to send a letter Regarding Second Round of EXEMPTION APPLICATION FOR SMALL CONDUIT HYDROELECTRIC FACILITY At Cosgrove Intake and also OAKDALE?

ACTION/AGREEMENTS Will call Back Tomorrow

10/13 SHARON MARTIN (SECRETARY) Will call Back Tomorrow

10/18 Cathy Middleton (SECRETARY) out of Town Rest of week

3090 2476

3090.2477

The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02202

MICHAEL S. DUKAKIS
GOVERNOR

JAMES S. HOYTE
SECRETARY

'88 SEP 14 P1:55

MWRA BIRECTOR

September 6, 1988

Mr. William Brutsch, Director
Waterworks Division
MA Water Resources Authority
Charlestown Navy Yard
100 First Avenue
Boston, MA 02129

Re: Cosgrove Intake Power Plant, Clinton
and Oakdale Power Plant, West Boylston

Dear Mr. Brutsch:

I have reviewed your notifications of filing with the Federal Energy Regulatory Commission dated August 30, 1988. Since both of these are existing projects and call for no new construction or operational changes, there are no actions which could be subject to the Massachusetts Environmental Policy Act. Therefore, no review by MEPA is required.

I wish you good fortune in exempting these two projects; they represent a beneficial use of the excess head available in parts of the MWRA system with no adverse environmental impact.

Sincerely,

Steven C. Davis

Steven C. Davis
Assistant Secretary
Environmental Impact Review

SCD/sd

3090 .2478

The Commonwealth of Massachusetts
Department of Public Utilities
Leverett Saltonstall Building, Government Center
100 Cambridge Street, Boston 02202

September 7, 1988

RECEIVED
MWRA WATERWORKS
WATER SUPPLY DEPARTMENT
'88 SEP 13 P5:51

Mr. William Brutsch
Director, Waterworks Division
Mass. Water Resource Authority
Charlestown Navy Yard
Boston, MA 02129

Dear Mr. Brutsch:

We have recieved your notification of application for exemption from licensing requirements for hydro facilities located in West Boylston and Clinton.

We do not intend to comment on the applications but will keep them on file for public information.

Sincerely,

Catherine A. Morris

Catherine A. Morris
Director
Electric Power Division

CAM/deb

3090.2479

Commonwealth of Massachusetts
Executive Office of Environmental Affairs
Department of Environmental Management

100 Cambridge Street
Boston
Massachusetts
02202

Division of
Forests & Parks

RECEIVED
MWRA WATERWORKS
WATER SUPPLY DEPARTMENT
'88 SEP 22 AM :12

September 19, 1988

Massachusetts Water Resources Authority
Charlestown Navy Yard
100 First Avenue
Boston, MA 02129

Attn: Thomas S. Baron

Dear Mr. Baron:

The Division of Forests and Parks has no comments on the exemption applications for these two small facilities; the Oakdale Power Plant, and the Cosgrove Plant in Clinton.

Very truly yours,

Gilbert A. Bliss
Director of Forests & Parks

GAB/maf

Gilbert A. Bliss
Director

3090.2480

Commonwealth of Massachusetts

Division of Fisheries & Wildlife

Richard Cronin, *Director*

September 19, 1988

Mr. Thomas S. Baron
Director, Water Supply Department
Massachusetts Water Resources Authority
Charlestown Navy Yard
100 First Avenue
Boston, MA 02129

RE: Application for Exemption for Small Conduit Hydroelectric Facility - Cosgrove Intake and Power Plant, Clinton, MA

Dear Mr. Baron:

This letter is to acknowledge our receipt of Mr. William Brutsch's 30 August letter and packet of materials informing the Division of Fisheries and Wildlife of the above referenced project. We understand that this action constitutes the initial stage of consultation.

Please send all future correspondence to me at the Westborough Field Headquarters. Thank you for contacting the Division relative to this matter.

Sincerely,

Robert P. Madore

Robert P. Madore
Aquatic Biologist II

cc. MDFW - Central District

Field Headquarters
Westborough, Massachusetts 01581 (617) 366-4470
An Agency of the Department of Fisheries, Wildlife & Environmental Law Enforcement

3090:2481

Commonwealth of Massachusetts

Division of Fisheries & Wildlife

Richard Cronin, *Director*

September 26, 1988

'88 SEP 28 A11:01

RECEIVED
MWRA WATERWORKS
WATER SUPPLY DEPARTMENT

Mr. Thomas S. Baron
Director, Water Supply Department
Massachusetts Water Resources Authority
Charlestown Navy Yard
100 First Avenue
Boston, MA 02129

RE: Draft Application for Exemption for Small Conduit Hydroelectric Facility - Cosgrove Intake and Power Plant, Clinton, MA

Dear Mr. Baron:

Review of the draft application for this project indicates there are no fish and wildlife issues or conflicts. We conclude that environmental studies or mitigation measures will be not necessary.

If you have any questions concerning this reply or require additional input from this agency please do not hesitate to contact me.

Sincerely,

Robert P. Madore

Robert P. Madore
Aquatic Biologist II

cc. MDFW - Central District

Field Headquarters
Westborough, Massachusetts 01581 (617) 366-4470
An Agency of the Department of Fisheries, Wildlife & Environmental Law Enforcement

3090 2482

United States Department of the Interior

OFFICE OF ENVIRONMENTAL PROJECT REVIEW
BOSTON FEDERAL OFFICE BUILDING
ROOM 1022
10 CAUSEWAY STREET
BOSTON, MASSACHUSETTS 02222—1035

September 16, 1988

William Brutsch
Waterworks Division
Massachusetts Water Resources Authority
Charlestown Navy Yard
100 First Avenue
Boston, Massachusetts 02129

MWRA
DIRE
'88
20

Dear Mr. Brutsch:

This is in reply to your letters dated September 7 regarding your draft Application for Exemption for the Cosgrove Intake Power Plant and the Oakdale Power Plant, MA.

To best address the concerns of this Department, it is suggested that you contact the following Interior offices.

U. S. Fish and Wildlife Service
4th Floor, Ralph Pill Marketplace
22 Bridge Street, Jct I-93
Concord, NH 03301-4901
Tel: 603/225-1411

National Park Service
143 South Third Street
Philadelphia, PA 19106
Tel: 215/597-3503

Sincerely,

William Patterson

William Patterson
Regional Environmental Officer

3090 2483

United States Department of the Interior

FISH AND WILDLIFE SERVICE
400 RALPH PILL MARKETPLACE
22 BRIDGE STREET
CONCORD, NEW HAMPSHIRE 03301-4901

Mr. William Brutsch
Director, Waterworks Division
Massachusetts Water Resources Authority
Charlestown Navy Yard
100 First Avenue
Boston, Massachusetts 02129

SEP 26 1988

Dear Mr. Brutsch:

This responds to your request, dated August 30, 1988, for information on the presence of Federally listed and proposed endangered or threatened species in accordance with your application for exemption for the hydroelectric facility at the Cosgrove Intake and Power Plant, Clinton, Massachusetts.

Our review shows that except for occasional transient individuals, no Federally listed or proposed threatened and endangered species under our jurisdiction are known to exist in the project area. No Biological Assessment or further consultation is required with us under Section 7 of the Endangered Species Act. It appears that there will be no major construction activity above ground. However, should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered.

This response relates only to endangered species under our jurisdiction. It does not address other legislation or our responsibilities under the Fish and Wildlife Coordination Act.

A list of Federally designated endangered and threatened species in Massachusetts is inclosed for your information. Thank you for your cooperation and please contact Mr. Roger Hogan or Susi von Oettingen of this office at 603-225-1411 if we can be of further assistance.

Sincerely yours,

Gordon E. Beckett

Inclosure

Gordon E. Beckett
Supervisor
New England Area

3090 2484

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

Common Name	Scientific Name	Status	Distribution
FISHES:			
Sturgeon, shortnose*	Acipenser brevirostrum	E	Connecticut River & Atlantic Coastal Waters
REPTILES:			
Turtle, green*	Chelonia mydas	T	Oceanic straggler in Southern New England
Turtle, hawksbill*	Eretmochelys imbricata	E	Oceanic straggler in Southern New England
Turtle, leatherback*	Dermochelys coriacea	E	Oceanic summer resident
Turtle, loggerhead*	Caretta caretta	T	Oceanic summer resident
Turtle, Atlantic ridley*	Lepidochelys kempii	E	Oceanic summer resident
Turtle, Plymouth red-bellied	Chrysemys rubriventris bangsi	E	Plymouth & Dukes Counties
BIRDS:			
Eagle, bald	Haliaeetus leucocephalus	E	Entire state
Falcon, American peregrine	Falco peregrinus anatum	E	Entire state-reestablishment to former breeding range in progress
Falcon, Arctic peregrine	Falco peregrinus tundrius	E	Entire state migratory-no nesting
Plover, Piping	Charadrius melodus	T	Entire state - nesting habitat
Roseate Tern	Sterna dougallii dougallii	E	Atlantic Coast
MAMMALS:			
Cougar, eastern	Felis concolor couguar	E	Entire state-may be extinct
Whale, blue*	Balaenoptera musculus	E	Oceanic
Whale, finback*	Balaenoptera physalus	E	Oceanic
Whale, humpback*	Megaptera novaeangliae	E	Oceanic
Whale, right*	Eubalaena spp. (all species)	E	Oceanic
Whale, sei*	Balaenoptera borealis	E	Oceanic
Whale, sperm*	Physeter catodon	E	Oceanic
MOLLUSKS: NONE			
PLANTS:			
Small Whorled Pogonia	Isotria medeoloides	E	Hampshire, Essex Hampden, Worcester Middlesex Counties
Gerardia, Sandplain	Agalinus acuta	**PE	Barnstable County

* Except for sea turtle nesting habitat, principal responsiblity for these species is vested with the National Marine Fisheries Service

** Potentially endangered

Rev. 1/25/88

3090 2485

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02254-9149

September 29, 1988

MWRA WATER WORKS
WATER SUPPLY DEPARTMENT
'88 OCT -3 P1:18

REPLY TO ATTENTION OF

Planning Division
Basin Management Branch

Thomas S. Baron
Director, Water Supply Department
Massachusetts Water Resources Authority
Charlestown Navy Yard
100 First Avenue
Boston, Massachusetts 02129

RE: COSGROVE INTAKE AND POWER PLANT, CLINTON, MA

Dear Mr. Baron:

Reference is made to your letter of August 30, 1988 which requested we review your application for an exemption for a small conduit hydroelectric facility on the Wachusett Reservoir in the Town of Clinton, Worcester County, Massachusetts. The application has received a cursory review and we offer the following comments.

In the preparation of the proposed project's environmental documents, all environmental resources should be completely analyzed for all impacts of construction and operation, including the transmission lines, cofferdams, and access roads or other project-related structures or equipment. Environmental resources analyzed should include, but not be limited to, terrestrial and aquatic habitats and associated biota, land and water use, wetlands, recreation, air and noise quality, water quality and quantity, threatened and endangered species, species of ecological significance, aesthetics, historical or archaeological sites. All mitigation measures should also be discussed in detail.

Projects for hydroelectric power generating facilities require a Department of Army permit under Section 404 of the Clean Water Act. You may contact the Regulatory Branch (ATTN: CENED-OD-R) of the New England Division to receive information on the Section 404 permit procedures. The toll free telephone number in Massachusetts is 1-800-362-4367.

Although we have no further comments at this time concerning the proposed project, we reserve the right to make additional comments as necessary when the Federal Energy Regulatory Commission requests a formal agency review of the license application.

Sincerely,

Joseph L. Ignazio
Chief, Planning Division

MASSACHUSETTS ★ HISTORICAL ★ COMMISSION ★ A CommonWealth to Keep

'88 -7 PM 1:09

MWRA
DIRE

October 3, 1988

Willilam Brutsch, Director
Waterworks Division
Massachusetts Water Resources Authority
Charlestown Navy Yard
100 First Avenue
Boston, MA 02129

RE: Small Conduit Hydroelectric Facility, Cosgrove Intake Power Plant, Clinton, MA

Dear Mr. Brutsch:

The staff of the Massachusetts Historical Commission have reviewed the information you submitted regarding the above referenced project. A review of the Inventory of Historic and Archaeological Assets of the Commonwealth indicates that there are no known or recorded historic structures or archaeological sites witin the project location.

These comments are offered to assist in compliance wiht M.G.L. Chapter 9, ss 26-27c as amended by Chapter 152 of the Acts of 1983 (950 CMR 71.00).

If you have any questions, please feel free to contact me.

Sincerely,

Deirdre Brotherson

Deirdre Brotherson
Preservation Planner
Technical Services Division
Massachusetts Historical Commission

DB/di

Massachusetts Historical Commission, Valerie A. Talmage, *Executive Director, State Historic Preservation Officer*
80 Boylston Street, Boston, Massachusetts 02116 (617) 727-8470

Office of the Secretary of State, Michael J. Connolly, *Secretary*

3090 2487

United States Department of the Interior

FISH AND WILDLIFE SERVICE
400 RALPH PILL MARKETPLACE
22 BRIDGE STREET
CONCORD, NEW HAMPSHIRE 03301-4901

MWRA DIRECTORS
cc
11
5

Mr. William Brutsch, Waterwork Div.
Mass. Water Resources Authority
Charlestown Navy Yard
100 First Avenue
Boston, MA 02129

OCT 7 1988

Dear Mr. Brutsch:

This is in response to your request for our comments on the application for exemption for a small conduit hydroelectric facility - Cosgrove Intake Power Plant, located in Clinton, Massachusetts. Our comments are provided in accordance with the Fish and Wildlife Coordination Act (48 Stat. as amended; 16 U.S.C. 661 et seq.).

The proposed project would utilize the direct intake of water from the Wachusett Reservoir as it enters the water supply aqueduct system supplying water to the Boston metropolitan region. We recognize that it is an existing facility and that flow from the Wachusett Reservoir to the metropolitan district is part of the normal operation required by the Massachusetts Water Resources Authority, and waters are completely enclosed in a conduit exiting from this point.

We have reviewed your initial stage consultation materials, and the information that you submitted as part of the second stage of consultation. The Exhibit E of your draft application is incomplete. You need to provide a description of the fishery resources in the Wachusett Reservoir, as well as wildlife resources in the project area.

Because of the nature of the proposed project, it is not necessary for the Fish and Wildlife Service to prescribe a minimum flow release from the project to protect fish and wildlife resources. However, in order to prevent the loss of or damage to fish and wildlife resources as a result of project construction and operation, the Fish and Wildlife Service will prescribe the following terms and conditions for incorporation in their entirety in the exemption pursuant to Section 30(c) of the Federal Power Act and Section 408 of the Energy Security Act. These are our preliminary terms and conditions and we will finalize them once we have reviewed the additional information that should be included as part of your Exhibit E.

1. The Exemptee shall permit access to the project area wherever possible to allow for public utilization of fish and wildlife resources, taking into consideration any necessary restrictions to maintain public safety and protect project civil works.

3090 2488

2. The Fish and Wildlife Service shall be allowed to inspect the project area at any time while the project operates under an exemption from licensing to monitor compliance with their terms and conditions and to investigate reported adverse impacts to fish and wildlife resources associated with project operation.

3. If, as a result of project construction or operation, adverse impacts to fish and wildlife resources of the area occur, project construction or operation will cease until the situation is correct, or if not immediately corrected, project construction or operation will resume only after a recommendation to do so by the U.S. Fish and Wildlife Service.

4. The Fish and Wildlife Service is reserved the right to add and alter terms and conditions as appropriate to carry out its responsibilities during the life of the project with respect to fish and wildlife resources. The Exemptee shall, within thirty (30) days of receipt, file with the Commission any additional terms and conditions imposed by the above agency.

5. The Exemptee shall incorporate the aforementioned fish and wildlife conditions in any conveyance -- by lease, sale or otherwise -- of his interests so as to legally assure compliance with said conditions for as long as the project operates under an exemption from licensing.

Your submittal of the information we have requested will satisfy the requirements for the second stage of consultation. It is not likely that environmental studies will need to be conducted as part of the second stage of consultation. If you have any questions, please contact Joseph F. McKeon at (603) 225-1411.

Sincerely yours,

Joseph F. McKeon

for Gordon E. Beckett
Supervisor
New England Area

3090 2489

CC: RO/FWE Reading File
EPA, Boston
FERC, OHL
FERC, DEA
FWE: JMcKeon:jd:10-7-88:834-4411

3090 2490

United States Department of the Interior

NATIONAL PARK SERVICE

MID-ATLANTIC REGION
143 SOUTH THIRD STREET
PHILADELPHIA, PA. 19106

IN REPLY REFER TO:

TAKE PRIDE IN AMERICA

October 6, 1988

L74 (MAR-PD)

MWRA DIRECTOR '88 OCT 11 P1:25

Mr. William Brutsch
Waterworks Division
Massachusetts Water Resources Authority
Charlestown Navy Yard
100 First Avenue
Boston, Massachusetts 02129

Dear Mr. Brutsch:

This is in response to your request for comments on the draft application for Exemption, Cosgrove Intake small conduit hydroelectric project, Wachusett Reservoir, Town of Clinton, Worcester County, Massachusetts.

We recommend that an assessment be made of the possibility of providing public access within project boundaries for recreational purposes. The assessment should be undertaken in consultation with the State Liaison Officer (SLO), regional officials, and local community groups and agencies concerned with providing opportunities for public recreation, and should include consideration of recreation needs and priorities identified in the Statewide Comprehensive Outdoor Recreation Plan. The SLO for Massachusetts is James S. Hoyte, Secretary of Environmental Affairs, 100 Cambridge Street, Boston, Massachusetts 02202, telephone (617) 727-9800.

Sincerely,

Robert F. Gift, Chief
Environment and Recreation
Assistance Division

3090.2491

In response to inventory of terrestial and aquatic resource listings, this appendix has been attached. It was produced during a larger study involved with source augmentation of the existing water supply system and is not targeted to the specific Hydropower issues of this application. The extant Hydropower operations depicted in this exemption application are, however, integral parts of the large context within which the Public Water Supply System of the Boston Metropolitan area functions. The fish and wildlife resources depicted by this exempted portion of the study* show the extent to which this agency's concern has been directed by all potentially impacting projects upon the resources in our charge.

*Task 7: Watershed Management Assessment Report, Submitted to: Metropolitan District Commission by: Wallace, Floyd, Associates Inc., July, 1985

060

3090.2492

7.22 WATER QUALITY OF QUABBIN, WACHUSETT AND SUDBURY RESERVOIRS

7.22.1 Baseline Conditions

I. Existing Conditions. The baseline conditions for this alternative have been defined to be the vegetative conditions on MDC watersheds in the period 1976-1980. Thus, the baseline water quality conditions under this alternative are the water quality conditions in Quabbin and Wachusett Reservoirs in the same period. This baseline is the baseline described under Section 4.22, Water Quality of Reservoirs (see Task 4. No Action Assessment Report). With respect to the Sudbury Reservoir, the baseline is described under Task 9. Upper Sudbury Watershed Assessment Report (see Section 9.22.1).

II. Future Conditions Without Alternative. Future conditions are those described in Task 4. No Action Assessment Report.

7.22.2 Future Conditions With Alternative

Impacts of this alternative are direct with respect to tributary streams (Section 7.21) and only indirect on Quabbin and Wachusett Reservoirs - i.e., impacts on these reservoirs must result from impacts on the tributary streams.

The residence time of tributary waters in the reservoirs is very long (months to years). For example, for a Quabbin Reservoir watershed yield of approximately 200 MGD it would take about six years of watershed runoff to equal the volume of Quabbin Reservoir. Natural purification processes in lacustrine systems (including physical, chemical and biological transformation processes) typically can occur in periods of time ranging from hours to weeks (Wetzel, 1975; Odum, 1971). Also, the dilution potential of the reservoirs is very high with respect to inputted tributary waters. As an example, in the highly improbably event that the entire watershed delivered water with a turbidity of 10 NTU for a full month (30 days), the dilution potential of the water mass in Quabbin Reservoir would result in the turbidity remaining within drinking water standards (less than 1 NTU) at the Shaft 12 intake to the distribution system (Wachusett Reservoir would also provide dilution treatment). Physical and chemical changes in the reservoir would purify the runoff even further. As discussed in Section 7.21, the impacts of this alternative on water quality parameters (e.g., coliform bacteria, turbidity, color, organic chemicals) are expected to be insignificant. Also, the minor changes in water quality parameters which may occur in the tributaries will

3090 2493

nonetheless be subject to the natural purification processes and dilution potential of the reservoirs. A highly conservative estimate would be that even a several hundred percent (300-500 percent) increase in the concentration of water quality constituents in the tributary streams would not have any measurable impact on the water quality at a mid-reservoir point in either Quabbin or Wachusett Reservoir. Thus, it is highly improbable that the expected minor changes in water quality in the tributary streams (±50%) will result in any measurable changes in the reservoirs.

7.22.3 Significant Impacts

I. Measures of Significance. Measures of significance are as discussed in Section 7.21.

II. Significant Impacts. There will be no significant impacts of this alternative on water quality in the reservoirs.

7.22.4 Mitigation and Enhancement

In the absence of significant impacts on water quality in the reservoirs, no recommendations for mitigation or enhancement are made.

3090 2494

7.30 ECOLOGY

7.31 AQUATIC ECOLOGY OF TRIBUTARIES

7.31.1 Baseline Conditions

I. Existing Conditions. The following section focuses on the aquatic ecology of the tributaries. Discussions of baseline conditions and the assessment of impacts are based on data available in the published literature and on limited field surveys.

- Macroinvertebrates and Fish. Macroinvertebrate population densities in the tributaries are moderate (i.e., approximately 150 to 1000 organisms/ft^2). Highest densities were observed in the East Branch of Fever Brook (963 organisms/ft^2). Lowest densities were observed in the East Branch of the Swift River (148 organisms/ft^2) and in Prescott Brook (212 organisms/ft^2). All of the tributaries examined support a relatively high diversity of macroinvertebrate species. Major taxa include the Oligochaeta, Diptera, Trichoptera, and Ephemeroptera. The largest species diversity was observed in the East Branch of Fever Brook and the Ware River. Species observed in these tributaries represent at least 13 major taxa. Table 7.31-1 summarizes data on macroinvertebrate species from aquatic surveys conducted in 1982. The numbers and diversity of macroinvertebrates, as well as the relatively high water quality, (Section 7.21) can support diverse fish populations in the tributaries.

- Other Biota. Relatively little seasonal data are available on phytoplankton and zooplanktonic populations in the tributaries. Limited field studies conducted in 1982 indicate that major taxa of phytoplankton include pennate diatoms and coccoid green algae. Pennate diatoms predominate. This is characteristic of relatively high quality lotic waters. Population densities for phytoplankton are relatively low (i.e., less than 50,000 cells/liter) and, again, are indicative of relatively high water quality.

  Zooplanktonic populations are typically low within the examined tributaries (i.e., less than 15 organisms/liter). The major taxon in the tributaries was the Cladocera. Low population densities in these waters may reflect the phenomenon of "drift" in periods of relatively high flow. No threatened or

3090.2495

BENTHIC ORGANISMS	Number of Organisms / ft^2			
	East Branch Swift 8/18/82	Middle Branch Swift 8/18/82	East Branch Fever 8/18/82	Cadwell Creek 8/13/82
Nematoda		4	24	28
Coelenterata	4		4	4
Oligochaeta	32	304	108	160
Hirudinea			4	
Cladocera			120	
Copepoda			24	
Ostracoda				
Amphipoda	4		412	
Isopoda			20	
Diptera		32	19	348
Turbellaria	44	12	4	
Hydracarina				4
Gastropoda			4	
Pelecypoda (Bivalvia)		12	28	16
Trichoptera	60	84	72	44
Other	4	32	120	
Total Benthic Organisms	148	480	963	604

Table 7.31-1 Tributary Streams Watershed Management Alternative Benthic Organisms. (New England Research, Inc.)

BENTHIC ORGANISMS	Number of Organisms / ft^2			
	8/18/82 Prescott Brook	8/18/82 Ware River	8/19/82 Stillwater River	
Nematoda	4	24		
Coelenterata	4			
Oligochaeta	80	80		
Hirudinea		32		
Cladocera		16		
Copepoda		12		
Ostracoda				
Amphipoda		72		
Isopoda		28		
Diptera	56	108		
Turbellaria				
Hydracarina		4		
Gastropoda				
Pelecypoda (Bivalvia)	44	120		
Trichoptera	24	24		
Other		4 Odonata 36 Ephemeroptera		
Total Benthic Organisms	212	560		

Table 7.31-1 Tributary Streams Watershed Management Alternative Benthic Organisms. (New England Research, Inc.)

endangered or otherwise protected aquatic species have been observed or reported in these tributaries.

Tables 7.31-2 and 7.31-3 summarize data on phytoplanktonic and zooplanktonic populations generated from aquatic surveys conducted in August 1982.

II. Future Conditions Without Alternative. As discussed in Section 7.21-1, it is highly unlikely that there will be significant changes in water quality in the period 1990-2020 except for the possible additional acidification of waters due to acid precipitation. How acid precipitation affects all trophic levels in an aquatic ecosystem is currently unknown in any great detail. However, it may be expected that long-term exposure to acid precipitation will result in decreased population densities and diversity. Severe acidification of waters over long periods of time has been associated with the total disappearance of fish populations (Linthurst et al., 1983). Also, it is possible that acid precipitation has already affected some fish populations within the tributaries (personal communication, Massachusetts Division of Fisheries and Game). However, it should be noted that no definitive study has been conducted which proves beyond doubt that there is a direct cause-effect relationship between acid deposition and population densities of fish species in the Quabbin tributary waters. Finally, it should be noted that vegetative cover in the vicinity of tributary streams effectively shades streams and thereby tends to inhibit the development of algae and associated color. Changes in vegetative cover (Section 7.31.2) may lessen this inhibition affect, but the degree or consequences of such changes cannot be predicted.

7.31.2 Future Conditions With Alternative

Indicator species selected for this proposed alternative are based on a previously submitted technical report (NER and NAI, 1983); see Tables 7.31-4 and 7.31-5. These species include 4 species of finfish, 4 species of macroinvertebrates, 2 taxa of phytoplankton, and 1 taxon of zooplankton. These species represent a range of habitat requirements, ecological niches, and tolerances, and could therefore reasonably be expected to reflect major types of potential impacts. Potential impacts include (1) change in water quality, (2) increase in water quantity, (3) habitat loss and/or change, and (4) displacement or disruption. Table 7.31-6 summarizes indicator species considered under this alternative, including general information on trophic levels and tolerance ranges (see Task 7: Watershed Management Alternative, Technical Appendix on Water Quality

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Table 7.31-2 Summary of Data on Phytoplanktonic Populations in Tributary Streams.

Phytoplanktonic Groups	East Branch of Swift River	Middle Branch of Swift River	East Branch of Fever Brook	Cadwell Creek	Prescott Brook	Ware River	Stillwater River
Flagellated Greens							
Filamentous Greens		1	1	1		1	
Coccoid Greens	11	3	1		7	3	1
Desmids	3				1		1
Other Greens							
Filamentous Blue Greens							
Coccoid Blue Greens							
Pennate Diatoms	33	25	5	1	5	16	7
Centric Diatoms		1		1	3	1	
Dinoflagellates							
Golden Brown Flagellates		1			1		
Total	47	31	7	3	17	21	9

All data from field surveys conducted in August 1982. Units are in cells/ml.
(New England Research, Inc.)

Table 7.31-3 Summary of Data on Zooplanktonic Populations in Tributary Streams.

Zooplanktonic Groups	East Branch of Swift River	Middle Branch of Swift River	East Branch of Fever Brook	Cadwell Creek	Prescott Brook	Ware River (shaft 8)	Stillwater River
Rotifera				3.7			3.7
Copepoda	1.9	1.9					
Cladocera	9.3	1.9	9.3	1.9			3.7
Others	1.9[1]			5.6[2]			
Total	13.1	3.8	9.3	11.2	0	0	7.4

1 Ephemeroptera nymph

2 Diptera

All data from field surveys conducted in August 1982. Units are organisms/liter. (New England Research, Inc.)

TABLE 7.31-4: INDICATOR SPECIES

	Scientific Name	Habitat Type	Trophic Level
Vegetation			
Red Oak	Quercus rubra	forest land open land	primary producer
Pale Green Orchid	Plantanthera flava	wetland forest land open water	primary producer
Herptile			
Eastern Spadefoot Toad	Scaphiopus holbrooki holbrooki	wetland open land open water	primary carnivore
Blanding's Turtle	Emydoidea blandingi	wetland open water	primary carnivore
Birds			
Bald Eagle	Haliaeetus Leucocephalus	open land open water	detritivore* higher order carnivore
Osprey	Pandion haliaetus	open water	higher order carnivore
Red-shouldered Hawk	Buteo lineotus	forest land wetland open water	primary carnivore higher order carnivore
Barred Owl	Strix varia	forest land wetland	primary carnivore higher order carnivore
Common Loon	Gavia immer	open water	primary carnivore higher order carnivore
Green-backed Heron	Butorides striatus	wetland open water	primary carnivore higher order carnivore
Spotted Sandpiper	Actitis macularia	wetland open water	primary carnivore higher order carnivore
American Bittern	Botaurus lentiginosus	wetland open water	primary carnivore higher order carnivore

*Scavengers on old carrion and dead fish.

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	Scientific Name	Habitat Type	Trophic Level
Birds (Cont'd)			
Virginia Rail	Rallus limicola	wetland open water	herbivore primary carnivore
Marsh Wren	Clistothorus palustris	wetland	primary carnivore
Swamp Sparrow	Melospiza georgiana	wetland openland	primary carnivore herbivore
Tree Swallow	Tachycineta bicolor	open water wetland open land	herbivore primary carnivore
Louisiana Waterthrush	Seiurus motacilla	open water wetland	primary carnivore
Pileated Woodpecker	Dryocopus pileatus	forest land	herbivore primary carnivore
Mammals			
New England Cottontail	Sylvilagus transitionalis	open land forest land	herbivore
Red Fox	Vulpes vulpes fulva	forest land wetland open land	higher order carnivore detritivore* herbivore primary carnivore
Finfish			
Redbreast Sunfish	Lepomis auritus	open water	primary carnivore higher order carnivore
Atlantic Salmon	Salmo salar	open water	primary carnivore higher order carnivore
Sea Lamprey	Petromyzon marinus	open water	higher order carnivore
Macroinvertebrate			
Inverted Floater	Alasmidonta heterodon	open water	detritivore herbivore primary carnivore higher order carnivore

*Scavenger on carrion.

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	Scientific Name	Habitat Type	Trophic Level
Macroinvertebrate (Cont'd)			
Several Common Names	Lampsilis cariosa	open water	detritivore herbivore primary carnivore higher order carnivore
Population B Scud	Crangonyx pseudogracilis	open water	detritivore herbivore
Phytoplankton			
Diatoms	Pennales	open water	primary producers
Zooplankton			
Water Fleas	Cladocera	open water	detritivore herbivore primary carnivore

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TABLE 7.31-5: AQUATIC INDICATOR SPECIES

	Habitat Type			
Trophic Level	Open Water	Forest Land	Wetland	Open Land
Detritivore	Inverted Floater Population B Scud Lampsilis cariosa Water Fleas	Not Applicable	Not Applicable	Not Applicable
Primary Producer	Diatoms	Not Applicable	Not Applicable	Not Applicable
Herbivore	Inverted Floater Population B Scud Lampsilis cariosa Water Fleas	Not Applicable	Not Applicable	Not Applicable
Primary Carnivore	Redbreast Sunfish Atlantic Salmon Inverted Floater Lampsilis cariosa Water Fleas	Not Applicable	Not Applicable	Not Applicable
Higher Order Carnivore	Redbreast Sunfish Atlantic Salmon Sea Lamprey Inverted Floater Lampsilis cariosa	Not Applicable	Not Applicable	Not Applicable

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Table 7.31-6 Summary of Information on Indicator Species taken from Report of NER and NAI (June 13, 1983).

Type of Environment	Comments on Species
Aquatic	Indicator species included phytoplankton (2 groups), zooplankton (1 genus), macroinvertebrates (3 species), and finfish(3 species). These organisms represent 5 trophic levels and 1 type of habitat. Tolerance spectrum of aquatic species included: tolerant; moderately tolerant; intolerant.
Aquatic	Potential impacts which can affect indicator species include the following: erosion; decline in water quality; habitat loss/change; displacement/disruption; vegetation composition change.

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and Ecology, Section 7.4, Indicator Species) for details on habitat requirements and environmental tolerances).

Changes in water quality as a result of this alternative are expected to be insignificant (see Section 7.21) or, as in the case of localized decreases in the shading effect on tributaries (see Section 7.31.1, II), cannot be predicted. Water quantity will increase slightly (see Section 7.11); however, the increase in water quantity will not significantly affect the habitat of aquatic indicator species. Finally, there will be no direct displacement or disruption of indicator species as a result of this alternative.

Table 7.33-11 summarizes the impacts of expected changes in water quality and water quantity on the habitat and tolerance ranges of the indicator species.

7.31.3 Significant Impacts

I. Measures of Significance. Measures of significance include the probability of impact, the duration (or time-frame) of impact and the magnitude of impact. For purposes of this assessment it is necessary to consider this measure with respect to the four types of impacts identified in Section 7.31.2. This assessment is also guided by consideration of whether or not impacts on individual indicator species will result in long-term changes in the community and/or trophic structure of the aquatic ecology of the tributaries.

II. Significant Impacts. There will be no measurable or ecologically significant impact of the proposed alternative on the aquatic ecology of the tributaries. Both the magnitudes and the time-frames of changes in the streams are too small to be significant (see Section 7.21).

7.31.4 Mitigation/Enhancement Measures

In the absence of any significantly adverse or beneficial impact of the proposed alternative on the aquatic ecology of the tributaries, no mitigation or enhancement measures are recommended.

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7.32 AQUATIC ECOLOGY OF QUABBIN, WACHUSETT AND SUDBURY RESERVOIRS

7.32.1 Baseline Conditions

I. Existing Conditions. The baseline conditions under this alternative are precisely the conditions discussed in Section 4.22, Task 4: No Action Assessment Report and (in the case of Sudbury Reservoir), the baseline conditions of Task 9: Upper Sudbury Watershed Assessment Report.

II. Future Conditions Without Alternative. See Sections 4.30 of the Task 4: No Action Assessment Report and Section 9.30 of the Task 9. Upper Sudbury Watershed Assessment Report.

7.32.2 Future Conditions With Alternative

Indicator species were selected and assessed (see Task 7: Watershed Management Technical Appendix, Section 7.5.4). While this alternative will cause relatively minor changes in the tributaries, it is highly improbable that such changes will result in any measurable impacts on indicator species in the reservoirs. This is because of the following reasons:

- There will be minor changes in water quality in the reservoirs (Section 7.22).
- There will be minor changes in quantity of water in the reservoirs (Section 7.22).
- There will be no direct effects on habitat or disruptions of aquatic biota due to the forest management activities involved in implementing the Watershed Management Alternative.
- Large, mature lacustrine systems tend to have high ecological stability (Odum, 1971).

Thus the aquatic ecosystems of the reservoirs will experience few, if any, readily measurable changes from this alternative.

7.32.3 Significant Impacts

I. Measures of Significance. See Section 7.21.

II. Significant Impacts. There will be no measurable or ecologically significant impact of the proposed alternative on the aquatic ecology of the reservoirs.

7.32.4 Mitigation/Enhancement Measures.

In the absence of any significantly adverse or beneficial impact of the proposed alternative on the aquatic ecology of the reservoirs, no mitigation or enhancement measures are recommended.

7.33 TERRESTRIAL ECOLOGY OF QUABBIN, WACHUSETT AND WARE RIVER WATERSHEDS

7.33.1 Baseline Conditions

I. Existing Conditions

- Habitat, Flora and Fauna. Habitat, flora and fauna are key components of terrestrial ecosystems. The assessment of this alternative required extensive field studies of terrestrial habitat types and flora and fauna in addition to a review of the existing literature. These studies included an autumn survey for rare plants and a winter survey for animal tracks (Phase I), as well as spring and summer surveys of habitats, flora and fauna (see Task 7: Watershed Management Technical Appendix (WMTA), Section 7.3.2).

  Prior to actual surveys, transects were located on U.S. Geological Survey topographic quadrangle maps of each watershed. Location of transects ensured a broad covereage of each watershed (see WMTA, pgs. 257-259). In the Quabbin Reservoir watershed, 77 transects were selected, covering a total length of approximately 24 miles; in the Wachusett Reservoir watershed, 12 transects were selected, covering a total length of approximately 6 miles; in the Ware River watershed, 45 transects were selected, covering a total length of approximately 20 miles. Additional information on the surveys is found in Table 7.33-1.

  Each transect was traversed and described with respect to vegetative communities, habitat characteristics, wildlife signs and human use. Table 7.33-2 summarizes the types of information collected during these surveys. Data collected along the 134 transects covering approximately 50 miles are included in the WMTA, Section 7.3.2.

- Threatened and Endangered Species. Throughout the field studies, particular attention was given to the identification of any threatened or endangered species. No threatened or endangered plant or animal species were observed in any of the field studies. However, a number of terrestrial species which are protected under the Massachusetts general laws were observed. These protected species include the following:

  1. Quabbin Reservoir Watershed

     - a variety of orchids (rattlesnake plantain, moccasin flower, long bracted orchid)

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Table 7.33-1. Summary of Terrestrial Ecological Surveys of MDC Watersheds

Dates	Summary Comments
September 1980 (Phase I Study)	Surveys included approximately 50 miles in 129 routes established in the 3 MDC watersheds. Surveys were for presence of rare plants and animals in the watersheds. No rare plants or animals were observed in the surveys.
December 1980 to January 1981 (Phase I Study)[1]	Winter field surveys were made on the 3 MDC watersheds to look for animal signs, including animal tracks. Signs of common animal species were observed. No signs of rare or endangered species were observed.
May 1982 (Phase II Study)[2]	Surveys included approximately 50 miles in 133 routes in the 3 watersheds. Same routes/transects as in Phase I Study. Protected plant species (e.g., wild orchids, mayflower, wild azaleas) were observed. Signs of common animals observed.
July 1982 (Phase II Study)[3]	Surveys included approximately 50 miles in 135 routes in the 3 watersheds. Same routes/transects as in previous surveys. Protected plant species (e.g., wild orchids) were observed. Signs of common animals were observed.

1 Information summarized from Phase I Report on autumn and winter surveys (NER, April 30,1981.)

2 Information summarized from report on spring 1982 terrestrial ecological field survey (NER, May 1982).

3 Information summarized from report on summer 1982 terrestrial ecological field survey (NER, July 1982).

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Table 7.33-2. Type of Information Collected Along Terrestrial Transects.

VEGETATIVE COMMUNITIES

Category	Criteria/Examples
Softwood Forest	80% or more hemlock, larch, pine, spruce
Hardwood Forest	80% or more ash, beech, birch, cherry, maple, oak
Softwood/Hardwood Forest	mixture S and H, S predominant
Hardwood/Softwood Forest	mixture H and S, H predominant
Shrubland	alder, blueberry, laurel, meadowsweet, sumac, willow
Grassland	fern, grass, rush, sedge, wildflower
Plantation	pine, spruce
% Cover Overstory	low 30-80% high 81-100%
% Cover Understory	low 30-80% high 81-100%

HABITAT CHARACTERISTICS

Type	Examples
Barren Land	road, parking lot, bare rock/soil
Open Water	reservoir, pond, river
Open Land	old field, r-o-w, shrub, cropland
Forest Land	H, S, HS, SH, plantation
Wetland	wet meadow, marsh, swamp, bog
Recreation Land	boat ramps, picnic areas, fishing areas, park areas
Edge/Interspersion within 10-20 meters	low(1-2 types) high(3 or more types)

WILDLIFE SIGNS

- Food Cuttings/Caches
- Claw Marks
- Tracts, Trails, Tunnels
- Nests, Dens, Burrows
- Scats/Pellets
- Other: e.g., songs, calls, etc.

HUMAN USE

- Timber Stand Improvement
- R-O-W Transmission Line Maintenance
- Agricultural Production
- Other

*See Technical Appendices for actual data and information collected.

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- azalea (swamp pink)

2. Wachusett Reservoir Watershed

   - orchid (moccasin flower)

3. Ware River Watershed

   - a variety of orchids (rattlesnake plantain, moccasin flower, purple fringed orchid)
   - azalea (swamp pink, Rhodora)
   - mayflower

In addition to the field surveys, the literature on threatened and endangered species was consulted. The U.S. Fish and Wildlife Service (1979) notes that few federally listed endangered species of plants or wildlife are resident in the state. However, FWS also notes that several are occasional visitors, including the bald eagle, peregrine falcon and Indiana bat. Other protected species (e.g., "state rare", "restricted", etc.) have been identified by Smith (1983). Some of these species may occur within the Quabbin watershed.

II. Future Conditions Without Alternative. A comparison of basic habitat types under the No Action and Watershed Management Alternatives is included in Table 7.33-3. The baseline conversions can be expected to result in several changes in the terrestrial ecology of the watersheds including:

1. an increase in the interspersion of habitat types and thus an increase in ecotone (edge) within the three watersheds;

2. an increase in sunlight penetration to forested soils;

3. a decrease in structural barriers to the movement of large mammals and certain bird populations;

4. a decrease in total vegetative biomass.

It can reasonably be expected that these changes will, in turn, result in additional changes in the faunal communities in the three watersheds. The conversion of dense forest to low density forest will provide excellent feeding and nesting habitat for a variety of bird populations. The increase in sunlight penetration to the forest floor will enhance the productivity of herbs, forbs and shrubs and, consequently, their value as habitat and/or

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TABLE 7.33-3: Vegetative Areas in MDC Watersheds in 2020 under No Action and Watershed Management Alternatives

Cover Type	Quabbin Watershed				Wachusett Watershed				Ware River Watershed			
	Acres		% of Total		Acres		% of Total		Acres		% of Total	
	No Action	Water Mgmt	No Action	Water Mgmt	No Action	Water Mgmt	No Action	Water Mgmt	No Action	Water Mgmt	No Action	Water Mgmt
Softwood Forest:												
High Density	7,268	500	15.5	1.1	1,260	100	26.0	2.1	4,247	200	23.6	1.0
Medium Density	0	5,676	0	12.1	0	361	0	7.4	0	907	0	5.0
Low Density	7,429	5,521	15.8	11.7	419	718	8.6	14.8	1,261	3,401	7.0	18.9
Hardwood Forest:												
High Density	12,725	500	27.1	1.1	1,597	100	32.9	2.1	8,356	200	46.4	1.1
Medium Density	0	10,752	0	22.9	0	538	0	11.1	0	6,301	0	35.0
Low Density	19,042	19,515	40.5	41.5	1,221	2,180	25.2	44.9	3,422	5,277	19.0	29.3
Very Low Density	0	1,000	--	2.1	0	0	--	--	0	0	--	--
Grass/Shrub.												
High Density	363	363	0.8	0.8	42	42	0.9	0.9	658	658	3.6	3.7
Low Density	0	3,000	--	6.4	250	750	5.1	15.4	0	1,000	--	5.5
Stone Mulch	173	173	0.4	0.4	61	61	1.3	1.3	65	65	0.4	0.4
TOTAL	47,000	47,000	100.0	100.0	4,850	4,850	100.0	100.0	18,009	18,009	100.0	100.0

food supplies to a variety of herpetofauna, avifauna and mammals.

In general, management practices already in effect can be expected to result in an overall increase in both floral and faunal species diversity as well as in the improved well-being of species and/or stability of populations already present in the watershed.

It is also probable that changes in vegetative cover will result in changes in carrying capacity for some faunal species. Carrying capacity for some species will increase and, for others, decrease. Table 7.33-4 includes examples of how the carrying capacity for some species can be expected to change. It should be noted that the carrying capacity for any species is highly variable (U.S. Dept. of Agriculture, 1968). Thus, it is not possible to make quantitative predictions of changes in carrying capacity. Examples are discussed in the following Section 7.33.2 which focuses on indicator species and how the proposed watershed management will expand upon the currently occurring baseline changes.

7.33.2 Future Conditions With Alternative

Twenty-eight terrestrial species were identified as terrestrial indicator species (NER and NAI, 1983). Of these, 20 species (including bird, mammal, herptile and vegetative species) were identified as indicator species for the terrestrial environment in the three watersheds considered under this alternative. These species are listed in Table 7.33-8.

Tables 7.33-5, 6 and 7 show: the initial 1980 cover-type acreage for the three watersheds; the regrowth from low density to medium density; the baseline cutting; and the proposed Watershed Management Alternative cutting for the study period 1986-2020. It is assumed that the cutting will be accomplished in a manner that results in the maintenance of a transition forest, i.e. the forest will not be permitted to regrow to high density but only to medium density stocking.

Primary factors that could theoretically influence the identified indicator species include habitat loss or change, displacement or disruption, and changes in the composition of vegetation. Habitat and vegetative cover could also be influenced by such phenomena as erosion and the loss of forest soil nutrients due to increased infiltration of rainwater. Both erosion and loss of soil nutrients are commonly considered to be key phenomena in the process of desertification (Odum, 1971).

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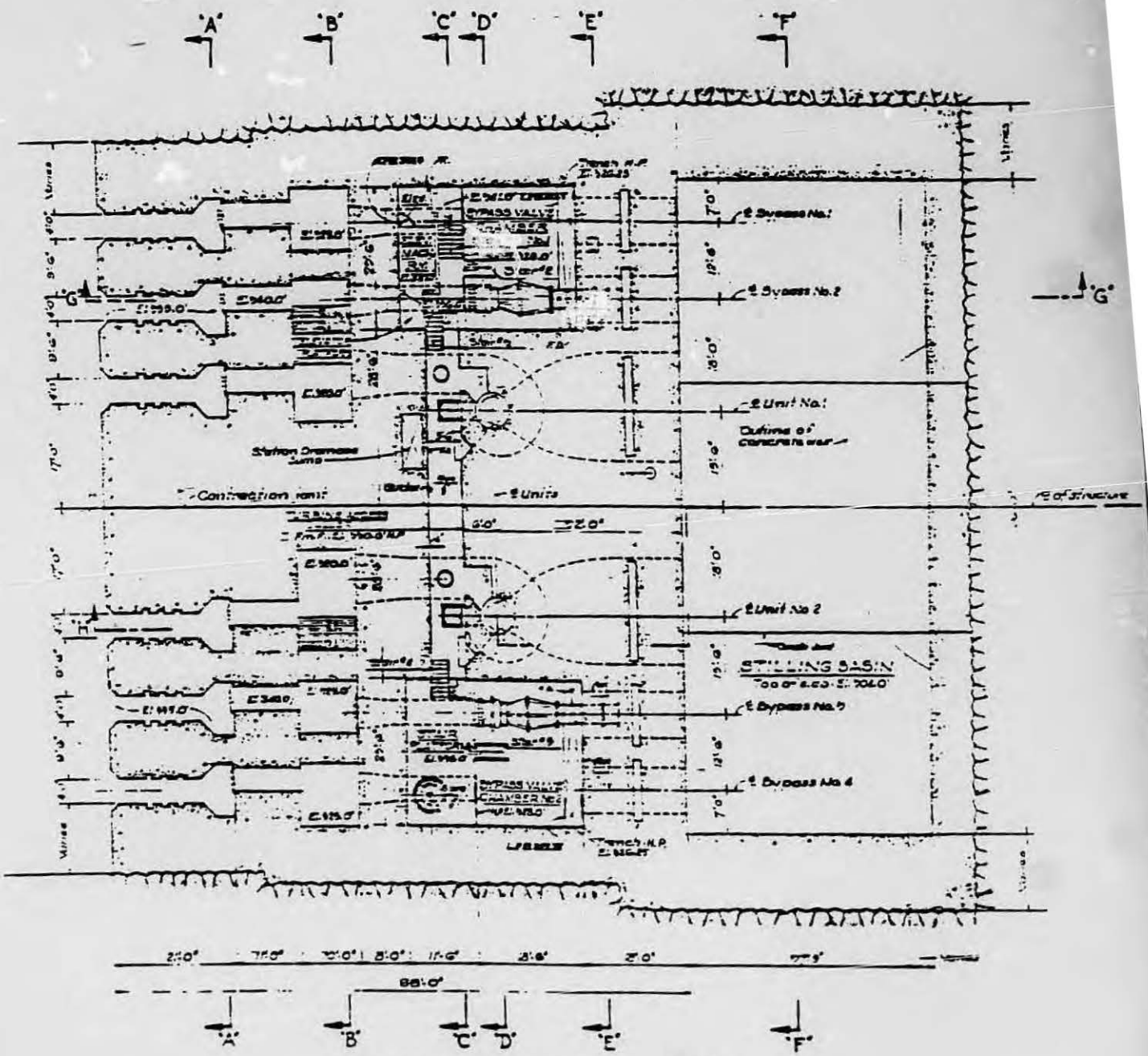
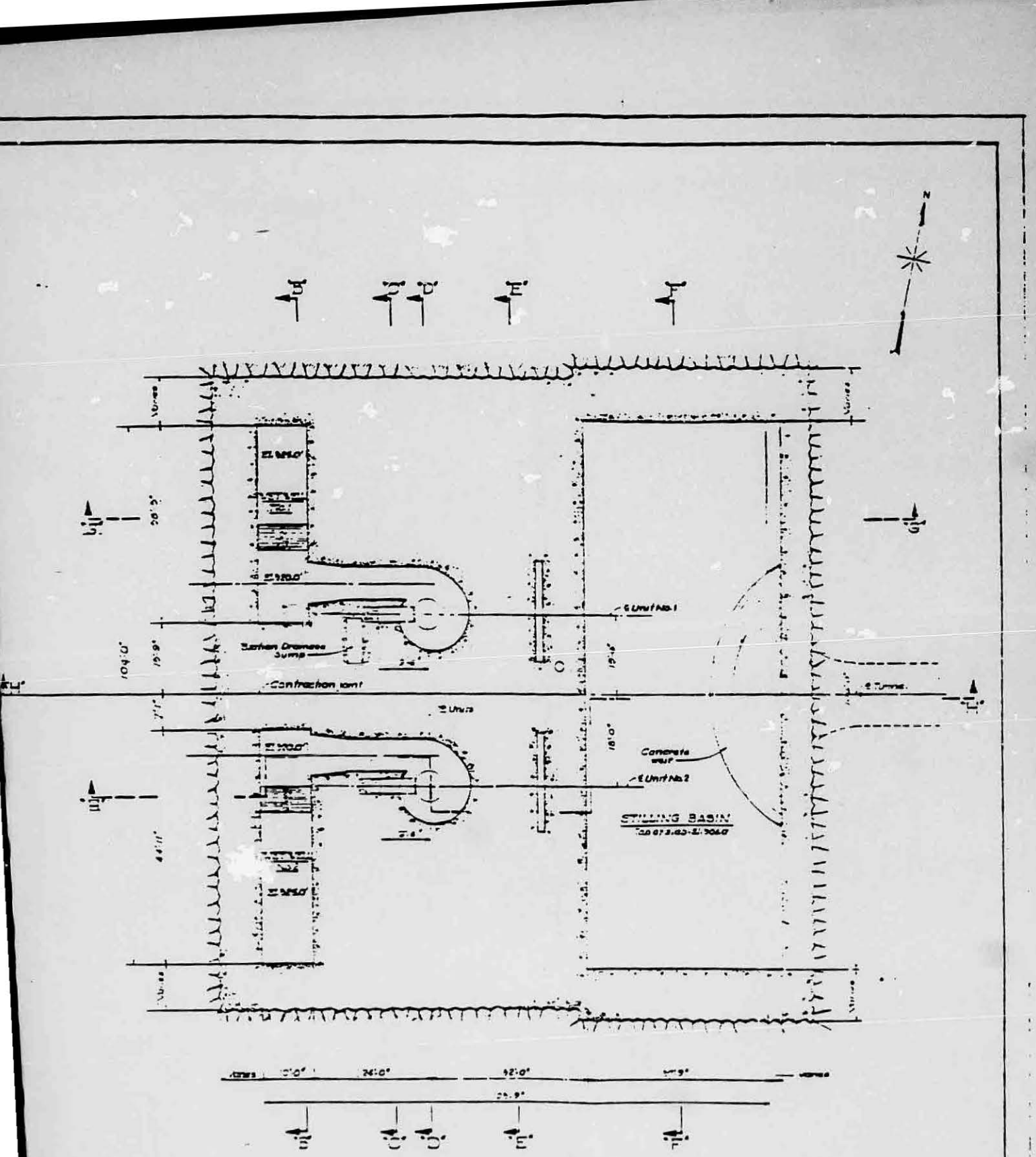
EXHIBIT G



PART PLAN AT EL. 343.0' & 338.0'

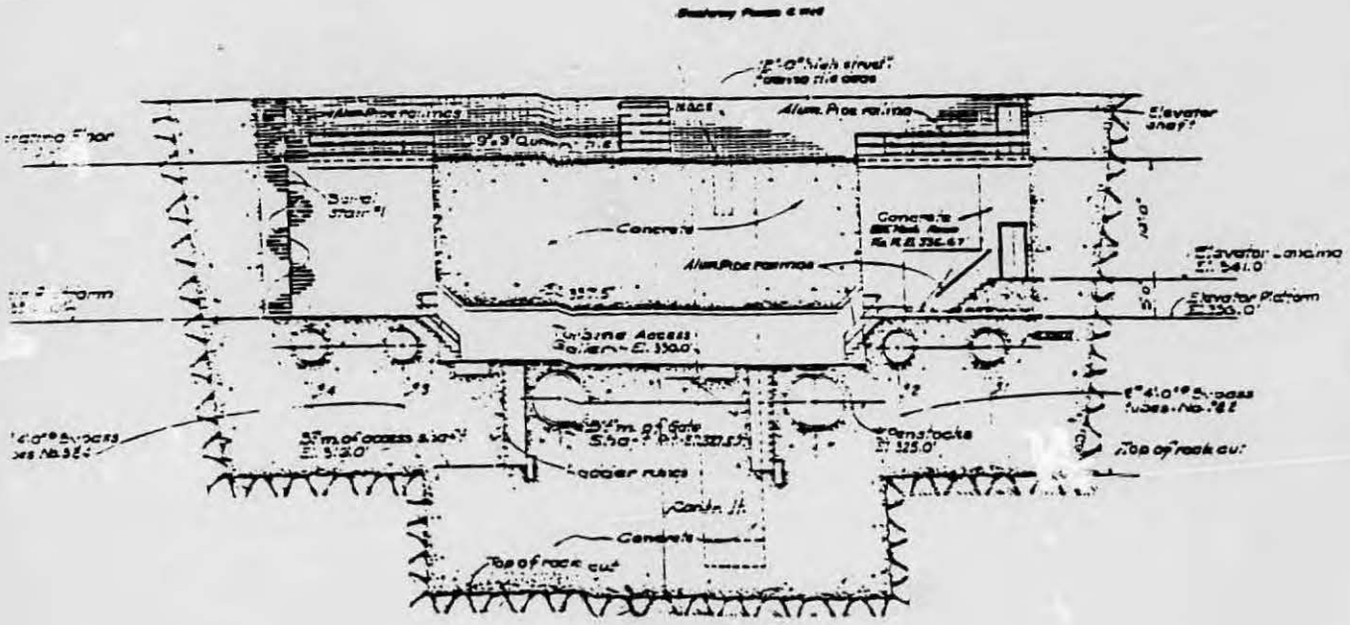


PLAN AT EL. 325.0'

EXHIBIT- G-1

MASSACHUSETTS WATER RESOURCES AUTHORITY

COSGROVE INTAKE & POWER PLANT
GENERAL
PLANS AT EL. 343.0' & 325.0'



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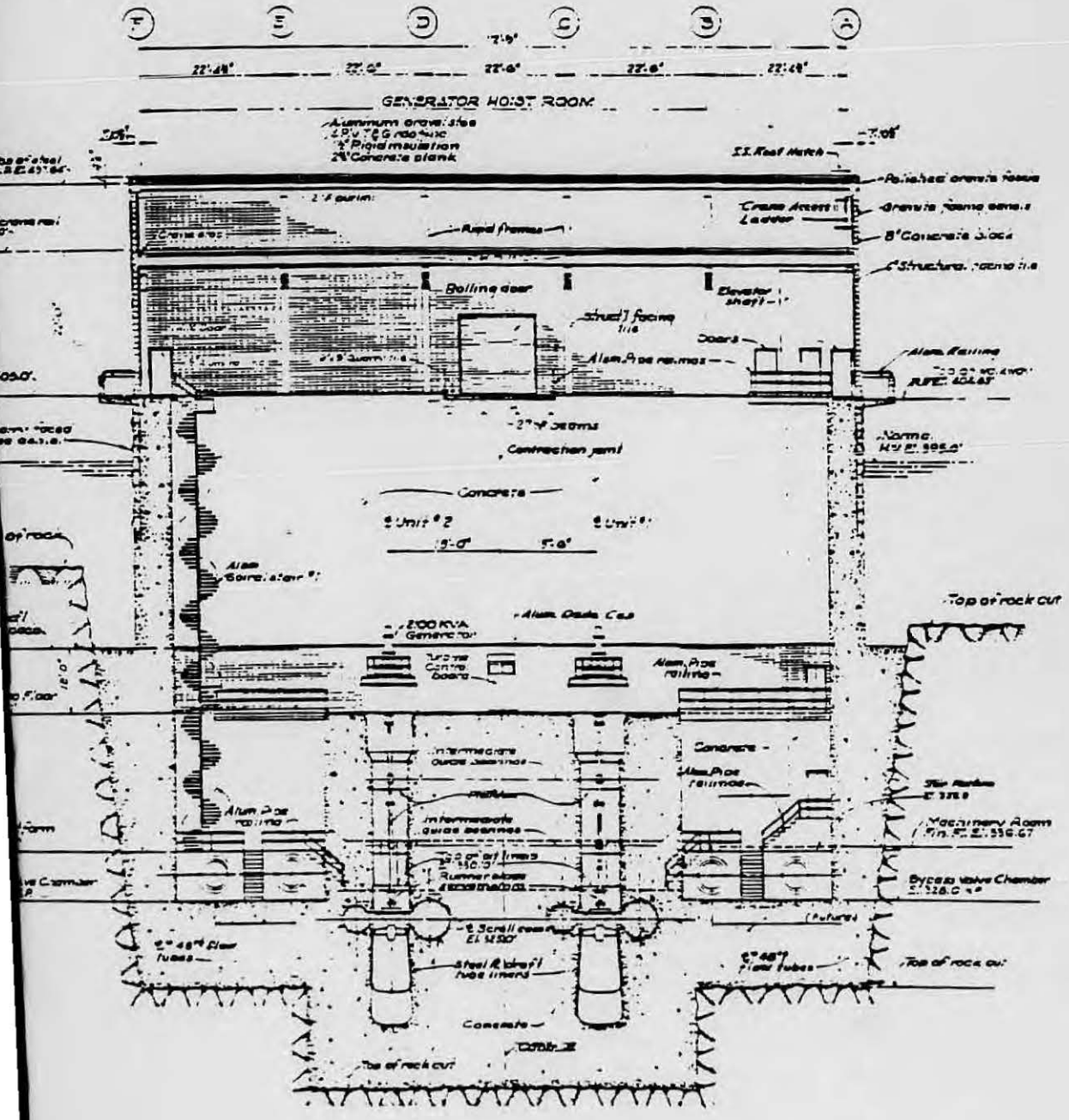

SECTION "D-D"

Scale: 1/8"=1'-0"

EXHIBIT- G-2

MASSACHUSETTS WATER RESOURCES AUTHORITY

COSGROVE INTAKE & POWER PLANT

GENERAL

LONGITUDINAL SECTIONS

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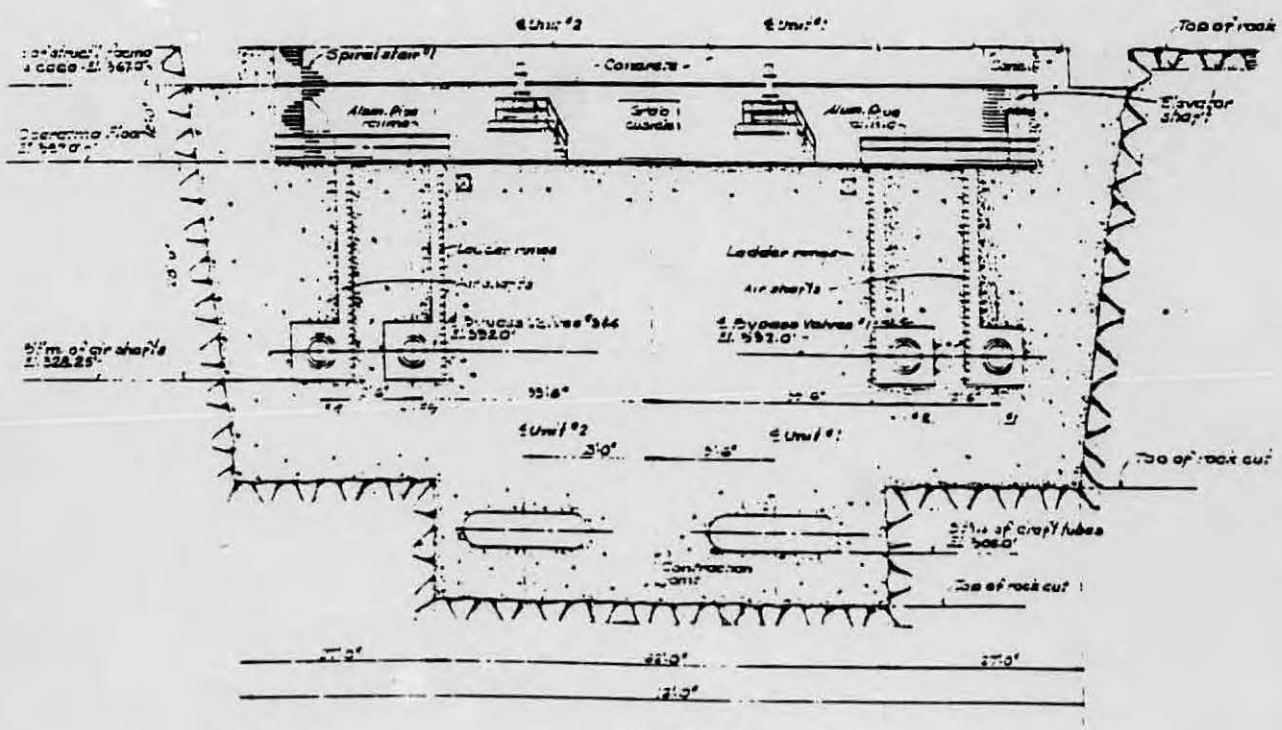

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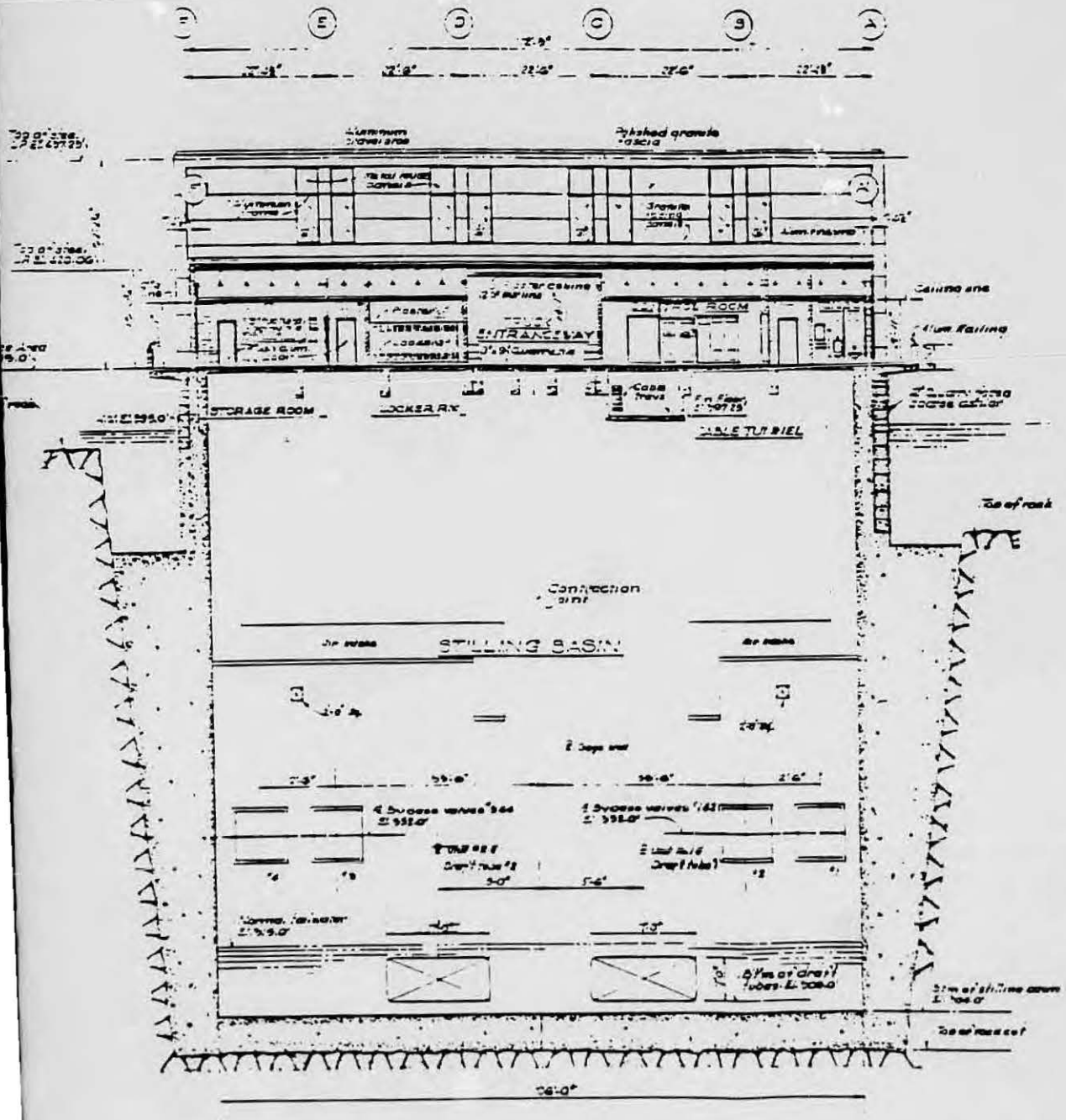

SECTION "E-E"

EXHIBIT- G-3

MASSACHUSETTS WATER RESOURCES AUTHORITY

COSGROVE INTAKE & POWER PLANT

GENERAL

LONGITUDINAL SECTIONS

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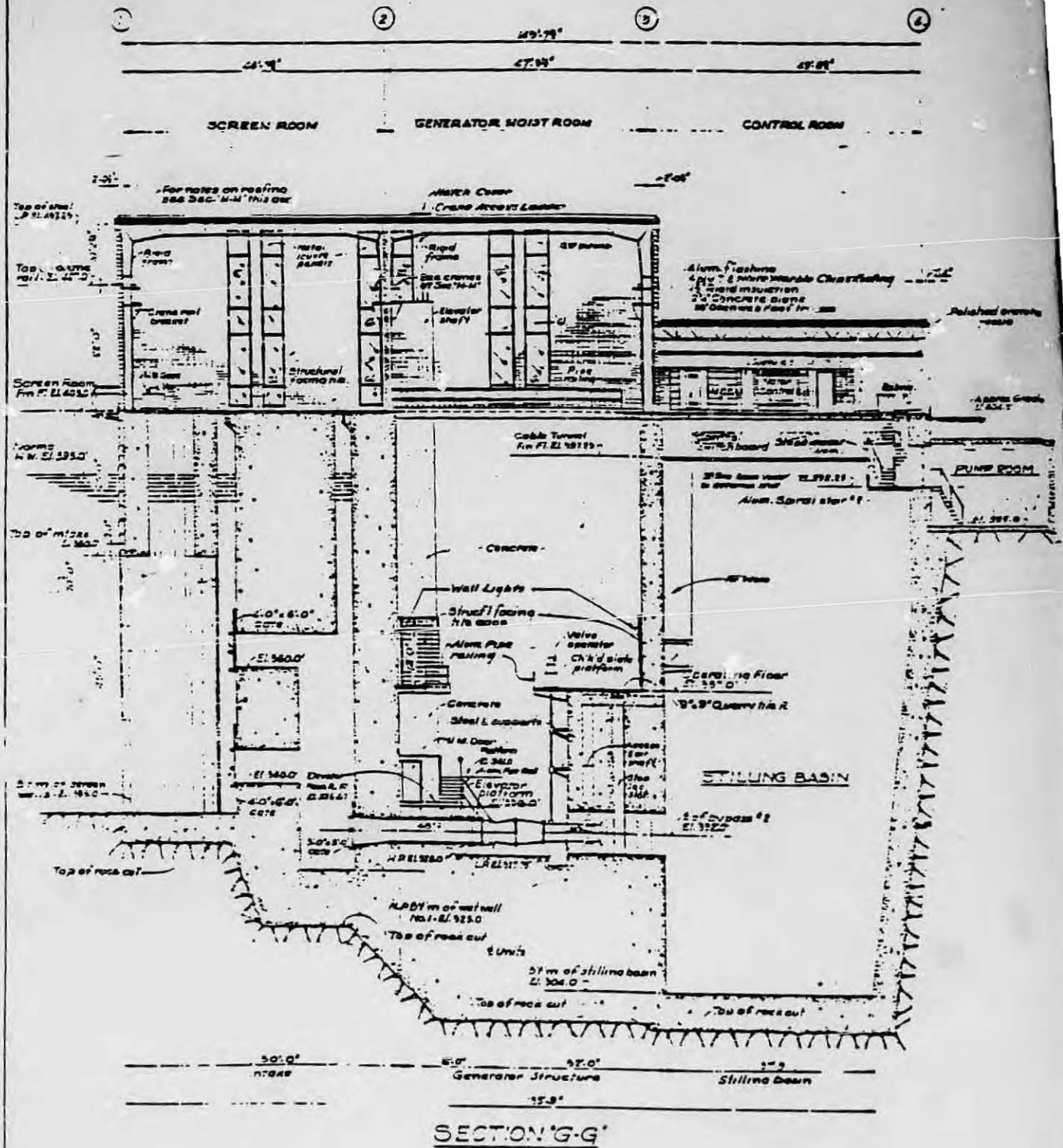
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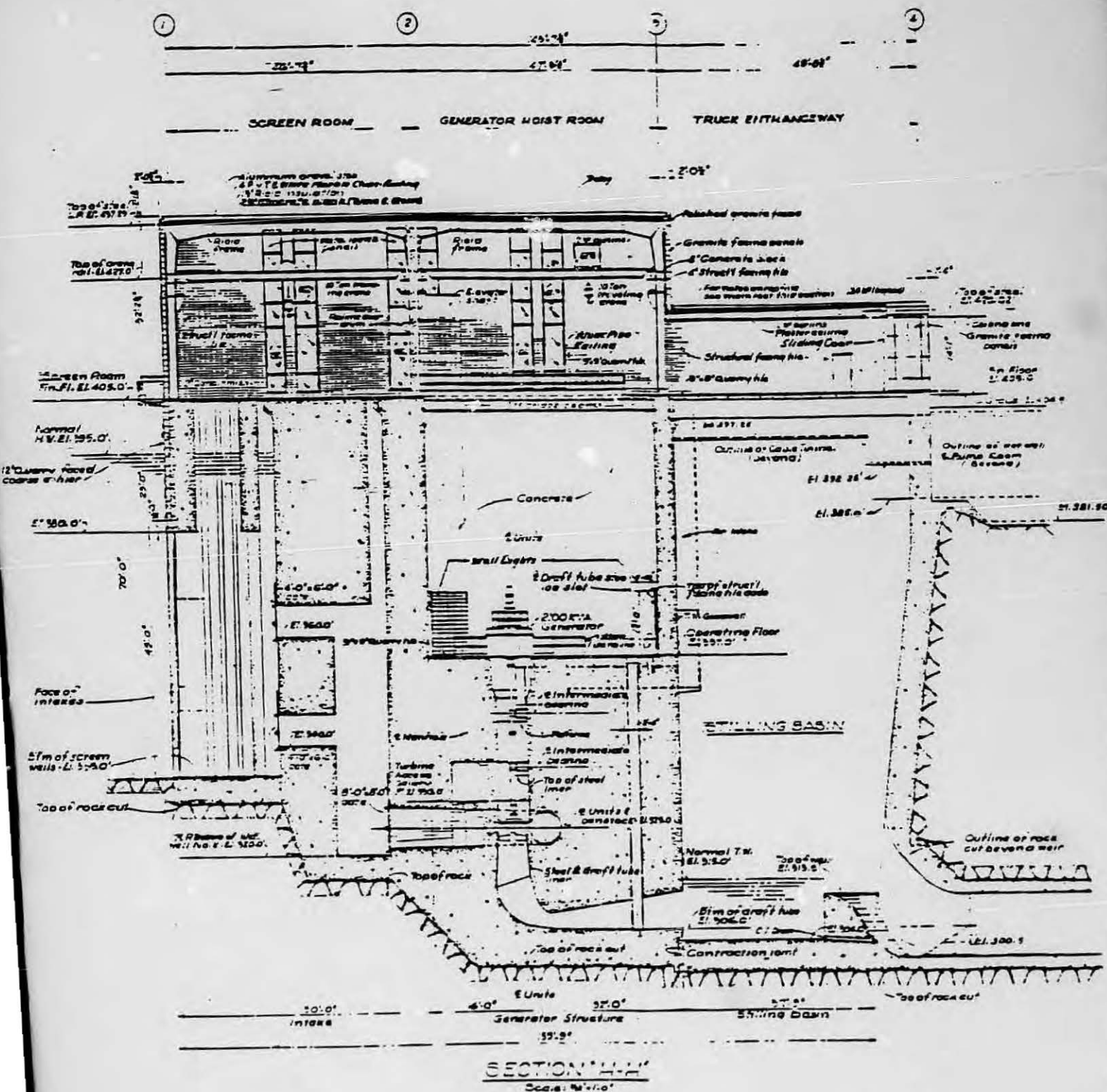
GENERATOR HOIST ROOM
CONTROL ROOM
PUMP ROOM
STILLING BASIN
Generator Structure
Stilling Basin

SECTION 'G-G'



SECTION "H-H"

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EXHIBIT-G-4

MASSACHUSETTS WATER RESOURCES AUTHORITY

COSGROVE INTAKE & POWER PLANT

GENERAL

CROSS SECTIONS

SCALE 1/8" = 1'-0"

Attached is evidence that the existing facility, located on the Wachusett Reservoir in the Town of Clinton, Worcester County, Massachusetts, is owned by the Metropolitan District Commission (MDC), but operated and maintained by the MWRA:

1. A copy of the Taking of the property, dated May 11, 1898.

2. A index plan outlining the Wachusett Reservoir and Watershed Land Plans and a map outlining the particular parcel of land described in the taking.

3. A copy of Chapter 488 of the Acts of 1895 of the Commonwealth of Massachusetts, which established the Metropolitan Water Board, empowered to impound the waters of the Nashua River and acquire all lands necessary in order to create the Wachusett Reservoir and its appurtenances (See Sections 4, 5, 6, 9 and 11 for specific references.)

4. A copy of Chapter 372 of the Acts of 1984 of the Commonwealth of Massachusetts which established the MWRA and authorized it, operation and maintenance of the Cosgrove facilities. (See page 73, Section 42, Subsections 104, 107, and 113 for specific references.)

3090.2524

5. A copy of the Memorandum of Understanding between the MDC Watershed Management Division and the MWRA Waterworks Division which documents the responsibilities of both agencies concerning the maintenance and operation of certain Waterworks holdings. (See pages 5 & 6, Section B for specific references.)

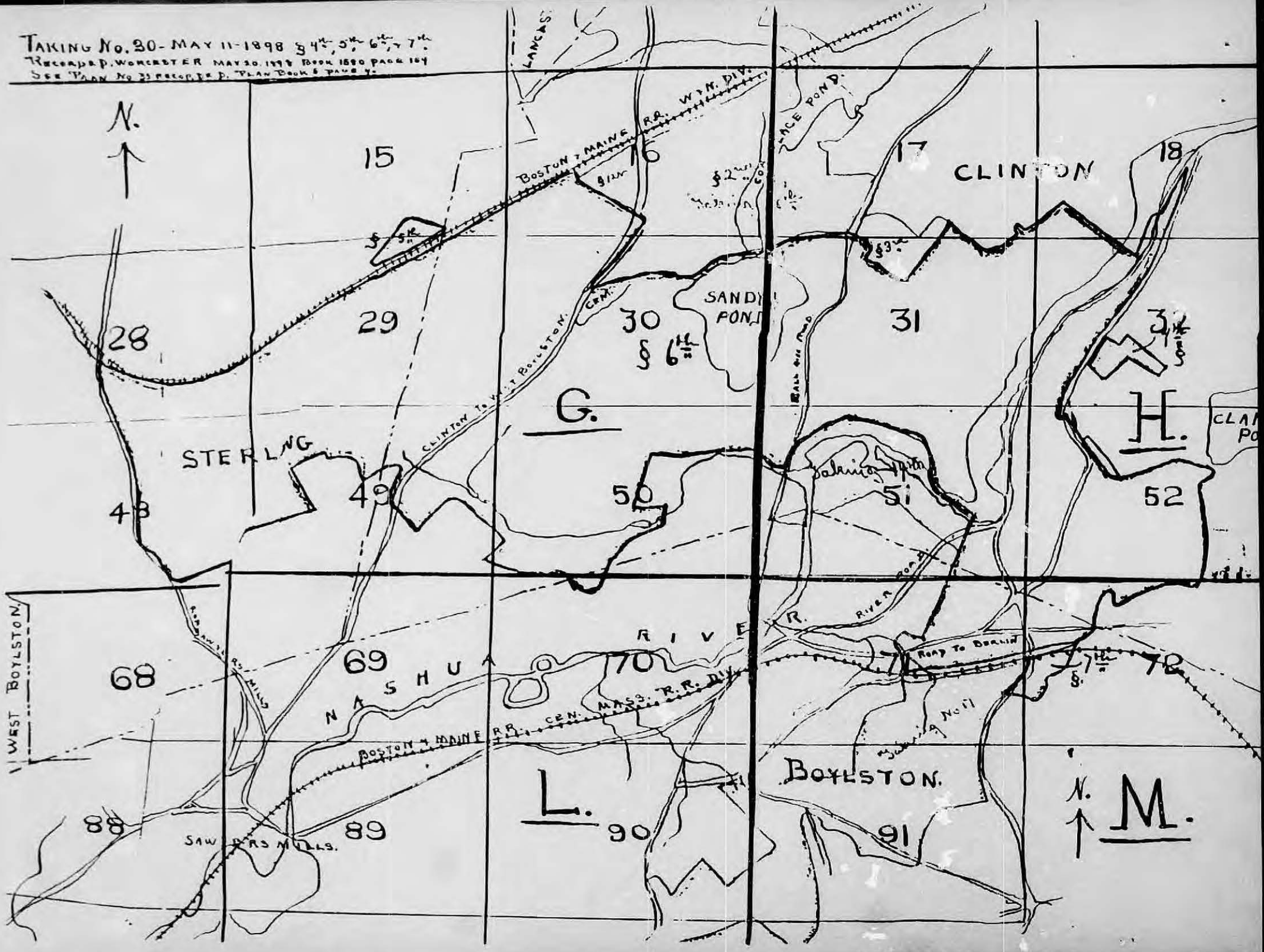
3090 2925

TAKING NO. 30

RESERVOIR §4,5,6,7 IN CLINTON,STERLING AND BOYLSTON

Dated May 11,1898. Recorded May 20,1898 with Worcester District Deeds, Book 1580, Page 154. Plan No.33.

3090 2526


TAKING No. 30 - MAY 11-1898 § 4th, 5th, 6th, & 7th.
RECORDED WORCESTER MAY 20. 1898 BOOK 1580 PAGE 164
SEE PLAN No 35 RECORDED PLAN BOOK 5 PAGE 4.
N.
15
16
17
18
CLINTON
BOSTON & MAINE R.R. W. & N. DIV.
LANCAST
SANDY POND
§ 6th
30
31
28
29
G.
H.
STERLING
48
49
50
51
52
CLINTON TO WEST BOYLSTON
CEN.
RIVER ROAD
ROAD TO BERLIN
NASHUA RIVER
68
69
70
72
WEST BOYLSTON
BOSTON & MAINE R.R. CEN. MASS. R.R. DIV.
BOYLSTON.
L.
M.
88
89
90
91
SAWYERS MILLS.

KNOW ALL MEN BY THESE PRESENTS,

That the Commonwealth of Massachusetts, by Henry H. Sprague, Wilmot R. Evans, and Henry P. Walcott, the Metropolitan Water Board, duly constituted and appointed under and according to the provisions of chapter 488 of the Acts of the Legislature of the Commonwealth of the year 1895, by virtue and in exercise of the power and authority of said Act and of every other power and authority hereto enabling, and in partial execution of said powers and authorities, does hereby take in fee for the Metropolitan Water Works provided for by said Act, the several tracts of land herein called sections fourth, fifth, sixth, and seventh, and the several lots herein described, included within said sections, excepting, however, and not hereby taking St. John's cemetery, shown on the plan hereinafter mentioned as lot 62 of section sixth, all situate in the towns of Clinton, Sterling, and Boylston, in the County of Worcester and said Commonwealth, said sections and lots being bounded as hereinafter set forth, with the buildings and other structures thereon, and all the rights, privileges easements and appurtenances thereto belonging, except as hereinafter set forth and reserved, but without interference with or in any way affecting the rights of the public, or any rights, authorities, duties, or obligations of any county, city, town, or officer thereof, in, to, or over any public street or way or any part thereof, whether hereinafter mentioned or not, within the limits of said sections or either of them, which said roads, streets, or ways, or any part thereof, are not hereby discontinued or altered.

The said sections and lots above referred to and hereby taken are shown upon a plan in three sheets, numbered 1, 2, and 3, said plan being inscribed "Commonwealth of Massachusetts, Metropolitan Water Board. Plan No. 33 of Land Takings, Wachusett Reservoir, Lands in Clinton, Sterling, and Boylston", signed by Frederic P. Stearns, Chief Engineer, dated February, 1898, and recorded herewith.

Deeds recorded 16-15-15½ Deeds Eckstein to Comm. Oct. 15-1897 rec'd Worc. B. 1559. p. 134- 141½ 241-242 p. 21
" Beaven " " July 13 " " " 1556 " 150 " "
" Kraemer " " Oct 2 " " " " " "

SECTION FOURTH. A tract of land with the buildings thereon, situate in said Clinton on the southeasterly side of Boylston street at its junction with Wilson street, containing six and ninety-four one-hundredths (6.94) acres, lately owned in severalty by Henry A. Eckstein, John Beaven, and Henry Kraemer, but now by the Commonwealth, shown on sheet 1 of said plan, and bounded and described as follows:

Beginning at the southwesterly angle of said tract, at the centre of a stone monument set in the southeasterly line of said Boylston street at the northwesterly corner of land now or late of Rudolph Munzer;

thence running a little east of north by said southeasterly line of Boylston street and by the southeasterly line of Wilson street in two courses, measuring two hundred seventy-five (275) feet and one hundred thirty-five (135) feet respectively, to the centre of a stone monument set in the southeasterly line of said Wilson street at the southwesterly corner of land now or late of John McNamara;

3090 2528

southeasterly by the same land one hundred thirty (130) feet; and
southwesterly by the same land one hundred sixty (160) feet, each of said last two boundary lines being intersected by the boundary line between said towns and its most northerly angle being four hundred ninety-six (496) feet southwesterly from the most northerly angle of said land of Wood, last above described, measured on the southeasterly line of Boylston street.

SECTION SIXTH, LOT 23. A lot of land lately owned by George H. Bruce, now by the Commonwealth, situate in said Boylston at the southeasterly corner of said road from Berlin and said road to Northborough, and northerly of the Boston and Maine Railroad, Central Massachusetts Division, containing one and sixty one-hundredths (1.60) acres, shown on sheet 2 of said plan, and bounded,
northerly by said road from Berlin three hundred eighty-seven (387) feet;
southeasterly by land of Lorenzo F. Wood, next herein described, by a broken line three hundred and seven (307) feet;
southerly by the northerly line of the location of said railroad one hundred sixty-three (163) feet; and
westerly by said road to Northborough two hundred seventy-five (275) feet.
Being a portion of the premises described in a deed from George H. Bruce to the Commonwealth, dated February 18, 1897, recorded as aforesaid, book 1528, page 635. For Copy see Volume Three of Deeds page 43
Deed to Commonwealth dated Mar. 30-1899-1611-21; For copy see Vol. 4 of Deeds page 130.

SECTION SIXTH, LOT 24. A lot of land owned by Lorenzo F. Wood, situate in said Boylston between said road from Berlin and said railroad, containing two and thirty-six one-hundredths (2.36) acres, shown on sheet 2 of said plan, and bounded,
northerly by said road from Berlin five hundred eighty-four (584) feet;
southeasterly by other land of Lorenzo F. Wood in a broken line running from the centre of a stone monument set in the southerly line of said road from Berlin, a short distance west of its intersection by the boundary line between Boylston and Clinton, south 69-1/4° west two hundred fifty-one (251) feet to the centre of a stone monument, and then running south 26-3/4° west one hundred and three (103) feet to the northerly line of said railroad location, said southeasterly boundary line coinciding with the southeasterly line of the location of said new highway to be built by said Board as aforesaid;
southerly by the northerly line of said railroad location four hundred ninety-five (495) feet; and
northwesterly in a broken line by said land formerly of George H. Bruce, last above described, three hundred and seven (307) feet; the easterly part of said lot 24 being included within the location of said new highway.

Deed to Commonwealth dated Mar 21-1899-1620.65; For copy see Volume 4 of Deeds page 219.

SECTION SIXTH. LOT 25. A lot of land with the buildings thereon, owned by John F. Philbin, situate in said Clinton between said River street and said Boylston street, containing thirty-one and twenty-nine one-hundredths (31.29) acres, shown on sheet 2 of said plan, and bounded,

3090 2529

westerly by said River street nineteen hundred and three (1903) feet;
northerly by land of the heirs or devisees of Michael Welch, hereinbefore described as lot 17, six hundred twenty-one (621) feet;
easterly five hundred thirty-nine (539) feet by the westerly line of said Boylston street, measuring from said land of heirs or devisees of said Welch;
easterly again and southeasterly eight hundred thirty-five (835) feet by said Boylston street;
southerly by land of Clarence Carvill, next hereinafter described, four hundred thirty-four (434) feet;
easterly by said land of Clarence Carvill three hundred ninety-nine (399) feet; and
southerly by land late of Thomas H. Burgess, now of the Commonwealth, being hereinafter described as lot 27, three hundred seventy-seven (377) feet.

Deed to Carvill Nov. 16-1900 recorded Dec 3rd 1900 also B 1614 P 86- Copies book 5 of Deeds page 306

SECTION SIXTH, LOT 26. A lot of land with the buildings thereon, owned by Clarence Carvill, situate in said Clinton on the westerly side of said Boylston street, containing three and seventy-eight one-hundredths (3.78) acres, shown on sheet 2 of said plan, and bounded,
easterly by said Boylston street four hundred eighty-eight (488) feet;
southerly by land late of Thomas H. Burgess, now of the Commonwealth, next hereinafter described, four hundred (400) feet;
westerly by land of John F. Philbin, last above described, three hundred ninety-nine (399) feet; and
northerly by the same land four hundred thirty-four (434) feet.

SECTION SIXTH, LOT 27. A lot of land with the buildings thereon, lately owned by Thomas H. Burgess, now by the Commonwealth, situate in said Clinton between said River street and said Boylston street, containing six and ninety-eight one-hundredths (6.98) acres, shown on sheet 2 of said plan, and bounded,
easterly by said Boylston street seven hundred twenty-one (721) feet;
southwesterly by land late of John Benker, now of the Commonwealth, next hereinafter described, nine hundred thirty-four (934) feet;
westerly by said River street sixty-eight (68) feet; and
northerly by land of John F. Philbin, hereinbefore described as lot 25, three hundred seventy-seven (377) feet, and by land of Clarence Carvill, last above described, four hundred (400) feet.

Being the same premises described in a deed from Thomas H. Burgess to the Commonwealth, dated June 1, 1896, recorded as aforesaid, book 1509, page 348. For copy see Volume One of Deeds page 86.

SECTION SIXTH. LOT 28. A lot of land with the buildings thereon, lately owned by John Benker, now by the Commonwealth, situate in said Clinton on the northwesterly side of said Boylston street and on the easterly sides of said River street and of said road leading southerly from said Clinton to Northborough, containing twelve and fifty-seven one-hundredths (12.57) acres, shown on sheet 2 of said plan, and bounded,

3090 2530

This taking is made subject to the effect of the taking of the waters of the South Branch of the Nashua river and of said Sandy pond by the Metropolitan Water Board by an instrument dated February 23, 1898, and recorded with Worcester District Deeds, book 1570, page 189.

The new highway above mentioned from Clinton to Boylston to be constructed by said Water Board has not yet been opened to public use, nor is it intended that the public shall by this instrument acquire any rights therein, nothwithstanding anything herein contained; but the right is herein reserved to all abutters upon said new highway and to their respective heirs and assigns, to use the same so far as included within the limits of this taking for all the purposes of a publicstreet or highway. The location of the said new highway is shown upon sheets 1 and 2 of said plan and is fully described in the aforesaid location and description thereof dated April 9, 1898, filed with the County Commissioners of said County of Worcester, and approvedby them April 12, 1898.

Wherever by this instrument lands have been taken from any owner which intervene between any remaining lands of said owner and any existing public way, the right of access to said public way is hereby reserved to such owner and his heirs and assigns over such intervening lands until the discontinuance of such public way.

Wherever lands are above mentioned or referred to as belonging to persons or corporations named it is to be understood that such lands are now or formerly of such persons or corporations, and if in any case the foregoing descriptions vary from the plan above referred to, the descriptions are to prevail in the construction of this instrument

The ownership of the lands above described and the measurements and areas above given are supposed to be as stated, but said lands are hereby taken whether their ownership is as above stated or otherwise, and whether said measurements and areas are greater or less than as above given.

The above courses are with reference to the meridian of seventy-one degrees, forty-four minutes, and fifty-seven seconds (71° 44' 57") west of Greenwich.

The lands, property, rights, and easements hereinbefore described and hereby taken are deemed by said Board necessary for carrying out the powers and duties conferred upon it by said Act.

IN WITNESS WHEREOF the said Henry H. Sprague, Wilmot R. Evans, and Henry P. Walcott, the Metropolitan Water Board aforesaid, acting for the Commonwealth, hereto set their hands this eleventh day of May in the year one thousand eight hundred and ninety-eight.

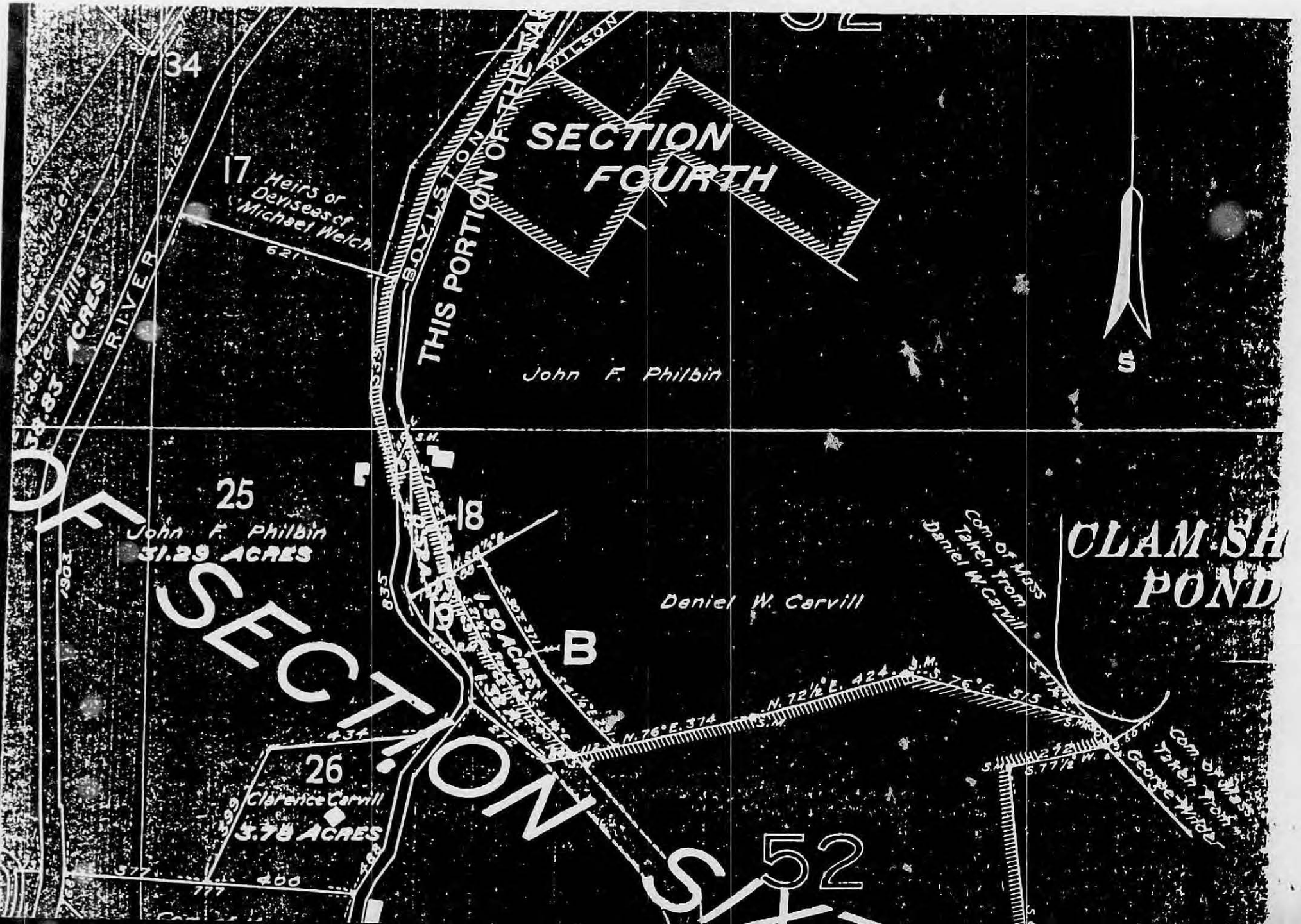
(Signed) HENRY H. SPRAGUE
WILMOT R. EVANS
HENRY P. WALCOTT
METROPOLITAN WATER BOARD.

Worcester ss., May 20th, 1898, at 1 o'clock and 20 minutes P.M. Received & Entered with Worcester District Deeds, book 1580, page 154.
Attest:

Harvey D. Wilder,
Register.

See Plans in Plan Book 5, page 4.

3090 2531



SECTION FOURTH
THIS PORTION OF THE
BOYLSTON
WILSON
34
17
Heirs or Deviseas of Michael Welch
621
RIVER
Mills
ACRES
John F. Philbin
25
John F. Philbin
31.29 ACRES
18
Daniel W. Carvill
B
1.50 ACRES
Com. of Mass Taken from Daniel W. Carvill
CLAM SH
POND
N. 76° E. 374
N. 72½° E. 424
S. 76° E. 515
Com. of Mass Taken from George Wilder
26
Clarence Carvill
3.78 ACRES
52
S



METROPOLITAN WATER BOARD

PLAN NO. 33 OF LAND TAKINGS - [SHEET

WACHUSETT RESERVOIR

Lands in Clinton, Sterling and Boylston

SCALE - 300 FEET TO THE INCH

FEBRUARY, 1898

[CHAP. 488.]

AN ACT

TO PROVIDE FOR A METROPOLITAN WATER SUPPLY.

Be it enacted, etc., as follows:

METROPOLITAN WATER BOARD.

SECTION 1. The governor, by and with the advice and consent of the council, shall appoint three water commissioners, who shall constitute the Metropolitan Water Board. Said commissioners shall hold office, one for the term of five years, one for the term of four years and one for the term of three years, beginning with the first Monday in May in the year eighteen hundred and ninety-five; and in the year eighteen hundred and ninety-eight, and annually thereafter, the governor shall appoint, as aforesaid, one member of said board to hold office for the term of three years, beginning with the first Monday in May in the year of his appointment. The governor, with the consent of the council, may remove any member of said board, and may appoint for the residue of the term, in the same manner in which the original appointment was made, a commissioner to fill any vacancy occurring by removal, resignation or otherwise. One of said commissioners shall be always a citizen of Boston, one shall be always a citizen of one of the other cities or towns in the water district hereinafter described, and one shall be always a citizen of this Commonwealth. The chairman of said board shall receive a salary of five thousand dollars a year, and the other members a salary of four thousand five hundred dollars a year.

OFFICERS AND ACCOUNTS.

SECT. 2. The governor shall, as soon as may be after the appointment of said board, and annually thereafter on or before the first Monday of May, designate one of their number to serve as chairman for the ensuing year; said board shall from time to time appoint an engineer, secretary, and such other agents, officers, clerks and other employees as said board may deem necessary, shall determine the duties and compensation of such appointees, and may remove the same at pleasure, and may employ counsel; shall at all times keep full, accurate, and separate accounts of the doings, receipts, expenditures, disbursements, assets and liabilities of said board, and include an abstract of the same in an annual report to the general court on or before the first Wednesday in January in each year, such report to be numbered as one of the series of public documents; and four thousand five hundred copies thereof to be printed annually.

METROPOLITAN WATER DISTRICT.

SECT. 3. Said board, acting for the Commonwealth, shall construct, maintain and operate a system of metropolitan water works substantially in accordance with the plans and recommendations of the State Board of Health, contained in their report to the legislature of the year eighteen hundred and ninety-five, and shall provide thereby a supply of pure water for the following named cities and towns, and the inhabitants thereof, to wit: — the cities of Boston, Chelsea, Everett, Malden, Medford, Newton and Somerville, and the towns of Brookline, Hyde

Park, Melrose, Revere, Watertown and Winthrop, which cities and towns shall constitute the Metropolitan Water District; shall secure and protect the purity of said water; shall on application furnish water to any city or town aforesaid that at the time of application owns its water pipe system; shall on application admit any other city or town, any part of which is within ten miles of the state house, into said water district, and furnish water to the same on the terms prescribed by this act for the cities and towns aforesaid, and on such payment of money as said board may determine; shall on application furnish water to any water company owning the water pipe system in any town within said ten miles, on such water company assuming the assessments of the town, if any, and making such payment of money as said board may determine; and may from time to time furnish water to any other city, town or water company, on such payment of money as said board may determine. All payments of money aforesaid shall be distributed to the cities and towns in said district in proportion to the total amount of the annual assessments theretofore paid by them respectively. Said board shall furnish said water to the city, town or company, by delivering the same into a main water pipe, reservoir, or tank of the city, town, or company, under sufficient pressure for use without local pumping, unless delivered in some other manner by mutual agreement between the parties interested; and shall have the direction and control of the connections between the metropolitan and local systems. Said board may utilize the fall of water at any dam under their charge, and may thereby produce power or electricity, and may transmit such power or electricity by pipes, wires, or other suitable means, and sell the same, or the right to use such water, by written or other contract, to run for a term not exceeding fifteen years. Any person or corporation authorized by said board shall have all the powers relating to the production, sale and transmission of power and electricity given by this act to said board.

WATER SOURCES.

SECT. 4. Said board may take, by purchase or otherwise, the waters of the south branch of the Nashua river, at and above a point above the dam of the Lancaster Mills in the town of Clinton, but shall allow not less than twelve million gallons of water to flow from a reservoir above said dam in each week, and such further quantity, not exceeding twelve million gallons a week, as the owner of said mills shall from time to time certify to be necessary for use therein and in other buildings now or hereafter owned by him, for domestic or manufacturing purposes, other than the production of water power, and said board, in regulating the flow of said quantities, shall, as far as practicable, conform to any reasonable request in writing of the owner of said mills; said board may also take the waters of Sandy pond, so-called, in the town of Clinton, and the waters which may flow into and from said pond or river, and the tributaries thereof above said point; may take such water rights as they deem necessary connected with said waters; said board shall forthwith, after taking the waters of said Nashua river, take by purchase or otherwise all real estate which will be submerged or flooded, or submerged to an increased depth, by the construction of the proposed reservoir on the Nashua river hereinafter provided for, and all parcels of real estate above the dam of said reservoir used for mill purposes and owned by the owner of any mill property of which any part will be submerged or flooded by the construction of said reservoir, including all the machinery used on such real estate and tenements for operatives; shall, on or before the first day of January in the year eighteen hundred and ninety-eight, take all the lands and all the ponds, basins, reservoirs, filter beds, dams, aqueducts, conduits, pumping stations, pipes, pumps, and other property held by the city of Boston for the

purpose of supplying water or for the purpose of storing or of protecting or preserving the purity of the water, and situated westward of Chestnut Hill reservoir in said city and westward of the intersections of the main pipes to be laid from Chestnut Hill reservoir to Spot pond, with the main pipes which convey water from the Mystic distributing reservoir; also the pumping station at Chestnut Hill reservoir and lands under and surrounding the same, and the pipes and aqueduct leading thereto; also Spot pond, so-called, in or near the town of Stoneham, and the lands under and surrounding the same, now owned by the cities of Malden and Medford and the town of Melrose, or either of them, held for the purpose of water supply or of protecting or preserving the purity of the water, and the pumping stations and pumps thereon; any or all of the aforesaid lands to be taken in fee or otherwise, as said board may determine. Said board may take any other lands in fee, easements, rights and other property that said board may deem necessary or desirable for carrying out the powers and duties conferred upon them by this act.

RECORD OF TAKING.

SECT. 5. Said board, to take any property by right of eminent domain, shall sign and cause to be recorded in the registry of deeds for the county and district in which the property to be taken is situated, a statement containing a description thereof, as certain as is required in a common conveyance of land, and stating that the same is taken for the Metropolitan water works; and upon such recording the ponds, works, lands, waters, easements, rights and other property described in said description shall be taken for the Commonwealth. Said board, upon entering upon any land for the purpose of using the same for carrying out any of the purposes of this act, shall sign and cause to be recorded in the registry aforesaid a statement containing a general description of the land and the purposes for which it is to be used, and the probable time for which the same is to be used, and after they have taken any property under the right of eminent domain shall notify the owner thereof, and on the request of the owner within three years after such taking, shall, within thirty days after such request, furnish him with a plan or description, in writing, of his land or other property so taken.

RESERVOIRS.

SECT. 6. Said board shall forthwith, after taking the waters of said Nashua river, construct a storage reservoir upon said Nashua river above said dam of the Lancaster Mills; shall forthwith construct the reservoir in Southborough already partially constructed by the city of Boston, and the dams thereof, and assume and carry out the agreement made by said city with the town of Southborough, and all contracts made by said city relating to the building of said reservoir; may construct other reservoirs, and may raise the level of any pond or reservoir under their charge. Said board may, as they deem desirable in constructing, or raising the level of, any pond or reservoir, raise or alter or discontinue parts of any railroad or public ways, and in case of a railroad shall make such raisings or alterations of the railroad, or construct upon existing or other locations, parts of the railroad to take the place of the parts so discontinued, as, and in such manner as, shall be mutually agreed upon by said water board and the board of directors of the railroad company; and if they cannot agree thereon then as, and in such manner as, shall be determined on the application of either party, in writing, by the board of railroad commissioners of this Commonwealth, who are hereby authorized and directed to adjudicate finally upon the same; and if said water board shall be of the opinion that the making of any such change of grade, alteration or construction requires

that lands be taken therefor, said board shall, in the name of the Commonwealth, take such lands and convey the same to the railroad company to be thereafter held and used as the board of directors of such company may determine, and the railroad company may if it desires locate its lines over any lands so conveyed to it, and when said new lines of railroad are completed the railroad company may discontinue the operation of the portions of its existing lines for which the new lines are substituted, and may maintain and operate said new lines of railroad; and said water board shall build the dam of any pond or reservoir constructed, or whose level is raised, as aforesaid, and make the raisings or alterations of the public ways aforesaid, and build in place of the parts of public ways discontinued, as aforesaid, such other reasonable and suitable ways, which shall thereafter be highways, as, and in such manner as, shall be mutually agreed upon by said water board and the county commissioners of the county in which such dam is to be built; or if they cannot agree thereon then as, and in such manner as, shall be determined on the application of said board, in writing, by the highway commission of this Commonwealth, which commission is hereby authorized and directed to adjudicate finally upon the same. Said water board, in flooding or otherwise affecting any burial ground, shall conform to any reasonable requirements relating thereto of the board of health of the city or town in which the same is situated.

CHESTNUT HILL RESERVOIR.

SECT. 7. Said water board shall forthwith lay pipes to connect the pumping station at Chestnut Hill reservoir with the main water pipes through which water is now supplied to the cities of Somerville, Chelsea and Everett, and the Charlestown district of the city of Boston, and with Spot pond, and on the first day of January in the year eighteen hundred and ninety-eight the contracts of the city of Boston with the cities of Somerville, Chelsea and Everett, described in, and confirmed by, chapter three hundred and fifty-one of the acts of the year eighteen hundred and eighty-six, for a supply of water, shall be cancelled. Said board shall also forthwith, after taking the waters of Nashua river as aforesaid, connect said river with the tributaries of said reservoir in Southborough.

DELIVERY OF WATER TO LANCASTER MILLS.

SECT. 8. Said board, until they shall have completed the dam of said proposed reservoir on the Nashua river, and rebuilt the dam of said Lancaster Mills, shall, unless otherwise agreed by said board and the owner of said mills, deliver each week day at, and at the level of, the present top of the dam of said mills at least one million gallons of the water of said river, unpolluted by any acts or doings of said board, conforming in the delivery of said quantity, so far as practicable, to any reasonable request in writing of the owner of said mills.

CONSTRUCTION OF BUILDINGS, ROADS, ETC.

SECT. 9. Said board in carrying out the powers and duties hereinbefore conferred upon them may construct and maintain buildings, machinery, roads, conduits and aqueducts; may lay and maintain pipes, drains and wires; may alter or change the grades or directions of any water course; may carry and conduct any aqueduct, conduit, pipe, drain or wire under or over any water course, or any railroad, street or other way, in such a manner as not unnecessarily to obstruct or impede travel thereon; may dig up any such road, street or way, and lay, maintain and repair aqueducts, conduits, pipes, wires and other works beneath the surface thereof, conforming to any reasonable regulations made by the mayor and aldermen of cities and the selectmen of towns, respectively,

wherein such works are performed, and restoring, so far as practicable, any such road, street or way, to as good order and condition as the same was in when such digging was commenced; said board may enter upon and use the lands of others; may take down dams to such an extent as they may deem necessary for prosecuting their works, and shall rebuild such dams whenever the necessity for keeping them down ceases; shall use such lands and do all work relating to such dams, in a reasonable manner with regard to the interests of the owners thereof, and, so far as practicable, shall heed all reasonable requests made by such owners; and in general may do any other act or thing necessary or proper for carrying out the powers and duties conferred upon them by this act.

OPERATION OF WORKS TAKEN FROM BOSTON.

SECT. 10. Said board, on or before the first day of January in the year eighteen hundred and ninety-eight, shall commence the operation of the works taken by them from the city of Boston, and shall thereafter keep the same and all water works constructed by them, and all bridges which they may build across said reservoir upon the Nashua river, and (until they abandon the same by notice in writing to said city) said Chestnut Hill reservoir, safe, and shall have charge of, use, maintain and operate the same, and the Commonwealth shall exclusively be responsible for all damages caused thereby or by any defect or want of repair therein; said board shall have the exclusive right and control over all ponds and reservoirs used by them in supplying water, and may order all persons to keep from entering in, upon or over, the waters thereof and the lands of the Commonwealth, city or town, surrounding the same; may inspect the water works and fixtures in any city or town supplied wholly or in part from the works under their charge, and may take all proper measures to determine the amount of water used and wasted and to prevent the improper use or waste of water.

PURCHASE AND SALE OF PROPERTY.

SECT. 11. Said board and any city, town or water company aforesaid, may agree with each other for the storing or pumping of water, or the furnishing of the same as aforesaid by either party to any city, town or company; and any such city, town or company may sell to said board, and said board may purchase any property of such city, town or company, whether taken by eminent domain or otherwise, that said board may deem desirable for use in furnishing, as aforesaid, water to any city, town or water company; and said board may sell at public or private sale any property, real or personal, whether taken by eminent domain or otherwise, no longer needed for the water works under their charge, or may from time to time lease any property not then so needed. The proceeds from the operations of said board shall be paid into the treasury of the Commonwealth.

EXPENSES AND DAMAGES.

SECT. 12. Said board shall incur such expenses as they deem necessary in constructing, operating and maintaining the water works under their charge; may agree with the party injured, upon the damages sustained by any city or town by the taking or use of its lands, ponds, reservoirs, water sources, aqueducts or other property, or the cancellation of contracts, as aforesaid; the damages sustained by the town of Clinton by any interference with its sewerage system or with its drainage rights or privileges; the damages sustained by any person or railroad or other corporation in property by any taking of property or by any change of grade, alteration or discontinuance of any road or public way, or by the construction or maintenance of any reservoir or other work, or by the interference with the use of any water, or by any other

act or thing done by said board under this act; shall save harmless the several cities and towns within which any road, street or way is dug up as aforesaid, against all damages for injuries resulting from a defect or want of repair in any road, street or way, caused by such digging up, or by constructing, laying, maintaining or repairing any aqueduct, conduit, pipe, wire or other works therein, and shall furnish without charge to all towns within which any work is done under authority of this act such additional police protection as may be necessary in consequence thereof: *provided*, said board shall have due and reasonable notice of the claims for such damages and opportunity to make a legal defence thereto.

PETITION FOR JURY.

SECT. 13. Said board, city, town, person or corporation, if they cannot agree upon any damages, sustained as aforesaid, may, except in the cases in which payment is otherwise provided for in this act, within two years after the day of the taking of any land, water, easements or other property, or of the use of any property, or of the making of any change of grade, alteration, discontinuance or location of a way or railroad, or of the doing of any other act or thing causing the damage, file in the office of the clerk of the superior court for the county in which the property taken, used or affected in value by such taking or other act of said board is situated, a petition, signed by the petitioner or the attorney of the petitioner, for a jury to determine such damages, and thereupon, after such notice as said court shall order, the damages so sustained shall be determined by a jury in said court, in the same manner as damages for lands taken for highways are determined. In determining any damages caused by any change of grade or discontinuance of a public way or railroad, or the substitution of a part of a public way or railroad for another part, there shall be taken into account any benefit to the party injured received from this act and anything done thereunder. Interest shall be included in such damages from the date of the taking, or the doing of the act or thing causing the damages, and costs shall be taxed and execution issued as in civil cases, against the Commonwealth in case the petitioner prevails, and against the petitioner in case he does not prevail. Damages for the temporary use of or injury to property may, on the request of the petitioner, be assessed by monthly payments, to be continued so long as the property is used.

COMMISSIONS MAY BE APPOINTED TO DETERMINE DAMAGES.

SECT. 14. Said board, upon the application of the owner of any real estate taken for said proposed reservoir upon the Nashua river, or the owner of any real estate entered upon and used, or of any real estate injured by the taking of the waters of said Nashua river, whether said real estate is within or without the Commonwealth, or of any real estate not taken but directly or indirectly decreased in value by this act or the doings of said board thereunder, situated in the town of West Boylston or in that part of the town of Boylston on the northerly side of said proposed reservoir, or in that part of the town of Clinton on either side of River or Grove streets, between the dam of said proposed reservoir and a line drawn from the northerly corner of Oak and Boylston streets to the northerly corner of said Grove and Nashua streets, and not owned on the first day of April in the year eighteen hundred and ninety-five, by the owner of the Lancaster Mills, may agree with such owner upon the damages to be paid for such taking, injury or decrease in value, and if said board and the owner of any such real estate cannot agree upon such damages, such owner may, within two years after the first taking of water, or of land for said reservoir, under the right of eminent domain, file in the clerk's office of the supreme judicial court for the

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county of Worcester, in term time or vacation, a petition for the determination of such damages, and thereupon said court, after notice by publication in some newspaper published in the county of Worcester, and in such other manner as the court may order, that all persons entitled to file such petitions will be heard by said court on a day therein named, and a hearing thereon; shall from time to time appoint one or more commissions, each consisting of three disinterested persons, and may after notice and hearing fill any vacancy occurring in any such commission until all petitions referred to it have been heard and determined. Each of said commissions shall, after notice and hearing, determine the damages specified in all such petitions as may be filed as aforesaid and referred to it by said court; and if the owner of any such real estate, no part of which is taken but which is decreased in value, shall in the petition aforesaid signify his willingness to surrender the real estate, or if there is a mill thereon, the real estate and machinery thereon, to the Commonwealth, the commission shall also determine the value of such real estate, or real estate and machinery, and interest may be included in such damages and in such value at such rate and for such time as the commission may deem just and equitable. Said commissions shall determine the damage to and value of real estate, machinery and business, and from time to time report their determinations on the petitions of such owners to said court. In case any individual or firm owning on the first day of April in the year eighteen hundred and ninety-five an established business on land in the town of West Boylston, whether the same shall be taken or not under this act, or the heirs or personal representatives of such individual or firm, shall deem that such business is decreased in value by the carrying out of this act, whether by loss of custom or otherwise, and unable to agree with said board as to the amount of damages to be paid for such injury, such damages shall be determined and paid in the manner hereinbefore provided. The words "real estate" as used in this section shall include water rights, and in the case of mills all machinery thereon.

PAYMENT OF DAMAGES.

SECT. 15. Said board shall, upon agreeing upon any damages, or upon the acceptance by said court of any determination specified in the preceding section, notify the owner that they will pay the damages, or in case the petitioner offers to make surrender, if they so prefer, they will pay the value so agreed upon or determined, and if any such owner shall in accordance with such notice and within one year after being so notified, deliver a release of such damages or a deed of the real estate, to and satisfactory to, said water board, said water board shall certify to the treasurer of the Commonwealth the amount to be paid such owner, and said treasurer shall pay the same from the proceeds of the bonds hereinafter provided for. Said water board, or any persons whose property is taken under the right of eminent domain, or entered upon or injured by the taking of said water, if dissatisfied with any determination of damages made by any commission, may at the term on which such determination is filed in court, or at the succeeding term, claim a trial by jury to determine such damages, and thereupon the damages shall be determined by a jury in said supreme judicial court as provided in section thirteen of this act.

PAYMENT TO CITY OF BOSTON AND TOWNS OF BOYLSTON AND WEST BOYLSTON.

SECT. 16. The treasurer of the Commonwealth shall, from the proceeds of the bonds hereinafter provided for, reimburse the city of Boston for all moneys paid or that may hereafter be paid by said city for land damages, or otherwise, in connection with the location, building or

maintenance of reservoirs or basins not yet built, or for lands taken for the preservation or protection of the purity of the waters of any reservoirs, or basins or of the tributaries thereof, and shall pay as part of the expenses of said metropolitan water works to the town of Boylston the sum of two thousand dollars a year, and to the town of West Boylston the sum of twelve thousand dollars a year for the year of and each year succeeding said taking of the waters of said Nashua river, so long as each of said towns remains a municipality, and shall pay no tax or other payment to either of said towns on account of any property held by said water board for the purposes of a water supply.

METROPOLITAN WATER LOAN.

SECT. 17. The treasurer and receiver general shall, from time to time, on the request of said board, issue negotiable bonds in the name and behalf of the Commonwealth, and under its seal, to an amount not exceeding twenty-seven million dollars, designated on the face thereof, Metropolitan Water Loan. Said bonds shall be deemed a pledge of the faith and credit of the Commonwealth, shall be countersigned by the governor; shall have the principal and interest made payable thereon, in gold coin of the United States of America or its equivalent; shall bear interest payable semi-annually on the first days of January and July of each year; shall be registered, or with interest coupons attached; shall be payable within such terms not less than thirty nor more than forty years, and shall bear such rates of interest not exceeding four per cent. per annum, and be issued and disposed of in such amounts and in such modes and at such times and prices as the treasurer and receiver general, with the approval of the governor, shall from time to time determine. Said treasurer shall, on issuing any of said bonds, establish a sinking fund, and determine the amount to be paid thereto each year, sufficient with its accumulations to extinguish the debt at maturity.

PROCEEDS FROM SALES OF PROPERTY AND BONDS.

SECT. 18. Said treasurer shall apply the proceeds from the sales of property made as hereinbefore provided, and the proceeds from the sales of said bonds, exclusive of the amounts received from premiums, to the payments for the property taken by said board, the payment of the damages aforesaid, and the payment of the expenses of construction of said water works, and the other payments specified in this act, and shall apply any premiums received from sales of said bonds, any assessments hereinafter provided for paid by the cities and towns, and the proceeds from the operations of said board, exclusive of the proceeds from sales of property, to the payment of the interest, sinking fund requirements and expenses of maintenance and operation of said water works, and shall take the balance required for said payments, if any, from the proceeds of said bonds, and shall apply the surplus, if any, to the payment of said interest, sinking fund requirements and expenses, for the following year. Said treasurer shall advance to such person as shall have been designated by said water board and shall have given a bond with sufficient sureties, to be approved by the auditor of the Commonwealth, in the sum of ten thousand dollars, such sums, not exceeding ten thousand dollars at any time, as said auditor may certify to be necessary to enable said board to make direct payment upon the pay rolls and other accounts of said board, and such persons shall, as soon as may be after expending any sum so advanced, and in all cases within thirty days from the receipt of any such sum, file with the auditor a statement in detail of the moneys expended subsequent to the last previous accounting, approved by said water board, and where it is practicable to obtain them, also the receipts or

other like vouchers of the persons to whom the payments have been made.

ESTIMATE AND APPORTIONMENT OF ANNUAL EXPENSES.

SECT. 19. Said treasurer shall in each year estimate the amount, in addition to the premiums from sales of said bonds and the proceeds from the operations of said board, exclusive of the proceeds from sales of property, required during the year to pay the interest, sinking fund requirements, expenses of maintenance and operation of said water works, and shall apportion to the city of Boston the proportion of such amount that the valuation of said city for the preceding year bears to the total of all such valuations of all cities and towns in said water district: *provided, however*, there shall be included only one sixth of the total valuation of any such city and town which has not reached the safe capacity of its present sources of supply in a dry year, as determined by said water board and certified to said treasurer, and has not made application to said board for water, and the remainder to the other cities and towns in said district, one third in proportion to their respective valuations and the remaining two thirds in proportion to their respective populations, including however only one sixth of the total valuation and one sixth of the total population of any such city and town which has not reached the safe capacity of its sources or of the sources of supply of the water company by which a town is supplied, or has not made application for water as aforesaid; and *provided, further*, that any city or town assessed upon its full valuation and population, which furnishes a part of its water supply from its own works or receives a supply from a water company, shall be allowed and credited in its apportionment with a sum equal to twelve dollars for each million gallons of water furnished as aforesaid, as determined by said water board and certified to said treasurer, and *provided, further*, that no such amount shall be so apportioned until the year eighteen hundred and ninety-eight, and in said year only the amount of three hundred thousand dollars shall be apportioned, and the sums of money expended by the state board of health under chapter four hundred and fifty-nine of the acts of the year eighteen hundred and ninety-three and chapter four of the resolves of the year eighteen hundred and ninety-five, and in the succeeding years the said amount of three hundred thousand dollars and two hundred thousand dollars additional for each year thereafter shall be so apportioned until the entire amount required as aforesaid is reached, and thereafter such entire amount shall be so apportioned. Said treasurer shall in each year notify each city and town of the amount of its assessment, and the same shall be paid by the city or town into the treasury of the Commonwealth at the time required for the payment and as part of its state tax.

CONTROL AND DISTRIBUTION OF WATER.

SECT. 20. The water board, water commissioners or superintendent of any city or town in the metropolitan water district, shall for their respective cities or towns, on and after the first day of January in the year eighteen hundred and ninety-five, have the charge and control of the water sources, water and water works owned and used by said city or town and not taken or used by said metropolitan water board as herein provided. Said water board, water commissioners or superintendent shall distribute and control the use of the water so furnished, and apply meters and extend the pipes and other works as said water board, water commissioners or superintendent may deem expedient; shall keep the pipes, fixtures and other works under their charge in good condition and repair, but shall not expend in any year more than the amount appropriated by the city or town therefor. Said water

board, water commissioners or superintendent, with the approval of the mayor or selectmen, shall determine the rate to be paid for water by the owner of the premises to which the water is furnished, or by the person or persons using the water: *provided, however*, that the minimum rates to be paid for water, and the premises to which the high service supply shall be furnished, shall be subject to the approval of said metropolitan water board. Any water board, water commissioner or superintendent as aforesaid shall for the water works under his charge do all the acts and things relating to buildings, machinery, roads, conduits, aqueducts, pipes and drains, which said metropolitan water board is authorized to do for the water works under their charge, and may take lands therefor, in fee or otherwise, and shall do all such acts and things and make all such takings in the manner in which said metropolitan water board are authorized to do similar things, and the damages sustained shall be recovered of, and paid by, the city or town for which such water board, water commissioners or superintendents are appointed or elected, in the same manner as damages caused by similar acts of said metropolitan water board are recovered of, and paid by, the Commonwealth.

APPLICATION OF INCOME.

SECT. 21. The income received in each city or town from the water works under the charge of its water board, water commissioners or superintendent, shall be applied to the payment of the expenses of maintenance and operation incurred by said water board, water commissioners or superintendent; the interest and sinking fund requirements of all bonds, notes or scrip of the city or town issued on account of the water works of such city or town; the assessment of the city or town to be paid to the treasurer of the Commonwealth as hereinbefore provided; the expenses of the extension of the works; and the balance, if any, as the city or town may determine. If such income in any year shall not be sufficient for said payments the balance required therefor shall be raised by taxation or by loan, as the city or town may determine; and the city or town is hereby authorized to assess such taxes and make such loans without further authority from the legislature.

WORCESTER AND CERTAIN TOWNS MAY TAKE WATER.

SECT. 22. The towns of Clinton, Sterling, Boylston, West Boylston, Lancaster, Holden, Rutland, Princeton, Paxton and Leicester, and the city of Worcester, may take from the south branch of the Nashua river, above the dam of the proposed reservoir on said river, so much of the water thereof as they have already been or may hereafter be authorized by the legislature to take, for supplying their inhabitants with water, and in case either of the towns of Lancaster, Holden, Rutland, Princeton, Paxton or Leicester, or the city of Worcester, shall so take water, it shall pay to the Commonwealth, to be paid into the sinking funds for said bonds, a fair proportion of the cost incurred by the Commonwealth for said water and for the construction, maintenance and operation of said works, the same to be determined by the engineer of said board and an engineer to be appointed by the city or town, and if they cannot agree, the proportion shall be determined by a master to be appointed by the supreme judicial court on the petition of either party interested, and the report of such master made and accepted by said court shall be final and binding on all parties.

USE OF WATER IN DISTRICT RESTRICTED.

SECT. 23. No city or town, any part of which is within ten miles of the state house, or any water company owning a water pipe system in

any such city or town shall, except in case of emergency, use, for domestic purposes, water from any source not now used by it except as herein provided or as shall be hereafter authorized by the legislature. If any town or towns in said district shall take the franchise, works and property in such town or towns, of any water company, the compensation to be allowed and paid therefor shall not be increased or decreased by reason of the provisions of this act. No town in said water district now supplied with water by a water company owning the water pipe system in such town, shall introduce water from the metropolitan water works until it shall first have acquired the works of such company.

SANITARY PROTECTION OF WATER.

SECT. 24. The state board of health is hereby authorized and required to make rules and regulations for the sanitary protection of all waters used by the metropolitan water board for the water supply of any city, town or water company aforesaid, and to transfer and deliver to said water board, such plans, maps and other information in their possession as will assist said board in carrying out the provisions of this act.

IMPROPER USE OF WATER PROHIBITED.

SECT. 25. No person shall take or divert any water of a water supply of any city or town in said water district from any water source, reservoir, conduit or pipe used for supplying such water to, or in any such city or town, or occupy, injure or interfere with any such water, or with any land, building, aqueduct, pipe, drain, conduit, hydrant, machinery or other work or property so used, and no person shall corrupt, render impure, waste or improperly use, any such water.

PRECEDING SECTION NOT TO APPLY IN CERTAIN CASES.

SECT. 26. The provisions of the preceding section shall not apply to any person in taking or diverting any such water or interfering with or occupying any water, land or works therein described, by permission of said metropolitan water board, or the water board, water commissioners or superintendent of any city or town having charge of the land, water or work; nor to the individual inhabitants of any city or town within the watershed of any water supply used by said metropolitan water board, or by any city or town aforesaid, in taking from the part of the supply or from the tributaries of the supply within their respective city or town limits so much of the water thereof as they shall need for their ordinary domestic household purposes, for extinguishing fires, or for generating steam.

ENFORCEMENT.

SECT. 27. Said metropolitan water board, and their employees designated for the purpose, shall enforce the provisions of this act, and of the rules, regulations and orders made thereunder, and may enter into any building, and upon any land for the purpose of ascertaining whether sources of pollution there exist, and whether the provisions of this act and of the rules, regulations and orders made as aforesaid are complied with; and, where the enforcement of any such provisions, rules, regulations or orders will require public works for the removal or purification of sewage, said metropolitan water board shall not enforce the same until they have provided such works, and the amount paid therefor shall be considered as part of the expenses of construction of the metropolitan water works, and such works shall be maintained and operated as a part of said water works.

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JURISDICTION OF THE COURTS.

SECT. 28. The supreme judicial court or any justice thereof, and the superior court or any justice thereof, shall, in term time or vacation, on the petition of said board or any city, town, corporation or person interested, or of the attorney of any such petitioner, have jurisdiction in equity or otherwise to enforce the provisions of this act, and of any rule, regulation or order made under the authority of this act, and to prevent any violation of said provisions, rules, regulations or orders.

PENALTIES.

SECT. 29. Whoever shall do any of the acts herein prohibited, or shall violate or refuse to comply with any rule, regulation or order made under the authority of this act shall, on complaint or indictment therefor and conviction thereof, be punished for each offence by a fine not exceeding five hundred dollars, to be paid to the Commonwealth, or by imprisonment not exceeding one year in the house of correction, or by both such fine and imprisonment.

GENERAL LAWS.

SECT. 30. All general laws relating to the water supplies of cities and towns or the lands and other property used for such supplies shall, so far as they are not inconsistent with the provisions of this act, apply to and be observed in carrying out the purposes of this act.

CONSTRUCTION OF WORKS.

SECT. 31. In the construction of these works preference in employment shall be given to citizens of this Commonwealth.

SECT. 32. This act shall take effect upon its passage. [*Approved June 5, 1895.*

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Chapter 372

THE COMMONWEALTH OF MASSACHUSETTS

In the Year One Thousand Nine Hundred and Eighty-four

AN ACT PERTAINING TO THE METROPOLITAN WATER DISTRICT AND THE METROPOLITAN SEWER DISTRICT OF THE METROPOLITAN DISTRICT COMMISSION.

Whereas. The deferred operation of this act would tend to defeat its purpose, which is to immediately establish the Massachusetts Water Resources Authority, therefore it is hereby declared to be an emergency law, necessary for the immediate preservation of the public convenience.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

SECTION 1. It is hereby determined that:

(a) Providing water supply services and sewage collection, treatment and disposal services to areas of the commonwealth made up of the cities and towns now served by the metropolitan district commission is an essential public purpose. The preservation and improvement of the health, welfare and living conditions of the citizenry, the promotion and enlargement of industry and employment and all other aspects of commerce, the protection, conservation, management and development of water supplies and the environment depend upon the sound maintenance, operation and improvement of an adequate water supply distribution system and an adequate sewage collection, treatment and disposal system. The financing requirements for such water supply and sewage collection, treatment and disposal systems are substantial and require independent financial resources, including the ability to rely on user charges to recover costs of providing such services and the ability to fund capital programs without undue reliance on the general obligation credit of the commonwealth.

(b) It is in the best interests of the commonwealth and its citizens to create an authority to achieve the following goals, purposes and objectives:

(i) efficient and economical operation of water delivery and sewage collection, disposal and treatment systems including programs for leak detection and reduction of infiltration and inflow for the service areas of the Authority;

(ii) repair, replacement, rehabilitation, modernization and extension of the delivery of water sewage collection, disposal and treatment systems for the service areas of the Authority, including the financing on a self-

sustaining basis of capital and operating expenses relating thereto;

(iii) establishment and administration of equitable charges, consistent with the objectives of this act to conserve water and improve the quality of the environment, for water delivery and sewage collection, disposal and treatment services;

(iv) professional and proactive management of and system-wide planning for the delivery of water and sewage collection, disposal and treatment services;

all of which are declared to be for the public benefit, to necessitate the creation of the authority, and to make it necessary and expedient to vest in the authority the powers granted by this act.

(e) The commonwealth faces important needs for fostering efficient use of water, for efficient planning and improvement of the delivery of water and sewage collection, disposal and treatment services to which one an authority should be established and vested with extensive operating, financing and regulatory powers to provide appropriate means for addressing these needs.

Therefore, it is declared to be in the best interest of the commonwealth and its inhabitants, to promote the general health and welfare, to improve commerce and living conditions, to conserve water, and to develop and protect in the public interest the natural resources of the commonwealth, that there be established the Massachusetts Water Resources Authority empowered to operate, regulate, finance, and improve the delivery of water and sewage collection, disposal and treatment systems and services, and to encourage conservation, as provided in this act.

This act may be cited as the Massachusetts Water Resources Authority Act.

SECTION 2. As used in this act, unless the context clearly indicates otherwise, the following words and phrases shall have the following meanings:

(a) "Advisory board", the advisory board established by section twenty-three;

(b) "Authority", the Massachusetts Water Resources Authority created by section three;

(c) "Bonds", bonds, notes or other evidences of indebtedness of the Authority;

(d) "Cost", as applied to any project of the Authority, any and all costs, however incurred, of carrying out and placing such projects in operation, including, without limiting the generality of the foregoing, amounts

for the following: acquisition, construction, expansion, improvement and rehabilitation of facilities; acquisition of real or personal property; demolitions and relocations; labor, materials, machinery and equipment; services of architects, engineers and environmental and financial experts and other consultants; feasibility studies, plans, specifications and surveys; interest prior to and during the carrying out of any project and for a reasonable period thereafter; reserves for debt service or other capital or current expenses; costs of issuance; and working capital, administrative expenses, legal expenses and other expenses necessary or incidental to the aforesaid, to the financing thereof and to the issuance therefor of bonds under the provisions of this act;

(e) "Costs of issuance", any amounts payable or reimbursable directly or indirectly by the Authority and related to the sale and issuance of bonds and the investment of the proceeds thereof and of revenues securing the same, including, without limiting the generality of the foregoing, printing costs, filing and recording fees, fees and charges of trustees, depositories, authenticating agents and paying agents, legal and auditing fees and charges, financial consultant fees, costs of credit ratings, premiums for insurance of the payment of bonds and fees payable for letters or lines of credit or other credit facilities securing bonds, underwriting or placement costs, fees and charges for execution, transportation and safekeeping of bonds, costs and expenses of refunding and other costs, fees and charges in connection with the foregoing;

(f) "Current expenses", the Authority's current expenses, whether or not annually recurring, of maintaining, repairing and operating the systems and engaging in other activities authorized by this act including, without limiting the generality of the foregoing, amounts for administrative expenses of the division including costs of salaries and benefits, as provided in this act, cost of insurance, payments for engineering, financial, accounting, legal and other services rendered to the Authority, taxes upon the Authority or its income, operations or property and payments in lieu of such taxes, costs incurred or payable by the Authority with respect to the system real property, costs of issuance not financed in the cost of a project, and other current expenses required or permitted by law to be paid by the Authority, including the funding of reasonable reserves for upgrading, maintenance, repair, replacements, insurance, emergency contingencies or operations;

(g) "Division", the division of watershed management established by section forty-two.

(h) "Local body", a city, town, district, commission, or other political subdivision or instrumentality of the commonwealth responsible for providing by itself or through an officer, board, department or division thereof local water supply or local sewer services; except as otherwise expressly provided herein, in any case where local water supply or local sewer services within the territorial boundaries of a local body are provided in whole or in part by a political subdivision or public instrumentality of the commonwealth separate from such local body, the term "local body" as used in this act shall mean, within the service area thereof, that political subdivision or public instrumentality.

(i) "MDC sewer system", the sewers and other works of the metropolitan district commission which comprise the system of sewage disposal of the metropolitan sewage district on the effective date of this act, including all interests in real and personal property, equipment, appurtenances, structures and facilities held by the commonwealth or the metropolitan district commission in connection with the ownership, maintenance and operation thereof;

(j) "MDC water system", the water works of the metropolitan district commission which comprise the system of metropolitan water works of the metropolitan water district on the effective date of this act, including all interests in real personal property, equipment, appurtenances, structures and facilities held by the commonwealth or the metropolitan district commission in connection with the ownership, maintenance and operation thereof;

(k) "Person", any natural or corporate person, including bodies politic and corporate, public departments, offices, agencies, authorities and political subdivisions of the commonwealth, corporations, societies, associations and partnerships, and subordinate instrumentalities of any one or more political subdivisions of the commonwealth;

(l) "Project", any undertaking or other activity by or on behalf of the Authority to maintain or improve the systems, including, without limiting the generality of the foregoing, any extension, expansion or addition thereto, any acquisition, construction, reconstruction or alteration of any part thereof and any other investment therein;

(m) "Revenues", all charges and other receipts derived by the Authority from operation of the waterworks and sewer systems and from all other activi-

ties or properties of the authority including, without limiting the generality of the foregoing, proceeds of grants, gifts or appropriations to the authority, investment earnings and proceeds of insurance or condemnation, and the sale or other disposition of real or personal property;

(n) "Safe yield", that amount of water that can be safely withdrawn from a water supply source without impairing the ability of such source to supply said amount of water on an average annual basis, as determined by the division of watershed management and commented on by the division of environmental protection within the department of the attorney general.

(o) "Sewer system", the sewer system of the authority, consisting of (i) the system personal property formerly a part of the MDC sewer system transferred to the authority in accordance with section four, (ii) the interest of the authority created by this act in the system real property which was a part of the MDC sewer system immediately prior to the effective date of this act, (iii) all extensions, enlargements, improvements and additions to the former MDC sewer system acquired, constructed or operated by or on behalf of the authority, and (iv) each other system for collection, treatment or disposal of sewage acquired or constructed by or on behalf of the authority in accordance with the provisions of this act or as otherwise authorized by law. The sewer system shall include, without limiting the generality of the foregoing, sewers, pipes, conduits, pump stations, force mains, interceptors, treatment works and other structures, devices, appurtenances and facilities utilized for sewage collection, disposal and treatment and franchises, privileges, plant, equipment and real and personal property and rights and interests in every kind relating thereto;

(p) "System", the sewer system and the waterworks system of the authority and the watershed system of the division.

(q) "System personal property", all personal property held by or on behalf of the commonwealth in the MDC sewer system and the MDC water system, including, without limitation, all equipment, machinery, vehicles and appliances.

(r) "System real property", all real property held by or on behalf of the commonwealth immediately prior to the effective date of this act in and for the MDC sewer system and the MDC water system, including all land, easements, and other interests in real property, including, without limitation, real property interests in buildings, structures and improvements and in sources of

water supply.

(s) "Transfer date", for those employees being transferred to the authority, July first, nineteen hundred and eighty-five; for those employees being transferred to the division, January first, nineteen hundred and eighty-five.

(t) "Users", local bodies, utilizing water or sewer services of the Authority;

(u) "Watershed system", (i) all real and personal property interests held by or on behalf of the commonwealth immediately prior to the effective date of this act in and for the MDC water system which were part of or appurtenant to the Quabbin watershed, Quabbin Reservoir, Ware River watersheds, Wachusett watershed, Wachusett Reservoir, North and South Sudbury watersheds, Sudbury Reservoir, Framingham reservoirs 1, 2 and 3, Blue Hills Reservoir, Bear Hill Reservoir, Spot Pond Reservoir, Fells Reservoir, Weston Reservoir, Norumbega Reservoir, Chestnut Hill Reservoir, including land, easements, buildings, structures, all equipment, machinery, vehicles, and appliances, improvements, water rights and rights in sources of water supply and, (ii) all enlargements and additions to the former MDC water system acquired or constructed by the division for the purposes of the watershed system, including land, easements, building structures, equipment, machinery, vehicles, and appliances, improvements, reservoirs, dams, water rights and rights in sources of water supply; but excluding in each case the waterworks system as defined herein;

(v) "Waterworks system", (i) all real and personal property interests in the system of waterworks held by or on behalf of the commonwealth immediately prior to the effective date of this act in and for the MDC water system, including all plants, works, connections, aqueducts, mains, pipe lines, pumping plans and facilities, waterworks buildings and structures, standpipes, tanks and appurtenances, all equipment, machinery, vehicles, and appliances, and all lands and easements directly appurtenant or incident to the maintenance or operation thereof, and (ii) all extensions, enlargements, improvements and additions to the former MDC water system acquired, constructed or operated by the authority including all plants, works, connections, aqueducts, mains, pipe lines, pumping plants and facilities, waterworks building and structures, standpipes, tanks and appurtenances, all equipment, machinery, vehicles, and appliances, and all lands and easements directly appurtenant or incident to the maintenance or operation thereof;

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SECTION 3. (a) There is hereby created and placed in the executive office of environmental affairs a body politic and corporate and a public instrumentality to be known as the Massachusetts Water Resources Authority, which shall be an independent public authority not subject to the supervision or control of the executive office of environmental affairs or of any other executive office, department, commission, board, bureau, agency or political subdivision of the commonwealth except to the extent and in the manner provided in this act. The exercise by the Authority of the powers conferred by this act shall be deemed to be the performance of an essential public function.

(b) The powers of the Authority shall be exercised by or under the supervision of a board of directors consisting of eleven members. The member of the board of directors shall be the secretary of the executive office of environmental affairs, serving ex officio, one member of the board of directors who is a resident of a Connecticut river basin community who represents water resources protection interests shall be appointed by the governor and shall serve coterminous with the governor, one member of the board of directors who is a resident of a Merrimack river basin community who represents water resources protection interests shall be appointed by the governor and shall serve coterminous with the governor, one member of the board of directors shall be appointed by the governor upon the recommendation of the mayor of Quincy in accordance with the procedure set forth in paragraph (c) and shall serve a term of four years, one member of the board of directors shall be appointed by the governor upon the recommendation of the board of selectmen of the town of Winthrop by majority vote, in accordance with the procedure set forth in paragraph (c) shall serve a term of four years; provided however, that one of the previous named five members shall be a minority person; three members of the board of directors shall be appointed by the mayor of the city of Boston and shall serve coterminous with the mayor, and three members of the board of directors shall be appointed by the advisory board as provided in section twenty-three of this act. Members appointed by the advisory board shall serve for terms of six years, provided, however, that, of the members first appointed by the advisory board, one shall serve for a term expiring on June thirtieth, nineteen hundred and eighty-six, one shall serve for a term expiring on June thirtieth, nineteen hundred and eighty-eight, and one shall serve for a term expiring on June thirtieth, nineteen hundred and ninety, with

the term of each to be designated by the advisory board at the time of appointment. Persons appointed to terms succeeding the terms of members initially appointed by the advisory board, shall be appointed to terms of six years. For the purposes of this paragraph a Connecticut river basin community shall include any city or town in the commonwealth lying in whole or in part in the drainage area of the Connecticut river or its tributaries. A Merrimack river basin community shall include any city or town in the commonwealth lying in whole or in part in the drainage area of the Merrimack river or its tributaries, and a minority person shall be as set forth in the definition of "minority" contained in section forty C of chapter seven of the General Laws.

(c) The members of the board of directors to be appointed by the governor, upon the recommendation of the mayor of the city of Quincy and the board of selectmen of the town of Winthrop shall be chosen by the governor from a list of three qualified persons submitted to the governor by said mayor and a list of three qualified persons submitted by said board.

The governor shall make such appointment within fourteen calendar days after receiving said list. If there should exist a vacancy in a position on the board of directors which is to be appointed in this manner, said vacancy shall be filled through the procedure set forth herein.

(d) Each member of the board of directors shall serve until his successor is appointed and qualified and each appointed member of the board of directors shall be eligible for reappointment. Each member of the board of directors, appointed to fill a vacancy on the board shall be appointed for the unexpired term of the vacant position. Each member of the board of directors before entering upon his duties shall take an oath before the governor to administer the duties of office faithfully and impartially and a record of such oaths shall be filed in the office of the secretary of the commonwealth. Any member of the board of directors may be removed by the appointing authority for misfeasance, malfeasance or wilful neglect of duty upon the filing by the appointing authority with the secretary of the commonwealth of a statement of facts and circumstances which form the basis for such removal. The secretary of the executive office of environmental affairs shall be the chairman of the authority. The board of directors annually shall elect one of its members as vice-chairman. Six members of the board of directors shall constitute a quorum and the affirmative vote of six members shall be necessary and shall suffice for any action taken by the board of directors. Any action of the board

may take effect immediately and need not be published or posted unless otherwise provided by law. No vacancy in the membership of the board of directors shall impair the right of a quorum to exercise the powers of the board of directors. The members of the board of directors shall serve without compensation but each member shall be reimbursed for all reasonable expenses incurred in the performance of his duties. The board of directors shall be deemed to be a governmental body for purposes of and shall be subject to section eleven A and one-half of chapter thirty A of the General Laws. The Authority shall be deemed to be an agency for all other purposes under said chapter thirty A. The Authority shall also be subject as an authority of the commonwealth to section forty-two of chapter thirty and section ten of chapter sixty-six of the General Laws. The Authority shall be deemed to be a public body and all monies of the Authority shall be deemed to be public funds for purposes of chapter twelve A of the General Laws.

(d) Notwithstanding any other provision of general or special law to the contrary, any member of the board of directors who is also an officer or employee of the commonwealth or of a city or town or other public body shall not thereby be precluded from voting for or acting on behalf of the Authority, the commonwealth or such city or town or other public body on any matter involving the Authority, the commonwealth or that city or town or other public body and any member, officer, employee or agent of the Authority shall not be precluded from acting for the Authority on any particular matter solely because of any interest therein which is shared generally with a substantial segment of the public. The Authority shall be deemed to be a state agency for purposes of chapter two hundred and sixty-eight A of the General Laws and a governmental body for purposes of chapter two hundred and sixty-eight B of the General Laws.

SECTION 6. (a) On July first, nineteen hundred and eighty-five, ownership, possession and control of the system personal property as it relates to the sewer and waterworks system shall pass to and be vested in the Authority without consideration or further evidence of transfer and shall thereafter be in the ownership, possession and control of the Authority. All records in custody of the metropolitan district commission under chapter one hundred and seventy-two of the acts of nineteen hundred and thirty-nine shall remain in the metropolitan district commission. All books, maps, papers, plans, records and documents of whatever description pertaining to the design, construction,

operation, and affairs of the MDC sewer system and the MDC water system, exclusive of those pertaining to the MDC watershed system, which are in the possession of the metropolitan district commission on January first, nineteen hundred and eighty-five, or which thereafter come into the possession of the metropolitan district commission also shall be transferred and delivered to the Authority to its use, ownership, possession and control. All such system personal property as it relates to the watershed system shall remain in the metropolitan district commission and be assigned to the watershed management division.

(b) As of July first, nineteen hundred and eighty-five, the commonwealth grants to the Authority, subject to limitations under other law in force on the effective date of this act and limitations contained in this act, the exclusive right for so long as the Authority shall not have been terminated in accordance with section twenty-one to utilize for water supply purposes all such quantities of water as may be safely yielded from the watershed system or as otherwise may have been provided by the general court for the watershed system. The Authority's right to utilize the watershed system shall include the delivery, distribution and sale of water thereof by the Authority and the receipt by the Authority as its revenues of the Authority's charges therefor.

(c) The ownership of the system real property, as it relates to the sewer and waterworks systems shall not be transferred to the Authority under this act, but the Authority, as of July first, nineteen hundred and eighty-five, shall have the rights to enter, use, improve, operate, maintain and manage that portion of the system real property in accordance with this act, such right to be subject to revocation by the commonwealth through legislation enacted by the general court. The commonwealth hereby covenants that in the event such rights are revoked by the general court, such rights shall be transferred to such other public body as the general court shall designate, and the commonwealth further covenants that whatever public body assumes such rights shall discharge and provide for the satisfaction of all the obligations of the Authority, including, but not limited to, its obligations to provide for payment of the bonds of the Authority. The ownership of the system real property as it relates to the watershed system shall remain in the commonwealth and the watershed management division of the metropolitan district commission shall manage all such properties provided for by this act.

Under this act (i) no lands or easements taken or acquired for the sur-

commencing July first, nineteen hundred and eighty-three; (ii) with respect to debt service relating to the MDC sewer system which shall be incurred in the fiscal year of the commonwealth commencing July first nineteen hundred and eighty-four; (iii) with respect to all costs and expenses including debt service which shall be incurred for operation of the water supply system for the fiscal year of the commonwealth commencing July first nineteen hundred and eighty-four. No repeal or amendment of laws pursuant to sections thirty through seventy-two of this act shall revoke the obligation of any person to make payments to the commonwealth, including, without limitation, charges or assessments under chapter sixty-two of the General Laws and section twenty of chapter fifty-nine of the General Laws, made prior to July first, nineteen hundred and eighty-four, pursuant to the authorization contained in the preceding sentence and during the fiscal year of the commonwealth commencing July first, nineteen hundred and eighty-four, and all amounts received by the commonwealth on account of charges or assessments to be made under the authority of the preceding sentence and any other amounts derived from or related to the operation of said systems during the fiscal year of the commonwealth commencing July first nineteen hundred and eighty-four shall be received and held as funds of the commonwealth and shall not be transferred to the Authority. Notwithstanding any other provision of this act or other law, commencing on July first, nineteen hundred and eighty-five, all amounts of any kind received by the commonwealth, exclusive of amounts derived from or related to the activities authorized in section forty-two, which are derived from or related to the operation of the systems including the former MDC sewer system or MDC water system, exclusive of that portion of the MDC water system comprising the watershed system as defined in this act, shall be deemed to be held in trust for and shall be transferred and paid over to the Authority when received without further appropriation to be applied to the purposes of the Authority. For purposes of this section, all references to funds received by the commonwealth shall be deemed to include receipt of funds by the metropolitan district commission.

(f) All rules, regulations, licenses and permits duly promulgated by or on behalf of the metropolitan district commission respecting the MDC sewer system and the MDC water system, exclusive of that portion of the MDC water system comprising the watershed system as defined in this act, shall remain in full force and effect to the extent consistent with this act until revised or

poses authorized by article ninety-seven of the Amendments to the Constitution of the Commonwealth shall be used for other purposes or disposed of, and ... no lands devoted to a public use shall be diverted to another inconsistent public use, except in all instances in accordance with the laws and the Constitution of the Commonwealth.

(d) On July first, nineteen hundred and eighty-five, all proceeds, exclusive of such amounts for the purposes of equipment, capital project needs, or land acquisition and improvements of that portion of the MDC water system comprising the watershed system, if any, of bonds referred to in section eleven and grants and other aid which are held by the commonwealth at the effective date of this act shall then and thereafter be deemed to be held in trust for, and shall upon demand of the authority be transferred to the Authority to be applied by the Authority to projects for which such bonds, grants or other aid was authorized. On July first, nineteen hundred and eighty-five, all proceeds, if any, of bonds referred to in said section eleven and grants and other aid which are for the equipment, capital project needs, or land acquisition and improvements of that portion of the MDC water system comprising the watershed system, shall then and thereafter be expended by the division on projects for which such bonds, grants or other aid was authorized. All proceeds if any, of bonds, grants or other aid referred to herein, which shall be so held in trust and transferred upon demand, shall be in the amount as certified by the commissioner of the metropolitan district commission to the state treasurer.

(e) The requirements respecting budgets of the Authority in paragraph (b) of section eight shall first be effective commencing with current expenses and costs paid or incurred on and after July first, nineteen hundred and eighty-five. The charges of the Authority provided for in section ten shall first become effective on July first, nineteen hundred and eighty-five. During the fiscal year of the commonwealth commencing July first, nineteen hundred and eighty-four, the commonwealth may make, enforce and receive assessments and charges relating to the MDC sewer and water systems, comprising the sewer system, watershed system, and waterworks system as defined in this act, with provisions of chapter ninety-two of the General Laws in effect immediately prior to the effective date of this act only as follows: (i) with respect to all expenses and costs other than debt service which shall have been expended for operation of the MDC sewer system in the fiscal year of the commonwealth

rescinded by the Authority. All such rules, regulations, licenses and permits respecting that portion of the MDC water system comprising the watershed system shall remain in full force and effect to the extent consistent with this act, including regulations promulgated pursuant to chapter seven hundred and thirty-seven of the acts of nineteen hundred and seventy-two. All contractual rights and liabilities of the metropolitan district commission pertaining to either the MDC sewer system, and the waterworks functions of the MDC water system, or the watershed functions of the MDC water system, shall continue in full force and effect and all benefits, obligations and duties assumed by and imposed upon the Authority and the division, respectively, so far as consistent with the powers granted to the Authority and said division under this act. No liability in tort, or for water pollution under a statutory or other basis, arising prior to July first, nineteen hundred and eighty-five, however, shall be imposed upon the Authority and this sentence shall apply to all actions or proceedings, including those commenced prior to the effective date of this act. Except as expressly excepted by the previous sentence, actions and proceedings against or on behalf of the metropolitan district commission, pertaining to either the MDC sewer system and the waterworks functions of the MDC water system, or the watershed system functions of the MDC water system, shall continue unabated and may be completed against or by the Authority or by the division, respectively.

(g) On July first, nineteen hundred and eighty-five, each employee of the metropolitan district commission paid as of the effective date of this act from funds derived from the accounts of the metropolitan sewerage district or the metropolitan water district shall become an employee of the Authority without impairment of civil service status and seniority and without reduction in compensation, notwithstanding any change in job titles or duties and without loss of accrued rights to holidays, sick leave, vacation and benefits, and shall thereafter perform his or her duties under the direction, control and supervision of the Authority, provided, however, that any employee subject to transfer under the foregoing provision of this sentence whose existing duties and responsibilities are determined by the commissioner of the metropolitan district commission to relate directly and primarily to functions of the metropolitan district commission not passing to the Authority under this act and for whom a position at the metropolitan district commission is funded in whole or in part by items 2410-1000 or 2460-1000 of section two of chapter two

hundred and thirty-four of the acts of nineteen hundred and eighty-four and any employee, so determined, to be transferred to the division of watershed management shall remain an employee of the commission, without change in civil service status, if any, without any reduction in seniority, compensation, salary, and without any loss of accrued rights to holidays, sick leave, vacation and other benefits of employment, and shall continue to perform duties under the direction, control and supervision of the metropolitan district commission, under funding arrangements not thereafter derived from the accounts of the metropolitan sewerage district or the metropolitan water district. It is the intention of the general court in the implementation of this provision that each employee of the metropolitan district commission whose compensation is funded from funds derived from the accounts of the metropolitan sewerage district or the metropolitan water district shall, upon the implementation of the foregoing provisions, then hold employment at the authority or the metropolitan district commission, as the case may be, subject, so far as concerns the authority, to the terms and conditions of employment established by this act, and so far as concerns the metropolitan district commission, to such rights as may now and hereafter be lawfully protected and provided. Terms of office of employees of the metropolitan district commission transferred to the Authority shall not be deemed to be interrupted by such transfer provided that all employees shall be governed by the provisions in section seven for retirement, pension and group insurance benefits and for protection and preservation of retirement and pension rights based on their prior service. Rights and obligations under collective bargaining agreements with respect to employees transferred from the metropolitan district commission, except to the extent expressly inconsistent with this act, shall be assumed by and imposed upon the Authority pursuant to section seven (c). Every employee transferred to the Authority under this paragraph who immediately prior to such transfer holds a permanent appointment classified under chapter thirty-one or has tenure by reason of section nine A of chapter thirty of the General Laws shall be entitled to the rights and benefits of and shall be subject to the provisions relating to tenured employees under chapter thirty-one or section nine A of chapter thirty, respectively, with respect to that position.

(b) The deputy commissioner of capital planning and operations shall assist and cooperate with the Authority in making suitable office arrangements, exclusive of the office premises in the building located at twenty

Somerset Street in Suffolk County, in the city of Boston, for the administrative offices of the Authority including, without limitation of the foregoing, temporary arrangements in office premises of the commonwealth which may include such reduced rents prior to the transfer date as the deputy commissioner shall deem appropriate.

SECTION 3. (a) Notwithstanding any other provision of this act, on January first, nineteen hundred and eighty-five or as soon thereafter as a quorum of the board of directors may be appointed, the Authority shall undertake the following: (i) appoint an executive director and such additional staff as shall be necessary for the purposes of this section; (ii) develop its rules and regulations, including charges for implementation on July first, nineteen hundred and eighty-five; (iii) provide for the implementation of permanent financing and; (iv) any such other powers necessary for the provision of water delivery and sewer services on July first, nineteen hundred and eighty-five. Until the appointment and qualification of members of the board of directors of the Authority constituting a quorum of the board all such rights and powers authorized by the provisions of this section may be exercised by personnel of the metropolitan district commission with the approval of the secretary of the executive office of environmental affairs.

(b) An amount equal to all requirements incurred in the MDC Sewer Fund and the MDC Water Fund to the extent and in amounts expended for the purposes of the sewer and waterworks systems for the fiscal year of the commonwealth commencing July first, nineteen hundred and eighty-four and all amounts appropriated by the commonwealth for such period shall be repaid to the commonwealth by the Authority and credited on the books of the commonwealth as of no later than June thirtieth, nineteen hundred and eighty-six. The Authority shall also reimburse the commonwealth to be credited on the books of the commonwealth as of no later than June thirtieth, nineteen hundred and eighty-six for all then outstanding and unreimbursed cash advances of funds of the commonwealth made on or prior to that date for the funding of projects for MDC sewer system or the MDC water system and, from January first, nineteen hundred and eighty-five through June thirtieth, nineteen hundred and eighty-five, for costs of projects of the Authority for the waterworks system and the sewer system, to the extent or and in amounts expended for the purposes of the sewer and waterworks systems. All amounts transferred between the commonwealth and the Authority under sections four and five shall be subject to adjustment from

final audit to be completed within two years of the effective date of this act.

(c) In order to provide funds in addition to amounts appropriated by the commonwealth for current expenses of the sewer and waterworks systems during the period from the effective date of this act until December thirty-first, nineteen hundred and eighty-five the state treasurer, on behalf of the commonwealth, is hereby authorized and directed to loan to the authority through investment in a note or other appropriate instrument of the authority, and the authority is authorized to borrow from the state treasurer, at any time and from time to time on or prior to December thirty-first, nineteen hundred and eighty-five, on such terms and conditions as the state treasurer and the authority shall agree, an amount not in excess of sixty-five million dollars. Any amount so borrowed by the authority, with interest thereon at such reasonable rate as the state treasurer and the authority shall agree, shall be repaid to the commonwealth to be credited on the books of the commonwealth as of no later than June thirtieth, nineteen hundred and eighty-six. If the amount so loaned, the authority may transfer to the state treasury such amounts as it deems appropriate to be administered in trust for the purpose of the water and sewer divisions of the metropolitan district commission; provided, however, that such amounts may be expended only after transfer to and subject to the working of the appropriate line-item appropriations of said divisions, all outside sections pertaining to said items, and all other laws regulating the expenditures of state funds. For purposes of the first sentence of paragraph (b), amounts expended from such transfers to the state treasury shall not be deemed requirements incurred in the metropolitan district commission sewer fund or the metropolitan district commission water fund. Said transfers shall be approved by the secretary of environmental affairs.

(d) The authority is also authorized to issue at one time or from time to time prior to June thirtieth, nineteen hundred and ninety, notes of the authority in the aggregate principal amount of six hundred million dollars outstanding at any one time, excluding notes refunded by other notes issued under this paragraph, for the purpose of providing funds for: (i) meeting the obligations of the authority to repay or reimburse the commonwealth for all amounts described in paragraph (b) of this section; (ii) repaying the commonwealth for any amounts borrowed by the authority from the commonwealth including

ing interest thereon pursuant to paragraph (c), (ii), meeting the obligations of the Authority as required by section forty-two of this act; (iv) paying all or part of the cost of the Authority's projects undertaken at any time prior to December thirty-first, nineteen hundred and eighty-nine; (v) paying all or any part of the current expenses of the Authority in anticipation of receipt of revenues of the Authority, but in no event shall the aggregate amount of notes outstanding for this purpose exceed one-half of the budgeted current expenses of the Authority for the fiscal year in which such notes are outstanding; and, (vi) paying all or any part of the interest payable on any notes of the Authority issued under this paragraph. Notes issued by the Authority in accordance with this paragraph shall be issued for such term or terms as the Authority shall determine and may be renewed from time to time; provided, however, all such notes and any renewals thereof shall mature and be payable no later than June thirtieth, nineteen hundred and ninety except that notes issued in anticipation of revenues shall be payable and shall mature not later than one year from their date. Notes issued by the Authority in accordance with this paragraph, except notes issued in anticipation of revenues, shall be issued in anticipation of bonds to be issued by the Authority pursuant to section twelve. All notes issued pursuant to this paragraph shall be authorized, issued and sold in the same manner as, and shall otherwise be subject to, section twelve and the other provisions of this act relating to bonds; provided, however, that notes issued under this paragraph shall be issued at a fixed rather than a variable rate or rates of interest.

(e) The commonwealth, acting by and through the secretary of administration and finance with the approval of the governor, upon application of the Authority, shall guarantee the principal of and interest on notes of the Authority issued in accordance with paragraph (d). The secretary of administration and finance with the approval of the governor and without further authority may approve the form, terms and conditions of, and may execute and deliver on behalf of the commonwealth such guaranty and any related agreements with or for the benefit of the holders of such notes containing such terms, conditions and covenants of the commonwealth as the secretary of administration and finance may deem reasonable including provision for the payment of notes not paid or refunded by the Authority by application of the proceeds of the loan authorized in paragraph (f). Without limiting the generality of the foregoing, such guaranty may take the form of an agreement to reimburse the

issuer of a letter of credit or other credit facility which relates to such notes. The full faith and credit of the commonwealth shall be pledged for the guaranty provided for in this paragraph. The total principal amount of notes to be guaranteed under this paragraph shall not exceed six hundred million dollars in the aggregate; provided, however, that any note being refunded by the issuance of a guaranteed note shall not, and the refunding note shall, be included within such total amount.

(f) If the Authority shall fail or otherwise be unable to refund or pay when due any guaranteed note or notes, or the interest thereon, issued by the Authority in accordance with paragraph (e), such notes, and the interest thereon, upon presentation to the state treasurer, shall be paid by the commonwealth. For the purpose of providing funds to pay any such guaranteed notes and interest or to reimburse the treasury for any such payments the state treasurer shall, upon the request of the governor, issue and sell bonds of the commonwealth in an amount specified by the governor from time to time, but not exceeding in the aggregate the sum of six hundred million dollars for principal and ninety million dollars for interest. Bonds issued by the commonwealth under this paragraph shall be designated on their face, Massachusetts Water Resources Authority Loan, Act of 1984. Such bonds shall be issued for such minimum term or terms not exceeding twenty years as the governor may recommend to the general court in accordance with section three of Article LXII of the Amendments to the Constitution of the Commonwealth. The Authority shall reimburse the commonwealth in accordance with a schedule to be determined by the secretary of administration and finance at the time such bonds are issued, from any moneys of the Authority which are available for such purposes, including funds provided from charges of the Authority in accordance with paragraph (d) of section ten. Bonds and interest thereon issued by the commonwealth under the authority of this section shall, notwithstanding any other provisions of this act, be general obligations of the commonwealth. In anticipation of the receipt of proceeds of such bonds, the treasurer may issue and sell temporary notes and renewals thereof in an amount outstanding at one time not in excess of the amount of bonds specified by the governor pursuant to this paragraph, for a term not to exceed three years, including any renewals thereof. The principal of and interest on such notes may be paid from the proceeds of said renewal notes or bonds and to the extent not so paid shall be paid from any other funds or receipts; provided, however, that if and

to the extent that the principal amount of such notes is paid from other than the proceeds of said renewal notes or bonds, the principal amount of said bonds which may be issued under this section shall be reduced by a like amount. Such notes and any renewals thereof shall be general obligations of the commonwealth.

(g) The state treasurer may borrow, from time to time, on the credit of the commonwealth such amounts as may be necessary to make any loans required of the commonwealth under paragraph (c) and to pay any interest or other charges incurred in borrowing such money, and may issue notes of the commonwealth therefor, bearing interest payable at such times and at such rates as shall be fixed by him. No note issued under this paragraph shall mature more than one and one-half years from its date but notes may be refunded one or more times. Such notes shall be issued for such maximum term of years, not exceeding one and one-half years, as the governor may recommend to the general court in accordance with section three of Article LXII of the Amendments to the Constitution of the Commonwealth.

(h) The obligations of the Authority to make repayments and reimbursements to the commonwealth as described in paragraphs (b) and (c) and section forty-two shall be reduced by the sum of all amounts received by the commonwealth of account of operations of the system conducting in the fiscal year of the commonwealth commencing July first, nineteen hundred and eighty-four, including, without limitation, all amounts so received on account of charges and assessments for purposes described in clauses (ii) and (iii) of the third sentence of paragraph (f) of section four. Attribution of charges and assessments received by the commonwealth during such year shall be made on a consistent basis with the certifications made to the state treasurer by the metropolitan district commission which are the basis of such charges. Except as otherwise expressly provided in this act, no amount to be repaid or reimbursed to the commonwealth by the Authority under this section five shall bear interest prior to such repayment or reimbursement. All amounts received by the commonwealth on account of operations of the system conducted in the fiscal year of the commonwealth commencing July first, nineteen hundred and eighty-four and all amounts repaid or reimbursed to the commonwealth by the Authority under this section and section forty-two shall be accounted for as appropriate on the books of the commonwealth in the Metropolitan Sewerage District Fund and the Metropolitan Water District Fund and such funds shall be

ending June thirtieth, nineteen hundred and eighty-six.

SECTION 6. The Authority shall have all powers necessary or convenient to carry out and effectuate the purposes and provisions of this act, including, without limiting the generality of the foregoing, the powers:

(a) to adopt and amend by-laws for the regulation of its affairs and the conduct of its business;

(b) to adopt an official seal and alter the same at pleasure;

(c) to maintain an office at such place or places as it may determine;

(d) to adopt a fiscal year to conform with the fiscal year of the commonwealth;

(e) to adopt and enforce procedures and regulations in connection with the performance of its functions and duties and without limitation on other reasonable means of enforcement, to establish reasonable penalties for violation of its regulations commensurate with the seriousness of the violation, provided, however, that no penalty may exceed ten thousand dollars for each such violation but the Authority may in the case of a continuing violation, each each day's violation a separate violation;

(f) to sue and be sued, to prosecute and defend actions relating to its properties and affairs, and to be liable in tort in the same manner as a private person except that the Authority and its members, employees and agents shall be immune from tort liability for acts and omissions constituting (i) the exercise of a legislative or judicial function, (ii) the exercise of an administrative function involving the determination of fundamental governmental policy or (iii) the exercise of a discretionary function or duty; provided, however, that property of the Authority, other than, in actions to enforce payment of bonds, the revenues and funds pledged to the payment of bonds, shall not be subject to attachment nor levied upon or execution, and, provided further, that the Authority is not authorized to become a debtor under the United States Bankruptcy Code;

(g) to employ personnel as hereinafter provided and to engage architectural, engineering, accounting, management, legal, financial and environmental consulting and other professional services;

(h) to receive and apply its revenues to the purposes of this act without appropriation or allotment by the commonwealth or any political subdivision thereof;

(i) to maintain, repair, operate, extend, enlarge, and improve the sewer and waterworks systems, to investigate, design, construct and acquire improvements and additions to said systems; to engage in activities, programs and projects on its own behalf or jointly with other public bodies; to provide technical assistance to local bodies and the division in furtherance of the management or improvement of water supply and sewage collection, disposal and treatment services; and to provide for the cost of activities, programs and projects from grants, the proceeds of bonds, or from other revenues available to the Authority for such purposes;

(j) pursuant to the provisions of section nine, to acquire and take and hold title in its own name, by purchase, lease, lease-purchase, sale and leaseback, mortgage, exchange, gift or otherwise, or to obtain options for the acquisition of, and to dispose of, any property, real or personal, improved or unimproved, tangible or intangible, or any interest therein, and to exercise the power of eminent domain;

(k) to establish, adjust, collect and abate charges for services, facilities and commodities furnished or supplied by it;

(l) to borrow money and issue bonds and to pledge or assign or create security interests in funds or revenues of the Authority to pay or secure such bonds;

(m) to obtain insurance and to enter into agreements of indemnification necessary or convenient to the exercise of its powers under this act;

(n) to apply for, receive, administer and comply with the conditions and requirements respecting any grant, gift or appropriation of property, services or moneys;

(o) to enter into contracts, arrangements and agreements with other persons in all matters necessary or convenient to the operation of this act including, without limiting the generality of the foregoing, matters of technical cooperation, planning, management, administration and operations and to execute and deliver instruments necessary or convenient to the exercise of its powers under this act;

(p) to apply for and to hold permits, licenses, certificates or approvals as may be necessary or desirable to construct, maintain and operate the sewer and waterworks systems;

(q) to appear in its own behalf before other public bodies, including, without limiting the generality of the foregoing, the Congress of the United

States and the general court of the commonwealth, in all matters relating to its powers and purposes;

(r) to do all things necessary, convenient or desirable for carrying out the purposes of this act or the powers expressly granted or necessarily implied by this act.

Specification elsewhere in this act of powers of the Authority with respect to the Authority's regulations, charges and operations shall not limit the generality of the powers granted in this section and in section ten or powers the Authority may exercise under any other special or general law insofar as it relates to the purposes of this act.

SECTION 7. (a) An executive director, who shall be a person professionally skilled and experienced in law, finance, public works or public utility programs, or public administration with significant experience in wastewater pollution abatement, shall be appointed by the board of directors for a term not to exceed five years as chief executive officer of the Authority, and shall so serve until his successor is appointed and qualified and each such executive director shall be eligible for reappointment for like five year terms. An executive director may be removed at any time by the board for misfeasance, malfeasance or wilful neglect of duty upon the filing by the board with the secretary of the commonwealth of a statement of facts and circumstances which form the basis for such removal. The executive director shall administer the affairs of the Authority, including, without limiting the generality of the foregoing, matters relating to contracting, procurement, personnel and administration, under the supervision of the board of directors in accordance with such authorizations as the board of directors may from time to time reasonably adopt and continue in force. The Authority shall also appoint persons to hold the offices of secretary and treasurer to the Authority. The secretary shall be the custodian of the seal and of the books and records of the Authority and shall keep a record of the proceedings of the board of directors. The secretary may cause copies to be made of all minutes and other records and documents of the Authority and may give certificates under its official seal to the effect that such copies are true copies and all persons dealing with the Authority may rely upon such certificates. The treasurer shall have charge of the books of account and accounting records of the Authority and shall be responsible under the supervision of the executive director for financial control for the Authority. Upon the recommendation of

the executive director. the board of directors shall also appoint and establish reasonable compensation, benefits and other terms of employment for other officers and other employees of the Authority as it deems necessary, including assistant secretaries and assistant treasurers in whom may be vested any of the powers of the secretary and the treasurer, respectively, and including architects, engineers, accountants, lawyers, planners and other management and professional personnel. Except as otherwise hereinafter provided for the appointment of said executive director, other officers and employees of the Authority shall serve at the pleasure of the board of directors or under collective bargaining agreements or contracts of employment; provided, however, that no contract of employment, except for that of the executive director, shall exceed a term of three years, which may be renewed upon the expiration thereof.

(b) The Authority may indemnify any present or past director, officer, employee or agent of the Authority and any member, officer, employee or agent of the retirement board established pursuant to paragraph (d) against liabilities, claims, costs and expenses, including legal expenses, in connection with any actual or threatened proceeding, including any settlement thereof approved by the Authority, arising by reason of any act or omission within the scope of his duties for the Authority; provided, however, that no indemnification shall be provided to a person concerning a matter as to which such person is finally adjudicated to have acted either without the belief held in good faith that his or her conduct was in the best interests of the Authority or with reason to understand that his or her conduct was unlawful. Costs and expenses may be paid prior to a final disposition upon receipt of an undertaking, which the Authority may accept without regard to the financial resources of the person indemnified, that the person receiving the benefit of payments shall repay such payments if he shall be finally adjudicated not to be entitled to indemnification hereunder. The Authority may purchase insurance on behalf of itself and any of its directors, officers, employees or agents and any member, officer, employee or agent of the retirement board established pursuant to paragraph (d) against any liability arising out of such person's status as such, whether or not the Authority would have the power to indemnify such person against such liability.

(c) The Authority and its employees shall be subject to the provisions of chapter one hundred and fifty E of the General Laws, and for purposes of said

chapter. The Authority shall be deemed to be an employer of the employees and a legislative body. The Authority may designate a representative to act in its interest in labor relations matters with its employees. Rights and obligations under collective bargaining agreements with respect to employees transferred from the metropolitan district commission, except to the extent expressly inconsistent with this act, shall be assumed by and imposed upon the Authority, and employees transferred to the Authority who are subject to such agreements shall continue to be represented by the employee organizations that are parties to such agreements until such time as they elect to be otherwise represented in accordance with the provisions of chapter one hundred and fifty E. Existing bargaining units as determined by the state labor relations commission for metropolitan district commission employees shall remain in full force and effect for those employees transferred to the Authority until the expiration date of collective bargaining agreements covering such employees. No collective bargaining agreement entered into by the Authority, however, shall limit inherent management rights which shall include, without limiting the generality of the foregoing, the following: (i) employment, assignment, and promotion of employees and the determination of standards therefor, (ii) termination and discharge of employees, provided that any collective bargaining agreement may protect employees against such actions on arbitrary, capricious or unreasonable grounds, (iii) determination of the Authority's levels of service, levels of staffing, and the methods, means and personnel for performing operations, (iv) supervision, control, and evaluation and establishment of productivity standards for employees, and (v) use of part-time regular employees and of management contractors or vendors. Notwithstanding the foregoing, each collective bargaining agreement in force on the effective date of this act covering former employees of the metropolitan district commission transferred to the employment of the Authority under section four, shall continue to be a valid collective bargaining agreement in effect with respect to such employees until the date which is two years subsequent to the stated date of expiration of such agreement; provided, however, that the Authority shall negotiate in good faith pursuant to the provisions of chapter one hundred and fifty E of the General Laws with respect to wages, hours, and other terms and conditions of employment to become effective as of the stated date of expiration of such agreement for the balance of the term of such agreement as hereby extended.

d) All employees of the Authority not employed by the metropolitan district commission prior to July first, nineteen hundred and eighty-five shall become members of a contributory retirement system to be referred to as the Massachusetts Water Resources Authority Retirement System, hereinafter referred to as the "Authority Retirement System", which shall be a separate system from the state employees' retirement system and which shall be established and maintained in accordance with sections one to twenty-eight, inclusive, and section one hundred and two of chapter thirty-two of the General Laws and for all purposes thereunder shall be deemed to be a contributory retirement system of a governmental unit governed by the provisions thereof for the state employees' retirement system except as otherwise expressly provided herein. The Authority Retirement System shall become effective without further acceptance by the Authority on July first, nineteen hundred and eighty-five. The Authority Retirement System shall be administered by a separate retirement board established by the Authority which shall consist of three persons and which shall have custody of the funds of the Authority Retirement System and shall have the general powers and duties set forth in subdivision five of section twenty of chapter thirty-two of the General Laws. One member of the retirement board shall be the secretary of the Authority, serving *ex officio*. The second member of the retirement board shall be initially appointed by the Authority for a term expiring June thirtieth, nineteen hundred and eighty-six and thereafter the second member shall be a person elected by members in service and members retired from service in the Authority Retirement System from among their number to serve for a term expiring June thirtieth, nineteen hundred and eighty-nine and for successive triennial terms thereafter. The third member of the retirement board shall be appointed by the Authority for successive triennial terms; provided, however, that the term of the member first appointed shall expire on June thirtieth, nineteen hundred and eighty-eight. Members of the retirement board shall serve until their successors are duly qualified and shall be eligible for re-election or reappointment. Members of the retirement board shall serve without compensation but each member may be reimbursed for all reasonable expenses incurred in the performance of his duties. Without limitation of other provisions of general law applicable by terms thereof to the retirement board, the retirement board shall be deemed to be a governmental body for purposes of and shall be subject to section eleven A and one-half of chapter thirty A of the General

Laws and the members thereof shall be deemed to be state employees subject to chapter two hundred and sixty-eight A of the General Laws. Whenever a person, other than an employee of the metropolitan district commission transferred to the Authority under the provisions of this act, who is a member of a retirement system under chapter thirty-two of the General Laws shall become a member of the Authority Retirement System by virtue of employment by the Authority, that person shall be entitled to all creditable service and all rights and benefits to which he was entitled as a member of such prior retirement system. Within ninety days of such employment, the amounts of the accumulated total deductions, including accumulated interest on such deductions, credited to such employee's accounts in the annuity savings fund and pension reserve fund of the prior retirement system shall be transferred and credited to the employee's accounts in the annuity savings fund and pension reserve fund of the Authority Retirement System. The amounts required to finance pension benefits earned by employees of the Authority in a given year shall be determined by the retirement board and shall be paid over by the Authority. Funds paid into the Authority Retirement System pursuant to this section shall cease to be funds of the Authority and shall be used solely for the purposes of the Authority Retirement System. This provision shall be deemed to constitute a contractual right and benefit on behalf of members of the Authority Retirement System who are or may be retired pursuant to said chapter thirty-two, and no amendment or alteration shall be made which would result in a diversion of the funds of the Authority Retirement System from the purposes thereof. Nothing in this act shall be deemed in any way to decrease or abridge the annuities, pensions, retirement allowances, refunds or accumulated total deductions or any right or benefit to which an employee transferred to the Authority Retirement System pursuant to this act has become entitled by virtue of membership in any of the systems in the state retirement system prior to transfer to the Authority's employment, and the liability therefor shall become the liability of the Authority Retirement System upon the transfer of funds provided for in this paragraph. All persons transferred to the Authority on July first, nineteen hundred and eighty-five who are members of the state employees' retirement system on account of employment by the metropolitan district commission prior to said date shall continue to be members of the state employees' retirement system and subject to the laws applicable thereto, and neither the Authority nor the Authority Retirement System shall have any liability for

retirement allowances to or on account of such persons.

The Authority shall not be liable for retirement allowances to or on account of metropolitan district commission employees who are not transferred to the Authority pursuant to the provisions of this act, except for the costs of retirement contributions of employees of the watershed management division properly chargeable to the Authority.

(e) Subject to the last sentence of this paragraph, every employee who, upon employment by the Authority is covered by the group insurance provided by chapter thirty-two A of the General Laws shall continue in uninterrupted coverage and all other employees of the Authority are hereby made eligible for said group insurance to the same extent as if they were employees of the commonwealth. The share of the commonwealth of the cost of such insurance, with respect to the employees of the Authority, shall be borne by the Authority, but with respect to persons retired from service with the metropolitan district commission who have not been employees of the Authority, shall continue to be borne by the commonwealth. The Authority shall forward its contribution, together with all amounts withheld from the salaries or wages of its employees as provided in paragraph (d) of section eight of said chapter thirty-two A and all amounts paid by an employee as provided in paragraph [illegible] of said section eight, to the state employees group insurance commission at such time and in such manner as said commission may reasonably prescribe. The Authority is authorized to enter into reasonable alternative and substitute group insurance arrangements providing benefits to its employees substantially equivalent to or superior to benefits under said chapter thirty-two A, and thereupon may cease its arrangements for such benefits under said chapter thirty-two A.

(f) The Authority may contract, to the extent permitted by and in accordance with applicable requirements of the United States Internal Revenue Code, with any of its employees (1) to defer a portion of the employee's compensation and to invest such amounts under a deferred compensation program and (2) to make contributions from amounts otherwise payable as an employee's current compensation to an individual retirement account; hereinafter referred to as IRA.

Investments of deferred compensation may be made in a life insurance or annuity contract, mutual fund or bank investment trust and investments of IRA amounts may be made in the foregoing or in other investments authorized by the

investment of deferred compensation or making any deductions from compensation for purposes of an IRA, shall solicit sealed bids to be opened at a time and place designated by the treasurer from insurance companies authorized to conduct business within the commonwealth pursuant to chapter one hundred and seventy-five of the General Laws, mutual fund managers and banks. As applicable to investment of deferred compensation and IRA amounts, as the case may be, bids shall clearly indicate the interest rate which shall be paid, any commissions for salesmen, any load imposed for purposes of administration, mortality projections, expected payments, tax implications for employees and such other information as the treasurer may require. For IRAs, upon the treasurer's determining which provider offers the product or products most beneficial to the employee in each category for which bids were solicited, the treasurer may offer such employee the opportunity to establish an IRA with one or more such providers. The employee who wishes to invest his IRA funds with any such provider, or combination of providers, may authorize the treasurer to deduct from amounts otherwise payable to the employee, at one time or on a periodic basis, amounts to be paid into the employee's IRA. If the employee so elects, the treasurer shall pay to the providers the amount designated by the employee, in the name of the employee, to the employee's IRA. Amounts so paid to the providers for the employee's IRA account shall belong exclusively to the employee. Except as otherwise provided herein, the treasurer may restrict an employee's right to contract to have contributions made to an IRA through deductions and payments by the treasurer to those providers selected as the result of the competitive bidding process outlined herein, but the authority conferred upon the treasurer shall not be construed to restrict or limit the right of any employee to establish one or more IRAs with such banks, insurance companies, or similar authorized institutions as the employee may choose in any manner other than through an authorized deduction by the treasurer of a portion of the employee's compensation as outlined herein. Notwithstanding any provisions to the contrary, the treasurer shall not be required to solicit bids from providers of investment products for deferred compensation investments or IRA contributions, provided: (1) the treasurer elects to invest such deferred compensation in, or is authorized by the employee to pay IRA contributions into, the same investment products as provided through a deferred compensation or IRA plan for employees of the commonwealth adminis-

tered by the state treasurer, or a deferred compensation plan for employees of the Authority administered by the treasurer, provided such plan resulted from: the solicitation of bids in accordance with bidding requirements comparable to those required under this section; or (ii) the treasurer elects to invest such deferred compensation in, or is authorized by the employee to pay IRA contributions into investment products offered pursuant to a deferred compensation plan or an IRA investment option program, developed through a competitive selection process resulting from the solicitation of bids by a group of any combination of three or more city, town, county or public authority treasurers acting as a Common Group for purposes of soliciting such proposals in accordance with bidding requirements comparable to those required under this section. Any contract entered into between an employee and the Authority pursuant to this section shall include all information in terms the employee can reasonably be expected to understand. Such deferred compensation and IRA programs shall be in addition to and not a part of the retirement program or pension system as provided under the Authority Retirement System, under said chapter thirty-two or under any other benefit program provided by law for such employees. Any compensation deferred under such a plan and any compensation contributed by an employee to an IRA under such plan shall continue to be included as regular compensation, as defined in section one of said chapter thirty-two, for the purpose of computing the retirement and pension benefits earned by any such employee, but any compensation so deferred shall not be included in the computation of any taxes withheld on behalf of any such employee. For purposes of this paragraph, the word "employee" shall have the same meaning as "employee" in section one of chapter thirty-two of the General Laws and shall also include consultants and independent contractors who are natural persons paid by the Authority and whose duties require that their time be devoted to the service of the Authority during regular business hours.

(g) The Authority shall not be subject to the jurisdiction of the division of personnel administration established by section four A of chapter seven of the General Laws and shall not be governed by sections forty-five, forty-six, forty-six C to forty-six G, inclusive, of chapter thirty, and sections twenty-six, twenty-seven and twenty-seven A to twenty-seven E, inclusive, of chapter one hundred and forty-nine of the General Laws. No employee of the Authority shall be covered by section nine A of chapter thirty of the General Laws or by chapter thirty-one of the General Laws except for certain

former employees of the metropolitan district commission transferred to the Authority from the metropolitan district commission under section four, to the extent of the rights provided for those employees in said section four; provided, however, that a veteran transferred to the Authority under said section four shall be entitled to include his service at the metropolitan district commission toward the three years of service provided for in section nine A of chapter thirty, and if he completes such term of service at the Authority, he shall be entitled to rights under and shall be subject to the provisions of chapter thirty. All provisional employees who are transferred to the Authority and who are labor service employees as defined in section one of chapter thirty-one and who are not eligible for an examination as provided for in section twenty-six of chapter seven hundred and sixty-seven of the acts of nineteen hundred and eighty-one and who have worked in such positions for a period of one year prior to January first, nineteen hundred and eighty-five shall be made permanent employees.

The Authority shall engage consultants to perform only those services for the Authority which regular employees of the Authority are unable to perform owing to lack of special expertise or other inability to perform such services on the schedule or in the manner required by the Authority. The Authority shall be subject to section four of chapter one hundred and fifty-one B of the General Laws, shall be deemed to be an agency of the commonwealth for purposes of section two of said chapter, and shall be subject to the enforcement jurisdiction of the commission against discrimination under said chapter. The Authority shall develop policies and programs for affirmative action in employment, procurement and contracting in accordance with law and consistent with general policies and programs of the commonwealth.

The Authority shall also appoint a special assistant for affirmative action and compliance and provide appropriate support staff. The special assistant shall report directly to the chairman of the Authority and shall develop, supervise, monitor and provide for the enforcement of affirmative action plans for employment, procurement and contracting activities of the Authority. The chairman shall take such steps and impose such sanctions as may be appropriate to ensure enforcement. A quarterly report shall be filed at the close of each quarter with the state office of affirmative action and each member of the general court requesting a copy of such report on actions taken during the preceding quarter to implement the Authority's affirmative

action plan and programs.

(b) The Authority shall establish an internal special audit unit which, under the direct supervision of the executive director, shall monitor the quality, efficiency and integrity of the Authority's operating and capital programs and make periodic recommendations and reports to the executive director and the board of directors. Employees of the Authority serving in the internal special audit unit shall devote their full-time efforts to the unit, and shall not be assigned direct operating responsibilities.

SECTION 8. Without limiting the generality of the powers granted to the Authority under other provisions of this act, the following provisions are made for the operation, improvement and enlargement of the sewer and waterworks systems by the Authority and for the attainment of the Authority's other purposes:

(a) The operations of the Authority specifically related to the separate functions of sewage collection, treatment and disposal and delivery of water shall be organized respectively into a sewer division and a waterworks division. The Authority shall maintain, except to the extent otherwise permitted in this act, segregated accounts for each of its divisions with respect to the revenues, expenses, assets and funds pertaining to the operation thereof. The board of directors may act to provide specified administrative or technical support services on a combined basis when, in the board's opinion, it would be more efficient to do so, in which event the board shall provide for a fair and equitable allocation of the costs to the accounts of the divisions in accordance with generally accepted accounting principles.

(b) The Authority shall adopt an annual budget for its current expenses which budget the Authority shall have submitted for comment and recommendations to the advisory board not less than sixty days prior to the adoption thereof. Except in case of an emergency, no current expenses may be incurred in excess of those shown in the annual current expense budget. The Authority may from time to time adopt amendments to current expense budgets which the Authority shall have submitted for comment and recommendation to the advisory board not less than thirty days prior to the adoption thereof. The Authority periodically shall also adopt and revise capital facility programs for the sewer system and waterworks system and capital expenditure budgets based thereon. The current expense budgets, capital expenditure budgets and the capital facility programs of the Authority shall be deemed not to be regulations or

adjudications for purposes of chapter thirty A of the General Laws. The Authority shall consult in the preparation of its capital facility programs for the sewer and waterworks systems with the advisory board and the executive office of environmental affairs, and may consult with other agencies of federal, state and local government concerned with the programs of the Authority. Proposed capital facility programs and capital expenditure budgets for said systems shall be submitted to the advisory board for such consultation no less than sixty days prior to adoption or revision by the Authority. The Authority shall prepare a written response to reports respecting its finances submitted to it by the advisory board which response shall state the basis for any substantial divergence between the actions of the Authority and the recommendations contained in such reports of the advisory board. The Authority shall file copies of its capital facility programs with the deputy commissioner of capital planning and operations in accordance with section thirty-nine J of chapter seven of the General Laws, shall prepare and file long-range capital facility development plans in accordance with section seven A of chapter twenty-nine of the General Laws, and shall be deemed to be a public agency subject to the recordkeeping and reporting requirements of paragraph c of section forty A of chapter seven of the General Laws.

(c) The sewer division of the Authority shall provide main sewer services for the area consisting of the following political subdivisions: Arlington, Ashland, Bedford, Belmont, Boston, Braintree, Brookline, Burlington, Cambridge, Canton, Chelsea, Dedham, Everett, Framingham, the north sewer district of Hingham, Holbrook, Lexington, Malden, Medford, Melrose, Milton, Natick, Needham, Newton, Norwood, Quincy, Randolph, Reading, Revere, Somerville, Stoneham, Stoughton, Wakefield, Walpole, Waltham, Watertown, Wellesley, Westwood, Weymouth, Wilmington, Winchester, Winthrop and Woburn. The Authority may also enter into (i) arrangements for a limited term with any person within or outside the foregoing political subdivisions to provide sewage treatment, collection or disposal services not involving extension of the sewer system; provided, however, that no such arrangement shall continue for a period in excess of six months, including any renewals thereof, unless it shall have been approved by the advisory board created by section twenty-three, and (ii) arrangements with any local body pursuant to which a sewage collection, treatment or disposal system or any part thereof shall become a part of the sewer system, provided that no extension of the sewer

system shall be made to local bodies not listed in the previous sentence unless the Authority shall obtain the approval of the advisory board and the department of environmental quality engineering, after the consideration of feasible alternatives to such extension, and the Authority shall find (1) the safe capacity of the sewer system as extended will be sufficient to meet necessary wet weather demand, (2) all feasible actions have been taken and shall continue to be taken by any local body to which the system is extended to minimize infiltration and inflow, and (3) an industrial pretreatment program is in effect within any such local body in accordance with applicable laws and regulations. Any local body within the limits of which any main sewer under the control of the Authority is situated shall connect its local sewers with such main sewers subject to the direction, control and regulation of the Authority and the Authority may also connect private sewers with such main sewers under such terms and conditions as the Authority may prescribe. Notwithstanding the foregoing, no new local body will be added to the sewer service area without prior approval of the governor and the general court.

(d) The waterworks division of the Authority shall provide water for local water systems of the following political subdivisions: Arlington, Belmont, Boston, Brookline, Cambridge, Canton, Chelsea, Chicopee, Clinton, Dedham, Everett, Framingham, Leominster, Lexington, Lynn, Lynnfield Water District, Malden, Marblehead, Marlborough, Medford, Melrose, Milton, Nahant, Needham, Newton, Northborough, Norwood, Peabody, Quincy, Revere, Saugus, Somerville, Southborough, South Hadley Water District No. 1, Stoneham, Swampscott, Wakefield, Waltham, Watertown, Wellesley, Weston, Wilbraham, Winchester, Winthrop, Woburn and Worcester. The provisions of special acts and contracts in effect on January first, nineteen hundred and eighty-four under which water is supplied by the MDC water system shall continue in full force and effect under the respective terms thereof, subject to all rights of the Authority as successor to the metropolitan district commission. Continuation of delivery of water to local water systems supplied on a contractual basis on the effective date of this act upon the expiration of such contractual obligations, service to be supplied under willingness-to-service contracts on the effective date of this act and new communities entering the system, shall be made to the foregoing political subdivision on such reasonable terms and charges as the Authority may determine, provided that in each such instance the Authority shall find: (1) the safe yield to the watershed system, only on

service of the division, is sufficient to meet projected demand; provided, however, that a local body receiving water on a contractual basis as of the effective date of this act which meets the requirements of having no local water supply capable of being developed under the provisions of clause (3), in this subsection, shall not be denied such continuation; (2) no existing or potential water supply source for the local body has been abandoned unless the department of environmental quality engineering has declared that the source is unfit for drinking and cannot be economically restored for drinking purposes; (3) a water management plan has been adopted after approval by the water resources commission established by section eight A of chapter twenty-one A of the General Laws; (4) effective demand management measures have been established, including but not limited to the establishment of a leak detection and other appropriate water system rehabilitation program; (5) a local water supply source feasible for development has not been identified by the local body or the department of environmental quality engineering; and (6) a water use survey has been completed which identifies all users in the area of the local body that consume in excess of twenty million gallons per year. Any provision for supply of water under special act in effect on the effective date of this act, and any contract for the supply of water by the metropolitan district commission in effect on the effective date of this act which does not provide for a specific term may be terminated by the authority on or after, but not before, the fifth anniversary of the effective date of this act, in which case continuation of service shall thereafter be governed by the provisions of the preceding sentence. Subject to the approval of the advisory board established by section twenty-three and regulatory bodies within the executive office of environmental affairs with jurisdiction in the matter as a result of other general or special laws applicable to the authority, the authority may extend the waterworks system to additional local bodies on such reasonable terms as the authority may determine; provided, however, that in each instance the authority shall find: (1) the safe yield of the watershed system, only on the service of the division, is sufficient to meet such new projected demand; (2) no existing or potential water supply source for the local body has been abandoned unless the department of environmental quality engineering has declared that the source is unfit for drinking and cannot be economically restored for drinking purposes; (3) a water management plan has been adopted after approval by the water resources commission established by

section eight A of chapter twenty-one A of the General Laws; (4) effective demand management measures have been established including, but not limited to, the establishment of a leak detection and other appropriate water system rehabilitation programs; (5) a local water supply source feasible for development has not been identified by the local body or the department of environmental quality engineering; and (6) a water use survey has been completed which identifies all users in the area of the local body that consume in excess of twenty million gallons per year; and provided further that no new local body will be added to the water service area without prior approval of the governor and the general court. Connections to the water system shall be under the direction and control of the Authority, provided, however, that water shall be delivered by the Authority under sufficient pressure for use without local pumping, unless delivered in some other manner by agreement. The Authority may also enter into arrangements not involving the extension of the waterworks system to provide the delivery of water to any local body, any institution, agency or facility of the commonwealth or any institution, agency or facility of the United States provided (1) that as a condition to the entry into such arrangement the Authority shall find and declare that the demand on the waterworks system from the Authority's performance of the arrangement is not reasonably expected to jeopardize the delivery of water provided by the Authority to the inhabitants of the political subdivisions listed in the first sentence of this paragraph, after taking account of other water supply resources reasonably available to such political subdivisions, and (2) no such arrangement shall extend for a period in excess of six months, including any renewals thereof, unless it shall have been approved by said advisory board. Subject to the provisions of section forty of chapter forty of the General Laws, in case of any emergency as determined by the department of environmental quality engineering, any local body deriving its water supply in whole or in part from the waterworks system may provide a connection and a supply of water to any adjoining local body having an inadequate water supply of water subject to reasonable provision for payment to the Authority and for approval by the Authority of the means of connection. No local body or private water company shall abandon any local water supply source and substitute for it water from the waterworks system unless the department of environmental quality engineering has declared that the water supply source abandoned or to be abandoned is unfit for drinking and cannot be economically restored for

drinking purposes. Any local body which derives all or part of its water supply on the effective date of this act under a contract with the metropolitan district commission which contains a minimum purchase requirement may elect, upon such reasonable prior notice as the authority may require, to terminate such minimum purchase requirement.

(e) In order to attain its statutory purposes to promote water conservation, protect the adequacy of a pure water supply, reduce wastewater flow and improve environmental quality, the authority is authorized and directed: (i) to promote water conservation and environmental quality through its schedule of charges, to which and, without limiting the generality of the foregoing and the generality of the regulatory powers conferred on the authority under section six and the powers to establish charges under section ten, the authority shall prepare and publish no later than the second anniversary of the effective date of this act a comprehensive study of environmental, social and economic impacts of its charges to serve as a basis for the implementation of charges fully consistent with the objectives of this act, and shall consult with the division for the determination of such environmental impacts; (ii) to construct public programs of education and technical assistance in support of water conservation and environmental quality objectives; (iii) to terminate as promptly as feasible, and thereafter not to institute or reinstitute, any charge or charges for the waterworks system by which the unit price decreases as volume of use increases; (iv) to identify and consider demand management and water conservation solutions to new and existing water consumption requirements and, wherever reasonably practicable, to implement such solutions in preference to solutions which would increase water withdrawals from any natural or artificial source of ground or surface waters; and (v) to prepare and submit an annual report to the governor, the general court and the water resources commission stating the means by which future water requirements of the Authority's service areas within the safe yield of the watershed system of the division, pursuant to any such determination made by the division.

Nothing contained in paragraphs (c) and (d) shall require a city or town not presently served by the Authority to accept an extension of the Authority's sewer and water works without a majority vote by the city council of a city or a majority vote of town meeting of a town.

(f) Officers or agents of the Authority may enter at reasonable times any public or private property, connected directly or indirectly to the sewer sys-

tem. For purposes of (i) inspecting, sampling and gauging any sewage, drainage, substances or wastes conveyed through such a connection, (ii) inspecting any monitoring equipment or procedures maintained with respect to discharges thereof, (iii) examining any records or matters pertaining to such discharges or to the operation of pretreatment works, and (iv) determining any matter of compliance with requirements under this act. Officers or agents of the Authority may also enter any public or private property supplied directly or indirectly by the waterworks system for purposes of (i) inspecting water works or fixtures, (ii) determining water usage, (iii) preventing improper use or waste of water, (iv) determining any matter of compliance with requirements under this act. Entry upon private property for purposes of this section shall be made (i) under warrant, including, without limitation, warrants for administrative inspection upon a probable cause showing of a reasonable and valid public interest in the effective enforcement of matters governed by this act in accordance with a general plan justifying administrative inspection of premises specified in the application for such warrant, or (ii) under procedures for warrantless entry of non-residential premises during business hours conducted by administrative inspectors in accordance with regulations which the Authority shall adopt to further the urgent governmental interest in environmental protection committed to the Authority. This section shall not limit entries and administrative inspections, including seizures of property, without a warrant (1) with the consent of the owner or person in charge of the premises, (2) in situations presenting imminent danger to health or safety, (3) in any other exceptional or emergency circumstances where time or opportunity to apply for a warrant is lacking, or (4) in all other situations in which a warrant is not required by the laws and constitutions of the Commonwealth or the United States.

(g) The Authority shall be deemed to be a public agency for purposes of and shall be subject to, sections forty-four A to forty-four H, inclusive, of chapter one hundred and forty-nine of the General Laws, section thirty-nine M of chapter thirty of the General Laws and sections thirty B to thirty I, inclusive, of chapter seven of the General Laws, and shall comply with requirements applicable to an independent public authority for publication of contract information in the central register established under section twenty A of chapter nine of the General Laws. The Authority shall not be subject to supervision under section twenty-two of chapter seven of the General

Laws, but may enter into agreements under section twenty-two A and twenty-two B of chapter seven of the General Laws and in all respects not governed by general or special laws expressly made applicable to the Authority shall adhere to good business practices to be determined by the Authority in its procurement of equipment, materials, property, supplies and services.

(h) In operating its systems and performing its projects in relation thereto, the Authority may construct and maintain buildings, machinery, roads, conduits, pipes, sewers and aqueducts, may alter grades or directions of watercourses and may construct aqueducts over or under any watercourse, railroad, pipeline, cable, or way, restoring the same to as good order and condition as practicable. Persons who sustain injury in their property by the entry upon or use thereof by the Authority under this section may recover their damages under chapter seventy-nine of the General Laws, unless a lawful alternative provision for such damages is otherwise made by the Authority.

(i) The Authority and the division shall be subject to the provisions of, and to regulation by the department of environmental quality engineering and any division thereof as may be duly exercised over an independent public authority of the commonwealth pursuant to sections fourteen, twenty-seven, thirty A to thirty-four C, inclusive, thirty-seven, forty and forty-two to forty-six A, inclusive, of chapter twenty-one A of the General Laws, sections four, six, seven and nine of chapter twenty-one C of the General Laws, sections three, six, seven, nine and ten of chapter twenty-one E of the General Laws, chapter ninety-one of the General Laws and sections two B, two C, five E, five G, seventeen, thirty-one D, one hundred and forty-two A to one hundred and forty-two E, inclusive, one hundred and fifty A, one hundred and fifty B, one hundred and sixty, one hundred and sixty A, one hundred and sixty B, one hundred and sixty-two and one hundred and sixty-five of chapter one hundred and eleven of the General Laws.

The Authority shall be deemed to be a public entity under section twenty-six A of chapter twenty-one of the General Laws and shall be eligible for grants and other assistance under the Massachusetts Clean water Act and any other program of federal or state assistance for waterworks, wastewater treatment or related purposes to the most liberal extent of the eligibility of an agency of the commonwealth, a political subdivision of the commonwealth, or any other public body of the commonwealth. The Authority shall be subject to section four A and sections eight A to eight F, inclusive, of chapter twenty-

one A of the General Laws, sections three, four, seven, ten and fourteen of chapter twenty-one D of the General Laws and sections one hundred and forty-two A to one hundred and forty-two E, inclusive, of chapter one hundred and eleven of the General Laws. The Authority shall be deemed to be an agency of the commonwealth for purposes of, and shall be subject to, section one hundred and fifty A and section one hundred and fifty B of chapter one hundred and eleven of the General Laws. Without limitation on other public health or environmental regulation over the Authority exercisable pursuant to other law without conflict with the Authority's purpose of serving critical public needs on a broad geographic basis as a public instrumentality of the commonwealth, the Authority also shall be subject to sections forty and forty A of chapter one hundred and thirty-one of the General Laws, to sections sixty-one to sixty-two H, inclusive, of chapter thirty of the General Laws and to sections twenty-six C and twenty-seven C of chapter nine of the General Laws. The Authority and the division shall be subject to sections thirteen to sixteen, inclusive, and section eighteen of chapter one hundred and thirty-two A of the General Laws. In accordance with section eleven D of chapter twelve of the General Laws, the Authority shall give written notice to the attorney general of all adjudicatory proceedings or public hearings conducted by it or to which it is a party in which damage to the environment is or may be at issue.

(j) All powers to be exercised under this act, including powers to be exercised by the division of watersheds management and the Authority, shall be subject to provisions regulating interbasin transfers as set forth in sections eight B to eight D, inclusive, of chapter twenty-one of the General Laws, including without limitation all approvals therein required to be obtained from the water resources commission and to provisions for the protection of scenic and recreational rivers and streams as set forth in section seventeen B of chapter twenty-one of the General Laws and in section two of chapter nine hundred and eighty-four of the acts of nineteen hundred and seventy-three, including without limitation all approvals respecting water diversions therein required to be obtained from the general court.

(k) Notwithstanding any rule or regulation or any provision of any general or special law to the contrary, the commissioner of public safety or his designee in the division of inspection of the department of public safety shall have exclusive jurisdiction and responsibility with respect to projects or operations of the Authority for inspection, approvals, enforcement, permits

ting and measure authorized or required by chapter one hundred and forty-three of the General Laws or any regulation adopted pursuant to chapter eight hundred and two of the acts of nineteen hundred and seventy-two.

(f) Notwithstanding the provisions of chapters one hundred and thirty-four and one hundred and forty-seven of the General Laws, if money, goods or other property which has been abandoned, mislaid or lost comes into the possession of the Authority and remains unclaimed in its possession for a period of one hundred and twenty days, the Authority may sell the same, excepting money so unclaimed, at public auction after notice of such sale has been published in a newspaper published in the city or town where such sale is to take place. The net proceeds of such sale, after deducting the cost of storage and the expenses of such sale, and all money so unclaimed, shall become revenues of the Authority. If in the opinion of the Authority any such property in the possession of the Authority and unclaimed in its possession for a period of one hundred and twenty days is of the value of one hundred and fifty dollars or less, the Authority may donate the same to a charitable organization.

(g) The powers of the Authority shall include the powers to be exercised by procedures, regulations, incentive and other charges, and licenses and permits to require persons who are users of the sewer system or of any tributary system to the sewer system to comply with applicable provisions of federal and state law respecting (i) toxic waste and pretreatment standards, (ii) construction, operation and maintenance of pretreatment facilities, (iii) monitoring, recordkeeping and reporting of discharges to the sewer system, (iv) notification of proposed new discharges or substantial changes in discharges to the sewer system, and (v) user charges in accordance with law, and to regulate the nature and quantity of discharge of sewage, drainage, substances or wastes by any person into the sewer system or any sewer tributary thereto. The procedures, regulations, charges and licensing, permitting and other programs of the Authority shall also reasonably provide for abatement, reduction and prevention of infiltration and inflow of ground waters, surface waters or storm waters into the sewer system; and the Authority is directed to continue and is authorized in its discretion reasonably to require the extension and improvement of separation of sewers for the collection, treatment, and disposal of human and industrial sewage from drainage for surface or storm water. The procedures, regulations, charges, licensing, permitting and other programs

of the Authority shall also reasonably provide for leak detection and repair, for programs for water conservation, including, without limiting the generality thereof, water use limitations in time of drought or other emergency, and may also reasonably provide for installation and maintenance of meters by any person and the metering of the use made by any user or group of users of the sewer system or any system tributary thereto or by any user of water derived from the waterworks system. The Authority may regulate and require the taking of a permit from the Authority with respect to any building, construction, excavation or crossing within an easement or other property interest held by the Authority or in the immediate vicinity of a water or sewer main or other facility which is operated by the Authority. The provisions of this paragraph shall not limit the generality of the regulatory powers conferred on the Authority under section six and the powers to establish charges under section ten.

(g) The Authority is authorized to take all necessary action, consistent with applicable special or general law, administrative regulation or practice, to secure any federal assistance which is or may become available to the Authority, the commonwealth or any local body for any of the sewer or waterworks purposes of this act. If any federal law, administrative regulation or practice requires any action relating to such federal assistance to be taken by any department or instrumentality of the commonwealth other than the Authority, such other department or instrumentality is authorized to take all such action, including without limitation filing applications for assistance, supervising the expenditure of federal grants or loans and making any determinations and certifications necessary or appropriate to the foregoing, and the Authority is authorized to take all action necessary to permit such department or instrumentality to comply with all federal requirements, such action; provided, however, that no such action or federal requirement shall be taken which is inconsistent with the provisions of any special or general law or the provisions of this act relating to waterworks, sewer works, wastewater treatment or water supply.

(h) Any person who without lawful authority injures, destroys or interferes with any property held or used by the Authority for the purpose of constructing, operating or maintaining the waterworks system or the sewer system, shall be subject to a criminal fine of not more than fifty thousand dollars, or imprisonment for not more than one year; provided, however, that in cases

of continuing violation, such maximum fine may be ten thousand dollars per day for each day such violation occurs or continues. Notwithstanding any limitation on criminal penalties set forth in the preceding sentence, any person convicted of the wanton or malicious destruction of or injury to any property of the Authority used in the construction, operation or maintenance of the waterworks system or the sewer system shall also be liable in tort to the Authority for triple the amount of damages thereby caused. The provisions of this paragraph are in addition to and not in limitation of the Authority's power to adopt, issue and enforce regulations, permits and licenses and establish penalties for violation thereof and to set charges and provide for the collection and enforcement thereof.

SECTION 9. (a) Except for the acquisition of any water supply source or right to a water source, which right is vested exclusively in the division of watershed management, the Authority may acquire from any person real property or any interest or rights therein, deemed by it essential for operation, improvement or enlargement of its sewer and waterworks systems by eminent domain in accordance with the provisions of chapter seventy-nine or chapter eighty A of the General Laws subject to the prior approval of the governor and the general court; provided, however, that for takings related to main, trunk, intercepting and connecting sewers and pumping stations incidental thereto, and combined overflow treatment works and pumping stations incidental thereto, said prior approval shall not be required, and provided, that no property or rights, including water rights, comprising the watershed system shall be taken; and, provided further, that no property or rights already appropriated to public use shall be so taken without the prior approval of the governor and general court. Notwithstanding the provisions of this act, no taking by eminent domain of water or water rights shall be made by the Authority. No taking shall be made for a project of the Authority which requires regulatory approvals with respect to matters to which the Authority is subject under paragraph (a) of section eight until the Authority has certified that the Authority reasonably believes all such approvals will be obtained by the Authority in ordinary course. Before a taking is made by the Authority for which damages may be recovered under chapter seventy-nine, the Authority shall file with the secretary of the commonwealth security to the satisfaction of said secretary for the payment of all damages and costs which may be awarded for the property taken, and if, upon petition of the owner and notice to the

Authority, any security then appears to have become insufficient, the secretary shall require the Authority to give further security to the satisfaction of the secretary.

(b) The Authority may order the removal or relocation of any conduits, pipes, wires, poles or other property located in public ways or places, or in or upon private lands, which it deems to interfere with the laying out, construction, maintenance or operation of the sewer and waterworks systems, subject to the ability of the proper authorities lawfully to grant or otherwise make provisions for new locations for any such structure so removed or relocated. Such orders, to the extent specified therein, shall be deemed a revocation of the right or license to maintain such conduits, pipes, wires, poles or other property in such public ways or places, and the private owner of any such structures in public ways or places shall comply with such orders. If any such owner shall fail to comply with any such order of the Authority relating to any such structure in public ways and places within a reasonable time, to be fixed in the order, the Authority may discontinue and remove such conduits, pipes, wires, poles or other property, and may relocate the same, and the cost of such discontinuance, removal or relocation shall be repaid to the Authority by the owner. No such discontinuance, removal or relocation shall entitle the owner of the property thus affected to any damages on account thereof. Any such structure in or upon private lands may be removed and relocated by the owner thereof, the reasonable expense thereof shall be repaid to him by the Authority.

(c) Subject to the prior approval of the governor and general court, and to applicable provisions of the laws and constitution of the commonwealth, including without limiting the generality of the foregoing, article ninety-seven of the Amendments to the Constitution of the Commonwealth, doctrines of law concerned with diversion of lands devoted to public use to other inconsistent public use the Authority may, at public or private sale, sell, lease or dispose of any interest in real property of the sewer and waterworks systems acquired by the Authority pursuant to paragraphs (b) and (c) of section four, upon compliance with the following conditions: (i) such property or interest in property is no longer needed for the construction, maintenance or operation of the sewer and waterworks systems; (ii) such disposition shall not impair the maintenance and operation of said systems; and (iii) the Authority shall so notify the deputy commissioner of capital plan-

ning and operations, and said deputy commissioner shall proceed in accordance with section forty F of chapter seven of the General Laws.

(d) Real and personal property, or interests or rights therein, may be acquired by the Authority after July first, nineteen hundred and eighty-five, if deemed essential for operation, improvement or enlargement of its sewer and waterworks systems. The Authority may, at public or private sale, dispose of said real property, or interest or rights therein no longer needed for the construction, maintenance or operation of the sewer and waterworks systems, subject to prior approval of the governor and the general court, provided, however, that such disposition shall not impair the maintenance and operation of said systems.

Any interest in real property so disposed of may be conveyed, subject to such easements, reservations and restrictions as the Authority deems necessary to secure the maintenance and operation of said systems, by deed duly executed by the Authority, with or without warranty. In any case where the Authority may dispose of such property, it may convey it and receive in complete or partial consideration therefor other property or interests therein, for the purpose of the sewer and waterworks systems, the title of the same to be taken in the name of the Authority. The Authority shall give sixty days notice of the proposed lease or disposition of any such property or any such interest in real property to the chief executive officer, as defined in section twenty-three, of any city or town in which the real property is located and to the deputy commissioner of capital planning and operations. The Authority shall be deemed to be a public agency for purposes of and shall comply with sections forty J and forty K of chapter seven of the General Laws. The Authority also from time to time at public or private sale conducted in a commercially reasonable manner may sell or otherwise dispose of personal property of the Authority whether acquired pursuant to the provisions of paragraph (d) of section four or after the effective date of this act, which is no longer needed for the construction, maintenance or operation of said systems.

SECTION 10. (a) Said Authority shall establish and adjust charges which may be denominated as charges, fees, rates, assessments or otherwise as the Authority may reasonably determine, for services, facilities and commodities furnished or supplied by the Authority. The charges of the Authority shall be separately established in respect to the Authority's waterworks and sewer divisions and shall be fixed and adjusted so as to provide funds, in the

aggregate and separately, with respect to costs and operations allocable to each division, sufficient in each fiscal year with other revenues of Authority, if any, available therefor (i) to pay all current expenses, (ii) to pay all debt service on bonds of the Authority as the same becomes due and payable, (iii) to create and maintain all reserves reasonably required by any bond resolution, trust agreement or other agreement securing bonds of the Authority or as otherwise determined by the Authority to be necessary or desirable, (iv) to pay all costs of maintenance and replacement of the sewer and waterworks systems, and costs of improving, extending and enlarging said systems as determined by the Authority to be necessary or desirable, to be funded as current expenses in order to carry out the purposes of the Authority, (v) to provide for payments to the commonwealth for debt service as herein provided, and (vi) to pay or provide for all amounts which the Authority may be obligated to pay or provide for by any law or contract including any bond resolution, trust agreement or other agreement securing bonds of the Authority and including any amount to be repaid to the commonwealth to reimburse the commonwealth for debt service paid by the commonwealth on a bond issued under paragraph (f) of section five. The charges of the Authority for delivery of water and for sewage collection, disposal and treatment services, shall be established as charges of general application to be borne by the local body utilizing such services and shall be established at a level sufficient to meet the revenue requirements of the Authority as provided in this paragraph, notwithstanding the provisions of any other general or special law to the contrary.

Said Authority's charges of general application shall be adopted, and on not less than an annual basis reviewed and if necessary revised, in accordance with procedures for notice and a hearing as provided by chapter thirty A of the General Laws, and notice of such hearing shall also be delivered at least twenty-one days in advance of the hearing date, to the advisory board and published in newspapers of general circulation in cities and towns receiving services. No later than the date of such publication, the Authority shall transmit to the advisory board and reasonably provide for other public review for the period preceding the hearing including (i) its most recent financial statements, (ii) its current expense budgets and capital expenditure budgets for the current fiscal year and, if then adopted or proposed, for the next fiscal year, and (iii) the proposed charges on which the Authority seeks

public comment. Prior to any public hearing as provided herein, the Authority shall comply with requests of the ombudsman acting under paragraph (j) of section twenty-three for the inspection of the books, records, financial statements and documents of the Authority relating to the proposed charges. In establishing its charges the Authority shall continue provisions for subsidization of water charges to which any local body is entitled in accordance with contract or other lawful obligations assumed by the Authority as successor to the metropolitan district commission, to the same extent as the metropolitan district commission would be bound to provide such subsidization if such charges had continued to be established by the metropolitan district commission. The Authority may also provide for charges of special application to any person for compensation for special or temporary services entered into in accordance with paragraphs (c) and (d) of section eight. Charges of special application shall not be regulations for purposes of chapter thirty A of the General Laws and may be computed in the Authority's discretion with respect to the services or commodities provided on the basis of the Authority's costs, or the value of the benefits conferred on the payer, or market value. The charges of the Authority, whether of general or special application, shall not be subject to supervision or regulation by any office, department, division, commission, board, bureau or agency of the commonwealth or any of its political subdivisions. The charges of the Authority, whether of general or special application, shall give account to (i) actual costs to the Authority of providing services, (ii) reasonable provisions in the nature of incentives and disincentives to promote conservation of resources and protection of the environment and to improve the protection, maintenance and improvement of the sewer and waterworks systems and of sewer and water systems of local bodies, (iii) reasonable provisions reflecting the contribution made by local bodies through expenditures including, but not limited to, leak detection, system rehabilitation and other water management programs, sewerage inflow/infiltration reduction projects, separation of combined sewers and other projects which improve the overall efficiency of the Authority's and local bodies' service delivery, (iv) reasonable provisions to reflect respective local bodies' disproportionate historic investment in the sewer and waterworks systems and in the former metropolitan district commission sewer system and metropolitan district commission water system used in the services delivered by the Authority, (v) reasonable interest charges and penalties for

delinquency in payment.

(b) Said Authority, in such form as it determines, may certify to each local body to which services, facilities or commodities of the Authority are delivered or furnished the amounts of the Authority's charges to such local body. The Authority may adopt and enforce procedures and regulations for the purposes of making, collecting and enforcing its charges which, without limiting the generality of the foregoing or the general powers with respect to its regulations and charges provided or by any other general or special law, may impose requirements on any person including, but not limited to, local bodies and officers and boards thereof or subordinate thereto, respecting (i) the furnishing, to the Authority information reasonably deemed pertinent by the Authority concerning the volume and character of services, facilities and commodities furnished or supplied by the Authority, and the nature and quantity of services, facilities and commodities furnished to or to be furnished to or used by or to be used by users, and (ii) reasonable schedules for remittance to the Authority of its charges. In all actions pursuant to this paragraph, the Authority shall give due regard to local bodies' systems of billing and collection of water and sewer charges in order to avoid unnecessary expense and to achieve management and fiscal efficiency consistent with the attainment of the Authority's statutory objectives. Local bodies, and officers and boards thereof or subordinate thereto, shall cooperate with the Authority to effect the prompt, accurate and efficient billing and collection of the Authority's charges. In the event any local body, which has received a certification of the Authority's charges, shall fail to pay the same to the Authority when due after demand by the Authority, the Authority may without any requirement of election of remedy provided that there is no duplication of recovery, (i) certify to the state treasurer the amount owing to the Authority by said local body, whereupon the state treasurer shall promptly pay over to the Authority any amount otherwise certified to the state treasurer for payment to the local body as receipts, distributions, reimbursements and assistance under sections eighteen A, eighteen B, eighteen C and eighteen D of chapter fifty-eight of the General Laws and any other amount for local reimbursement, grant or assistance programs entitled to be received by such local body until such time as any deficiency in the local body's payment of charges to the Authority shall be set off by such payments from the state treasurer, and (ii) recover from the local body in an action in superior court the amount

of such unpaid amount together with such cost interest and other actual damages the Authority shall have sustained from the failure or refusal of the local body to pay over said amount. Any amount paid to the Authority by the state treasurer as a set off under the provisions of the next preceding sentence which is later determined, upon audit, to be in excess of the actual amount of charges, interest and damages due to the Authority, shall, upon demand of the local body, be repaid by the Authority to the local body.

SECTION 11. (a) Debt for borrowed money incurred by the commonwealth in respect to the metropolitan district commission sewer system, or any predecessor thereof, shall not be assumed by said Authority; provided, however, that on and after July first, nineteen hundred and eighty-five, the Authority shall make payments to the state treasurer from the sewer division to reimburse the commonwealth for all payments made on and after July first, nineteen hundred and eighty-five by the commonwealth on account of principal, including sinking fund installments and interest on all bonds of the commonwealth issued for purposes of the former metropolitan district commission sewer system. The amount of such reimbursements, and the date on which the amounts to be reimbursed shall become due, shall be certified to the Authority by the treasurer, for each fiscal year no later than two hundred and eighty days prior to the commencement thereof; provided, however, that such amounts due on July first, nineteen hundred and eighty-five shall be certified ninety days prior thereto. The obligation of the Authority to make the reimbursements herein required shall be subordinate in every respect to the Authority's obligation for debt service on its bonds.

(b) Debt for borrowed money incurred by the commonwealth in respect to the metropolitan district commission water system, or any predecessor thereof, shall not be assumed by the Authority; provided, however, that on or after July first, nineteen hundred and eighty-five, the Authority shall make payments to the state treasurer from the water division of the Authority to reimburse the commonwealth for one-half of all payments made on or after July first, nineteen hundred and eighty-five by the commonwealth on account of principal, including sinking fund installments and interest on all bonds of the commonwealth issued for purposes of the former metropolitan district commission water system. The amount of such reimbursements, and the date on which such amounts to be reimbursed shall become due, shall be certified to the Authority by the treasurer, for each fiscal year no later than two hundred

and eighty days prior to the commencement thereof; provided, however, that such amounts due on July first, nineteen hundred and eighty-five shall be certified ninety days prior thereto. The obligation of the Authority to make the reimbursements herein required shall be subordinate in every respect to the Authority's obligations for debt service on its bonds.

SECTION 12. (a) Said Authority may provide, by resolution of its board of directors, for the issuance from time to time of bonds of the Authority for any of its corporate purposes and for reimbursement, pursuant to section forty-two, to the commonwealth for costs associated with the division, or for the borrowing of money in anticipation of the issuance of such bonds. Bonds issued by the Authority may be issued as general obligations of the Authority or as special obligations payable solely for particular revenues or funds as may be provided for in any bond resolution, trust agreement or other agreement securing bonds. The Authority may also provide by resolution of its board of directors for the issuance from time to time of temporary notes in anticipation of the revenues to be collected or received by the Authority, or in anticipation of the receipt of other grants or aid. The issue of such notes shall be governed by the provisions of this act relating to the issue of bonds of the Authority other than such temporary notes as the same may be applicable; provided, however, that notes issued in anticipation of revenues shall mature no later than one year from their respective dates and notes issued in anticipation of grants, or other aid and renewals thereof, shall mature not later than six months after the expected date of receipt of such grant or aid. The aggregate principal amount of all bonds issued under the authority of this act, shall not exceed the sum of six hundred million dollars outstanding at any one time, provided, however, that bonds for the payment of redemption of which, either at or prior to maturity, refunding bonds shall have been issued, shall be excluded in the computation of outstanding bonds.

(b) Bonds of each issue shall be dated, may bear interest at such rate or rates, including rates variable from time to time as determined by an index, banker's loan rate or other method determined by the Authority, and shall mature or otherwise be payable at such time or times, as may be determined by the Authority, and may be made redeemable before maturity at the option of the Authority or the holder thereof at such price or prices and under such terms and conditions as may be fixed by the Authority. Prior to the initial issuance of each series of bonds the Authority shall advise the advisory board

created by section twenty-three and the executive office for administration and finance of the timing and terms thereof and the Authority shall also communicate such information to the finance advisory board. The Authority shall determine the form of bonds, including interest coupons, if any, to be attached thereto, and the manner of execution of such bonds, and shall fix the denomination or denominations of such bonds and the place or places of payment of principal, redemption premium, if any, and interest, which may be at any bank or trust company within or without the commonwealth. In case any officer whose signature or a facsimile of whose signature shall appear on any bonds or coupons shall cease to be such officer before the delivery thereof, such signature or facsimile shall nevertheless be valid and sufficient for all purposes as if such officer had remained in office until delivery. The Authority may provide for authentication of bonds by a trustee, fiscal agent, registrar or transfer agent. Bonds may be issued in bearer or in registered form, or both, and, if notes, may be made payable to bearer or to order, as the Authority may determine, and provision may be made for the registration of any coupon bonds as to principal alone and also as to both principal and interest, for the reconversion into coupon bonds of bonds registered as to both principal and interest and for the interchange of bonds registered as to both principal and interest and for the interchange of registered and coupon bonds. The Authority may also establish and maintain a system of registration for any bonds whereby the name of the registered owner, the rights evidenced by the bonds, the transfer of the bonds and such rights and other similar matters are recorded in books or other records maintained by or on behalf of the Authority, and no instrument evidencing such bond or rights need be delivered to the registered owner by the Authority. A copy of the books or other records of the Authority pertaining to any bonds registered under such registration system certified by an authorized officer of the Authority or by the agent of the Authority maintaining such system shall be admissible in any proceeding without further authentication. The Authority may adopt regulations with respect to the operation of such system. The board of directors may by resolution delegate to any director or directors or officer or officers of the Authority or any combination thereof the power to determine any of the matters set forth in this section. In the discretion of the Authority, bonds of the Authority may be issued with such terms as will cause the interest thereon to be subject to federal income taxation. The Authority may sell its bonds in the manner

either at public or private sale, for the price, at the rate or rates of interest, or at discount in lieu of interest, as it may determine will best effect the purposes of this act.

(c) Said Authority may issue interim receipts or temporary bonds, with or without coupons, exchangeable for definitive bonds when the bonds shall have been executed and are available for delivery. The Authority may also provide for replacement of any bonds which shall have become mutilated or shall have been destroyed or lost. The Authority, by itself or through such agent as it may select, may purchase and invite offers to tender for purchase any bonds of the Authority at any time outstanding, provided, however, that no such purchase by the Authority shall be made at a price, exclusive of accrued interest, if any, exceeding the principal amount thereof or, if greater, the redemption price of such bonds when next reasonable at the option of the Authority, and may resell any bonds so purchased in such manner and for such price as it may determine will best effect the purposes of this act.

(d) In the discretion of the board of directors, any bonds issued hereunder may be secured by a bond resolution or trust agreement or other agreement in such form and executed in such manner as may be determined by the board of directors between the Authority and the purchasers or holders of such bonds or between the Authority and a corporate trustee which may be any trust company or bank having the powers of a trust company within or without the Commonwealth. Such bond resolution, trust agreement or other agreement may pledge or assign, in whole or in part, the revenues and funds held or to be received by the Authority, and any contract or other rights to receive the same, whether then existing or thereafter coming into existance and whether then held or thereafter acquired by the Authority, and the proceeds thereof. Such bond resolution, trust agreement or other agreement may contain such provisions for protecting and enforcing the rights, security and remedies of the bondholders as may be reasonable and proper, including, without limiting the generality of the foregoing, provisions defining defaults and providing for remedies in the event thereof which may include the acceleration of maturities, restrictions on the individual right of action by bondholders and covenants setting forth the duties of and limitations on the Authority in relation to the acquisition, construction, improvement, enlargement, alteration, equipping, furnishing, maintenance, use, operation, repair, insurance and disposition of the sewer and waterworks systems, the custody, safeguard-

(d) investment and substitution of moneys, the issue of additional or refunding bonds, the fixing, revision, charging and collection of charges, the use of any surplus bond proceeds, the establishment of reserves and the making and amending of contracts; provided, however, that the Authority shall not mortgage its real property or fixed assets to secure its bonds.

(e) In the discretion of the board of directors any bonds issued under authority of this act may be issued by the Authority in the form of lines of credit or other banking arrangements under terms and conditions, not inconsistent with this act, and under such agreements with the purchasers or makers thereof or any agent or other representative of such purchasers or makers as the board of directors may determine to be in the best interests of the Authority. In addition to other security provided herein or otherwise by law, bonds issued by the Authority under any provision of this act may be secured, in whole or in part, by financial guarantees, by insurance or by letters of credit issued to the Authority or a trustee or any other person, by any bank, trust company, insurance or surety company or other financial institution, within or without the Commonwealth, and the Authority may pledge or assign, in whole or in part, the revenues and funds held or to be received by the Authority, and any contract or other rights to receive the same, whether then existing or thereafter coming into existence and whether then held or thereafter acquired by the Authority, and the proceeds thereof, as security for such guarantees or insurance or for the reimbursement by the Authority to any issuer of such letter of credit of any payments made under such letter of credit.

(f) It shall be lawful for any bank or trust company to act as a depository or trustee of the proceeds of bonds, revenues or other moneys under a bond resolution, trust agreement or other agreement of the Authority and to furnish indemnification and to provide security as may be required by the Authority. Any pledge of revenues and other funds made by the Authority under the provisions of this act shall be valid and binding and shall be deemed continuously perfected for the purposes of the uniform commercial code and other laws when such pledge is made. The revenues and funds, rights therein and thereto and proceeds so pledged and then held or thereafter acquired or received by the Authority shall immediately be subject to the lien of such pledge without any physical delivery or segregation thereof or further act, and the lien of any such pledge shall be valid and binding against all parties

having claims of any kind in tort, contract or otherwise against the Authority, whether or not such parties have notice thereof. The bond resolution, trust agreement or any other agreement by which a pledge is created need not be filed or recorded to perfect such pledge except in the records of the Authority and no filing need be made under the uniform commercial code. It is hereby declared that any pledge or assignment made under the authority of this act is an exercise of the political and governmental powers of the Authority, and revenues or funds, contract or other rights to receive the same and the proceeds thereof which are subject to the lien of a pledge or assignment created under this act shall not be applied to any purposes not permitted by such pledge or assignment.

(g) Any holder of a bond issued by the Authority under the provisions of the act or of any of the coupons appertaining thereto and any trustee or other representative under a bond resolution, trust agreement or other agreement securing the same, except to the extent the rights herein given may be restricted by the resolution, trust agreement or other agreement, may bring suit upon the bonds or coupons and may, either at law or in equity, by suit, action, mandamus, or other proceeding for legal or equitable relief, including proceedings for the appointment of a receiver to take possession and control of the business and properties of the Authority, to operate and maintain the same, to make any necessary repairs, renewals and replacements in respect thereof and to fix, revise and collect charges, protect and enforce any and all rights under the laws of the commonwealth or granted hereunder or under such bond resolution, trust agreement or other agreement, and may enforce and compel performance of all duties required by this act or by such bond resolution, trust agreement or other agreement, to be performed by the Authority or by any officer thereof.

(h) Before the issuance of any bonds of the Authority each member of the board of directors and each officer of the Authority charged with responsibility for the issuance thereof shall execute a surety bond conditioned on the faithful performance of the duties of the office of each such director and officer, in the sum of one hundred thousand dollars payable to the Authority, or, in lieu thereof, the Authority shall obtain a blanket bond in the same amount covering all such persons, and such bonds or bonds shall be filed in the office of the secretary of the commonwealth.

SECTION 13. Said Authority may issue refunding bonds for the purpose of

paying any of its bonds issued pursuant to this act at or prior to maturity or upon acceleration or redemption or purchase and retirement. Refunding bonds may be issued at such times at or prior to the maturity, redemption or purchase and retirement of the refunded bonds as the board of directors deems to be in the interest of said Authority. Refunding bonds may be issued in sufficient amounts to pay or provide for payment of the principal of the bonds being refunded, together with any redemption premium thereon, any interest or discount accrued or to accrue to the date of payment of such bonds, the costs of issuance of the refunding bonds, the expenses of paying, redeeming or purchasing the bonds being refunded, the costs of holding and investing proceeds of refunding bonds pending such payment, redemption or purchase and such reserves for debt service or other capital or current expenses from the proceeds of such refunding bonds as may be required by a bond resolution, trust agreement or other agreement securing bonds. The issue and sale of refunding bonds, the maturities and other details thereof, the security therefor, the rights of the holders thereof, and the rights, duties and obligations of the Authority in respect of the same shall be governed by the provisions of this act relating to the issue of bonds other than refunding bonds insofar as the same may be applicable.

SECTION 14. Bonds issued by said Authority are hereby made securities in which all public officers and agencies of the commonwealth and its political subdivisions, all insurance companies, trust companies in their commercial departments, savings banks, cooperative banks, banking associations, investment companies, executors, administrators, trustees and other fiduciaries may properly invest funds, including capital in their control or belonging to them. Such bonds are hereby made securities which may properly be deposited with and received by any state or municipal officer or any agency or political subdivision of the commonwealth for any purpose for which the deposit of bonds or obligations of the commonwealth or any political subdivision is now or may hereafter be authorized by law.

SECTION 15. Bonds may be issued under this act without obtaining the consent of any executive office, department, division, commission, board, bureau or agency of the commonwealth or any political subdivision thereof, and without any other proceedings or the happening of any condition or acts other than those proceedings, conditions or acts which are specifically required therefor, and the validity of and security for any bonds issued by the Authority

pursuant to this act shall not be affected by the existence or nonexistence of any such consent or other proceedings, conditions or acts. Provisions of this act relating to the preparation, adoption or approval of programs and budgets shall not affect the issue of bonds and bonds may be issued either before or after such preparation, adoption or approval.

SECTION 16. Bonds issued under the provisions of this act, excepting any notes or bonds guaranteed or issued by the commonwealth under paragraphs (e) or (f), respectively, of section five, shall not be deemed to be a debt or a pledge of the faith and credit of the commonwealth or of any of its political subdivisions, but shall be payable solely from the funds of the Authority from which they are made payable pursuant to this act. Bonds issued under the provisions of this act, excepting any notes or bonds guaranteed or issued by the commonwealth under paragraphs (e) or (f) of section five, shall recite that neither the commonwealth nor any political subdivisions thereof shall be obligated to pay the same and that neither the faith and credit nor the taxing power of the commonwealth or of any political subdivision thereof is pledged to the payment of the principal of or interest on such bonds. Further, every bond shall recite whether it is a general obligation of the Authority or a special obligation thereof payable solely from particular revenues or funds pledged to its payment. The aggregate principal amount of all bonds issued under the authority of this act shall not exceed the sum of six hundred million dollars outstanding, provided however, that bonds for the payment or redemption of which, either at or prior to maturity, refunding bonds shall have been issued shall be excluded in the computation of outstanding bonds.

SECTION 17. Notwithstanding any of the provisions of this act or any recitals in any bonds issued hereunder, all such bonds shall be deemed to be investment securities under the uniform commercial code.

SECTION 18. All moneys received pursuant to the provisions, whether as proceeds from the issue of bonds or as revenues or otherwise, shall be deemed to be trust funds to be held and applied solely as provided in this act.

SECTION 19. (a) Bonds issued by the Authority, their transfer and the income therefrom, including any profit made on the sale thereof, shall, at all times, be exempt from taxation by and within the commonwealth.

(b) The Authority shall not be required to pay any taxes, betterments, assessments or excises upon its income, existence, operation or property; provided, however, that so long as there is no revocation of the Authority

title to sewer and waterworks systems as provided for in section four. The Authority is authorized and directed to make payments in accordance with sections five B to five F, inclusive, of chapter fifty-nine of the General Laws.

SECTION 20. It is expressly contemplated by this act that the Authority, to the extent deemed by it to be necessary and convenient to achieve its purposes under this act and under such supervision from agencies of the commonwealth as is expressly authorized in this act, shall provide water and sewage collection, treatment and disposal services within its service area on an exclusive basis. It is intended that this section shall not (i) diminish the powers or responsibilities of local bodies, (ii) override other provisions of this act regulating the procedures for abandonment of local water supplies, (iii) limit the lawful exercise of any local body, subject to applicable approvals by the department of environmental quality engineering and the water resources commission, to continue to use any source of water used by it or to develop or reactivate any source of water to be used by it, or (iv) impose responsibility on the Authority for operation of the sewer and waterworks systems except as the Authority is charged with responsibility or may elect to exercise responsibility under other provisions of this act. In addition to and without limiting the generality of the foregoing, said Authority shall be a "local government" insofar as concerns immunity under sections (4), (4A) or (4C) of the Clayton Act; 15 U.S.C.A §§15, 15A, and 15C from damages, interest on damages, costs or attorneys fees for a local government, for any official or employee thereof acting in an official capacity or for a person against whom a claim is based on any official action directed by a local government or official or employee thereof acting in an official capacity.

SECTION 21. The Authority and its corporate existance shall continue until terminated by law; provided, however, that no such law shall take effect so long as said Authority shall have bonds outstanding unless adequate provision has been made for the payment or satisfaction thereof. Upon termination of the Authority, the title to all funds and other properties owned by it which remain after provision for the payment or satisfaction of all bonds of the Authority shall vest in the commonwealth. The obligations, costs and liabilities of the Authority shall be assumed by and imposed upon the commonwealth, and the funds of the authority retirement system shall be transferred to the treasurer and receiver general or to such other successor as the general court may designate, to be held for the exclusive use and benefit of the

members of the authority retirement system.

SECTION 22. (a) The Authority shall, at all times, keep full and accurate accounts of its receipts, expenditures, disbursements, assets and liabilities which shall be open to inspection by any officer or duly appointed agent of the commonwealth or the advisory board. Said Authority shall submit an annual report, in writing, to the governor, the president of the senate, the speaker of the house of representatives, the chairman of the senate committee on ways and means, the chairman of the house committee on ways and means and the advisory board. Said report shall include financial statements relating to the operations, properties, and capital facility expenditures, including costs of land acquisitions, of the Authority maintained in accordance with generally accepted accounting principles so far as applicable, beginning with the fiscal year of the Authority commencing July first, nineteen hundred and eighty-five, and audited by an independent certified public accountant firm.

(b) Not later than December thirty-first, nineteen hundred and eighty-nine and every five years thereafter, the Authority shall submit to the governor, the president of the senate, the speaker of the house of representatives, the chairman of the senate committee on ways and means, the chairman of the house committee on ways and means and the advisory board a progress report on the Authority's attainment of its statutory purposes. Each such five-year progress report shall be prepared by the Authority with the assistance of an independent citizen panel which shall include persons selected by the Authority and approved by the advisory board who are experienced in environmental protection, civil engineering and public management and finance. Said reports shall include recommendations concerning the future activities of the Authority including, but not limited to, changes in the provisions of this act or the Authority's administrative procedures necessary or desirable for improving the delivery of services. The costs of preparing the reports of said Authority shall be provided for in the current expense budgets of said Authority.

SECTION 23. (a) There shall be an advisory board to the Authority consisting of (1) a voting representative of each of the following cities and towns: Arlington, Ashland, Bedford, Belmont, Boston, Braintree, Brookline, Burlington, Cambridge, Canton, Chelsea, Chicopee, Clinton, Dedham, Everett, Framingham, Hingham, Holbrook, Leominster, Lexington, Lynn, Lynnfield, Malden, Marblehead, Marlborough, Medford, Melrose, Milton, Nahant, Natick, Needham, Newton, Northborough, Norwood, Peabody, Quincy, Randolph, Reading, Revere,

Saugus, Somerville, South Hadley, Southborough, Stoneham, Stoughton, Swampscott, Tewksbury, Topsfield, Walpole, Waltham, Watertown, Wellesley, Weston, Westwood, Weymouth, Wilbraham, Wilmington, Winchester, Winthrop, Woburn and Worcester and (ii) a voting representative of the metropolitan area planning council to be designated by the board of the council and six persons to be appointed by the governor who shall be voting representatives from the following categories: (1) one person who represents the interests of persons and communities in the Connecticut river basin area, (2) one person who represents the interests of persons and communities in the Quabbin and ware watershed area, (3) one person who represents the interests of persons and communities in the Wachusett watershed area, provided, however, that no such person appointed for categories (1), (2) or (3) shall live in a community which has a representation on the advisory board by virtue of clause (i) of this sentence, (4) one person with skill and expertise in matters relating to environmental protection, and (5) two persons qualified by membership or affiliation in organizations directly concerned with the recreational or commercial uses of Boston harbor and who are further qualified by professional experience in an environmental or scientific discipline. The member of the advisory board representing a city or town shall consist of the chief executive officer thereof; provided, however, that any chief executive officer, by writing filed with the authority may appoint a permanent designee to serve in his stead as a member of said advisory board until the expiration of each term of office of the designating chief executive officer or the earlier vacancy of the office of the designating chief executive officer. For purposes of this section, the term "chief executive officer" shall mean the person designated as the chief executive officer under the provisions of a local charter of laws having the force of a charter, and otherwise the mayor in every city and the chairman of the board of selectmen or president of the town council, as the case may be, in every town. The members of said advisory board appointed by the governor shall serve coterminous with the governor.

(b) The total voting strength of the advisory board shall be one hundred votes, of which ninety-five votes shall be divided on a fractional basis in the manner hereafter provided among the cities and towns listed in clause (i) of the first sentence of paragraph (a) of this section and five votes shall be divided on an equal fractional basis among the representatives provided for in clause (ii) of said sentence. The fractional vote of the representative of

each city or town shall be determined on an annual basis by the Authority on a weighted basis by dividing a reasonable estimate of the charges for the Authority's services to users in that city or town by a reasonable estimate of the charges for the Authority's services to all users in all such cities and towns. For each year the determination of votes shall be certified to the advisory board by the Authority, provided, however, that within five days of the effective date of this act the executive office of environmental affairs shall prepare an interim voting value based on the most recent available annual records of the costs of water and sewer services of the metropolitan district commission, which interim voting value shall be conclusive upon the advisory board until July first, nineteen hundred and eighty-six. Said advisory board may act at a regular periodic meeting called in accordance with its by-laws or at a special meeting called by the Authority or by representatives of fifteen or more members of the advisory board. Except as specially provided in paragraph (e), a quorum of the advisory board shall consist of representatives who hold a total voting strength of fifty or more of the votes of the advisory board, and the advisory board may act, except as otherwise provided in paragraph (e), by the affirmative casting of a majority of the votes represented in the quorum. The advisory board shall be deemed to be a governmental body for purposes of, and shall be subject to, section eleven A and one-half of chapter thirty A of the General Laws and shall also be subject to section ten of chapter sixty-six of the General Laws.

(c) For the conduct of its business said advisory board shall adopt and may revise and amend by-laws. Said advisory board shall annually elect a chairperson, a vice chairperson and a secretary and such other officers as said advisory board may determine. Each officer shall serve until a successor is chosen and qualified. Each officer may be removed by vote of the advisory board with or without cause. In the event of a vacancy, said board shall fill the vacancy for the unexpired term. Each member of said advisory board shall serve without compensation but may be reimbursed, as an expense of said advisory board, for all reasonable expenses incurred in the performance of its duties as approved by the advisory board.

(d) The purposes of the advisory board shall be as follows:

(i) to appoint three members of the board of directors of the Authority, in the manner hereafter provided and in section three;

(ii) to consider matters committed to the approval of the advisory board

under paragraphs (c) and (d) of section eight;

(iii) to make recommendations to the Authority on annual current expense expenditure budgets submitted to the advisory board in accordance with paragraph (b) of section eight;

(iv) to make recommendations to the Authority on its charges;

(v) to hold hearings, which may be held jointly with the Authority at the discretion of the advisory board and said Authority, on matters relating to said Authority;

(vi) to review the annual report of the Authority and to prepare comments thereon to the Authority and the governor, and to make such examinations of the reports on the Authority's records and affairs as the advisory board deems appropriate; and

(vii) to make recommendations to the governor and the general court respecting the Authority and its programs. The advisory board shall have all powers necessary or convenient to carry out and effectuate the foregoing purposes.

(e) Three members of the board of directors of the Authority shall be appointed by the advisory board. Members of the board of directors so appointed may also be members of said advisory board. Said advisory board shall appoint successor members, which successor members shall replace those members of the board of directors appointed by the advisory board whose terms have expired or otherwise terminated. With respect to appointment of any member of the board of directors the advisory board shall act only if there is a special quorum consisting of a majority of those persons who are voting members of the advisory board and only by an affirmative vote of the majority of the members present, each voting member voting one unweighted vote, and in this instance the total voting strength of the advisory board shall equal the total number of persons entitled to vote.

(f) Within thirty days of receiving any proposed current expense budget of the Authority or within fifteen days of receiving any proposed amended expense budget of the Authority, the advisory board shall hold a public hearing on matters relating to such budget for the purpose of ascertaining, for subsequent report to the Authority if necessary, the views of the public thereon.

(g) The advisory board shall provide for the appointment of an executive who, with assistance from such staff and consultants as the advisory board may

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authorize and appoint, shall act for and in the name of the advisory board in the following respects:

(i) preparation of analysis for the advisory board of the Authority's current expense budgets, capital expenditure budgets and capital programs and their effect on the charges of said Authority;

(ii) representation of the advisory board to said Authority in all matters relating to said Authority's programs, operations, finances and charges.

(iii) reporting regularly to the advisory board on the activities of the commissioner and other staff of the advisory board, on the affairs of the Authority, and on the effect of the Authority's program and operations on the costs to consumers of water and sewer services; and

(iv) exercising such other duties and responsibilities consistent with the powers of the advisory board as the advisory board may assign from time to time.

Reports of the commissioner, after acceptance by the advisory board, shall be made available to the public.

(b) The advisory board may incur expenses, not to exceed thirty-five thousand dollars in the fiscal year commencing July first, nineteen hundred and eighty-four and not to exceed one hundred thousand dollars annually thereafter for expenses authorized under paragraph (c) and for personnel and office expenses. Such expenses shall be paid by the Authority in the fiscal year commencing July first, nineteen hundred and eighty-four from amounts appropriated to the Authority by the commonwealth, and thereafter shall be provided for in current expense budgets of the Authority. After the fifth anniversary of the transfer date, the maximum level of advisory board expenses may be increased from time to time upon the review and approval by the Authority of the justification for such increases submitted by the advisory board.

SECTION 24. The superior court department of the trial court shall have jurisdiction to enforce rights and duties created by the provisions of this act, and on complaint of the Authority may restrain violations of the Authority's regulations and otherwise enforce by any appropriate remedy, including without limiting the generality of the foregoing, injunctive relief, the regulations, licenses, permits, orders, penalties and charges of the Authority. Penalties and charges established by or under authorization of this act shall be collected for the account of the Authority and paid over to the Authority. Except for rights of action expressly conferred upon the Authority, to provide

sion of this act shall create private rights of action in enforcement proceedings.

Notwithstanding any provision of the Massachusetts Water Resources Authority Act or of any special or general law to the contrary, the supreme judicial court shall have original and exclusive jurisdiction of all state actions in which the Authority is a defendant and water pollution is an issue. The attorney general shall appear on behalf of the Authority in any action involving water pollution in which the Authority is a plaintiff or defendant, and he shall do so to the same extent as is required by section three of chapter twelve when appearing on behalf of a state agency.

SECTION 25. The provisions of this act shall be deemed to provide an additional, alternative and complete method for accomplishing the purposes of this act, and shall be deemed and construed to be supplemental and additional to, and not in derogation of, powers conferred upon the Authority and others by law; provided, however, that insofar as the provisions of this act are inconsistent with the provisions of any general or special law, administrative order or regulation, the provisions of this act shall be controlling.

SECTION 26. (a) All local bodies and all public agencies, instrumentalities, commissions and authorities of the commonwealth are hereby authorized and empowered to undertake activities, programs and projects in conjunction with the Authority in furtherance of the purposes of this act, including without limiting the generality of the foregoing, to join in investigations and studies, and to grant applications and applications for project approvals.

(b) Except with respect to real property acquired or held for purposes described in Article XCVII of the Amendments to the Constitution, all local bodies and all public agencies, instrumentalities, commissions and authorities of the commonwealth, are hereby authorized and empowered to lease, and grant or convey to the Authority upon such terms and conditions as the proper authorities of such public bodies, public agencies, instrumentalities, commissions and authorities of the commonwealth may deem appropriate and without the necessity of any action or formality other than the regular and formal actions of said public bodies, agencies, instrumentalities, commissions and authorities of the commonwealth any interest in any real or personal property which may be necessary or convenient to effect the purposes of the sewer and waterworks of the Authority.

(c) All general and special laws relating to water and sewer services

local bodies shall be interpreted and construed liberally so as to effectuate the purposes and provisions of this act and the objectives of the Authority.

(d) For any local body in the service areas of the Authority, local officials lawfully so charged shall for their local body have the charge and control of the respective water, waterworks and sewer works owned and used by said local body and not in the ownership, possession and control of the Authority. Said local officials so charged shall have for their local body the charge and control of the water sources owned and used by said local body. Subject to the exercise of powers of the Authority provided for in this act or otherwise, and to other applicable law, said local officials shall manage and improve municipal water works and sewer works, extend the pipes and other works as they may deem expedient, keep the pipes, fixtures and other works under their charge in good condition and repair, and prescribe for local water and sewer systems, rules and regulations under other law, provided, however, that without limiting the generality of the foregoing, written notice of rules and regulations relating to local sewer and delivery of water services proposed for adoption by any local body shall, except in an emergency, be given to the Authority not less than sixty days prior to adoption.

(e) Notwithstanding any provision of general or special law to the contrary, a local body may (i) for furnishing water supply, establish rates, fees or other charges on a flat rate per volume of water consumed or on an ascending unit rate based on quantity of water consumed; and may (ii) provide for furnishing water supply and sewer services in its charges or through abatement proceedings conducted in accordance with its regulations for assurance of service to persons who by reason of age, infirmity or poverty are unable to pay the charges of the local body otherwise applicable, provided that the aggregate liability of the local body for the total amounts owed to the Authority under section ten shall be in no way diminished thereby. Without limiting the generality of regulatory powers and powers with respect to charges established elsewhere in this act, the Authority may require that each local body adopt and administer user charges for local water services and sewage services which shall be in compliance with (i) all applicable requirements of state and federal law, and (ii) policies of the Authority directed to conservation of water, elimination of infiltration and inflow of surface water and ground water into the sewage collection, treatment and disposal system, and removal or pre-treatment of industrial wastes. No action shall be taken by the

Authority, however, in violation of clause . of section .0 of Article I of the United States Constitution which shall substantially impair a contractual expectation entered into prior to the effective date of this act by a local body pursuant to a power granted it by law to issue revenue bonds.

(f) If, except in circumstances of temporary emergency, any volume of water from the watersheds system of the division shall be directed under any provision of law for delivery of water purposes which are not subject to the charges of the Authority provided for in section ten, the Authority shall receive compensation from the user or users thereof in lieu of revenues which otherwise would have been received by the Authority in respect of the use of such water.

SECTION 27. Notwithstanding the provisions of any general or special law or provision of this act to the contrary, no officer of the Authority shall enter into any consent decree in any court of any jurisdiction without prior approval of the governor and the general court.

SECTION 28. The provisions of chapter twelve A of the General Laws shall apply to the Authority.

SECTION 29. The provisions of this act are severable, and if any provision hereof shall be held invalid in any circumstance, such invalidity shall not affect any other provisions or circumstances. This act shall be construed in all respects so as to meet any constitutional requirements. In carrying out the purposes and provisions of this act, all steps shall be taken which are necessary to meet constitutional requirements.

SECTION 30. On July first, nineteen hundred and eighty-five, the metropolitan sewerage district and the metropolitan water district shall be dissolved and the following sections of chapter ninety-two of the General Laws are hereby repealed: Sections one, one A, two, three, four, five, five A, five B, six, six A, six B, seven, eight, eight A, nine, ten to thirty-two, inclusive, seventy-seven, seventy-eight, eighty-one, eighty-two, and one hundred and two.

SECTION 31. Chapter 10 of the General Laws is hereby amended by striking out section 11 and inserting in place thereof the following section:-

Section 11. He shall annually as soon after the prorogation of the general court as is practicable, publish a statement showing the assessments for interest, principal, and maintenance requirements due from towns in the metropolitan parks districts; a statement showing the several classes of taxes

incurred for metropolitan district purposes, and the share of the towns in the district is measured by the basis used in computing the assessments mentioned in the first statement; and such other statements, if any, as he may deem advisable. The expense of printing shall be apportioned and paid from the maintenance fund of the parks districts.

SECTION 32. The second paragraph of section 33B of chapter 21 of the General Laws is hereby amended by striking out, in line 2, the words, "the metropolitan district commission" and inserting in place thereof the words:- the Massachusetts Water Resources Authority.

SECTION 33. Said chapter 21 of the General Laws is hereby amended by striking out section 40 and inserting in place thereof the following section:-

Section 40. The director, his authorized representative, or personnel of the division of watershed management in the metropolitan district commission or of the Massachusetts Water Resources Authority may enter at reasonable times any property, public or private, for the purpose of investigating or inspecting any condition relating to the discharge or possible discharge of pollutants and may make such tests as may be necessary to determine the existence and nature of such discharge; provided, however, that personnel of said division may investigate or inspect only such conditions as affect the watershed system under the care and control of said division, and provided, further, that personnel of the Massachusetts Water Resources Authority may investigate or inspect only such conditions as affect the sewer and waterworks systems under the care and control of said Authority. He may inspect any monitoring equipment or procedure required by the terms of a permit issued under section forty-three. The director or his authorized representative may examine any records pertaining to operation of treatment works, and any records required to be kept by the terms of a permit issued under said section forty-three.

SECTION 34. Section fifteen of chapter twenty-one A of the General Laws is hereby repealed.

SECTION 35. Section 38 of chapter 40 of the General Laws is hereby amended by striking out the third paragraph thereof and inserting in place thereof the following paragraph:-

Nothing in this section shall be construed as authorizing any city, town or political subdivision which derives any part of its water supply from the Massachusetts Water Resources Authority, except in case of emergency, to use

for water in contravention of any provision of the Massachusetts Water Resources Authority Act, and no such city, town, political subdivision nor any water company therein shall purchase water, except in case of emergency, from any municipality without written permission to do so by the said Authority.

SECTION 36. Chapter forty of the General Laws is hereby amended by striking out section forty and inserting in place thereof the following:-

Section 40. The division of watershed management of the metropolitan district commission in cities and towns supplied water by the Massachusetts Water Resources Authority, the city council in other cities, the selectmen or water commissioners in other towns, water commissioners of water supply and fire and water districts, officers having control of county institutions having water works, heads of state departments having control of state institutions having water works, hereinafter described as officers having control of such an institution, and water companies supplying any communities in the commonwealth, in cases of emergency, may, on behalf of their respective bodies politic or corporate, take by eminent domain under chapter seventy-nine the right to draw water from any stream, pond or reservoir or from ground sources of supply by means of driven, artesian or other wells not already appropriated to uses of a municipal or other public water supply, or may purchase water from the Massachusetts Water Resources Authority, any other water supply district, fire and water district or any city, town or water company, or county or state institution having water works, for a period of not more than six months in any years in quantities necessary to relieve the emergency; but no such taking or purchase shall be made until after the department of environmental quality engineering has certified that an emergency exists and has approved the water as a proper source of water supply and unless and until, in the case of towns and water supply and fire and water districts, the selectmen or water commissioners have first been authorized so to take or purchase by a vote of the voters at a town meeting or a district meeting, as the case may be, or, in the case of water companies, said companies have first been authorized in writing by said department, and unless and until notice of such taking, including a copy of plans and specifications, has been given to the city council or to the board of selectmen, as the case may be, by certified mail at least ten days prior thereto. The proper authority as aforesaid may also take by eminent domain under said chapter seventy-nine the right to use any land for the time necessary to use such water; provided, that, in the case of such a taking by

a water company, said department shall first prescribe the limits within which such rights shall be taken. The vote of a city council or of the voters of a town or of a water supply or fire and water district or the action of county or state officers as aforesaid or of the metropolitan district commission and the written authorization of said department of environmental quality engineering to a water company to make or authorize such taking or purchase as aforesaid shall be conclusive evidence of the existence of the emergency. Any water supply district or fire and water district and any city, town or water company or the aforesaid officers having control of any county or state institution having water works may, for a period of not more than six months in any year, sell to the Massachusetts Water Resources Authority, to any city, town, water supply or fire and water district, or water company, or to any county or state institution having water works, such quantities of water as may be available at the time, and the approval of said department of environmental quality engineering shall be conclusive evidence that such quantities are safely available for sale. In such emergencies the said parties interested may agree to install for the purpose temporary pipes and other works in any city or town; provided, that the installation or repair of such pipes or other works in or along any highway shall be done with the least possible hindrance to public travel, and shall be subject to the direction and approval of the officers or departments having charge of the maintenance of said highways.

SECTION 37. Section 24 of chapter 40B of the General Laws is hereby amended by inserting after the word "commission", in line 7, the words:- the chairman of the board of directors of the Massachusetts Water Resources Authority.

SECTION 38. Chapter 59 of the General Laws is hereby amended by striking out section 5D and inserting in place thereof the following section:-

Section 5D. Property held by a city, town or district, including property held by or for the watershed system of the division of watershed management of the metropolitan district commission, and the waterworks system of the Massachusetts Water Resources Authority, as successors to the metropolitan water district, pursuant to the provisions of the Massachusetts Water Resources Authority Act, in another city or town for the purpose of a water supply, the protection of its sources or a sewage disposal, or of a public airport is yielding no rent, shall not be liable to taxation therein; but the city, town or district so holding it shall annually on July first, pay to the city or

town in which such property is located an amount equal to that which such city or town would receive in taxes upon the average of the assessed taxable valuation of the land, which shall not include buildings or other structures except in the case of land taken for the purpose of protecting the sources of an existing water supply, for the three years last preceding the acquisition thereof, the valuation for each year being reduced by all abatements thereon. Payments made by the division of watershed management of said commission and by the metropolitan water and sewer authority pursuant to the provisions of this section for the year when a city or town shall have made a general revaluation of all its real property for purposes of taxation shall not be less than payment made to said city or town for the year immediately preceding the general revaluation. Whenever a city or town in which such land is located shall have made a general revaluation of all its real property for purposes of taxation, the valuation of such land for the purpose of payment authorized by this section shall be determined by the commissioner of revenue as of January first, between January first and June first, in the year succeeding such revaluation and in every fifth year thereafter, so that the payment with respect to such land shall remain substantially the same as that made prior to such revaluation. The city, town or district owning such land or the division of watershed management of said commission and the metropolitan water and sewer authority, if aggrieved by the determination of the commissioner, may within six months after written notice thereof appeal to the appellate tax board. Any part of such land or buildings from which any revenue in the nature of rent is received shall be subject to taxation. Revenue received for the use of such areas of land within the property so said for the purpose of a public airport as are used for the take-off and landing of aircraft, including runways and taxi strips, or for the use of buildings on such property which are used as a terminal or administration building or for housing, servicing and repairing aircraft, shall not be deemed to be rent or revenue in the nature of rent within the meaning of this paragraph.

If such land is part of a larger tract which has been assessed as a whole, its assessed valuation in any year shall be taken to be that proportional part of the valuation of the whole tract which the value of the land so acquired, exclusive of buildings, bore in such year to the value of the whole tract.

SECTION 39. Said chapter 59 is hereby further amended by striking out section 5E and inserting in place thereof the following section:-

Section 5E. The assessors of a city or town where land is acquired by such other city, town or district for water supply or sewage disposal or for a public airport shall, within one year after such acquisition, determine the average valuation of such land under section five O and certify the amount so determined to such other city, town or district. The mayor or selectmen, the commissioners or prudential committee of a district, or the division of watershed management of the metropolitan district commission or the Massachusetts Water Resources Authority, within six months after receipt of said certificate, any appeal from such determination to the appellate tax board; and upon the approval of said board shall determine the valuation in the manner provided in the preceding section, and section sixty-five, so far as applicable, shall govern such appeal.

If land within any city or town shall have been taken from it for said purposes, and for any one of the three years prior to the taking shall have been used for any public purpose, and for that reason no taxes have been assessed thereon, the city or town and the board or officer having charge of the land so taken may within six years after such taking agree as to the value of the land upon which the annual payment is to be made as aforesaid from the time of the taking, and if they cannot agree the board or officer shall notify the city or town thereof, and thereupon the value shall be determined by the appellate tax board under said section sixty-five, and said notice shall be deemed to be the notice referred to in said section sixty-five. This section and section five O shall apply to property held for the purposes of the watershed system of said division and the waterworks system of said Authority, except property situated in Ashland, Boylston, Holden, Houghton, Sterling or West Boylston, but shall apply only to property acquired by a city, town or district, prior to January first, nineteen hundred and forty-six, including land or property acquired for water supply purposes prior to such date by the metropolitan district commission, or a predecessor entity thereof and comprising any or all of the watersheds system of said division or waterworks system of said Authority pursuant to the provisions of the Massachusetts Water Resources Authority Act.

SECTION 40. Said chapter 59 is hereby further amended by striking out section 5F and inserting in place thereof the following section:-

Section 5F. Land acquired on or after January first, nineteen hundred and forty-six, by a municipality or a district including land held by or for the

waterworks system of the division of waterworks management and by or for the waterworks system of the Massachusetts Water Resources Authority, its successors to the metropolitan water district, and held on January first in any year for any public purpose by such municipality, in this section referred to as the holding municipality, or by such district, if such land is located in a municipality other than such holding municipality, or, in the case of land so acquired and held by a district, in a municipality other than the municipality or municipalities in which the district lies or which constitute the district, shall, with all buildings and other things erected thereon or affixed thereto, be exempt from taxation for the next following fiscal year except as hereinafter otherwise provided; such holding municipality or district shall, on July first of such year, pay to the municipality in which such land is located the amount which would be assessable for the next following fiscal year upon a valuation equal to the average of the assessed taxable valuations of the land and all buildings and other things erected thereon or affixed thereto on the three assessment dates next preceding the acquisition of the land, the assessed valuation for each assessment date being reduced by all abatements, if any. If land subject to this section was not separately assessed or was exempt from taxation on any of said assessment dates, the fair cash value of the land and all buildings and other things erected thereon or affixed thereto on such assessment date shall for the purposes of this section be deemed to be the assessed valuation thereof on such date. Payments made by said division or said authority pursuant to the provisions of this section for the year when a city or town shall have made a general revaluation of all its real property for purposes of taxation shall not be less than payments made to said city or town for the year immediately preceding the general revaluation. Whenever a city or town in which such land is located shall have made a general revaluation of all its real property for purposes of taxation, the valuation of such land for the purpose of payments authorized by this section shall be determined by the commissioner of revenue as of January first, between January first, and June first, in the year succeeding such general revaluation and in every fifth year thereafter. The division of watersheds management of the metropolitan district commission or the Massachusetts Water Resources Authority or the holding municipality or district, if aggrieved by the determination of the commissioner, may within six months after written notice thereof appeal to the appellate tax board.

The assessors of the municipality where land subject to this section ... shall determine the average valuation in accordance with this section and certify such valuation to the holding municipality or district liable under this section. The division of watershed management of the metropolitan district commission, or the Massachusetts Water Resources Authority or the holding municipality or district, if aggrieved by such determination, may within three months, after such certification appeal to the appellate tax board, which shall determine the average valuation in accordance with this section.

If rent or any revenue in the nature of rent is received from any part of any real estate subject to this section, the party yielding such rent or revenue shall be subject to taxation. The tax shall be in addition to the amount payable under this section. Revenue received for the use of such portions of a public airport as are used for the taking-off and landing of aircraft, including runways, taxi and transition strips, or revenue received for the use of buildings on a public airport, which are actually and exclusively used for servicing and repairing airplanes, shall not be deemed to be rent or revenue in the nature of rent within the meaning of this paragraph.

SECTION 40A. Said chapter 59 of the General Laws is hereby further amended by inserting after section 5F the following section:-

Section 5G. The Massachusetts Water Resources Authority, on July first of each year, shall pay over to the division of watershed management, in amounts to be held in trust for payment to each city or town in which property of the Quabbin watershed and Ware River watershed is held by said division for purposes of a water supply or the protection of its sources, said amount to equal that which such city or town would receive in taxes upon the fair cash valuation of the land, which shall not include buildings or other structures except in the case of land taken for the purposes of protecting the sources of an existing water supply, the valuation for each year being reduced by all abatements thereon; provided that in no event shall any city or town receive an amount less than the payment received from the metropolitan district commission in the prior fiscal year. Said division shall pay such amounts without further appropriation to such city or town no later than August first of each year. Payments made by said Authority pursuant to the provisions of this section for the year when a city or town shall have made a general revaluation of all its real property for purposes of taxation shall not be less than payment made to said city or town for the year immediately preceding the genera...

revaluation. Whenever a city or town in which such land is located shall have made a general revaluation of all its real property for purposes of taxation, the valuation of such land for the purpose of payment authorized by this section shall be determined by the commissioner of revenue as of January first, between January first and June first, in the year succeeding such revaluation and in every fifth year thereafter, so that the payment with respect to such land shall remain substantially the same as that made prior to such revaluation; provided, however, that notwithstanding any other provisions of this section, the valuation of such lands, held by and for the division of watershed management, for the purpose of payments in lieu of taxes pursuant to this section, shall be determined by the commissioner of revenue in accordance with the provisions of sections thirteen to seventeen, inclusive, of chapter fifty-eight of the General Laws. In no event shall any city or town receive an amount less than the payment received from the metropolitan district commission in the prior fiscal year. The city, town, district, or authority owning such land, or said division of watershed management, if aggrieved by the determination of the commissioner, may within six months after written notice thereof appeal to the appellate tax board. Any part of such land or buildings from which any revenue in the nature of rent is received shall be subject to taxation.

If such land is part of a larger tract which has been assessed as a whole, its assessed valuation in any year shall be taken to be that proportional part of the value of the whole tract which the value of the land so assessed, exclusive of buildings, bore in such year to the value of the whole tract.

The Massachusetts Water Resources Authority on July first of each year shall pay over to the said division of watershed management, an amount to be held in trust for payments in lieu of taxes to the towns of Belchertown, Hardwick, New Salem, Pelham, Petersham and Ware for watershed lands of the Quabbin Reservation which were included in the former towns of Dana, Greenwich, Enfield, and Prescott. Said amounts to be held in trust as payments in lieu of taxes shall be made only on lands which are above the high water mark of the total acreage in question that is held by each community; provided, however, that the sum of said payments shall not be less than fifty thousand dollars annually, and shall be valued in accordance with the provisions of sections thirteen to seventeen, inclusive, of chapter fifty-eight. In no event shall any city or town receive an amount less than the payment received

from the metropolitan district commission in the prior fiscal year.

SECTION 41. Section 1 of chapter 83 of the General Laws is hereby amended by striking out the fifth paragraph, inserted by section 7 of chapter 778 of the acts of 1969, and inserting in place thereof the following paragraph:-

Any city, town or district may enter into agreements and contracts with the Massachusetts Water Resources Authority for the purpose of making connections and for the collection, treatment and disposal of sewage. No connection shall be made until the plans have been approved by the department of public health, and in instances within the sewer system of the Massachusetts Water Resources Authority until the contract and plans are approved by the said Authority. The word "district", as used in this paragraph, shall be construed, so far as apt, as it is defined in section one A of chapter forty.

SECTION 42. Chapter 92 of the General Laws is hereby amended by inserting after section 103 the following seventeen sections:-

Section 104. As used in this chapter, unless the context clearly indicates otherwise, the following words and phrases shall have the following meanings:

(a) "Advisory committee", the watershed system advisory committee for the appropriate watershed system.

(b) "Authority", the Massachusetts Water Resources Authority.

(c) "Bonds", any bonds, notes or other evidences of indebtedness.

(d) "Commission", the metropolitan district commission.

(e) "Division", division of watershed management.

(f) "Quabbin watershed advisory committee", the committee established by section one hundred and fourteen.

(g) "Revenues", all charges, reimbursements and other receipts derived by the division from operation of the watershed system and from all other activities or properties of the division including, without limiting the generality of the foregoing, proceeds of grants, gifts, investments, earnings and proceeds of insurance or condemnation.

(h) "Watershed system", (i) all real and personal property interests held by or on behalf of the commonwealth immediately prior to the effective date of this act in and for the metropolitan district commission water system which were part of or appurtenant to the Quabbin watershed, Quabbin Reservoir, Ware River watershed, Wachusett watershed, Wachusett Reservoir, North and South Sudbury watersheds, Sudbury Reservoir, Framingham Reservoirs 1, 2 and 3, Blue

Hills Reservoir, Bear Hill Reservoir, Foot Penn Reservoir, Wells Reservoir, Weston Reservoir, Norumbega Reservoir, Chestnut Hill Reservoir, including land, easements, buildings, structures, all equipment, machinery, vehicles, and appliances, improvements, water rights and rights in source of water supply and (ii) all enlargements and additions to the former metropolitan district commission water system acquired or constructed by the division for the purposes of the watersnea system, including land, easements, buildings, structures, equipment, machinery, vehicles, and appliances, improvements, reservoirs, dams, water rights and rights in sources of water supply, but excluding the waterworks system of the Authority;

Section 105. There shall be within the commission a division of watersnea management which shall be subject to the provisions of chapter seven hundred and thirty-seven of the acts of nineteen hundred and seventy-two. The division shall construct, maintain and operate a system of watersnea, reservoirs, water rights and rights in sources of water supply, shall supply thereby sufficient supply of pure water to the Massachusetts Water Resources Authority, and shall utilize and conserve said water and other natural resources in order to protect, preserve and enhance the environment of the commonwealth and to assure the availability of pure water for future generations. The division shall maintain a visitors' informational center at the Quabbin reservation.

Section 106. The division shall keep all bridges built by it across the reservoir upon the Nashua river safe, and shall have charge of, use, maintain and operate the same, and the commonwealth shall be exclusively responsible for all damages caused thereby or by any defect or want of repair therein. The commission shall have the exclusive right and control over all ponds, reservoirs and other property within the watersnea system, and may order all persons to keep from entering in, upon or over the waters thereof and the lands of the commonwealth or towns surrounding the same.

Section 107. The division shall have the exclusive right to and interest in hydroelectricity developed, generated, transmitted, distributed and sold as an incident to the operation of the watersnea and waterworks systems, may undertake such projects for such purposes and may authorize or contract with any other person otherwise lawfully qualified for such person to perform on reasonable terms and conditions such activities on behalf of or by arrangement with the division. The division may by lease, license or permit or on its own behalf provide for the installation and operation of electric and telecommuni-

cations transmission facilities within said systems, provided that such facilities shall not interfere with the proper operation of said systems and that no lease, license or permit for such purpose shall be made for a term of more than forty years. Subject to contractual requirements or other legal obligations in force on the effective date of this act, the division shall permit use of water in reservoirs for hydroelectric generation only when and to the extent that water is otherwise subject to release for reasons of sound management of the reservoirs for watershed, waterworks and stream flow purposes. All revenues derived from the activities authorized herein shall annually be remitted by the division to the state treasurer who shall deposit said revenues into the general fund.

Section 108. The department of environmental quality engineering shall make rules and regulations for the sanitary protection of the watershed systems of the division. The division shall cause such rules and regulations to be posted at or near the waters to which they respectively apply, and shall also cause the same to be published at least once in a newspaper published in the county where said waters are in whole or in part situated, and such posting and publication shall be sufficient notice to all persons. The sworn certificate of any member of the commission or of its secretary or such posting and publication, or of the posting or publication of an order made by the commission, shall be prima facie evidence thereof. A copy of any such rule, regulation or order, attested by any member of the commission or by its secretary, shall be prima facie evidence that said rule, regulation or order was made by department or by the commissioner, as the case may be.

Section 109. No person shall take or divert any water of the watershed system of the division, and no person shall corrupt, render impure, waste or improperly use any such water.

Section 110. The commission, and its employees designated for the purpose, shall enforce sections one hundred and four to one hundred and nine, inclusive, and the rules, regulations and orders made thereunder, and may enter into any building, and upon any land for the purpose of ascertaining whether sources of pollution there exist, and whether said sections and the rules, regulations and orders made as aforesaid are complied with.

Section 111. Any person who without lawful authority takes or diverts any water from any water supply within the watershed system of the division, or who corrupts or defiles any such water supply, or any source of such water

supply, or who injures, destroys or interferes with any property held or used by the Authority for the purpose of constructing, operating or maintaining the watershed system, or who violates or refuses to comply with any rule, regulation or order of the commission shall be subject to a criminal fine of not more than fifty thousand dollars or imprisonment for not more than one year; provided, however, that in cases of continuing violation, such maximum fine may be ten thousand dollars per day for each day such violation occurs or continues. Notwithstanding any limitation on criminal penalties set forth in the preceding sentence, any person convicted of the wanton or malicious destruction of or injury to any property used in the construction, operation or maintenance of the watershed system shall also be liable in tort to the commission for triple the amount of damages thereby caused. Any such fine or tort judgment shall be payable to the treasury of the commonwealth.

Section 112. The supreme judicial or superior court or any justice of either court shall, on petition of the commission or of any town or person interested, have jurisdiction in equity or otherwise to enforce sections one hundred and four to one hundred and eleven, inclusive, and any rule, regulation or order made thereunder, and to prevent any violation of said sections, rules, regulations or orders.

Section 113. The amount of fiscal year charges to the Authority representing one-half of the amounts appropriated for the division, debt service, the cost of capital improvements and other authorized charges of the division, less one-half of the amount of prior appropriations which may revert in accordance with law, less revenues received pursuant to section one hundred and seven, and less one-half the amounts paid in said fiscal year in trust by the Authority to the division for application to payments in lieu of taxes to be made by the division as provided in chapter fifty-nine of the General Laws, shall be determined annually by the comptroller as of the close of each fiscal year. The comptroller shall certify to the state treasurer the amount of such determination. The state treasurer shall in each year, beginning with that portion of calendar year nineteen hundred and eighty-five ending June thirtieth thereof, and each fiscal year thereafter beginning with the fiscal year nineteen hundred and eighty-six, assess to the Authority the amount of such determination. All sums received under the provisions of this section shall be paid into the state treasury.

Section 114. The commissioner is hereby authorized and directed to estab-

tion the Quabbin watershed advisory committee. The purpose of the committee shall be to advise the division on its policies and regulations regarding fishing, boating and other recreational activities and environmental, wildlife and habitat matters within the Quabbin watershed and the ware river watershed. The commissioner of the metropolitan district commission shall appoint to said advisory committee one person from three names nominated by each of the following organizations: the Massachusetts Council of Sportsmen, the Trout Unlimited, the Quabbin Fishermen's Association, the Worcester County League of Sportsmen, and the North Worcester County Quabbin Anglers. The Massachusetts Audubon Society, the New England Sierra Club and the Friends of Quabbin, Inc..

The commissioner shall also appoint one member from the general public.. The committee shall elect a chairperson from among its members, shall meet at least twice each calendar year, and may provide for alternate members to participate fully in its meetings whenever a regular member is unable to do so.

Section 115. The commissioner shall establish a watershed system advisory committee to advise the division on its policies and regulations regarding fishing, boating, and recreational activities and other environmental and wildlife matters in all of the watershed system areas under the control of the division, exclusive of the Quabbin watershed and the Ware river watershed. The committee shall consist of nine members, the qualifications of whom shall be determined by regulation by the commissioner. The committee shall elect a chairperson from among its members, shall meet at least twice each calendar year, and may provide for alternate members to participate fully in its meetings whenever a regular member is unable to do so.

Section 116. The commissioner shall at least once every five years, adopt after public hearing one or more periodic watershed management plans for the watershed system, which shall have been prepared with the participation of a professionally qualified forester and the appropriate watershed advisory committee. Any watershed management plan shall provide for, but need not be limited to, forestry, water yield assessment and recreational activities.. All forestry activities shall be subject to sections forty to forty-six, inclusive, of chapter one hundred and thirty-two of the General Laws.

Section 117. The commission, on behalf of the commonwealth, may take by eminent domain under chapter seventy-nine, or acquire by purchase or otherwise, lands in fee, easements, rights and other property that it deems necessary or desirable for carrying out the powers and duties conferred upon it by

the provisions of this chapter relative to the construction, maintenance and operation of the watershed system.

Section 118. The division shall be deemed to be a public entity under section twenty-six A of chapter twenty-one and shall be eligible for grants and other assistance under the Massachusetts Clean Water Act and other program of federal or state assistance for water supply, or related purposes.

Section 119. The commission shall have over the property of the watershed system all the general power and authority which it has over reservations so far as the same may be exercised consistently with the purposes for which the watershed system is maintained.

Section 120. The division shall not contract for services exclusive of contracts pursuant to provisions of any general or special act relating to forest cutting practices and for consultants performing only those services for the division which regular employees of the division are unable to perform, to accomplish any of its duties nor shall it enter into any interagency agreement for such purpose. Only officers and employees of the division shall perform its duties.

SECTION 43. Said chapter 92 is hereby further amended by striking out section 58 and inserting in place thereof the following section:-

Section 58. The amount of money required each year from every such town to meet the interest, sinking fund and serial or other bond requirements and the cost of maintenance for the metropolitan parks district as aforesaid, and the deficiency, if any, shall be estimated by the state treasurer, in accordance with the proportions determined as aforesaid by said commission, together with any amounts required by law to be specially assessed upon any particular town, and shall be included and make a part of the sum charged to such town, and shall be paid by such town into the state treasury as provided by section twenty of chapter fifty-nine. and the total of such assessments for the metropolitan parks district shall be limited in accordance with section twenty A of chapter fifty-nine by reference to the total of such assessments for the metropolitan parks districts in the preceding fiscal year.

SECTION 44. Said chapter 92 is hereby further amended by striking out section 60 and inserting in place thereof the following section:-

Section 60. The expense of the salaries of the metropolitan district commissioners, and such expense of maintenance of the general office and otherwise as the commission shall determine are not clearly or wholly incurred in

the maintenance work of either the metropolitan parks or boulevards shall be paid one-half as maintenance of reservations by the metropolitan parks district and one-half as maintenance of boulevards by the commonwealth. The state treasurer shall include the amounts required of each town or said district to meet said expenses in the sums assessed upon said towns and such amounts shall be paid by said towns to the commonwealth as provided by section twenty of chapter fifty-nine.

SECTION 45. Said chapter 92 is hereby further amended by striking out section 61 and inserting in place thereof the following section:-

Section 61. The police appointed or employed by the commission, except special police officers, shall have within the metropolitan parks district, within the cities and towns outside said district wherein property owned by or under management or control of the division of watershed management or the Massachusetts Water Resources Authority is situated, and within the waters of Boston harbor, including the coastline and coastal waters of the following cities and towns: Boston, Braintree, Cambridge, Chelsea, Cohasset, Everett, Hingham, Hull, Lynn, Marblehead, Milton, Nahant, Quincy, Revere, Saugus, Somerville, Swampscott, Weymouth, and Winthrop, all the powers of police officers and constables of towns of this commonwealth, except the power of serving and executing civil process, and may carry within the commonwealth such weapons as the said commission shall authorize. Such special police officers shall have all said powers, except in relation to the service of civil process and to the carrying of weapons, but only within said parks district.

The police appointed or employed by the commission, except special police officers, shall have exclusive jurisdiction on and within all property of the division of watershed management and the Massachusetts Water Resources Authority.

Nothing in this section shall affect the powers and jurisdiction of the state police, the metropolitan district commission police, the city of Boston police department, the division of fisheries, wildlife and recreational vehicles, or the police officers of the respective cities and towns within the Boston Harbor or within the commonwealth as of the effective date of this section.

SECTION 46. Said chapter 92 is hereby further amended by striking out section 68 and inserting in place thereof the following section:-

Section 68. The commission may join with any city, town or county in the

laying out, improvement, relocation, planning, repairing, maintaining and caring for any public way, bridge or stream which lies along or connects any reservation or boulevard owned or controlled by the commission, and in the expense of such work, and for such purposes or any of them, may make contribution to such city, town or county by a grant of land or rights in land, although the same be already a boulevard, or by payment of money for its portion of such expense.

SECTION 47. Said chapter 92 is hereby further amended by striking out section 97 and inserting in place thereof the following section:-

Section 97. If any apportionment for assessment upon the towns of the metropolitan parks district shall not have been finally determined by July first of any year, the last apportionment thereof shall remain in force for the purpose of assessment during such current year. Any difference between such apportionment when finally made by the commission for such year, and the pre-existing apportionment above referred to, shall be adjusted with such towns by the state treasurer in the assessment of the succeeding year by a deduction therefrom or an addition thereto, as may be required to give effect to the said apportionment when made as aforesaid.

SECTION 48. Said chapter 92 is hereby further amended by striking out section 98 and inserting in place thereof the following section:-

Section 98. Annual appropriations shall be made for the maintenance of reservations and boulevards and such appropriations shall be apportioned and assessed by the state treasurer as provided in this chapter. If the amount so assessed and collected, any balance remaining on November thirtieth in any year shall be carried forward to the next year, and shall be taken into account in making the assessments for that year.

SECTION 49. The first sentence of section 103 of said chapter 92, as appearing in section 1 of chapter 507 of the acts of 1982, is hereby amended by striking out the words "sewer, water", in lines 3 and 4, and inserting in place thereof the words:- watershed system.

SECTION 50. Chapter 111 of the General Laws is hereby amended by striking out section 174A and inserting in place thereof the following section:-

Section 174A. In order to preserve the purity and prevent the pollution of the waters of any reservoir, pond, and stream used for domestic water supply, by the watershed system of the division of watershed management of the metropolitan district commission, or by a town, water supply or fire and water

district, public institution or water company, said division, the public board or commission, or the governing board in case of a water company, having control of such waters may authorize one or more of its employees, so far as permissible under federal law, to take such reasonable means and use such appliances and weapons as, in the judgment of such public board or commission, or governing board, as the case may be, will prevent the defilement of said waters by gulls or terns, any provision of chapter one hundred and thirty-one to the contrary notwithstanding. Every such division, public board or commission and governing board shall keep an accurate account of all birds killed by its employees under authority of this section and submit such account to the director of the division of fisheries and wildlife of the department of fisheries, wildlife and recreational vehicles at such times and covering such periods as he may prescribe.

SECTION 51. The seventh paragraph of section 105 of chapter 120 of the General Laws, as appearing in section 220 of chapter 706 of the acts of 1975, is hereby amended by inserting after the word "engineering", in line 6, the following words:- Massachusetts Water Resources Authority.

SECTION 52. The eighth paragraph of section 105 of said chapter 120, as so appearing, is hereby amended by inserting after the word "commission", in line 2, the following words:- Massachusetts Water Resources Authority.

SECTION 53. The third paragraph of section 40A of chapter 131 of the General Laws, as appearing in chapter 782 of the acts of 1982, is hereby amended by inserting after the word "commission.", in line 6, the following words:- Massachusetts Water Resources Authority.

SECTION 54. The sixth paragraph of section 40A of said chapter 131, as so appearing, is hereby further amended by inserting after the word "commission", in line 15, the following words:- Massachusetts Water Resources Authority.

SECTION 55. Section 45 of said chapter 131, as appearing in section 1 of chapter 802 of the acts of 1967, is hereby amended by striking out, in lines 5 and 6, the words "or the first sentence of section seventeen of chapter ninety-two".

SECTION 56. The definition of "employer" or "public employer" in section 1 of chapter 150E of the General Laws, as most recently amended by chapter 484 of the acts of 1981 is hereby further amended by adding the following sentence:- In the case of employees of the Massachusetts Water Resources Authority, the employer shall mean the Massachusetts Water Resources

Authority.

SECTION 57. Section 73 of chapter 152 of the General Laws is hereby amended by striking out the first sentence, as most recently amended by section 19 of chapter 364 of the acts of 1983, and inserting in place thereof the following sentence:- Any person entitled under section sixty-nine to receive compensation from the commonwealth or from such county, city, town or district and any person entitled under section thirty-one, thirty-four, thirty-four A, thirty-five, thirty-five A or thirty-six to receive compensation from the Massachusetts Turnpike Authority or the Massachusetts Port Authority, the Blue Hills Regional Vocational School system, the Greater Lawrence Sanitary District, the Minuteman Regional Vocational Technical School District, the Massachusetts Water Resources Authority or any police officer of the Massachusetts Bay Transportation Authority so entitled to compensation under said sections and who is also entitled to a pension by reason of the same injury, shall elect whether he will receive such compensation or such pension, and shall not receive both, except in the manner and to the extent provided by section fourteen of chapter thirty-two.

SECTION 58. Section 5 of chapter 111 of the General Laws, as most recently amended by chapter 466 of the acts of 1975, is hereby further amended by inserting after the word "commission", the first time it appears in line 16, the following words:- the Massachusetts Water Resources Authority.

SECTION 59. Section 7 of chapter 731 of the acts of 1981 is hereby amended by inserting after the word "Authority,", in line 1, the following words:- the Massachusetts Water Resources Authority.

SECTION 60. Without limiting the generality of paragraph (d) of section eight of this act, special acts which shall continue to govern certain water supply arrangements include: chapter three hundred and forty-eight of the acts of nineteen hundred and twenty-three, as amended by chapter five hundred and ninety-two of the acts of nineteen hundred and fifty-eight, and chapter six hundred and forty-three of the acts of nineteen hundred and seventy-four, relating to water supply for the town of Clinton from the Wachusett Reservoir; chapter six hundred and fifty-six of the acts of nineteen hundred and twelve, relating to water supply for the town of Framingham, provided upon the expiration of agreements in effect on the effective date of this act, the terms and charges upon which such service shall be provided shall be determined in accordance with the provisions of paragraph (d) of section eight of this act;

chapter seventy-five of the acts of nineteen hundred and twenty-five with respect to water supply for the town of Sterling, chapter six hundred and forty-four of the acts of nineteen hundred and forty-one, relating to water supply for the town of Southborough; section eleven of chapter three hundred and seventy-five of the acts of nineteen hundred and twenty-six relating to water supply for the towns of Hubbardston, Barre, Oakham, Hardwick, New Braintree, Palmer and Ware from the Ware river; section twelve of chapter three hundred and seventy-five of the acts of nineteen hundred and twenty-six, as amended by chapter three hundred and forty of the acts of nineteen hundred and thirty-one and chapter six hundred and ninety-nine of the acts of nineteen hundred and forty-nine, relating to water supply for the city of Worcester, from the Quinsigamond river; section twenty-two of chapter three hundred and twenty-one of the acts of nineteen hundred and twenty-seven relating to water supply from the watershed of the Swift river; and section twenty-two of chapter four hundred and eighty-eight of the acts of eighteen hundred and ninety-five with respect to water supply from the south branch of the Nashua River, as amended by section two of chapter three hundred and fifty-two of the acts of nineteen hundred and thirty-three, for various cities and towns, with respect to maintenance of flow and restriction on diversion, the authority shall be bound to the same extent as was the metropolitan district commission immediately prior to the effective date of this act by those limitations which continue in force as of the date of this act set forth in two certain findings of the Secretary of War of the United States, acting upon the recommendations of the Chief of Engineers of the United States Army, dated respectively March fourteenth, nineteen hundred and twenty-eight and May eleventh, nineteen hundred and twenty-nine; with respect to the Ware river by section four of chapter three hundred and seventy-five of the acts of nineteen hundred and twenty-six as amended by section seven of chapter five hundred and thirteen of the acts of nineteen hundred and thirty-nine; with respect to the Swift river and the Quinsigamond river, by section one of chapter three hundred and twenty-one of the acts of nineteen hundred and twenty-seven; with respect to the Nashua river, by chapter four hundred and eighty-eight of the acts of eighteen hundred and ninety-five; with respect to the Sudbury river, by chapter one hundred and seventy-seven of the acts of eighteen hundred and seventy-two and section three of chapter five hundred and fifty-seven of the acts of nineteen hundred and forty-seven; and with respect to the Charles river, by chapter six

hundred and three of the acts of nineteen hundred and fifty. Duties, powers and rights of the metropolitan district commission relating to the sewer and waterworks systems under any of the foregoing acts shall hereafter be vested in the Authority subject to the powers of and limitations on the Authority contained elsewhere in this act.

SECTION 61. Effective July first, nineteen hundred and eighty-five the authority of the state treasurer to issue bonds and notes of the commonwealth for the purposes of the MDC sewer system and the MDC water system shall be void and of no further effect.

SECTION 62. Section 33 of chapter 21 of the General Laws, as most recently amended by section 3 of chapter 286 of the acts of 1982, is hereby amended by striking out the seventh paragraph thereof and inserting in place thereof the following paragraph:-

Where (i) the federal government has awarded a seventy-five per cent grant for the eligible costs of the project, the division may award a fifteen per cent grant for such eligible project costs, or (ii) the federal government has awarded a fifty-five per cent grant for the eligible costs of the project the division may award a thirty-five per cent grant for such eligible projects costs; provided, however, that in the event the grant awarded by the federal government is less than seventy-five per cent or fifty-five per cent of such eligible costs, as the case may be, the division may award a grant in such amount to assure that the public entity's share of the eligible costs of such project does not exceed ten per cent; and provided (iii) that in the event that a project eligible for such a federal grant has not been awarded a federal grant, the division may award a grant of up to thirty-five per cent of the eligible costs of such project. Where, because the project entails the use of innovative or alternate technology, the federal government has awarded an eighty-five per cent grant for the eligible costs of the project, the division may award a nine per cent grant for such eligible project costs; provided, however, that in the event the grant awarded for such a project is less than eighty-five per cent the division may award a grant in such amount to assure that public entity's share of the eligible costs of such project does not exceed six per cent.

SECTION 63. Grants made under clause (iii) of the first sentence of the second paragraph of section thirty-three of chapter twenty-one of the General Laws shall be made in accordance with a priority system to be established by

regulation of the director of the division of water pollution control, which priority system may include criteria applied in administering the FWPCA as defined in said chapter twenty-one of the General Laws and shall also include supplemental preferential criteria for the following factors: (a) that the project is necessary in order to abate violation of law found in a judicial proceeding or ordered to be abated under section thirty-three D of chapter twenty-one of the General Laws or other administrative proceeding of proper jurisdiction; provided, however, that the division may deny priority to a project where unreasonable and wilful dilatory conduct of a public entity has contributed to the entry of such judicial or administrative order; and (b) that the project will offer water quality improvements benefitting shellfish cultivation and saltwater recreation. Nothing in this section shall require the director in establishing such priority system and making such grants to take any action which would disqualify the commonwealth from the receipt of maximum available federal assistance under federal programs for wastewater treatment construction grants.

SECTION 64. It is the intention of the general court with respect to grants authorized by section thirty-three of chapter twenty-one of the General Laws provided from the proceeds of any bond issues previously authorized and lawfully available therefore and, as necessary, from future authorizations of bonds or other future appropriations, that: (a) total state expenditures in any fiscal year for the sum of all grants made under clauses (i), (ii) and (iii) of the first sentence of the second paragraph of said section thirty-three, computed on the basis that such grants under clause expenditures in said fiscal year for the aggregate of grants under clauses (i) and (ii) of said sentence of said paragraph of said section thirty-three, computed on the basis that such grants under clauses (i) and (ii) are made or deemed to be made in accordance with federal grant participation levels in effect on the effective date of this act, and (b) total aggregate expenditures in all years for grants under said clause (iii) of the first sentence of said second paragraph of said section thirty-three shall not exceed three hundred million dollars. It is also the intention of the general court that from the effective date of this act, that the share of eligible costs to be borne by a public entity sponsoring any water pollution abatement facility funded by a grant from the federal government under the Federal Water Pollution Control Act shall not exceed ten per cent.

SECTION 65. Chapter seven hundred and thirty-seven of the acts of nine-teen hundred and seventy-two shall continue in full force and effect.

SECTION 66. Notwithstanding any other provision of this act, employees of the metropolitan district commission whose duties as of the effective date of this act are directly or primarily related to forestry, biology, wildlife, police, management, maintenance or operation in any watershed system property shall be transferred on January first, nineteen hundred and eighty-five to the division of watershed management.

SECTION 67. Any community, any part of which is within ten miles of the state house, may continue to use any source of water presently used by it, or may develop any source not presently used by it for domestic or industrial purposes. If the commissioner of the department of environmental quality engineering shall declare a source of water to be unfit for consumption, said town or community or part thereof, may abandon said unfit source and derive its entire water supply or portion thereof from the Authority. No water company owning a water pipe system in the town of Hingham, Hull, Dedham, or Westwood shall charge more for water than a reasonable sum measured by the price ordinarily charged for a similar service in towns in the water works system of the Authority. The selectmen of either of said towns or any persons deeming themselves aggrieved by the price charged for water by any such company in either of said towns may, in nineteen hundred and twenty-three and every fifth year thereafter, apply by petition to the supreme judicial court, asking to have the rate fixed at a reasonable sum measured by the standard above specified; and five or more judges of said court, after hearing the parties, shall establish such maximum rates as they shall deem proper; and said maximum rates shall be binding upon said water company until the same shall be revised or altered by said court pursuant to this section.

SECTION 68. The executive director of the Authority shall conduct a feasability study for construction of a septage waste processing facility for towns which have used in the past or now use the MDC sewer lines to discharge waste from septic systems. Said feasability study shall require that the entire cost of building and maintaining such processing facility shall be borne by the towns using it.

SECTION 69. The Authority shall not take any structural action in any donor basin, including any capital improvements or expenditure of capital funds, which could reasonably be expected to (1) create a new interbasin

transfer of water or (ii) increase the rate of any existing interbasin transfer of water without the express approval of the general court; provided, however, that this provision shall not be construed to require general court approval for actions undertaken to reduce leakage in an existing interbasin transfer. Any determinations made under the provisions of this section shall be made by the division.

SECTION 70. The Authority shall take all reasonable steps expeditiously to continue planning on design and to commence construction of wastewater treatment and delivery projects for which planning or design contracts have been approved by the metropolitan district commission prior to the effective date of this act and which are listed on the Construction Grants Project Priority List established by the department of environmental quality engineering and the division of water pollution control in effect on the effective date of this act.

SECTION 71. Notwithstanding any provision of this act to the contrary, the supply of water by the Authority to any political subdivision to which the metropolitan district commission was not providing water at the time of the effective date of this act shall be made only upon the determination by the Authority and the department of environmental quality engineering that the water supply source used by said political subdivision at the time of the passage of this act is unfit for drinking and cannot be economically restored for drinking purposes.

SECTION 72. Section 2 of chapter 234 of the acts of 1984 is hereby amended by inserting after item 2420-0200 the following item:-

2420-1400 For the operation and maintenance of the watershed management division, provided, that the secretary of environmental affairs shall file quarterly reports, by subsidiary, of expenditures for the purpose of this item with the house and senate committees on ways and means, including not more than one hundred and sixty-six permanent positions and not more than four temporary positions $2,881,156

SECTION 73. Sections six, ten, thirty, thirty-one, thirty-four, forty-three, forty-four, forty-six, forty-seven, forty-eight, fifty-five, sixty-one, sixty-eight and seventy shall take effect upon July first, nineteen hundred and eighty-five. All other provisions of this act shall take effect upon January first, nineteen hundred and eighty-five.

House of Representatives. December 19, 1984.

Preamble adopted. Thomas W. McGee, Speaker.

In Senate. December 19, 1984.

Preamble adopted. William M. Bulger, President.

House of Representatives. December 19, 1984.

Bill passed to be enacted. Thomas W. McGee, Speaker.

In Senate. December 19, 1984.

Bill passed to be enacted. William M. Bulger, President.

December 19, 1984.

Approved,

at nine o'clock and 18 minutes, P. M.

Governor.

MEMORANDUM OF UNDERSTANDING

Division of Properties, Personnel and Functions Between the Metropolitan District Commission (Division of Watershed Management) and the Massachusetts Water Resources Authority (Waterworks Division)

This Memorandum documents the agreement between the Metropolitan District Commission and The Massachusetts Water Resources Authority concerning the assignment of those responsibilities discharged by the Water Division of the Metropolitan District Commission as of June 30th, 1985, including the division of personnel, property, and responsibilities for maintenance, operations, policy making and long range planning pursuant to Chapter 372 of the Acts of 1984.

I. GENERAL MATTERS

1.1 Parties and Intentions

A. The parties to this Memorandum are the Massachusetts Water Resources Authority (MWRA), and the Metropolitan District Commission (MDC).

B. The parties acknowledge the need for continuing cooperation in interpreting portions of the Massachusetts Water Resources Authority Act (the "Act"), c. 372 of the Acts of 1984, and state their intention to continue working together to implement the Act so as to ensure that each will be able to discharge its responsibilities in an efficient manner consistent with the statutory purposes.

C. The parties intend to monitor the effectiveness of the division of responsibilities described herein, and undertake to make any appropriate amendments to this agreement, by mutual consent, in a timely manner.

D. The parties acknowledge that this M.O.U. is not intended to define the whole of their relationship; that both parties have rights, obligations and responsibilities under the law which, while unexpressed in this document, may be exercised.

1.2 Effective Dates and Amendments

This Memorandum shall be effective from July 1st, 1985 until replaced by any subsequent written agreement(s).

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1.3 Dispute Resolution

A. The parties acknowledge that efficient operation of the MWRA and the DWM requires that any disagreements which arise be resolved expeditiously. To that end, during the first year of operation of this Memorandum, the Executive Director of the MWRA, the Commissioner of the MDC or their designees shall meet on a bimonthly basis to monitor the progress of the implementation effort, and to identify and resolve any potential problems.

B. Upon the request of either party, the Executive Director of the MWRA and the Commissioner of the MDC shall meet expeditiously to discuss matters of special concern.

C. If the parties are unable to reach agreement, both parties may request mediation by a neutral party, to be chosen by mutual agreement or, if the dispute is unresolved after six months, mediation may be requested by one party alone.

D. Should either party see need for an opinion from the Attorney General of the Commonwealth with respect to the rights and responsibilities of the MDC and MWRA under the Act, the parties shall cooperate in developing an adequate statement of the facts and in requesting the Secretary of Environmental Affairs to obtain such an opinion pursuant to G.L. c. 12, section 3.

E. In the event that no agreement is reached after exhausting the above procedures, the parties state their intention to consider all alternatives short of litigation, including arbitration, in order to resolve the dispute in a timely fashion.

1.4 General Nature of the Division

A. Section 4(c) of the Act provides that the ownership of the real property of the water system shall not transfer to the MWRA but that, as of July 1, 1985, the MWRA shall have the right to use, improve, operate, maintain and manage that portion of the real property which relates to the waterworks system. The waterworks system is defined in section 2(7) to include all plants, works, connections, aqueducts, mains, pipelines, pumping plants and facilities, waterworks buildings and structures, standpipes, tanks and appurtenances, all equipment, machinery, vehicles and appliances and all lands and easements directly appurtenant or incident to the maintenance or operation thereof.

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B. The MWRA shall have the right to maintain, improve, rebuild or replace any building or structure which relates to the waterworks system and to list such buildings or structures as assets for accounting purposes or to abandon any such building or structure for which it no longer has a use. Should the MWRA choose to abandon a building or structure it shall have the salvage rights to any fixtures therein or captial improvements it may have made to that building or structure.

C. Section 4(a) of the Act provides that all personal property relating to the waterworks system shall pass to and be vested in the MWRA. Section 4(g) provides that, with certain exceptions, all employees of the MDC whose duties and responsibilities relate directly and primarily to waterworks functions of the system shall be transferred to the MWRA.

D. To comply with these provisions of the Act, and to clarify the operations and functions to be transferred, the parties agree that current personnel, facilities and functions of the MDC Water Division shall be divided as indicated in the tables and organization charts in Appendices A, B, and C, and described in the balance of this Memorandum.

E. Except as otherwise specified herein, the functions now performed by employees to be transferred to the MWRA shall become functions of the MWRA; the personal property and facilities operated or maintained by employees to be transferred shall be owned, operated and maintained by the MWRA, except that the Commonwealth shall continue to hold title to the real property of the water system.

II. DIVISION OF FUNCTIONS

2.1 Functions to be transferred to the MWRA

A. The functions of the MWRA shall include:

(i) All pumping and distribution functions now performed by the Metropolitan Operations Sections of the MDC Water Division;

(ii) The planning, engineering and construction management functions for waterworks properties and, specifically, those functions of personnel to be transferred from the Project Planning and Management Office;

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(iii) Functions of the current Demand Management Office.

B. Day-to-day responsibility for operation of all man-made points of control over water flowing into or out of the reservoirs and aqueducts of the water system including, but not limited to, control of water flows for the Quabbin, Nash Hill, Wachusett, Norumbega, and Weston Reservoirs, the Ware River Intake, the Winsor and Wachusett Dams and use of the Sudbury or Framingham Reservoirs for flood control. Such decisions shall be consistent with the regulatory responsibility of the DWM, as described in section 2.2 of this Memorandum. To the extent that implementation of such decisions requires the assistance of DWM personnel (e.g., laborers who adjust the logs to control water flow over spillways), the DWM shall provide that assistance in accordance with the provisions of this Memorandum concerning shared personnel.

C. Sanitary monitoring and treatment as presently carried out by MDC consistent with the regulations for protection of the watershed promulgated by the Department of Environmental Quality Engineering (DEQE) pursuant to G.L. c. 92, section 108, except that DWM shall remain responsible for such monitoring and treatment in the Quabbin Reservoir, Quabbin Watershed, Ware River, Ware River Watershed, and any new sources of water supply.

D. Operation, maintenance, ownership and replacement of personal property related to the functions described in A, B, and C above, including aqueducts, sluice gates, valves, shafts, connections and related machinery.

E. Groundskeeping at Nash Hill, Norumbega, Spot Pond, Fells, Bear Hill, Chestnut Hill, Waban Hill, Fisher Hill, Blue Hills and Weston Reservoirs as previously performed by MDC Water Division; groundskeeping for all aqueducts; and groundskeeping or other labor now performed by personnel to be transferred to the MWRA, but not including any functions related to recreation.

2.2 Joint Functions of the MDC and DWM

A. Water Supply Control:

(1) The MWRA is responsible for operating the waterworks as defined in Section 2(7) of Chapter 372 of the Acts of 1984, which transport water from its supply sources. While the DWM is not responsible for the maintenance, upkeep and operation of these waterworks,

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it is required, by statute, to regulate the reservoirs and the water coming therefrom and, in consultation with the Division of Environmental Protection in the Attorney General's office, to determine the amount of flow which can be safely withdrawn from water supply sources.

(ii) The MDC shall continue to bear the primary responsibility for monitoring reservoir levels and, in consultation with the MWRA, for determining if a water shortage condition exists. The MDC shall consult with the MWRA prior to making any final determination and must additionally work with both the MWRA and the DEQE before mandatory water restrictions are recommended.

(iii) The DWM, in consultation with the MWRA, shall develop written policies and procedures to be followed during wet weather or flood periods to enable MWRA to determine how much water above statutory requirements shall be released into the Nashua, Swift, Sudbury or other rivers, and may use its right of inspection to ensure that its policies and procedures are being followed.

B. Hydroelectricity Generation and Sale:

(i) Pursuant to G.L. c.92, section 107 the DWM has the exclusive right to and interest in hydroelectricity developed, generated, transmitted, distributed and sold as an incident to the operation of the watershed and waterworks systems, except that MWRA shall be credited with all revenues derived from such hydroelectricity, pursuant to G.L. c.92, Section 111. The MWRA shall have the right to negotiate the terms of any contracts for sale of hydroelectricity subject to the approval of the MDC.

(ii) The MDC presently operates and controls facilities for generation of hydroelectricity at the following locations: Windsor Dam; Oakdale Power Station; Wachusett Power Station; Cosgrove Power Station and has plans for a facility at the Southborough Aqueduct. These facilities will be maintained and operated by personnel whose main function is to perform duties connected with the supply of water and who will be transferred to the MWRA, as of July 1, 1985.

(iii) The parties hereby agree that as of July 1, 1985, and for so long as MWRA is entitled to receive credit for

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the revenues derived from hydroelectricity, MWRA shall have authority to operate, control, maintain and replace the hydroelectricity facilities listed above, subject to limitations imposed by DWM, pursuant to section 107 of the Act, for reasons of sound management of the reservoirs, for watershed, waterworks and stream flow purposes.

(iv) Upon request by MWRA, the DWM may authorize the MWRA to develop and operate increased hydroelectric capacity or new facilities. In evaluating such a request, the DWM shall consider all relevant data. However, the DWM may not approve such expanded capacity or new facility unless the water for such hydroelectric generation is otherwise subject to release for reasons of sound management of the reservoirs for watershed, waterworks and stream flow purposes. To the extent the DWM determines that additional facilities may be developed, the DWM shall authorize MWRA to undertake such projects.

(v) The staff of MDC and MWRA shall meet expeditiously to establish systems for maintaining records of power production, consumption and sales of power, and shall agree by September 1, 1986 upon procedures for crediting MWRA with revenues derived from hydroelectricity production.

C. Long Range Supply:

(i) The MDC has entered into a contract to conduct a study known as the Long Range Water Supply Study -- ENR 2020. The MWRA hereby assumes responsibility for the completion of this study in connection with its duties to determine the future requirements of the water system under section 8(e) of the Act and, in consultation with MDC, for formulating a proposal for augmentation of the water system for consideration by the General Court.

(ii) The MDC is responsible for adopting plans for water yield enhancement, pursuant to G.L. c. 92, section 116, for the acquisition of new water rights and watershed lands to provide a sufficient supply of pure water to the MWRA pursuant to c. 92, section 105, and for construction of new dams and reservoirs under section 2(u) of the Act. In light of this role, the MDC shall have ongoing and substantial involvement in the long range planning effort of the MWRA and the MDC shall designate a Planning Liaison Officer who shall be fully involved with MWRA staff in the design,

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review and evaluation of all water supply studies, including public participation. The MDC's Planning Liaison Officer shall be notified of all relevant meetings of the MWRA Board and its committees, and shall be consulted during the design and execution of the environmental and water needs studies and programs required of MWRA by subsection 8(e), paragraphs (i), (ii), (iv) and (v) of the Act. The Liaison Officer shall also keep MWRA staff informed of all planning activities of the MDC related to present or future water supply resources.

(iii) The MWRA specifically reserves the right to petition the Commission of the MDC and, when appropriate, the DEQE, for permission to use water from the Sudbury Reservoir and Foss Reservoir for water supply purposes. The MDC hereby agrees that such permission will not be unreasonably withheld or denied.

D. Additional areas of cooperation:

(i) Each party hereby agrees to submit copies of draft capital and operating and maintenence budgets to the other party in time to permit review and comment by the other party, prior to any final action on those budgets by the Commissioner of the MDC or the Board of Directors of the MWRA.

(ii) DWM shall consult with MWRA with respect to regulation and control of uses not related to flow of water for water supply purposes, of watershed lands and of the Quabbin, Wachusett, Sudbury and Framingham Reservoirs and the Ware River Watershed.

(iii) DWM and MWRA shall supplement each other's efforts in carrying out sanitary monitoring and control at Wachusett and Sudbury Watersheds, including all reservoirs, consistent with regulations issued by DEQE.

(iv) The parties shall consult on a regular basis to ensure that Section 8(d) and (e) of the Act, dealing with contract members, new communities, demand management, conservation, safe yield and extensions of the waterworks system, are satisfied.

III. INSPECTIONS

In order that each party may fulfill its obligations and responsibilities under the Act, the parties agree as follows:

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A. The DWM shall have the right to inspect those waterworks facilities and records maintained and operated by the MWRA through which flows pass or are recorded.

B. The MWRA shall have the right to inspect those facilities and records owned by the MDC that are critical to the safe and reliable supply of water to the MWRA, such as dams, dikes and spillways and to monitor any water supply owned by the MDC to determine its purity.

C. All such inspections shall be carried out at reasonable times and with reasonable notice to the other party.

IV. DIVISION OF FACILITIES

4.1 In General

The facilities, machinery, equipment, vehicles, tools and other property now operated or maintained by those employees to be transferred shall be operated or maintained by the MWRA and, if personal property, shall be owned by the MWRA, and the MWRA shall have sole responsibility for their maintenance and replacement. With respect to buildings or structures owned by the Commonwealth but used exclusively or primarily by MWRA personnel, MWRA shall hereby undertake to maintain and repair such buildings or structures to the extent necessary to enable MWRA to carry out its functions and duties under the Act.

4.2 Extraordinary Inspections and Maintenance

A. The MDC recognizes its responsibility to maintain and make necessary improvements in all facilities and properties, real and personal, owned and operated by it, that are critical to the safe and reliable supply of water to the MWRA. This includes, but is not limited to, responsibility for the structural and operational integrity of dams, dikes, roads and spillways. The MDC shall include the funds necessary to carry out this responsibility in its capital and operating budgets.

B. If the MDC fails for budgetary or other reasons to maintain any such facility or property to the satisfaction of the MWRA, the MWRA shall request the Commissioner of the MDC to make such repairs or improvements as the MWRA considers necessary. The Commissioner may carry out the repairs or may declare a need and authorize the MWRA to carry out repairs or improvements. In either case, the MWRA may seek reimbursement or a credit against revenues due to or from the MWRA.

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C. Should a dispute arise between the MDC and the MWRA as to the need for any inspection or repairs, or the costs or liabilities associated with the repairs, that disagreement shall be subject to the dispute resolution mechanism described in this Memorandum.

D. The MWRA expressly disclaims any willingness to accept any financial responsibility or legal liability for the condition of dams, dikes, spillways and other real property owned by the Commonwealth (other than that covered by section 4.1 above), or for any emergency maintenance of such properties undertaken by the MWRA pursuant to the preceding paragraphs.

V. DIVISION OF PERSONNEL

5.1 Personnel to be Transferred

As shown in the organization charts in Appendix B, the following employees of the MDC Water Division shall be transferred to the MWRA:

A. The Water Division Director, Chief Planner, and 1 principal clerk; but not the Director of Reservoir Operations or the Environmental Quality Director.

B. 17 of 67 authorized positions at Quabbin, primarily including the operator at Winsor Dam Power Station, and the operators and laborers at Ware River Intake Works and Nash Hill Reservoir.

C. 12 of 40 authorized positions at Wachusett (not considering Clinton Sewage Treatment Plant), consisting of the operators and one laborer for the Cosgrove and Oakdale Intake and Power Plants.

D. 40 of 82 authorized positions at Sudbury, including all positions at Weston and Norumbega distribution reservoirs, all currently filled positions in the aqueduct maintenance crew at Natick (Lake Cochituate), and the operators and laborers for the power station and shaft #4 at Southboro.

E. 22 of 25 authorized positions in the Sanitary Section; 3 positions at Quabbin are not transferred.

F. None of the positions in the Forestry Section.

G. All employees of Metropolitan Operations (i.e. the Pumping and Distribution Sections).

H. 12 of 21 authorized positions in Water Division Administration.

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I. All 4 positions in Demand Management.

J. 42 of 50 authorized positions in Project Planning and Management; all positions in the Construction Management section shall be transferred, and all but 8 positions in the Project Planning & Engineering section.

5.2 Shared Personnel

A. In general, to the extent that employees remaining with DWM under this agreement now perform functions related to responsibilities to be assumed by the MWRA, the DWM shall make those or other DWM personnel available to the MWRA on a timely basis, as requested by the MWRA, to continue performing their current functions; to the extent that employees transferring to the MWRA under this agreement now perform functions related to responsibilities to remain with the DWM, the MWRA shall make those or other MWRA personnel available to the DWM on a timely basis, as requested by DWM, to continue performing their current functions.

B. Each party shall reimburse or otherwise compensate the other for the direct payroll and other costs associated with any such services provided to it, under accounting and other arrangements to be mutually agreed upon by September 1, 1986; provided that, in no case shall the MWRA reimbursement for services performed by a DWM employee, when combined with the aliquot share payments made pursuant to section 42 of the Act (amending by addition section 113 of Chapter 92 of the General Laws) exceed 100 per cent of the direct payroll costs for that individual DWM employee.

VI. MISCELLANEOUS MATTERS

6.1 Burial Rights

Every MDC employee transferred to the MWRA as of July 1, 1985 who now has rights to burial at Quabbin Cemetery shall retain said rights under section 4(g) of the Act.

6.2 Housing

Those employees transferring to the MWRA who live in houses owned by the Commonwealth shall have the same right to continued occupancy of those houses as if they were remaining with the MDC, subject to the approval of the Commission and any changes in state law or policy as it relates to the leasing of such houses.

VII. REGULATORY AUTHORITY

With respect to property under the control and operation of the MWRA under the terms of this Memorandum, the MWRA shall exercise exclusively all authority and responsibility for such permits, licenses, leases, rights of way, easements or other permissions as have been customarily within the purview of the MDC Water Division. This subsection applies notwithstanding the continued ownership of all real property by the Commonwealth, but does not affect the powers of the DWM with respect to watershed lands. The purpose of this subsection is to make clear that the MWRA shall have power to approve or disapprove plans, regulate rights of way, and issue use permits when, for example, a utility company seeks to carry out construction on land above an aqueduct.

IN WITNESS WHEREOF the parties hereto have caused this agreement to be executed as of the 24 day of August 1986, by their duly authorized representatives.

MASSACHUSETTS WATER RESOURCES AUTHORITY

By: _____
Michael Hogan
Executive Director

METROPOLITAN DISTRICT COMMISSION

By: _____
William B. Deary
Commissioner

REC/bl
2113L

23 October 1985
revised 30 January 1986

APPENDIX A
Allocation Between the MWRA and MDC (Division of Watershed Management) of Structures, Certain Equipment, and Responsibilities

DEFINITIONS OF HEADINGS IN THIS APPENDIX

OPERATION - Operation of sluice gates, screens, valves, turbines, pumps, treatment facilities, communication facilities, water surface elevation readings, meter readings, gauge reading (stream and rain fall) and other incidental controls necessary for flood control and to deliver pure water to Chicopee and the metropolitan Boston areas, including diversion of water from the Ware River to the Quabbin Reservoir.

MAINTENANCE -

GROUNDS: Fertilizing and cutting of lawn areas, mowing of fields, mowing and cutting of shrubs and small trees on aqueducts, maintain plantings, maintain fences and gates, maintain roadways, plow roads, employ trash receptacles.

FORESTRY: Set up program for cord wood, timber, and wood chip sales on the various watershed properties, including seeding of clearcut areas, at Quabbin Reservoir, Ware River watershed, Sudbury Reservoir, Wachusett Reservoir and Framingham Reservoir 1, 2, and 3.

STRUCTURE: Maintain roofs, walls, windows, doors, floors for named structures including meter chambers, shaft head houses. In the case of dams, maintenance shall include periodic inspection.

PIPING: Maintain piping and valves in all structures and all inground water supply pipe lines.

EQUIPMENT: Maintain all vehicles, and all mechanical equipment which includes, but not limited to turbines, generators, pumps, motors, engines, electrical wiring and control panels, heating, ventilation and air conditioner, plumbing, meters, screens (water) chemical feed machines, hoists.

Note: The allocation of vehicles is detailed in Appendix C.

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MWRA = X
MDC = O

QUABBIN AREA

MAINTENANCE

	CP	GRNDS	FSTRY	STRUC	PIPING	EQUIP
Quabbin Watershed	O	O	O			
Winsor Dam	O	O		O		
Goodnough Dike	O	O		O		
Quabbin Weir	X	O		O		
Observation Tower & Utility Building	O	O		O		O
Rest Rooms	O	O		O		O
Quabbin Park Cemetary	O	O		O		
Office Building	O			O		
Service Building	O			O		
Well Pump House	O			O	O	O
Administration Building	O	O		O		
East Residence	O			O		O
West Residence	O			O		O
East Garage	O			O		O
West Garage	O			O		O
Hangar Building	O			O		O
Stockroom & Blacksmith Shop	O	O		O		O
New Salem Headquarters	O	O		O		O
Boat Launching Areas 1,2,3 each w/ 3 structures & ramps	O	O		O		
Rental Boats and Motors	O					O
Blue Meadow Road Residence #1,2,3	O	O		O		O
Mackie House (New Salem)	O	O		O		O
Winsor Dam Intake	X			X	X	X
Winsor Dam Power Station	X			X	X	X
Winsor Dam Diversion Works	X			X	X	X
Chicopee Valley Aqueduct[2]	X	X		X	X	X
Bondsville Circle Regulating Valve Pit (Palmer)	X	X		X	X	X
Nash Hill Distribution Res.	X			X		
Nash Hill Gate House	X			X		X
Nash Hill Service Building	X			X		X
Meter in Chicopee P.S.	X					X
Meter in South Hadley Chlorination Chamber	X					X
Meter in Wilbraham meter vault	X					X
Gate House #12	X	X		X		X
Service & Generator Building #12	X	X		X	X	X
Gate House #11A	X	X		X		X
Quabbin Hill Power Line from Winsor Dam to Quabbin Hill Tower	O	O				O

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[2]Includes: Winsor Dam to Power Station to Bondsville to Nash Hill Reservoir in Chicopee to Chicopee-Ludlow line.

MWRA = (
MDC = O

MAINTENANCE

	OP	GRNDS	FSTRY	STRUC	PIPING	EQUIP
WARE RIVER AREA						
Ware River Watershed	O	O	O			
Comet Pond	O	O		O		O
Demon Pond	O	O		O		O
Brignam Pond	O	O		O		O
Ware River Diversion Dam	X	X		X	X	X
Ware River Intake Works	X	X		X	X	X
Ware River Intake Serv. Bldg.	X	X		X		X
Lower Garage	X	X		X		X
Rutland-Holden Sewer[3]	X	X		X	X	X
Residence - Oakham	O	O		O		O
Shafts 2-7, 9, 10	X	X		X	X	X
WACHUSETT AREA						
Oakdale Power Sta. (Shaft 1)	X	O		X	X	X
Oakdale Power Station Service Building	O	O		O		O
Wachusett Watershed	O	O	O			
North Dike	O	O	O	O		
South Dike	O	O	O	O		
Wachusett Dam & Spillway	X	O		O		
Upper Gate Chamber	X				X	X
Wachusett Power & Intake Sta.	X	O		X	X	X
Quinapoxet Weir & Fish Ladder	O	O		O		O
Bridges - Thomas & Beamon Sts.	O			O		
Cosgrove Power Station	X	O		X	X	X
Shaft A	X			X		
Shaft B	X			X		
Shaft C	X			X		
Cosgrove Aqueduct Tunnel	X			X		
Wachusett Aqueduct & Open Channel	X	X		X		
Wachusett Aqueduct Lower Dam Head House (Terminal Cham.	X	X		X		
Power Line: Cosgrove to Arrestor Building	X	O				X
Arrestor Building	X	O		X		X
All power transmission lines station to grid	X	O				X

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[3]MWRA - Operations is meters readings, gates, valves, billings and payments for sewage conveyed and treated. Maintenance is defined as those items which can be charged back to the users (Rutland, Holden, and Rutland State Hospital).

MDC - Approves new connections, enters into agreements with Rutland, Holden, Rutland State Hospital, Worcester, and Upper Blackstone Pollution Abatement District, and provides capital improvements for protection of the watershed. Capital improvements are defined as those items that cannot be charged back to users as maintenance costs.

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MWRA = X
MDC = O

	MAINTENANCE					
	OP	GRNDS	FSTRY	STRUC	PIPING	EQUIP
Residences[4]	O			O		O
Wilson Street Yard[5]	O	O		O		
77 Lancaster Street Yard[6]	O	O		O		
Stirling Filter Beds	O	O		O		
Cider Mill Ditch	O	O		O		
Wasnacum Ponds	O	O		O		O
SUDBURY AREA						
Mariboro Brook Filters[7]	O	O		O		O
North Sudbury Watershed	O	O	O			
Sudbury Dam	X	O		O		
Sudbury Dam Gate House	X			X	X	X
Sudburg Dam Boat House	O	O		O		
Sudbury Dam Lightning Arrestor House	X	O		X		X
Shaft 4 Valve Station	X	X		X	X	X
Chemical Feed Building	X	X		X	X	X
Administration Building	X	X		X	X	X
Residences[8]	O			O		O
Off Boston Road						
Headquarters Building	O	O		O		O
Garage	O	O		O		O
Barn Maintenance	O	O		O		O
Chemical Storage Shed	X	O		O		O
Salem End Road						
Garage	O	O		O		O
Carpenter Shop	O	O		O		O
Storage Garage	O	O		O		O
Paint Shop	O	O		O		O

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[4]Includes: 300 Boylston St. (2 family); 804 Wilson St.; 806 Wilson St.; 14 Foster St.; 77 Lancaster St.; Cedar St.; Malboro St.

[5]Includes: Garage Carpenter Shop; Construction Buildings; Garage & Storage Building.

[6]Includes: Garage; Barn (Headquarters); Wood Storage Shed.

[7]Includes: Office Building; Garage; Storage Building.

[8]Includes: 260 Boston Road (2 family); 322 Salem End Road; 684 Water Street & Garage; Off West Commonwealth Road.

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MWRA = X
MDC = O

MAINTENANCE

	OP	GRNDS	FSTRY	STRUC	PIPING	EQUIP
Lake Cochituate[9]	X	X		X		X
Norumbega Balancing Reservoir	X	X		X		X
Chemical Feed House	X	X		X		X
Gate 7 Screen House	X	X		X		X
Schenkes Pond	X	X		X		X
Weston Balancing Reservoir	X	X		X		X
Headquarters & Garage	X	X		X		X
Screen Chamber & Chem. Feed	X	X		X		X
Chlorine & Ammonia Storage	X	X		X		X
Cochituate Aqueduct	X	X		X		
Gate House	X	X		X		
Dadmum's Waste	X	X		X		
Framingham Dams 1, 2, & 3	X	O		O		
Spillways	X	O		X		X
Gate Houses	O	O		O		
Farm Pond						
SUDBURY AQUEDUCT[10, 10A]	X	X		X	X	X
WESTON AQUEDUCT[11]	X	X		X	X	X

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[9]Includes: Office; Garage; Barn; Storage; Lumber Shed.

[10]Includes: Stearns Gate House; Farm Pond Inlet Chamber; Farm Pond Gate House; Leland St. Gauging Station; Chemical Feed Building (Leland St.); Course Brook waste weir; Siphon Chamber - East & West; Bond Bridge; Clark's waste weir; Terminal Chamber at Bradlee Basin (Chestnut Hill Area), Bacon's waste weir, Aqueduct Arches, Fuller Brook waste weir.

[10A]Snow plowing to be done by MDC.

[11]Includes: Gauging Chamber #1 (Pinehill Rd.); Gauging Chamber #2 (Potter Rd.); Sudbury River Siphon Chambers #1 & 2; Happy Hollow Siphon Chambers #3 & 4; Terminal Chamber; Ash St. Barn; Lower Terminal Chamber; Weston Aqueduct Head House.

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MWRA = X
MDC = O

	MAINTENANCE					
	OP	GRNDS	FSTRY	STRUC	PIPING	EQUIP
HULTMAN AQUEDUCT[12]	X	X		X	X	X
Storage Buildings						
Off Winter Street Gate 10	X	X		X		
Off Winter Street	X	X		X		
Telephone Building	X	X		X		
BOSTON AREA						
DISTRIBUTION RESERVOIRS & STANDPIPES[13]						
Reservoirs:						
Spot Pond	X	X		X	X	X
Chestnut Hill[14A]	X	X		X	X	X
Fells[14A]	X	X		X	X	X
Hoban Hill	X	X		X	X	X
Bear Hill[14A]	X	X		X	X	X
Fisher Hill	X	X		X	X	X
Arlington (covered)	X	X		X	X	X
Blue Hills	X	X		X	X	X
Standpipes[15]	X	X		X	X	X
PUMPING STATIONS[16]	X	X		X	X	X

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[12] Includes: Shaft 3; (Shaft 4); Shaft 5; Shaft 6; Norumbega.

[13] Includes: Valve Houses; Chemical Feed Facilities.

[14A] Snow removal at Chestnut Hill, Fells and Bear Hill to be done by MDC.

[15] Includes: Arlington, Park Circle Turkey Hill; Arlington, Bellvue #1 & 2; Walnut Hill.

[16] Includes: Chestnut Hill (high); Chestnut Hill (low); Spot Pond (Stoneham); Hyde Park; Arlington (Spring St.); Arlington (Brattle Court); Brookline (Newton St.); Newton (Commonwealth Ave.); Waltham (Lexington St.); Belmont; Newton (Dudley Rd.); Brookline (Reservoir Rd.).

3090 2650