

BOSTON PUBLIC LIBRARY



3 9999 06588 168 0

GOVDOC

WB/616
WS
61
1993

N U T S A N D B O L T S

BOSTON PUBLIC LIBRARY
GOVERNMENT DOCUMENTS DEPARTMENT
RECEIVED
OCT 20 1998



BOSTON WATER AND
SEWER COMMISSION

Annual Report 1993

The year 1993 was one of challenge and accomplishment for the Boston Water and Sewer Commission. A sluggish economy and a continuing need to pay for the Boston Harbor Cleanup Project placed increasing demands on our ratepayers. Last year we responded to those demands with a coordinated cost reduction plan while maintaining our emphasis on the efficient, daily delivery of high quality water and wastewater services to the residents, businesses, and visitors of the City of Boston. This plan involved the continued implementation of a "nuts and bolts" strategy, including the rigorous review and diligent improvement of all aspects of our operations. These management improvements included the following:

- The Commission saved ratepayers approximately \$6.4 million through the timely refinancing of bonds.
- The BWSC managed the installation of state-of-the-art meter reading devices for over 1,500 of our largest-user accounts, eliminating the cost of entering buildings to read meters.
- The Commission converted from quarterly to monthly billing for all of its accounts, reducing its need to finance working capital and simplifying the household budgeting process for our customers.
- The BWSC installed tamper-proof locking devices on 940 fire hydrants to help prevent unbilled water loss.
- The Commission developed more effective litigation strategies for collecting delinquent accounts.
- The BWSC identified and developed numerous state and federal funding opportunities which helped save millions of dollars.
- The Commission initiated a Rate Relief Campaign which coalesced over 600 customers to lobby for and obtain additional state and federal funding for rate relief.



Acting Executive Director Patricia A. Fahy with former Executive Director Robert J. Ciolek

I am proud to report that cost reduction and management efficiency measures such as these proved to be extraordinarily beneficial to our ratepayers. As a direct consequence of these efforts, we ended the year in excellent financial shape—resulting in no rate increase for 1994.

Each year, the Commission is faced with tough challenges. During 1993, as in previous years, our employees rose to meet these challenges. Our overall achievements are the sum total of hundreds of day-to-day accomplishments on the part of our employees. The professionalism, know-how, creative problem-solving, and hard work of those employees were the vital "nuts and bolts" of our successes during 1993—successes that laid the groundwork for continuous improvements in service to our ratepayers in years to come.

Patricia A. Fahy
 Patricia A. Fahy,
 Acting Executive Director



from left to right

VICTORIA L. WILLIAMS

MARY G. NEE

BWSC Board of Commissioners

BWSC DELIVERS

In 1993, the BWSC delivered on its rate relief goals by containing costs, improving operations, and identifying partners to share in the cost of cleaning up Boston Harbor. Following are a few highlights of our 1993 activities:

A PLAN FOR FISCAL HEALTH

As a direct result of a strict cost control program, the Boston Water and Sewer Commission ended 1993 on solid financial ground, allowing us to freeze rates for 1994. Our excellent state of fiscal health is due to an integrated, comprehensive plan for management based on fiscal responsibility and accountability. The components of the plan—many of which are described in this report—are now in place, resulting in a strong, coordinated strategy to ensure the long-term continuation of the agency's fiscal health.

STATE DEBT SERVICE ASSISTANCE

In 1993, the Boston Water and Sewer Commission secured \$6.5 million in debt service assistance from the Commonwealth of Massachusetts for sewer rate relief, the first-ever allocation of its type. Funding for the BWSC included over \$600,000 in direct assistance and \$5.9 million in indirect assistance through the Massachusetts Water Resources Authority (MWRA). The MWRA, the agency from which the BWSC buys its water and wastewater services, received a total allocation of \$19 million. Approximately \$5.9 million of this allocation has been passed on to the BWSC through a reduction in wholesale sewer rates. The Commonwealth's Sewer Rate Relief Fund was established by the Massachusetts Legislature to mitigate rate increases due to debt service obligations for sewer construction projects.

STATE REVOLVING LOAN FUND

Massachusetts' State Revolving Loan Fund, a low interest loan fund for wastewater construction projects, effected its first pooled financing in 1993. The Commission was a major participant in this transaction, and as a result our ratepayers will benefit from savings of \$11.4 million.

BOND REFINANCINGS

The Commission took advantage of the economy's low interest rates to execute a refunding bond issue totaling approximately \$101 million, reducing the Commission's future debt service obligations by approximately \$6.4 million.

STAFF REDUCTIONS

With the implementation of an Early Retirement Incentive Program and other efficiency measures, the BWSC continued to reduce its workforce in 1993. The Commission's budget-cutting efforts have resulted in the fourth consecutive year of personnel cutbacks which have translated into significant savings for BWSC ratepayers. The Commission will continue to explore ways to streamline its workforce in 1994.

RATE RELIEF CAMPAIGN

The BWSC strongly believes that rate relief efforts should involve our ratepayers, the people who ultimately bear the burden of the costs associated with the Boston Harbor Cleanup Project. In 1993, the Commission initiated a Rate Relief Public Information Campaign, which included educational fact sheets, billing inserts, brochures, summaries of pending legislative initiatives, a 24-Hour Rate Relief Information Hotline, and a highly effective Legislative Letter Writing Campaign. Over 600 BWSC customers participated in the campaign.



from left to right

RONALD A. CATENA

Director of Public Affairs

JAMES E. SCHULTZ

Director of Facilities and Support Services

HENRY C. LUTHIN

General Counsel

DETAILS

The BWSC continually seeks new and better ways to improve the efficiency of its operations. Our staff is committed to the “nuts and bolts” of our business – and recognizes that the way to achieve our fiscal, public service, and environmental goals is through strict attention to details. We believe this attitude forms the foundation of our current fiscal stability, and will allow us to provide even better service to our ratepayers in years to come.

IMPROVED COLLECTION PROGRAM

The BWSC has dramatically improved its collection rate in recent years. Through the implementation and continued use of an “Integrated Collections Program,” the Commission successfully reduced the average collection period for its account receivables by 63% since 1990. The improved collections also resulted in a decrease in net receivables of \$5.3 million, despite an 11% increase in water and sewer rates during 1993.

MONTHLY BILLING

In 1993, the BWSC converted from quarterly to monthly billing for all of its 87,000 accounts. This conversion saved ratepayers money by enabling the Commission to reduce its need to finance working capital through the rate structure. It also put the BWSC on the same billing schedule as other major Boston utilities, thereby simplifying the household budgeting process for our customers. With this billing frequency change, Commission staff mailed out and processed over one million bills in 1993.

MINORITY AND WOMEN HIRING

In 1993, the Commission made substantial advances toward its long-range goal to achieve a workforce that represents the diversity of the City of Boston and to increase opportunities for minorities and women within the Commission. Our efforts in this area during 1993 raised the proportion of minorities and women employees to 22% and 21%, respectively. Contract awards to MBE and WBE vendors increased by 59% in 1993.

IMPROVED CUSTOMER SERVICE

Improving community outreach and customer service was a continuing priority at the Boston Water and Sewer Commission in 1993. The Commission held over 160 community site visits for the purpose of allowing customers an opportunity to pay their bills or discuss concerns in person. Over 50 public informational meetings were also held in neighborhoods throughout the city to brief local community organizations and public officials about BWSC activities and issues in their areas. The Commission also distributed pertinent press releases and billing inserts, as well as public education fact sheets and brochures sent to our customers, schools, and various civic and neighborhood organizations.

To improve customer service, the Commission has in place an automatic call distribution system that ensures prompt responses to all customer inquiries regarding billing explanations, service requests, and other issues. The new BWSC system queues all incoming calls, provides “hold” messages, and allows supervisors to monitor calls, further ensuring that high quality service is provided.

SERVICE

The BWSC contributes greatly to the health and livelihood of the 574,000 residents of Boston and millions of people who work in or visit the city each year. Planning, designing, building, and maintaining the Commission's vast infrastructure requires highly-trained people who understand and participate in the agency's responsibilities as a provider of essential services. Our engineers and operations people are among the best in the business. We're available 24 hours a day, 365 days a year.

PREVENTIVE MAINTENANCE

Every day, the Boston Water and Sewer Commission provides over one million people with water that is among the cleanest in the country. To most people, a turn of the faucet or a flush of the toilet is all that is required to operate the water and sewer system. But maintaining a system that includes 1,182 miles of water pipes, 1,340 miles of sewer pipes, 12,900 fire hydrants, 16,900 water gates, and 46 permitted combined sewer overflow outfalls is an extraordinarily complex task. Through an aggressive preventive maintenance program, the BWSC can extend the useful life of the system, save in repairs, and reduce the number of emergencies. As part of this continuing program, the BWSC maintenance staff had accomplished the following tasks by the close of 1993:

- Replaced 13,526 linear feet of sewer or drain pipe
- Inspected 12,295 fire hydrants
- Replaced 1,570 lead service pipes
- Replaced or raised to grade 212 castings
- Inspected 1,097 tidegates
- Repaired 2,153 leaks and breaks
- Cleaned and inspected 12,548 catchbasins
- Reconstructed 545 catchbasins
- Inspected 45,121 manholes
- Scaled 615 joints in the sewer and drain system
- Removed 10,715 cubic yards of debris from sewers, drains, and meter boxes

AUTOMATIC METER READING

Utilizing state-of-the-art technology, the BWSC managed the installation of automatic meter reading devices for over 1,500 of its largest-user accounts in 1993. These accounts are now read automatically though telephone lines linked to a BWSC computer. Automatic meter reading reduces Commission operating costs for on-site meter reading.

UNACCOUNTED-FOR WATER

In 1993, the BWSC continued its aggressive campaign to reduce system water loss, known throughout the industry as "unaccounted-for water." Unaccounted-for water is the difference between the amount of water purchased from the MWRA and the amount that is billed to BWSC ratepayers. The BWSC has achieved significant reductions in its unaccounted-for water percentage, from 50% in 1977 to 26% in 1993. This success was largely due to a nationally-recognized leak detection and repair program and recent meter downsizing efforts.

In 1993, the BWSC's leak detection and repair program field crews surveyed over 1,180 miles of water main for leaks. Their efforts resulted in the identification and correction of over 200 system leaks, estimated to be losing 4.5 million gallons of water a day.

Meter downsizing efforts have also contributed substantially to reducing unaccounted-for water. By replacing large water meters with smaller ones, the BWSC can better account for the water used at low flows that does not often register on the large meters. Since the start of the meter downsizing program in 1990, over 2,300 meters have been downsized, resulting in the accounting of 1.3 million gallons per day of previously unbilled water use.

REDUCTION IN WATER USAGE

The Commission's continuing efforts to search actively for and repair leaks and to downsize meters have resulted in a dramatic lowering of the amount of water that the BWSC purchases from the MWRA each year. Water usage in the city has been reduced by 34% since 1977, although population has declined by only 2% since that time.



from left to right

JOHN P. SULLIVAN
Chief Engineer

GERARD F. DWYER
Director of Operations

JOSEPH DELGARDO
Affirmative Action Manager

FISCAL CONFIDENCE

The excellent overall fiscal condition of the Boston Water and Sewer Commission continued to improve during 1993. Many of the Commission's cost reduction measures – including the conversion to monthly billing, an improved collection rate and a significant refunding of the Commission's outstanding debt resulting in consequential savings – contributed to a growing level of confidence and respect within the financial community. This fiscal confidence was publicly demonstrated in the following ways in 1993:

BALANCED BUDGETS AND IMPROVED CREDIT RATINGS

Due to strong fiscal controls and conservative budgeting, the BWSC has achieved a balanced budget in every year it has been in operation. This exemplary record of fiscal responsibility is demonstrated in the Commission's credit ratings – including a credit rating upgrade from Standard and Poor's from "A-" to "A" in 1993.

Strong management, satisfactory financial operations and a substantial, stable customer base characterize the Commission's credit position...The Commission has, and continues to respond to economic and financial challenges posed by both the slowdown in the local economy and projected large rate increases...

MOODY'S MUNICIPAL CREDIT REPORT MARCH, 1993

1993 DISTINGUISHED BUDGET AWARD

In 1993, the Boston Water and Sewer Commission received the highest form of recognition in governmental budgeting. For the second consecutive year, the Award for Distinguished Budget Presentation was presented to the BWSC by the Government Finance Officers Association (GFOA) for its Current Expense Budget document for the fiscal year beginning January 1, 1993.

1992 CAFR AWARD

During 1993, the BWSC's Comprehensive Annual Financial Report received a Certificate of Achievement for Excellence in Financial Reporting, presented by the Government Finance Officers Association. The award was based on conformity to Generally Accepted Accounting Principles and compliance with other finance-related legal and contractual provisions. This award represents a celebrated accomplishment for any municipality or governmental agency, but it was especially noteworthy for the Commission; it was the first time in the GFOA's history that it bestowed this honor on any entity in the City of Boston.

1993 BEST PUBLIC WATER SYSTEM RECOGNITION

The BWSC received special recognition for continuous outstanding performance and achievement in 1993 from the Massachusetts Department of Environmental Protection (DEP) and the Northeast Rural Water Association. Having won the DEP 1991 and 1992 Best Overall Public Water System Award, the Commission was once again recognized in 1993 for its continued efforts and achievements with regard to compliance with drinking water regulations, cross connections, and statistical reporting.

TO THE COMMISSIONERS
OF THE BOSTON WATER AND SEWER COMMISSION

WE HAVE AUDITED THE ACCOMPANYING BALANCE SHEETS OF THE BOSTON WATER AND SEWER COMMISSION (THE "COMMISSION") AS OF DECEMBER 31, 1993 AND 1992 AND THE RELATED STATEMENTS OF OPERATIONS, COMMISSION EQUITY AND CASH FLOWS FOR THE YEARS THEN ENDED. THESE FINANCIAL STATEMENTS ARE THE RESPONSIBILITY OF THE COMMISSION'S MANAGEMENT.

OUR RESPONSIBILITY IS TO EXPRESS AN OPINION ON THESE FINANCIAL STATEMENTS BASED ON OUR AUDITS.

WE CONDUCTED OUR AUDITS IN ACCORDANCE WITH GENERALLY ACCEPTED AUDITING STANDARDS.

THOSE STANDARDS REQUIRE THAT WE PLAN AND PERFORM THE AUDIT TO OBTAIN REASONABLE ASSURANCE ABOUT WHETHER THE FINANCIAL STATEMENTS ARE FREE OF MATERIAL MISSTATEMENT. AN AUDIT INCLUDES EXAMINING, ON A TEST BASIS, EVIDENCE SUPPORTING THE AMOUNTS AND DISCLOSURES IN THE FINANCIAL STATEMENTS. AN AUDIT ALSO INCLUDES ASSESSING THE ACCOUNTING PRINCIPLES USED AND SIGNIFICANT ESTIMATES MADE BY MANAGEMENT, AS WELL AS EVALUATING THE OVERALL FINANCIAL STATEMENT PRESENTATION. WE BELIEVE THAT OUR AUDITS PROVIDE A REASONABLE BASIS FOR OUR OPINION.

IN OUR OPINION, THE FINANCIAL STATEMENTS REFERRED TO ABOVE PRESENT FAIRLY, IN ALL MATERIAL RESPECTS, THE FINANCIAL POSITION OF THE COMMISSION AT DECEMBER 31, 1993 AND 1992 AND THE RESULTS OF ITS OPERATIONS AND ITS CASH FLOWS FOR THE YEARS THEN ENDED IN CONFORMITY WITH GENERALLY ACCEPTED ACCOUNTING PRINCIPLES.

I N D E P E N D E N T
A U D I T O R S
R E P O R T

OUR AUDITS WERE MADE FOR THE PURPOSE OF FORMING AN OPINION ON THE BASIC FINANCIAL STATEMENTS TAKEN AS A WHOLE.

THE SUPPLEMENTAL SCHEDULE OF REVENUES AND EXPENSES - RATE BASIS IS PRESENTED FOR PURPOSES OF ADDITIONAL ANALYSIS AND IS NOT A REQUIRED PART OF THE BASIC FINANCIAL STATEMENTS. SUCH INFORMATION HAS BEEN SUBJECTED TO THE AUDITING PROCEDURES APPLIED IN OUR AUDITS OF THE BASIC FINANCIAL STATEMENTS AND, IN OUR OPINION, IS FAIRLY STATED IN ALL MATERIAL RESPECTS IN RELATION TO THE BASIC FINANCIAL STATEMENTS TAKEN AS A WHOLE.

KPMG Peat Marwick

MARCH 18, 1994

BALANCE SHEETS
DECEMBER 31, 1993 AND 1992

ASSETS	<u>1993</u>	<u>1992</u>
Current assets:		
Cash and cash equivalents (note 8)	\$ 3,832,503	1,279,402
Accounts receivable:		
Customers, less allowances of \$9,103,606 in 1993 and \$10,811,240 in 1992 (Note 1)	27,392,705	32,741,057
Unbilled revenues, less allowances of \$1,703,990 in 1993 and \$1,742,110 in 1992 (Note 1)	9,000,544	19,269,332
Construction grants receivable	1,764,309	4,909,376
Prepaid expenses	853,992	1,012,460
Deferred compensation plan assets (Note 12)	2,193,688	1,884,482
Total current assets	<u>45,037,741</u>	<u>61,096,109</u>
Investments (notes 4 and 8)	261,486,092	241,561,630
Property, plant and equipment, net (note 3)	349,118,663	321,560,923
Deferred charges (note 2)	39,374,440	26,653,608
Bond issue costs, net	<u>4,895,327</u>	<u>5,815,854</u>
Total assets	<u>\$ 699,912,263</u>	<u>656,688,124</u>
LIABILITIES AND COMMISSION EQUITY		
Current liabilities:		
Payable from current assets:		
Accounts payable	\$ 8,899,367	8,532,973
Other accrued liabilities	5,998,581	7,193,196
Current portion of revenue bonds	<u>5,305,000</u>	<u>4,385,000</u>
	<u>20,202,948</u>	<u>20,111,169</u>
Payable from trustee assets:		
Massachusetts Water Resources Authority assessment (note 5)	—	4,788,803
Current portion of City of Boston bonds	<u>270,000</u>	<u>270,000</u>
	<u>270,000</u>	<u>5,058,803</u>
Total current liabilities	<u>20,472,948</u>	<u>25,169,972</u>
Long-term debt (note 4)	331,921,399	325,898,893
Long-term notes payable (note 4)	8,787,493	—
Deferred compensation plan liability (note 12)	2,193,688	1,884,482
Other long-term liabilities	10,127,397	2,462,792
Deferred credits and reserves (note 2)	<u>205,628,059</u>	<u>179,436,255</u>
Total liabilities	<u>579,130,984</u>	<u>534,852,394</u>
Commission equity:		
Contributed capital	<u>120,781,279</u>	<u>121,835,730</u>
Commitments and contingencies (notes 10 and 11)		
Total liabilities and commission equity	<u>\$ 699,912,263</u>	<u>656,688,124</u>

STATEMENTS OF OPERATIONS
YEARS ENDED DECEMBER 31, 1993 AND 1992

	<u>1993</u>	<u>1992</u>
Operating revenues:		
Water and sewer usage	\$ 190,961,747	179,642,591
Fire pipe	2,294,655	1,918,940
Other	5,340,634	2,588,429
Total operating revenues	<u>198,597,036</u>	<u>184,149,960</u>
Operating expenses:		
Operations	54,464,580	64,218,978
Maintenance	8,101,308	5,697,210
MWRA assessment (Note 5)	98,552,914	89,210,117
Depreciation and amortization	10,428,340	7,870,315
Total operating expenses	<u>171,547,142</u>	<u>166,996,620</u>
Excess operating revenues	<u>27,049,894</u>	<u>17,153,340</u>
Nonoperating revenue (expense):		
Interest income	16,349,249	17,777,556
Interest expense	(19,010,555)	(20,624,566)
Total nonoperating expense	<u>(2,661,306)</u>	<u>(2,847,010)</u>
Excess revenues before depreciation add-back and transfer requirements	24,388,588	14,306,330
Add: Depreciation on fixed assets acquired by grants	<u>1,803,216</u>	<u>1,778,146</u>
Excess revenue before transfer requirements	26,191,804	16,084,476
Excess revenues used to fund reserves and other deferrals (note 2)	(19,024,485)	(12,091,299)
Accumulated revenues used to offset future rates - beginning of year	<u>5,890,147</u>	<u>1,896,970</u>
Accumulated revenues used to offset future rates - end of year	<u>\$ 13,057,466</u>	<u>5,890,147</u>

SEE ACCOMPANYING NOTES TO FINANCIAL STATEMENTS.

STATEMENTS OF COMMISSION EQUITY
YEARS ENDED DECEMBER 31, 1993 AND 1992

	<u>CONTRIBUTED CAPITAL</u>
Balance, December 31, 1991	\$ 118,906,974
Contributions in aid of construction	4,706,902
Depreciation of related property	<u>(1,778,146)</u>
Balance, December 31, 1992	121,835,730
Contributions in aid of construction	748,765
Depreciation of related property	<u>(1,803,216)</u>
Balance, December 31, 1993	<u>\$ 120,781,279</u>

SEE ACCOMPANYING NOTES TO FINANCIAL STATEMENTS.

STATEMENTS OF CASH FLOWS
YEARS ENDED DECEMBER 31, 1993 AND 1992

	<u>1993</u>	<u>1992</u>
Operating activities:		
Excess operating revenues	\$ 27,049,894	17,153,340
Adjustments to reconcile operating income to net cash:		
Excess revenues used to fund reserves and other deferrals	(26,191,804)	(16,084,476)
Depreciation and amortization	11,210,644	7,870,315
Change in assets and liabilities:		
Accounts receivable	5,348,352	17,958,194
Unbilled revenues	10,268,788	(4,379,929)
Construction grants receivable	3,145,067	615,585
Prepaid expenses	158,468	(16,869)
Deferred charges	(14,978,701)	(2,887,929)
Accounts payable	366,394	20,968
Other accrued liabilities	(1,194,615)	(1,011,825)
MWRA assessment	(4,788,803)	656,594
Deferred credits	26,191,804	16,084,444
Other long-term liabilities	16,452,097	505,231
Net cash provided by operating activities	<u>53,037,585</u>	<u>36,483,643</u>
Investing activities:		
Additions to property, plant and equipment, net	(35,214,220)	(23,057,667)
Purchase of investments	(19,924,463)	(54,167,667)
Interest income	16,349,249	17,777,556
Net cash used for investing activities	<u>(38,789,434)</u>	<u>(59,447,778)</u>
Capital and related financing activities:		
Proceeds from issuance of bonds, net	12,871,740	42,941,436
Payment on bonds, including current maturities	(6,305,000)	(4,195,000)
Proceeds of contributions in aid of construction	748,765	4,706,902
Payment of bond interest	(19,010,555)	(19,956,763)
Net cash provided by (used for) capital and related financing activities	<u>(11,695,050)</u>	<u>23,496,575</u>
Net increase in cash and cash equivalents	2,553,101	532,440
Cash and cash equivalents at beginning of year	<u>1,279,402</u>	<u>746,962</u>
Cash and cash equivalents at end of year	<u>\$ 3,832,503</u>	<u>1,279,402</u>

SEE ACCOMPANYING NOTES TO FINANCIAL STATEMENTS.

(1) ORGANIZATION, BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Boston Water and Sewer Commission (the "Commission") has the responsibility to provide water and wastewater services on a fair and equitable basis in the City of Boston (the "City") as required under the Boston Water and Sewer Reorganization Act of 1977 (the "Enabling Act").

The accompanying financial statements of the Commission include only the activities of the Commission itself, as it has no oversight relationships that would require inclusion of any other potential component units.

Under the Enabling Act, the Commission is subject to regulation with respect to rates, accounting and other matters, where applicable, by the Board of Commissioners (the "Board"). The Board regulates the rates that the Commission can charge its customers for water and sewer usage. The rates charged to customers are based on the cash required for the Commission's operations, debt service, and reserve contributions. However, there is no legally adopted budget that the Commission must adhere to. To comply with the external financial reporting requirements of the Board, the accompanying financial statements are presented on a basis that is consistent with generally accepted accounting principles ("GAAP") for regulated utilities (i.e., the accrual basis of accounting and the capital maintenance measurement focus).

To accommodate the rate making process, the Commission follows the accounting standards set forth in Financial Accounting Standards Board Statement No. 71 ("FAS-71"), "Accounting for the Effects of Certain Types of Regulation". FAS-71 allows certain (a) revenues provided for future allowable costs to be deferred until the costs are actually incurred (deferred credits) and (b) costs incurred to be capitalized if future recovery is reasonably assured (deferred charges). Revenues and current expenses appearing in the Supplemental Schedule of Revenues and Expenses - Rate Basis are presented in the same format as utilized in the Commission's operational budgeting and rate setting process. The revenues and expenses shown on the Statement of Operations are presented on a GAAP basis. A reconciliation between the revenues and expenses of these two operating statements for the year ended December 31, 1993 is provided below:

	<u>Revenues</u>	<u>Expenses</u>
AS PRESENTED IN THE STATEMENT OF OPERATIONS:		
OPERATING REVENUES/EXPENSES	\$ 198,597,036	171,547,142
NONOPERATING REVENUES/EXPENSES	16,349,249	19,010,555
TOTAL	214,946,285	190,557,697
RECLASSIFICATIONS AND DEFERRALS:		
CONTRIBUTION TO RESERVES	—	8,565,829
REVENUE ADJUSTMENTS/BAD DEBT EXPENSE	(21,911,135)	(21,911,135)
EXCESS DEPRECIATION OVER BOND PAYMENTS	—	(4,519,369)
INTEREST EXPENSE	—	(4,511,678)
INTEREST INCOME	(5,964,816)	—
CAPITAL EXPENDITURES	—	11,594,051
EXCESS REVENUE USED TO OFFSET CURRENT RATES	5,890,147	—
OTHER DEFERRALS	—	127,620
AS PRESENTED IN THE SUPPLEMENTAL SCHEDULE	<u>\$ 192,960,481</u>	<u>179,903,015</u>

The Enabling Act requires that any net surplus, as defined by the rate setting process, be either turned over to the City or applied to offset water and sewer rates for the following year. The Commission has applied \$13,057,466 and \$5,890,147 for the years ended December 31, 1993 and 1992, respectively, to offset rates in the respective subsequent years.

(a) **Revenue Billings** Water and sewerage fees are billed to users of the systems on a monthly cycle basis beginning in 1993. Revenues are accrued for periods between the termination of billings for the various cycles and the end of the year. In 1992 the water and sewerage fees were billed on a quarterly basis. Due to the change from quarterly to monthly billing, the unbilled revenues decreased approximately \$10 million from year end 1992 to 1993. Various adjustments are made on a post-billing basis that reduce the amount of total billings. Accordingly, the 1993 and 1992 total customer billings of \$53,550,624 and \$63,595,528, respectively, have been reduced by provisions for billing adjustments and sewer abatements of \$13,643,451 and \$3,410,862, respectively, in 1993 and \$16,034,585 and \$4,008,646 in 1992. These net billing amounts are further reduced by an allowance for uncollectible accounts to arrive at the net accounts receivable.

(b) **Investments** Investments, consisting of direct and unconditionally guaranteed short-term obligations of the U.S. Government, repurchase agreements and money market funds secured by government securities, are stated at amortized cost plus accrued interest.

(c) **Property, Plant and Equipment** Property, plant and equipment is stated at historical cost. Depreciation is provided on the straight-line method based upon the estimated useful lives of the various classes of assets. Maintenance and repairs are charged to expense as incurred. Major renewals or betterments are capitalized and depreciated over their estimated useful lives. The Commission does not have any donated fixed assets.

The Commission capitalizes interest costs during construction of assets for its own use. No interest was capitalized in 1993 or 1992 because the difference between interest expense and interest income on unexpended proceeds was immaterial.

(d) **Depreciation** Estimated useful lives used in computing depreciation are as follows:

	<u>YEARS</u>
WATER:	
WORKS	100
METERS	10
HYDRANTS	40
SEWERAGE:	
WORKS	75
PUMPING STATION	35
OTHER	4 TO 14

In 1992, the Commission re-estimated the useful lives of certain property, plant and equipment. The impact on the financial statements from this change in estimate is not material but will result in a reduction in depreciation expense over the remaining useful lives of the assets.

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 1993 AND 1992

(e) **Contributed Capital** Contributions from governmental agencies, individuals and the City, received in aid of specific construction projects that are not refundable, are recorded as contributed capital. Accordingly, depreciation of the related property is charged directly to contributed capital and appears as an addition to excess revenues in the accompanying statements of operations.

(f) **Cash Equivalents** The Commission considers all highly liquid, short-term cash investments with original maturities of three months or less to be cash equivalents for purposes of the statement of cash flows.

(g) **Bond Issue Costs** Expenses related to the issuance of bonds are amortized on a weighted-average basis over the life of the bonds, which approximates the effective interest method.

(h) **Self-insurance** The Commission self-insures for workers' compensation, general liability and unemployment claims within certain limits. Under the sections of the Model Water and Sewer Act, the Commission's tort liability is capped at \$100,000 per claimant. For general liability claims, the Commission self-insures for claims less than \$1 million per occurrence and \$2.5 million annually. The Commission also maintains a trailing retention of \$5,000 per claimant and a one year cap of \$500,000, with excess liability coverage over the retention in the amount of \$5 million. Claims under \$10,000 are paid from the operating budget. General liability claims paid during the year were approximately \$915,000, while the amount paid for workers' compensation and unemployment claims was approximately \$436,000. The Commission maintains a reserve for workers' compensation and general liability claims. The total reserve at December 31, 1993 is approximately \$4.5 million, of which approximately \$950,000 relates to workers' compensation claims.

(i) **Reclassifications** Certain amounts in the 1992 financial statements have been reclassified to conform to the 1993 presentation.

(2) DEFERRED CHARGES AND CREDITS

As discussed in note 1, the application of FAS-71 results in certain revenues and expenses being removed from the Statement of Operations and reflected in the balance sheet as deferred charges or deferred credits. The revenues and expenses that have been removed from the Statement of Operations and added to the balance sheet as deferred credits appear in the line "Excess revenues used to fund reserves and other deferrals" on the Statement of Operations. The components of these amounts are:

	1993	1992
CONTRIBUTIONS TO RESERVES	\$ 8,565,829	3,186,000
PRINCIPAL PAYMENTS ON LONG-TERM DEBT	5,660,000	3,685,000
INTEREST PAID FROM ESCROW FUNDS, NET	(4,511,678)	(4,450,969)
CAPITAL EXPENDITURES	11,594,051	8,448,485
DEPRECIATION	(5,853,263)	(4,728,735)
INTEREST INCOME ON PROJECT AND ESCROW FUNDS	5,964,816	7,138,183
OTHER	(2,395,270)	(1,186,665)
	<u>\$ 19,024,485</u>	<u>12,091,299</u>

The components of the deferred charges included in the accompanying balance sheets are as follows:

	1993	1992
ACCRUED PENSION EXPENSE	\$ 15,840,264	16,089,235
DEBT EXTINGUISHMENT EXPENSE	23,534,176	10,564,373
	<u>\$ 39,374,440</u>	<u>26,653,608</u>

The activity in and components of deferred credits and reserves included in the accompanying balance sheet are as follows:

	DECEMBER 31, 1992	INCREASE (DECREASE)	DECEMBER 31, 1993
DEBT SERVICE	\$ 23,596,000	8,565,829	32,161,829
CAPITAL IMPROVEMENTS	90,203,111	10,458,656	100,661,767
WORKING CAPITAL	57,506,997	—	57,506,997
SELF-INSURANCE	2,240,000	—	2,240,000
SUBTOTAL	173,546,108	19,024,485	192,570,593
REDUCTION OF FUTURE RATES	5,890,147	7,167,319	13,057,466
TOTAL DEFERRED CREDITS	<u>\$ 179,436,255</u>	<u>26,191,804</u>	<u>205,628,059</u>

(3) PROPERTY, PLANT AND EQUIPMENT

The cost of water and sewerage property, plant and equipment in service and related accumulated depreciation at December 31, 1993 and 1992 are as follows:

	1993	1992
WATER:		
WORKS	\$ 114,160,293	111,568,571
METERS AND HYDRANTS	14,613,529	12,806,214
TOTAL WATER	<u>128,773,822</u>	<u>124,374,785</u>
SEWERAGE:		
WORKS	186,031,182	179,822,168
PUMPING STATION	6,818,570	6,818,570
TOTAL SEWERAGE	<u>192,849,752</u>	<u>186,640,738</u>
OTHER	41,826,691	15,086,099
TOTAL	<u>363,450,265</u>	<u>326,101,622</u>
LESS ACCUMULATED DEPRECIATION	56,478,733	49,200,438
TOTAL	<u>306,971,532</u>	<u>276,901,184</u>
CONSTRUCTION IN PROGRESS	42,147,131	44,659,739
TOTAL	<u>\$ 349,118,663</u>	<u>321,560,923</u>

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 1993 AND 1992

(4) LONG-TERM DEBT

At the time of its creation, the Commission assumed general obligation certificates of indebtedness of the City (the "City bonds") pertaining to the water and sewer systems. Payments of principal and interest are made directly to the City in accordance with the original maturity and interest schedules. A summary of these City bonds as of Dec. 31, 1993 and 1992 follows:

CITY BONDS, BEARING INTEREST AT RATES	<u>1993</u>	<u>1992</u>
RANGING FROM 5.1% TO 9.5% WITH		
MATURITY DATES THROUGH DECEMBER 1999	\$ 680,000	950,000
LESS CURRENT INSTALLMENTS	<u>270,000</u>	<u>270,000</u>
 TOTAL GENERAL OBLIGATION DEBT OF THE CITY, NET OF CURRENT INSTALLMENTS	 <u>\$ 410,000</u>	 <u>680,000</u>

A SUMMARY OF REVENUE BONDS OF THE COMMISSION FOLLOWS:

SENIOR DEBT:	<u>1993</u>	<u>1992</u>
1985 SERIES A, BEARING A VARIABLE INTEREST RATE (1.2% AND 3.95% AT DEC. 31, 1993 AND 1992, RESPECTIVELY), MATURING IN TWO EQUAL AMOUNTS ON NOV. 1, 2014 AND 2015 AND REQUIRING ANNUAL SINKING FUND CONTRIBUTIONS THROUGH 2014	\$ 47,385,000	48,030,000
1986 SERIES A, BEARING INTEREST AT RATES RANGING FROM 6.0% TO 7.88%, WITH MATURITY DATES RANGING FROM NOV. 1, 1994 TO 2015.	53,790,000	54,660,000
1989 SERIES A, BEARING INTEREST AT RATES OF 6.4% AND 6.9% WITH MATURITY DATES AT NOV. 1, 1994 AND 1996, RESPECTIVELY	1,010,000	39,395,000
1991 SERIES A, BEARING INTEREST AT RATES RANGING FROM 5.5% TO 7.0%, WITH MATURITY DATES RANGING FROM NOV. 1, 1994 TO 2021	17,705,000	52,065,000
1992 SERIES A, BEARING INTEREST AT RATES RANGING FROM 3.0% TO 6.1%, WITH MATURITY DATES RANGING FROM NOV. 1, 1994 TO 2013	68,695,000	68,810,000
1993 SERIES A, BEARING INTEREST AT RATES RANGING FROM 2.2% TO 5.4%, WITH MATURITY DATES RANGING FROM NOV. 1, 1994 TO 2019	98,855,000	—
 SUBORDINATED DEBT:		
1984 SERIES A, BEARING INTEREST AT A RATE OF 10%, WITH A MATURITY DATE OF JAN. 1, 1996	1,610,000	18,935,000
1988 SERIES A, BEARING INTEREST AT RATES RANGING FROM 6.0% TO 7.4%, WITH MATURITY DATES RANGING FROM NOV. 1, 1994 TO 2008	55,130,000	55,855,000
	<u>344,180,000</u>	<u>337,750,000</u>
LESS CURRENT INSTALLMENTS	5,305,000	4,385,000
TOTAL LONG-TERM REVENUE BONDS	<u>338,875,000</u>	<u>333,365,000</u>
LESS UNAMORTIZED ISSUE DISCOUNT	<u>7,363,601</u>	<u>8,146,107</u>
 NET LONG-TERM REVENUE BONDS	 <u>\$ 331,511,399</u>	 <u>325,218,893</u>

Annual sinking fund requirements and debt principal and interest maturities for all future years are as follows (amounts are in thousands):

	CITY		REVENUE		TOTALS	
	BONDS		BONDS			
	PRINCIPAL	INTEREST	PRINCIPAL	INTEREST	PRINCIPAL	INTEREST
1994	\$ 270	44	\$ 5,305	21,050	\$ 5,575	21,094
1995	195	27	4,195	20,771	4,390	20,798
1996	65	15	7,860	20,327	7,925	20,342
1997	50	10	8,215	17,014	8,265	17,024
1998	50	7	8,755	16,573	8,805	16,580
THEREAFTER	50	3	309,850	174,280	309,900	174,283
	<u>\$ 680</u>	<u>106</u>	<u>\$ 344,180</u>	<u>270,015</u>	<u>\$ 344,860</u>	<u>270,121</u>

The 1984 Series A Bonds were issued in order to refund a series of 1980 System Revenue Bonds. Under the Refunding Trust Agreement, the 1980 Bondholders have no right, title, interest or liens in any other funds, real or personal property or assets of the Commission other than the amounts held under the Refunding Trust Agreement and pledged for their benefit thereunder.

The 1985 Series A Bonds were issued to provide funds for projects under the Commission's ongoing capital improvement programs and other capital and operating needs. The Commission maintains a letter of credit to guarantee the principal and interest payments on these variable interest rate bonds in the event that the Commission is unable to make such payments.

In August 1986, the Commission issued 1986 Series A Bonds. This issue was structured as a rolling cross-over refunding and new money issue. The 1986 Bonds provide funds for the Commission's ongoing capital improvement program and other capital and operating needs. In addition, a portion of the proceeds on the 1986 Bonds were deposited into the 1986 Series A Escrow Account to provide for the principal payments of the 1985 Series A Bonds and the interest payments on the 1986 Bonds as they come due. Thus, the Commission is allowed to pay the low short-term interest rates provided under the 1985 Bonds and has secured a guaranteed redemption for the 1985 Bonds.

In December 1988, the Commission issued 1988 Series A Bonds to provide for the defeasance of a portion of the 1984 Series A Bonds, to provide supplemental funding for the Operating Reserve Fund and to pay costs of issuance. Under the 1988 Refunding Trust Agreement, the Commission deposited sufficient funds with the Bond Trustee to pay when due the principal and interest on the refunded bonds until the first call date, January 1, 1995. As a result, the refunded bonds are no longer outstanding under the Commission's Resolution.

In December 1989, the Commission issued the 1989 Series A Bonds to provide funds for projects undertaken as part of the Commission's ongoing capital improvement program.

In June 1991, the Commission issued 1991 Series A Bonds to provide funds for projects, to provide funds for the Senior Debt Reserve Fund and to pay the cost of issuance of the 1991 Series A Bonds. The Commission maintains an insurance policy with Financial Guaranty Insurance Company to guarantee payment of principal and interest on the 1991 Series A Bonds maturing November 1, 1997 through November 1, 2021.

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 1993 AND 1992

In September 1992, the Commission issued 1992 Series A Bonds to provide funds for the advanced refunding of \$23,930,000 of the Commission's 1986 Series A Bonds and the establishment of an escrow account to provide for future principal and interest payments on \$37,640,000 of the same 1986 series bonds as part of a cross-over refunding transaction. Under the 1992 Refunding Trust Agreement, the Commission deposited sufficient funds with the Bond Trustee to pay when due the principal and interest on the advanced refunded bonds until the first call date, November 1, 1996. As a result, this transaction qualifies as an in-substance defeasance and the advanced refunded bonds of \$23,930,000 are no longer considered outstanding under the Commission's Resolution. The bonds refunded through the cross-over transaction are not considered defeased, accordingly, the outstanding debt of \$37,640,000 and related escrow account are included in the accompanying financial statements.

In March 1993, the Commission issued \$100,505,000 of General Revenue Bonds, 1993 Series A to advance refund a portion of the 1984 Series A (Subordinated Series), a portion of the 1989 Series A (Senior Series), and a portion of the 1991 Series A (Senior Series) Bonds. Under the 1993 Refunding Trust Agreement, the Commission deposited sufficient funds with the Bond Trustee to pay the principal and interest on the advanced refunded bonds when due. As a result, this transaction qualifies as an in-substance defeasance and the advanced refunded bonds of \$88,040,000 are no longer considered outstanding under the Commission's Resolution. The Commission advance refunded the bonds to reduce its total debt service payment over the next 26 years by almost \$7,426,000 and to obtain an economic gain of \$6,256,720.

In the aggregate \$214,360,000 remains outstanding at December 31, 1993 on the bond issues that were defeased "in-substance".

The "Resolution Establishing Issue of Revenue Bonds" adopted by the Commission on December 6, 1984 places certain restrictions on the Commission's operations. It requires that rates, charges and fees be set at a level sufficient to meet a net revenue test on an annual basis and requires that all revenues, as defined, be deposited in a Revenue Fund maintained by a fiscal agent. Amounts held in the Revenue Fund are to be disbursed into and withdrawn from other funds provided for in the Resolution. The Resolution provides that all excess cash be held in the Revenue Fund until the last business day of the fiscal year. At that time, if certain covenants are met, the Commission has the option to remove any excess cash from the Revenue Fund and place such cash in a fund not restricted by the Resolution.

The Commission has options for early redemption of revenue bonds starting in 1995 at prices ranging from 100% to 103% of face value. In addition, in compliance with the Resolution, the Commission has established both trustee and nontrusteed funds with investments, principally short-term securities, which are restricted for payment of specified liabilities, capital projects or other costs of operations. The components of the trustee and nontrusteed investments at December 31, 1992 and 1991 are as follows:

	1993	1992
TRUSTEED:		
U.S. TREASURY NOTES	\$ 78,449,086	86,926,407
U.S. TREASURY BILLS	6,924,736	4,103,168
OTHER GOVERNMENT OBLIGATIONS	30,964,781	44,007,138
MONEY MARKET AND		
CASH INVESTMENTS	29,325,851	40,540,493
COMMERCIAL PAPER	24,725,490	12,622,067
REPURCHASE AGREEMENTS	50,287,185	32,938,383
	<u>220,677,129</u>	<u>221,137,656</u>
NONTRUSTEED:		
U.S. TREASURY NOTES	6,611,690	671,029
U.S. TREASURY BILLS	171,366	—
MONEY MARKET AND		
CASH INVESTMENTS	26,046,544	17,752,945
COMMERCIAL PAPER	3,000,000	2,000,000
REPURCHASE AGREEMENTS	4,979,363	—
	<u>40,808,963</u>	<u>20,423,974</u>
	<u>\$ 261,486,092</u>	<u>241,561,630</u>

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 1993 AND 1992

Long-Term Notes Payable: During 1993 the Commission executed new loan agreements with a principal balance \$7,329,947 with the Massachusetts Water Pollution Abatement Trust ("MWPAT") to finance and refinance a portion of the Commission's water pollution abatement projects. As of December 31, 1993, an aggregate amount of \$6,969,129 was received by the Commission. The Commission is eligible to receive the remaining \$360,818 once the projects are completed. For purposes of offsetting principal and

interest payments, an amount aggregating \$8,136,275, consisting of contract assistance payments from the Commonwealth of Massachusetts and other interest subsidies from MWPAT, will be recognized as capital grants in aid of construction over the term of the loan. The long term portion of the loan agreements with MWPAT is \$7,158,563. The scheduled loan payments and related subsidies are shown below:

	SCHEDULED LOAN REPAYMENTS			LOAN SUBSIDY AMOUNTS			NET LOAN REPAYMENTS		
	Principal	Interest	Total	Equity Earnings	Contract Assistance Payments	Total	Principal	Interest	Total
1994	\$ 171,384	389,287	560,671	200,907	261,594	462,501	74,624	23,546	98,170
1995	239,522	366,003	605,525	186,468	292,560	479,028	106,616	19,881	126,497
1996	248,129	357,603	605,732	180,121	292,560	472,681	113,649	19,402	133,051
1997	257,747	348,079	605,826	173,542	292,560	466,102	121,014	18,710	139,724
1998	268,227	337,237	605,464	166,704	292,560	459,264	128,788	17,412	146,200
THEREAFTER	6,144,938	2,942,814	9,087,752	1,408,266	4,388,433	5,796,699	3,193,944	97,109	3,291,053
	<u>\$ 7,329,947</u>	<u>4,741,023</u>	<u>12,070,970</u>	<u>2,316,008</u>	<u>5,820,267</u>	<u>8,136,275</u>	<u>3,738,635</u>	<u>196,060</u>	<u>3,934,695</u>

During 1993 the Commission executed a new, interest free loan agreement with the Massachusetts Water Resource Authority. The Commission received \$2,036,162 to be repaid in five equal, annual installments as part of the Massachusetts Water Resource Authority Infiltration/Inflow Local Financial Assistance program. The long term portion of this loan is \$1,628,930. This program is designed to assist service area communities with sewer system rehabilitation.

5) MASSACHUSETTS WATER RESOURCES AUTHORITY

The Massachusetts Water Resources Authority (the "Authority") provides all the Commission's water supply and sewer treatment requirements and assesses the Commission for a portion of its actual operating and capital expenses. The assessment is based on the Authority's fiscal year (July 1 to June 30) and payments are due to the Authority in four equal installments in September, November, March and May. The change in payment method to equal installments resulted in a decrease of approximately \$4.8 million in accrued assessments due to the Authority at year end 1993 as compared with year end 1992. Interest is not charged on the outstanding balance. The amounts included in the operating statements for the assessments by the Authority for 1993 and 1992 are as follows:

	1993	1992
ASSESSMENTS ALLOCATED ON:		
WATER USAGE	\$ 27,600,054	26,620,563
WASTEWATER USAGE	70,952,860	62,589,554
TOTAL	<u>\$ 98,552,914</u>	<u>89,210,117</u>

During both 1993 and 1992, over 75% of water received from the Authority was billable to customers. Since its inception, the Commission has increased the percentage of billable water from 52% in 1977 to over 75% in 1993 and is continuing to take steps to improve the amount of billable water, including replacement of old and defective meters and implementation of a comprehensive leak detection and repair program.

(6) TRANSACTIONS WITH THE CITY OF BOSTON

The Commission's ongoing program to meter City facilities has resulted in billings to nine City departments based on actual consumption of \$3,015,000 and \$3,631,000 in 1993 and 1992, respectively.

The City provides services to the Commission, including paving and facilities rental. Operating costs billed to the Commission by the City were \$1,428,000 and \$2,368,000 during 1993 and 1992, respectively. Capital costs billed by the City were \$6,121,000 and \$1,330,000 during 1993 and 1992, respectively.

During 1992, the Commission entered into an agreement with the City that allows the Commission's water and sewer bills that have remained unpaid for more than 2 years to be added as liens on the City's property tax bills. Under this agreement, the City provides collection services on these bills for an administrative fee. In 1993, approximately \$4.2 million of billings were included on property tax bills and approximately \$1.4 million of this amount was collected and remitted to the Commission. At year end 1993, the Commission transferred an additional \$2.7 million of unpaid bills to the City for collection as part of this program.

(7) RETIREMENT BENEFITS

The Commission provides retirement benefits to substantially all of its employees which are funded by a pension trust fund (the "Trust Fund"), and the State-Boston Retirement System (the "SBRS"), a cost-sharing retirement plan. The Commission does not provide any other significant postemployment benefits.

A dispute concerning the Commission's past and future obligations to all Commission employees covered by the SBRS was settled in 1986, resulting in a payment of \$19,100,000 to the SBRS. This payment was funded primarily through 1985 and 1986 bond proceeds and is recorded as a deferred charge that will be recovered through future rates. As part of the settlement with the SBRS, the Commission annually reimburses the City for the Commission's share of pension benefits paid to Commission employees. The Commission's share is based upon the proportion of each employee's total years of creditable service that were spent with the Commission. Employees become 100% vested after 10 years of creditable service as defined by Chapter 32 of the Massachusetts General Laws ("MGL").

DESCRIPTION OF THE SBRS PLAN

The SBRS is a cost-sharing multi-employer public employee retirement system established under Chapter 32 of the MGL and is a member of the Massachusetts Contributory Retirement System.

The SBRS provides for retirement allowance benefits up to a maximum of 80% of a member's highest consecutive three-year average annual rate of regular compensation. Benefit payments are based upon a member's age, length of creditable service, level of compensation, and group classification.

Members become vested after ten years of creditable service. A superannuation retirement allowance may be received upon the completion of twenty years of service or upon reaching the age of 55 with ten years of service. Normal retirement for employees occurs at age 65.

A retirement allowance has two parts: an annuity and a pension. A member's accumulated total deductions and a portion of the interest they generate constitute the annuity. The differential between the total retirement benefit and the annuity is the pension. The average retirement benefit is approximately 80-85% pension and 15-20% annuity.

Members who become permanently and totally disabled from further duty may be eligible to receive a disability retirement allowance. The amount of benefits to be received in such cases is dependent upon several factors including whether or not the disability is work-related, the member's age, years of creditable service, level of compensation, veteran's status, and group classification.

**NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 1993 AND 1992**

Employees who resign and are not eligible to receive a retirement allowance or who are under the age of 55 are entitled to request a refund of their accumulated total deductions. In addition, depending upon the number of years of creditable service, such employees are entitled to receive either zero (0%) percent, fifty (50%) percent, or one hundred (100%) percent of the regular interest which has accrued upon those deductions.

Survivor benefits are extended to eligible beneficiaries of deceased members.

Administrative expenses are appropriated from governmental entities whose employees are members of the SBRS.

The Commission and its employees are obligated to contribute to the plan under authority of the Pension Reform Law adopted in 1988.

The plan described above is funded by the assets held in the Trust Fund as well as assets earmarked for the Commission held as part of the SBRS. As required by the Commission's Enabling Act, *employee* pension contributions are transferred to the SBRS and are either returned to employees upon termination or, for vested employees, are used to defray a portion of the total retirement benefit. The Commission's policy is to make additional *employer* contributions to the Trust Fund based upon the actuarially determined cost of future benefits, net of employee contributions.

THE COMMISSION'S TRUST FUND

(a) Valuation of Investments

Trust Fund assets at December 31, 1993 and 1992 are as follows:

	<u>1993</u>	<u>1992</u>
ASSETS (AT FAIR MARKET VALUE):		
COMMON STOCK	\$ 16,973,017	14,087,551
PREFERRED STOCK	237,550	678,160
CASH	515,936	471,345
MUTUAL FUNDS	<u>9,763,186</u>	<u>8,601,642</u>
TOTAL	<u>\$ 27,489,689</u>	<u>23,838,698</u>

The investment portfolio is regulated by the MGL, Chapter 32, Section 23. The investments are presented in the financial statements at fair market value. The investments are managed by independent investment advisors. Fleet Bank of MA, N.A., is the custodian of the portfolio.

(b) Funding Status and Progress

The Commission's funding policy has been to provide for quarterly employer contributions to the Trust Fund based upon an actuarially determined rate using the aggregate actuarial cost method. The Commission's contributions totalled approximately \$781,000 in 1993, and \$810,000 in both 1992 and 1991. As a percentage of the covered payroll this amounts to 4.0% in 1993, 4.1% in 1992 and 5.1% in 1991. Note that the actuarially determined rate changed from 5.5% to 4.0% in January 1992. This accounts for the changes in the contributions as a percentage of covered payroll. The Commission's covered payroll was approximately \$19,327,000, \$19,533,000 and \$18,240,000 in 1993, 1992 and 1991, respectively. Total payroll was approximately \$21,051,000, \$21,183,000 and \$20,246,000 in 1993, 1992 and 1991, respectively.

Net assets in excess of the pension benefit obligation ("PBO") applicable to the Trust Fund, as of January 1, (the latest data available), is determined as follows:

	<u>1993</u>	<u>1992</u>
NET ASSETS AVAILABLE FOR BENEFITS	<u>\$23,838,698</u>	<u>21,920,705</u>
PENSION BENEFIT OBLIGATION:		
RETIREES AND BENEFICIARIES		
CURRENTLY RECEIVING		
BENEFITS AND TERMINATED		
EMPLOYEES ENTITLED TO		
BENEFITS BUT NOT YET		
RECEIVING THEM	4,144,425	3,558,000
CURRENT EMPLOYEES:		
EMPLOYER-FINANCED VESTED	11,706,139	8,523,000
EMPLOYER-FINANCED NONVESTED	<u>1,672,561</u>	<u>3,211,000</u>
TOTAL PENSION BENEFIT OBLIGATION	<u>17,523,125</u>	<u>15,292,000</u>
NET ASSETS IN EXCESS OF PENSION BENEFIT OBLIGATION	<u>\$ 6,315,573</u>	<u>6,628,705</u>

In compliance with Statement No. 5 of the Governmental Accounting Standards Board, the January 1, 1992 PBO was computed through an actuarial update using the information contained in the January 1, 1991 actuarial valuation. The January 1, 1993 PBO was computed using the information contained in the January 1, 1993 actuarial valuation. The significant assumptions used in the calculation of the PBOs as of January 1, 1993 and 1992 include annually compounded rates of return of 7.5% and 8.0%, respectively, on present and future assets and projected salary increases of 5% and 6% per year, compounded annually. The January 1, 1993 actuarial valuation was based on 130 retired and inactive employees and 550 active employees. These assumptions are the same as those used to determine actuarial contribution requirements.

(c) Historical Trend Information

Net assets available for benefits as a percentage of the PBO are 136%, 143% and 128% for 1993, 1992 and 1991, respectively. The excess assets as a percentage of covered payroll are 33%, 34% and 20% for 1993, 1992 and 1991, respectively. Ten year historical trend information for the Trust Fund is not available.

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 1993 AND 1992

SBRs

(a) Valuation of Investments

The investment portfolio is regulated by the MGL, Chapter 32, Section 23. The investments are presented in the financial statements at fair market value. The investments are managed by independent investment advisors. State Street Bank and Trust Company is the custodian of the portfolio.

(b) Funding Status and Progress

The amount shown below as the PBO for SBRs is a standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases estimated to be payable in the future as a result of employee service to date. The measure is intended to help users assess the funding status of the system on a going-concern basis, assess progress made in accumulating sufficient assets to pay benefits when due, and make comparisons among systems. Employee contributions are defined under MGL, Chapter 32. Total employee contributions were approximately \$1,412,000, \$1,390,000 and \$1,314,000 or 7.3%, 7.1% and 7.2% of covered payroll in 1993, 1992 and 1991, respectively.

The PBO was computed as part of an actuarial valuation performed as of January 1, 1993. Significant actuarial assumptions used in the valuation include (a) the life expectancy of participants using the 1971 Group Annuity Mortality Table, set back six years for females, (b) projected salary increases of 6% both retroactively and prospectively, a year, attributed to inflation and seniority/merit, (c) a rate of return on the investments of present and future assets of 10% a year, and (d) retirement age assumptions of 64, 62 and 60 for various groups.

Total unfunded PBO of SBRs and an estimate of the Commission's share as provided by SBRs at June 30, 1993, (the latest data available), are as follows (in thousands):

	SBRs	Commission
Retirees and beneficiaries		
currently receiving benefits and terminated employees not yet receiving benefits	\$ 1,011,651	9,738
Current Employees:		
Accumulated employee contributions including investment earnings	613,060	11,505
Employer-financed vested	301,524	5,958
Employer-financed nonvested	145,574	2,727
Cost-of-living adjustments ("COLA") reimbursable by the Commonwealth of Massachusetts	255,905	3,340
Total pension benefit obligation	2,327,714	33,268
Net assets available for benefits, at market	1,353,519	23,454
Unfunded pension benefit obligation	974,195	9,814
Effects of COLA	255,905	3,340
Unfunded pension benefit obligation, net of COLA	\$ 718,290	6,474

(c) Contribution Requirements and Contributions Made

Effective July 1, 1991, the SBRs adopted a funding schedule, approved by the Public Employee Retirement Administration, equal to the following amounts calculated in accordance with the entry age normal actuarial cost method:

1. Normal cost, or the cost of projected pension benefits attributed to the fiscal year.
2. 12 year amortization, in an amount increasing by no more than 4-1/2% per year, of the unfunded actuarial liability resulting from retiree liabilities frozen at July 1, 1991 (10 years remaining).
3. 29 year amortization, in an amount increasing by no more than 4-1/2% per year, of the unfunded actuarial liability resulting from active liabilities (27 years remaining).
4. 15 year amortization of the unfunded actuarial liability resulting from actuarial gains and losses (13 years remaining).
5. 15 year amortization of actuarial (gain) or loss as of July 1, 1992 (14 years remaining).
6. 15 year amortization of actuarial (gain) or loss as of July 1, 1993.

(d) Historical Trend Information

Ten-year historical trend information designed to provide information about SBRs and its progress made in accumulating sufficient assets to pay benefits when due is presented in the SBRs financial statements. For the three years ended June 30, 1993, 1992 and 1991, available assets were sufficient to fund 58%, 54% and 50% of the PBO, respectively. Unfunded PBO represented 138%, 154% and 159% of the annual payroll for employees covered by the SBRs for 1993, 1992 and 1991, respectively.

(8) DEPOSITS AND INVESTMENTS

The Commission's General Revenue Bond Resolution, adopted December 6, 1984, as amended, places certain limitations on the nature of deposits and investments available to the Commission. Demand deposits and term deposits without collateralization can only be made with financial institutions meeting certain criteria. Certificates of deposit must be fully collateralized and issued by FDIC insured banks. Investments can also be made in securities issued by or unconditionally guaranteed by the U.S. Government or its Agencies; public agencies, municipalities or state obligations carrying the highest bond rating; commercial paper rated A-1, P-1; A-Rated money market funds; fully collateralized investment contracts and certain futures contracts. In addition, the Commission's Trust Fund has additional investment powers, most notably the ability to invest in stocks, corporate bonds and other instruments.

(a) Deposits

A summary of the amount of the Commission's deposits that are (Category 1) fully insured or collateralized with securities held by the Commission or its agent in the Commission's name, (Category 2) those deposits that are collateralized with securities held by the pledging financial institution's trust department or agent in the Commission's name and (Category 3) those deposits that are not collateralized as of December 31, 1993 follows:

	CATEGORY			TOTAL BANK BALANCE	CARRYING AMOUNT
	1	2	3		
CASH	\$ 368,838	—	7,217,940	7,586,778	5,004,434
MONEY MARKET	—	—	23,955,975	23,955,975	23,966,226
TOTAL	<u>\$ 368,838</u>	<u>—</u>	<u>31,173,915</u>	<u>31,542,753</u>	<u>28,970,660</u>

Outstanding checks account for the majority of the difference between the bank balance and the carrying amount of cash.

(b) Investments

The Commission's investments are categorized according to the level of risk assumed by the Commission. Category 1 includes investments that are insured, registered or held by the Commission's trustee in the Commission's name. Category 2 includes uninsured and unregistered investments held by the counterparty's trust department or agent in the Commission's name. Category 3 includes uninsured or unregistered investments held by the counterparty, its trust department or agent but not in the Commission's name:

	CATEGORY			CARRYING AMOUNT	ESTIMATED MARKET VALUE
	1	2	3		
U.S. GOVERNMENT OBLIGATIONS	\$92,157,478	—	—	92,157,478	92,008,022
U.S. GOVERNMENT AGENCY OBLIGATIONS	30,964,781	—	—	30,964,781	30,421,475
REPURCHASE AGREEMENTS	—	55,266,548	—	55,266,548	54,943,238
MONEY MARKET	4,575	—	30,229,063	30,233,638	30,233,638
COMMERCIAL PAPER	—	27,725,490	—	27,725,490	27,619,000
TOTAL	<u>\$ 123,126,834</u>	<u>82,992,038</u>	<u>30,229,063</u>	<u>236,347,935</u>	<u>235,225,373</u>

(9) LEASE AGREEMENTS

On July 2, 1993, the Commission entered into a new 30-year operating lease for office space in the same building the Commission had previously occupied. This lease accounts for over 95% of the Commission's future minimum lease commitments. In addition to the minimum base rent under this lease, the Commission must pay as additional rent, a percentage of operating costs of the leased building.

The Commission also leases other office space and equipment under various leases expiring through 1996, that have also been accounted for as operating leases. Leases associated with other office space are expected to be renewed as they expire in the normal course of business until the commission finalizes construction of a planned consolidated facility.

Minimum lease commitments under all operating leases with terms in excess of one year at December 31, 1993 are as follows:

	OFFICE	OTHER
1994	\$ 640,875	660,050
1995	668,062	406,739
1996	668,062	8,860
1997	668,062	—
1998	698,209	—
THEREAFTER	<u>20,906,434</u>	<u>—</u>
TOTAL	<u>\$ 24,249,704</u>	<u>1,075,649</u>

Rent expense under operating leases amounted to \$1,663,757 and \$1,636,502 in 1993 and 1992, respectively.

(10) COMMITMENTS

A major capital improvement program is currently in progress. As part of this program, the Commission has entered into a number of contracts for the design and construction of its facilities. Commitments under these contracts aggregate approximately \$40 million as of December 31, 1993. Capital improvements, primarily related to water and wastewater system projects with an emphasis on the clean-up of the Boston harbor area, are expected to aggregate approximately \$79 million for 1994 and 1995. Of this amount, approximately \$61 million represents extension and improvement projects and \$18 million represents renewal and replacement projects. The extension and improvement projects will be 22% funded by federal and state grants. The remaining amounts will be funded from the Commission's bond proceeds and operating revenues.

(11) CONTINGENCIES

The Commission is involved in ordinary and routine litigation and other matters related to its operations and the establishment of rates. Management believes that the resolution of these matters will not materially affect the financial position of the Commission.

The Commission has received federal and state grants for specific purposes that are subject to review and audit by the grantor agencies. Such audits could lead to requests for reimbursement to the grantor agency for expenditures disallowed under terms of the grant. The Commission believes such disallowances, if any, will not be significant.

The Commission is involved as a defendant in litigation regarding the pollution of Boston harbor. Management believes that, except for increases in future assessments by the Massachusetts Water Resources Authority related to the litigation, the Commission's extensive capital improvement program (see note 10) addresses probable actions that the Commission may be required to undertake in connection with this litigation.

The Commission has collected a large quantity of catch basin cleanings at one of its pumping station locations. The Commission is aware of the need to properly dispose of this material and has accounted for the estimated future costs associated with the clean up in the financial statements. Additional costs associated with the clean up may occur but cannot be reasonably estimated at this time.

(12) DEFERRED COMPENSATION

The Commission offers its employees a deferred compensation plan created in accordance with Section 457 of the U.S. Internal Revenue Code. The plan is administered by Aetna Life Insurance and Annuity Company. The plan, available to all employees, permits them to defer a portion of their current salary to future years. The deferred compensation is not available to the participants until termination, retirement, death or unforeseeable emergency.

In accordance with Section 457 of the Internal Revenue Code, all amounts of compensation deferred under the plan, all property and rights purchased with such amounts, and all income attributable to such amounts, property, or rights are (until they are made available to the employee or other beneficiary) solely the property and rights of the Commission (without being restricted to the provisions of benefits under the plan), subject only to the claims of the Commission's general creditors.

Participants' rights created under the plan are equivalent to those of general creditors of the Commission and only in an amount equal to the fair market value of the deferred account maintained with respect to each participant. Plan assets have been used for no purpose other than to pay benefits. In addition, the Commission believes that it is unlikely that it will use the assets to satisfy the claims of general creditors in the future.

The Commission and its agent have no liability for losses under the plan, but do have the duty of care that would be required of any ordinary prudent investor.

The activity of the plan for the fiscal year ended December 31, 1993, is as follows:

FUND ASSETS (AT MARKET VALUE) JANUARY 1, 1993	\$ 1,884,482
INCREASE (DECREASE) IN FUND ASSETS:	
DEFERRALS OF COMPENSATION	216,707
EARNINGS AND ADJUSTMENTS TO MARKET VALUE	114,029
PAYMENTS, WITHDRAWALS AND OTHER REDUCTIONS	<u>(21,530)</u>
FUND ASSETS (AT MARKET VALUE) DECEMBER 31, 1993	<u>\$ 2,193,688</u>

**SUPPLEMENTAL SCHEDULE OF REVENUES AND EXPENSES - RATE BASIS YEARS
ENDED DECEMBER 31, 1993 AND 1992**

	<u>1993</u>	<u>1992</u>
Revenues:		
Water revenue	\$ 69,276,952	69,521,239
Sewer revenue	121,684,795	110,121,352
	<u>190,961,747</u>	<u>179,642,591</u>
Less:		
Adjustments	15,340,693	21,577,110
Discounts	817,682	695,212
Bad debt	5,752,760	8,083,917
Total	<u>21,911,135</u>	<u>30,356,239</u>
Net billed charges	169,050,612	149,286,352
Prior year surplus	5,890,147	1,896,972
Miscellaneous revenues:		
Late charge revenue	4,024,210	4,866,299
Investment income	6,360,223	5,773,075
Fire pipe revenue	2,294,655	1,918,940
Other income	5,340,634	2,590,964
Total revenues	<u>192,960,481</u>	<u>166,332,602</u>
Direct operating expenses:		
Salaries and wages	20,839,563	20,814,026
Overtime wages	1,035,921	1,038,897
Fringe benefits	3,392,987	4,817,619
Supplies and materials	2,018,818	1,938,821
Repairs and maintenance	8,101,308	5,697,210
Utilities	421,372	372,623
Professional services	1,703,726	1,027,556
Space and equipment rentals	1,663,757	1,636,502
Other services	774,663	617,541
Insurance	615,524	765,423
Damage claims	193,482	754,038
Inventory	250,225	254,910
Capital outlay	725,304	649,621
Total direct operating expenses	<u>41,736,650</u>	<u>40,384,787</u>
Nonoperating expenses:		
MWRA assessment	98,552,914	89,210,117
Capital improvements	10,868,747	7,798,864
Principal payments	5,660,000	3,685,000
Interest expense	14,498,877	16,173,598
Deposits to reserve funds	8,565,829	3,186,000
Miscellaneous	19,998	4,089
Total nonoperating expenses	<u>138,166,365</u>	<u>120,057,668</u>
Total current expenses	<u>179,903,015</u>	<u>160,442,455</u>
Current year rate surplus	<u>\$ 13,057,466</u>	<u>5,890,147</u>

This supplemental schedule presents the Commission's revenues and expenses on the basis that is presented in the Commission's budget and rate-setting documents.

Design and Production:
PLANNERS COLLABORATIVE INC.
with FLANDERS + ASSOCIATES

Photography:
SAM DODEN

Produced in Cooperation with the
Boston Water and Sewer Commission
Public Affairs Department

Printed on Recycled Paper

**BOSTON WATER AND
SEWER COMMISSION**

*425 Summer Street
Boston, Massachusetts 02210*

617.330.9400