

**NEW YORK CITY WATER BOARD**

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

***APRIL 1999***

# 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") 2000, as well as the financial condition of the water and wastewater system and its budget for FY 2000.

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 are 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 2000 proposal is to increase water rates by not more than 4.0%. This proposal matches last year's historically low increase and represents continued improvement over previous years when much greater increases were levied by the Board. For example, 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 have sought to lower and stabilize rate increases. From FY 1995 through the upcoming FY 2000, rate increases will have averaged just 4.3% per year.

The proposed 4.0% increase is also lower than was projected at this time last year when an increase of 5.4% was anticipated for FY 2000. This 26% reduction in the anticipated FY 2000 rate increase can be attributed to several factors:

- a strong year-to-date revenue performance matching the collection plan for FY 1999;
- a one time increase in projected investment income related to cash flows from the construction fund being lower than anticipated which resulted in higher balances in the fund and, therefore, increased investment income.

It should be noted that we have succeeded in lowering this year's rate increase while at the same time maintaining projections for future years at approximately the same stable levels that were forecast last year.

The strong year-to-date revenue performance reflects DEP's continuing improvements in billing system administration ensuring 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% two years ago to 18% currently. Through the end of March, 160,000 more bills have been issued and net billings have improved by almost \$128 million compared to the same period last year. The system's

accounts receivable balance has also declined month by month over the course of the year and is \$44 million lower than at the same time last year, an improvement of about 6%. 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 required rate increase 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 water and wastewater system infrastructure in response to Federal and State regulatory mandates under the Clean Water and Safe Drinking Water Acts. While these capital investments are needed for managing and preserving important environmental resources for future generations, they are a major influence on DEP's capital program and the resulting debt service incurred on bonds issued to finance these investments continues to be the single most important factor driving the need for rate increases.

As shown by the materials presented in this booklet, 70% 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 plant upgrading and rehabilitation, combined sewer overflow abatement and conservation. These capital investments are required to satisfy obligations under existing laws and consent decrees, and 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 upgrading components of the water main and sewer collection networks 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 several years ago 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 shown 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 ("Memorandum of Agreement" or "MOA"). 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 will enjoy high quality water into the 21st Century, and substitutes watershed management for the construction of what would be a large and expensive 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 has just issued its most recent Filtration Avoidance Determination Report which demonstrates that it is compliance with all mandated MOA programs.

DEP continues to scrutinize the system's mandated programs to ensure that 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 its operations and maintenance expense budget so as to ensure only necessary increases are provided. As shown in the financial section of this report, only moderate increases are projected for net system O&M expenses, less than 2% per year over the next five years.

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.

In addition to the Board's rate proposal, this booklet also summarizes several proposed changes to its billing policies. These changes are intended to simplify DEP's administration of the various billing programs and provide additional options for customers in specific circumstance. In the case of the leak forgiveness policy, the change is intended to improve the conservation incentive to customers as compared to the existing policy.

**Schedule for Water Board Rate Adoption**

**March 31, 1999      Water Board Meeting to Approve Public Notice of 4.0%**

**Rate Hearing Dates and Locations**

<b>Borough</b>	<b>Location</b>	<b>Date/Time</b>
<b>Queens</b>	<b>Department of Environmental Protection 6th Floor Lecture Room 59-17 Junction Boulevard Corona, New York 11368</b>	<b>Thursday April 22, 1999 6:00 P.M.</b>
<b>Bronx</b>	<b>Herbert H. Lehman College Carman Hall, Rm. B-34 250 Bedford Park Boulevard West Bronx, New York 10468</b>	<b>Friday April 23, 1999 10:00 A.M.</b>
<b>Staten Island</b>	<b>College of Staten Island Conference Center, Rm. 1P-116 2800 Victory Boulevard Staten Island, New York 10314</b>	<b>Monday April 26, 1999 10:00 A.M.</b>
<b>Brooklyn</b>	<b>Kingsborough Community College Marine Academic Center, Rm. M-239 Oriental Boulevard Manhattan Beach Brooklyn, New York 11235</b>	<b>Monday April 26, 1999 2:30 P.M.</b>
<b>Manhattan</b>	<b>The College of Insurance 2nd Floor Auditorium 101 Murray Street New York, New York 10007</b>	<b>Tuesday April 27, 1999 5:00 P.M.</b>

**May 4, 1999      Water Board Meeting to Adopt Rates for  
Fiscal Year 2000  
The College of Insurance  
Room 118  
101 Murray Street  
New York, New York 10007**

**May 1999      Flat-rate Bills are Mailed Over the Several Weeks Following  
Rate Adoption**

**July 1, 1999      Fiscal Year 2000 Rates Become Effective**

# PROGRAM SUMMARY

## Fiscal Year 2000 Rate Proposals

- **Increase of 4.0% in-City water rates for all customers, flat-rate, metered and the residential per dwelling unit bill caps**
- **Maintain in-city wastewater rates at 159% of water charges**
- **Increase wholesale water rate to upstate municipalities and water districts to \$385.13 per million gallons**

## Fiscal Year 2000 Billing Policy Proposals

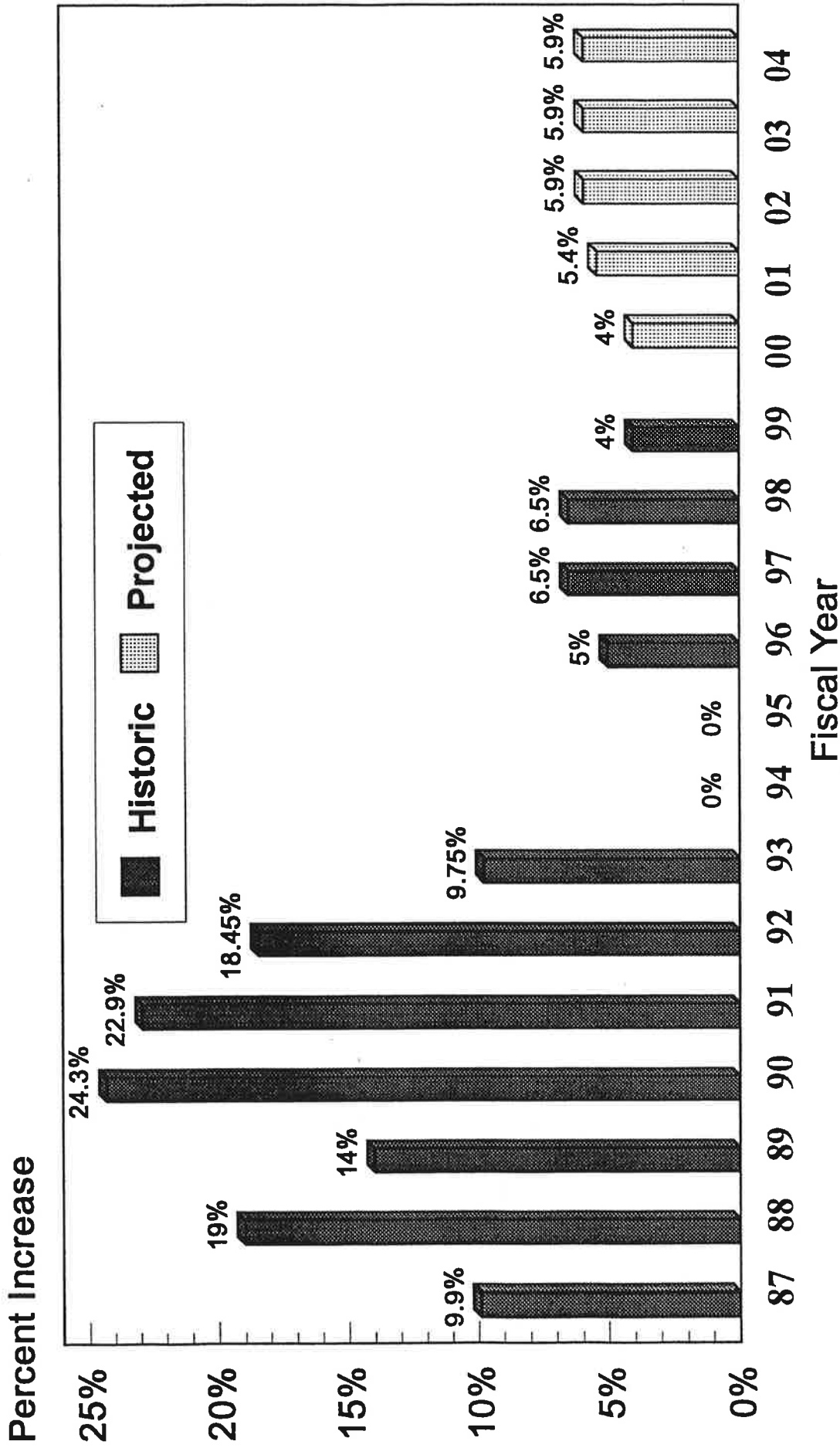
- **Extend the Metering Transition Program to authorize the continuation of unmetered billing for residential premises (with large service lines) to June 30, 2000.**
- **All Water Board Discretionary Billing Programs: uniform requirement of applying within 18 months of the bill; premises in violation of Certificate of Occupancy not eligible for discretionary programs; refunds related to credits arising from Water Board billing programs not to be made where credit will be used within one-year.**
- **Extend Waiver of Interest Period: from current 6 months up to a maximum of 18 months for bills meeting certain conditions and covering an extended period of time.**
- **Backbilling Limitation: modify definition of residential premises; expand 2- year coverage to include exempt properties; limit definition of upward adjustments to specifically exclude erroneously canceled charges.**
- **Transition Programs: extend authorization for accounts to remain on flat-rate billing to June 30, 2000 and expand eligibility to premises with 6 or more residential units and eliminate need for variances.**
- **Initial Meter Bill Cap: delete requirement that flat-rate conversion credit be considered in the determination of initial meter bill eligibility.**



## **Fiscal Year 2000 Billing Policy Proposals (Continued)**

- **Leak Forgiveness:** reduce benefit to half of the bill instead of the current 150% of prior ADC; change eligibility to once every 5 years instead of the current once every 18 months, except in the case of ownership changes.
- **Complaint Resolution:** require that customer must register a complaint within 18 months of the bill; reinstate explicit three tiered complaint resolution by inserting an initial review at borough office or customer service call center prior to initial appeal to BCCS Deputy Commissioner.
- **Innocent Owner Provision:** incorporate DEP policy into Board rules; provide relief to innocent owners where unbilled charges are discovered after property transfer, but charges were not posted to account at time of title search and a final reading was requested.
- **Rate Schedule:** conform to statutory language to make explicit the Board's authority to bill Con Edison for steam condensate discharges to Wastewater system.

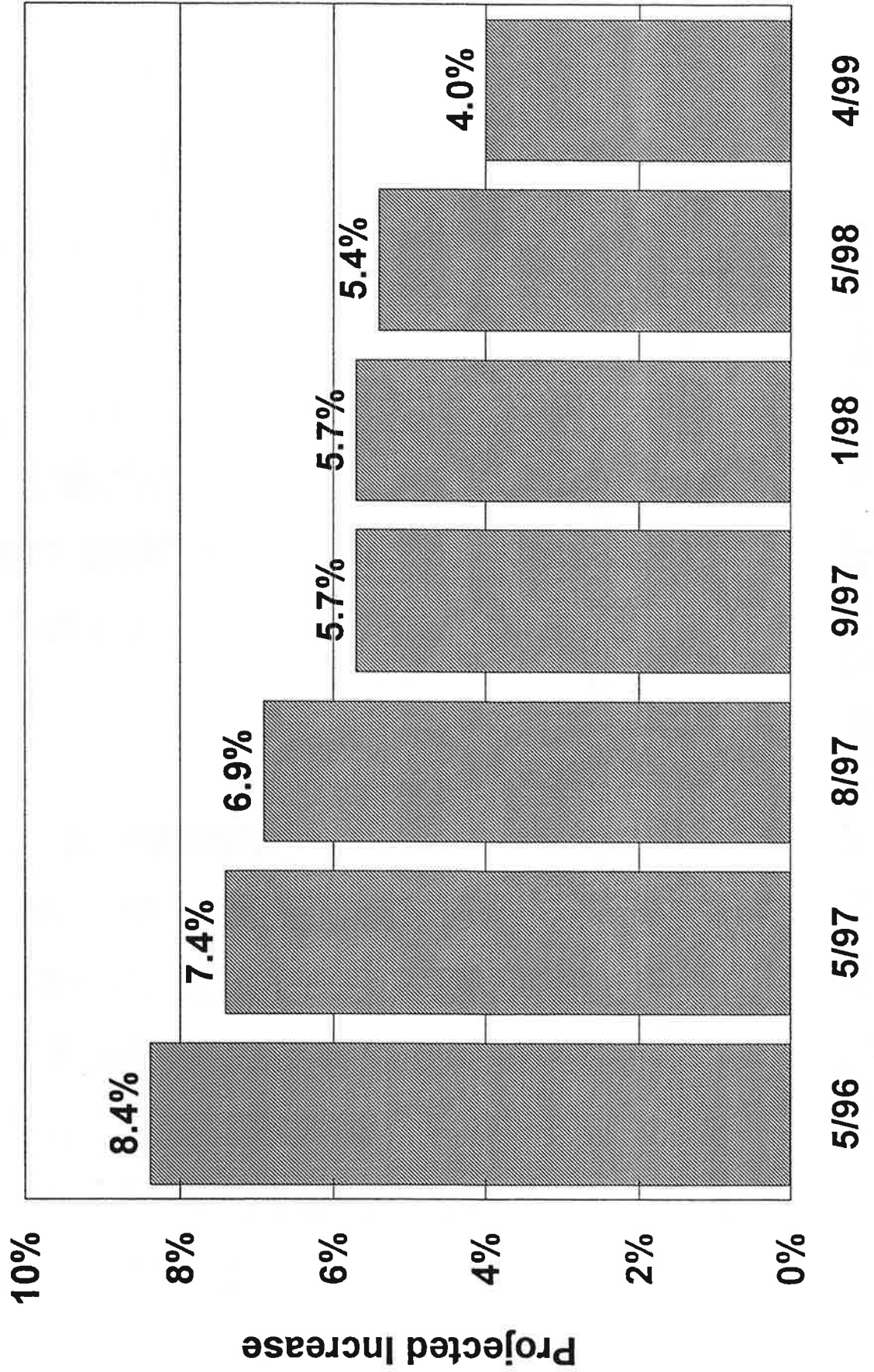
# NYC Water and Wastewater Rate History



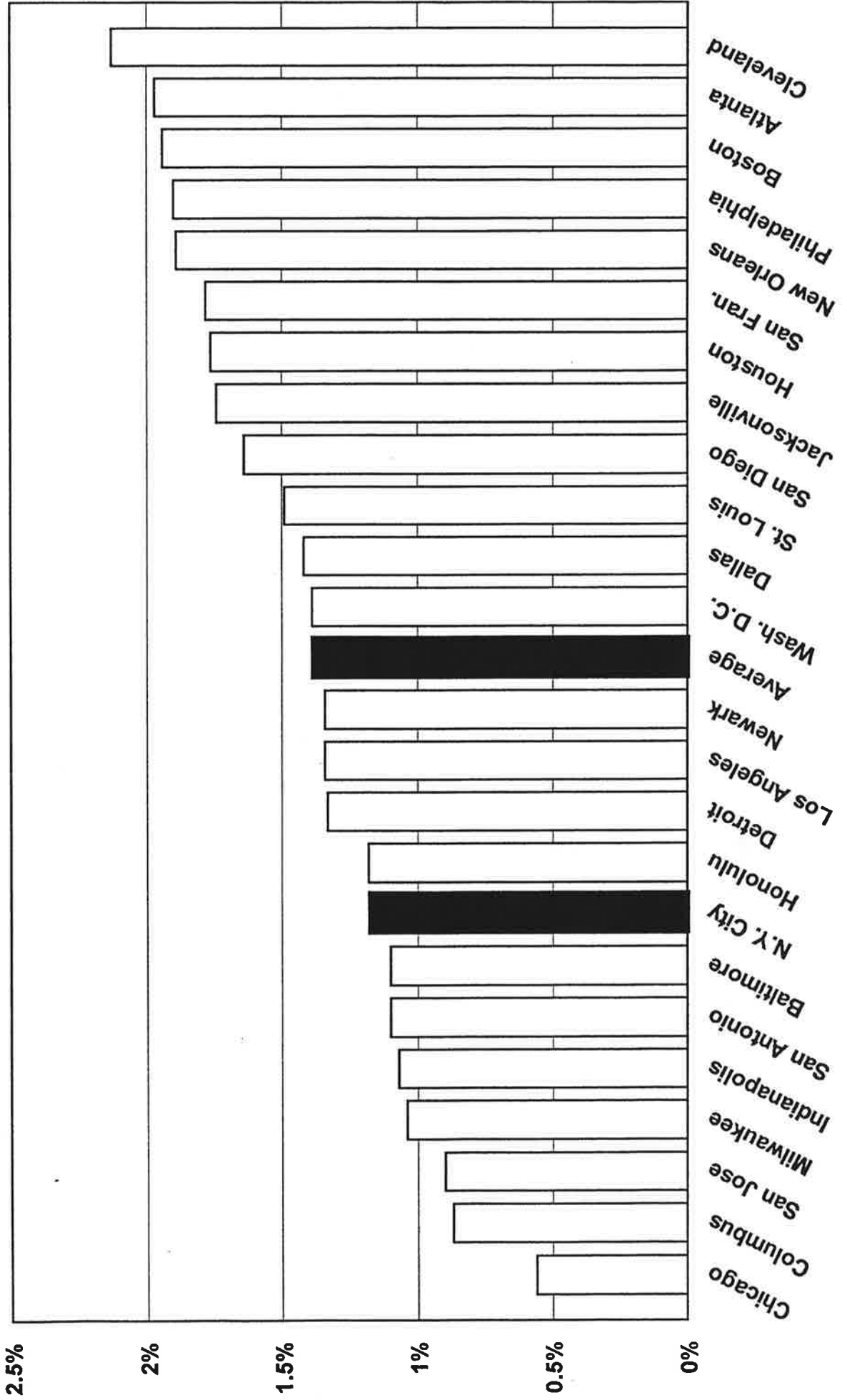
- No increases in FY94/95 resulted from overestimating cost of land disposal of sludge and the resulting accumulation of surpluses
- Average annual increase FY87 through FY99 was 10.8%

# Improved Rate Outlook

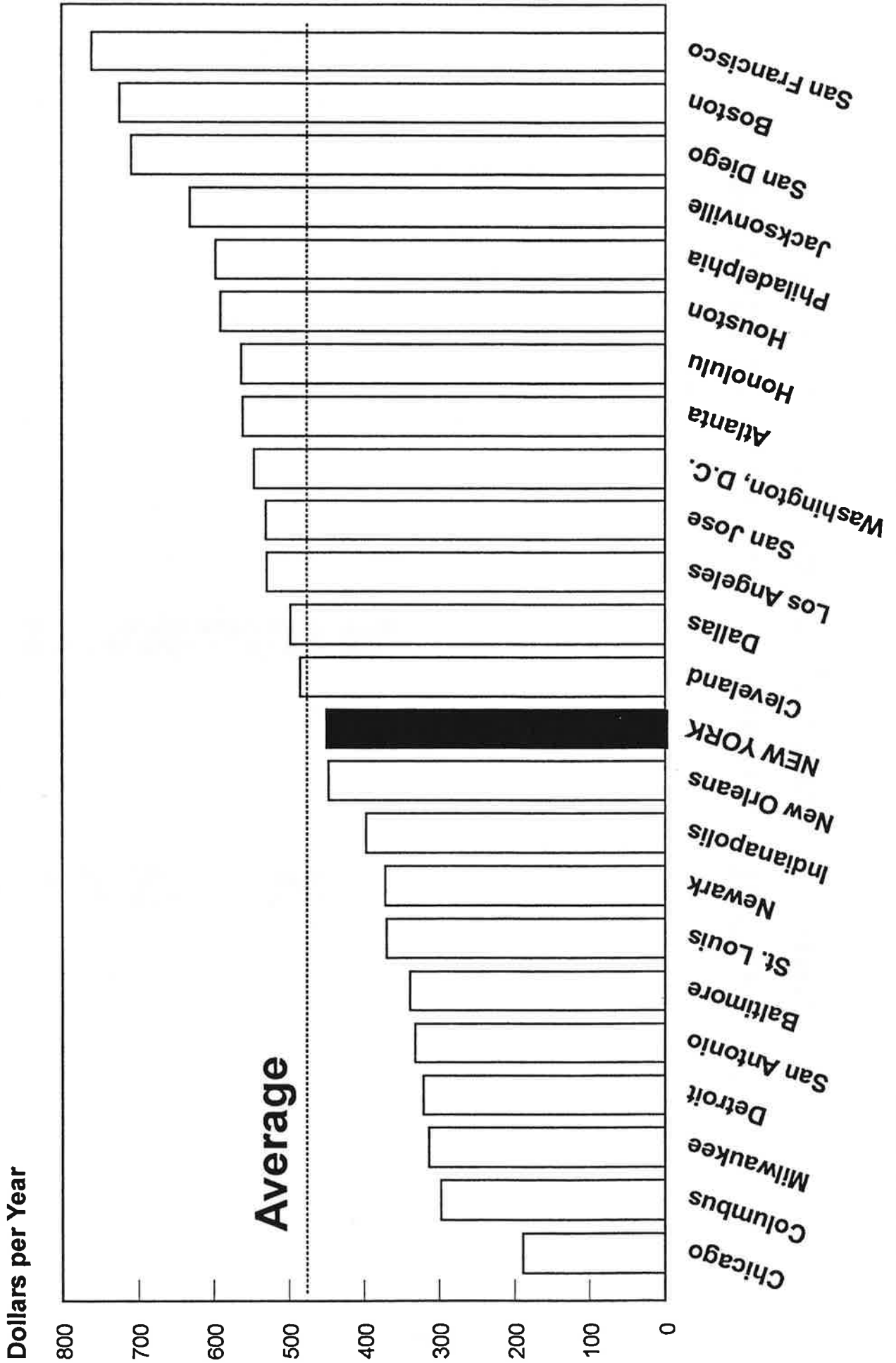
Projected FY 2000 Increase



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



# Annual Water & Wastewater Charges Residential - Fiscal Year 2000

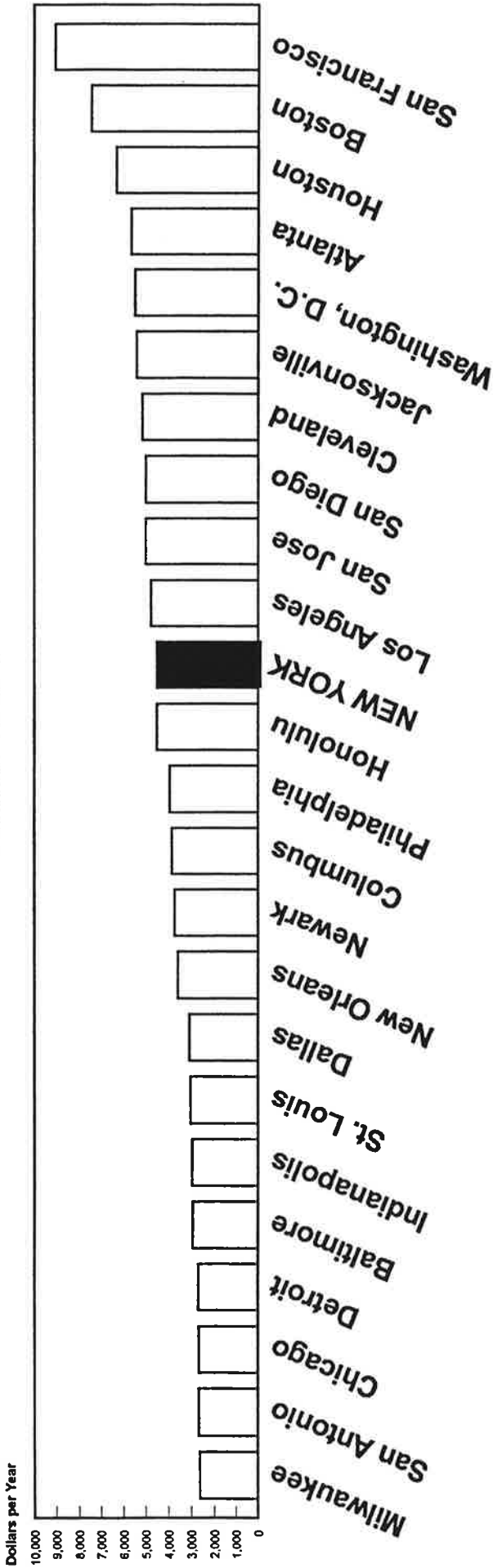


Annual Charges for All Cities Based on  
Comparison of 2000 Data for Year

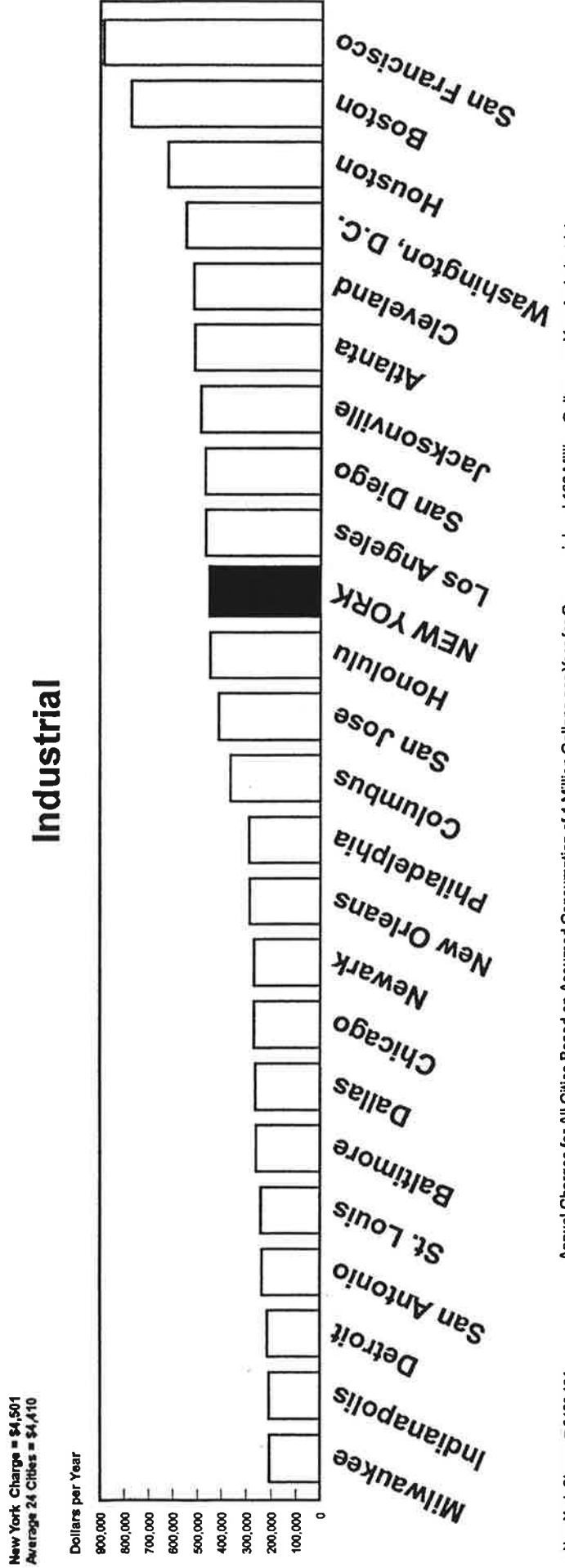
New York Charges = \$450  
Average of 24 Cities = \$450

# Annual Water & Wastewater Charges - Fiscal 2000

## Commercial



## Industrial



**Typical NYC Water/Wastewater Charges**  
 (Combined water/wastewater charge)

**Average Annual Customer Charges**

FY99 Average	FY00 Average	Change
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**Flat-Rate Customers**

Single-Family Residential	\$488	\$508	\$20
Two-Family Residential	\$757	\$787	\$30
Walk-Up Apartments	\$2,319	\$2,412	\$93
Charge/Dwelling Unit	\$348	\$362	\$14
Elevator Apartments	\$26,095	\$27,139	\$1,044
Charge/Dwelling Unit	\$395	\$411	\$16

**Metered Customers**

**Rate per 100 Cubic Feet**

Residential & Commercial			
Water	\$1.25	\$1.30	\$0.05
Wastewater	\$1.99	\$2.07	\$0.08
Combined	\$3.24	\$3.37	\$0.13

**Typical Metered Charges**

**Average Annual Charges**

	FY99	FY00	Change
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Single Family (100,000 gallons)	\$433	\$450	\$17
Per Multifamily Unit (85,000 gallons)	\$368	\$383	\$15

# Water and Wastewater System Capital Program

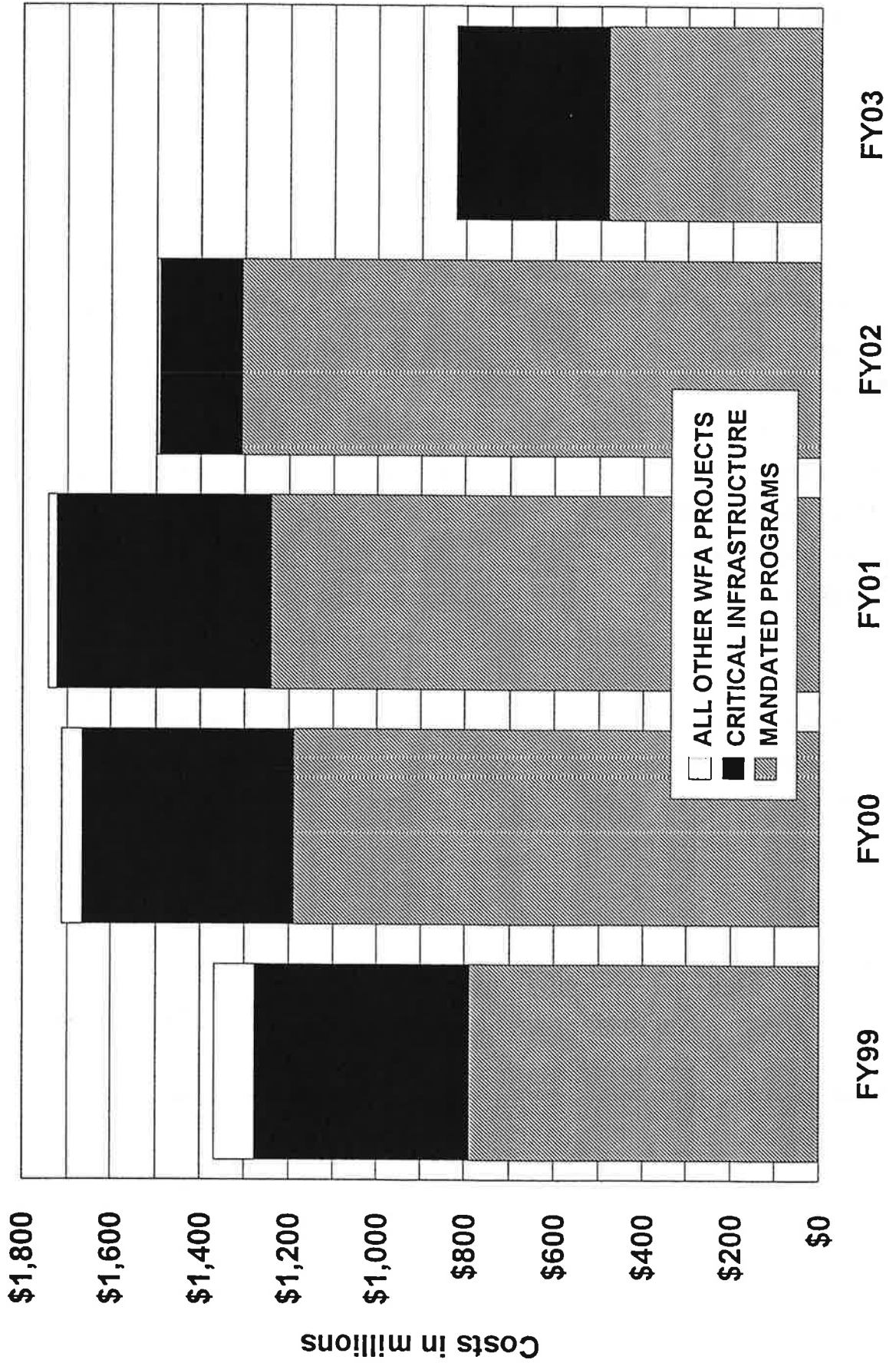
(Per January 1999 Capital Plan)

Program \$(000)'S

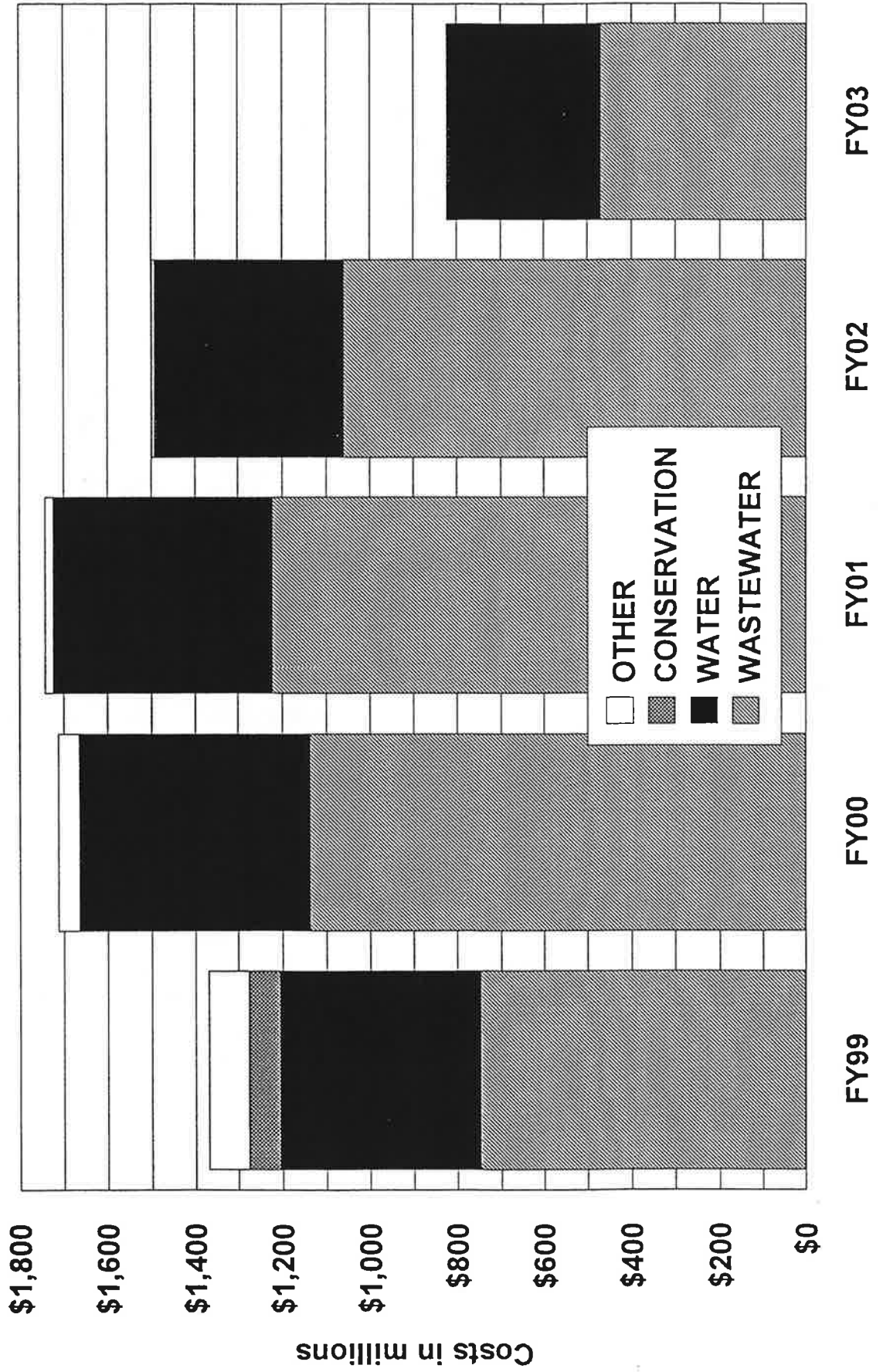
	FY99	FY00	FY01	FY02	FY03	5-Year Total
<b>Combined Sewer Overflow</b>	61,252	54,830	275,444	141,000	116,050	648,576
<b>Watershed Investments</b>	156,765	179,036	142,975	66,987	40,400	586,163
<b>Hillview Reservoir</b>	28,496	69,000	18,000	200,000	0	315,496
<b>Newtown Creek</b>	231,184	442,000	324,000	384,000	0	1,381,184
<b>Croton Filtration</b>	3,213	0	6,000	99,000	66,000	174,213
<b>Meter Installations</b>	70,509	4,223	4,223	4,223	4,223	87,401
<b>Water Pollution Control Plants</b>	202,472	430,050	459,455	401,500	244,630	1,738,107
<b>Utility Relocation Costs</b>	35,653	10,000	10,000	10,000	10,000	75,653
<b>MANDATED PROGRAMS</b>	<b>789,544</b>	<b>1,189,139</b>	<b>1,240,097</b>	<b>1,306,710</b>	<b>481,303</b>	<b>5,006,793</b>
	57.7%	69.4%	71.2%	87.2%	58.5%	70.1%
<b>Sewer Construction</b>	253,401	210,102	164,234	131,878	109,051	868,666
<b>In-City WaterMain Construction</b>	168,482	132,597	104,403	42,079	46,604	494,165
<b>Third Water Tunnel</b>	64,241	132,187	214,060	10,000	182,500	602,988
<b>CRITICAL INFRASTRUCTURE</b>	<b>486,124</b>	<b>474,886</b>	<b>482,697</b>	<b>183,957</b>	<b>338,155</b>	<b>1,965,819</b>
	35.5%	27.7%	27.7%	12.3%	41.1%	27.5%
<b>ALL OTHER WFA PROJECTS</b>	<b>92,724</b>	<b>48,694</b>	<b>19,213</b>	<b>7,950</b>	<b>3,664</b>	<b>172,245</b>
	6.8%	2.8%	1.1%	0.5%	0.4%	2.4%
<b>TOTAL CAPITAL PROGRAM</b>	<b>1,368,392</b>	<b>1,712,719</b>	<b>1,742,007</b>	<b>1,498,617</b>	<b>823,122</b>	<b>7,144,857</b>
	100%	100%	100%	100%	100%	100%



# Capital Program Components Mandated vs. Critical Infrastructure

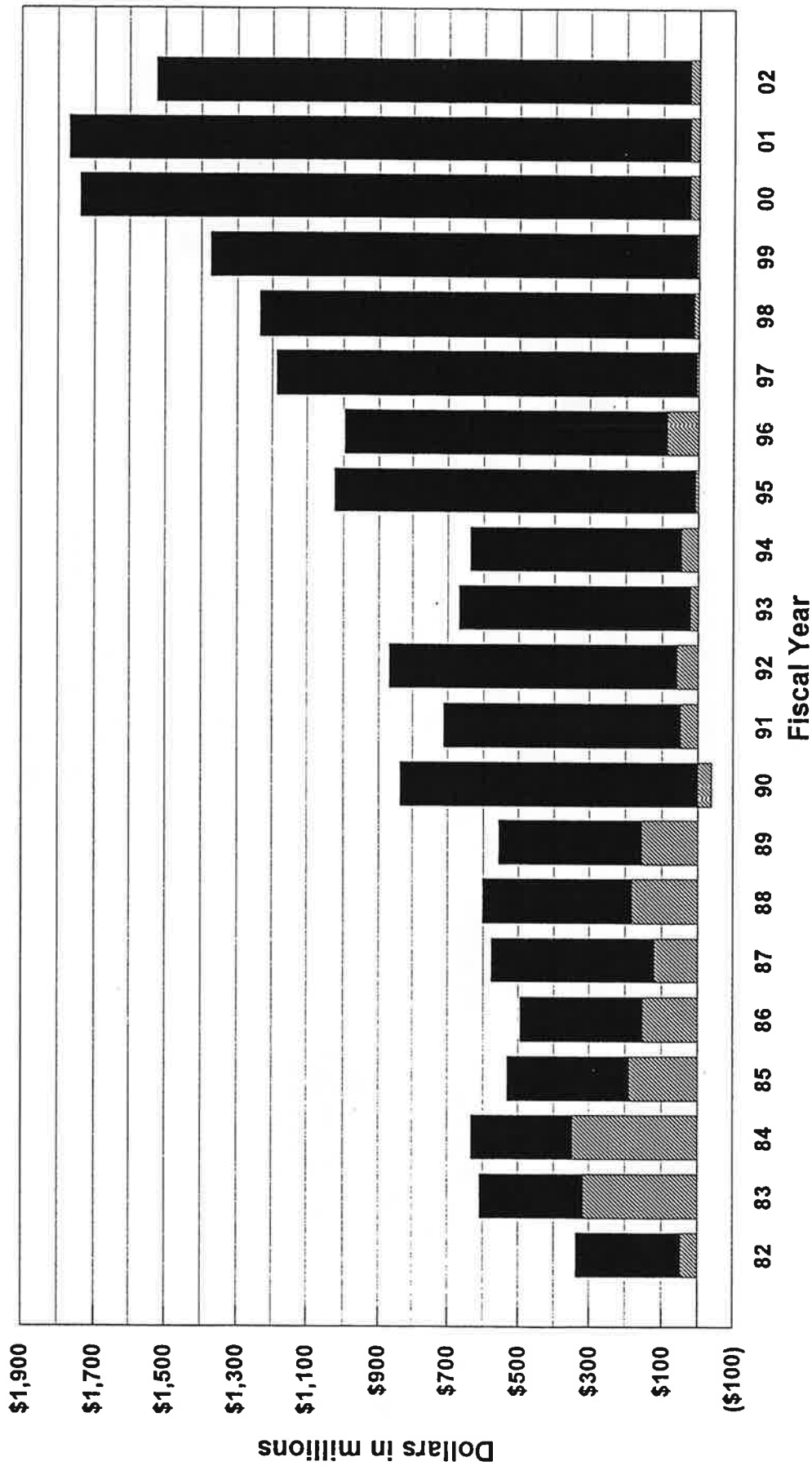


# Capital Program Components Water vs. Wastewater



# 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)

	FY99	FY00	Change
<b><u>WFA Debt Service</u></b>			
<b>First Resolution Bonds:</b>			
Outstanding Bonds	\$428,211	\$428,501	\$290
Anticipated Future Bonds	0	25,077	\$25,077
<b>Total First Resolution DS</b>	<b>428,211</b>	<b>453,578</b>	<b>\$25,367</b>
<b>Subordinate Obligations:</b>			
Short-Term Obligations	22,200	22,200	0
Outstanding Bonds	146,254	163,720	17,466
Anticipated Future Bonds	0	16,827	16,827
Less: EFC Subsidy and capitalized interest	(42,398)	(44,665)	(2,267)
<b>Actual Subordinate DS</b>	<b>126,056</b>	<b>158,082</b>	<b>32,026</b>
Less: Carryforward and Other Revenues	(65,022)	(91,770)	(26,748)
<b>Net Subordinate DS</b>	<b>61,034</b>	<b>66,312</b>	<b>5,278</b>
<b>Total Debt Service</b>	<b>489,245</b>	<b>519,890</b>	<b>30,645</b>
<b><u>Operating Expenses</u></b>			
Authority/Board Operations	11,900	12,495	595
Water System	273,047	279,668	6,621
Wastewater System	378,800	379,992	1,192
Indirect Expenses	15,319	15,473	154
Judgments/Claims	12,000	8,000	(4,000)
<b>Total Operating Expenses</b>	<b>691,066</b>	<b>695,628</b>	<b>4,562</b>
Less: Trust Account Withdrawals	0	0	0
<b>Net Operating Expenses</b>	<b>691,066</b>	<b>695,628</b>	<b>4,562</b>
Rental Payment	147,866	151,960	4,094
Cash Financed Capital Construction	50,000	20,000	(30,000)
Credit For Prior Year Expenses	(13,800)	0	13,800
<b>Total Operating Expenses</b>	<b>\$875,132</b>	<b>\$867,588</b>	<b>(\$7,544)</b>
<b>Total Expenditures</b>	<b>\$1,364,377</b>	<b>\$1,387,478</b>	<b>\$23,101</b>
	555		
<b><u>Revenues</u></b>			
<b>Operating Revenues:</b>			
User Payments	1,301,777	1,355,281	53,504
Upstate Revenues	14,000	14,910	910
Miscellaneous Revenue (Permits, etc.)	4,500	4,725	225
Miscellaneous Interest Income	25,000	25,000	0
Interest Income on System Funds	102,870	65,234	(37,636)
EFC Subsidy on Outstanding Bonds	5,404	4,945	(459)
<b>Gross System Revenues</b>	<b>\$1,453,551</b>	<b>\$1,470,095</b>	<b>\$16,544</b>
<b>Surplus Carryforward</b>	<b>\$89,174</b>	<b>\$82,617</b>	<b>(\$6,557)</b>

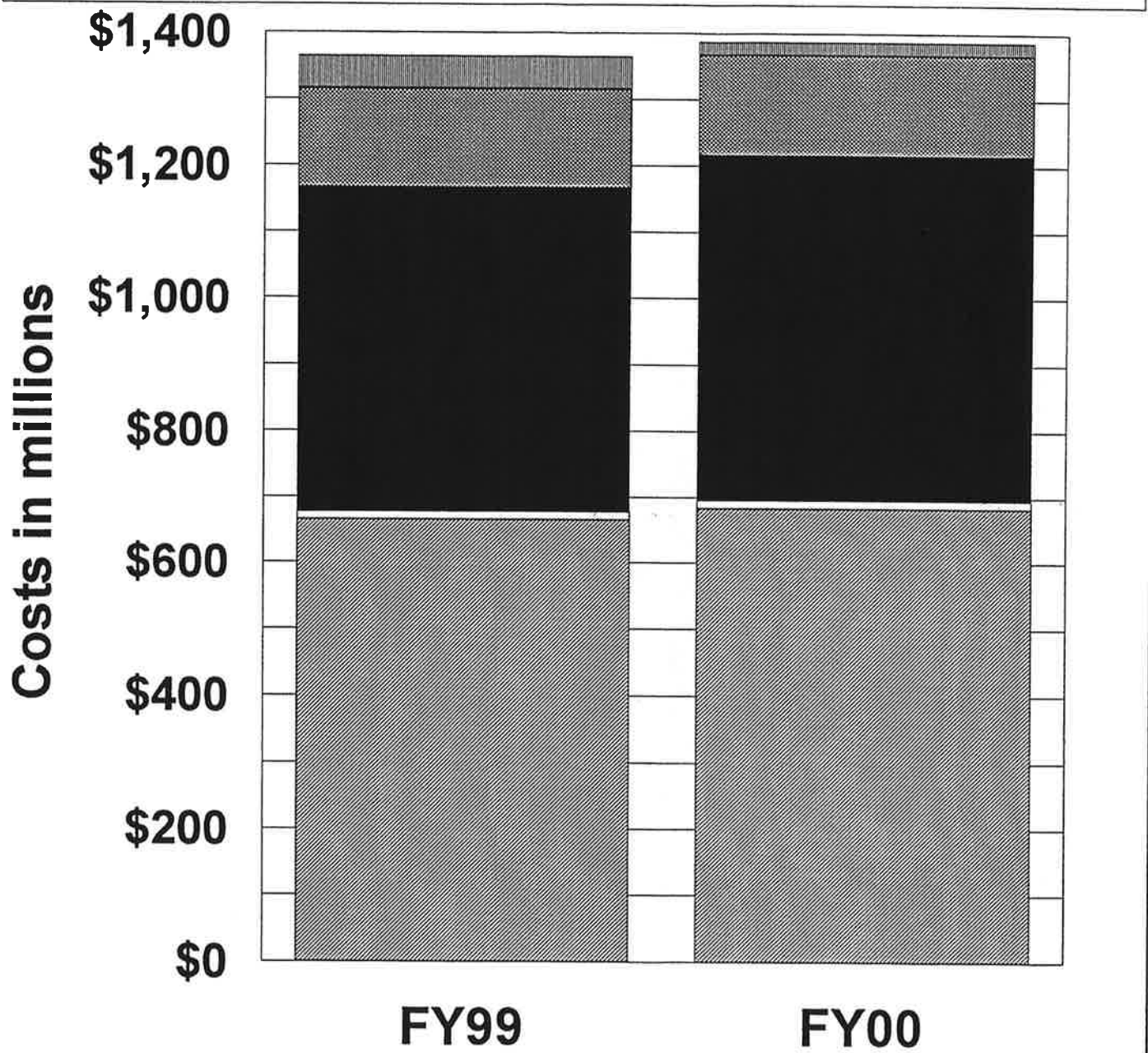
## Anticipated Water and Wastewater System Costs

(in 000's)

	FY2000 Total Costs	Water Costs	Wastewater Costs
<b><u>WFA Debt Service</u></b>			
<b>First Resolution Bonds:</b>			
Outstanding Bonds	428,501	214,250	214,251
Anticipated Future Bonds	25,077	8,647	16,430
<b>Total First Resolution DS</b>	<b>453,578</b>	<b>222,897</b>	<b>230,681</b>
<b>Subordinate Obligations:</b>			
Short-Term Obligations	22,200	7,655	14,545
Outstanding Bonds	163,720	11,490	152,230
Anticipated Future Bonds	16,827	3,365	13,462
Less: EFC Subsidy and capitalized interest	(44,665)	(3,675)	(40,990)
<b>Actual Subordinate DS</b>	<b>158,082</b>	<b>18,835</b>	<b>139,247</b>
Less: Carryforward and Other Revenues	(91,770)	(10,625)	(81,145)
<b>Net Subordinate DS</b>	<b>66,312</b>	<b>8,210</b>	<b>58,102</b>
<b>Total Debt Service</b>	<b>\$519,890</b>	<b>\$231,107</b>	<b>\$288,783</b>
<b><u>Operating Expenses</u></b>			
Authority/Board Operations	12,495	5,297	7,198
Water System	279,668	279,668	
Wastewater System	379,992		379,992
Indirect Expenses	15,473	6,560	8,913
Judgments/Claims	8,000	4,000	4,000
<b>Total Operating Expenses</b>	<b>695,628</b>	<b>295,525</b>	<b>400,103</b>
Rental Payment	151,960	75,980	75,980
Cash Financed Capital Construction	20,000	6,896	13,104
<b>Total Operating Expenses</b>	<b>\$867,588</b>	<b>\$378,401</b>	<b>\$489,187</b>
<b>Total Expenditures</b>	<b><u>\$1,387,478</u></b>	<b><u>\$609,508</u></b>	<b><u>\$777,970</u></b>

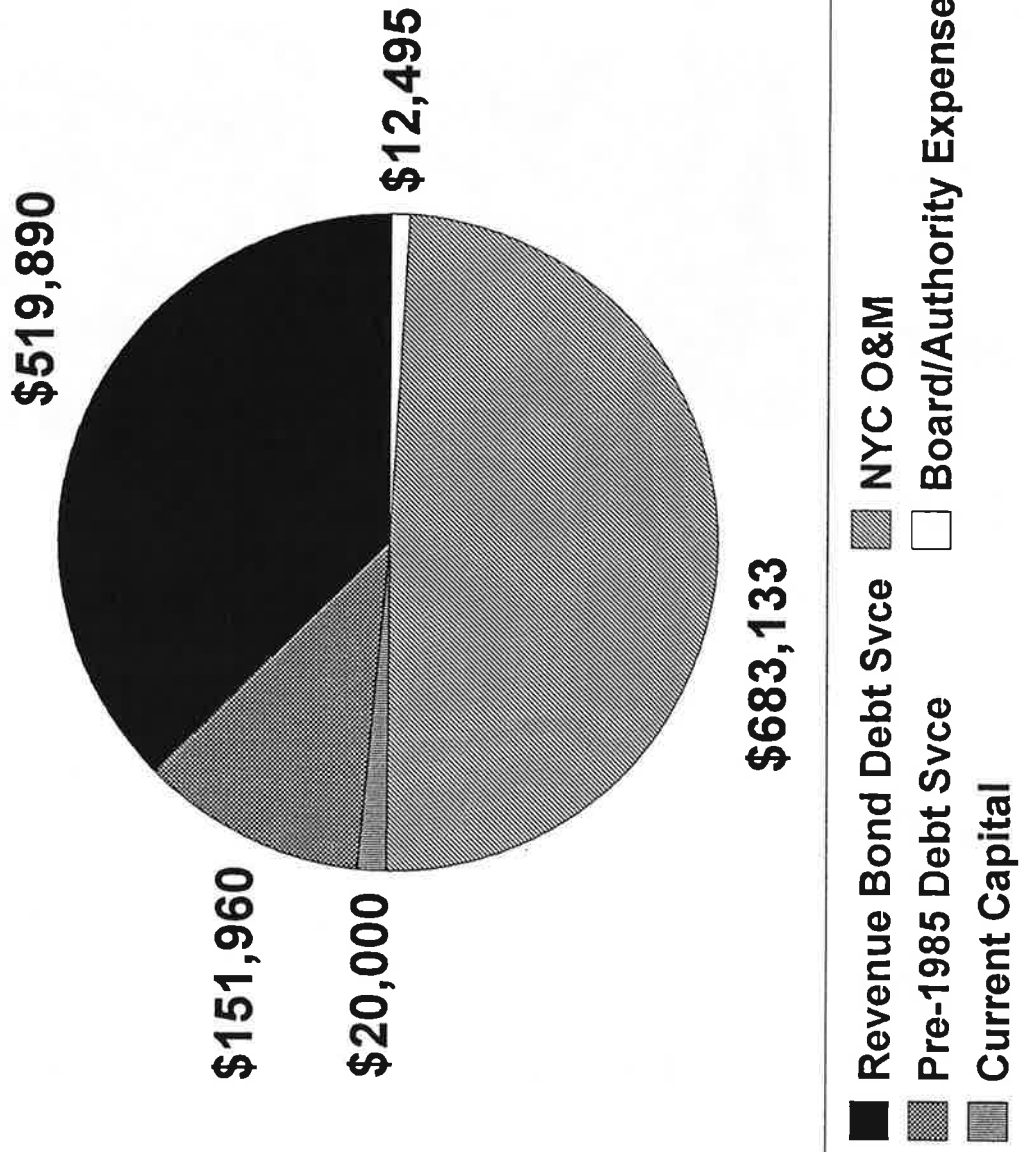
# Water/Wastewater System Cost Components

FY99-FY00



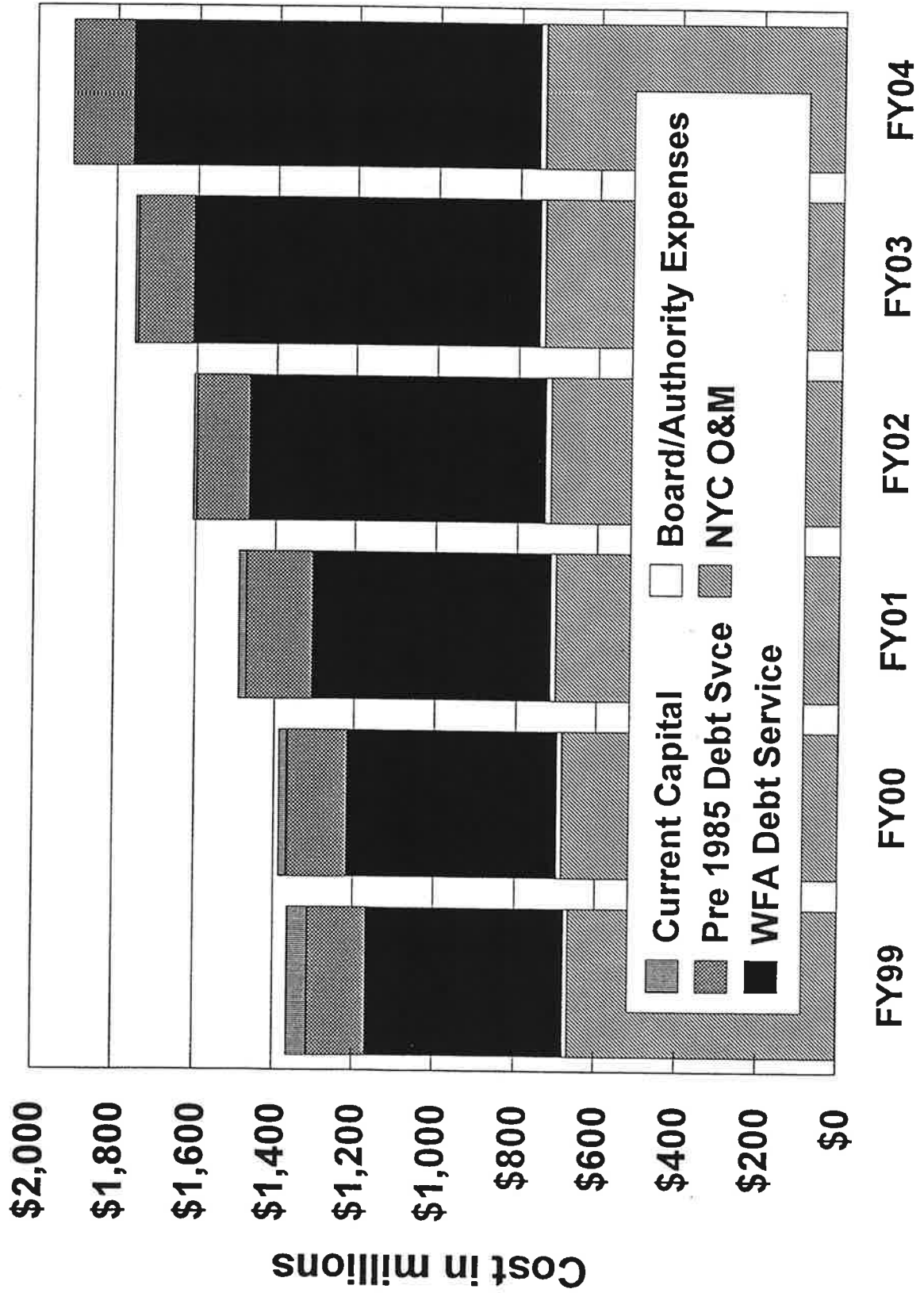
- Current Capital
- Pre-1985 Debt Svce
- Revenue Bond Debt Svce
- Board/Authority Expenses
- NYC O&M

# Water Board Expenses - FY 2000



in '000's

# Projected System Costs FY1999-FY2004





## 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.**
- **While the ratio of wastewater system costs to water system costs has declined somewhat in recent years due to ongoing water system investments to protect the quality of the City's water supply, scheduled investments in the capital improvement program for rehabilitation and construction of wastewater treatment facilities will cause the ratio of wastewater system costs to increase in the future. Accordingly, the long term ratio of wastewater system costs to water system costs will approximate the current ration of wastewater charges to water charges.**
- **The Billing Policy Proposals being considered by the Board are not anticipated to significantly affect Board revenues.**

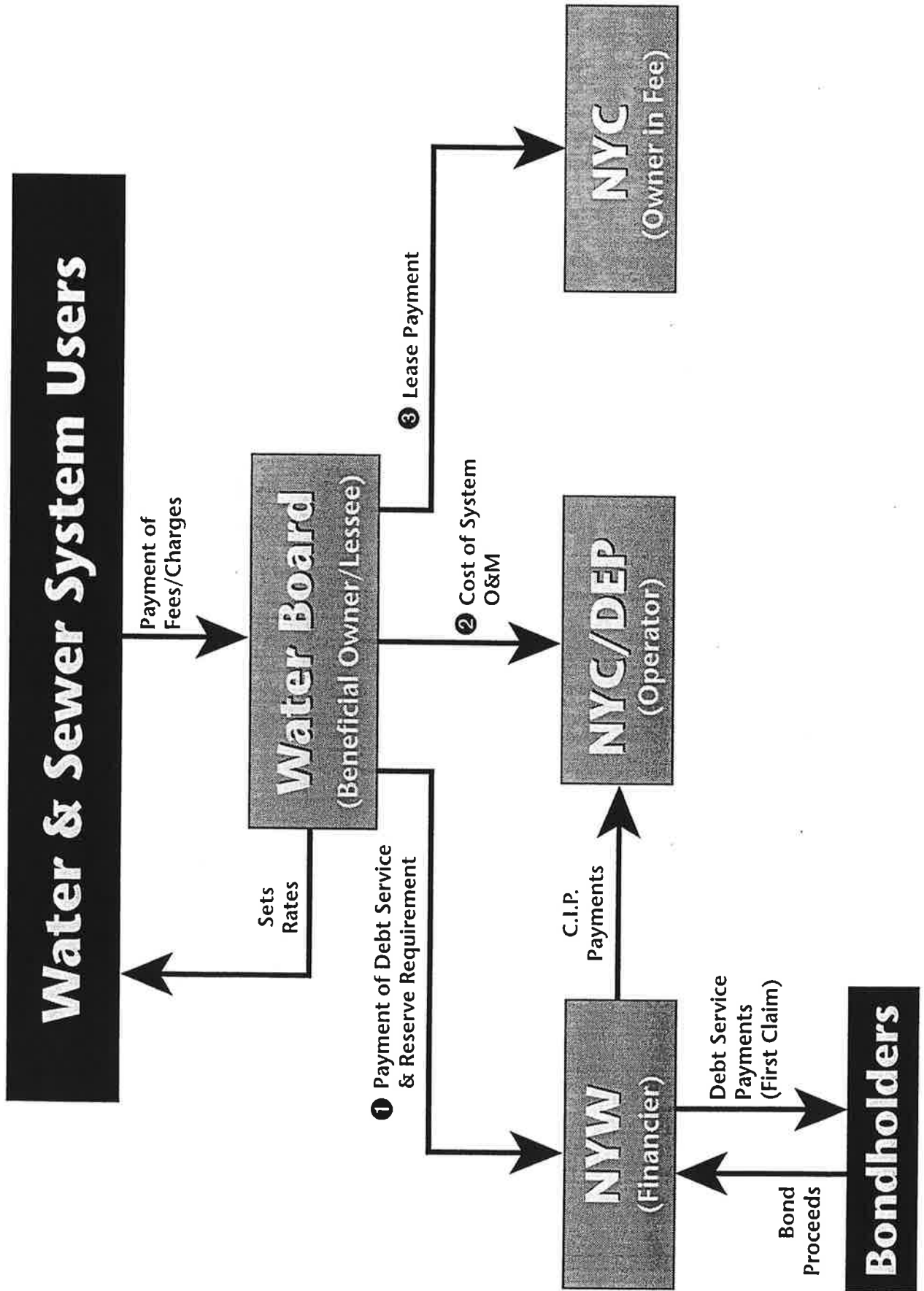
## Process For Water Board Rate Adoption

- The Board must adopt rates which will satisfy the revenue requirements of the system
- The Water Finance Authority projects revenue bond debt service on bonds issued after 1986 to finance water and wastewater capital projects and certifies the FY 2000 amount to the Water Board
- The City Office of Management and Budget projects DEP's operating and maintenance expenses and certifies the FY 2000 amount to the Water Board based on the Mayor's Executive Budget
- The City projects debt service on general obligation bonds issued prior to 1986 to finance water and wastewater capital projects based on information received from the Office of the Comptroller and certifies the FY 2000 amount to the Water Board
- The System's consulting engineer must certify that expenses are reasonable and appropriate
- The Board must hold public hearings in each borough of New York City
- At its Annual Meeting in May, the Board adopts an annual budget based on the system expenses that have been identified to it, and adopts a rate which will produce sufficient revenues to meet those expenses

## **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**

# Operating Relationships



# 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 from its upstate surface water systems and an average of 33 million gallons per day from wells located in southeast Queens. The Water System provides an average of 1,432 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 6,181 miles of pipe, 88,633 mainline valves and 103,661 fire hydrants.

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.

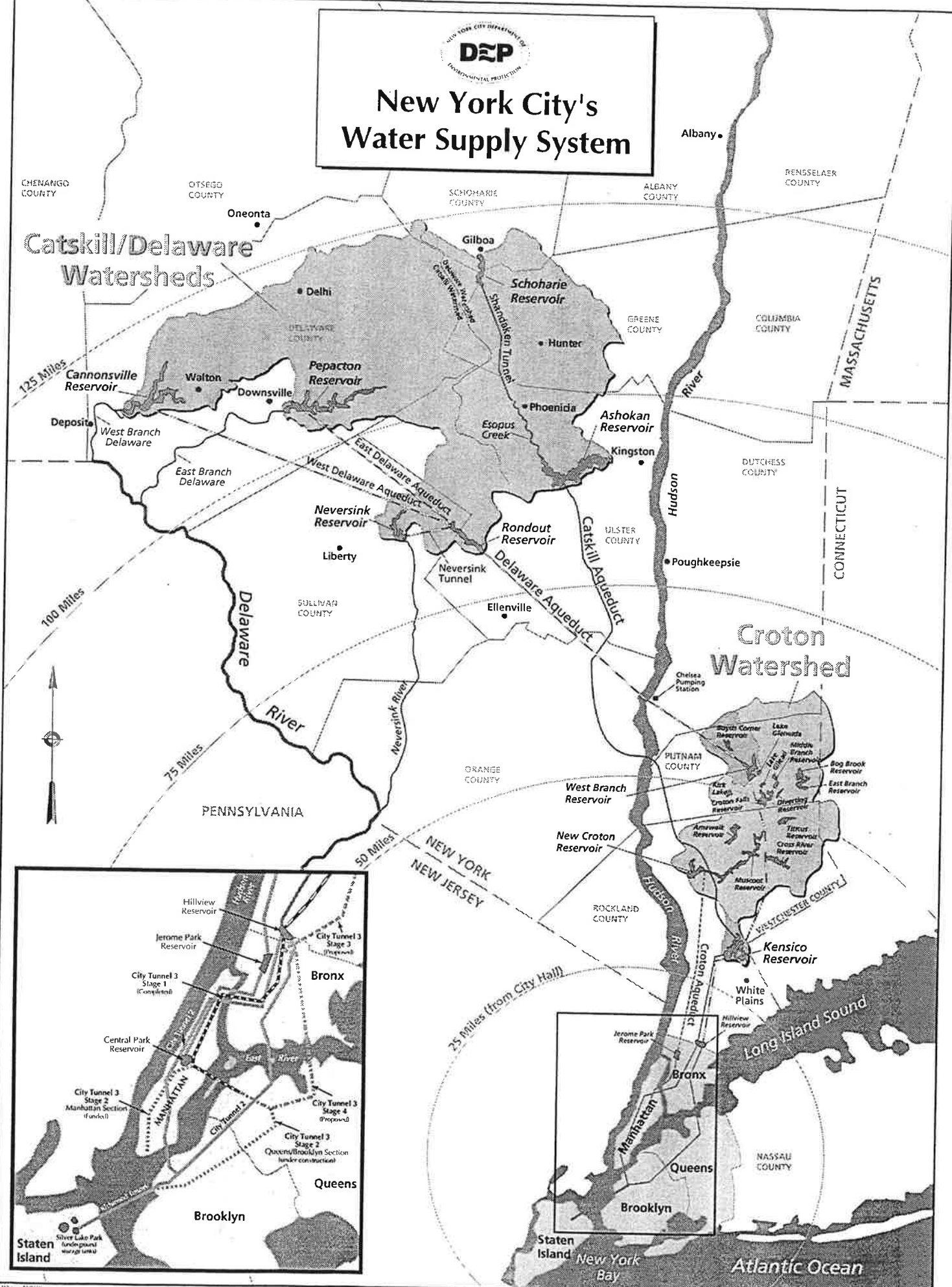
## The Wastewater System

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, 131, 243 catch basins and 5,000 seepage basins. The wastewater treatment facilities include 14 operating wastewater treatment plants, one storm-overflow retention plant, 89 pumping stations, nine wastewater laboratories, three inner-harbor vessels and eight sludge dewatering facilities. The wastewater treatment facilities treat an approximately 1,350 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.



# New York City's Water Supply System



## Catskill/Delaware Watersheds

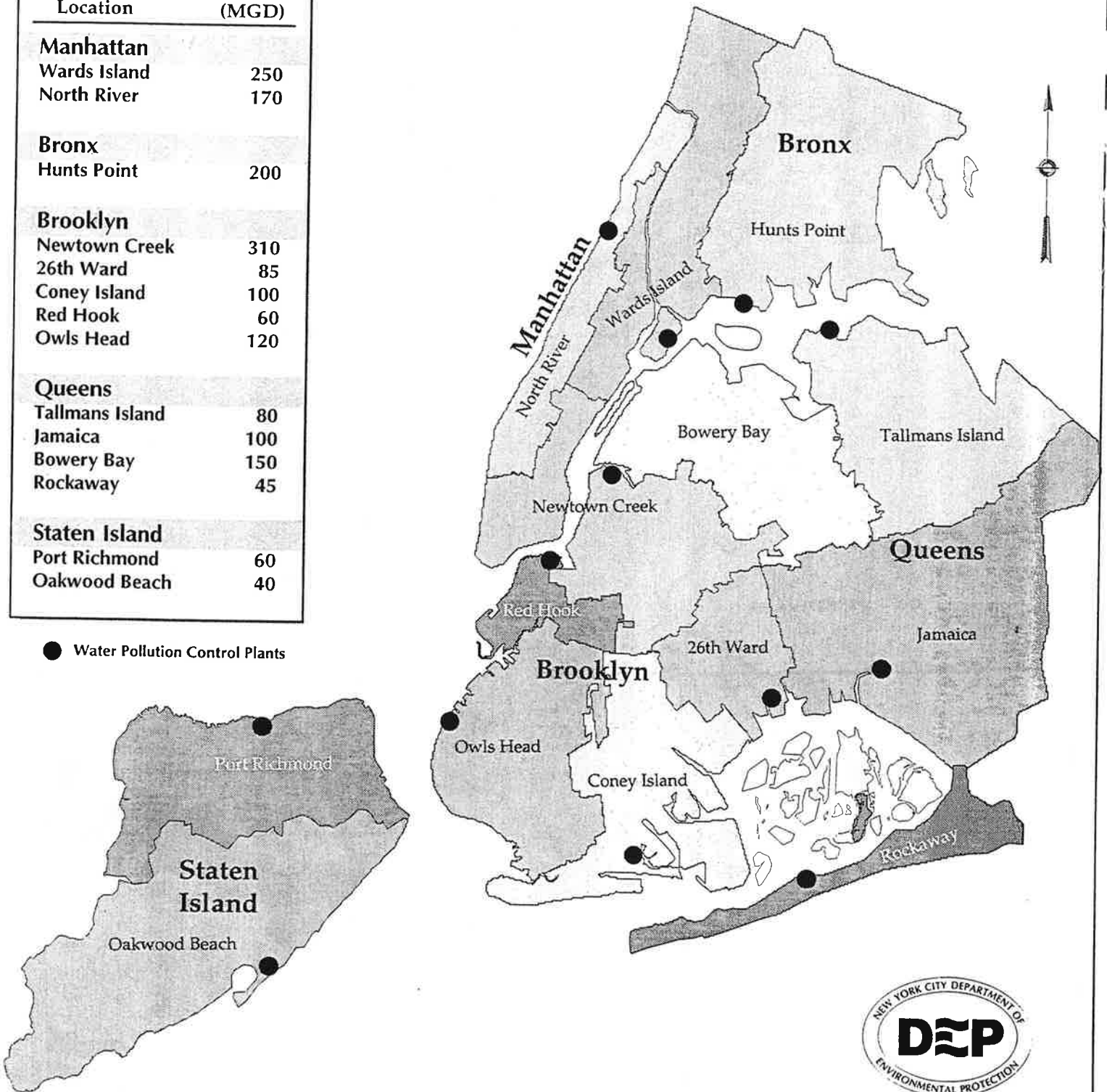
## Croton Watershed



# New York City Drainage Areas and Wastewater Treatment Plants

Plant Location	Capacity (MGD)
<b>Manhattan</b>	
Wards Island	250
North River	170
<b>Bronx</b>	
Hunts Point	200
<b>Brooklyn</b>	
Newtown Creek	310
26th Ward	85
Coney Island	100
Red Hook	60
Owls Head	120
<b>Queens</b>	
Tallmans Island	80
Jamaica	100
Bowery Bay	150
Rockaway	45
<b>Staten Island</b>	
Port Richmond	60
Oakwood Beach	40

● Water Pollution Control Plants



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