

NEW YORK CITY WATER BOARD

***PUBLIC INFORMATION REGARDING
WATER AND WASTEWATER RATES***

APRIL 1998

NEW YORK CITY WATER BOARD

Information Booklet

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Introductory Statement

This information booklet has been prepared by the New York City Water Board ("the Board") to acquaint the public with its rate and billing policy proposals for Fiscal Year ("FY") 1999, as well as the financial condition of the water and wastewater system and its budget for FY 1999.

Public hearings concerning these proposals will be held in each borough of the City. The schedule of the dates, times and locations for these hearings, the purpose of which is to present and explain the Board's proposals and provide an opportunity for public comment, is included in this information booklet.

The Board's FY 1999 proposal is to increase water rates by 4.0%. This is the lowest rate increase levied by the Board in its history, with the exception of FY's 1994 and 1995 when no increases were imposed because large surpluses had accumulated as a result of lower than anticipated costs for ending the ocean disposal of sewage sludge. It is important to note this abatement of the rate increase trend and worthwhile to recall that over the seven year period from FY 1986 through FY 1993 rates increased by an average of over 16% per year. During the Giuliani mayoralty a significantly better record has been achieved as we continue to try to lower and stabilize rate increases. Rate increases have averaged just 4.4% per year from FY 1995 through the upcoming FY 1999.

The proposed 4.0% increase is also substantially lower than was projected for this time last year, when an increase of 7.6% was anticipated for FY 1999. This nearly 50% reduction in the anticipated rate increase can be attributed to revenue management improvements achieved by the Department of Environmental Protection ("DEP"). Current year revenues, through the end of March, have improved by 16% over the previous year. For the full year, the Board expects FY 1998 revenues to be about \$80 million ahead of its projection of last year. This improved revenue performance has enabled the lowering of the proposed FY 1999 rate increase.

The stronger revenue performance is directly related to DEP's continuing improvements in billing system administration and meter reading efficiency which ensure that more customers are receiving more accurate bills, and that these bills are being paid more often. For example, the percentage of estimated bills is down from 40% a year ago to 20% currently. Through the end of March, 200,000 more bills have been issued than through the same period last year, and net billings have improved by almost \$70 million. The system's accounts receivable balance has also

declined month by month over the course of the year and is now about 25% lower than at the same time last year. This reflects both the identification and correction of previously issued incorrect bills that were not being paid and improved payments on more accurate newly issued bills.

The lowering of the system's rate projections has been achieved despite the fact that the underlying cost factors driving water and sewer rate increases have not changed. There continues to be a need to make significant capital investments in the water and wastewater system infrastructure in response to Federal and State regulatory mandates under the Clean Water and Safe Drinking Water Acts. The capital investments needed for managing and preserving important environmental resources for future generations are a major influence on DEP's capital program. The resulting debt service incurred on bonds issued to finance these investments continues to be the single most important factor precipitating the need for rate increases.

About 67% of the system's capital program over the next five years is allocated for mandated projects in watershed protection and water quality preservation, wastewater treatment and disposal, and combined sewer overflow abatement. These capital investments are required to satisfy obligations under existing laws and regulations, and are necessary to preserve the environmental integrity of both the City's watershed and the New York harbor estuary.

The system's capital program also requires resources for the upgrading of aging components of the water main and sewer collection networks, for conservation (water metering), and for continued work on the Third Water tunnel so as to ensure continued system reliability, adequate performance, safety and service delivery. It should be noted that the City's acquisition of the water system assets of the Jamaica Water Supply Company added more than 600 miles of water main (a 10% addition) and 69 groundwater wells to the system's infrastructure. These facilities represent an incremental addition to the capital requirements of the system.

City residents and businesses should be aware that their charges for water and sewer services are lower than in most other municipalities. As indicated by the materials presented in this booklet the City's charges for residential customers rank in the lower half of the twenty-four cities surveyed and are below the average of all these twenty-four cities.

To ensure future rate increases are kept to a minimum, several initiatives are being pursued by DEP, the most important of which is to maintain compliance

with the City's obligations under the landmark watershed protection agreement. This agreement unites the City, New York State, the watershed communities, the United States Environmental Protection Agency ("EPA") and key environmental groups in support of an enhanced protection program for the City's drinking water supply and provides the system with a long-term waiver from EPA of the need to filter the system's Catskill/Delaware water supply. Water quality preservation will ensure that New Yorkers enjoy high quality water into the 21st Century, and substitutes watershed management for the construction of a filtration plant. Protecting the water supply will cost a fraction of the estimated annual cost of filtration and represents a substantial and real saving to the City, the system and its rate payers.

DEP continues to scrutinize the system's mandated programs to ensure the assumptions on which such programs are based continue to be valid and the investment continues to be justified. Where it believes either the objective of the program, the investment, or the timing of the investment should be reconsidered, DEP will attempt to renegotiate and restructure the commitment to place it on a more prudent and appropriate basis.

DEP has controlled the management of its non-capital operating budgets so as to ensure only necessary increases are provided. As shown in the financial section of this report, only moderate increases are anticipated over the next five years for system operating expenses.

Finally, although the growth in the system's debt service continues, the Municipal Water Finance Authority has made an aggressive effort over the last year to take advantage of the historically low long term interest rates in the capital markets. In excess of \$1 billion in higher interest rate bonds from prior years were refinanced in FY 1998 and the savings have helped to reduce projections of both current and future debt service costs. As long as interest rates remain low, the Water Authority will continue to look at restructuring its debt to produce lower debt service costs and, therefore, lower rates to consumers of water and sewer system services.

Schedule For Water Board Rate Adoption

April 2, 1998

Water Board Meeting To Approve Public Notice of 4.3% Increase

Rate Hearing Dates and Locations

Borough	Location	Date/Time
Queens	DEP 6th Floor Lecture Room 59-17 Junction Boulevard Corona, New York 11368	April 22, 1998 1:00 PM
Staten Island	College of Staten Island Center for the Arts - Lecture Hall 2800 Victory Boulevard Staten Island, New York 10314	April 22, 1998 5:00 PM
Brooklyn	The Brooklyn Public Library Cadman Plaza - Business Branch 280 Cadman Plaza West Brooklyn, New York 11201	April 23, 1998 1:30 PM
Manhattan	The College of Insurance 2nd Floor Auditorium 101 Murray Street New York, New York 10007	April 23, 1998 5:00 PM
Bronx	Lehman College Carman Hall B-34 250 Bedford Park Boulevard West Bronx, New York 10468	April 24, 1998 10:00 AM

April 28, 1998

**Public Hearing in Connection With Proposed Revisions to
Procedures Governing Applications For and the Granting of
Wastewater Allowances
9:00 A.M., 8th Floor Conference Room
59-17 Junction Boulevard
Corona, New York 11368**

May 1, 1998

**Water Board Meeting To Adopt Rates For Fiscal
Year 1999
9:00 A.M., College of Insurance,
Room 118, 101 Murray Street,
New York, New York 10007**

May 1998

**Flat-Rate Bills Are Mailed Over The Several Weeks Following Rate
Adoption**

July 1, 1998

Fiscal Year 1999 Rates Become Effective

PROGRAM SUMMARY

Fiscal Year 1999 Rate Proposals

- **Increase of 4.0% in-City water rates for all customers, flat-rate and metered**
- **Maintain in-city wastewater rates at 159% of water charges**
- **Increase wholesale water rate to upstate municipalities and water districts to \$342.97 per million gallons**

Fiscal Year 1999 Billing Policy Proposals

- **Extend the Metering Transition Program to authorize the continuation of unmetered billing for residential premises with large service lines to June 30, 1999**
- **Revise procedures governing applications for, and the granting of, wastewater allowances, including allowances in respect to air conditioning and/or refrigeration systems, for properties whose process is such that water supplied is not discharged entirely into the wastewater system**

Summary of Proposed Revisions of Procedures Governing Wastewater Allowances

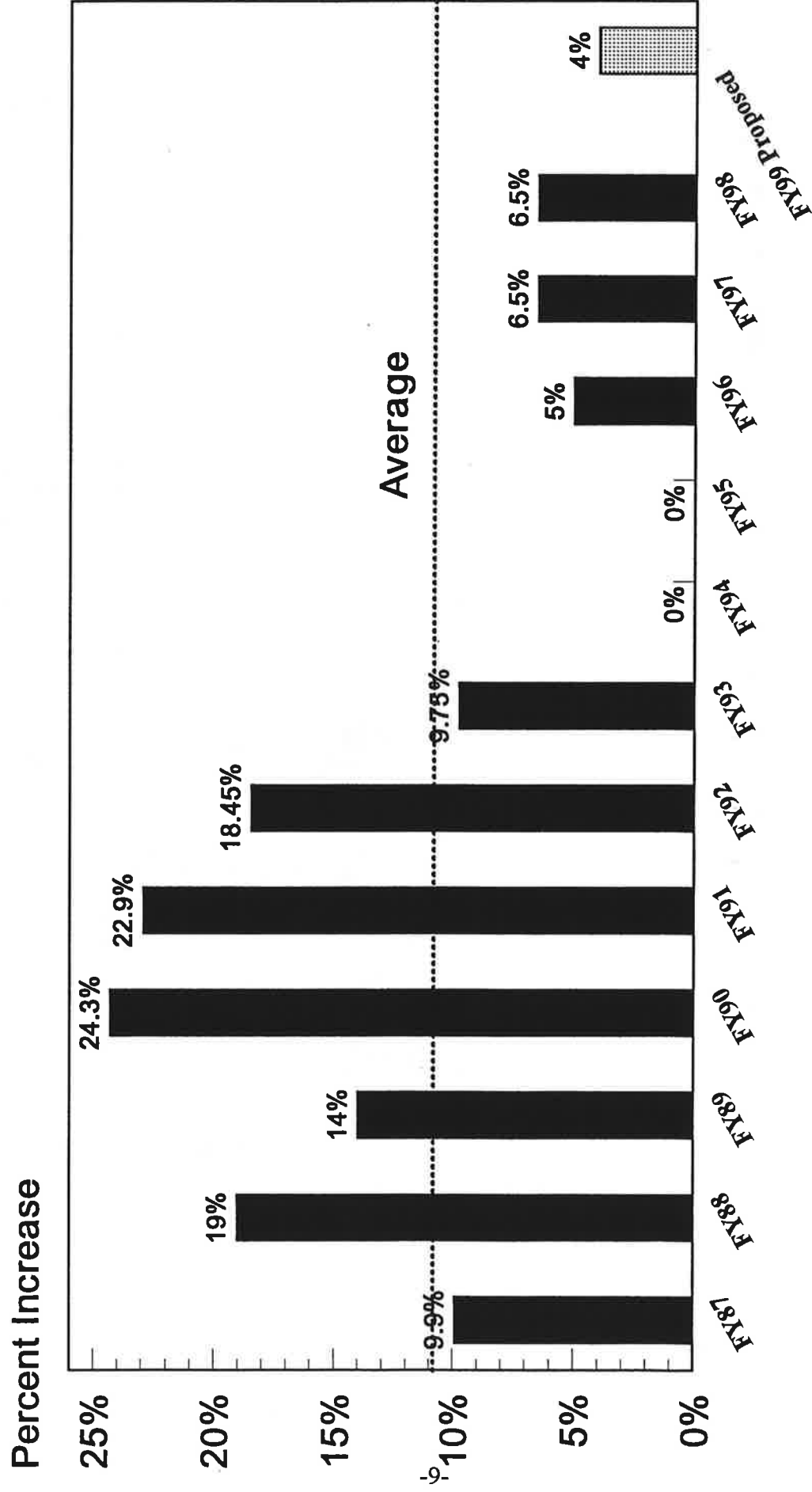
Revisions are proposed to the procedures under Part III, Section 4 of the Water Board's Water and Wastewater Rate Schedule governing applications for, and the granting of, Wastewater Allowances, including allowances in respect to air conditioning and/or refrigeration systems ("AC/R Allowances"). Any property which is used for a commercial or industrial purpose, whose process is such that water supplied is not discharged entirely into the wastewater system, shall be eligible to apply for a discount on wastewater charges. The permitted discount, or allowance, shall bear a reasonable relationship to the amount of wastewater actually discharged into the wastewater system.

Summary of the Proposed Revisions:

The revised procedures, which will take effect on May 1, 1998, provide for the following.

1. Wastewater Allowances, including AC/R Allowances, will only be granted to eligible applicants effective upon filing a complete, written application with the Department of Environmental Protection ("DEP"), on such forms as the Commissioner of DEP shall prescribe.
2. For complete applications filed before May 1, 1998, AC/R Allowances, if granted, will be retroactive up to a maximum of six (6) years from the date DEP, having received a complete application, determines that the applicant is eligible. All other Wastewater Allowances will be prospective only from and after the date DEP, having received a complete application, determines that the applicant is eligible.
3. For complete applications filed after May 1, 1998, Wastewater Allowances, including AC/R Allowances, if granted, will be prospective only from and after the date DEP, having received a complete application, determines that the applicant is eligible for the Allowance for a period not exceeding two (2) years. At the end of the two year period, application may be filed for the renewal of the Allowance.
4. If an application for an AC/R Allowance is rejected as incomplete prior to May 1, 1998, and a complete application is re-filed after May 1, 1998, the AC/R Allowance, if granted, will be prospective only, in the same manner as provided in 3 above.
5. No property or process shall be eligible for a Wastewater Allowance if the water supply is not fully metered to the satisfaction of DEP, or if the property has any delinquent water/wastewater charges or real estate taxes.

NYC Water and Wastewater Rate History

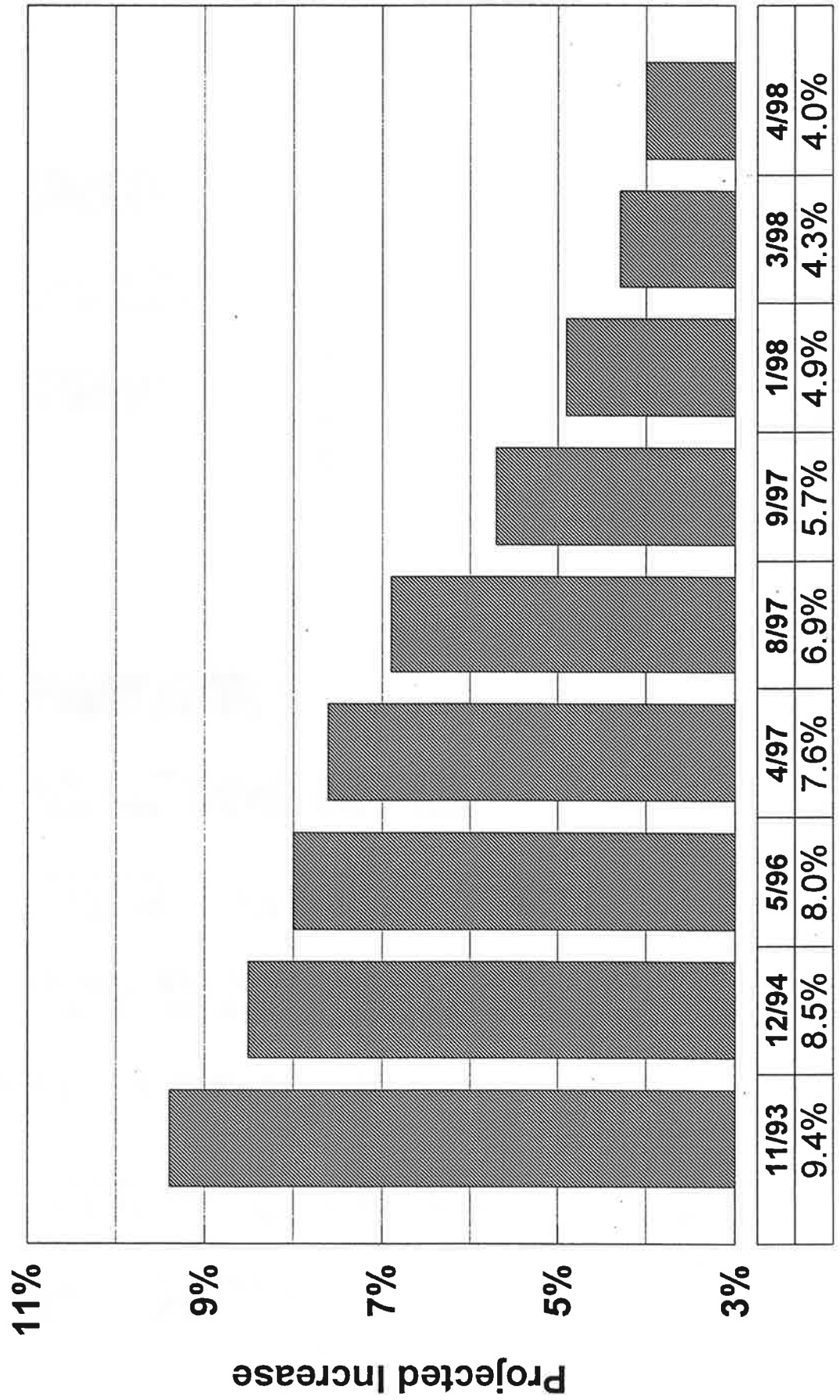


Fiscal Year

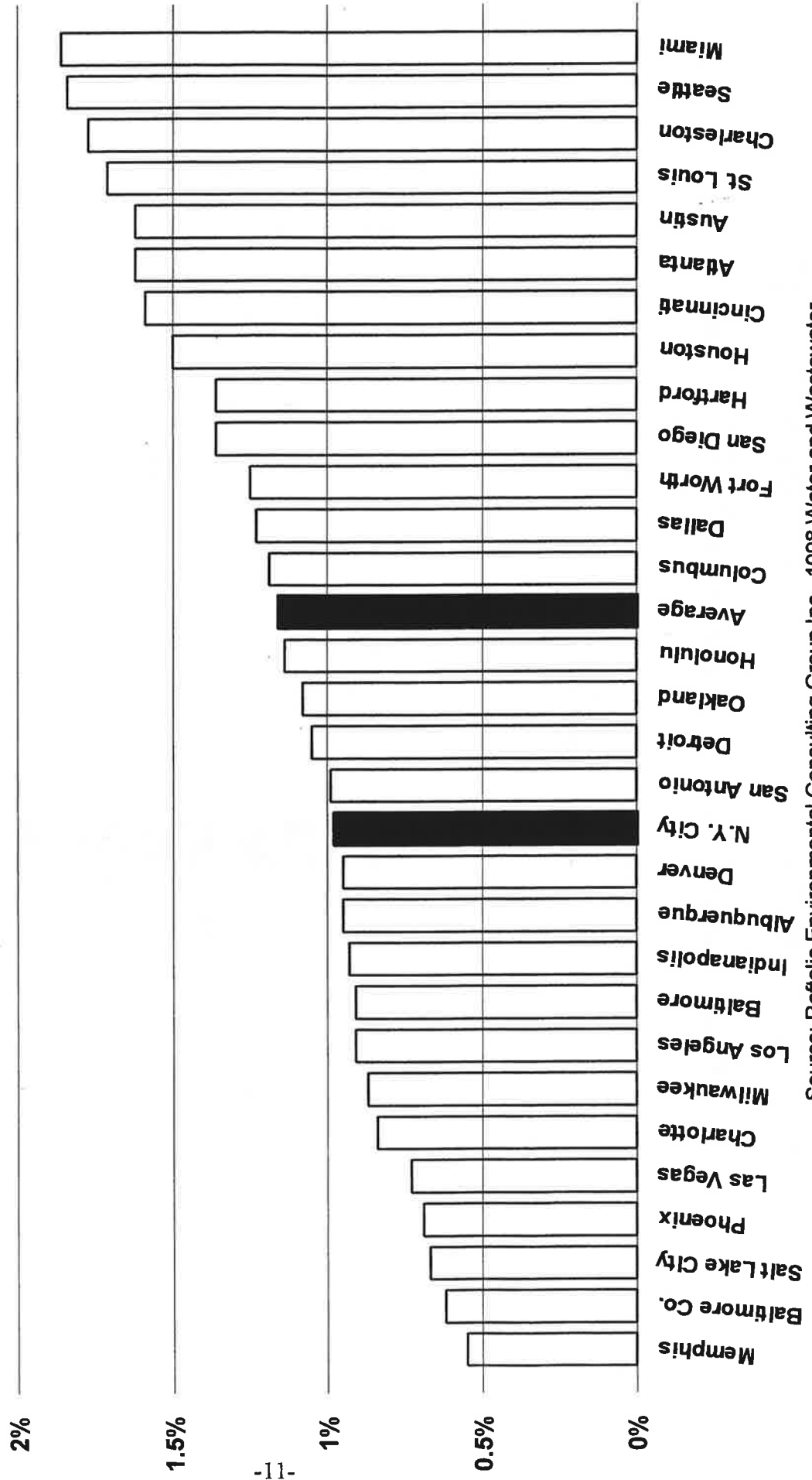
- No increases in FY94/95 resulted from overestimating cost of land disposal of sludge and the resulting accumulation of surpluses
- Average annual increase over the period is 10.8%

Improved Rate Projection

Projected FY 1999 Increase

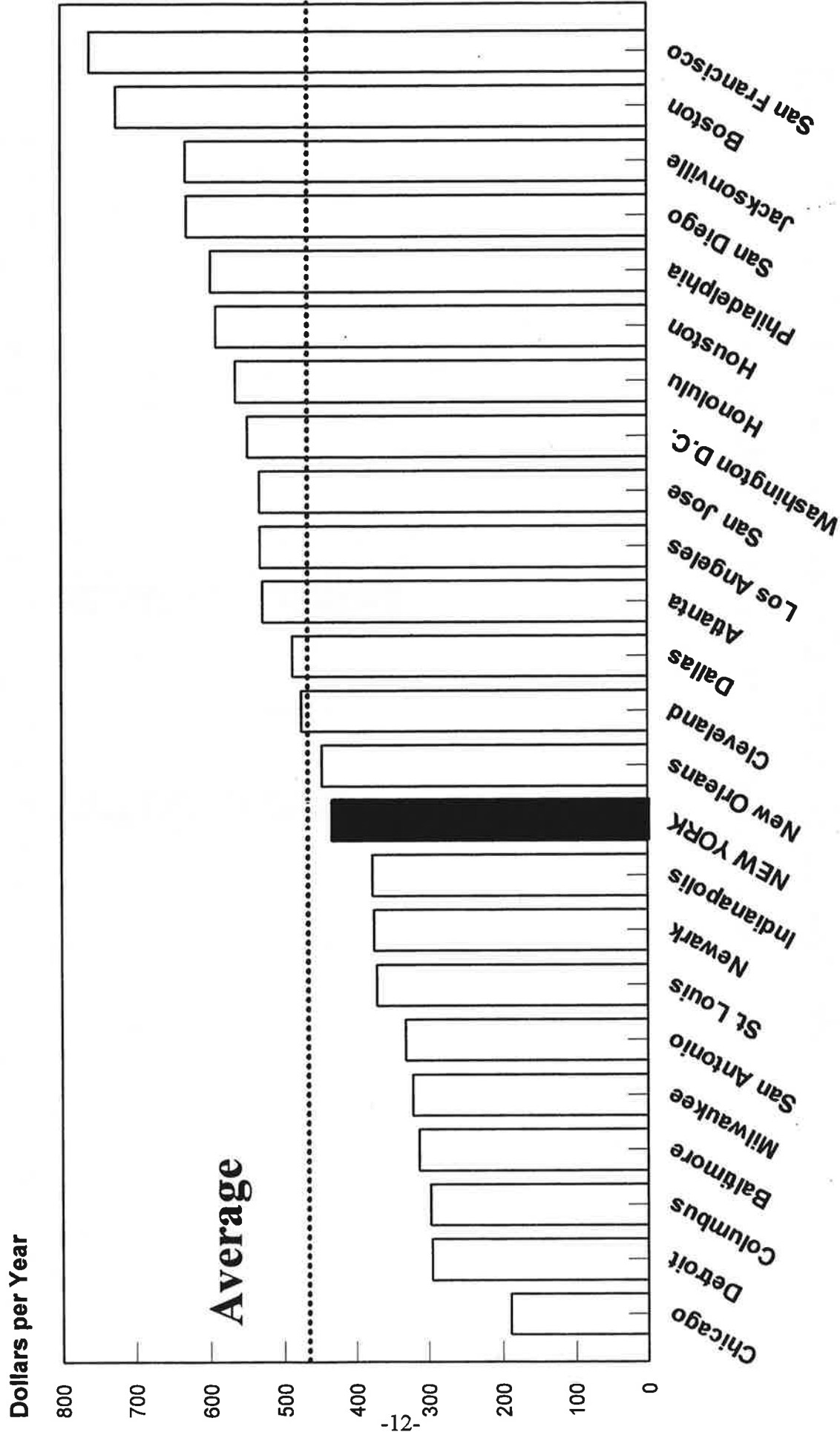


Residential Water & Sewer Charges as a Percentage of Median Household Income



Source: Raftelis Environmental Consulting Group Inc. 1998 Water and Wastewater Rate Survey, Charlotte NC.

Annual Water & Wastewater Charges Residential - Fiscal Year 1999

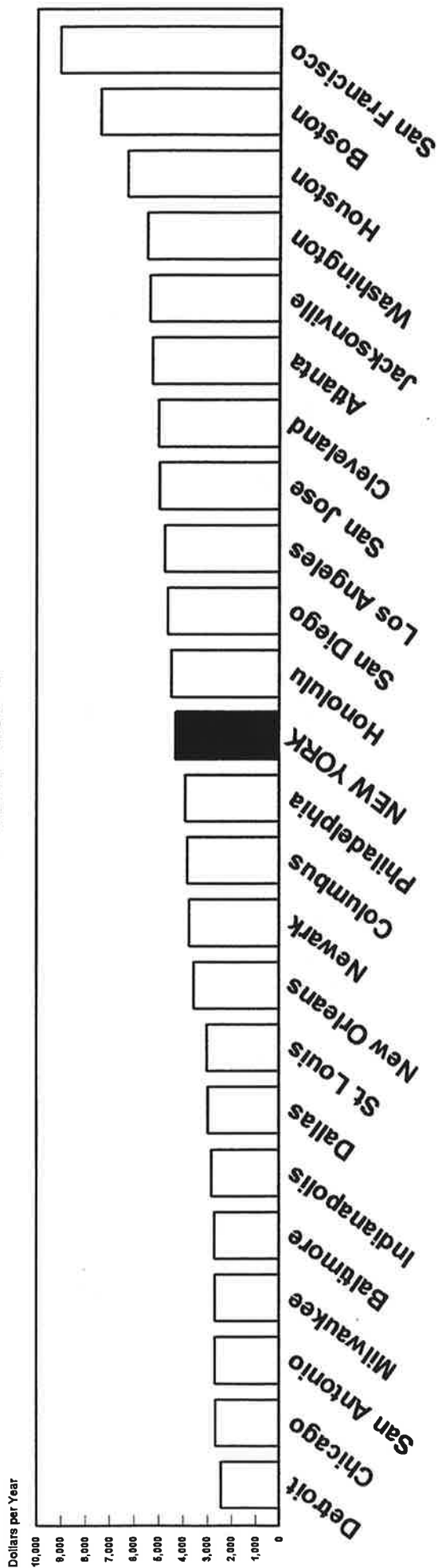


New York Charges = \$433
Average 24 Cities = \$473

Annual Charges for All Cities Based on
Consumption of 100,000 Gallons per Year

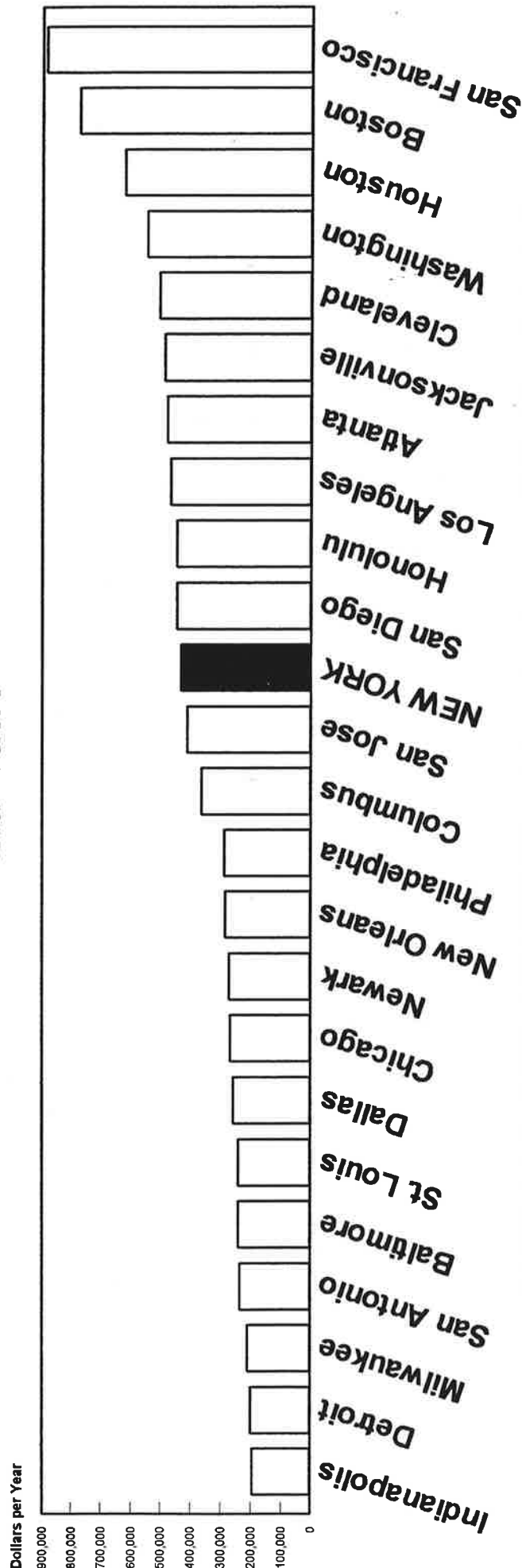
Annual Water & Wastewater Charges - Fiscal 1999

Commercial



New York Charge = \$4,334
Average 24 Cities = \$4,343

Industrial



New York Charge = \$433,371
Average 24 Cities = \$398,202

Annual Charges for All Cities Based on Assumed Consumption of 1 Million Gallons per Year for Commercial and 100 Million Gallons per Year for Industrial

Impact of Proposed 4% Increase
 (Combined water/wastewater charge)

Average Annual Customer Charges

FY98 Average	FY99 Average	Change
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Flat-Rate Customers

Single-Family Residential	\$469	\$488	\$19
Two-Family Residential	\$728	\$757	\$29
Walk-Up Apartments	\$2,230	\$2,319	\$89
Charge/Dwelling Unit	\$335	\$348	\$13
Elevator Apartments	\$25,091	\$26,095	\$1,004
Charge/Dwelling Unit	\$380	\$395	\$15

Metered Customers

Rate per 100 Cubic Feet

FY98 Average	FY99 Average	Change
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Residential & Commercial			
Water	\$1.20	\$1.25	\$0.05
Wastewater	\$1.91	\$1.99	\$0.08
Combined	\$3.11	\$3.24	\$0.13

Typical Metered Charges

Average Annual Charges

Single Family (100,000 gallons)	\$416	\$433	\$17
Per Multifamily Unit (85,000 gallons)	\$353	\$368	\$15

Water and Wastewater System Capital Program

(Per January 1998 Capital Plan)

Program \$(000)'S

	FY98	FY99	FY00	FY01	FY02	5-Year Total
Combined Sewer Overflow	62,445	153,677	205,100	53,900	118,900	594,022
Watershed Investments	142,266	160,097	99,540	121,875	52,934	576,712
Hillview Reservoir	17,780	20,000	219,100	0	0	256,880
Newtown Creek	161,567	360,150	435,000	383,000	0	1,339,717
Croton Filtration	3,474	0	0	3,000	300,000	306,474
Meter Installations	74,992	29,565	4,223	4,223	4,223	117,226
Water Pollution Control Plants	251,601	333,670	300,036	271,730	333,130	1,490,167
MANDATED PROGRAMS	714,125	1,057,159	1,262,999	837,728	809,187	4,681,198
	57.9%	71.7%	81.7%	61.9%	61.7%	67.7%

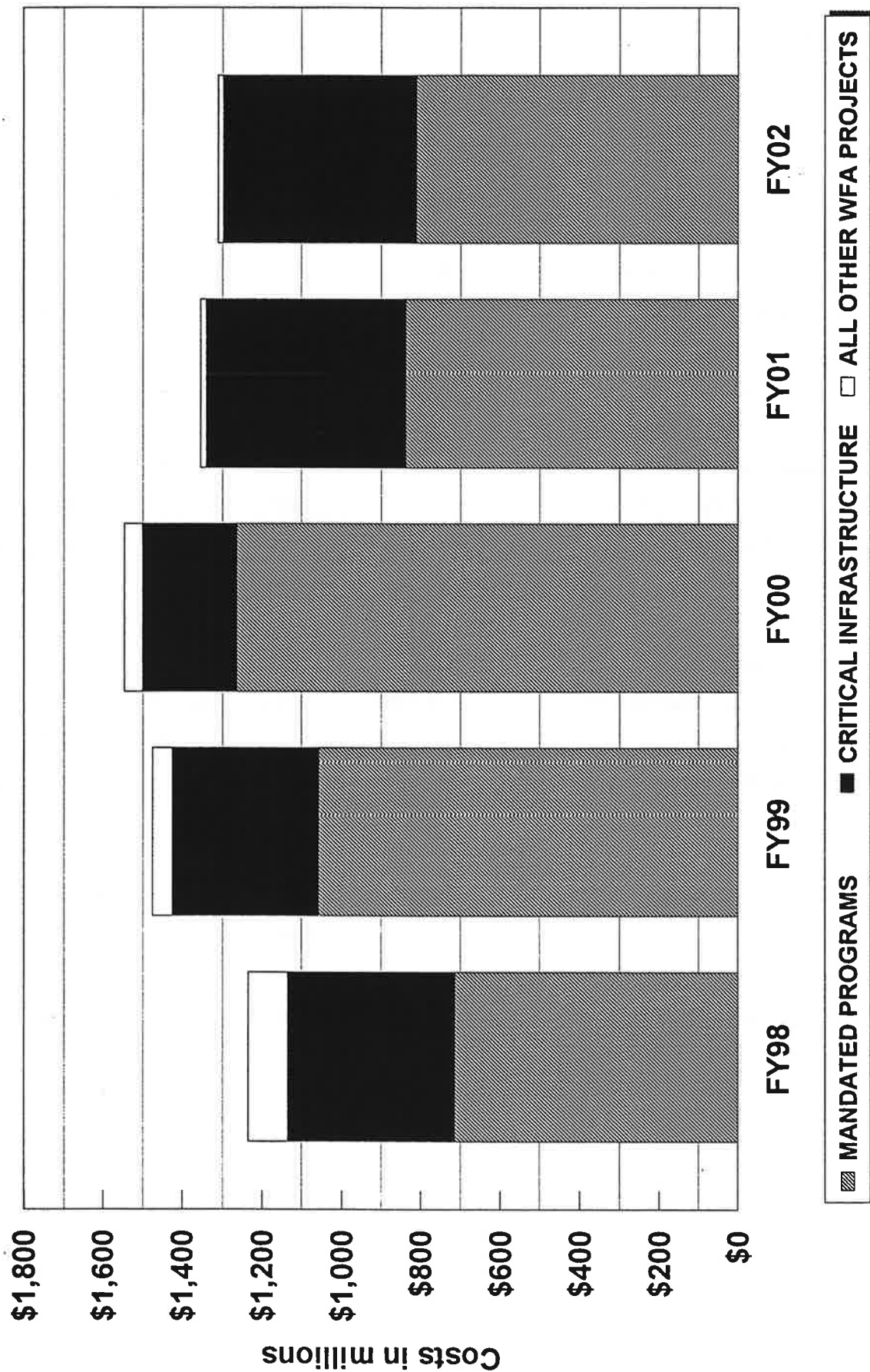
Sewer Construction	221,639	167,554	134,390	134,873	125,639	784,095
In-City WaterMain Construction	169,936	118,603	73,600	128,441	48,136	538,716
Third Water Tunnel	29,988	82,000	29,200	239,060	315,000	695,248
CRITICAL INFRASTRUCTURE	421,563	368,157	237,190	502,374	488,775	2,018,059
	34.2%	25.0%	15.3%	37.1%	37.3%	29.2%

ALL OTHER PROJECTS	98,579	49,624	45,617	13,400	12,950	220,170
	8.0%	3.4%	3.0%	1.0%	1.0%	3.2%

TOTAL CAPITAL PROGRAM	1,234,267	1,474,940	1,545,806	1,353,502	1,310,912	6,919,427
	100%	100%	100%	100%	100%	100%

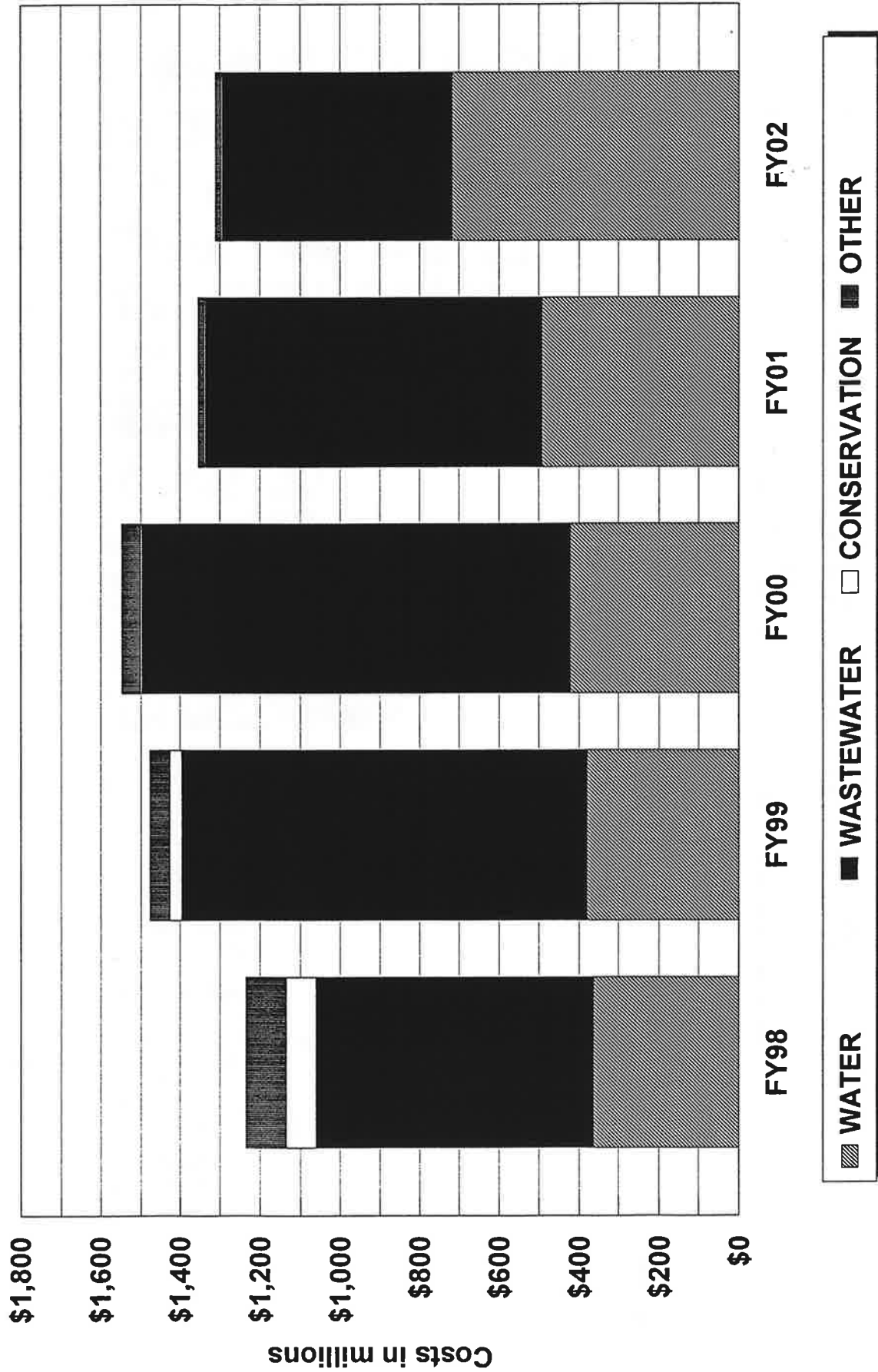
Note: Assumes \$112 million in non-Water Finance Authority funding sources

Capital Program Components Mandated vs. Critical Infrastructure



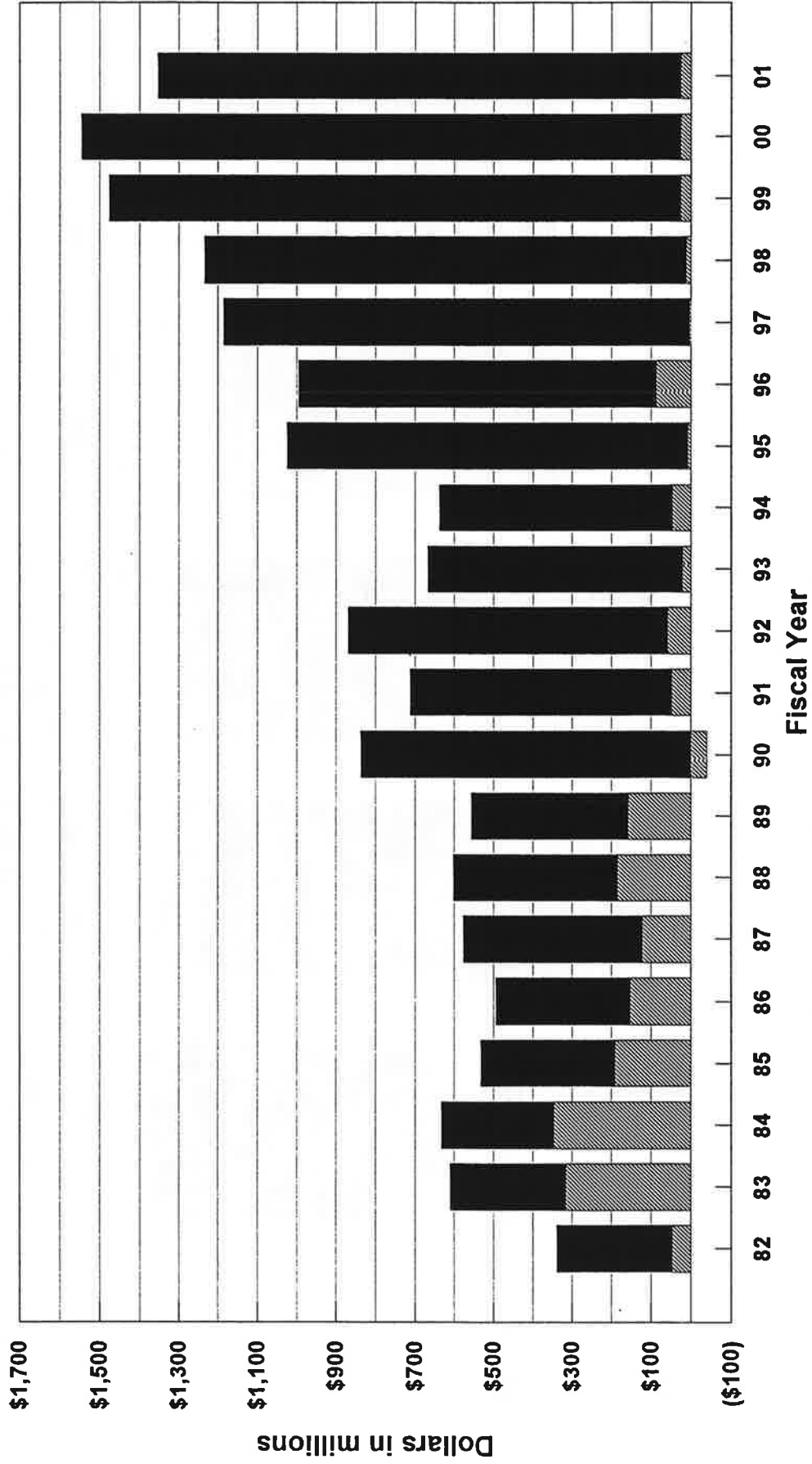
Capital Program Components

Water vs. Wastewater



Construction Grant Assistance

Historical and Projected



Grants City Funds

Amounts reflect capital contract commitments and grant registrations

Anticipated Water and Wastewater System Expenditures
(in 000's)

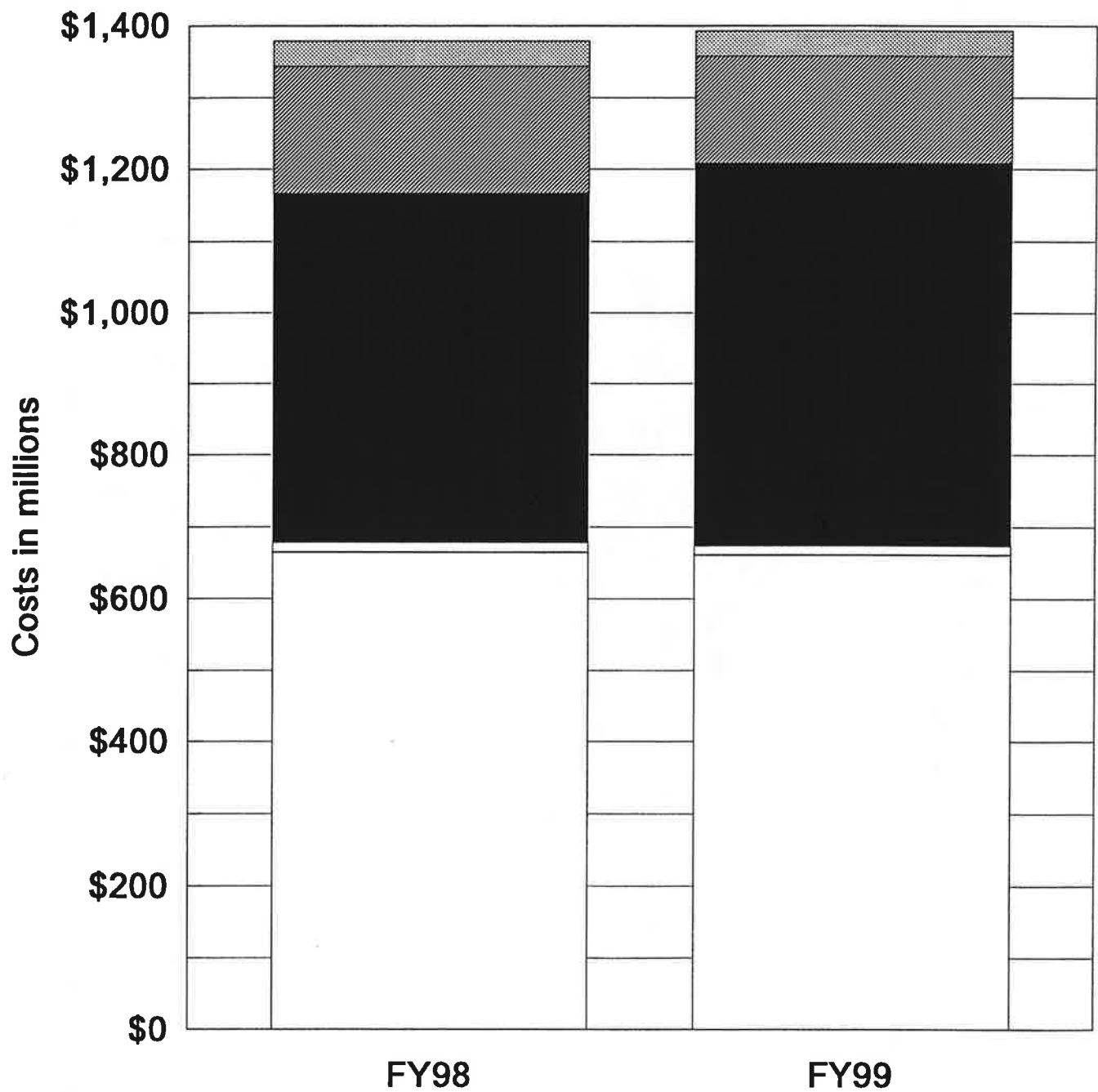
	<u>FY98</u>	<u>FY99</u>	<u>Change</u>
<u>WFA Debt Service</u>			
First Resolution Bonds:			
Outstanding Bonds	\$421,646	\$423,603	\$1,957
Anticipated Future Bonds	0	29,227	29,227
Total First Resolution Debt Service	421,646	452,830	31,184
Subordinate Obligations:			
Short Term Obligations	19,000	19,200	200
Outstanding Bonds	131,448	137,277	5,829
Anticipated Future Bonds	0	3,398	3,398
Less: EFC Subsidy	(36,941)	(39,960)	(3,019)
Actual Subordinate Debt Service	113,507	119,915	6,408
Less: Carryforward and Other Revenues	(46,075)	(37,857)	8,218
Net Subordinate Debt Service	67,432	82,058	14,626
Total Debt Service	489,078	534,888	45,810
<u>Operating Expenses</u>			
Authority/Board Operations	12,900	13,000	100
Water System	258,209	281,192	22,983
Wastewater System	381,842	374,855	(6,987)
Indirect Expenses	15,619	15,319	(300)
Judgements/Claims	28,500	4,700	(23,800)
Total Operating Expenses	697,070	689,066	(8,004)
Less: Trust Account Withdrawals	(15,000)	(15,000)	0
Net Operating Expenses	682,070	674,066	(8,004)
Rental Payment	176,482	148,672	(27,810)
Cash Financed Construction	35,000	35,000	0
Less Credit for Prior Year Expenses	(3,707)	0	3,707
Total Expenses	889,845	857,738	(32,107)
Total Expenditures	<u>\$1,378,923</u>	<u>\$1,392,626</u>	<u>\$13,703</u>
<u>Revenues</u>			
Operating Revenues:			
User Payments	\$1,268,989	\$1,318,148	\$49,159
Upstate Revenues	12,000	12,780	780
Miscellaneous Revenues (Permits, etc.)	5,500	5,775	275
Miscellaneous Interest Income	25,000	25,000	0
Interest Income on System Funds	89,305	59,849	(29,456)
EFC Subsidy on Outstanding Bonds	13,058	5,153	(7,905)
Gross System Revenues	<u>\$1,413,852</u>	<u>\$1,426,705</u>	<u>\$12,853</u>
Surplus Carryforward	\$34,929	\$34,079	(\$850)

Anticipated Water and Wastewater System Costs
(in 000's)

	FY 1999 Total Costs	Water Costs	Wastewater Costs
<u>WFA Debt Service</u>			
First Resolution Bonds:			
Outstanding Bonds	\$423,603	\$155,930	\$267,673
Anticipated Future Bonds	29,227	14,339	14,888
Total First Resolution Debt Service	452,830	170,269	282,561
Subordinate Obligations:			
Short Term Obligations	19,200	6,777	12,423
Outstanding Bonds	137,277		137,277
Anticipated Future Bonds	3,398		3,398
Less: EFC Subsidy	(39,960)		(39,960)
Actual Subordinate Debt Service	119,915	6,777	113,138
Less: Carryforward and Other Revenues	(37,857)	(1,980)	(35,877)
Net Subordinate Debt Service	82,058	4,797	77,261
Total Debt Service	\$534,888	\$175,066	\$359,822
<u>Operating Expenses</u>			
Authority/Board Operations	\$13,000	\$5,572	\$7,428
Water System	281,192	281,192	
Wastewater System	374,855		374,855
Indirect Expenses	15,319	6,566	8,753
Judgements/Claims	4,700	2,350	2,350
Total Operating Expenses	689,066	295,680	393,386
Less: Trust Account Withdrawals	(15,000)		(15,000)
Net Operating Expenses	674,066	295,680	378,386
Rental Payment	148,672	74,336	74,336
Cash Financed Construction	35,000	12,353	22,647
Total Expenses	\$857,738	\$382,369	\$475,369
Total Expenditures	<u>\$1,392,626</u>	<u>\$557,435</u>	<u>\$835,191</u>

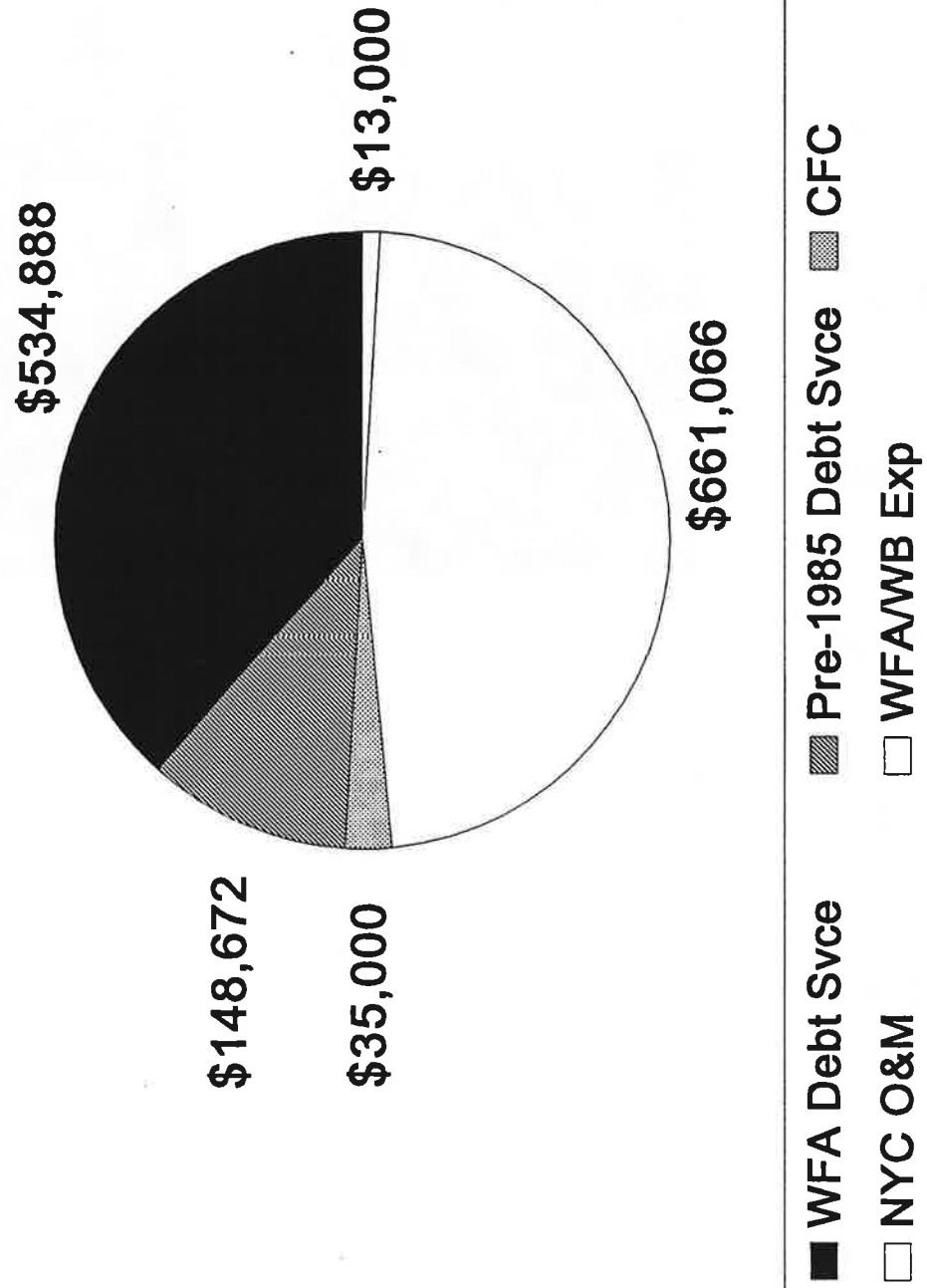
Water/Wastewater System Cost Components

FY98 - FY99



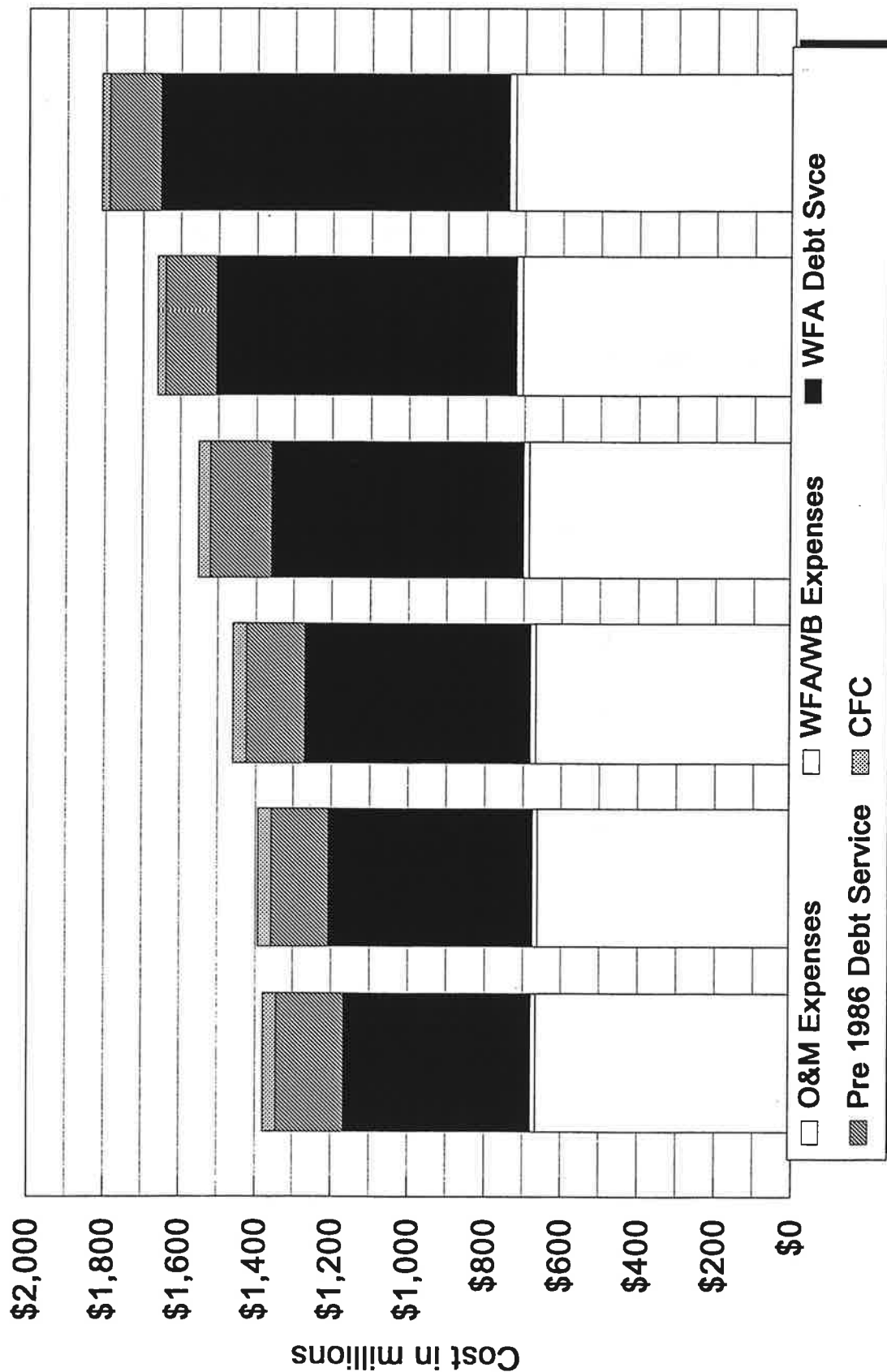
□ NYC O&M □ WB/WFA Exp ■ WFA Debt Svce
▨ Pre 1986 Debt Svce ▤ CFC

Water Board Expenses - FY 99



in '000's

Projected System Costs FY1998-FY2003



Rate Advisor's Conclusions

- **The 4.0% increase in water rates and charges proposed by the Board will yield anticipated revenues for Fiscal Year 1999 that are sufficient to cover the expected costs of providing water service and wastewater service.**
- **The current ratio of the Board's charges for water service and wastewater service approximates the long term current cost of providing water service and wastewater service.**
- **The Billing Policy Proposals being considered by the Board are not anticipated to significantly affect Board revenues.**

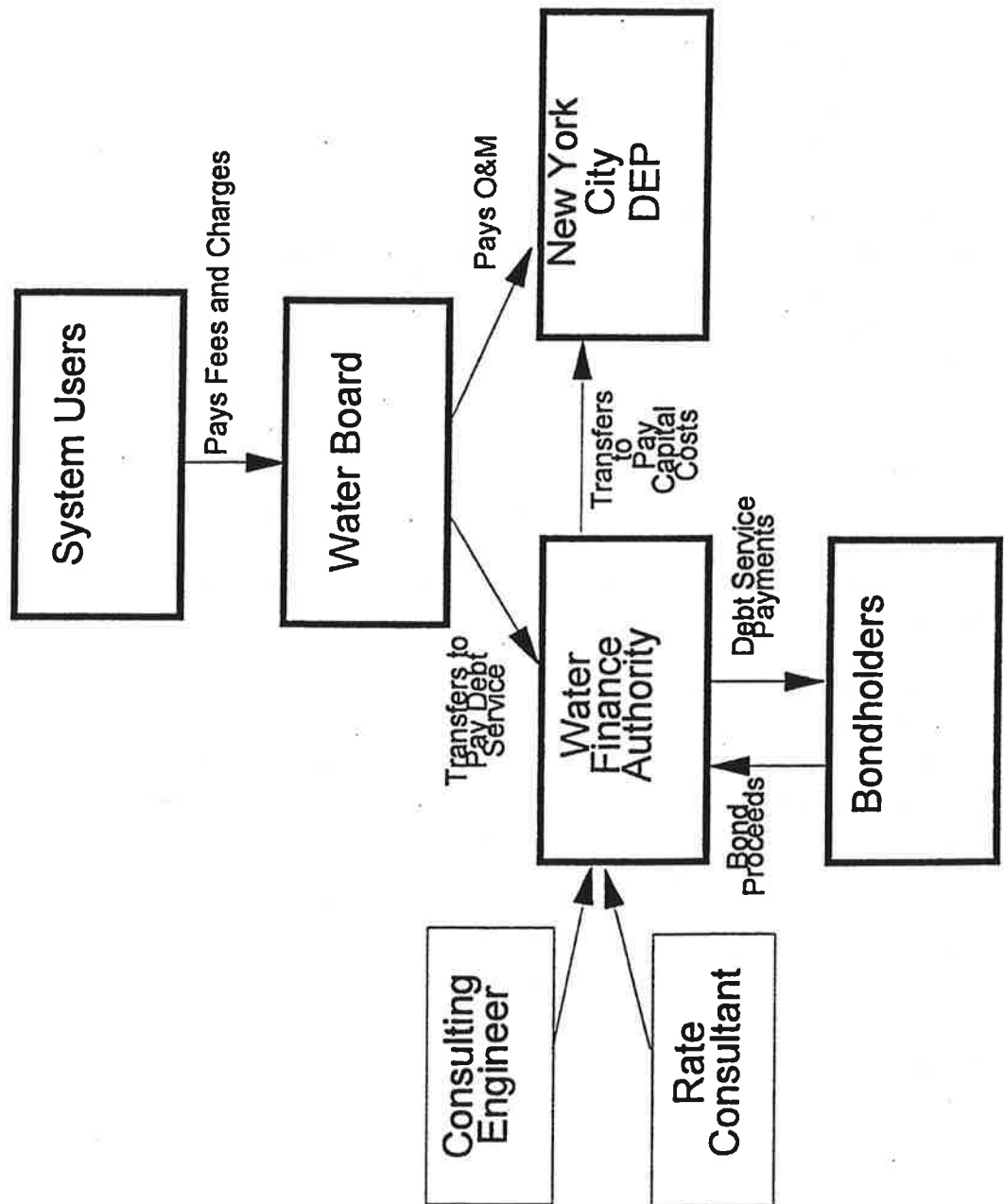
Process For Water Board Rate Adoption

- **Board Must Adopt Rates Which Will Satisfy The Revenue Requirements Of The System**
- **Water Finance Authority projects debt service on bonds issued after 1985 to finance water and wastewater capital projects and certifies the FY 1999 amount to the Water Board**
- **City Office of Management and Budget projects DEP's operating and maintenance expenses and certifies the FY 1999 amount to the Water Board based on the Mayor's Executive Budget**
- **City projects debt service on General Obligation bonds issued prior to 1985 to finance water and sewer capital projects based on information received from the Office of the Comptroller and certifies the FY 1999 amount to the Water Board**
- **Consulting Engineer Must Certify That Expenses Are Reasonable And Appropriate**
- **Board Must Hold public hearings in each borough of New York City**

Important Objectives Of The Water Board In Establishing Rates And Charges

- **Sufficient revenues must be raised by rates and charges and other sources of revenue in order to satisfy the revenue requirements of the Water System and the Wastewater System**
- **Rates and charges should be equitable and fair, in the sense that charges levied on different users reflect, as closely as practicable, the costs incurred in providing water and wastewater services**
- **The rate structure, both present and long term, should provide a reasonably stable and predictable flow of revenue**
- **The rate structure should be relatively simple and easy to administer**
- **The rate structure should be understandable to the customer**
- **The rate structure should encourage water conservation**

Water and Wastewater System Financing



Description Of The Water System **And** **The Wastewater System**

The Water System

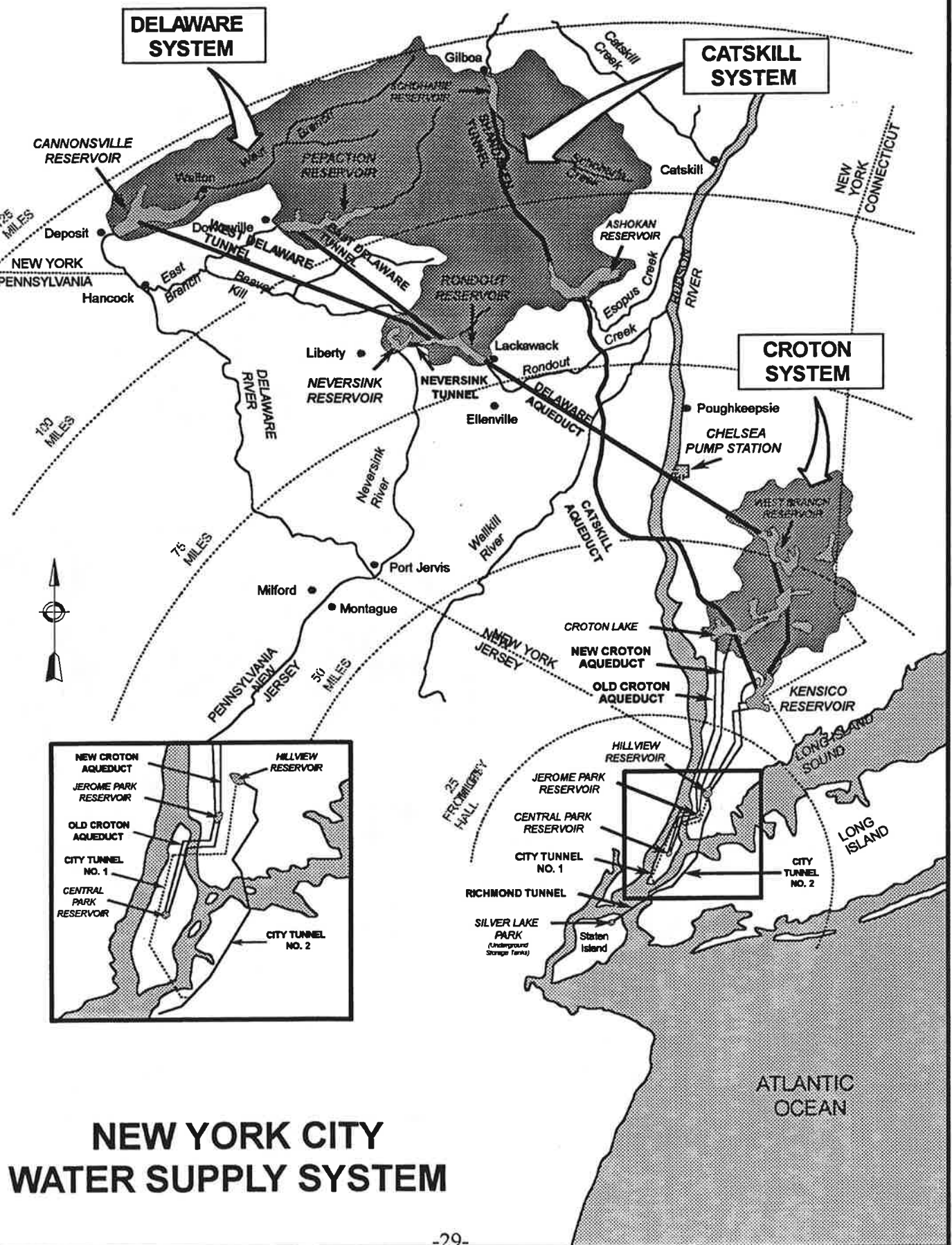
Water for the System is impounded at three upstate reservoir systems: the Croton, Catskill and Delaware watersheds. There are 18 reservoirs and three controlled lakes with a storage capacity of 550 billion gallons. The Water System provides an average of 1,307 million gallons per day to customers within the City and in upstate areas. Water is conveyed to the City through large aqueducts and balancing reservoirs. Within the City, water is distributed through two major tunnels. A third tunnel is now under construction and will supplement the two City tunnels currently in use. The water distribution system covers approximately 300 square miles in the City and consists of 6,796 miles of pipe, 88,633 mainline valves, 103,661 fire hydrants, plus 69 groundwater wells.

In comparison to other public water systems, the City's Water System is both economical and flexible. Approximately 95% of the total daily water supply is delivered to the consumer by gravity. Only about 5% of the water is regularly pumped to maintain the desired pressure. As a result operating costs are relatively insensitive to the cost of power.

The Wastewater System

The Wastewater System is primarily a combined system designed to carry both stormwater and sanitary wastewater. It consists of an extensive network of facilities including approximately 6,400 miles of wastewater lines, 130,000 catch basins and 5,000 seepage basins. The wastewater treatment facilities include 14 operating wastewater treatment plants, one storm-overflow retention plant, 89 wastewater pump stations, nine wastewater laboratories, eight sludge dewatering facilities and three inner-harbor vessels which transport sludge between facilities. The wastewater treatment facilities treat approximately 1,349 million gallons per day of dry-weather wastewater.

Maps of the Water Supply System and the Plant Drainage Areas are included in the following two pages.



Plant Location

Capacity (MGD)

MANHATTAN

Wards Island	250
North River	170

BRONX

Hunts Point	200
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BROOKLYN

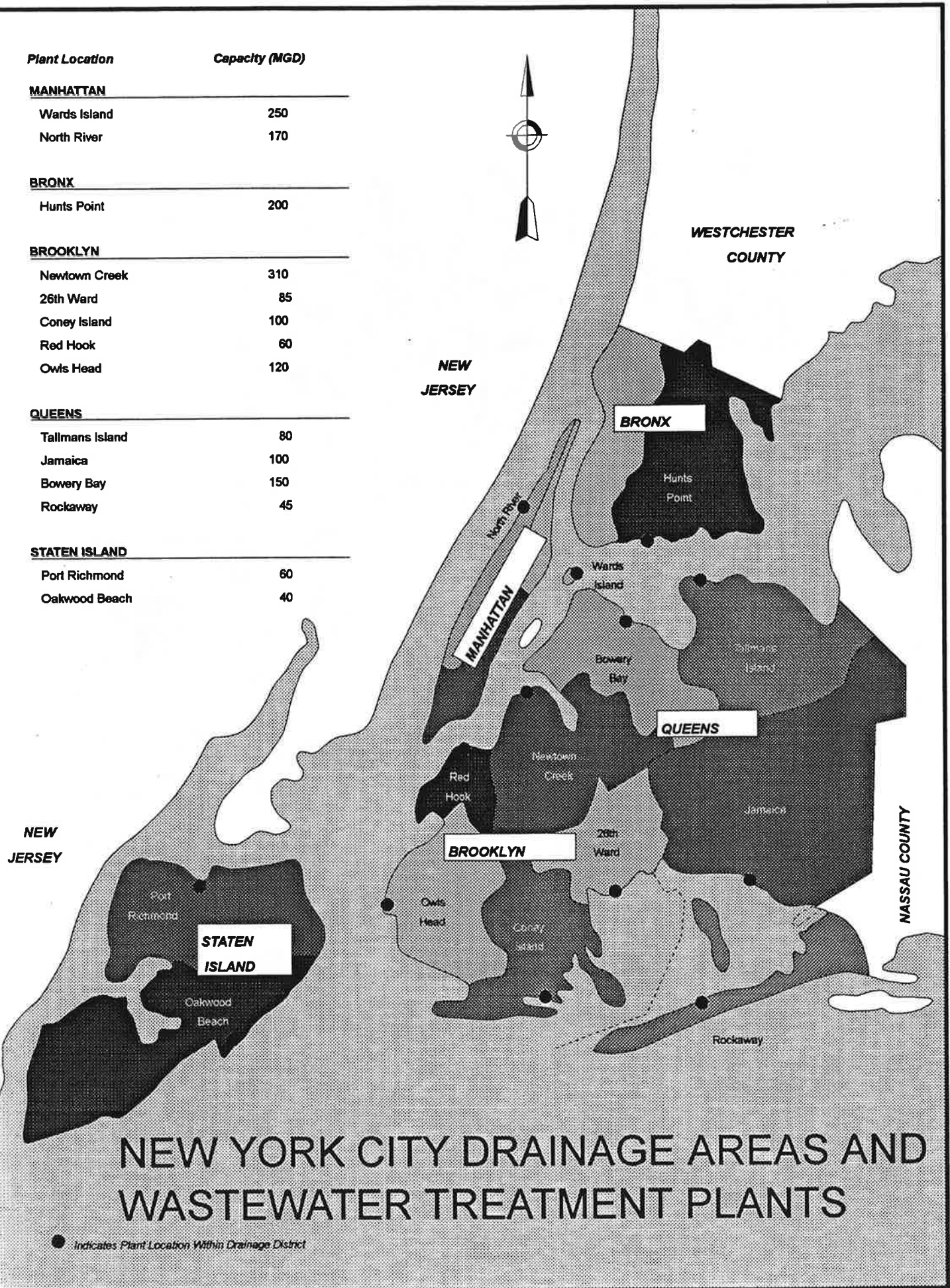
Newtown Creek	310
26th Ward	85
Coney Island	100
Red Hook	60
Owls Head	120

QUEENS

Tallmans Island	80
Jamaica	100
Bowery Bay	150
Rockaway	45

STATEN ISLAND

Port Richmond	60
Oakwood Beach	40



NEW YORK CITY DRAINAGE AREAS AND WASTEWATER TREATMENT PLANTS

● Indicates Plant Location Within Drainage District