BOSTON WATER AND SEWER COMMISSION

1998 ANNUAL REPORT

building Boston from the ground down

BOSTON WATER AND SEWER COMM
SPOOL
METER FLOW
STRAINER
UPSTREAM
WITH A STRAINER
1-1/4" FORD CORPORATION
FORD BALL VALVE
SCALE

executive

A city is only as strong as the infrastructure foundation supporting it.

BUILDING THE CITY FROM THE GROUND DOWN is what the Boston Water and Sewer Commission has been doing since its inception in 1977. By supporting an aggressive Capital Improvement Program (CIP), the Commission has significantly reduced I/I (infiltration and inflow) into its sewers, repaired, replaced and relined leaking pipes in the water system, and initiated major sewer separation projects, which have drastically reduced harmful pollution from entering Boston Harbor. The results have been dramatic. Boston leads all the Massachusetts Water Resources Authority (MWRA) communities in its reduction of I/I, and as a major American city, has experienced the fewest water main breaks per mile. In addition, its contribution to the renaissance of Boston Harbor has opened great development opportunities along Boston's waterfront. The Commission is proud to be a partner in helping to protect and improve the infrastructure, which will allow Boston to grow into the new millennium.

Mindful of Mayor Thomas M. Menino's directive to provide the citizens of Boston the highest quality water and sewer services for the lowest possible price, the 1998 Direct Expense Budget was once again level-funded; and for the unprecedented, fifth consecutive year, there was no increase in Boston's water and sewer rates. By increasing productivity, the Commission has seen its water and sewer rates go from one of the highest in the metropolitan Boston area to one of the lowest. This rate stabilization has not occurred at the expense of service to our customers. Besides aggressively attacking the infrastructure problems of the City's water and sewer system, the Commission has also reformed the way it does business. The Water and Sewer Departments were merged to form one single Operations Division, eliminating cross functionality and duplication of service.

director's message

The Commission has aggressively embarked on a five-year strategic plan with regards to information technology; and in the last two years has implemented PeopleSoft® Human Resource Information System and Financial Management System, bringing all of the Commission's administrative and financial functions into Y2K compliance.

The future also holds great promise for the Boston Water and Sewer Commission. In 1998, the Commission purchased a 10-acre parcel in the City of Boston, formerly occupied by the Stride Rite Corporation. This will enable the Commission to consolidate its functions into one site. By consolidating its functions into one area, the Commission will be able to increase its efficiency and productivity and its service to the citizens of Boston.

This Annual Report demonstrates that the Commission has a rock solid financial foundation and strong management initiatives that will enable the Commission to get the job done. A city is only as strong as the infrastructure foundation supporting it. The Boston Water and Sewer Commission is proud to report that its piece of the infrastructure foundation is ready for whatever challenges the new century brings us.

Vincent G. Mannering
Executive Director

Pictured above: Dennis A. DiMarzio, Chairman, Board of Commissioners; Cathleen Douglas Stone, Commissioner; Muhammad Ali-Salaam, Commissioner; and Vincent G. Mannering, Executive Director.

strengthening the

For the fifth consecutive year, the Commission proudly announced that there would be no increase in the water and sewer rates for its customers.

ADVANCING THE FINANCIAL ASSETS is one of the highest priorities of the Commission. As a result of exemplary financial management in 1998, the Commission ended its fiscal year with several upgraded bond ratings, the largest bond issuance in the Commission's history and no water and sewer rate increase for an unprecedented fifth consecutive year.

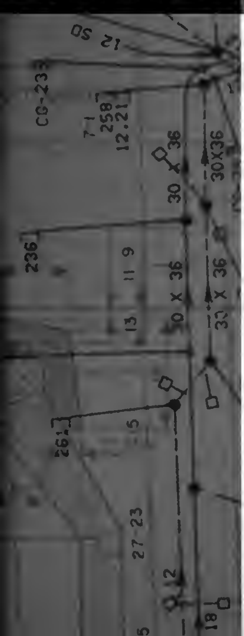
Bond Rating Upgrades At the beginning of the year the Commission received two bond rating upgrades: Moody's Investor Services upgraded the Commission's bond rating from A2 to A1 and Standard and Poor's upgraded the Commission's rating from A to A+. These ratings are the highest in the Commission's history and will save our customers millions of dollars in debt service costs.

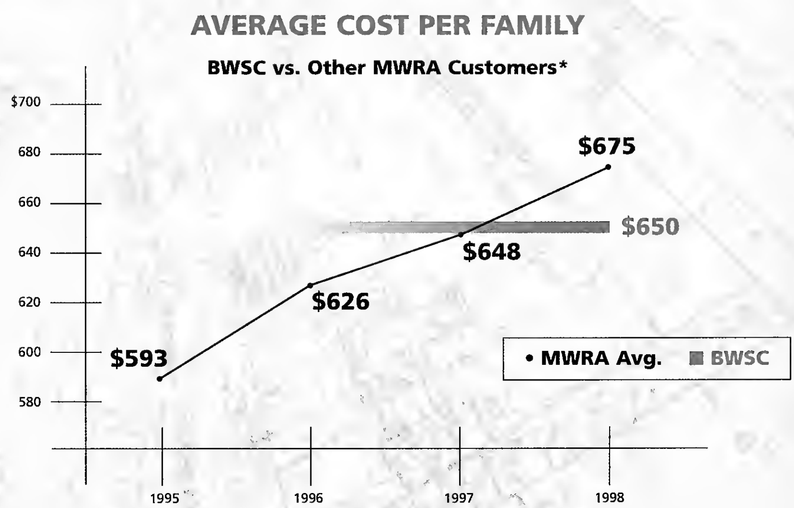
Bond Activity The Commission issued Series A and Series C Refunding bonds which generated a combined $1.9 million in net present value savings, or 8% of refunded par. This is the highest percentage savings ever achieved by the Commission in a bond refunding issuance. The Series A and Series C Refunding bonds will also provide to the Commission $6.3 million in interest savings over the remaining term of the bonds and an additional $100,000 of rate relief payments for our customers in 1999 from the Commonwealth Sewer Debt Rate Relief Program. In addition to the issuance of the Series A and Series C Refunding bonds, $132.5 million in revenue bonds, with a true interest rate of 4.9%, were issued to fund future capital expenditures. Overall, 81% of the Commission's outstanding Revenue bonds carry interest rates at or below 5.25%.

Finally, the Commission became the first government entity in New England to accept electronic quotes, which were the low bids for the sale of its 1998 Series D bond.

Rates For the fifth consecutive year, the Commission proudly announced that there would be no increase in the water and sewer rates for its customers. By incorporating sound financial practices, such as the submission of a level-funded direct expense budget, the Commission has not increased its rates since 1993. Currently, the Commission charges one of the lowest rates within the MWRA system.

financial foundation





*Charges reflect industry average "typical" household usage of 90,000 gallons or 12,000 cubic feet annually.

maintaining the

The Commission's Operations and Engineering Divisions work 365 days a year to assure the water and wastewater systems run without interruption.

THE COMMISSION'S OPERATIONS AND ENGINEERING Divisions work 24 hours a day, 365 days a year, to assure the water and wastewater systems function without interruption. All of Boston sits atop the foundation of water and sewer mains that have been constructed over three centuries. The Commission continues to build and improve on this foundation through its annual Capital Improvement Program (CIP) and by performing daily preventive maintenance on the system.

Operations Division In 1998, the Commission's Operations Division continued its Water Main Flushing Program for the second year, flushing 245 miles of main. The Preventive Maintenance Catch Basin Cleaning Program was developed and implemented, resulting in the cleaning of 7,100 catch basins.

The installation of a fixed radio base pilot meter reading system was completed, with 1,470 residential radio transmitters and 17 data collectors installed. Large meter testing began, using Rad-Com and Flow Search Equipment. Over 3,900 meters were replaced, increasing reading percentages and revenue returns to the Commission.

Engineering Division Throughout 1998, the Engineering Division participated in the implementation of the MWRA's Combined Sewer Overflow (CSO) Facilities Plan. As a result, the first of several contracts for the Dorchester Sewer Separation Project was issued, with an estimated value of $13 million. The Dorchester Sewer Separation Project is a 7-year project that will involve the separation of combined sewers throughout Dorchester. Also to relieve flooding problems, the Commission has initiated a number of projects throughout the city. These projects include a detailed study of the South End, a project to relieve flooding problems in the Arnold Arboretum/South Street, Roslindale area, and the design of a new 72" drain conduit in the Tobin Road/Centre Street, West Roxbury area. With respect to day to day activities, the Commission oversaw construction management of $13 million in projects that included the relaying or relining of 16,000 linear feet (lf) of sewer and drain, and 87,000 lf of water relay or water rehabilitation. In addition, 225,000 lf of television inspection was performed.

essential flow

DORCHESTER SEWER SEPARATION PROJECT

The Dorchester Sewer Separation Project involves the separation of combined sewers throughout Dorchester. The purpose of the project is to reduce pollution levels in Boston Harbor and Dorchester Bay, and to lower sewage treatment costs by removing excess flow.

enhancing the

The Web-Site was the first project of its kind undertaken by Commission staff and it was designed and developed entirely in-house.

TO PREPARE FOR THE Y2K ISSUES that have become a standard way of life over the past year, the Commission has been preparing all of its mission critical systems for the "main event" of January 1, 2000. Since the early 1990's, the Commission has been enhancing its systems to assure readiness for the "Y2K Bug." Replacements and upgrades of the Commission's technical infrastructure were initiated in December 1996 and continue today as new technology and versions of software are released. By July 1999, the Commission anticipates that all mission critical system compliancy will be completed and tested.

Applications In 1998, a new year 2000 compliant Human Resources Management System, developed by PeopleSoft, Inc., was implemented. Data conversion and parallel testing for a replacement, year 2000 compliant Financial Management

System, also developed by PeopleSoft, Inc., has been successfully completed with a "go live" date of January 1, 1999. The Commission's networking infrastructure has been upgraded and Windows NT deployment has been expanded to a total of 230 users. The Commission's ESRI, Inc.-based Geographical Information System (GIS) continues to develop with the completion of an ARC/View-based application for easy access to digitized water and sewer base maps, Boston Street Index, and Orthophotos. The application allows users to print maps at various scales, complete with template and Commission logo.

Web-Site Another major accomplishment in 1998 was the completion of the Commission's Web-Site. The Commission initiated the development of the site in April 1998 and on December 31, 1998, went live at www.BWSC.org. The Web-Site was the first project of its kind undertaken by Commission staff and it was designed and developed entirely in-house. The site was developed to be used as an additional method of outreach to our customers, the general public, other utilities, businesses and students.

Some of the information available on the site includes:

- DESCRIPTIONS OF THE WATER AND WASTEWATER SYSTEMS
- RATE INFORMATION
- EMPLOYMENT OPPORTUNITIES
- NEIGHBORHOOD PROJECT UPDATES
- COMMUNITY SITE VISITS
- REQUESTS FOR PROPOSALS/INVITATIONS TO BID
- COMMISSION REGULATIONS
- FEEDBACK PAGE
- LINKS TO RELATED AGENCIES

internal systems

TIMELINE

1996

JANUARY
Internal Code Review Initiated

JUNE
Strategic Information Technology Plan Established

DECEMBER
Operating Systems Replacement Initiated

1998

JANUARY
Human Resource System Replacement Completed

FEBRUARY
Compliance Testing Initiated

AUGUST
PC BIOS Upgrade Initiated

1999

JANUARY
Financial Management System Replaced

FEBRUARY
Server Operating Systems Upgrade Initiated

MARCH
Telecommunications System Replacement Completed; Hand-Held Meter Reading Equipment Replacement Initiated

JULY
Mission Critical System Compliancy Completed

AUGUST
Contingency Plans Complete

DECEMBER
Year 2000 Compliance Testing Complete

designing the future

The Facility In March 1998, the commission purchased a 10-acre parcel located in the Roxbury neighborhood of Boston, where it plans to build a new facility that will consolidate all of its operations, maintenance and administrative activities into one central location.

The Purpose The consolidation offers the Commission a centralized facility that provides suitable space to enhance administrative and operational efficiencies at a cost considerably less than a comparable leasing option. The new facility will provide space for all of the Commission's needs such as the machine shops, interior and exterior materials storage, administrative offices, parking for both fleet and employee vehicles and a fueling and washing station for Commission vehicles.

The Location The new facility is more centrally located than the present facilities. In addition, accessibility via public transportation is increased at this new location allowing more of our customers an opportunity to visit the new facility.

The Move Site preparation and construction began in October 1998. The move into the new facility will consist of two phases: Operations Divisions in spring 2000 and Administrative Divisions in fall 2000.

independent auditors' report

THE COMMISSIONERS
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, 1998 and 1997, 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, 1998 and 1997 and the results of its operations and its cash flows for the years then ended in conformity with generally accepted accounting principles.

The year 2000 supplementary information on page 22 is not a required part of the financial statements, but is supplementary information required by the Governmental Accounting Standards Board, and we did not audit and do not express an opinion on such information. Further, we were unable to apply to the information certain procedures prescribed by professional standards because of the nature of the subject matter underlying the disclosure requirements and because sufficiently specific criteria regarding the matters to be disclosed have not been established. In addition, we do not provide assurance that the Commission is or will become year 2000 compliant, that the Commission's year 2000 remediation efforts will be successful in whole or in part, or that parties with which the Commission does business are or will become year 2000 compliant.

Our audits were made for the purpose of forming an opinion on the basic financial statements taken as a whole. The accompanying 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.

During 1998, the Commission adopted the provisions of Governmental Accounting Standards Board Statement No. 31, *Accounting and Financial Reporting for Certain Investments and for External Investments Pools.*

KPMG Peat Marwick LLP

March 30, 1999

balance sheets

December 31, 1998 and 1997

	1998	1997
ASSETS:		
Current assets:		
Cash and cash equivalents (note 8)	$ 5,082,191	$ 4,050,618
Accounts receivable, net:		
Customers, less allowances of $6,035,718 in 1998 and $6,472,190 in 1997 (note 1)	14,526,071	20,767,222
Unbilled revenues, less allowances of $1,703,561 in 1998 and $1,702,361 in 1997 (note 1)	8,089,906	8,862,033
Construction grants receivable	1,278,612	1,337,856
Bond proceeds receivable (note 4)	130,352,759	—
Prepaid expenses	278,772	269,934
Total current assets	159,608,311	35,287,663
Restricted investments (notes 4 and 8)	241,151,737	275,956,366
Property, plant and equipment, net (note 3)	455,100,689	433,277,165
Deferred charges (note 2)	25,726,726	31,025,356
Bond issue costs, net	3,059,252	2,672,324
Total assets	$884,646,715	$778,218,874
LIABILITIES AND COMMISSION EQUITY:		
Current liabilities:		
Payable from current assets:		
Accounts payable	$ 7,159,313	$ 5,761,067
Other accrued liabilities	10,120,896	8,377,396
Current portion of revenue bonds (note 4)	8,440,000	7,115,000
	25,720,209	21,253,463
Payable from trusteed assets:		
Current portion of City of Boston bonds (note 4)	—	50,000
Total current liabilities	25,720,209	21,303,463
Long-term debt, net (note 4)	345,161,475	265,080,570
Long-term notes payable (note 4)	35,937,958	34,267,440
Other long-term liabilities	58,426,830	64,731,187
Deferred credits and reserves (note 2)	288,558,846	266,185,706
Total liabilities	753,805,318	651,568,366
Commission equity:		
Contributed capital	130,841,397	126,650,508
Commitments and contingencies (notes 9, 10, 11 and 12)		
Total liabilities and commission equity	$884,646,715	$778,218,874

See accompanying notes to financial statements.

statements of operations and commission equity

Years Ended December 31, 1998 and 1997

	1998	1997
OPERATING REVENUES:		
Water and sewer usage	$184,371,106	$183,255,895
Fire pipe	2,412,803	2,396,537
Other	6,305,287	6,617,579
Total operating revenues	193,089,196	192,270,011
OPERATING EXPENSES:		
Operations	45,654,617	43,654,591
Maintenance	5,113,903	5,445,498
MWRA assessment (note 5)	105,461,022	103,242,409
Depreciation and amortization	13,935,085	13,904,199
Total operating expenses	170,164,627	166,246,697
Excess operating revenues	22,924,569	26,023,314
NONOPERATING REVENUE (EXPENSE):		
Bond redemption costs (note 4)	(5,558,203)	—
Investment income	19,795,336	18,740,157
Interest expense	(17,096,519)	(17,323,597)
Total nonoperating revenue (expense)	(2,859,386)	1,416,560
Excess revenues before depreciation add-back and transfer requirements	20,065,183	27,439,874
Add: Depreciation on fixed assets acquired by grants	2,307,958	2,189,961
Excess revenue before transfer requirements	22,373,141	29,629,835
Excess revenues used to fund reserves and other deferrals (note 2)	(23,207,892)	(29,376,952)
Accumulated revenues used to offset future rates — beginning of year	9,622,986	9,370,103
Accumulated revenues used to offset future rates — end of year	$ 8,788,235	$ 9,622,986
Contributed capital, December 31	$126,650,508	$121,981,722
Contributions in aid of construction	6,498,847	6,858,747
Depreciation of related property	(2,307,958)	(2,189,961)
Contributed capital, December 31	$130,841,397	$126,650,508

See accompanying notes to financial statements.

statements of cash flows

Years Ended December 31, 1998 and 1997

	1998	1997
CASH FLOWS FROM OPERATING ACTIVITIES:		
Excess operating revenues	$ 22,924,569	$ 26,023,314
Adjustments to reconcile operating income to net cash:		
Excess revenues used to fund reserves and other deferrals	(22,373,141)	(29,629,835)
Depreciation and amortization	13,935,085	13,904,199
Change in assets and liabilities:		
Accounts receivable, net	6,241,151	3,124,374
Unbilled revenues	772,127	(582,324)
Construction grants receivable	59,244	31,102
Prepaid expenses	(8,838)	3,669
Accounts payable	1,398,246	(4,003,143)
Other accrued liabilities	1,743,500	972,485
Deferred credits and reserves	22,373,140	29,629,835
Other long-term liabilities	(6,304,357)	(4,585,592)
Net cash provided by operating activities	40,760,726	34,888,084
CASH FLOWS FROM INVESTING ACTIVITIES:		
Sale (purchase) of investments, net	34,804,629	(27,345,420)
Investment income	18,470,233	18,740,157
Net cash provided by (used for) investing activities	53,274,862	(8,605,263)
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:		
Additions to property, plant and equipment	(33,624,421)	(23,827,647)
Proceeds from notes payable	1,670,518	13,736,117
Payment on bonds	(76,535,000)	(6,332,480)
Proceeds from bonds	26,082,560	—
Contributions in aid of construction	6,498,847	6,858,747
Payment of bond interest	(17,096,519)	(17,323,597)
Net cash used for capital and related financing activities	(93,004,015)	(26,888,860)
Net increase (decrease) in cash and cash equivalents	1,031,573	(606,039)
Cash and cash equivalents at beginning of year	4,050,618	4,656,657
Cash and cash equivalents at end of year	$ 5,082,191	$ 4,050,618
NONCASH INVESTING AND FINANCING ACTIVITIES:		
Proceeds of bonds issued in December 1998 and received in January 1999	$130,352,759	$ —

See accompanying notes to financial statements.

notes to financial statements

December 31, 1998 and 1997

(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").

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 is appointed by the City's Mayor subject to confirmation by the City Council. It 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 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, 1998 is provided below:

	REVENUES	EXPENSES
AS PRESENTED IN THE STATEMENT OF OPERATIONS:		
Operating revenues/expenses	$193,089,196	$170,164,627
Other revenues/expenses	19,795,336	22,654,722
Total	212,884,532	192,819,349
RECLASSIFICATIONS AND DEFERRALS:		
Contributions to reserves	—	18,562,782
Provision for working capital	570,428	—
Provision for capitalized interest	154,593	—
Revenue adjustments/bad debt expense	(8,813,304)	(8,813,305)
Excess depreciation and amortization over bond payments	—	(3,211,772)
Interest expense (escrowed funds)	—	(1,462,408)
Investment income (escrowed funds)	(3,598,558)	—
Capital expenditures	—	9,913,671
Excess revenue used to offset current rates	9,622,986	—
Bond redemption costs	—	(5,558,203)
Other deferrals	—	(217,674)
As presented in the Supplemental Schedule	$210,820,675	$202,032,440

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 $8,788,235 and $9,622,986 for the years ended December 31, 1998 and 1997, 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. Revenues are accrued for periods between the termination of billings for the various cycles and the end of the year. Various adjustments are made on a post-billing basis that reduce the amount of total billings. Accordingly, the 1998 and 1997 total customer bills outstanding of $32,581,569 and $39,259,192, respectively, have been reduced by provisions for billing adjustments and sewer abatements of $9,615,824 and $2,403,956, respectively, in 1998 and $9,615,824 and $2,403,956, respectively, in 1997. These net billing amounts are further reduced by an allowance for uncollectible accounts of $6,035,718 and $6,472,190 in 1998 and 1997, to arrive at 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 fair value.

(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 1998 or 1997 because the difference between interest expense and interest income on unexpended proceeds was not material.

(d) Depreciation

Estimated useful lives used in computing depreciation are as follows:

WATER	YEARS	SEWERAGE	YEARS
Works	100	Works	75
Meters	10	Pumping station	35
Hydrants	40	BUILDINGS	40
		OTHER	4 to 14

(e) Contributed Capital

Contributions received from governmental agencies, individuals and the City 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 statements 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) Proprietary Activity Accounting and Financial Reporting

Under the Governmental Accounting Standards Board (GASB) Statement No. 20, *Accounting and Financial Reporting for Proprietary Activities*, the Commission has elected to apply all Financial Accounting Standards Board (FASB) Statements and Interpretations issued on or before November 30, 1989, except those that conflict with or contradict GASB pronouncements.

(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 Statements of Operations and reflected in the balance sheets as deferred charges or deferred credits. The revenues and expenses that have been removed from the Statements of Operations and added to the balance sheets as deferred credits appear in the line "Excess revenues used to fund reserves and other deferrals" on the Statements of Operations. The components of these amounts are as follows:

	1998	1997
Contributions to reserves	**$18,562,782**	$18,970,811
Provision for working capital	**(570,428)**	(570,428)
Provision for capitalized interest	**(154,593)**	(154,593)
Principal payments on long-term debt	**10,355,117**	8,503,196
Interest paid from escrow funds	**(1,462,408)**	(1,149,643)
Capital expenditures	**9,913,671**	12,235,587
Depreciation and amortization	**(11,627,127)**	(11,714,237)
Investment income on project and escrow funds	**3,598,558**	2,759,462
Bond redemption costs	**(5,558,203)**	—
Other	**150,523**	496,797
Total	**$23,207,892**	$29,376,952

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

	1998	1997
Accrued pension expense	**$14,263,215**	$14,631,411
Debt extinguishment expense	**11,463,511**	16,393,945
Total deferred charges	**$25,726,726**	$31,025,356

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

	DECEMBER 31, 1997	INCREASE (DECREASE)	DECEMBER 31, 1998
Debt service	$ 96,394,820	$18,562,782	**$114,957,602**
Capital improvements	130,547,334	5,215,537	**135,762,871**
Working capital	27,380,565	(570,427)	**26,810,138**
Self-insurance	2,240,000	—	**2,240,000**
Subtotal	256,562,719	23,207,892	**279,770,611**
Reduction of future rates	9,622,986	(834,751)	**8,788,235**
Total deferred credits and reserves	$266,185,705	$22,373,141	**$288,558,846**

notes to financial statements

December 31, 1998 and 1997

(3) PROPERTY, PLANT AND EQUIPMENT

The cost of water and sewerage property, plant and equipment in service and related accumulated depreciation at December 31, 1998 and 1997 are as follows:

	1998	1997
WATER:		
Works	$162,165,940	$151,503,838
Meters and hydrants	13,516,756	19,388,133
Total water	175,682,696	170,891,971
SEWERAGE:		
Works	255,512,601	243,396,937
Pumping station	6,818,570	6,818,570
Total sewerage	262,331,171	250,215,507
OTHER	73,771,148	68,140,883
Total property, plant and equipment	511,785,015	489,248,361
Less accumulated depreciation	91,982,675	95,498,323
Net property, plant and equipment	419,802,340	393,750,038
Construction in progress	35,298,349	39,527,127
Total	$455,100,689	$433,277,165

(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. The Commission also issues revenue bonds to support various projects.

A summary of the City bonds and revenue bonds outstanding as of December 31, 1998 and 1997 follows (amounts in thousands):

	1998	1997
City Bonds, bearing interest at a rate of 6.9%, paid off in full in 1998	$ —	$ 100
Less current installments	—	50
Total City Bonds, net of current installments	$ —	$ 50
SENIOR DEBT:		
1986 Series A, bearing interest at a rate of 6.0%, with a maturity date of November 1, 2015	$ —	$ 13,165
1989 Series A, bearing interest at a rate of 6.9%, with a maturity date of November 1, 1999	585	585
1991 Series A, bearing interest at rates ranging from 6.25% to 6.5%, with maturity dates ranging from November 1, 1999 to 2001	2,955	14,890
1992 Series A, bearing interest at rates ranging from 5.3% to 5.75%, with maturity dates ranging from November 1, 1999 to 2013	61,190	63,755
1993 Series A, bearing interest at rates ranging from 4.25% to 5.25%, with maturity dates ranging from November 1, 1999 to 2019	97,410	97,480
1994 Series A, bearing a variable interest rate (3.7% and 3.2% at December 31, 1999 and 1998, respectively), with maturity dates ranging from November 1, 1999 to 2024	37,800	38,400
1998 Series A, bearing interest rates ranging from 5.0% to 5.1%, with maturity dates ranging from November 1, 2014 to 2015	12,960	—
1998 Series C, bearing interest rates ranging from 4.5% to 5.2%, with maturity dates ranging from November 1, 1999 to 2021	11,300	—
1998 Series D, bearing interest rates ranging from 4.5% to 5.0%, with maturity dates ranging from November 1, 1999 to 2028	132,455	—
SUBORDINATED DEBT:		
1988 Series A, bearing interest at rates ranging from 6.0% to 7.4%, with maturity dates ranging from November 1, 1998 to 2008	—	48,075
	356,655	276,350
Less current installments	8,440	7,115
Total long-term revenue bonds	348,215	269,235
Less unamortized issue discount	3,054	4,204
Net long-term revenue bonds	$345,161	$265,031

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

	REVENUE BONDS	
	PRINCIPAL	INTEREST
1999	$ 8,440	$ 18,767
2000	8,180	18,334
2001	8,550	17,910
2002	8,955	17,464
2003	9,475	17,005
Thereafter	313,055	194,148
	$356,655	$283,628

(a) Current Year Activity

In December 1998, the Commission issued $132,455,000 of General Revenue Bonds, 1998 Series D (Senior Series) to provide funds for the projects undertaken as part of the Commission's ongoing capital improvement program. The majority of these proceeds were received in January 1999 and are recorded as bond proceeds receivable as of December 31, 1998.

On November 2, 1998 the Commission redeemed the remaining $45,065,000 balance of the General Revenue Bonds, 1988 Series A (Subordinated Series) by utilizing internally available funds on deposit in the Commission's Revenue and Stabilization Funds. This resulted in savings in debt service of approximately $6.4 million per year for the next 10 years. A call premium of $207,900 was paid and a charge of approximately $4.9 million was recognized in the Statement of Operations for unamortized bond issue costs.

In March 1998, the Commission issued $12,960,000 of General Revenue Bonds, 1998 Series A (Senior Series), which, together with available funds of the Commission, were used to current refund $13,165,000 of General Revenue Bonds, 1986 Series A (Senior Series). As a result of this current refunding, the Commission reduced its total debt service payments over 17 years by approximately $2.4 million and obtained an economic gain of approximately $1.2 million. A charge of approximately $219,000 was recognized in the Statement of Operations for unamortized bond issue costs.

In March 1998, the Commission issued $11,325,000 of General Revenue Bonds, 1998 Series C (Senior Series), to advance refund a portion of General Revenue Bonds, 1991 Series A (Senior Series). The proceeds, together with available funds of the Commission, were used to purchase government securities sufficient 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 $11,065,000 are no longer considered outstanding under the Commission's "Resolution Establishing Issue of Revenue Bonds" (the "Resolution"). As a result of this advanced refunding, the Commission reduced its total debt service payments over 23 years by approximately $1.9 million and obtained an economic gain of approximately $0.8 million. A charge of approximately $448,000 was recognized in the Statement of Operations for unamortized bond issue costs.

(b) Prior Year Activity

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 provided 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 on the 1985 Series A Bonds and the interest payments on the 1986 Bonds as they come due. The outstanding portion of this issue, except for the 2015 Term Bonds, was extinguished through early redemption on November 1, 1996 at no gain or loss. A call premium of $752,800 was paid and a charge of $1,154,545 was recognized in the Statement of Operations for unamortized bond issue costs.

In December 1988, the Commission issued 1988 Series A Bonds to provide for the defeasance of a portion of the 1984 Series A Bonds (subsequently paid January 1, 1995), to provide supplemental funding for the Operating Reserve Fund and to pay costs of issuance.

In December 1989, the Commission issued 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, 1998 through November 1, 2021.

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 A 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 were not considered defeased. The outstanding debt of $37,640,000 was paid from the 1992 cross-over funds on November 1, 1996.

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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 payments over 26 years by almost $7,426,000 and to obtain an economic gain of $6,256,720.

In October 1994, the Commission issued $40,000,000 of General Revenue Bonds, 1994 Series A to provide funds for projects undertaken as part of the Commission's ongoing capital improvement program. The Commission maintains a letter of credit to guarantee the principal and interest payments on these bonds maturing November 1, 1998 through 2024, in the event that the Commission is unable to make such payments.

In the aggregate, $158,890,000 remains outstanding at December 31, 1998 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 1998 at a price of 102% of face value. In addition, in compliance with the Resolution, the Commission has established both trusteed 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 trusteed and nontrusteed investments at December 31, 1998 and 1997 are as follows:

	1998	1997
TRUSTEED:		
U.S. Treasury notes	**$ 81,329,017**	$ 82,475,563
Other government obligations	**16,997,371**	38,724,170
Money market and cash investments	**1,470,337**	9,445,701
Open-ended mutual funds	**9,930,455**	8,642,010
Commercial paper	**81,131,233**	74,160,038
	190,858,413	213,447,482
NONTRUSTEED:		
U.S. Treasury notes	**—**	8,224,593
Other government obligations	**1,927,227**	2,434,866
Money market and cash investments	**13,858,046**	16,469,137
Open-ended mutual funds	**14,407,475**	13,676,278
Commercial paper	**20,100,576**	3,093,300
Repurchase agreements	**—**	18,610,710
	50,293,324	62,508,884
	$241,151,737	$275,956,366

(c) Long-Term Notes Payable

During 1997 and 1996, the Commission executed loan agreements 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, 1998, an aggregate amount of $31,545,790 was received by the Commission. The Commission is eligible to receive the remaining $788,910 once the projects are completed. For purposes of offsetting principal and interest payments, an amount aggregating $22,012,639 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 $27,348,647 at December 31, 1998.

The scheduled loan payments for all MWPAT obligations and related subsidies are shown below (amounts in thousands):

	SCHEDULED LOAN REPAYMENTS			LOAN SUBSIDY AMOUNTS			NET LOAN REPAYMENTS		
	PRINCIPAL	INTEREST	TOTAL	EQUITY EARNINGS	CONTRACT ASSISTANCE PAYMENTS	TOTAL	PRINCIPAL	INTEREST	TOTAL
1999	$ 1,232	$ 1,553	$ 2,785	$ 777	$ 866	$ 1,643	$ 819	$ 323	$ 1,142
2000	1,276	1,497	2,773	743	867	1,610	852	312	1,164
2001	1,319	1,436	2,755	708	867	1,575	879	300	1,179
2002	1,375	1,371	2,746	672	867	1,539	920	287	1,207
2003	1,427	1,302	2,729	635	867	1,502	955	273	1,228
Thereafter	22,740	8,541	31,281	4,117	10,027	14,144	15,411	1,726	17,137
	$29,369	$15,700	$45,069	$7,652	$14,361	$22,013	$19,836	$3,221	$23,057

The Commission has entered into various interest-free loan agreements with the Massachusetts Water Resources Authority (the "Authority"). Under these agreements, the Commission received $2,263,384, $528,000 and $1,122,425 in 1998, 1997 and 1996, respectively, to be repaid in five equal annual installments as part of the Authority's Infiltration/Inflow Local Financial Assistance program. The long-term portion of these loans at December 31, 1998 is $2,998,582. In addition, the Commission has received interest-free loans from the Authority as part of the Authority's Local Water Infrastructure Rehabilitation Program. Under this program the Commission has received $3,754,867 and $4,311,384 in 1998 and 1997, respectively. The long-term portion of these loans at December 31, 1998 is $5,590,729. These programs are designed to assist service area communities with sewer system rehabilitation.

(5) MASSACHUSETTS WATER RESOURCES AUTHORITY

The Massachusetts Water Resources 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. Amounts included in the Statements of Operation for assessments by the Authority for 1998 and 1997 are as follows:

	1998	1997
ASSESSMENTS ALLOCATED ON:		
Water usage	$ 30,951,756	$ 29,523,486
Wastewater usage	74,509,266	73,718,923
Total	$105,461,022	$103,242,409

In 1998 and 1997, over 79% and 77%, respectively, of water provided from the Authority was billable to customers. Since its inception, the Commission has increased the percentage of billable water from 52% in 1977 to 79% in 1998 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 approximately $2,951,000 and $3,364,000 in 1998 and 1997, respectively.

The City provides services to the Commission, including paving and facilities rental. Operating costs billed to the Commission by the City were approximately $1,213,800 and $1,275,200 during 1998 and 1997, respectively. Capital costs billed by the City were approximately $2,097,700 and $2,627,300 during 1998 and 1997, respectively.

The Commission has an agreement with the City that allows the Commission's water and sewer bills that have remained unpaid for more than two 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. As of December 31, 1998, receivables totaling approximately $2.5 million of billings had been included on property tax bills. During 1998, the City collected and remitted to the Commission $312,860.

At the end of 1995, the Commission implemented its own tax lien program. Under this program, accounts which have unpaid balances over two years old are transferred into the tax lien program for collection. As of December 31, 1998, approximately $3.4 million of this amount remains outstanding.

(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" or "System"), a cost-sharing retirement plan. The

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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, level of compensation and group classification. Employees become 100% vested after 10 years of creditable service as defined by Chapter 32 of the Massachusetts General Laws ("MGL").

(a) Description of the SBRS Plan and the Trust Fund

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 System provides retirement, disability and death benefits to plan members and beneficiaries. Chapter 32 of the MGL assigns authority to establish and amend benefit provisions of the plan. The System issues a publicly available financial report which can be obtained through the Commonwealth of Massachusetts, Public Employee Retirement Administration ("PERA"), One Ashburton Place, Boston, Massachusetts 02108.

(b) Funding Policy

Plan members are required to contribute to the SBRS at rates ranging from 5% to 11% of annual covered compensation. The Commission is required to pay into the SBRS its share of the remaining systemwide actuarially determined contribution plus administration costs which are apportioned among the employers based on active covered payroll. Through fiscal 1998, the Commonwealth of Massachusetts reimbursed the SBRS for a portion of benefit payments for cost-of-living increases. Beginning July 1, 1998, the SBRS is locally funding the cost of living adjustments, as approved by the SBRS' Board of Retirement, the City's Mayor and City Council. The contributions of plan members and the Commission are governed by Chapter 32 of the MGL. The Commission's contributions to the System for the years ending December 31, 1998, 1997 and 1996 were approximately $1,131,000, $1,033,000 and $787,000, respectively, which equaled its required contribution each year. Total employee contributions, based on actuarially determined amounts were approximately $1,633,000, $1,578,000 and $1,473,000 or 7.8%, 7.7% and 7.5% of covered payroll in 1998, 1997 and 1996, respectively.

(c) 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. State Street Bank and Trust Company is the custodian of the portfolio, which is managed by independent investment advisors.

(d) The Commission's Trust Fund

The Trust Fund pays the SBRS plan annually an amount equal to the amount SBRS paid on behalf of the Commission's employees. 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.

- *Valuation of Investments*

Trust Fund assets at December 31, 1998 and 1997 are as follows:

	1998	1997
ASSETS (AT FAIR MARKET VALUE):		
Common stock	**$27,770,996**	$28,341,071
International stock	**4,323,937**	2,610,975
Mutual funds	**570,852**	191,419
Fixed income	**21,612,227**	17,190,657
Total	**$54,278,012**	$48,334,122

The investment portfolio is regulated by the MGL, Chapter 32, Section 23. The investments are managed by independent investment advisors. Fleet Bank of MA, N.A., is the custodian of the portfolio.

The most recent actuarial valuation of the Commission was prepared by the Segal Company as of January 1, 1997. As of that date, the total covered employee payroll was approximately $22,111,072.

The unfunded actuarial liability ("UAL") as of January 1, 1997 is as follows:

Active participants	$ 25,809,167
Retired members and beneficiaries	7,841,245
Total actuarial liability	33,650,412
Less actuarially determined net assets	(34,333,364)
Overfunded actuarial liability	$ (682,952)

The significant assumptions used in the calculation of the UAL as of January 1, 1997 include annually compounded rates of return of 7.5% on present and future assets and projected salary increases (due to inflation) of 5% per year, compounded annually. The January 1, 1997 actuarial valuation was based on 151 retired and inactive employees and 530 active employees. These assumptions are the same as those used to determine actuarial contribution requirements.

(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 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, 1998 follows:

	CATEGORY			TOTAL BANK	CARRYING
1998	1	2	3	BALANCE	AMOUNT
Cash	$200,000	—	$ 5,307,117	$ 5,507,117	$ 5,082,191
Bank money market deposits	—	—	16,098,220	16,098,220	15,328,383
Total	$200,000	—	$21,405,337	$21,605,337	$20,410,574
1997					
Cash	$364,781	—	$ 4,841,688	$ 5,206,469	$ 4,050,618
Bank money market deposits	—	—	26,705,272	26,705,272	25,914,838
Total	$364,781	—	$31,546,960	$31,911,741	$29,965,456

Deposits in transit and outstanding checks account for the majority of the difference between the bank balance and the carrying amount.

(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.

The Commission adopted Governmental Accounting Standard Board Statement No. 31, *Accounting and Financial Reporting for Certain Investments and for External Investment Pools*. Investments are recorded at a fair value beginning in fiscal year 1998. In 1997, investments were recorded at amortized cost which approximated fair value. Fair value is determined based on quoted market price. This statement was not retroactively adopted since the effect on the prior year was not material. The difference between the amortized cost and the fair value of investments at December 31, 1998 was approximately $1.3 million. This amount was recorded as an unrealized gain and included in investment income for the year ended December 31, 1998.

	CATEGORY			FAIR
1998	1	2	3	VALUE
CATEGORIZED:				
U.S. Government obligations	$ 81,329,017	$ —	—	$ 81,329,017
U.S. Government agency obligations	18,924,598	—	—	18,924,598
Repurchase agreements	—	—	—	—
Commercial paper	—	101,231,809	—	101,231,809
	100,253,615	101,231,809	—	201,485,424
NOT CATEGORIZED:				
Open-end mutual funds	—	—	—	24,337,930
Total	$100,253,615	$101,231,809	—	$225,823,354

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1997	CATEGORY 1	CATEGORY 2	CATEGORY 3	ESTIMATED FAIR VALUE
CATEGORIZED:				
U.S. Government obligations	$108,201,840	$ —	—	$108,201,840
U.S. Government agency obligations	23,657,352	—	—	23,657,352
Repurchase agreements	—	18,610,710	—	18,610,710
Commercial paper	—	77,253,338	—	77,253,338
	131,859,192	95,864,048	—	227,723,240
NOT CATEGORIZED:				
Open-end mutual funds	—	—	—	22,318,288
Total	$131,859,192	$95,864,048	—	$250,041,528

(9) LEASE COMMITMENTS

On July 2, 1993, the Commission entered into a 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 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.

Minimum lease commitments under all operating leases with terms in excess of one year at December 31, 1998 are as follows:

	OFFICE	OTHER
1999	$ 1,325,717	$ 749,275
2000	1,325,717	23,908
2001	1,325,717	23,908
2002	1,325,717	23,908
2003	1,325,717	23,908
Thereafter	19,438,800	382,537
Total	$26,067,385	$1,227,444

Rent expense under operating leases amounted to $1,783,290 and $1,828,796 in 1998 and 1997, 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 $34 million as of December 31, 1998. 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 $128.7 million for 1999 and 2000. Of this amount, approximately $101.1 million represents extension and improvement projects and $27.6 million represents renewal and replacement projects. The extension and improvement projects are expected to be 17% funded by federal and state grants and Authority grants and loans. The remaining amounts will be funded from the Commission's bond proceeds, the sale of surplus property and operating revenues.

Included in the above commitments is funding for the design and construction of a facility to consolidate Commission operations at one location. A purchase and sales agreement was executed on January 22, 1998. The date of closing was April 2, 1998 at a total purchase price of $11 million. The total three-year spending for the new facility is $43.3 million, of which $25.3 million will be spent in 1999 with $17.9 and $0.1 million in years 2000 and 2001, respectively.

Pursuant to Chapter 152 of the Acts of 1997, the Massachusetts General Court authorized the taking of real property within certain boundaries in South Boston for the purpose of constructing a new convention center in the City of Boston. A four acre parcel purchased by the Commission in 1993 lies within those boundaries. Chapter 152 provides that land held by public agencies, including the Commission, is deemed to be held for governmental purposes and therefore will be taken without consideration to the applicable agency. The Commission purchased the parcel for $6 million, and made improvements therein, costing approximately $2 million. As part of legislative negotiations, the taking agency represented that the Commission will receive compensation in some form over time from the end user for the acquisition and use of the parcel. In addition, the Commission will not have to make sewer and drainage improvements that had been planned for the convention center area because these will be made by the developer as part of the development of the site.

(11) RISK MANAGEMENT AND OTHER INSURANCE

The Commission carries self insured retention limits for claims filed under workers' compensation and general liability and completely self insures for all unemployment benefits. The workers' compensation self insured retention limit is $150,000 per claim and is supplemented with $5 million in excess coverage purchased through an outside carrier. For general liability, the Commission's self insured limits are $1 million per occurrence, $2.5 million aggregate and is subordinate to $5 million of excess coverage purchased through an outside carrier. Under the sections of the Model Water and Sewer Act, the Commission's tort liability is capped at $100,000 per claimant.

The Commission maintains other insurance coverage as follows:

POLICY TYPE	COVERAGE
Health	Premium based
Vehicles	Combined single limit of $1 million
Property	Aggregate limit of $41,203,000
Public Officials	Coverage of $3 million; $100,000 self-insurance retention
Fiduciary	$2 million coverage
Crime	Employee dishonesty coverage of $5 million

The Commission participates in the City's health benefits plans for which the City assesses monthly premiums to the Commission based on current enrollments. Insurance claims for all policies have not exceeded coverage by a material amount in the past three years.

Liabilities for self-insured claims are reported if it is probable that a loss has been incurred and the amount can be reasonably estimated. The Commission has established a liability based on historical trends of previous years and attorney's and independent insurance reserve appraiser's estimates of pending matters and lawsuits in which the Commission is involved. Unemployment claims paid during 1998 were immaterial.

Changes for the years ended December 31, 1998 and 1997 are as follows:

	1998	1997
Beginning balance of reserves	**$4,296,807**	$4,165,390
Payment of claims attributable to events of both current and prior years:		
Workers' compensation	**(706,631)**	(631,508)
General liability	**(348,932)**	(396,487)
Incurred claims	**2,732,801**	1,159,412
Ending balance of reserves	**$5,974,045**	$4,296,807

Incurred claims represent the total of a provision for events of the current fiscal year and any change in the provision for events of the prior fiscal years.

(12) 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 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. Additionally, the Commission is likely to bear either directly or through future assessments of the Authority a substantial portion of the financial costs involved. As of December 31, 1998, the overall clean up costs are estimated to be approximately $506 million. However, the extent of the Commission's liability for these costs cannot be determined.

required supplementary information

December 31, 1998 and 1997

YEAR 2000 — UNAUDITED

The "year 2000 problem" is the result of shortcomings in many electronic data processing systems and other equipment that may make operations beyond the year 1999 troublesome. For many years, computer programmers eliminated the first two digits from a year when writing programs. Accordingly, many programs, if not corrected, will not be able to distinguish between the year 2000 and the year 1900. This may cause the programs to process data inaccurately or stop processing data entirely.

The Commission is well under way with its efforts to ensure that its computer operations are year 2000 compliant. In June 1996, immediately after its Strategic Information Technology Plan was finalized, the Commission began preparing its computing environment for the year 2000. In accordance with the plan, the Commission's technical infrastructure has been updated to accommodate the use of new technology. The plan identified the Commission's Human Resource Information System (HRIS) and Financial Management System (FMS) as two obsolete "mission critical" applications that may not function properly in the year 2000. On January 1, 1998, the HRIS was replaced with a new client/server based HRIS developed by Peoplesoft, Inc. The FMS was replaced with a new client/server based FMS developed by Peoplesoft, Inc. on January 1, 1999. With respect to other "mission critical" systems, the action plan called for program code modification to the Commission's Customer Information/Billing System which has been completed. The plan also called for replacement meter reading equipment scheduled for completion in June 1999. Additionally, contingency plans have been put in place should an unexpected error occur in critical technology. To date, the Commission has expended approximately $2 million to address year 2000 concerns and expects to spend an additional $0.5 million during 1999.

In early 1998, the Commission's year 2000 Program Office conducted a full inventory of its computing hardware and software. Vendors were solicited for year 2000 product compliance certification or a plan for remediation should their product not be compliant. Vendors' responses were examined and a prioritized action plan was developed for non-compliant or questionable inventory items.

While the Commission is working diligently to address the year 2000 problem and, at this time, the Commission does not anticipate any significant disruption to its operations or financial condition caused by the year 2000 problem, because of the inherent complexity of the task, the Commission cannot provide complete assurance that the year 2000 problem will not cause disruptions to its operations or financial activities. Furthermore, although the Commission is monitoring the readiness activities of its vendors and suppliers, including the MWRA, failures by such entities to resolve their own year 2000 problems could adversely affect the Commission's operations.

supplemental schedule of revenues and expenses — rate basis

Years Ended December 31, 1998 and 1997

	1998	1997
REVENUES:		
Water revenue	$ 66,828,252	$ 66,673,734
Sewer revenue	117,542,854	116,582,161
	184,371,106	183,255,895
Less:		
Adjustments	6,804,478	7,279,381
Discounts	720,014	741,903
Bad debt	1,288,812	1,437,706
Total	8,813,304	9,458,990
Net billed charges	175,557,802	173,796,905
Prior year surplus	9,622,986	9,370,103
Miscellaneous revenues:		
Late charge revenue	2,546,050	2,939,296
Investment income	13,650,728	13,041,399
Fire pipe revenue	2,412,803	2,396,537
Other income	7,030,306	7,342,599
Total revenues	210,820,675	208,886,839
DIRECT OPERATING EXPENSES:		
Salaries and wages	23,476,920	22,230,570
Overtime wages	807,205	799,512
Fringe benefits	3,874,986	3,482,062
Supplies and materials	2,264,173	1,904,423
Repairs and maintenance	5,113,903	5,445,498
Utilities	532,068	519,179
Professional services	1,630,676	1,579,685
Space and equipment rentals	1,783,290	1,828,796
Other services	910,101	861,431
Insurance	320,368	358,501
Damage claims	1,088,550	480,560
Inventory	42,167	383,524
Capital outlay	424,563	662,161
Total direct operating expenses	42,268,970	40,535,902
NONOPERATING EXPENSES:		
MWRA assessment	105,461,022	103,242,409
Capital improvements	9,489,108	11,573,426
Principal payments	10,355,117	8,503,196
Interest expense	15,634,111	16,173,954
Deposits to reserve funds	18,562,782	18,970,811
SDWA assessment	261,330	264,155
Total nonoperating expenses	159,763,470	158,727,951
Total current expenses	202,032,440	199,263,853
Current year rate surplus	$ 8,788,235	$ 9,622,986

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.

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