

BOSTON PUBLIC LIBRARY



3 9999 06588 165 6



M3/B16
WS
S1

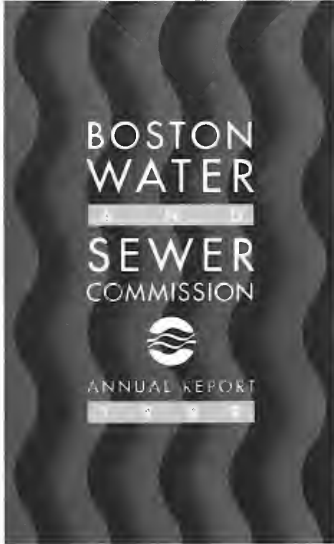
989

BMA-1068

16

Doc. 2 of 2

BOSTON PUBLIC LIBRARY
DOCUMENTS DEPARTMENT
RECEIVED
JUL 17 1990



THE CHALLENGE

Today in Boston we look to a future filled with promises and challenges, as well as uncertainties. While our skyline is rich with the evidence of new development and continued growth, fiscal belt-tightening is becoming a major concern for all City agencies.

As we close out the decade, the Boston Water and Sewer Commission (BWSC) accepts the challenge of maintaining a water and sewer system that must meet the promise of this new revitalized Boston. At the same time, we continue a management program of fiscal austerity.

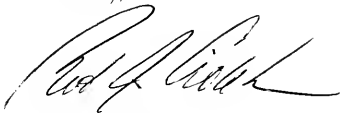
Since its inception, the BWSC has provided the City with some of the purest water in the nation. Originating at the Quabbin Reservoir, our water flows through 50 miles of MWRA pipeline before reaching the City of Boston. We also maintain a wastewater collection system that consists of over 90,000 service pipes and extends over a length of 1,300 miles. Operating, maintaining and improving this vast service delivery infrastructure is a constant challenge.

In addition, BWSC has earned a growing respect in financial communities for its sound fiscal management, as well as in the environmental community for water conservation and pollution control programs. However, since parts of our system are over 130 years old, much remains to be accomplished.

As the Executive Director of the Boston Water and Sewer Commission, I have set three important goals for the Commission: cost-control, continued excellence in customer service, and an increased vigilance in protecting our urban environment.

I am committed to these goals. I also believe that the employees of the Commission share a common desire to serve the needs of the people of Boston. This dedication of purpose will result in a greatly improved water and wastewater delivery system as we enter the next century.

Sincerely,



Robert J. Ciolek
Executive Director



▲
Robert J. Ciolek
Executive Director

L:
Mary Nee
Commissioner

R:
Lisa G. Chapnick
Commissioner



The Boston Water and Sewer Commission (BWSC) takes very seriously its role in preserving and protecting Boston's urban environment. While the Commission has earned national recognition for resource conservation programs and for achievements in rehabilitating and operating our water and wastewater system, we are committed to further improvements. As we move towards the year 2000, The Boston Water and Sewer Commission is pleased to be part of the increased effort to improve the environmental quality of life in the City of Boston.

Conserving a Precious Resource. The BWSC has developed several model conservation programs to insure that Boston residents, businesses and visitors continue to receive a stable supply of clean, pure water. Successful conservation programs include:

- An aggressive leak detection and repair program which has helped to reduce Boston's water consumption from 150 million gallons per day in 1976 to 111.4 million gallons per day in 1989 - a reduction of 26 percent. In 1989 alone, the program saved 10.1 million gallons per day;
- A progressive rate structure which promotes water conservation by charging a higher rate for higher amounts of water used;
- Ongoing domestic and industrial conservation programs.

Guarding Against Pollution. Improving water quality in Boston Harbor will continue to be one of the most pressing environmental issues of the decade. The Commission, in cooperation with other state and federal agencies, plays a significant role in harbor clean-up efforts.

The BWSC has taken several major steps to control daily discharge of sewage into the harbor. Through the construction of two new interceptors in 1988 and the systematic cleaning of existing interceptors, we have enlarged our capacity for transporting sewage and have virtually eliminated dry weather overflows.

During wet weather, Boston's sewage system, which combines wastewater and storm drainage, often overflows at dozens of points around the harbor. These combined sewer overflows (CSOs), are a major source of pollution in the harbor and its tributaries.

The BWSC has already separated over 4,600 feet of combined sewers, significantly reducing the threat of sewage spills during wet weather. In addition the Commission exceeds federal permit requirements for inspection and maintenance of our tidegates and regulators, which help control the flow of combined sewage into the harbor.

The BWSC is actively locating and correcting illegal sewage connections to storm drains, thus reducing another source of contaminants being discharged into the City's waterways. And by using the Calf Pasture CSO Pumping Station as a back-up to the Massachusetts Water Resources Authority treatment plant, BWSC is providing an outlet for combined sewage during storms and is treating harmful bacteria by chlorinating the flow into Dorchester Bay.

Through aggressive maintenance and upgrading of Boston's water and sewer system, the BWSC will continue to play a major part in restoring Boston Harbor.

" Since its inception,

the BWSC has

provided the City

with some of

the purest water

in the nation. "

THE CHALLENGE

CONFLICTING COSTS

Since its inception, the Boston Water and Sewer Commission has practiced innovative financial strategies that have allowed for capital improvements while securing a reputation for the Commission as one of the best managed utilities in the country.

Today, however, we are faced with a future that calls for tighter cost controls, fiscal austerity and an ever-vigilant, ongoing scrutiny of our budgets and resources.

The clean-up of Boston Harbor involves costs of staggering proportions. Unfortunately, because of the abdication of the responsibility of the federal and state governments in providing grants for this project, our customers will pay much more for water and wastewater services. Due to existing laws and our commitment to the quality of our water and wastewater systems, capital cost increases are largely unavoidable.

As we enter this period of rapidly escalating rates, BWSC will actively seek ways to continue delivering high quality services in the most cost-effective manner.

Fiscal Accountability. The major impetus for the creation of the Commission was to generate adequate revenue to meet the cost of proper operation and maintenance of the City's water and sewer system.

Currently, rates must be established at a level sufficient to generate revenues to recover the full costs of operations on a fair and equitable basis, to encourage water conservation, and to provide continued discounts for the elderly and disabled.

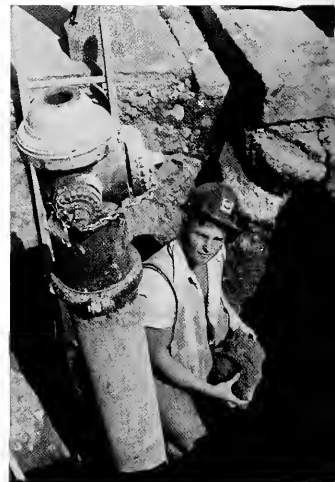
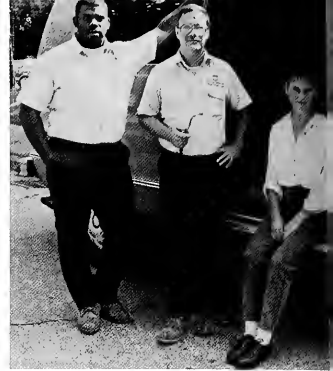
With the creation of the MWRA and its mission to clean up Boston Harbor as well as upgrade the existing water and sewer infrastructure, the City is now feeling the impact of increased rates. To assure accurate rate levels, the Commission carefully monitors metering at the 29 points where water is delivered by the MWRA and independently reviews Authority ratemaking methodology.

Our commitment to fiscal accountability assures our customers that their rate dollars are used wisely and efficiently. Recently, a national bond rating service recognized the Commission's sound fiscal management by awarding us an A/A - bond rating.

Management Accountability. The Commission's policies are formulated by a three-member Board of Commissioners, appointed to four-year terms by the Mayor, subject to confirmation by the City Council.

Policy is implemented under the direction of the Executive Director, Robert J. Ciolek, and carried out through various departments managed by experienced senior staff. Units within the Office of the Executive Director include Legal, Planning and Program Management, Affirmative Action and Public Affairs. In addition to the Office of the Executive Director, the Commission is organized into four principal departments: Finance, Administration, Operations, and Engineering.

Buoyed by a reputation for management accountability and fiscal stability and integrity, the Commission enters this period of maximum fiscal austerity with a sound management and financial structure.





Service to the people of Boston, delivered with courtesy and respect, is Boston Water and Sewer Commission's most essential mission. We firmly believe that the people of Boston will be more willing to accept the high costs associated with harbor clean-up and increased water rates when they are receiving value for their dollar as well as a sustained quality of service.

Encouraging Community Access. Our customer service department continues to actively work through community outreach to make the Commission more accessible and accountable to residents.

Public outreach efforts include cost-effective educational tools, such as conservation tips, billing inserts, and a traveling water conservation exhibit. Neighborhood meetings are frequently held to update customers on construction projects and local system improvements.

By holding office hours in 15 convenient locations throughout Boston's neighborhoods, BWSC representatives are available to accept payments, listen to service-related complaints and process elderly and disabled discounts.

The BWSC once again confirms its commitment to the concept that our customers' needs are our most important consideration.



**" Service to the
people of Boston
is our most
essential mission. "**



**" The same vision that guided planners to tap
Long Pond, to construct the Boston Main Interceptor
System and build the Quabbin Reservoir, must
guide us to shape our future as well. "**



INDEPENDENT AUDITORS' REPORT

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, 1989 and 1988 and the related statements of operations, Commission equity and cash flows for the years then ended. These financial statements and the supplemental schedule discussed below 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, such financial statements present fairly, in all material respects, the financial position of the Commission at December 31, 1989 and 1988 and the results of its operations and its cash flows for the years then ended in conformity with generally accepted accounting principles.

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 for the years ended December 31, 1989 and 1988 is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such supplemental schedule 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 when considered in relation to the basic financial statements taken as a whole.

DELOITTE & TOUCHE
Boston, Massachusetts
April 27, 1990

BALANCE SHEETS, December 31, 1989 and 1988

ASSETS	NOTES	1989	1988
CURRENT ASSETS:			
Cash and cash equivalents	1,5,9	\$ 26,801,667	\$ 36,932,369
Accounts receivable:			
Customers, less allowances of			
\$12,517,089 in 1989 and			
\$10,179,803 in 1988		42,429,786	36,812,209
City of Boston - net	7	976,736	1,585,750
Earned revenues in excess of			
billings, less allowances of			
\$1,732,419 in 1989 and \$641,623			
in 1988	1	10,838,488	7,134,473
Construction grants receivable	9	12,893,326	11,784,224
Prepaid expenses		1,521,537	1,073,979
Deferred charges	1,2,8	12,594,773	11,387,415
Total current assets		<u>108,056,313</u>	<u>106,710,419</u>
TRUSTEED ASSETS	1,5,9	86,691,747	86,008,860
NONTRUSTEED ASSETS	1,5,9	44,528,169	2,614,295
PROPERTY, PLANT AND EQUIPMENT - Net	1,4,10	256,914,295	228,925,916
DEFERRED CHARGES	1,2,8	27,355,384	28,526,521
DEBT ISSUE COSTS, LESS AMORTIZATION	1	4,451,430	3,989,837
TOTAL		<u>\$527,997,338</u>	<u>\$456,775,848</u>

See notes to financial statements.

BALANCE SHEETS, December 31, 1989 and 1988 (cont.)

LIABILITIES AND COMMISSION EQUITY	NOTES	1989	1988
CURRENT LIABILITIES:			
Payable from current assets			
Accounts payable		\$ 8,252,043	\$ 5,581,059
Other accrued liabilities		<u>4,144,934</u>	<u>3,763,845</u>
Total		<u>12,396,977</u>	<u>9,344,904</u>
Payable from current trustee assets:			
Massachusetts Water Resources			
Authority assessment	6	2,976,492	2,495,227
City bonds	5	<u>621,453</u>	<u>630,174</u>
Total		<u>3,597,945</u>	<u>3,125,401</u>
General revenue bonds	5	<u>6,320,820</u>	<u>7,386,749</u>
Deferred credits	1, 3	<u>18,426,107</u>	<u>30,752,850</u>
Total current liabilities		<u>40,741,849</u>	<u>50,609,904</u>
OTHER LIABILITIES:			
City bonds	5	1,705,000	2,295,000
General revenue bonds	5	241,143,511	204,632,803
Deferred credits	1, 3	125,570,982	97,342,356
Other liabilities		<u>1,249,247</u>	<u>1,674,126</u>
Total other liabilities		<u>369,668,740</u>	<u>305,944,285</u>
COMMISSION EQUITY:			
Contributed capital	1	117,586,749	105,768,355
Accumulated deficit			<u>(5,546,696)</u>
Total commission equity		<u>117,586,749</u>	<u>100,221,659</u>
TOTAL		<u>\$527,997,338</u>	<u>\$456,775,848</u>

See notes to financial statements.

STATEMENTS OF OPERATIONS
For The Years Ended December 31, 1989 and 1988

	TOTAL		WATER		SEWER	
	1989	1988	1989	1988	1989	1988
OPERATING REVENUES:						
Water and sewer usage	\$ 120,484,970	\$ 90,734,764	\$56,375,198	\$44,560,550	\$64,109,772	\$46,174,214
Fire pipe	1,678,379	1,378,635	1,678,379	1,378,635		
Other	870,533	813,539	400,445	382,363	470,088	431,176
Total operating revenues	<u>123,033,882</u>	<u>92,926,938</u>	<u>58,454,022</u>	<u>46,321,548</u>	<u>64,579,860</u>	<u>46,605,390</u>
OPERATING EXPENSES:						
Operations	79,034,656	61,353,142	35,172,791	27,832,594	43,861,865	33,520,548
Engineering and administrative	23,807,038	14,409,642	12,143,322	6,585,206	11,663,716	7,824,436
Maintenance	4,831,816	4,575,196	2,222,635	2,726,623	2,609,181	1,848,573
Depreciation	4,366,778	3,901,230	2,008,076	1,782,862	2,358,702	2,118,368
Total operating expenses	<u>112,040,288</u>	<u>84,239,210</u>	<u>51,546,824</u>	<u>38,927,285</u>	<u>60,493,464</u>	<u>45,311,925</u>
TOTAL OPERATING INCOME	10,993,594	8,687,728	<u>\$ 6,907,198</u>	<u>\$ 7,394,263</u>	<u>\$ 4,086,396</u>	<u>\$ 1,293,465</u>
OTHER INCOME (EXPENSE)						
Interest income	7,986,618	6,503,666				
Interest expense	<u>(15,543,820)</u>	<u>(15,642,921)</u>				
INCOME (LOSS) FROM CURRENT OPERATIONS (Note 1)	3,436,392	(451,527)				
PRIOR YEAR RATE SURPLUS RECOGNIZED IN CURRENT YEAR	2,996,564	3,448,091				
CURRENT PERIOD RATE SURPLUS DEFERRED TO SUBSEQUENT YEAR (Note 1)	<u>[6,432,956]</u>	<u>[2,996,564]</u>				
NET INCOME	<u>\$ -0-</u>	<u>\$ -0-</u>				

See notes to financial statements.

STATEMENTS OF COMMISSION EQUITY
For The Years Ended December 31, 1989 and 1988 (Note 1)

	CONTRIBUTED CAPITAL	ACCUMULATED DEFICIT	TOTAL COMMISSION EQUITY
BALANCE, JANUARY 1, 1988	\$ 97,173,599	\$(5,546,696)	\$ 91,626,903
CONTRIBUTIONS IN AID OF CONSTRUCTION	9,373,194		9,373,194
DEPRECIATION OF RELATED PROPERTY	<u>(778,438)</u>	<u> </u>	<u>(778,438)</u>
BALANCE, DECEMBER 31, 1988	105,768,355	(5,546,696)	100,221,659
CONTRIBUTIONS IN AID OF CONSTRUCTION	13,309,386		13,309,386
DEPRECIATION OF RELATED PROPERTY	<u>(1,490,992)</u>		<u>(1,490,992)</u>
PRIOR YEARS RATE DEFICITS RECOVERED IN 1989		4,856,609	4,856,609
RECOVERIES ON PRE-COMMISSION RECEIVABLES WRITTEN OFF IN PRIOR YEARS	<u> </u>	<u>690,087</u>	<u>690,087</u>
BALANCE, DECEMBER 31, 1989	<u>\$117,586,749</u>	<u>\$ -0-</u>	<u>\$117,586,749</u>

See notes to financial statements.

STATEMENTS OF CASH FLOWS
For The Years Ended December 31, 1989 and 1988

	NOTES	1989	1988
OPERATING ACTIVITIES:			
Net income		\$ -0-	\$ -0-
Adjustments to reconcile net income to net cash:			
Depreciation and amortization		5,230,216	5,453,874
Loss on disposals of property, plant and equipment			100,346
Recovery of accumulated deficit		5,546,696	
Change in assets and liabilities:			
Accounts receivable		(5,008,563)	420,750
Earned revenues in excess of billings - net		(3,704,015)	166,482
Deferred charges		(36,221)	(13,795,966)
Accounts payable, assessments, accrued liabilities and other		(4,855,027)	11,954,203
Accrued interest		(1,854,651)	(40,024)
Deferred credits		15,901,883	11,807,499
Total		<u>11,220,318</u>	<u>16,067,164</u>
FINANCING ACTIVITIES:			
Proceeds of debt issuance		39,269,679	54,290,112
Payment for defeasance of bond principal and interest			(51,498,254)
Payment of debt issuance costs		(779,000)	(1,071,345)
Payment of principal on bonds		(3,115,000)	(2,900,000)
Proceeds of contributions in aid of construction		12,200,284	8,594,756
Total		<u>47,575,963</u>	<u>7,415,269</u>
INVESTING ACTIVITIES:			
Purchase of property, plant and equipment		(26,330,222)	(25,051,900)
Net proceeds (purchases) of investments		(42,596,761)	23,132,044
Total		<u>(68,926,983)</u>	<u>(1,919,856)</u>
CASH AND CASH EQUIVALENTS:			
Increase (decrease) during year		(10,130,702)	21,562,577
Balance, beginning of year		36,932,369	15,369,792
BALANCE, END OF YEAR		<u>\$ 26,801,667</u>	<u>\$ 36,932,369</u>
YEAR-END BALANCES COMPRISED OF:			
Cash		\$ 503,784	\$ 199,636
Current portion:			
Trusteed assets	1,5,8	20,821,462	13,925,770
Nontrusteed assets	1,5	5,476,421	22,806,963
TOTAL CASH AND CASH EQUIVALENTS		<u>\$ 26,801,667</u>	<u>\$ 36,932,369</u>
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION - Cash paid during the year for interest (net of amount capitalized)			
		<u>\$ 18,019,458</u>	<u>\$ 15,682,944</u>

See notes to financial statements

NOTES TO FINANCIAL STATEMENTS

1. ORGANIZATION, BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING PRINCIPLES

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").

Under the Enabling Act, the Commission is required to maintain and present its financial statements in accordance with generally accepted accounting principles ("GAAP"). Also, the Commission has adopted a rate setting process which recognizes certain costs in periods other than when the costs are incurred. This is generally accepted as appropriate regulatory practice.

To accommodate this rate setting process, the Commission follows the accounting standards set forth under the Financial Accounting Standards Board Statement No. 71 ("FAS-71"), "Accounting for the Effects of Certain Types of Regulation." FAS-71 requires that under regulation (a) revenues provided for future allowable costs are deferred until the costs are actually incurred (deferred credits) and (b) allowable incurred costs are capitalized if future recovery is assured (deferred charges).

The following is a reconciliation outlining the effects of FAS-71 on the statements of operations for the years ended December 31, 1989 and 1988:

	1989	1988
Income prior to deferrals	<u>\$11,858,132</u>	<u>\$ 7,439,775</u>
Revenues and expenses deferred in accordance with FAS-71:		
Deferred revenues:		
Revenue bond principal payments	(3,115,000)	(2,540,000)
Interest expense funded from escrow accounts	6,213,355	3,589,285
Deposits to reserve funds	(3,213,000)	(2,929,162)
Investment income on project funds	(5,146,168)	(5,912,644)
Amortization of bond issue and defeasance costs	1,278,819	774,208
Revenue raised for working capital	(6,294,360)	(10,159,000)
Revenue financed capital improvements	(3,882,320)	4,471,041
Depreciation on commission financed property, plant and equipment	4,366,778	3,901,231
Other	(120,836)	135,302
Total	<u>(9,912,732)</u>	<u>(8,669,739)</u>
Deferred expenses - depreciation on contributed capital	<u>1,490,992</u>	<u>778,437</u>
Income (loss) from current operations	<u>\$ 3,436,392</u>	<u>\$ 145,527</u>

The Enabling Act requires that any net surplus or deficit, as defined by the rate setting process, must either be returned to the City or applied to offset water and sewer rates for the following year. The Commission has applied \$6,432,956 and \$2,996,564 for the years ended December 31, 1989 and 1988, respectively, to offset rates in the respective subsequent years.

Revenues and Earned Revenues in Excess of Billings- Water and sewerage fees are billed to users of the systems on a quarterly cycle basis. Revenues are accrued for periods between the termination of billings for the various cycles and the end of the year.

Trusted and Nontrusted Assets- These assets, consisting of direct and unconditionally guaranteed short-term obligations of the U.S. Government, repurchase agreements and money market units secured by government securities, are stated at cost plus accrued interest.

Property, Plant and Equipment- Property, plant and equipment is stated at 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 capitalizes interest costs during construction of assets for its own use. Interest totaling approximately \$442,000 and \$660,000 was capitalized in 1989 and 1988, respectively.

Depreciation- The ranges of estimated useful lives used in computing depreciation are as follows:

	Years
Water:	
Works	60 to 100
Meters and hydrants	10 to 40
Sewerage:	
Works	40 to 75
Pumping station	35
Other	3 to 15

Commission Equity- Contributions from governmental agencies, individuals and others received in aid of specific construction projects, which are not refundable, are included in Commission equity as contributed capital. Accordingly, depreciation of the related property is charged directly to Commission equity and is not included in the accompanying statements of operations.

In 1989, the Commission determined that the accumulated deficit, previously recorded as a reduction of Commission equity, would be recoverable. The balance of \$5,546,696 was recovered in the 1989 fiscal year, net of all previous receipts that represented payment of pre-Commission receivables previously written off to the accumulated deficit.

Cash Equivalents- The Commission considers all highly liquid, short-term cash investments with a maturity of less than three months to be cash equivalents.

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.

Reclassification- Certain amounts in the 1988 financial statements have been reclassified to conform to the 1989 presentation.

2. DEFERRED CHARGES

The following is a summarization of the major components of deferred charges included in the accompanying balance sheet:

	1989	1988
Current deferred charges		
Accrued interest expenses	\$10,186,561	\$ 8,437,049
Accrued pension expenses	201,833	189,255
Accrued legal claims	427,835	418,531
Accrued vacation and sick time expenses	818,544	640,055
Debt extinguishment expenses	960,000	960,000
Provision for adjustments		742,525
Total current deferred charges	<u>\$12,594,773</u>	<u>\$11,387,415</u>
Noncurrent deferred charges		
Accrued pension expense	\$16,541,824	\$16,743,657
Accrued legal claims	1,664,822	1,674,126
Debt extinguishment expense	9,148,738	10,108,738
Total noncurrent deferred charges	<u>\$27,355,384</u>	<u>\$28,526,521</u>

3. DEFERRED CREDITS

The following is a summarization of the major components of deferred credits included in the accompanying balance sheet:

	1989	1988
Current deferred credits		
Reserve deposits made under the terms of the Bond Indenture (Note 5)	\$ 11,573,162	\$ 8,360,162
Prior year surplus deferred to subsequent year	6,432,956	2,996,564
Provision for additional working capital		18,440,603
Other	<u>419,989</u>	<u>955,521</u>
Total current deferred credits	<u>\$ 18,426,107</u>	<u>\$30,752,850</u>
Noncurrent deferred credits		
Revenues raised for capital improvements and payments on long-term debt	\$ 69,626,118	\$ 66,116,781
Working capital at inception of Commission	28,985,575	28,985,575
Provision for additional working capital	24,734,963	
Self insurance and other	<u>2,224,326</u>	<u>2,240,000</u>
Total noncurrent deferred credits	<u>\$125,570,982</u>	<u>\$97,342,356</u>

4. PROPERTY, PLANT AND EQUIPMENT

The cost of water and sewerage plant and equipment in service and related accumulated depreciation at December 31, 1989 and 1988 are summarized as follows:

	1989	1988
Water		
Works	\$ 90,153,870	\$ 83,217,000
Meters and hydrants	10,762,835	9,559,755
Total water	<u>100,916,705</u>	<u>92,776,755</u>
Sewerage:		
Works	136,939,338	132,419,951
Pumping station	6,799,216	6,751,316
Total sewerage	<u>143,738,554</u>	<u>139,171,267</u>
Other	11,863,301	12,217,442
Total	256,517,560	247,995,464
Less accumulated depreciation	35,647,669	29,759,897
Total	<u>220,869,891</u>	<u>218,235,567</u>
Construction in progress	36,244,404	16,727,349
Total	<u>\$256,914,295</u>	<u>\$234,962,916</u>

5. BONDS PAYABLE

Outstanding bonds payable, including accrued interest, at December 31, 1989 and 1988 were as follows:

	<u>1989</u>	<u>1988</u>
Revenue Bonds:		
1984 Series A, bearing interest at rates ranging from 7.0% to 10.0% with maturity dates ranging from January 1, 1990 to January 1, 2011	\$ 21,902,728	\$ 25,048,342
1985 Series A, bearing a variable interest rate (6.6% and 7.3% at December 31, 1989 and 1988, respectively), maturing in two equal amounts on November 1, 2014 and 2015 and requiring annual sinking fund contributions through 2014	49,944,810	50,411,868
1986 Series A, bearing interest at rates ranging from 6.0% to 7.9% with maturity dates ranging from November 1, 1990 to 2015	80,240,291	81,131,143
1988 Series A, bearing interest at rates ranging from 6.0% to 7.4% with maturity dates ranging from November 1, 1990 to 2008	55,872,063	55,428,199
1989 Series A, bearing interest at rates ranging from 5.9% to 7.1% with maturity dates ranging from November 1, 1990 to November 2019	39,504,439	
City Bonds, bearing interest at rates ranging from 5.1% to 9.5% with maturity dates ranging from December 1990 to December 1999	<u>2,326,453</u>	<u>2,925,174</u>
Total bonds outstanding	249,790,784	214,944,726
Less current portion due within one year including accrued interest	<u>6,942,273</u>	<u>8,016,923</u>
Portion due after one year, net of unamortized original issue discount	<u>\$242,848,511</u>	<u>\$206,927,803</u>

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 to 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.

In compliance with the Resolution the Commission has established both trustee and nontrustee funds with assets, principally short-term securities, which are restricted for payment of specified liabilities. The Commission has options for early redemption of revenue bonds starting in 1995 at prices ranging from 100% to 103% of face value.

Revenue Bonds- The 1984 Series A Bonds were issued in order to advance 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 bonds in the event that the Commission is unable to make such payments.

In August of 1986, the Commission issued 1986 Series A General Revenue Bonds (1986 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 of the 1986 bonds were deposited to the 1986 Series A Escrow Account to provide for the principal payments of the 1985 Series A Bonds and the interest payments of 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 of 1988, the Commission issued 1988 Series A bonds to provide for the defeasance of a portion of the Commission's General Revenue Bonds 1984 Series A, 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 1984

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 of 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 the aggregate, \$107,140,000 remains outstanding at December 31, 1989 on the defeased portions of the 1980 and 1984 issues.

City Bonds - At the time of its creation, the Commission assumed general obligation certificates of indebtedness of the City (City Bonds) pertaining to the water and sewerage works systems. Payments for principal and interest are made directly to the City in accordance with the original maturity and interest schedule.

Aggregate bond maturity and sinking fund requirements of the Revenue Bonds and City Bonds at December 31, 1989 are as follows:

Year	Total
1990	\$ 3,895,000
1991	3,920,000
1992	4,440,000
1993	4,630,000
1994	4,955,000
Thereafter	<u>231,705,000</u>
Subtotal	253,545,000
Accrued interest	3,047,273
Unamortized original issue discount	<u>(6,801,489)</u>
Total bonds payable	<u>\$249,790,784</u>

6. MASSACHUSETTS WATER RESOURCES AUTHORITY

The Massachusetts Water Resources Authority (the "Authority") provides all the Commission's water and sewer treatment requirements and assesses the Commission for its actual operating and capital expenses. Payments to the Authority are due in four installments in March, May, September and November. Interest is not charged on the outstanding balance. Assessments for 1989 and 1988 are as follows:

	1989	1988
Assessments allocated on:		
Water usage	\$21,928,747	\$18,415,728
Wastewater usage	<u>32,787,627</u>	<u>24,778,849</u>
Total	<u>\$54,716,374</u>	<u>\$43,194,577</u>

During 1989 and 1988, over 70% and 67%, respectively, 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 70% in 1989 and is continuing to take steps to improve the amount of water billable, including replacement of old and defective meters and a comprehensive leak detection and repair program.

7. 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 \$1,391,000 and \$1,249,000 in 1989 and 1988, respectively. The remaining four City departments were billed \$1,593,000 and \$1,564,000 based on estimated consumption during 1989 and 1988, respectively.

The City provides services to the Commission, including paving and facilities rental. Operating costs billed by the City were \$520,000 during both 1989 and 1988. Capital costs billed by the City were \$763,000 and \$361,000 during 1989 and 1988, respectively.

8. RETIREMENT BENEFITS

The Commission provides retirement benefits to substantially all of its employees through a pension trust fund (trust fund) and the State-Boston Retirement System (Boston System). A dispute concerning the Commission's past and future obligations to all Commission employees covered by the Boston System was settled in 1986, resulting in a payment of \$19,100,000 to the Boston System. This payment, funded primarily through 1985 and 1986 bond proceeds, was recorded as a deferred charge to be recovered through future rates.

As part of the settlement with the Boston System, 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.

The Commission's covered payroll was \$14,738,993 and \$13,570,544 in 1989 and 1988, respectively. Total payroll for all Commission employees was \$17,443,241 and \$14,782,906 in 1989 and 1988, respectively. In compliance with Governmental Accounting Standard No. 5, as of January 1, 1990, the Commission updated its actuarial valuation originally performed as of January 1, 1989. The valuation and subsequent update were based on 98 retired and inactive employees, 153 vested active employees and 365 non-vested active employees. Employee contributions are defined under Massachusetts General Laws, Chapter 32. Total employee contributions were \$1,017,036 and \$863,522 or 6.9% and 6.4% of covered payroll in 1989 and 1988, respectively.

As required by the Commission's Enabling Act, employee pension contributions are transferred to the Boston System 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 contributions to the pension trust fund based upon the actuarially determined cost of future benefits net of employee contributions.

Trust fund assets at December 31, 1989 and 1988 comprised

	1989	1988
Assets (at fair market value).		
Common stocks	\$ 8,740,563	\$ 7,105,225
U.S. Government securities	4,378,249	4,146,601
Corporate bonds and notes	1,924,029	
Short-term investments	1,591,600	2,286,000
Cash	264,957	235,535
Other	289,817	189,414
Total	<u>\$17,189,215</u>	<u>\$13,962,775</u>

Net assets in excess of pension benefit obligation applicable to the Commission's employees are determined as follows:

	1989	1988
Net assets available for benefits	<u>\$17,189,215</u>	<u>\$13,962,775</u>
Pension benefit obligation		
Retirees and beneficiaries currently receiving benefits	2,001,000	1,685,000
Current employees		
Employer-financed vested	3,213,000	2,790,000
Employer-financed nonvested	<u>4,551,000</u>	<u>3,954,000</u>
Total pension benefit obligation	<u>9,765,000</u>	<u>8,429,000</u>
Net assets in excess of pension benefit obligation	<u>\$ 7,424,215</u>	<u>\$ 5,533,775</u>

The amount shown as the pension benefit obligation is a standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increase, estimated to be payable in the future as a result of employees' 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. The measure is independent of the actuarial funding method used to determine contributions to the pension trust fund.

The pension benefit obligation was computed as part of an update performed as of January 1, 1990 using the information and assumptions contained in the January 1, 1989 actuarial valuation. Significant actuarial assumptions used to calculate the pension benefit obligations include a rate of return on investment of present and future assets of 9% a year compounded annually and projected salary increases of 7% a year, compounded annually.

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 totaled \$990,929 and \$916,012 in 1989 and 1988, respectively, or 6.7% of the covered payroll. Historical information on the Commission's pension plan is not available.

9. DEPOSITS AND INVESTMENTS

The Boston Water and Sewer Commission's General Revenue Bond Resolution, adapted 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 Pension Trust Fund has additional investment powers, most notably the ability to invest in stocks, corporate bonds and other instruments.

Deposits—The following summary presents the amount of the Commission's deposits which 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 which 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 which are not collateralized as of December 31, 1989 (in thousands).

	Bank Balances Category			Total Bank Balance	Carrying Amount
	1	2	3		
Cash	\$200		\$ 2,115	\$ 2,315	\$ 2,315
Certificates of Deposit	400		5,413	5,813	5,813
Money market	<u>200</u>	<u>—</u>	<u>3,836</u>	<u>4,036</u>	<u>4,036</u>
Total	\$800	\$ 0	\$11,364	\$12,164	\$12,164

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 (in thousands):

	Category			Carrying Amount	Estimated Market Value
	1	2	3		
U. S. Government obligations	\$35,957			\$ 35,957	\$ 35,121
U. S. Government Agency obligations	47,256			47,256	50,658
Repurchase Agreements	\$33,993	\$ 800		34,793	34,793
Money market Other investments		26,526		26,526	26,526
		<u>1,326</u>	<u>—</u>	<u>1,326</u>	<u>1,326</u>
Total	\$83,213	\$35,319	\$27,326	\$145,858	\$148,424

10. COMMITMENTS

The Commission leases its administrative offices. The lease provides for an initial term of five years with two options to extend the lease for additional five-year terms. The basic rent includes an allocation for building operating costs and an escalation clause subject to certain limitations. In 1988 the Commission entered into an additional three-year lease of a vehicle maintenance facility. Total rent expense for both facilities amounted to \$1,220,120 and \$1,025,000 for 1989 and 1988, respectively.

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 \$41.7 million at December 31, 1989. 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 \$136 million for 1990 through 1992. Of this amount, approximately \$91 million represents extension and improvement projects and \$45 million represents renewal and replacement projects. The extension and improvement projects will be 40% funded by federal and state grants. The remaining amounts will be funded from Commission revenues.

11. CONTINGENCIES

The Commission is involved in ordinary and routine litigation and other matters incidental 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 MWRA assessments incidental 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.

SUPPLEMENTAL SCHEDULE**REVENUES AND EXPENSES****For The Years Ended December 31, 1989 and 1988**

	1989	1988
REVENUES:		
Water revenue	\$ 58,568,444	\$45,856,376
Sewer revenue	66,683,058	47,635,464
Less:		
Adjustments	9,323,376	7,798,591
Discounts	566,758	372,062
Bad debt	5,850,715	257,391
Total	15,740,849	8,428,044
Net billed charges	109,510,653	85,063,796
Prior year surplus	2,996,564	3,448,090
Miscellaneous revenues:		
Late charge revenue	2,411,481	2,232,288
Investment income	5,575,137	4,271,378
Fire pipe revenue	1,678,380	1,378,635
Other income	1,421,737	864,103
Total revenues	123,593,952	97,258,290
EXPENSES:		
Salaries and wages	16,335,091	13,839,431
Overtime wages	1,108,150	943,475
Fringe benefits	2,900,338	2,858,009
Supplies and materials	1,247,115	1,276,803
Repairs and maintenance	4,831,816	3,927,395
Utilities	423,507	445,646
Professional services	1,617,191	1,909,925
Space and equipment rentals	1,220,120	1,132,730
Other services	298,075	100,012
Insurance	786,642	1,121,585
Damage claims	104,717	319,415
Inventory	446,411	154,314
Capital outlay	584,478	1,013,050
Total direct operating expenses	31,903,651	29,041,790
MWRA ASSESSMENT	54,716,374	43,194,577
CAPITAL IMPROVEMENTS	3,297,843	(6,469,800)
PRINCIPAL PAYMENTS	3,115,000	2,540,000
INTEREST EXPENSE	9,772,770	12,866,997
DEPOSITS TO RESERVE FUNDS	3,213,000	2,929,162
WORKING CAPITAL PROVISION	6,294,360	10,159,000
RECOVERY OF ACCUMULATED DEFICIT	4,847,998	
TOTAL NONOPERATING EXPENSES	85,257,345	65,219,936
TOTAL CURRENT EXPENSES	117,160,996	94,261,726
CURRENT YEAR RATE SURPLUS	\$ 6,432,956	\$ 2,996,564

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.



**“ Much has been accomplished in
the last thirteen years towards
the Commission's goal of providing
superior water and sewer services
to the city of Boston.**

**But even as this task is mastered,
greater challenges now begin.**

**The BWSC stands ready to
meet these growing challenges. ”**





BOSTON WATER AND SEWER COMMISSION
425 SUMMER STREET
BOSTON, MA 02210