



CONSULTANTS TO MANAGEMENT, INC.

STUDY OF THE TOWN OF  
HINGHAM WATER SERVICE

FINANCIAL ANALYSIS  
1/1/85 - 12/31/89

APPENDIX

APRIL 1985

CONSULTANTS TO MANAGEMENT, INC.  
*Financial Utility Consultants*

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Water Supply Committee  
Town of Hingham  
7 East Street  
Hingham, Mass. 02043

To the Members of the Committee

This appendix was prepared as an adjunct to the main financial report of the study of the Hingham Water System through the year 2025 because of the technical nature of the data and the number of pages.

The assumptions that we developed to prepare the study are an integral part of the exhibits. Each set of exhibits are preceded by a narrative discription of our methods and procedures to prepare the data.

This appendix should be used in conjunction with a review of the main report.

Very truly yours,

CONSULTANTS TO MANAGEMENT, INC.

Wesley T. Gardner Jr., CPA  
President

WTG/dfm

## INTERVIEWS

This study required us to interview professionals from a number of organizations. We held discussions and obtained information from the following organizations.

<u>Contact</u>	<u>Organization</u>
David Kanke	. Hingham Water Company
James Salser	. Hingham Water Company
Craig Dore	. Farmers Home Administration
David Terry	. Massachusetts Department
Richard Giorso	Environmental Quality Engineering
Chet Furbush	. State Street Bank
Jerry Haley	. State Street Bank
Nancy O'Toole (Aid)	. State Representative
Alex Zaleski	. Metropolitan area planning council
Mrs. Mullis	. Commonwealth of Massachusetts
	Department of Revenue/Bureau
	of Accounts
Freta Ackerman	. Moody's Inc.
William Bowen	. Water Resource Commission
Mary Cottrell	. Commonwealth of Massachusetts
Harold Bertaluchi	Department of Public Utilities
Al Andrews	. Dennis Water District
Mrs. Cynthia Moore	. Town of Hingham
Joseph Chase	. Town of Hingham
Chester Janiak	. Burns and Levinson
George Ford	. Burns and Levinson
Paul Shehan III	. Independent Insurance agent
Richard Bayles	. Massachusetts Insurance Commission/
	Bureau of Rates
Tax Assessor's Office	. Hull, Norwell, Rockland and Cohasset
William Walsh	. Massachusetts Department of
	Employment Security
Peter Allen	. E. F. King Chemical Co.
Robert English	. E. F. King Chemical Co.
John McCullen	. Plymouth County Retirement System
Gary Hemingway	. Advanced Business Systems
	(billing service)
Joseph Kamineki	. Datanational Comp. (billing service)
Bud Cooney	. Whitman \$ Howard, Inc.
Mark Devine	. Whitman \$ Howard, Inc.

TOWN OF HINGHAM

5 Year Operating Expense Projections - 1985 through 1989

The objectives of the study and evaluation of the Hingham water system include the determination of costs to operate as three different forms of ownership. The three forms of ownership are:

1. Continue as a private water company.
2. Operate as a department of the Town of Hingham.
3. Operate as a water district.

A fourth alternative was to tie in with the MDC, however, the Hingham Water Supply Committee decided not to pursue that alternative.

The financial analysis and proforma projections were based on the five year period January 1, 1985 through December 31, 1989 for the three alternative forms of ownership considering a new treatment plant and with no new treatment plant. The two main areas of expenditures are the operating and maintenance expenses and the capital improvement costs. The operating and maintenance costs are based on the last annual report available that contain actual operations of the HWC for the year ended December 31, 1983 adjusted for proforma estimates and changes that would result during the five year period because of the different ownerships. The capital improvement and treatment plant operating and maintenance costs are based on estimates completed by Whitman & Howard, Inc.. We completed the financing costs and associated expenses based on the timing of the capital improvements and need for funds to pay for the work completed during the five year period.

The appendix outlines in detail the assumptions and estimated expenditures by each of the three alternative ownerships by treatment plant and without a treatment plant and results in an average water rate for each class of customer by service size for the five year period. We also have presented the effect of the average of the rates for the five year period on the impact analysis.

The following sections present the detail of our analysis. A summary has been prepared and included in the body of the main report.

The exhibits are grouped by title as outlined in the Table of Contents. Within each group the exhibits are in the following order.

- Municipally owned - No treatment plant
- Privately owned - No treatment plant
- District owned - No treatment plant
- Municipally owned - Treatment plant
- Privately owned - Treatment plant
- District owned - Treatment plant

The committee requested that we process three additional options for financing and the opportunity for grants. We have included the schedules in separate sections as outlined in the Table of Contents.

APPENDIX

TABLE OF CONTENTS

PAGE NO.

Impact analysis	5
Revenue to be generated at average rates	6
Quarterly minimum customer service charge	7
Metered sales rate calculation	8
Customer account calculation for minimum quarterly charges	10
Fire service rate calculation	11
Fire protection equivalent connection size	12
Equivalent meters	13
Capitalization	14
Tax calculation	15
Deferred tax calculation	16
Depreciation calculation	17
Rate base	18
Cost allocation - base extra capacity method - Hingham and Hull	19
Allocation of operation and maintenance expense -fire/nonfire	23
Allocation of utility plant	25
Allocation of proforma amounts between Hingham and Hull	26
Operating expense worksheet - 1989	27
"          "          "          - 1988	
"          "          "          - 1987	
"          "          "          - 1986	
"          "          "          - 1985	
Debt service expense	31
Annual salaries and wages	32
Payroll taxes	34
Workmens compensation	36

Employee welfare	37
Pension costs	39
Chemical costs	40
Property taxes	41
Power costs	44
Billing costs	45
Outside professional services	46
Municipal ownership with a \$6 million grant for the treatment plant and a purchase price of \$6.2 million.	47
Municipal ownership with a \$6 million grant for the treatment plant and a purchase price of \$3.9 million.	48
Private ownership with the town building the treatment plant and leasing it to the HWC.	49
Municipal Ownership with a \$4 Million Purchase Price and no Grant	50

### Impact Analysis

The impact analysis illustrates the effect of the average of the five years proforma revenue requirements for each meter size by form of ownership. The calculations are based on a minimum charge and 700 cubic feet of water each quarterly billing period.

It is important to note that each meter size receives the same 700 cubic feet of water per quarter not a multiple per meter size. This method meets the American Water Works Association standards for rate design.

HINGHAM, MASSACHUSETTS  
IMPACT ANALYSIS OF RATES

EXHIBIT III  
HINGHAM

2500 CUBIC FEET/QUARTER

	CURRENT	NO TREATMENT PLANT ** \$6.2 MILLION **		\$4 Million Purchase No Treat Plant		TREATMENT PLANT ** \$6.2 MILLION **		\$6.2 Million Purchase \$6 Million GRANT	\$4 Million Purchase No Grant But Plant	\$4 Million Purchase \$6 Million Grant	Leased Plant PRIVATE	
		COMPANY	MUNICIPAL	DISTRICT	MUNICIPAL	COMPANY	MUNICIPAL	DISTRICT	MUNICIPAL	MUNICIPAL	MUNICIPAL	
5/8" meter % to current rate	\$47.86	\$47.63 -0.5%	\$45.89 -4.1%	\$49.21 2.8%	\$41.72 -12.9%	\$78.39 63.8%	\$67.33 40.7%	\$76.20 59.2%	\$59.03 23.3%	\$62.67 30.9%	\$54.26 13.4%	\$70.02 46.3%
1" meter % to current rate	\$39.63	\$73.45 85.3%	\$70.70 78.4%	\$68.63 73.2%	\$64.29 62.2%	\$110.96 180.0%	\$99.82 151.9%	\$100.86 154.5%	\$87.46 120.7%	\$92.92 134.5%	\$80.45 103.0%	\$94.52 138.5%
1 1/2" meter % to current rate	\$74.07	\$116.48 57.3%	\$112.05 51.3%	\$100.98 36.3%	\$101.89 37.6%	\$165.24 123.1%	\$153.96 107.9%	\$141.97 91.7%	\$134.83 82.0%	\$143.33 93.5%	\$124.09 67.5%	\$135.36 82.7%
2" meter % to current rate	\$113.58	\$168.13 48.0%	\$161.67 42.3%	\$139.80 23.1%	\$147.02 29.4%	\$230.38 102.8%	\$218.94 92.8%	\$191.30 68.4%	\$191.69 68.8%	\$203.82 79.5%	\$176.46 55.4%	\$184.37 62.3%
HULL												
5/8" meter % to current rate	\$55.74	\$49.81 -11.6%	---	\$49.98 -10.3%		\$80.91 45.2%	---	\$75.35 35.2%				\$80.92 45.2%
1" meter % to current rate	\$46.59	\$79.16 69.9%	---	\$76.35 63.4%		\$117.52 152.2%	---	\$111.41 139.1%				\$108.88 133.7%
1 1/2" meter % to current rate	\$87.12	\$128.06 47.0%	---	\$120.30 38.1%		\$178.54 105.0%	---	\$171.51 96.9%				\$155.48 78.5%
2" meter % to current rate	\$136.86	\$186.74 36.5%	---	\$173.04 26.4%		\$251.76 84.0%	---	\$243.63 78.0%				\$211.39 54.5%

HINGHAM, MASSACHUSETTS  
5 YEAR AVERAGE REVENUE REQUIREMENTS

EXHIBIT IV

	\$6.2 Million Purchase			6.2 Million Purchase	\$4 Million Purchase	\$4 Million Purchase	LEASED PLT PRIVATE
	MUNICIPAL DEPARTMENT	PRIVATE COMPANY	WATER DISTRICT	MUNICIPAL	MUNICIPAL	MUNICIPAL	
NO TREATMENT PLANT							
Five year average revenue requirements	\$2,282,147	\$2,737,233	\$2,780,110	\$0	\$2,050,127	\$0	\$0
1989 revenue requirements	\$2,507,588	\$3,010,004	\$3,003,810	\$0	\$2,250,563	\$0	\$0
Percent increase	9.9%	10.0%	8.0%		9.8%		
TREATMENT PLANT							
Five year average revenue requirements	\$3,155,923	\$4,059,892	\$3,889,536	\$6 Million Grant \$2,735,336	No Grant \$2,923,903	\$6 Million Grant \$2,503,316	\$3,847,643
1989 revenue requirements	\$3,945,491	\$5,128,776	\$4,794,405	\$3,244,514	\$3,688,466	\$2,987,489	\$4,724,125
Percent increase	25.0%	26.3%	23.3%	18.6%	26.1%	19.3%	22.8%

HINGHAM, MASSACHUSETTS  
 COMPARATIVE METERED SALES STEP RATES  
 PER 100 CUBIC FEET  
 5 YEAR AVERAGE 1985 - 1989

EXHIBIT II

	HINGHAM		HULL	
	Step 1	Step 2	Step 1	Step 2
Company Current	\$1.8980	\$1.7100	\$2.1400	\$1.9140
NO TREATMENT PLANT				
Municipal (\$6.2 million pur price)	\$1.7080	\$0.8172	\$1.2852	\$0.0000
Private	\$1.7720	\$0.8459	\$1.7575	\$0.8448
District	\$2.1131	\$1.0094	\$1.8774	\$0.9078
Municipal (\$4 million pur price)	\$1.5532	\$0.7431	\$1.0697	\$0.0000
TREATMENT PLANT				
Municipal	\$2.6613	\$1.2696	\$2.0608	\$0.0000
Private	\$3.3053	\$1.5747	\$3.2890	\$1.5736
District	\$3.4845	\$1.6607	\$2.9779	\$1.4345
\$6 Million Grant Municipal	\$2.3286	\$1.1190	\$1.6700	\$0.0000
Leased Plant Private	\$3.1435	\$1.4836	\$3.6447	\$1.7223
\$6 Million Grant/\$4 Million Purchase Price Municipal	\$2.1451	\$1.0234	\$1.4544	\$0.0000
No Grant/\$4Million Purchase Price Municipal	\$2.4778	\$1.1821	\$1.8452	\$0.0000

HINGHAM, MASSACHUSETTS  
COMPARATIVE RATES SUMMARY  
5 YEAR AVERAGE 1985 - 1989

EXHIBIT Ia  
HINGHAM

METER SIZE	HWC CURRENT	NO TREATMENT PLANT *** \$6.2 Million ***			\$4 Million 'Purchase No Treat 'Plant MUNICIPAL	TREATMENT PLANT **** \$6.2 Million ***			\$6.2 Million 'Purchase \$6 Million GRANT MUNICIPAL	\$4 Million 'Purchase 'No Grant But Plant MUNICIPAL	\$4 Million 'Purchase 'Grant MUNICIPAL	Leased Plant PRIVATE
		COMPANY	MUNICIPAL	DISTRICT	COMPANY	MUNICIPAL	DISTRICT	MUNICIPAL	MUNICIPAL	MUNICIPAL		
5/8"/3/4	\$16.59	\$29.62	\$28.50	\$27.73	\$25.91	\$44.85	\$40.29	\$40.84	\$35.25	\$37.51	\$32.47	\$38.34
3/4"	\$25.56	\$38.23	\$36.77	\$34.20	\$33.44	\$55.71	\$51.12	\$49.06	\$44.73	\$47.59	\$41.20	\$46.51
1"	\$39.63	\$55.44	\$53.31	\$47.14	\$48.48	\$77.42	\$72.78	\$65.50	\$63.68	\$67.76	\$58.66	\$62.84
1 1/2"	\$74.07	\$98.47	\$94.66	\$79.49	\$86.08	\$131.70	\$126.92	\$106.61	\$111.05	\$118.17	\$102.30	\$103.68
2"	\$113.58	\$150.12	\$144.28	\$118.31	\$131.21	\$196.84	\$191.90	\$155.94	\$167.91	\$178.66	\$154.67	\$152.69
3"	\$195.81	\$287.83	\$276.61	\$221.83	\$251.54	\$370.55	\$365.16	\$287.49	\$319.51	\$339.98	\$294.33	\$283.38
4"	\$272.29	\$442.76	\$425.48	\$338.29	\$386.92	\$565.97	\$560.09	\$435.49	\$490.07	\$521.46	\$451.44	\$430.40
6"	\$489.45	\$873.11	\$839.01	\$661.78	\$762.96	\$1,108.81	\$1,101.55	\$846.59	\$963.84	\$1,025.98	\$887.87	\$838.80
8"	\$793.39	\$1,992.03	\$1,914.17	\$1,502.86	\$1,740.67	\$2,520.18	\$2,509.34	\$1,915.45	\$2,195.64	\$2,336.29	\$2,022.58	\$1,900.63
Public Hydrant	\$363.68	\$413.00	\$441.00	\$452.00	\$401.00	\$385.00	\$370.00	\$395.00	\$334.00	\$350.00	\$314.00	\$435.00
Private fire												
4" conn.	\$161.64	\$206.00	\$220.00	\$226.00	\$200.00	\$193.00	\$185.00	\$197.00	\$167.00	\$175.00	\$157.00	\$217.00
6" conn.	\$363.68	\$413.00	\$441.00	\$452.00	\$401.00	\$385.00	\$370.00	\$395.00	\$334.00	\$350.00	\$314.00	\$435.00
8" conn.	\$565.76	\$949.00	\$1,014.00	\$1,040.00	\$922.00	\$886.00	\$851.00	\$908.00	\$767.00	\$805.00	\$721.00	\$1,000.00
10" conn	\$1,010.32	\$1,569.00	\$1,676.00	\$1,719.00	\$1,523.00	\$1,464.00	\$1,405.00	\$1,500.00	\$1,267.00	\$1,329.00	\$1,192.00	\$1,652.00

HINGHAM, MASSACHUSETTS  
 COMPARATIVE RATES SUMMARY  
 5 YEAR AVERAGE 1985 - 1989

EXHIBIT 1b

HULL

	HWC CURRENT	NO TREATMENT PLANT			TREATMENT PLANT			Leased Plant PRIVATE
		COMPANY	MUNICIPAL	DISTRICT	COMPANY	MUNICIPAL	DISTRICT	
5/8" - 3/4" meter	\$20.43	\$31.86	---	\$30.72	\$47.43	---	\$44.89	\$44.15
3/4" meter	\$30.68	\$41.64	---	\$39.51	\$59.63	---	\$56.91	\$53.47
1" meter	\$46.59	\$61.21	---	\$57.10	\$84.04	---	\$80.95	\$72.11
1 1/2" meter	\$87.12	\$110.11	---	\$101.05	\$145.06	---	\$141.05	\$118.71
2" meter	\$136.86	\$168.79	---	\$153.79	\$218.28	---	\$213.17	\$174.62
3" meter	\$245.85	\$325.29	---	\$294.45	\$413.53	---	\$405.49	\$323.74
4" meter	\$363.12	\$501.34	---	\$452.68	\$633.20	---	\$621.85	\$491.49
6" meter	\$695.88	\$990.37	---	\$892.22	\$1,243.37	---	\$1,222.85	\$957.46
8" meter	\$1,161.68	\$2,261.87	---	\$2,035.02	\$2,829.82	---	\$2,785.46	\$2,168.99
Seasonal	by meter size	average \$232.06	---	average \$206.81	average \$265.10	---	average \$242.81	Average \$244.52
Public hydrants	\$363.68	\$413.00	---	\$452.00	\$385.00	---	\$395.00	\$435.00
Private fire conn.								
4" connection	\$161.64	\$206.00	---	\$226.00	\$193.00	---	\$197.00	\$217.00
6" connection	\$363.68	\$413.00	---	\$452.00	\$385.00	---	\$395.00	\$435.00
8" connection	\$565.76	\$949.00	---	\$1,040.00	\$886.00	---	\$908.00	\$1,000.00
10" connection	\$1,010.32	\$1,659.00	---	\$1,719.00	\$1,464.00	---	\$1,500.00	\$1,652.00

Revenue to be generated at average rates for Hingham and Hull

The revenue to be generated schedules are calculated based on the rates developed by class of customer and are annualized to determine if the total revenue requirements can be met using the average rates for each type of ownership.

The revenue to be generated at average rates includes the class of customers for fire protection both public and private, minimum charge to cover the customer service costs, water consumption for 700 cubic feet per quarter, rates for the consumption of water above the 700 cubic feet at two step rates and the rate for water purchased in bulk. The calculation methodology for Hingham and Hull is the same. The reason for the difference in rates between Hingham and Hull is the allocation of costs and the number of equivalent meters. Our calculation of the revenue to be generated for both towns shows that our rate structure will result in sufficient revenue to meet revenue requirement needs.

HINGHAM, MASSACHUSETTS  
Municipally owned - No treatment plant  
Revenue to be generated at proposed rates - Hingham

Fire protection charges		Annual Revenue
501 Public hydrants at	441	220,905
Private Hydrants		
8 4" connections at	220	1,764
65 6" connections at	441	28,660
38 8" connections at	1,014	38,537
1 10" connections at	1,676	1,676
		<u>70,637</u>
Total Fire Protection		291,542

Metered Revenue

Minimum charge

Meter size	No. of meters	Quarterly charge	Quarterly revenue	Annual revenue
5/8-3/4	5,747	\$16.54	95,061	380,245
3/4	15	\$24.81	372	1,489
1	214	\$41.35	8,849	35,398
1 1/2	53	\$82.71	4,383	17,533
2	72	\$132.33	9,528	38,110
3	4	\$264.66	1,059	4,234
4	4	\$413.53	1,654	6,616
6	7	\$827.05	5,789	23,157
8	1	\$1,902.22	1,902	7,609
<u>6117</u>			<u>128,598</u>	<u>514,392</u>
				514,392

Municipally owned - No treatment plant

Water consumption charge

Water allowed in service charge

Allowed CCF in the minimum charge.	28
No. of customers	6,117
Total CCF allowed	171,276
1st step rate	\$1.7080
Revenue from minimum charge	<u>292,545</u>

Metered water

Balance of base consumption at 1st step

	HINGHAM	HULL
1st step consumption in CCF	248,590	395,008
Consumption in minimum in CCF	171,276	
Balance of consumption at 1st step CCF	<u>77,314</u>	<u>395,008</u>
1st step rate	\$1.7080	\$1.2852
Balance of revenue from 1st step	132,055	507,682

Extra capacity consumption at 2nd step

2nd step consumption in CCF	474,807	0
2nd step rate	\$0.8172	\$0.0000
Revenue from 2nd step	<u>387,995</u>	<u>0</u>
Total water consumption revenue	812,595	507,682
Total revenue		<u>2,126,211</u>
Revenue requirements		2,126,211
Variance		0

Privately owned - No treatment plant

Revenue to be generated at proposed rates - Hingham

No units	Fire protection charges	Annual Revenue	No. of Units	Hull Annual Revenue	Cohasset Annual Revenue	
	\$/unit					
501	Public hydrants at Basic Private Hydrants	413	206,815	4	1,651 143,294	11,802
8	4" connections at	206	1,651			
65	6" connections at	413	26,832	17	7,018	
38	8" connections at	949	36,079			
1	10" connections at	1,569	1,569			
			<u>66,131</u>			
	Total Fire Protection		<u>272,946</u>		<u>151,963</u>	<u>11,802</u>

Metered Revenue

Minimum charge

Meter size	No. of meters	Hingham			No. of Meters	Hull		
		Quarterly charge	Quarterly revenue	Annual revenue		Quarterly Charge	Quarterly Revenue	Annual Revenue
5/8-3/4	5,747	\$17.21	98,930	395,719	3,510	\$19.56	68,661	274,642
					700	\$219.76		153,830
3/4	15	\$25.82	387	1,549	0	\$29.34	0	0
1	214	\$43.04	9,210	36,838	92	\$48.90	4,499	17,997
1 1/2	53	\$86.07	4,562	18,247	11	\$97.81	1,076	4,304
2	72	\$137.71	9,915	39,661	11	\$156.49	1,721	6,886
3	4	\$275.43	1,102	4,407	0	\$312.98	0	0
4	4	\$430.35	1,721	6,886	2	\$489.04	978	3,912
6	7	\$860.71	6,025	24,100	1	\$978.07	978	3,912
8	1	\$1,979.63	1,980	7,919	0	\$2,249.56	0	0
	<u>6,117</u>		<u>133,831</u>	<u>535,325</u>	<u>4,327</u>		<u>77,913</u>	<u>465,482</u>

Privately owned - No treatment plant

Water consumption charge

Water allowed in service charge

	Hingham	Hull
Allowed CCF in the minimum charge.	28	28
No. of customers	6,117	4,327
Total CCF allowed	171,276	121,156
1st step rate	\$1.7720	\$1.7575
Revenue from minimum charge	<u>303,502</u>	<u>212,936</u>

Metered water

Balance of base consumption at 1st step

1st step consumption in CCF	248,590	135,742
Consumption in minimum in CCF	171,276	121,156
Balance of consumption at 1st step CCF	<u>77,314</u>	<u>14,586</u>
1st step rate	\$1.7720	\$1.7575
Balance of revenue from 1st step	137,001	25,635

Extra capacity consumption at 2nd step

2nd step consumption in CCF	474,807	259,266
2nd step rate	\$0.8459	\$0.8448
Revenue from 2nd step	<u>401,624</u>	<u>219,017</u>
Total water consumption revenue	<u>842,127</u>	<u>457,588</u>
Total revenue	<u>1,650,398</u>	<u>1,086,835</u>
Revenue requirements	1,650,398	1,086,835
Variance	<u>0</u>	<u>0</u>

HINGHAM, MASSACHUSETTS  
 No treatment plant - District owned  
 Revenue to be generated at proposed rates - Hingham

#Units	Fire protection charges		----- Hull -----		Cohasset	
		Annual Revenue	#Units	Annual Revenue		
501	Public hydrants at Basis service Private Hydrants	452	226,590	4	1,809 146,681	12,081
8	4" connections at	226	1,809			
65	6" connections at	452	29,398	17	7,689	
38	8" connections at	1,040	39,529			
1	10" connections at	1,719	1,719			
			<u>72,455</u>			
	Total Fire Protection		<u>299,045</u>		<u>156,178</u>	<u>12,081</u>
	Metered Revenue					

Meter size	No. of meters	HINGHAM				----- HULL -----			
		Quarterly charge	Quarterly revenue	Annual revenue	No. of Meters	Quarterly Charge	Regular Quarterly Revenue	Annual Revenue	
5/8-3/4 - Hull seasonal		5,747	\$12.94	74,365	297,459	3,510	\$17.58	-61,711	246,845
3/4	15	\$19.41	291	1,165		700	\$193.67	0	135,571
1	214	\$32.35	6,923	27,691		0	\$26.37	0	0
1 1/2	53	\$64.70	3,429	13,716		92	\$43.95	4,044	16,175
2	72	\$103.52	7,453	29,813		0	\$43.95	0	0
3	4	\$207.04	828	3,313		11	\$87.91	-967	3,868
4	4	\$323.49	1,294	5,176		0	\$140.65	1,547	6,189
6	7	\$646.99	4,529	18,116		0	\$281.30	0	0
8	1	\$1,488.07	1,488	5,952		2	\$439.54	879	3,516
						1	\$879.08	879	3,516
						0	\$2,021.88	0	0
	<u>6117</u>		<u>100,600</u>	<u>402,400</u>	<u>4,327</u>			<u>70,027</u>	<u>415,680</u>

No treatment plant

Water consumption charge

Water allowed in service charge	Hingham	Hull
Allowed CCF in the minimum charge.	28	28
No. of customers	6,117	4,327
Total CCF allowed	171,276	121,156
1st step rate	\$2.1131	\$1.8774
Revenue from minimum charge	<u>361,916</u>	<u>227,453</u>
<b>Metered water</b>		
Balance of base consumption at 1st step		
1st step consumption in CCF	248,590	135,742
Consumption in minimum in CCF	171,276	121,156
Balance of consumption at 1st step CCF	<u>77,314</u>	<u>14,586</u>
1st step rate	\$2.1131	\$1.8774
Balance of revenue from 1st step	163,369	27,382
Extra capacity consumption at 2nd step		
2nd step consumption in CCF	474,807	259,266
2nd step rate	\$1.0094	\$0.9078
Revenue from 2nd step	<u>479,257</u>	<u>235,349</u>
Total water consumption revenue	<u>1,004,541</u>	<u>490,185</u>
Total revenue	<u>1,705,987</u>	<u>1,074,124</u>
Revenue requirements	<u>1,705,987</u>	<u>1,074,124</u>
Variance	<u>0</u>	<u>0</u>

HINGHAM, MASSACHUSETTS  
Municipal - Treatment plant  
Revenue to be generated at proposed rates - Hingham

Fire protection charges			Annual Revenue
2	501 Public hydrants at	370	185,261
Private Hydrants			
8	4" connections at	185	1,479
65	6" connections at	370	24,036
38	8" connections at	851	32,319
1	10" connections at	1,405	1,405
			<u>59,239</u>
Total Fire Protection			244,500
Metered Revenue			
Minimum charge			

Meter size	No. of meters	Quarterly charge	Quarterly revenue	Annual revenue
5/8-3/4	5,747	\$21.66	124,471	497,883
3/4	15	\$32.49	487	1,949
1	214	\$54.15	11,587	46,349
1 1/2	53	\$108.29	5,739	22,958
2	72	\$173.27	12,475	49,901
3	4	\$346.53	1,386	5,545
4	4	\$541.46	2,166	8,663
6	7	\$1,082.92	7,580	30,322
8	1	\$2,490.71	2,491	9,963
<u>6117</u>			<u>168,383</u>	<u>673,533</u>
				673,533

MUNICIPAL TREATMENT PLANT

Water consumption charge

Water allowed in service charge

Allowed CCF in the minimum charge.	28
No. of customers	6,117
Total CCF allowed	171,276
1st step rate	\$2.6613
Revenue from minimum charge	<u>455,819</u>

Metered water

Balance of base consumption at 1st step

	HINGHAM	HULL
1st step consumption in CCF	248,590	395,008
Consumption in minimum in CCF	171,276	
Balance of consumption at 1st step CCF	<u>77,314</u>	<u>395,008</u>
1st step rate	\$2.6613	\$2.0608
Balance of revenue from 1st step	205,757	814,023

Extra capacity consumption at 2nd step

2nd step consumption in CCF	474,807	0
2nd step rate	\$1.2696	\$0.0000
Revenue from 2nd step	<u>602,832</u>	<u>0</u>
Total water consumption revenue	<u>1,264,408</u>	<u>814,023</u>
Total revenue		<u>2,996,464</u>
Revenue requirements		<u>2,996,464</u>
Variance		<u>0</u>

Rate, owner treatment  
 Revenue to be generated at proposed rates - Hingham

No units	Fire protection charges \$/unit	Annual Revenue	No. of Units	Hull Annual Revenue	Cohasset Annual Revenue	
501	Public hydrants at Basic Private Hydrants	385	193,047	4	1,541 129,068	10,630
8	4" connections at	193	1,541			
65	6" connections at	385	25,046	17	6,550	
38	8" connections at	886	33,677			
1	10" connections at	1,464	1,464			
			<u>61,729</u>			
	<b>Total Fire Protection</b>		<u>254,775</u>		<u>137,160</u>	<u>10,630</u>

Metered Revenue

Minimum charge

Meter size	No. of meters	----- Hingham -----			----- Hull -----			
		Quarterly charge	Quarterly revenue	Annual revenue	No. of Meters	Quarterly Charge	Quarterly Revenue	Annual Revenue
5/8-3/4	5,747	\$21.71	124,787	499,148	3,510	\$24.41	85,668	342,674
					700	\$242.08		169,456
3/4	15	\$32.57	489	1,954	0	\$36.61	0	0
1	214	\$54.28	11,617	46,467	92	\$61.02	5,614	22,454
1 1/2	53	\$108.57	5,754	23,016	11	\$122.03	1,342	5,370
2	72	\$173.71	12,507	50,028	11	\$195.26	2,148	8,591
3	4	\$347.41	1,390	5,559	0	\$390.51	0	0
4	4	\$542.84	2,171	8,685	2	\$610.17	1,220	4,881
6	7	\$1,085.67	7,600	30,399	1	\$1,220.35	1,220	4,881
8	1	\$2,497.04	2,497	9,988	0	\$2,806.80	0	0
	<u>6,117</u>		<u>168,811</u>	<u>675,244</u>	<u>4,327</u>		<u>97,213</u>	<u>558,308</u>

Privately owned - treatment plant

Water consumption charge

Water allowed in service charge

	Hingham	Hull
Allowed CCF in the minimum charge.	28	28
No. of customers	6,117	4,327
Total CCF allowed	171,276	121,156
1st step rate	\$3.3053	\$3.2890
Revenue from minimum charge	<u>566,114</u>	<u>398,482</u>

Metered water

Balance of base consumption at 1st step

1st step consumption in CCF	248,590	135,742
Consumption in minimum in CCF	171,276	121,156
Balance of consumption at 1st step CCF	<u>77,314</u>	<u>14,586</u>
1st step rate	\$3.3053	\$3.2890
Balance of revenue from 1st step	255,544	47,972

Extra capacity consumption at 2nd step

2nd step consumption in CCF	474,807	259,266
2nd step rate	\$1.5747	\$1.5736
Revenue from 2nd step	<u>747,679</u>	<u>407,984</u>

Total water consumption revenue	<u>1,569,337</u>	<u>854,438</u>
Total revenue	<u>2,499,356</u>	<u>1,560,536</u>
Revenue requirements	2,499,356	1,560,536
Variance	<u>0</u>	<u>0</u>

HINGHAM, MASSACHUSETTS  
 District - Treatment plant  
 Revenue to be generated at proposed rates - Hingham

#Units	Fire protection charges		Annual Revenue	Hull		Cohasset
	#Units	Annual Revenue		#Units	Annual Revenue	
501	Public hydrants at Basis service	395	197,734	4	1,579	10,627
	Private Hydrants				129,031	
2	8 4" connections at	197	1,579			
65	6" connections at	395	25,654	17	6,710	
38	8" connections at	908	34,495			
1	10" connections at	1,500	1,500			
			63,228			
	Total Fire Protection		260,962		137,319	10,627

Metered Revenue

Minimum charge

Meter size	No. of meters	HINGHAM			No. of Meters	Regular		HULL Annual Revenue
		Quarterly charge	Quarterly revenue	Annual revenue		Quarterly Charge	Quarterly Revenue	
5/8-3/4	5,747	\$16.44	94,503	378,014	3,510	\$24.04	84,381	337,523
Hull seasonal					700	\$221.96		155,375
3/4	15	\$24.67	370	1,480	0	\$36.06	0	0
1	214	\$41.11	8,798	35,190	92	\$60.10	5,529	22,117
1 1/2	53	\$82.22	4,358	17,431	11	\$120.20	1,322	5,289
2	72	\$131.55	9,472	37,867	11	\$192.32	2,116	8,462
3	4	\$263.10	1,052	4,210	0	\$384.64	0	0
4	4	\$411.10	1,644	6,578	2	\$601.00	1,202	4,808
6	7	\$822.20	5,755	23,022	1	\$1,202.00	1,202	4,808
8	1	\$1,891.05	1,891	7,564	0	\$2,764.61	0	0
	6117		127,843	511,374	4,327		95,752	538,382

Water consumption charge

Water allowed in service charge	Hingham	Hull
Allowed CCF in the minimum charge.	28	28
No. of customers	6,117	4,327
Total CCF allowed	171,276	121,156
1st step rate	\$3.4845	\$2.9779
Revenue from minimum charge	596,810	360,795
 <u>Metered water</u>		
 <u>Balance of base consumption at 1st step</u>		
1st step consumption in CCF	248,590	135,742
Consumption in minimum in CCF	171,276	121,156
Balance of consumption at 1st step CCF	77,314	14,586
1st step rate	\$3.4845	\$2.9779
Balance of revenue from 1st step	269,400	43,435
 <u>Extra capacity consumption at 2nd step</u>		
2nd step consumption in CCF	474,807	259,266
2nd step rate	\$1.6607	\$1.4345
Revenue from 2nd step	788,507	371,925
Total water consumption revenue	1,654,718	776,155
Total revenue	2,427,053	1,462,482
Revenue requirements	2,427,053	1,462,482
Variance	0	0

### Quarterly Minimum Customer Service Charge

The quarterly minimum service charge is based on the basic customer charge calculation from the Customer account calculation for minimum quarterly charges. The basic service charge amount is multiplied by the American Water Works Association (AWWA) standards for ratio equivalents using the 5/8-3/4" meter as the standard of one. Each meter size thereafter is a multiple of the 5/8-3/4" meter. The calculation of the charge per meter size is a calculation of the basic customer charge times the ratio equivalent.

The total charge per meter size is based on the customer charge per meter size plus the 1st step charge for 700 CF of water. The charge for the 700 CF of water is the same for all meter sizes because the meter size has no bearing on the amount of water consumed.

The municipally owned rates do not include a customer charge for Hull because all water sales will be at a bulk rate. The town of Hull would bill and collect from its own customers.

HINGHAM, MASSACHUSETTS  
Municipally owned - No treatment plant  
Quarterly minimum customer service charge

Meter Size	Charge/equivalent meter		Ratio Equivalent	Charge/ meter size		Charge for 700CF		Customer charge with 700CF	
	Hingham	Hull		Hingham	Hull	Hingham	Hull	Hingham	Hull
5/8"-3/4"	\$16.54	\$0.00	1	\$16.54	\$0.00	\$11.96	\$0.00	\$28.50	\$0.00
3/4"	\$16.54	\$0.00	1.5	\$24.81	\$0.00	\$11.96	\$0.00	\$36.77	\$0.00
1"	\$16.54	\$0.00	2.5	\$41.35	\$0.00	\$11.96	\$0.00	\$53.31	\$0.00
1 1/2"	\$16.54	\$0.00	5	\$82.71	\$0.00	\$11.96	\$0.00	\$94.66	\$0.00
2"	\$16.54	\$0.00	8	\$132.33	\$0.00	\$11.96	\$0.00	\$144.28	\$0.00
3"	\$16.54	\$0.00	16	\$264.66	\$0.00	\$11.96	\$0.00	\$276.61	\$0.00
4"	\$16.54	\$0.00	25	\$413.53	\$0.00	\$11.96	\$0.00	\$425.48	\$0.00
6"	\$16.54	\$0.00	50	\$827.05	\$0.00	\$11.96	\$0.00	\$839.01	\$0.00
8"	\$16.54	\$0.00	115	\$1,902.22	\$0.00	\$11.96	\$0.00	\$1,914.17	\$0.00

## HINGHAM, MASSACHUSETTS

No treatment plant - Privately owned

Quarterly minimum customer service charge

Meter Size	Charge/equivalent meter		Ratio Equivalent	Charge/ meter size		Charge for 700CF		Customer charge with 700CF	
	Hingham	Hull		Hingham	Hull	Hingham	Hull	Hingham	Hull
5/8"-3/4"	\$17.21	\$19.56	1	\$17.21	\$19.56	\$12.40	\$12.30	\$29.62	\$31.86
Hull seasonal		\$219.76	1		\$219.76		\$12.30		\$232.06
3/4"	\$17.21	\$19.56	1.5	\$25.82	\$29.34	\$12.40	\$12.30	\$38.23	\$41.64
1"	\$17.21	\$19.56	2.5	\$43.04	\$48.90	\$12.40	\$12.30	\$55.44	\$61.21
1 1/2"	\$17.21	\$19.56	5	\$86.07	\$97.81	\$12.40	\$12.30	\$98.47	\$110.11
2"	\$17.21	\$19.56	8	\$137.71	\$156.49	\$12.40	\$12.30	\$150.12	\$168.79
3"	\$17.21	\$19.56	16	\$275.43	\$312.98	\$12.40	\$12.30	\$287.83	\$325.29
4"	\$17.21	\$19.56	25	\$430.35	\$489.04	\$12.40	\$12.30	\$442.76	\$501.34
6"	\$17.21	\$19.56	50	\$860.71	\$978.07	\$12.40	\$12.30	\$873.11	\$990.37
8"	\$17.21	\$19.56	115	\$1,979.63	\$2,249.56	\$12.40	\$12.30	\$1,992.03	\$2,261.87

HINGHAM, MASSACHUSETTS

District owned

Quarterly minimum customer service charge

No treatment plant

Meter Size	Charge/equivalent meter		Ratio Equivalent	Charge/ meter size		Charge for 700CF		Customer charge with 700CF	
	Hingham	Hull		Hingham	Hull	Hingham	Hull	Hingham	Hull
5/8"-3/4"	\$12.94	\$17.58	1	\$12.94	\$17.58	\$14.79	\$13.14	\$27.73	\$30.72
Hull Seasonal		\$193.67	1		\$193.67		\$13.14		\$206.81
3/4"	\$12.94	\$17.58	1.5	\$19.41	\$26.37	\$14.79	\$13.14	\$34.20	\$39.51
1"	\$12.94	\$17.58	2.5	\$32.35	\$43.95	\$14.79	\$13.14	\$47.14	\$57.10
1 1/2"	\$12.94	\$17.58	5	\$64.70	\$87.91	\$14.79	\$13.14	\$79.49	\$101.05
2"	\$12.94	\$17.58	8	\$103.52	\$140.65	\$14.79	\$13.14	\$118.31	\$153.79
3"	\$12.94	\$17.58	16	\$207.04	\$281.30	\$14.79	\$13.14	\$221.83	\$294.45
4"	\$12.94	\$17.58	25	\$323.49	\$439.54	\$14.79	\$13.14	\$338.29	\$452.68
6"	\$12.94	\$17.58	50	\$646.99	\$879.08	\$14.79	\$13.14	\$661.78	\$892.22
8"	\$12.94	\$17.58	115	\$1,488.07	\$2,021.88	\$14.79	\$13.14	\$1,502.86	\$2,035.02

HINGHAM, MASSACHUSETTS  
Municipal Treatment plant  
Quarterly minimum customer service charge

Meter Size	Charge/equivalent meter		Ratio Equivalent	Charge/ meter size		Charge for 700CF		Customer charge with 700CF	
	Hingham	Hull		Hingham	Hull	Hingham	Hull	Hingham	Hull
5/8"-3/4"	\$21.66	\$0.00	1	\$21.66	\$0.00	\$18.63	\$0.00	\$40.29	\$0.00
3/4"	\$21.66	\$0.00	1.5	\$32.49	\$0.00	\$18.63	\$0.00	\$51.12	\$0.00
1"	\$21.66	\$0.00	2.5	\$54.15	\$0.00	\$18.63	\$0.00	\$72.78	\$0.00
1 1/2"	\$21.66	\$0.00	5	\$108.29	\$0.00	\$18.63	\$0.00	\$126.92	\$0.00
2"	\$21.66	\$0.00	8	\$173.27	\$0.00	\$18.63	\$0.00	\$191.90	\$0.00
3"	\$21.66	\$0.00	16	\$346.53	\$0.00	\$18.63	\$0.00	\$365.16	\$0.00
4"	\$21.66	\$0.00	25	\$541.46	\$0.00	\$18.63	\$0.00	\$560.09	\$0.00
6"	\$21.66	\$0.00	50	\$1,082.92	\$0.00	\$18.63	\$0.00	\$1,101.55	\$0.00
8"	\$21.66	\$0.00	115	\$2,490.71	\$0.00	\$18.63	\$0.00	\$2,509.34	\$0.00

HINGHAM, MASSACHUSETTS  
 Treatment plant - Privately owned  
 Quarterly minimum customer service charge

Meter Size	Charge/equivalent meter		Ratio Equivalent	Charge/ meter size		Charge for 700CF		Customer charge with 700CF	
	Hingham	Hull		Hingham	Hull	Hingham	Hull	Hingham	Hull
5/8"-3/4"	\$21.71	\$24.41	1	\$21.71	\$24.41	\$23.14	\$23.02	\$44.85	\$47.43
Hull seasonal		\$242.08	1		\$242.08		\$23.02		\$265.10
3/4"	\$21.71	\$24.41	1.5	\$32.57	\$36.61	\$23.14	\$23.02	\$55.71	\$59.63
1"	\$21.71	\$24.41	2.5	\$54.28	\$61.02	\$23.14	\$23.02	\$77.42	\$84.04
1 1/2"	\$21.71	\$24.41	5	\$108.57	\$122.03	\$23.14	\$23.02	\$131.70	\$145.06
2"	\$21.71	\$24.41	8	\$173.71	\$195.26	\$23.14	\$23.02	\$196.84	\$218.28
3"	\$21.71	\$24.41	16	\$347.41	\$390.51	\$23.14	\$23.02	\$370.55	\$413.53
4"	\$21.71	\$24.41	25	\$542.84	\$610.17	\$23.14	\$23.02	\$565.97	\$633.20
6"	\$21.71	\$24.41	50	\$1,085.67	\$1,220.35	\$23.14	\$23.02	\$1,108.81	\$1,243.37
8"	\$21.71	\$24.41	115	\$2,497.04	\$2,806.80	\$23.14	\$23.02	\$2,520.18	\$2,829.82

HINGHAM, MASSACHUSETTS  
 District - Treatment plant  
 Quarterly minimum customer service charge

Meter size	Charge/equivalent meter		Ratio Equivalent	Charge/ meter size		Charge for 700CF		Customer charge with 700CF	
	Hingham	Hull		Hingham	Hull	Hingham	Hull	Hingham	Hull
5/8"-3/4"	\$16.44	\$24.04	1	\$16.44	\$24.04	\$24.39	\$20.85	\$40.84	\$44.89
1 1/4" Seasonal		\$221.96	1		\$221.96		\$20.85		\$242.81
1/4"	\$16.44	\$24.04	1.5	\$24.67	\$36.06	\$24.39	\$20.85	\$49.06	\$56.91
"	\$16.44	\$24.04	2.5	\$41.11	\$60.10	\$24.39	\$20.85	\$65.50	\$80.95
1/2"	\$16.44	\$24.04	5	\$82.22	\$120.20	\$24.39	\$20.85	\$106.61	\$141.05
"	\$16.44	\$24.04	8	\$131.55	\$192.32	\$24.39	\$20.85	\$155.94	\$213.17
"	\$16.44	\$24.04	16	\$263.10	\$384.64	\$24.39	\$20.85	\$287.49	\$405.49
"	\$16.44	\$24.04	25	\$411.10	\$601.00	\$24.39	\$20.85	\$435.49	\$621.85
"	\$16.44	\$24.04	50	\$822.20	\$1,202.00	\$24.39	\$20.85	\$846.59	\$1,222.85
"	\$16.44	\$24.04	115	\$1,891.05	\$2,764.61	\$24.39	\$20.85	\$1,915.45	\$2,785.46

### Metered Sales Rate Calculation

The metered sales rate calculation schedule determines the two step rate based on the consumption in CCF. To calculate the two step rate the following procedure was completed.

1. The base cost amount is obtained from the cost allocation base extra capacity schedule. This amount is divided by the base consumption in CCF which was calculated as follows. The total actual consumption in CCF was obtained from the bill analysis for the year ended 3/31/83 for Hingham (723,397ccf) and Hull (395,008ccf) and was multiplied by the percentage relationship of the average daily usage to the maximum daily usage. The result was that the maximum daily usage was 1.91 times greater than the average daily usage. Therefore, for Hingham the base usage was 248,590 CCF and the extra capacity usage was 474,807 CCF; for Hull the base usage was 135,742 CCF and the extra capacity usage was 259,266 CCF.

2. The base rate per CCF was determined as a result of dividing the base costs by the base consumption.

3. The extra capacity amount is obtained from the cost allocation base extra capacity schedule and the extra capacity consumption is the amount as stated in 1 above.

The municipally owned rates do not result in a 2nd step for Hull. All sales of water to Hull would be in bulk and at the 1st step.

4. The extra capacity rate per CCF was determined as a result of dividing the extra capacity costs by the extra consumption.

HINGHAM, MASSACHUSETTS  
Municipally owned - No treatment plant  
Metered Sales Rate calculation

Description	Hingham	Hull		
<b>Base Costs</b>				
Revenue to be recovered through metered sales	812,595	507,682		
Less: Extra-capacity	387,995	0		
<b>Base Cost to all users</b>	<u>424,600</u>	<u>507,682</u>		
Base consumption in CCF	248,590	395,008		
Total base step rate		\$1.7080	\$1.2852	
=====				
Extra-capacity Costs	387,995	0		
Extra consumption in CCF	474,807	0		
Total extra step rate		\$0.8172	\$0.0000	
=====				
<b>Consumption statistics</b>				
Total metered consumption CCF	723,397	395,008		
Base consumption 100/291#	248,590	135,742		
Extra consumption	<u>474,807</u>	<u>259,266</u>		
=====				

# Based on 1983 maximum day demand to average day demand  
7,030mill. gal/3,682mill. gal = 1.91

No treatment plant - Privately owned  
 Metered Sales Rate calculation

Description	Hingham	Hull
Base Costs		
Revenue to be recovered through metered sales	842,127	457,588
Less: Extra-capacity	401,624	219,017
Base Cost to all users	<u>440,503</u>	<u>238,571</u>
Base consumption in CCF	248,590	135,742
Total base step rate	\$1.7720	\$1.7575
	=====	=====
Extra-capacity Costs	401,624	219,017
Extra consumption in CCF	474,807	259,266
Total extra step rate	\$0.8459	\$0.8448
	=====	=====
Consumption statistics		
Total metered consumption CCF	723,397	395,008
Base consumption 100/291#	248,590	135,742
Extra consumption	<u>474,807</u>	<u>259,266</u>
	=====	=====

# Based on 1983 maximum day demand to average day demand  
 7,030mill. gal/3,682mill. gal = 1.91

## HINGHAM, MASSACHUSETTS

District owned

Metered Sales Rate calculation

No treatment plant

Description

Hingham

Hull

## Base Costs

Revenue to be recovered

through metered sales

1,004,541

490,185

Less: Extra-capacity

479,257

235,349

Base Cost to all users

525,285

254,835

Base consumption in CCF

248,590

135,742

Total base step rate

\$2.1131

\$1.8774

Extra-capacity Costs

479,257

235,349

Extra consumption in CCF

474,807

259,266

Total extra step rate

\$1.0094

\$0.9078

## Consumption statistics

Total metered consumption CCF

723,397

395,008

Base consumption 100/291#

248,590

135,742

Extra consumption

474,807

259,266

# Based on 1983 maximum day demand to average day demand  
7,030mill. gal/3,682mill. gal = 1.91

HINGHAM, MASSACHUSETTS  
Municipal - Treatment plant  
Metered Sales Rate calculation

Description	Hingham	Hull
Base Costs		
Revenue to be recovered through metered sales	1,264,408	814,023
Less: Extra-capacity	602,832	0
Base Cost to all users	<u>661,576</u>	<u>814,023</u>
Base consumption in CCF	248,590	395,008
Total base step rate	\$2.6613 =====	\$2.0608 =====
Extra-capacity Costs	602,832	0
Extra consumption in CCF	474,807	0
Total extra step rate	\$1.2696 =====	\$0.0000 =====
Consumption statistics		
Total metered consumption CCF	723,397	395,008
Base consumption 100/291#	248,590	135,742
Extra consumption	<u>474,807</u> =====	<u>259,266</u> =====

# Based on 1983 maximum day demand to average day demand  
7,030mill. gal/3,682mill. gal = 1.91

HINGHAM, MASSACHUSETTS  
Treatment plant - Privately owned  
Metered Sales Rate calculation

Description	Hingham	Hull		
Base Costs				
Revenue to be recovered through metered sales	1,569,337	854,438		
Less: Extra-capacity	747,679	407,984		
Base Cost to all users	<u>821,658</u>	<u>446,454</u>		
Base consumption in CCF	248,590	135,742		
Total base step rate			\$3.3053	\$3.2890
			=====	=====
Extra-capacity Costs	747,679	407,984		
Extra consumption in CCF	474,807	259,266		
Total extra step rate			\$1.5747	\$1.5736
			=====	=====
Consumption statistics				
Total metered consumption CCF	723,397	395,008		
Base consumption 100/291#	248,590	135,742		
Extra consumption	<u>474,807</u>	<u>259,266</u>		
	=====	=====		

# Based on 1983 maximum day demand to average day demand  
7,030mill. gal/3,682mill. gal = 1.91

HINGHAM, MASSACHUSETTS  
 District - Treatment plant  
 Metered Sales Rate calculation

Description	Hingham	Hull
Use Costs		
Revenue to be recovered through metered sales	1,654,718	776,155
Less: Extra-capacity	788,507	371,925
Use Cost to all users	<u>866,210</u>	<u>404,230</u>
Use consumption in CCF	248,590	135,742
Total base step rate	\$3.4845	\$2.9779
	=====	=====
Extra-capacity Costs	788,507	371,925
Extra consumption in CCF	474,807	259,266
Total extra step rate	\$1.6607	\$1.4345
	=====	=====
Consumption statistics		
Total metered consumption CCF	723,397	395,008
Use consumption 100/291#	248,590	135,742
Extra consumption	<u>474,807</u>	<u>259,266</u>
	=====	=====

Based on 1983 maximum day demand to average day demand  
 1,030mill. gal/3,682mill. gal = 1.91

Customer Account Calculation for Minimum Quarterly Charges

This schedule determines the basic customer charge, annually and quarterly, based on the customer accounts cost obtained from the cost allocation base extra capacity schedule. The equivalent meters statistic is obtained from the equivalent meters schedule. The number of meters by size was obtained from the company's annual report.

HINGHAM, MASSACHUSETTS

Customer Account Calculation for Minimum Quarterly Charges

Municipally owned - No treatment plant

Description	Hingham
Total Allocated to Customer Accounts	514,392
Equivalent Meters	7,775
Basic customer charge - annual	66.16
Basic customer charge - quarterly	16.54

HINGHAM, MASSACHUSETTS  
 Customer Account Calculation for Minimum Quarterly Charges  
 No treatment plant - Privately owned  
 Description

Description	Hingham	----- Hull -----	
		Regular	Seasonal
Total Allocated to Customer Accounts	535,325	366,425	153,830
Equivalent Meters	7,775	4,683	700
Basic customer charge - annual	\$68.86	\$78.25	\$219.76
Basic customer charge - quarterly	\$17.21	\$19.56	

HINGHAM, MASSACHUSETTS

Customer Account Calculation for Minimum Quarterly Charges

No treatment plant - District owned

Description	Hull		
	Hingham	Regular	Seasonal
Total Allocated to Customer Accounts	402,400	329,337	135,571
Equivalent Meters	7,775	4,683	700
Basic customer charge - annual	51.76	70.33	193.67
Basic customer charge - quarterly	12.94	17.58	

HINGHAM, MASSACHUSETTS

Customer Account Calculation for Minimum Quarterly Charges

Municipal - Treatment plant

Description -

Hingham

Total Allocated to Customer Accounts	673,533
	=====
Equivalent Meters	7,775
	=====
Basic customer charge - annual	86.63
	=====
Basic customer charge - quarterly	21.66

Customer Account Calculation for Minimum Quarterly Charges  
 Treatment plant - Privately owned  
 Description

Description	Hingham	----- Hull -----	
		Regular	Seasonal
2 Total Allocated to Customer Accounts	675,244	457,191	169,456
Equivalent Meters	7,775	4,683	700
Basic customer charge - annual	\$86.85	\$97.63	\$242.08
Basic customer charge - quarterly	\$21.71	\$24.41	

WINGHAM, MASSACHUSETTS

Customer Account Calculation for Minimum Quarterly Charges

District - Treatment plant  
Description

Hingham                      Hull  
                                  Regular    Seasonal

Total Allocated to Customer Accounts

511,374    450,319    155,375

Equivalent Meters

7,775            4,683            700

Basic customer charge - annual

65.78            96.16            221.96

Basic customer charge - quarterly

16.44            24.04

### Fire Service Rate Calculation

This schedule determines the rate per connection for public and private fire hydrants. The fire protection costs are obtained from the cost allocation base extra capacity schedule. The rate per equivalent is calculated by dividing the total fire protection cost by the connection equivalents obtained from the fire protection equivalent connection size schedule. The rate per connection size is based on calculating the equivalent service factor times the rate per equivalent.

In the case of Hull and Cohasset the basic charge for hydrants in service prior to July 1968 is a flat sum plus the equivalent times the number of additional hydrants. We used the same methodology for the municipal and district to be consistent in the comparison of ownership.

HINGHAM, MASSACHUSETTS

Fire Service Rate Calculation

~~Municipally owned - No treatment plant~~

Description Amount Hingham Hull Rate / connection  
Hingham Hull

PUBLIC  
~~Town of Hull Basic 85,515 24,590 0 24,590~~

Town of Cohasset Basic 7,043 2,025 0 2,025

Total 92,558 26,616

~~Total Fire Protection 327,417 291,542 35,875~~

Balance for Equivalentents 291,542 9,259

Rate per Equivalent 8.82 8.82

~~Public Fire Hydrants 220,905 1,764 441~~

Private fire Hingham Hull  
4" 8 1,764 220

6" 65 17 28,660 7,496 441 441

8" 38 38,537 0 1,014

10" 1 1,676 0 1,676

Total 291,542 9,259

HINGHAM, MASSACHUSETTS

Fire Service Rate Calculation

No treatment plant - Privately owned

Description	Amount	Rate / connection	
		Hingham	Hull
Town of Hull Basic	85,515	143,294	0 143,294
Town of Cohasset Basic	7,043	11,802	0 11,802
Total	92,558	155,096	
Total Fire Protection	436,711	272,946	163,765
Balance for Equivalentents		272,946	8,669
Rate per Equivalentent		8.26	8.26
Public Fire Hydrants		206,815	1,651 413
Private fire Hingham			
4" 8		1,651	206
6" 65 17		26,832	7,018 413 413
8" 38		36,079	0 949
10" 1		1,569	0 1,569
Total		272,946	8,669

HINGHAM, MASSACHUSETTS  
 Fire Service Rate Calculation

No treatment plant - District owned

Description	Amount	Hingham Hull		Rate / connection	
		Hingham	Hull	Hingham	Hull
PUBLIC					
Town of Hull Basic	85,515		146,681	0	146,681
Town of Cohasset Basic	7,043		12,081	0	12,081
Total	92,558		158,761		
Total Fire Protection	467,304	299,045	168,259		
Balance for Equivalents		299,045	9,498		
Rate per Equivalent		9.05	9.05		
Public Fire Hydrants		226,590	1,809	452	
Private fire					
4" Hingham	8		1,809	226	
6" Hingham	65	17	29,398	7,689	452
8" Hingham	38		39,529	0	1,040
10" Hingham	1		1,719	0	1,719
Total		299,045	9,498		

HINGHAM, MASSACHUSETTS  
 Fire Service Rate Calculation  
 Municipal Treatment plant  
 Description

	Amount	Hingham
PUBLIC		
Town of Hull Basic	85,515	
Town of Cohasset Basic	7,043	
Total	92,558	
Total Fire Protection	284,207	244,500
Balance for Equivalentents		244,500
Rate per Equivalentent		7.40
Public Fire Hydrants		185,261
Private fire Hingham		
4" 8		1,479
6" 65	17	24,036
8" 38		32,319
10" 1		1,405
Total		244,500

HINGHAM, MASSACHUSETTS  
 Fire Service Rate Calculation  
 Treatment plant - Privately owned

Description	Amount	Rate / connection			
		Hingham	Hull		
Town of Hull Basic	85,515		129,068	0	129,068
Town of Cohasset Basic	7,043		10,630	0	10,630
Total	<u>92,558</u>		139,698		
Total Fire Protection	<u>402,566</u>	<u>254,775</u>	<u>147,790</u>		
Balance for Equivalents		254,775	8,092		
Rate per Equivalent		7.71	7.71		
Public Fire Hydrants		193,047	1,541	385	
Private fire					
4" Hingham 8 Hull		1,541		193	
6" 65 17		25,046	6,550	385	385
8" 38		33,677	0	886	
10" 1		1,464	0	1,464	
Total		<u>254,775</u>	<u>8,092</u>		

HINGHAM, MASSACHUSETTS  
 Fire Service Rate Calculation  
 District - Treatment plant

Description	Amount	Rate / connection			
		Hingham	Hull		
TOWN OF HULL BASIC	85,515		129,031	0	129,031
TOWN OF COHASSET BASIC	7,043		10,627	0	10,627
<b>Total</b>	<b>92,558</b>		<b>139,658</b>		
<b>Total Fire Protection</b>	<b>408,908</b>	<b>260,962</b>	<b>147,946</b>		
<b>Balance for Equivalent</b>		<b>260,962</b>	<b>8,288</b>		
<b>Rate per Equivalent</b>		<b>7.89</b>	<b>7.89</b>		
<b>Public Fire Hydrants</b>		<b>197,734</b>	<b>1,579</b>	<b>395</b>	
<b>Private fire</b>					
4" Hingham	8		1,579		197
6" Hingham	65	17	25,654	6,710	395
8" Hingham	38		34,495	0	908
10" Hingham	1		1,500	0	1,500
<b>Total</b>		<b>260,962</b>	<b>8,288</b>		

Fire Protection Equivalent Connection Size

This schedule determines the equivalent connection sizes for public and private fire connections. The number of connections by size are multiplied by the AWWA equivalent standards to obtain the equivalent fire services by connection size. The number of connections are based on the Billing Analysis prepared and presented as of March 31, 1983 by the company during the last rate increase filing.

HINGHAM, MASSACHUSETTS / NO TREATMENT PLANT  
 Fire Protection Equivalent Connection Size

Size Connection Inches	No. of connections		Equivalen Service Factor	Equivalent Fire services	
	Hingham	Hull		Hingham	Hull
4	8		25	200	
6	65	17	50	3,250	850
6	501	4	50	25,050	200
8	38		115	4,370	
10	1		190	190	
			Total	33,060	1050

### Equivalent Meters

This schedule determines by meter size the equivalent meters for Hingham and Hull. The AWWA standards for equivalent meter sizes are used to calculate the ratio equivalents. The total number of meters in service were obtained from the 1983 Annual Report.

The number of equivalent meters was calculated by multiplying the number of meters times the ratio equivalent for each size meter.

HINGHAM, MASSACHUSETTS  
 NO TREATMENT PLANT

Equivalent Meters

Meter Size	Number of Meters		Ratio Equivalent	No. of Equivalent 5/8" Meter	
	Hingham	Hull		Hingham	Hull
5/8"-3/4"	5747	4210	1	5,747	4,210
3/4"	15	0	1.5	23	0
1"	214	92	2.5	535	230
1 1/2"	53	11	5	265	55
2"	72	11	8	576	88
3"	4	0	16	64	0
4"	4	2	25	100	50
6"	7	1	50	350	50
8"	1	0	115	115	0
	<u>6117</u>	<u>4327</u>		<u>7,775</u>	<u>4,683</u>

### Capitalization

This schedule is based on the Department of Public Utilities order #1590 approved capitalization schedule.

There is no capitalization schedule for the municipal or district operation because they are nonprofit organizations. No capital stock is issued nor is a return earned on the assets.

The capitalization of the company is affected by any need for additional funds for capital improvements.

The capitalization increase for the first exhibit is \$2,000,000 in 1987 for improvements to the transmission and distribution system without constructing a treatment plant. Based on present market conditions and discussions with the State Street Bank Municipal Bond Department, we assumed a 9 percent interest rate on a general mortgage bonds for 15 years.

The capitalization increase for the second exhibit is \$12,500,000 in 1987 for improvements to the transmission and distribution system for \$2,000,000 and the construction of a water treatment plant for \$10,500,000. Based on a discussion with HWC officials, we allocated the debt needs as 65 percent long term debt and 35 percent as capital stock. We assumed the same 9 percent 15 years general mortgage bond for the debt.

## HINGHAM, MASSACHUSETTS

## Capitalization

Type of Capital	Privately Owned		1989	
	Amount	Percent	Cost Rate	Weight Cost %
Long Term Debt				
1st Mtg, 4.70%, 1993	600,000	14.05%	4.9	0.69
Gen Mtg., 9.25%, 1996	750,000	17.56%	9.54	1.68
Gen Mtg., 10.00%, 2004	920,000	21.55%	10.37	2.23
Gen Mtg., 12.25%, 2002	2,000,000	46.84%	13.69	6.41
Total	4,270,000	100.00%		11.01
TOTAL		73.16%		11.01 8.05

## Preferred Stock

Ser B, 4.75%, 2013	93,000	100.00%	5.3	5.30	
Total	93,000	100.00%		5.30	
TOTAL		1.59%		5.30	0.08

## Common Equity

Common Stock	1,046,700				
Paid-in Capital	225,300				
Retained Earnings	201,805				
TOTAL	1,473,805	25.25%		14.50	3.66

TOTAL CAPITAL	5,836,805	100.00%			11.80
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AVERAGE FIVE YEAR RATE OF RETURN					11.41
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NO TREATMENT PLANT						
Type of Capital	Amount	Percent	Rate	Cost	Weight	Weight
Long Term Debt				Cost		%
1st Mtg, 4.70%, 1993	600,000	14.05%	4.9	0.69		
Gen Mtg., 9.25%, 1996	750,000	17.56%	9.54	1.68		
Gen Mtg., 10.00%, 2004	920,000	21.55%	10.37	2.23		
Gen Mtg., 12.25%, 2002	2,000,000	46.84%	13.69	6.41		
Total	4,270,000	100.00%		11.01		
TOTAL		72.66%		11.01	8.00	
Preferred Stock						
Ser A, 5.25%, 1987	40,000	30.08%	5.63	1.69		
Ser B, 4.75%, 2013	93,000	69.92%	5.3	3.71		
Total	133,000	100.00%		5.40		
TOTAL		2.26%		5.40	0.12	
Common Equity						
Common Stock	1,046,700					
Paid-in Capital	225,300					
Retained Earnings	201,805					
TOTAL	1,473,805	25.08%		14.50	3.64	
TOTAL CAPITAL	5,876,805	100.00%			11.76	

HINGHAM, MASSACHUSETTS						
Capitalization						
Type of Capital	Amount	Percent	Rate	Cost	Weight	Weight
Long Term Debt				Cost		%
1st Mtg, 4.70%, 1993	600,000	14.05%	4.9	0.69		
Gen Mtg., 9.25%, 1996	750,000	17.56%	9.54	1.68		
Gen Mtg., 10.00%, 2004	920,000	21.55%	10.37	2.23		
Gen Mtg., 12.25%, 2002	2,000,000	46.84%	13.69	6.41		
Total	4,270,000	100.00%		11.01		
TOTAL		73.16%		11.01	8.05	
Preferred Stock						
Ser B, 4.75%, 2013	93,000	100.00%	5.3	5.30		
Total	93,000	100.00%		5.30		
TOTAL		1.59%		5.30	0.08	
Common Equity						
Common Stock	1,046,700					
Paid-in Capital	225,300					
Retained Earnings	201,805					
TOTAL	1,473,805	25.25%		14.50	3.66	
TOTAL CAPITAL	5,836,805	100.00%			11.80	

## HINGHAM, MASSACHUSETTS

Capitalization  
NO TREATMENT PLANT

Type of Capital	Privately Owned		1985		Weight Cost	Weight %
	Amount	Percent	Rate	Cost		
Long Term Debt						
1st Mtg, 4.70%, 1993	600,000	22.81%	4.9	1.12		
Gen Mtg., 9.25%, 1996	750,000	28.52%	9.54	2.72		
Gen Mtg., 10.00%, 2004	920,000	34.98%	10.37	3.63		
Gen Mtg., 12.25%, 1985	360,000	13.69%	12.78	1.75		
Total	2,630,000	100.00%		9.22		
TOTAL		62.08%		9.22	5.72	
Preferred Stock						
Ser A, 5.25%, 1987	40,000	30.08%	5.63	1.69		
Ser B, 4.75%, 2013	93,000	69.92%	5.3	3.71		
Total	133,000	100.00%		5.40		
TOTAL		3.14%		5.40	0.17	
Common Equity						
Common Stock	1,046,700					
'Paid-in Capital	225,300					
Retained Earnings	201,805					
TOTAL	1,473,805	34.79%		14.50	5.04	
TOTAL CAPITAL	4,236,805	100.00%			10.93	

HINGHAM, MASSACHUSETTS  
Capitalization

Type of Capital	Privately Owned		1986		Weight Cost	Weight %
	Amount	Percent	Rate	Cost		
Long Term Debt						
1st Mtg, 4.70%, 1993	600,000	26.43%	4.9	1.30		
Gen Mtg., 9.25%, 1996	750,000	33.04%	9.54	3.15		
Gen Mtg., 10.00%, 2004	920,000	40.53%	10.37	4.20		
Total	2,270,000	100.00%		8.65		
TOTAL		58.55%		8.65	5.06	
Preferred Stock						
Ser A, 5.25%, 1987	40,000	30.08%	5.63	1.69		
Ser B, 4.75%, 2013	93,000	69.92%	5.3	3.71		
Total	133,000	100.00%		5.40		
TOTAL		3.43%		5.40	0.19	
Common Equity						
Common Stock	1,046,700					
'Paid-in Capital	225,300					
Retained Earnings	201,805					
TOTAL	1,473,805	38.02%		14.50	5.51	
TOTAL CAPITAL	3,876,805	100.00%			10.76	

HINGHAM, MASSACHUSETTS  
Capitalization

Type of Capital	Privately Owned		1989		Weight %
	Amount	Percent	Cost Rate	Weight Cost	
<b>Long Term Debt</b>					
1st Mtg, 4.70%, 1993	600,000	5.77%	4.9	0.28	
Gen Mtg., 9.25%, 1996	750,000	7.22%	9.54	0.69	
Gen Mtg., 10.00%, 2004	920,000	8.85%	10.37	0.92	
Gen Mtg., 12.25%, 2002	8,125,000	78.16%	13.69	10.70	
Total	10,395,000	100.00%		12.59	
TOTAL		63.63%		12.59	8.01
<b>Preferred Stock</b>					
Ser B, 4.75%, 2013	93,000	100.00%	5.3	5.30	
Total	93,000	100.00%		5.30	
TOTAL		0.57%		5.30	0.03
<b>Common Equity</b>					
Common Stock	5,421,700				
'Paid-in Capital	225,300				
Retained Earnings	201,805				
TOTAL	5,848,805	35.80%	14.50	5.19	
TOTAL CAPITAL	16,336,805	100.00%		13.23	
AVERAGE FIVE YEAR RATE OF RETURN				12.27	

HINGHAM, MASSACHUSETTS					
Capitalization					
TREATMENT PLANT					
Type of Capital	Privately Owned		1987		
	Amount	Percent	Cost Rate	Weight Cost	Weight %
Long Term Debt					
1st Mtg, 4.70%, 1993	600,000	5.77%	4.9	0.28	
Gen Mtg., 9.25%, 1996	750,000	7.22%	9.54	0.69	
Gen Mtg., 10.00%, 2004	920,000	8.85%	10.37	0.92	
Gen Mtg., 12.25%, 2002	8,125,000	78.16%	13.69	10.70	
Total	10,395,000	100.00%		12.59	
TOTAL		63.47%		12.59	7.99
Preferred Stock					
Ser A, 5.25%, 1987	40,000	30.08%	5.63	1.69	
Ser B, 4.75%, 2013	93,000	69.92%	5.3	3.71	
Total	133,000	100.00%		5.40	
TOTAL		0.81%		5.40	0.04
Common Equity					
Common Stock	5,421,700				
Paid-in Capital	225,300				
Retained Earnings	201,805				
TOTAL	5,848,805	35.71%		14.50	5.18
TOTAL CAPITAL	16,376,805	100.00%			13.21

HINGHAM, MASSACHUSETTS					
Capitalization					
TREATMENT PLANT					
Type of Capital	Privately Owned		1988		
	Amount	Percent	Cost Rate	Weight Cost	Weight %
Long Term Debt					
1st Mtg, 4.70%, 1993	600,000	5.77%	4.9	0.28	
Gen Mtg., 9.25%, 1996	750,000	7.22%	9.54	0.69	
Gen Mtg., 10.00%, 2004	920,000	8.85%	10.37	0.92	
Gen Mtg., 12.25%, 2002	8,125,000	78.16%	13.69	10.70	
Total	10,395,000	100.00%		12.59	
TOTAL		63.63%		12.59	8.01
Preferred Stock					
Ser B, 4.75%, 2013	93,000	100.00%	5.3	5.30	
Total	93,000	100.00%		5.30	
TOTAL		0.57%		5.30	0.03
Common Equity					
Common Stock	5,421,700				
Paid-in Capital	225,300				
Retained Earnings	201,805				
TOTAL	5,848,805	35.80%		14.50	5.19
TOTAL CAPITAL	16,336,805	100.00%			13.23

HINGHAM, MASSACHUSETTS					
Capitalization					
Type of Capital	Privately Owned		1985		
	Amount	Percent	Cost Rate	Weight Cost	Weight %
Long Term Debt					
1st Mtg, 4.70%, 1993	600,000	22.81%	4.9	1.12	
Gen Mtg., 9.25%, 1996	750,000	28.52%	9.54	2.72	
Gen Mtg., 10.00%, 2004	920,000	34.98%	10.37	3.63	
Gen Mtg., 12.25%, 1985	360,000	13.69%	12.78	1.75	
Total	2,630,000	100.00%		9.22	
TOTAL		62.08%		9.22	5.72
Preferred Stock					
Ser A, 5.25%, 1987	40,000	30.08%	5.63	1.69	
Ser B, 4.75%, 2013	93,000	69.92%	5.3	3.71	
Total	133,000	100.00%		5.40	
TOTAL		3.14%		5.40	0.17
Common Equity					
Common Stock	1,046,700				
'Paid-in Capital	225,300				
Retained Earnings	201,805				
TOTAL	1,473,805	34.79%		14.50	5.04
TOTAL CAPITAL	4,236,805	100.00%			10.93

HINGHAM, MASSACHUSETTS					
Capitalization					
Type of Capital	Privately Owned		1986		
	Amount	Percent	Cost Rate	Weight Cost	Weight %
Long Term Debt					
1st Mtg, 4.70%, 1993	600,000	26.43%	4.9	1.30	
Gen Mtg., 9.25%, 1996	750,000	33.04%	9.54	3.15	
Gen Mtg., 10.00%, 2004	920,000	40.53%	10.37	4.20	
Total	2,270,000	100.00%		8.65	
TOTAL		58.55%		8.65	5.06
Preferred Stock					
Ser A, 5.25%, 1987	40,000	30.08%	5.63	1.69	
Ser B, 4.75%, 2013	93,000	69.92%	5.3	3.71	
Total	133,000	100.00%		5.40	
TOTAL		3.43%		5.40	0.19
Common Equity					
Common Stock	1,046,700				
'Paid-in Capital	225,300				
Retained Earnings	201,805				
TOTAL	1,473,805	38.02%		14.50	5.51
TOTAL CAPITAL	3,876,805	100.00%			10.76

### Tax Calculations

This schedule is based on the Department of Public Utilities methodology to calculate the tax amounts allowed as part of a rate case. There is no tax calculation schedule for the municipal or district operation.

During the year 1988, with no treatment plant, the taxable income base is negative; therefore the only tax liability is the state tax minimum. We have assumed a maximum tax rate of 46 percent for the 5 years because the law has not been changed and we are unable to determine what the maximum will be during the five years; therefore, we have used 46 percent for consistency.

PLINGHAM, MASSACHUSETTS

Privately Owned  
No treatment plant  
Tax Calculations

	1985	1986	1987	1988	1989	Total Five Yrs	Five Yr. Average
Rate Base	3,944,344	3,858,017	5,721,904	5,574,068	5,484,003	24,582,337	4,916,467
Return Rate Base	431,268	415,215	672,822	657,780	647,152	2,824,236	564,847
Less: Interest Expense	225,632	195,402	457,762	448,991	441,736	1,769,523	353,905
Net Return on Rate Base	205,636	219,812	215,061	208,789	205,416	1,054,714	210,943
Add:							
Deferred Federal Inc. Tax	100,062	100,199	132,529	178,651	169,564	681,004	136,201
Investment Tax Cr.	23	24	13,359	27	29	13,462	2,692
Less:							
Additional Depr.	217,526	217,824	288,106	388,371	368,617	1,480,444	296,089
Taxable Income Base	88,194	102,211	72,842	(904)	6,391	268,736	53,747
Taxable income-Sch. J	72,094	81,003	60,082	(904)	5,432	248,486	33,497
Tax Inc. (net base/.5049)	142,790	160,435	118,999	(904)	10,759	492,149	66,344
State Tax	9,281	10,428	7,735	228	699	31,990	4,312
Net tax less state tax	133,508	150,006	111,264	(1,132)	10,060	460,159	62,032
Federal Income Tax	40,386	41,433	36,078	0	3,669	191,423	8,285
Net tax times 45%	61,414	69,003	51,181	0	4,628	211,673	28,535
Total Tax	49,667	51,861	43,813	228	4,368	223,413	12,597

HINGHAM, MASSACHUSETTS  
Privately Owned  
Treatment plant  
Tax Calculations

	1985	1986	1987	1988	1989	Total Five Yrs	Five Yr. Average
Rate Base	3,944,344	3,858,017	15,914,980	15,372,213	15,175,385	54,264,939	10,852,988
Return Rate Base	431,268	415,215	2,102,902	2,034,038	2,007,994	6,991,416	1,398,283
Less: Interest Expense	225,632	195,402	1,271,762	1,231,397	1,215,630	4,139,825	827,965
Net Return on Rate Base	205,636	219,812	831,140	802,641	792,364	2,851,592	570,318
Add:							
Deferred Federal Inc. Tax	100,062	100,199	301,579	589,201	531,814	1,622,854	324,571
Investment Tax Cr.	23	24	83,359	27	29	83,462	16,692
Less:							
Additional Depr.	217,526	217,824	655,606	1,280,871	1,156,117	3,527,944	705,589
Taxable Income Base	88,194	102,211	560,471	110,998	168,089	1,029,964	205,993
Taxable income-Sch. J	72,094	81,003	534,721	85,248	142,339	1,009,714	185,743
Tax Inc. (net base/.5049)	142,790	160,435	1,059,064	168,841	281,916	1,999,830	367,880
State Tax	9,281	10,428	68,839	10,975	18,325	129,989	23,912
Net tax less state tax	133,508	150,006	990,224	157,866	263,591	1,869,841	343,968
Federal Income Tax	35,664	43,253	429,753	46,868	95,502	839,877	137,975
Net tax times 46%	61,414	69,003	455,503	72,618	121,252	860,127	158,225
Total Tax	44,945	53,681	498,592	57,843	113,826	969,866	161,888

### Deferred Tax Calculation

This schedule is based on the actual company method of calculation prior years book and tax depreciation. There is not deferred tax calculation for the municipal and district operations. The data was provided to us during the last request for a rate increase. The current book depreciation rate is 1.5 percent per year based on a department of public utility ruling. The total book depreciation is a composite of the amounts for assets acquired prior to 1954, 1954 to 1984 and the addition of 2,000,000 and 12,500,000 for no treatment plant asset additions and the treatment plant asset addition, respectively.

The tax depreciation calculation is based on actual company experience through 1983 and estimated 1983 and 1984 of 10.4 percent. The addition for 1985 through 1989 were based on an ACRS life of 15 years for public utility tax purpose.

The difference between the book depreciation and tax depreciation results in the annual accelerated depreciation. The accelerated depreciation divided by the federal tax rate of 46 percent results in the annual deferred tax.

DEFERRED TAX CALCULATION

BOOK DEPRECIATION

		1985	1986	1987	1988	1989
Depr. prior 1954	1,800,031					
Rate	2.01%	36,181	36,181	36,181	36,181	36,181
Composite depr 54-84	4,146,508					
Rate	1.50%	62,198	62,198	62,198	62,198	62,198
Annual depr		51	106	30,164	30,225	30,290
Total book depr.		98,430	98,484	128,542	128,603	128,668

TAX DEPRECIATION

Depr prior 1954		36,256	36,256	36,256	36,256	36,256
Composite depr. 1954-82		161,280	161,280	161,280	161,280	161,280
Estimated 1983-84 (1,137,000x.104)		118,248	118,248	118,248	118,248	118,248
1985 additions	3,426	171	343	308	274	240
1986 additions	3,631		182	363	327	290
1987 additions	2,003,849			100,192	200,385	180,346
1988 additions	4,080				204	408
1989 additions	4,325					216
Total tax depr		315,955	316,308	416,648	516,974	497,285

ACCELERATED DEPRECIATION

DEFERRED FEDERAL TAX @ 46%		100,062	100,199	132,529	178,651	169,564
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		1985	1986	1987	1988	1989
DEFERRED TAX CALCULATION						
BOOK DEPRECIATION						
Depr. prior 1954	1,800,031					
Rate	2.01%	36,181	36,181	36,181	36,181	36,181
Composite depr 54-84	4,146,508					
Rate	1.50%	62,198	62,198	62,198	62,198	62,198
Annual depr		51	106	187,664	187,725	187,790
Total book depr.		98,430	98,484	286,042	286,103	286,168
TAX DEPRECIATION						
Depr prior 1954		36,256	36,256	36,256	36,256	36,256
Composite depr. 1954-82		161,280	161,280	161,280	161,280	161,280
Estimated 1983-84(1,137,000x.104)		118,248	118,248	118,248	118,248	118,248
1985 additions	3,426	171	343	308	274	240
1986 additions	3,631		182	363	327	290
1987 additions	12,503,849			625,192	1,250,385	1,125,346
1988 additions	4,080				204	408
1989 additions	4,325					216
Total tax depr		315,955	316,308	941,648	1,566,974	1,442,285
ACCELERATED DEPRECIATION						
		217,526	217,824	655,606	1,280,871	1,156,117
DEFERRED FEDERAL TAX @ 46%						
		100,062	100,199	301,579	589,201	531,814

### Depreciation Calculation

This schedule results in the calculation of the book depreciation. There is no depreciation schedule for municipal and district operations. The calculation is based on plant in service less contributed property. Contributed property is no longer depreciable according to recent Department of Public Utility decisions. The depreciation is based on 1.5 percent of total depreciable plant except for assets acquired prior to 1954. They are calculated at 2.01 percent. The annual additions for 1985 through 1989 include the capitalized payroll, transmission and distribution improvements and the water treatment plant on the second exhibit.

INGHAM, MASSACHUSETTS  
 DEPRECIATION CALCULATION  
 treatment plant

Privately owned

	1985	1986	1987	1988	1989
Plant in service	6,932,431	6,936,062	8,939,911	8,943,991	8,948,316
Contributed property	982,466	982,466	982,466	982,466	982,466
Total depreciable plant	5,949,965	5,953,596	7,957,445	7,961,525	7,965,850
Depreciation at 2.01% (1,800,031)	36,181	36,181	36,181	36,181	36,181
Depreciation of 1.5%/Yr	62,249	62,303	92,361	92,422	92,487
Annual Depreciation	98,430	98,484	128,542	128,603	128,668

INGHAM, MASSACHUSETTS  
 Plant in service summary

	1985	1986	1987	1988	1989
Beginning balance	6,929,005	6,932,431	6,936,062	8,939,911	8,943,991
Capitalized labor	3,426	3,631	3,849	4,080	4,325
Plant	0	0	2,000,000	0	0
Total additions	3,426	3,631	2,003,849	4,080	4,325
Ending Balance	6,932,431	6,936,062	8,939,911	8,943,991	8,948,316

reatment plant	1985	1986	1987	1988	1989
Plant in service	6,932,431	6,936,062	19,439,911	19,443,991	19,448,316
Contributed property	982,466	982,466	982,466	982,466	982,466
Total depreciable plant	5,949,965	5,953,596	18,457,445	18,461,525	18,465,850
Depreciation at 2.01%(1,800,031)	36,181	36,181	36,181	36,181	36,181
Depreciation of 1.5%/Yr	62,249	62,303	249,861	249,922	249,987
Annual Depreciation	98,430	98,484	286,042	286,103	286,168

HINGHAM, MASSACHUSETTS

Plant in service summary

	1985	1986	1987	1988	1989
Beginning balance	6,929,005	6,932,431	6,936,062	19,439,911	19,443,991
Additions					
Capitalized labor	3,426	3,631	3,849	4,080	4,325
plant	0	0	12,500,000	0	0
Total additions	3,426	3,631	12,503,849	4,080	4,325
Ending Balance	6,932,431	6,936,062	19,439,911	19,443,991	19,448,316

Rate Base

This schedule is based on the Department of Public Utilities order #1590-A for rate base. There is no rate base schedule for the municipal or district operation.

The rate base was developed from the 1983 annual report of the HWC. We assumed the same amount each year for the following accounts because we did not have the data to assume any change.

Contributions by customer

Material and Supply

The refundable construction advances was assumed to be reduced by \$10,000 per year. The unamortized investment credit pre 1971 was assumed to be reduced by \$2,000 per year.

The cash working capital is based on the operation and maintenance expenses less depreciation times 12.33 percent. This is the method approved by the D.P.U.

## HINGHAM, MASSACHUSETTS

Privately Owned - No treatment plant

Rate Base	1984	1985	1986	1987	1988	1989	Total	Five Year
							Five Yrs	Average
Plant in Service	6,929,005	6,932,431	6,936,062	8,939,911	8,943,991	8,948,316	40,700,711	8,140,142
Less: Accumulated Depr.	1,926,637	2,025,067	2,123,551	2,252,093	2,380,696	2,509,364	11,290,769	2,258,154
Net Plant	5,002,368	4,907,364	4,812,511	6,687,818	6,563,295	6,438,952	29,409,942	5,881,988
Less:								
Contributions by customer	982,466	982,466	982,466	982,466	982,466	982,466	4,912,330	982,466
Refundable Const. advances	102,898	92,898	82,898	72,898	62,898	52,898	364,490	72,898
Reserve for Deferred Tax	334,330	100,062	100,199	132,529	178,651	169,564	681,004	136,201
Unamort Inv Cr. Pre- 1971	30,977	28,977	26,977	24,977	22,977	20,977	124,885	24,977
Add:								
Ave. Material & Supply	45,113	45,113	45,113	45,113	45,113	45,113	225,565	45,113
Cash Working Capital	184,413	196,270	192,933	201,842	212,652	225,843	1,029,540	205,908
Rate Base	3,781,223	3,944,344	3,858,017	5,721,904	5,574,068	5,484,003	24,582,337	4,916,467

HINGHAM, MASSACHUSETTS  
Privately Owned - treatment plant

Rate Base	1984	1985	1986	1987	1988	1989	Total Five Yrs	Five Year Average
Plant in Service	6,929,005	6,932,431	6,936,062	19,439,911	19,443,991	19,448,316	72,200,711	14,440,142
Less: Accumulated Depr..	1,926,637	2,025,067	2,123,551	2,409,593	2,695,696	2,981,864	12,235,769	2,447,154
Net Plant	5,002,368	4,907,364	4,812,511	17,030,318	16,748,295	16,466,452	59,964,942	11,992,988
Less:								
Contributions by customer	982,466	982,466	982,466	982,466	982,466	982,466	4,912,330	982,466
Refundable Const.advances	102,898	92,898	82,898	72,898	62,898	52,898	364,490	72,898
Reserve for Deferred Tax	334,330	100,062	100,199	301,579	589,201	531,814	1,622,854	324,571
Unamort Inv Cr. Pre- 1971	30,977	28,977	26,977	24,977	22,977	20,977	124,885	24,977
Add:								
Ave. Material & Supply	45,113	45,113	45,113	45,113	45,113	45,113	225,565	45,113
Cash Working Capital	184,413	196,270	192,933	221,468	236,346	251,974	1,098,991	219,798
							0	0
							0	0
							0	0
							0	0
Rate Base	3,781,223	3,944,344	3,858,017	15,914,980	15,372,213	15,175,385	54,264,939	10,852,988

Cost Allocation - Base Extra Capacity Method

This schedule is a result of the allocation of the costs by class of customer. Each of the classes was calculated as follows.

Fire protection - The amount was obtained from two sources. The schedule on allocation of operation and maintenance expenses - fire protection column and the line "Gen/adm. allocation" expense proportionately to each of the classes of customers based on the amount of actual expenses of the source of supply, pumping, purification and transmission and distribution.

Customer service charge - The amount is based on the direct allocation of customer related charges and the proportionate allocation of general and miscellaneous expenses. The direct allocations include the following accounts:

- 607-Inspect customer installation
- 609.4-Maintenance of service
- 609.5 -Maintenance of meters
- 610.10 - Salary officers and clerks
- 610.3 - Law expense
- 610.4 - Insurance

The municipal and district 610.1 and 610.4 accounts were allocated on the percentage relationship of salaries for customer service to total salaries. The private 610.1 and 610.4 accounts were allocated based on 90 percent of the total because of the service company charges.

Wholesale customer amount - No wholesale amounts were allocated to

private or district because of the small amounts. The municipal wholesale represents that portion of the Hull allocated costs less any expenses that would be spent directly by Hull for their own billing, meter reading and in town service costs.

Base and extra costs - The amounts are based on various allocation methods depending on the account. The total amounts for base and extra are a summary of the detailed allocations.

Source of supply cost was based on allocating the water usage for the percentage relationship of average to maximum daily demand. The result was an allocation of 52.4% to base and 47.6% to extra capacity.

Pumping cost was based on the relationship of average daily usage to maximum daily usage.

Purification cost was based on the relationship of average daily usage to maximum daily usage.

Transmission and distribution costs were allocated based on the accounts in the category as follows.

.Misc. trans and dist. exp. - based on the relationship of average daily usage to maximum daily usage.

.Maint. of trans and dist. mains - based on the relationship of average daily usage to maximum daily usage.

.Maint. storage, reservoir tanks - total amount allocated to extra capacity.

General and miscellaneous expense was allocated based on the percentage relationship of all expenses allocated above.

Uncollectible operating expense was allocated 100% to customer charges for the private company. Since the municipal and the district have the power of placing liens on property no uncollectible amounts are anticipated.

Payroll taxes were allocated to fire protection and to general services. The general services portion was further allocated based on the percentage of customer accounts salary to total salary and to base and extra capacity based on maximum day usage to average day demand.

Property taxes were allocated to fire protection and general services. The general services portion was further allocated based on the percentage relationship of maximum day to average day demand.

Depreciation is allocated to fire protection and general services. The general service portion was further allocated based on the percentage relationship of maximum day to average day demand.

Other taxes were allocated to fire protection and general services. The general services were further allocated on the relationship of the average daily usage to maximum daily demand.

Rate of Return is based on the percentage relationship of total expenses.

MUNICIPALLY OWNED - HINGHAM COST ALLOCATION - BASE-EXTRA CAPACITY METHOD

HINGHAM

No treatment plant

DESCRIPTION	ACCOUNT NUMBER	TOTAL	BASE COSTS % AMOUNT	TOTAL COST % AMOUNT	EXTRA CAPACITY % AMOUNT	FIRE PROTECT % AMOUNT	WHOLESALE CUSTOMER % AMOUNT	CUSTOMER CHARGES % AMOUNT
<b>SOURCE OF SUPPLY</b>								
Water supply build/fix	601.1	0	0	0	0	0	0	0
Maint of surface source	601.2	0	0	0	0	0	0	0
Maint. of Water Sup.	601.3							
<b>TOTAL SOURCE OF SUPPLY</b>		13,109	52.4%	6,869	6,240	6,109	10% 131	0
<b>PUMPING</b>								
Pumping Labor	603.1	47,772						
Boiler Fuel	603.2	349						
Purchased power	603.4	107,834						
Pumping station supply	603.5	6,455						
Power pump build/fix	604.1	12,215						
Maint, pumping equip	604.2	3,612						
<b>TOTAL PUMPING</b>		178,236	52.4%	71,915	106,321	65,327	23% 40,994	
<b>PURIFICATION</b>								
Labor	605.1	46,321						
Supplies and expense	605.2	82,192						
Maint building/fixtures	606.1	751						
Maintenance equipment	606.2	5,357						
<b>TOTAL PURIFICATION</b>		134,621	52.4%	70,541	64,079	62,733	1% 1,346	0
<b>TRANSMISSION AND DIST.</b>								
Inspect customer install	607	129			3		3	126
Misc trans & dist exp	608	18,846	52.4%	9,876	8,971	8,971	0%	
Maint.Trans & Dist Mains	609.2	43,564	52.4%	17,577	25,987	15,967	23% 10,020	
Maint/Stor,Reserv,Tank	609.3	3,291			3,291	2,534	23% 757	
Maint. of Services	609.4	23,990			0			100.0% 23,990
Maint. of Meters	609.5	33,061			0			100.0% 33,061
Maint. of Hydrants	609.6	194		2	192		99% 192	
<b>TOTAL TRANS AND DIST.</b>		123,074		27,455	38,443	27,472	10,971	0
<b>GENERAL AND MISCELLANEOUS</b>								
Salary-officers & clerks	610.1	197,542			0			52,546
Gen. office supply & exp.	610.2	95,856			0			95,856
Law Expense - General	610.3	85,889			0			85,889
Insurance	610.4	32,020			0			8,517
Accidents and Damages	610.5	0			0			0
Stores expense	610.6	0			0			0
Customer Charges	610.8	9,203			0			9,203
Maint of general structure	610.9	1,913			5,465		5,465	
Gen/adn allocation		0	39.4%	70,963	86,339	36.0%	64,886	11.9%
Miscellaneous general exp.	610.11	112,079			96,772		21,453	0.0%
<b>TOTAL GENERAL AND MISC.</b>		534,503		70,963	188,576	64,886	123,691	0
Hull Wholesale		507,682						507,682
<b>TOTAL OPERATING EXPENSES</b>		983,543		247,742	403,660	226,527	177,133	0
Uncollect operat revenue		0						
Payroll taxes		24,432		6,318	9,644	5,777	15.8%	3,867
Property taxes		63,135	52.4%	27,093	36,042	47.6%	24,611	18.1%
Other taxes		0						
Depreciation	610.1	0						
<b>TOTAL EXPENSES</b>		1,071,110		281,153	449,346	256,915	192,431	0
DEBT SERVICE		547,419		143,446	230,191	131,080	18.1%	99,111
<b>TOTAL REVENUE REQUIREMENTS</b>		2,126,211	0	424,600	679,537	387,995	291,542	507,682

1 AM. SBAC. TTTS  
 FEASIBILITY STUDY  
 COST ALLOCATION - BASE-EXTRA CAPACITY METHOD

HINGHAM

PRIVATELY OWNED - HINGHAM  
 No treatment plant  
 DESCRIPTION

ACCOUNT NUMBER	TOTAL	BASE COSTS % AMOUNT	TOTAL COST % AMOUNT	EXTRA CAPACITY % AMOUNT	FIRE PROTECT % AMOUNT	WHOLESALE CUSTOMER % AMOUNT	CUSTOMER CHARGES % AMOUNT	
<b>SOURCE OF SUPPLY</b>								
Water supply build/fix	601.1	0	0	0	0	0	0	
Maint of surface source	601.2	0	0	0	0	0	0	
Maint. of Water Sup.	601.3							
<b>TOTAL SOURCE OF SUPPLY</b>	<b>14,816</b>	<b>52.4%</b>	<b>7,764</b>	<b>7,053</b>	<b>6,904</b>	<b>148</b>	<b>0</b>	
<b>PUMPING</b>								
Pumping Labor	603.1	68,450						
Boiler Fuel	603.2	349						
Purchased power	603.4	107,834						
Pumping station supply	603.5	6,932						
Power pump build/fix	604.1	17,000						
Maint. pumping equip	604.2	4,694						
<b>TOTAL PUMPING</b>	<b>205,259</b>	<b>52.4%</b>	<b>82,818</b>	<b>122,441</b>	<b>75,232</b>	<b>47,210</b>		
<b>PURIFICATION</b>								
Labor	605.1	66,393						
Supplies and expense	605.2	77,057						
Maint building/fixtures	606.1	989						
Maintenance equipment	606.2	7,213						
<b>TOTAL PURIFICATION</b>	<b>151,652</b>	<b>52.4%</b>	<b>79,466</b>	<b>72,186</b>	<b>70,670</b>	<b>1,517</b>	<b>0</b>	
<b>TRANSMISSION AND DIST.</b>								
Inspect customer install	607	185		4		4	181	
Misc trans & dist exp	608	26,286	52.4%	13,774	12,512	12,512		
Maint.Trans & Dist Mains	609.2	59,812	52.4%	24,133	35,679	21,922	13,757	
Maint/Stor,Reserv,Tank	609.3	3,680			3,680	2,833	846	
Maint. of Services	609.4	32,119			0	0	100.0% 32,119	
Maint. of Meters	609.5	45,183			0	0	100.0% 45,183	
Maint. of Hydrants	609.6	276		3	274	274		
				0	0	0		
<b>TOTAL TRANS AND DIST.</b>	<b>167,541</b>		<b>37,909</b>	<b>52,148</b>	<b>37,268</b>	<b>14,880</b>	<b>0</b>	
<b>GENERAL AND MISCELLANEOUS</b>								
Salary-officers & clerks	610.1	211,893			0		190,704	
Gen. office supply & exp.	610.2	75,071			0		75,071	
Law Expense - General	610.3	1,630			0		1,630	
Insurance	610.4	79,453			0		71,507	
Accidents and Damages	610.5	0			0			
Stores expense	610.6	0			0			
Inventory adjustments	610.8	0			0			
Maint of general structure	610.9	636			7,623	7,623		
Gen/adn allocation		0	38.6%	1,552	1,895	35.2% 1,419	11.8% 476	0.0% 0
Miscellaneous general exp.	610.11	59,379			77,501	77,501		
<b>TOTAL GENERAL AND MISC.</b>	<b>428,062</b>		<b>1,552</b>	<b>87,019</b>	<b>1,419</b>	<b>85,600</b>	<b>0</b>	
<b>TOTAL OPERATING EXPENSES</b>	<b>967,330</b>		<b>209,509</b>	<b>340,847</b>	<b>191,492</b>	<b>149,355</b>	<b>0</b>	
Uncollect operat revenue		4,080					100.0% 4,080	
Payroll taxes		34,818	52.4%	11,516	17,425	47.6% 10,461	6,964	
Property taxes		202,996	52.4%	87,111	115,884	47.6% 79,132	36,753	
Other taxes		17,507	52.4%	7,513	9,994	47.6% 6,824	3,170	
Depreciation	610.1	83,097	52.4%	35,659	47,438	47.6% 32,393	15,045	
<b>TOTAL EXPENSES</b>	<b>1,309,827</b>		<b>351,308</b>	<b>531,587</b>	<b>320,302</b>	<b>211,285</b>	<b>0</b>	
RATE OF RETURN		340,571		89,194	142,983	81,322	61,661	
<b>TOTAL REVENUE REQUIREMENTS</b>	<b>1,650,398</b>		<b>440,503</b>	<b>674,570</b>	<b>401,624</b>	<b>272,946</b>	<b>0</b>	

HINGHAM, MASSACHUSETTS  
FEASIBILITY STUDY

COST ALLOCATION - BASE-EXTRA CAPACITY METHOD

HINGHAM

PRIVATELY OWNED - HULL  
No treatment plant  
DESCRIPTION

ACCOUNT NUMBER	TOTAL	BASE COSTS % AMOUNT	TOTAL COST % AMOUNT	EXTRA CAPACITY % AMOUNT	FIRE PROTECT % AMOUNT	WHOLESALE CUSTOMER % AMOUNT	CUSTOMER CHARGES % AMOUNT
<b>SOURCE OF SUPPLY</b>							
Water supply build/fix	601.1	0	0	0	0	0	0
Maint. of surface source	601.2	0	0	0	0	0	0
Maint. of Water Sup.	601.3						
<b>TOTAL SOURCE OF SUPPLY</b>	<b>11,100</b>	<b>52.4%</b>	<b>5,816</b>	<b>5,284</b>	<b>5,173</b>	<b>111</b>	<b>0</b>
<b>PUMPING</b>							
Pumping Labor	603.1	51,281					
Boiler Fuel	603.2	208					
Purchased power	603.4	62,977					
Pumping station supply	603.5	5,193					
Power pump build/fix	604.1	12,736					
Maint. pumping equip	604.2	3,516					
<b>TOTAL PUMPING</b>	<b>135,911</b>	<b>52.4%</b>	<b>54,837</b>	<b>81,074</b>	<b>49,814</b>	<b>31,259</b>	
<b>PURIFICATION</b>							
Labor	605.1	49,740					
Supplies and expense	605.2	0					
Maint building/fixtures	606.1	774					
Maintenance equipment	606.2	5,403					
<b>TOTAL PURIFICATION</b>	<b>55,917</b>	<b>52.4%</b>	<b>29,301</b>	<b>26,617</b>	<b>26,058</b>	<b>559</b>	<b>0</b>
<b>TRANSMISSION AND DIST.</b>							
Inspect customer install	607	138					
Misc trans & dist exp	608	14,030	52.4%	7,352	6,678		136
Maint.Trans & Dist Mains	609.2	31,924	52.4%	12,881	19,043	7,343	
Maint/Stor,Reserv,Tank	609.3	3,537			3,537	814	
Maint. of Services	609.4	24,033			0	0	100.0% 24,033
Maint. of Meters	609.5	113,577			0	0	100.0% 113,577
Maint. of Hydrants	609.6	160		2	159	159	
<b>TOTAL TRANS AND DIST.</b>	<b>187,400</b>	<b>100.0%</b>	<b>20,234</b>	<b>29,420</b>	<b>21,103</b>	<b>8,318</b>	<b>0</b>
<b>GENERAL AND MISCELLANEOUS</b>							
Salary-officers & clerks	610.1	147,126					132,414
Gen. office supply & exp.	610.2	52,125					52,125
Law Expense - General	610.3	1,259					1,259
Insurance	610.4	63,558					57,202
Accidents and Damages	610.5	0					
Stores expense	610.6	0					
Inventory adjustments	610.8	0					
Maint of general structure	610.9	491			4,069	4,069	
Gen/adn allocation		0	28.2%	2,457	3,175	897	0 35.3% 3,071
Miscellaneous general exp.	610.11	47,758			56,545	56,545	
<b>TOTAL GENERAL AND MISC.</b>	<b>312,317</b>		<b>2,457</b>	<b>63,789</b>	<b>2,278</b>	<b>61,511</b>	<b>0</b>
<b>TOTAL OPERATING EXPENSES</b>	<b>702,645</b>		<b>112,645</b>	<b>206,183</b>	<b>104,425</b>	<b>101,759</b>	<b>0</b>
Uncollect operat revenue		3,602					100.0% 3,602
Payroll taxes		28,672	52.4%	9,483	14,349	8,615	21.1% 4,840
Property taxes		81,711	52.4%	35,970	45,741	32,675	
Other taxes		12,481	52.4%	5,494	6,987	4,991	
Depreciation	610.1	33,449	52.4%	14,724	18,724	13,376	
<b>TOTAL EXPENSES</b>	<b>862,559</b>		<b>178,317</b>	<b>291,984</b>	<b>164,081</b>	<b>127,903</b>	<b>0</b>
<b>RATE OF RETURN</b>	<b>224,276</b>		<b>60,254</b>	<b>90,798</b>	<b>54,936</b>	<b>35,862</b>	<b>0</b>

DISTRICT OWNED - HINGHAM		COST ALLOCATION - BASE-EXTRA CAPACITY METHOD						HINGHAM							
No treatment plant		ACCOUNT		BASE COSTS		TOTAL COST		EXTRA CAPACITY		FIRE PROTECT		WHOLESALE CUSTOMER		CUSTOMER CHARGES	
DESCRIPTION		NUMBER	TOTAL	%	AMOUNT	%	AMOUNT	%	AMOUNT	%	AMOUNT	%	AMOUNT	%	AMOUNT
SOURCE OF SUPPLY															
Water supply build/fix	601.1		0		0		0		0		0		0		0
Maint of surface source	601.2		0		0		0		0		0		0		0
Maint. of Water Sup.	601.3														
TOTAL SOURCE OF SUPPLY			14,182	52.4%	7,431		6,751		6,609		142		0		0
PUMPING															
Pumping Labor	603.1		59,270												
Boiler Fuel	603.2		0												
Purchased power	603.4		107,834												
Pumping station supply	603.5		6,789												
Power pump build/fix	604.1		14,913												
Maint. pumping equip	604.2		3,902												
TOTAL PUMPING			192,708	52.4%	77,754		114,954		70,631		44,323				
PURIFICATION															
Labor	605.1		57,481												
Supplies and expense	605.2		83,545												
Maint building/fixtures	606.1		886												
Maintenance equipment	606.2		6,398												
TOTAL PURIFICATION			148,310	52.4%	77,714		70,596		69,113		1,483		0		
TRANSMISSION AND DIST.															
Inspect customer install	607		160				3				3				157
Misc trans & dist exp	608		23,006	52.4%	12,055		10,951		10,951						
Maint. Trans & Dist Mains	609.2		52,666	52.4%	21,250		31,416		19,303		12,113				
Maint/Stor, Reserv, Tank	609.3		3,509				3,509		2,702		807				
Maint. of Services	609.4		28,575				0		0		0			100.0%	28,575
Maint. of Meters	609.5		40,724				0		0		0			100.0%	40,724
Maint. of Hydrants	609.6		240		2		238		0		238				
TOTAL TRANS AND DIST.			148,880		33,307		46,117		32,956		13,161		0		69,456
GENERAL AND MISCELLANEOUS															
Salary-officers & clerks	610.1		154,897				0								53,130
Gen. office supply & exp.	610.2		67,004				0								67,004
Outside professional exp.	610.3		19,148				0								19,148
Insurance	610.4		32,102				0								11,011
Accidents and Damages	610.5		0				0								
Stores expense	610.6		0				0								
Customer charges	610.8		9,203				0								9,203
Maint of general structure	610.9		1,273				6,672				6,672				
Gen/adn allocation			0	38.9%	50,065		60,835	35.6%	45,753	11.7%	15,082	0.0%	0	13.8%	17,723
Miscellaneous general exp.	610.11		76,334				65,171				65,171				
TOTAL GENERAL AND MISC.			359,961		50,065		132,678		45,753		86,926		0		177,218
TOTAL OPERATING EXPENSES			864,042		246,271		371,096		225,062		146,035		0		246,674
Uncollect operat revenue			0												
Payroll taxes			30,365	52.4%	5,824		11,363	47.6%	5,290		6,073				13,179
Property taxes			202,996	52.4%	87,111		115,884	47.6%	79,132		36,753				
Other taxes			0												
Depreciation	610.1														
TOTAL EXPENSES			1,097,403		339,206	0	498,344		309,483	0	188,860	0	0	0	259,853
DEBT SERVICE			608,583		186,078		279,958		169,773	18.0%	110,185				142,547
TOTAL REVENUE REQUIREMENTS			1,705,987		525,285	0	778,302		479,257	0	299,045	0	0	0	402,400





HINGHAM, MASSACHUSETTS  
 FEASIBILITY STUDY  
 COST ALLOCATION - BASE-EXTRA CAPACITY METHOD

PRIVATELY OWNED - HINGHAM  
 Treatment plant  
 DESCRIPTION

HINGHAM

ACCOUNT NUMBER	TOTAL	BASE COSTS % AMOUNT	TOTAL COST % AMOUNT	EXTRA CAPACITY % AMOUNT	FIRE PROTECT % AMOUNT	WHOLESALE CUSTOMER % AMOUNT	CUSTOMER CHARGES % AMOUNT
<b>SOURCE OF SUPPLY</b>							
Water supply build/fix	601.1	0	0	0	0	0	0
Maint of surface source	601.2	0	0	0	0	0	0
Maint. of Water Sup.	601.3						
<b>TOTAL SOURCE OF SUPPLY</b>	<b>16,682</b>	<b>52.4%</b>	<b>8,741</b>	<b>7,941</b>	<b>7,774</b>	<b>167</b>	<b>0</b>
<b>PUMPING</b>							
Pumping Labor	603.1	69,938					
Boiler Fuel	603.2	349					
Purchased power	603.4	131,067					
Pumping station supply	603.5	7,810					
Power pump build/fix	604.1	17,306					
Maint. pumping equip	604.2	4,766					
<b>TOTAL PUMPING</b>	<b>231,235</b>	<b>52.4%</b>	<b>93,299</b>	<b>137,937</b>	<b>84,752</b>	<b>53,184</b>	
<b>PURIFICATION</b>							
Labor	605.1	67,838					
Supplies and expense	605.2	101,808					
Maint building/fixtures	606.1	1,003					
Maintenance equipment	606.2	19,601					
<b>TOTAL PURIFICATION</b>	<b>190,249</b>	<b>52.4%</b>	<b>99,691</b>	<b>90,559</b>	<b>88,656</b>	<b>1,902</b>	<b>0</b>
<b>TRANSMISSION AND DIST.</b>							
Inspect customer install	607	189					185
Misc trans & dist exp	608	26,815	52.4%	14,051	12,764		
Maint.Trans & Dist Mains	609.2	60,922	52.4%	24,581	36,341	14,012	
Maint/Stor,Reserv,Tank	609.3	3,705			3,705	852	
Maint. of Services	609.4	32,609			0	0	100.0%
Maint. of Meters	609.5	46,125			0	0	100.0%
Maint. of Hydrants	609.6	281		3	279	279	
				0	0	0	
<b>TOTAL TRANS AND DIST.</b>	<b>170,646</b>		<b>38,634</b>	<b>53,092</b>	<b>37,946</b>	<b>15,147</b>	<b>0</b>
<b>GENERAL AND MISCELLANEOUS</b>							
Salary-officers & clerks	610.1	215,182			0		193,664
Gen. office supply & exp.	610.2	76,210			0		76,210
Law Expense - General	610.3	1,981			0		1,981
Insurance	610.4	80,455			0		72,409
Accidents and Damages	610.5	0			0		0
Stores expense	610.6	0			0		0
Inventory adjustments	610.8	0			0		0
Maint of general structure	610.9	643			7,776		
Gen/adn allocation		0	39.5%	17,512	21,094	36.0%	15,965
Miscellaneous general exp.	610.11	60,563			38,638	11.6%	5,129
<b>TOTAL GENERAL AND MISC.</b>	<b>435,035</b>		<b>17,512</b>	<b>67,508</b>	<b>15,965</b>	<b>51,543</b>	<b>0</b>
<b>TOTAL OPERATING EXPENSES</b>	<b>1,043,848</b>		<b>257,878</b>	<b>357,037</b>	<b>235,093</b>	<b>121,943</b>	<b>0</b>
Uncollect operat revenue		4,355					100.0%
Payroll taxes		35,508	52.4%	11,744	17,770	47.6%	10,668
Property taxes		314,581	52.4%	150,200	164,381	47.6%	136,441
Other taxes		89,775	52.4%	42,864	46,911	47.6%	38,938
Depreciation	610.1	150,475	52.4%	71,846	78,629	47.6%	65,265
<b>TOTAL EXPENSES</b>	<b>1,638,543</b>		<b>534,533</b>	<b>664,728</b>	<b>486,406</b>	<b>178,322</b>	<b>0</b>
<b>RATE OF RETURN</b>		<b>860,813</b>		<b>287,125</b>	<b>337,727</b>	<b>261,274</b>	<b>76,453</b>

HINGHAM, MASSACHUSETTS

FEASIBILITY STUDY

COST ALLOCATION - BASE-EXTRA CAPACITY METHOD

HINGHAM

PRIVATELY OWNED - HULL

Treatment plant  
DESCRIPTION

ACCOUNT NUMBER	TOTAL	%	BASE COSTS AMOUNT	%	TOTAL COST AMOUNT	%	EXTRA CAPACITY AMOUNT	%	FIRE PROTECT AMOUNT	%	WHOLESALE CUSTOMER AMOUNT	%	CUSTOMER CHARGES AMOUNT
<b>SOURCE OF SUPPLY</b>													
Water supply build/fix	601.1	0	0		0		0		0		0		0
Maint of surface source	601.2	0	0		0		0		0		0		0
Maint. of Water Sup.	601.3												
<b>TOTAL SOURCE OF SUPPLY</b>		12,498	52.4%	6,549		5,949		5,824		125		0	0
<b>PUMPING</b>													
Pumping Labor	603.1	52,395											
Boiler Fuel	603.2	208											
Purchased power	603.4	76,545											
Pumping station supply	603.5	5,851											
Power pump build/fix	604.1	12,965											
Maint. pumping equip	604.2	3,571											
<b>TOTAL PUMPING</b>		151,535	52.4%	61,141		90,393		55,540		34,853			
<b>PURIFICATION</b>													
Labor	605.1	50,822											
Supplies and expense	605.2	0											
Maint building/fixtures	606.1	785											
Maintenance equipment	606.2	14,684											
<b>TOTAL PURIFICATION</b>		66,291	52.4%	34,737		31,555		30,892		663		0	
<b>TRANSMISSION AND DIST.</b>													
Inspect customer install	607	141				3				3			139
Misc trans & dist exp	608	14,312	52.4%	7,500		6,813		6,813					
Maint.Trans & Dist Mains	609.2	32,516	52.4%	13,120		19,397		11,918		7,479			
Maint/Stor,Reserv,Tank	609.3	3,563				3,563		2,743		819			
Maint. of Services	609.4	24,400				0		0		0		100.0%	24,400
Maint. of Meters	609.5	115,940				0		0		0		100.0%	115,940
Maint. of Hydrants	609.6	163		2		161				161			
			100.0%	0		0		0					
<b>TOTAL TRANS AND DIST.</b>		191,035		20,621		29,936		21,474		8,462		0	140,478
<b>GENERAL AND MISCELLANEOUS</b>													
Salary-officers & clerks	610.1	149,410				0							134,469
Gen. office supply & exp.	610.2	52,916				0							52,916
Law Expense - General	610.3	1,530				0							1,530
Insurance	610.4	64,360				0							57,924
Accidents and Damages	610.5	0				0							
Stores expense	610.6	0				0							
Customer charges	610.8	0				0							0
Maint of general structure	610.9	497				4,151				4,151			
Gen/adn allocation		0	29.2%	11,906		15,272	27.0%	11,005	10.5%	4,268	0.0%	0	33.3% 13,593
Miscellaneous general exp.	610.11	48,710				25,662				25,662			
<b>TOTAL GENERAL AND MISC.</b>		317,423		11,906		45,085		11,005		34,080		0	260,431
<b>TOTAL OPERATING EXPENSES</b>													
Uncollect operat revenue		3,845											100.0% 3,845
Payroll taxes		29,240	52.4%	9,671		14,633	47.6%	8,785		5,848			21.1% 4,936
Property taxes		126,627	52.4%	60,988		65,638	47.6%	55,401		10,237			
Other taxes		64,002	52.4%	30,826		33,176	47.6%	28,002		5,174			
Depreciation	610.1	60,570	52.4%	29,173		31,397	47.6%	26,500		4,897			
<b>TOTAL EXPENSES</b>		1,023,066		265,612		347,763		243,424		104,339	0	0	409,690
<b>RATE OF RETURN</b>		537,470		180,842		208,011		164,560		43,451			148,617
<b>TOTAL REVENUE REQUIREMENTS</b>		1,560,536		446,454		555,774		407,984		147,790			550,221

HINGHAM, MASSACHUSETTS  
FEASIBILITY STUDY

COST ALLOCATION - BASE-EXTRA CAPACITY METHOD

HINGHAM

DISTRICT OWNED - HINGHAM  
Treatment plant  
DESCRIPTION

ACCOUNT NUMBER	TOTAL	%	BASE COSTS AMOUNT	%	TOTAL COST AMOUNT	%	EXTRA CAPACITY AMOUNT	%	FIRE PROTECT AMOUNT	%	WHOLESALE CUSTOMER AMOUNT	%	CUSTOMER CHARGES AMOUNT	
SOURCE OF SUPPLY														
Water supply build/fix	601.1	0	0		0		0		0		0		0	
Maint of surface source	601.2	0	0		0		0		0		0		0	
Maint. of Water Sup.	601.3													
<b>TOTAL SOURCE OF SUPPLY</b>		16,031	52.4%	8,400		7,631	7,471		160		0		0	
PUMPING														
Pumping Labor	603.1	60,504												
Boiler Fuel	603.2	0												
Purchased power	603.4	131,067												
Pumping station supply	603.5	7,667												
Power pump build/fix	604.1	15,167												
Maint. pumping equip	604.2	3,962												
<b>TOTAL PUMPING</b>		218,367	52.4%	88,107		130,260	80,036		50,224					
PURIFICATION														
Labor	605.1	58,680												
Supplies and expense	605.2	110,683												
Maint building/fixtures	606.1	897												
Maintenance equipment	606.2	18,767												
<b>TOTAL PURIFICATION</b>		189,026	52.4%	99,050		89,976	88,086		1,890		0			
TRANSMISSION AND DIST.														
Inspect customer install	607	164				3							160	
Disc trans & dist exp	608	23,448	52.4%	12,287		11,161	11,161				3			
Maint. Trans & Dist Mains	609.2	53,591	52.4%	21,623		31,968	19,642		12,326					
Maint/Stor, Reserv, Tank	609.3	3,531				3,531	2,719		812					
Maint. of Services	609.4	28,983				0			0			100.0%	28,983	
Maint. of Meters	609.5	41,537				0			0			100.0%	41,537	
Maint. of Hydrants	609.6	244				2			242					
<b>TOTAL TRANS AND DIST.</b>		151,497		33,912		46,905	33,522		13,383		0		70,680	
GENERAL AND MISCELLANEOUS														
Salary-officers & clerks	610.1	157,627				0							54,066	
Gen. office supply & exp.	610.2	67,951				0							67,951	
Outside professional exp.	610.3	19,499				0							19,499	
Insurance	610.4	32,932				0							11,296	
Accidents and Damages	610.5	0				0								
Stores expense	610.6	0				0								
Customer charges	610.8	9,203				0							9,203	
Maint of general structure	610.9	1,293				6,800			6,800					
Gen/adn allocation		0	39.9%	65,854		78,855	36.4%	60,012	11.4%	18,843	0.0%	0	12.3%	20,284
Miscellaneous general exp.	610.11	77,840				32,537			32,537					
<b>TOTAL GENERAL AND MISC.</b>		366,344		65,854		118,192	60,012		58,180		0		182,298	
TOTAL OPERATING EXPENSES														
Collect operat revenue		941,265		295,322		392,964	269,127		123,838		0		252,978	
Payroll taxes		30,938	52.4%	5,933		11,577	47.6%	5,390	6,188				13,427	
Property taxes		314,581	52.4%	150,005		164,576	47.6%	136,264	28,312					
Other taxes		0				0			0					
Depreciation	610.1													
<b>TOTAL EXPENSES</b>		1,286,783		451,260	0	569,118	410,780	0	158,337	0	0	0	266,405	
WWT SERVICE		1,140,270		414,950		480,351	377,727	9.0%	102,624		0		244,969	
<b>TOTAL REVENUE REQUIREMENTS</b>		2,427,053		866,210	0	1,049,469	788,507	0	260,962	0	0	0	511,374	

HINGHAM, MASSACHUSETTS  
FEASIBILITY STUDY

COST ALLOCATION - BASE-EXTRA CAPACITY METHOD

HINGHAM

DISTRICT OWNED - HULL  
reatment plant  
DESCRIPTION

ACCOUNT NUMBER	TOTAL	BASE COSTS %	TOTAL COST AMOUNT	EXTRA CAPACITY %	FIRE PROTECT AMOUNT	WHOLESALE CUSTOMER AMOUNT	CUSTOMER CHARGES AMOUNT
SOURCE OF SUPPLY							
Water supply build/fix	601.1	0	0	0	0	0	0
Point of surface source	601.2	0	0	0	0	0	0
Point of Water Sup.	601.3						
TOTAL SOURCE OF SUPPLY		52.4%	6,293		120	0	0
PUMPING							
Pumping Labor	603.1						
Boiler Fuel	603.2						
Purchased power	603.4						
Pumping station supply	603.5						
Power pump build/fix	604.1						
Point. pumping equip	604.2						
TOTAL PUMPING		52.4%	57,273		32,648	0	0
PURIFICATION							
Labor	605.1						
Supplies and expense	605.2						
Point building/fixtures	606.1						
Maintenance equipment	606.2						
TOTAL PURIFICATION		52.4%	30,770		587	0	0
TRANSMISSION AND DIST.							
Inspect customer install	607						
Sc trans & dist exp	608						120
Int. Trans & Dist Mains	609.2	52.4%	6,558				
Int./Stor, Reserv, Tank	609.3						
Int. of Services	609.4						
Int. of Meters	609.5						100.0% 21,686
Int. of Hydrants	609.6						100.0% 101,995
TOTAL TRANSMISSION AND DIST.		100.0%	0		140	0	0
GENERAL AND MISCELLANEOUS							
Salary-officers & clerks	610.1						
Office supply & exp.	610.2						37,540
Outside professional Exp.	610.3						47,181
Insurance	610.4						15,055
Accidents and Damages	610.5						9,036
Repairs expense	610.6						0
Customer charges	610.8						6,510
Int of general structure	610.9						998
Gen/adm allocation							0
Miscellaneous general exp.	610.11	29.5%	37,617				13,669
TOTAL GENERAL AND MISC.			37,617		34,807	38,976	41,419
OPERATING EXPENSES							
Collect operat revenue			150,054				280,542
Roll taxes		52.4%	6,101				8,739
Property taxes		52.4%	61,044				0
Water taxes							0
Depreciation	610.1						0
TOTAL EXPENSES			217,199		199,841	95,058	289,281
NET SERVICE			187,031		172,084	52,888	249,101
TOTAL REVENUE REQUIREMENTS			404,230		371,925	147,946	538,382

Allocation of Operation and Maintenance Expense-Fire/Non-Fire

This schedule allocates the operation and maintenance expenses between fire protection and general service costs for use in the cost allocation process. The methods of allocation are as follows:

Source of supply - allocated on the basis of estimated use of water for fire protection. No records were available as to actual usage, however, industry experience is 1% fire and 99% non-fire.

Pumping - allocated on the basis of a calculation by Whitman \$ Howard, Inc. on the relationship of total storage capacity of a three hour fire flow at 3,500 gpm. Hingham has a storage capacity of 2,750,000 gallons to a three hour fire flow of 630,000 gallons. This results in a fire protection cost of 23%.

Water treatment - allocated on the basis of source of supply.

Transmission and distribution - allocated on the following basis.

- . Storage \$ standpipe - allocated on the basis of pumping.
- . Mains - allocated on the basis of pumping.
- . Services - allocated 100% to general service.
- . Meters - allocated 100% to general service.
- . hydrants - allocated 99% to fire protection, 1% general for hydrant flushing.
- . General plant - allocated on the basis of the weighted average % of trans. \$ dist. expense. *(computed w/o genl plant)*

- . Customer accounts - allocated on the basis of the number fire protection bills to general service bills.
- . Administration and general - allocated on the basis of the weighted average % of the allocation of utility plant

Uncollectible operating revenue - allocated 100% to customer accounts.

Payroll taxes - allocated on the basis of the weighted average % of the allocation of utility plant.

Property taxes - allocated on the basis of the weighted average % of the allocation on utility plant.

Depreciation - allocated on the same basis as property taxes.

Rate of return - allocated on the same basis as depreciation.

## HINGHAM, MASSACHUSETTS

## FIRE PROTECTION MUNICIPALLY OWNED

## ALLOCATION OF OPERATION AND MAINTENANCE EXP. HINGHAM

## HULL

No treatment plant

OPERATION AND MAINTENANCE EXP. COST	HINGHAM			HULL						
	TOTAL	FIRE PROTECTION	GENERAL SERVICE	TOTAL	FIRE PROTECTION	GENERAL SERVICE				
SOURCE OF SUPPLY	%	AMOUNT	%	AMOUNT	%	AMOUNT				
OPERATION AND MAINTENANCE EXP. COST										
SOURCE OF SUPPLY	13,109	1%	131	99%	12,978	9,821	1%	98	99%	9,723
PUMPING	178,236	23%	40,994	77%	137,242	115,666	23%	26,603	77%	89,063
WATER TREATMENT	134,621	1%	1,346	99%	133,274	39,303	1%	393	99%	38,910
TRANSMISSION AND DISTRIBUTION:										
STORAGE AND STANDPIPES	3,291	23%	757	77%	2,534	3,155	23%	726	77%	2,429
MAINS	43,564	23%	10,020	77%	33,544	23,252	23%	5,348	77%	17,904
SERVICES	23,990	0%	0	100%	23,990	17,950	0%	0	100%	17,950
METERS	33,061	0%	0	100%	33,061	81,289	0%	0	100%	81,289
HYDRANTS	194	99%	192	1%	2	112	99%	111	1%	1
GENERAL PLANT	18,846	29%	5,465	71%	13,381	10,059	29%	2,917	71%	7,142
CUSTOMER ACCOUNTS	129	2%	3	98%	126	97	2%	2	98%	95
ADMINISTRATION AND GENERAL	534,503	18%	96,772	82%	437,730	0	20%	0	80%	0
TOTAL OPERATION/MAINT. EXP.	983,543	16%	155,680	84%	827,862	300,704	12%	36,198	88%	264,506

## ALLOCATION OF NON OPERATION AND MAINTENANCE EXPENSE

UNCOLLECT. OPERATING REVENUE	0	0%	0	100%	0	0	0.00%	0	100%	0
PAYROLL TAXES	24,432	16%	3,867	84%	20,564	20,119	20%	4,024	80%	16,095
PROPERTY TAXES	63,135	18%	11,431	82%	51,705	25,413	16%	4,064	84%	21,350
DEPRECIATION	0	18%	0	82%	0	0	16%	0	84%	0
DEBT SERVICE	547,419	18%	99,111	82%	448,308	317,382	16%	50,750	84%	266,632
TOTAL NON-OPERATING EXPENSE	634,986	18%	114,409	82%	520,577	362,915	16%	58,838	84%	304,077
TOTAL REVENUE REQUIREMENTS	1,618,529	17%	270,089	83%	1,348,440	663,618	14%	95,036	84%	568,583

## HINGHAM, MASSACHUSETTS

## FIRE PROTECTION PRIVATELY OWNED

## ALLOCATION OF OPERATION AND MAINTENANCE EXP. HINGHAM

## HULL

No treatment plant

OPERATION AND MAINTENANCE EXP. COST	TOTAL	FIRE PROTECTION		GENERAL SERVICE		TOTAL	FIRE PROTECTION		GENERAL SERVICE	
	COST	%	AMOUNT	%	AMOUNT	COST	%	AMOUNT	%	AMOUNT
SOURCE OF SUPPLY	14,816	1%	148	99%	14,668	11,100	1%	111	99%	10,989
PUMPING	205,259	23%	47,210	77%	158,049	135,911	23%	31,259	77%	104,651
WATER TREATMENT	151,652	1%	1,517	99%	150,135	55,917	1%	559	99%	55,358
TRANSMISSION AND DISTRIBUTION:										
STORAGE AND STANDPIPES	3,680	23%	846	77%	2,833	3,537	23%	814	77%	2,724
MAINS	59,812	23%	13,757	77%	46,055	31,924	23%	7,343	77%	24,582
SERVICES	32,119	0%	0	100%	32,119	24,033	0%	0	100%	24,033
METERS	45,183	0%	0	100%	45,183	113,577	0%	0	100%	113,577
HYDRANTS	276	99%	274	1%	3	160	99%	159	1%	2
GENERAL PLANT	26,286	29%	7,623	71%	18,663	14,030	29%	4,069	71%	9,961
CUSTOMER ACCOUNTS	185	2%	4	98%	181	138	2%	3	98%	136
ADMINISTRATION AND GENERAL	428,062	18%	77,501	82%	350,561	312,317	18%	56,545	82%	255,771
TOTAL OPERATION/MAINT. EXP.	967,330	15%	148,879	85%	818,451	702,645	14%	100,861	86%	601,784
ALLOCATION OF NON OPERATION AND MAINTENANCE EXPENSE										
UNCOLLECT. OPERATING REVENUE	4,080	0%	0	100%	4,080	3,602	0.00%	0	100%	3,602
PAYROLL TAXES	34,818	20%	6,964	80%	27,854	28,672	20%	5,734	80%	22,938
PROPERTY TAXES	202,996	18%	36,753	82%	166,243	81,711	16%	13,066	84%	68,645
OTHER TAXES	17,507	18%	3,170	82%	14,337	12,481	16%	1,996	84%	10,485
DEPRECIATION	83,097	18%	15,045	82%	68,052	33,449	16%	5,348	84%	28,100
RATE OF RETURN	309,858	18%	56,100	82%	253,758	204,050	16%	32,628	84%	171,422
TOTAL NON-OPERATING EXPENSE	652,355	18%	114,861	80%	519,987	363,965	16%	56,777	81%	294,707
TOTAL REVENUE REQUIREMENTS	1,619,685	16%	263,740	83%	1,338,438	1,066,610	15%	157,638	84%	896,491

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 ALLOCATION OF OPERATION AND MAINTENANCE EXP. HINGHAM

HULL

No treatment plant

OPERATION AND MAINTENANCE EXP.	TOTAL COST	FIRE PROTECTION %	AMOUNT	GENERAL SERVICE %	AMOUNT	TOTAL COST	FIRE PROTECTION %	AMOUNT	GENERAL SERVICE %	AMOUNT
SOURCE OF SUPPLY	14,182	1%	142	99%	14,040	10,625	1%	106	99%	10,518
PUMPING	192,708	23%	44,323	77%	148,385	126,562	23%	29,109	77%	97,452
WATER TREATMENT	148,310	1%	1,483	99%	146,827	48,550	1%	485	99%	48,064
TRANSMISSION AND DISTRIBUTION:										
STORAGE AND STANDPIPES	3,509	23%	807	77%	2,702	3,369	23%	775	77%	2,594
MAINS	52,666	23%	12,113	77%	40,553	28,110	23%	6,465	77%	21,645
SERVICES	28,575	0%	0	100%	28,575	21,381	0%	0	100%	21,381
METERS	40,724	0%	0	100%	40,724	100,002	0%	0	100%	100,002
HYDRANTS	240	99%	238	1%	2	139	99%	138	1%	1
GENERAL PLANT	23,006	29%	6,672	71%	16,334	12,279	29%	3,561	71%	8,718
CUSTOMER ACCOUNTS	160	2%	3	98%	157	120	2%	2	98%	117
ADMINISTRATION AND GENERAL	359,961	18%	65,171	82%	294,790	263,427	16%	42,123	84%	221,304
TOTAL OPERATION/MAINT. EXP.	864,042	15%	130,952	85%	733,090	614,564	13%	82,765	87%	531,799

ALLOCATION OF NON OPERATION AND MAINTENANCE EXPENSE

UNCOLLECT. OPERATING REVENUE	0	0%	0	100%	0	0	0.00%	0	100%	0
PAYROLL TAXES	30,365	20%	6,073	80%	24,292	25,005	20%	5,001	80%	20,004
PROPERTY TAXES	202,996	18%	36,753	82%	166,243	81,711	16%	13,066	84%	68,645
DEPRECIATION	0	18%	0	82%	0	0	16%	0	84%	0
DEBT SERVICE	608,583	18%	110,185	82%	498,399	352,844	16%	56,420	84%	296,423
TOTAL NON-OPERATING EXPENSE	841,944	18%	153,010	82%	688,934	459,560	16%	74,487	84%	385,073
TOTAL REVENUE REQUIREMENTS	1,705,987	17%	283,963	83%	1,422,024	1,074,124	15%	157,252	85%	916,872

HINGHAM, MASSACHUSETTS  
 FIRE PROTECTION MUNICIPALLY OWNED  
 ALLOCATION OF OPERATION AND MAINTENANCE EXP. HINGHAM  
 Treatment plant

HULL

OPERATION AND MAINTENANCE EXP.	TOTAL COST	FIRE PROTECTION %	AMOUNT	GENERAL SERVICE %	AMOUNT	TOTAL COST	FIRE PROTECTION %	AMOUNT	GENERAL SERVICE %	AMOUNT
SOURCE OF SUPPLY	14,958	1%	150	99%	14,809	11,206	1%	112	99%	11,094
PUMPING	203,895	23%	46,896	77%	156,999	131,052	23%	30,142	77%	100,910
WATER TREATMENT	175,233	1%	1,752	99%	173,481	49,476	1%	495	99%	48,981
TRANSMISSION AND DISTRIBUTION:										
STORAGE AND STANDPIPES	3,313	23%	762	77%	2,551	3,176	23%	730	77%	2,445
MAINS	44,489	23%	10,232	77%	34,256	23,745	23%	5,461	77%	18,284
SERVICES	24,398	0%	0	100%	24,398	18,255	0%	0	100%	18,255
METERS	33,873	0%	0	100%	33,873	83,282	0%	0	100%	83,282
HYDRANTS	198	99%	196	1%	2	115	99%	113	1%	1
GENERAL PLANT	19,288	29%	5,594	71%	13,695	10,295	29%	2,986	71%	7,310
CUSTOMER ACCOUNTS	132	2%	3	98%	130	99	2%	2	98%	97
ADMINISTRATION AND GENERAL	545,206	9%	48,422	91%	496,783	0	8%	0	92%	0
TOTAL OPERATION/MAINT. EXP.	1,064,983	11%	114,007	89%	950,976	330,701	12%	40,042	88%	290,659

ALLOCATION OF NON OPERATION AND MAINTENANCE EXPENSE

UNCOLLECT. OPERATING REVENUE	0	0%	0	100%	0	0	0.00%	0	100%	0
PAYROLL TAXES	25,004	20%	5,001	80%	20,003	20,590	20%	4,118	80%	16,472
PROPERTY TAXES	63,135	9%	5,682	91%	57,453	25,413	8%	2,033	92%	23,380
DEPRECIATION	0	9%	0	91%	0	0	8%	0	92%	0
DEBT SERVICE	1,029,319	9%	92,639	91%	936,680	596,777	8%	47,742	92%	549,035
TOTAL NON-OPERATING EXPENSE	1,117,458	9%	103,322	91%	1,014,136	642,781	8%	53,893	92%	588,888
TOTAL REVENUE REQUIREMENTS	2,182,441	10%	217,328	90%	1,965,113	973,482	10%	93,935	92%	879,547

HINGHAM, MASSACHUSETTS  
 FIRE PROTECTION PRIVATELY OWNED  
 ALLOCATION OF OPERATION AND MAINTENANCE EXP. HINGHAM  
 Treatment plant

HULL

	TOTAL	FIRE PROTECTION	GENERAL SERVICE	TOTAL	FIRE PROTECTION	GENERAL SERVICE
OPERATION AND MAINTENANCE EXP. COST	%	AMOUNT	%	AMOUNT	%	AMOUNT
SOURCE OF SUPPLY	16,682	1%	167	99%	16,515	12,498
PUMPING	231,235	23%	53,184	77%	178,051	151,535
WATER TREATMENT	190,249	1%	1,902	99%	188,347	66,291
TRANSMISSION AND DISTRIBUTION:						
STORAGE AND STANDPIPES	3,705	23%	852	77%	2,853	3,563
MAINS	60,922	23%	14,012	77%	46,910	32,516
SERVICES	32,609	0%	0	100%	32,609	24,400
METERS	46,125	0%	0	100%	46,125	115,940
HYDRANTS	281	99%	279	1%	3	163
GENERAL PLANT	26,815	29%	7,776	71%	19,039	14,312
CUSTOMER ACCOUNTS	189	2%	4	98%	185	141
ADMINISTRATION AND GENERAL	435,035	9%	38,638	91%	396,398	317,423
TOTAL OPERATION/MAINT. EXP.	1,043,848	11%	116,814	89%	927,034	738,782

ALLOCATION OF NON OPERATION AND MAINTENANCE EXPENSE

UNCOLLECT. OPERATING REVENUE	4,355	0%	0	100%	4,355	3,845	0.00%	0	100%	3,845
PAYROLL TAXES	35,508	20%	7,102	80%	28,406	29,240	20%	5,848	80%	23,392
PROPERTY TAXES	314,581	9%	27,940	91%	286,641	126,627	8%	10,237	92%	116,390
OTHER TAXES	89,775	9%	7,973	91%	81,802	64,002	8%	5,174	92%	58,828
DEPRECIATION	150,475	9%	13,364	91%	137,111	60,570	8%	4,897	92%	55,673
RATE OF RETURN	860,813	9%	76,453	91%	784,360	537,470	8%	43,451	92%	494,019
TOTAL NON-OPERATING EXPENSE	1,455,508	9%	132,832	91%	1,322,676	821,755	8%	69,607	92%	752,147
TOTAL REVENUE REQUIREMENTS	2,499,356	10%	249,646	90%	2,249,710	1,560,536	9%	143,523	91%	1,417,013

HINGHAM, MASSACHUSETTS

FIRE PROTECTION DISTRICT OWNED

ALLOCATION OF OPERATION AND MAINTENANCE EXP. HINGHAM

HULL

Treatment plant

OPERATION AND MAINTENANCE EXP.	TOTAL	FIRE PROTECTION		GENERAL SERVICE		TOTAL	FIRE PROTECTION		GENERAL SERVICE	
	COST	%	AMOUNT	%	AMOUNT	COST	%	AMOUNT	%	AMOUNT
SOURCE OF SUPPLY	16,031	1%	160	99%	15,871	12,010	1%	120	99%	11,890
PUMPING	218,367	23%	50,224	77%	168,142	141,947	23%	32,648	77%	109,299
WATER TREATMENT	189,026	1%	1,890	99%	187,136	58,722	1%	587	99%	58,135
TRANSMISSION AND DISTRIBUTION:										
STORAGE AND STANDPIPES	3,531	23%	812	77%	2,719	3,390	23%	780	77%	2,611
MAINS	53,591	23%	12,326	77%	41,265	28,604	23%	6,579	77%	22,025
SERVICES	28,983	0%	0	100%	28,983	21,686	0%	0	100%	21,686
METERS	41,537	0%	0	100%	41,537	101,995	0%	0	100%	101,995
HYDRANTS	244	99%	242	1%	2	142	99%	140	1%	1
GENERAL PLANT	23,448	29%	6,800	71%	16,648	12,515	29%	3,629	71%	8,886
CUSTOMER ACCOUNTS	164	2%	3	98%	160	122	2%	2	98%	120
ADMINISTRATION AND GENERAL	366,344	9%	32,537	91%	333,807	268,141	8%	21,678	92%	246,463
TOTAL OPERATION/MAINT. EXP.	941,265	11%	104,995	89%	836,270	649,275	10%	66,163	90%	583,111

ALLOCATION OF NON OPERATION AND MAINTENANCE EXPENSE

UNCOLLECT. OPERATING REVENUE	0	0%	0	100%	0	0	0.00%	0	100%	0
PROPERTY TAXES	30,938	20%	6,188	80%	24,750	25,477	20%	5,095	80%	20,381
DEPRECIATION	314,581	9%	28,312	91%	286,269	126,627	8%	10,130	92%	116,496
WATER SERVICE	0	9%	0	91%	0	0	8%	0	92%	0
TOTAL NON-OPERATING EXPENSE	1,140,270	9%	102,624	91%	1,037,646	661,104	8%	52,888	92%	608,216
TOTAL REVENUE REQUIREMENTS	1,485,788	9%	137,124	91%	1,348,664	813,208	8%	68,114	92%	745,094
TOTAL REVENUE REQUIREMENTS	2,427,053	10%	242,119	90%	2,184,934	1,462,482	9%	134,277	91%	1,328,205

### Allocation of Utility Plant

This schedule is based on the relationship of the use of the functional assets to Hingham and Hull further allocated between fire protection and general service expenses.

The allocation of utility plant between Hingham and Hull was based on a HWC report performed by an engineering consultant. We used the allocation data and updated the total asset cost for the increase in transmission and distribution expenses of \$2,000,000 and the treatment plant of \$10,500,000.

PKI FIOP NGHA  
 ALLOCATION OF UTILITY PLANT  
 No treatment plant

TYPE	TOTAL ASSET COST	FIRE PROTECTION %	AMOUNT	GENERAL SERVICE %	AMOUNT
SOURCE OF SUPPLY	302,236	1%	3,022	99%	299,214
PUMPING	202,994	23%	46,689	77%	156,305
TREATMENT	166,907	1%	1,669	99%	165,238
STORAGE AND STANDPIPES	270,660	23%	62,252	77%	208,408
TRANS. AND DIST.	3,987,060	23%	917,024	77%	3,070,036
SERVICES	618,005	0%	0	100%	618,005
METERS	153,373	0%	0	100%	153,373
HYDRANTS	4,511	99%	4,466	1%	45
GENERAL PLANT	99,242	16%	15,879	84%	83,363
TOTAL	5,804,988	18%	1,051,000	82%	4,753,988

HINGHAM, MASSACHSETTS  
 FIRE PROTECTION-HULL  
 ALLOCATION OF UTILITY PLANT  
 No treatment plant

TYPE	TOTAL ASSET COST	FIRE PROTECTION PERCENT	AMOUNT	GENERAL SERVICE PERCENT	AMOUNT
SOURCE OF SUPPLY	128,153	1%	1,282	99%	126,871
PUMPING	156,922	1%	1,569	99%	155,353
TREATMENT	151,692	1%	1,517	99%	150,175
STORAGE AND STANDPIPES	104,615	23%	24,061	77%	80,554
TRANS. AND DIST.	2,139,226	23%	492,022	77%	1,647,204
SERVICES	465,537	0%	0	100%	465,537
METERS	115,078	0%	0	100%	115,078
HYDRANTS	2,615	99%	2,589	1%	26
GENERAL PLANT	57,538	14%	8,055	86%	49,483
TOTAL	3,321,376	16%	531,095	84%	2,790,281

HINGHAM, MASSACHUSETTS  
 FIRE PROTECTION-HINGHAM  
 LOCATION OF UTILITY PLANT  
 TREATMENT PLANT

TYPE	TOTAL ASSET COST	FIRE PROTECTION %	AMOUNT	GENERAL %	SERVICE AMOUNT
SOURCE OF SUPPLY	302,236	1%	3,022	99%	299,214
PUMPING	202,994	23%	46,689	77%	156,305
TREATMENT	6,960,407	1%	69,604	99%	6,890,803
STORAGE AND STANDPIPES	270,660	23%	62,252	77%	208,408
TRANS. AND DIST.	3,987,060	23%	917,024	77%	3,070,036
SERVICES	618,005	0%	0	100%	618,005
METERS	153,373	0%	0	100%	153,373
HYDRANTS	4,511	99%	4,466	1%	45
GENERAL PLANT	99,242	16%	15,879	84%	83,363
TOTAL	12,598,488	9%	1,118,935	91%	11,479,553

HINGHAM, MASSACHUSETTS  
 FIRE PROTECTION-HULL  
 LOCATION OF UTILITY PLANT

TYPE	TOTAL ASSET COST	FIRE PROTECTION PERCENT	AMOUNT	GENERAL PERCENT	SERVICE AMOUNT
SOURCE OF SUPPLY	128,153	1%	1,282	99%	126,871
PUMPING	156,922	1%	1,569	99%	155,353
TREATMENT	3,858,192	1%	38,582	99%	3,819,610
STORAGE AND STANDPIPES	104,615	23%	24,061	77%	80,554
TRANS. AND DIST.	2,139,226	23%	492,022	77%	1,647,204
SERVICES	465,537	0%	0	100%	465,537
METERS	115,078	0%	0	100%	115,078
HYDRANTS	2,615	99%	2,589	1%	26
GENERAL PLANT	57,538	14%	8,055	86%	49,483
TOTAL	7,027,876	8%	568,160	92%	6,459,716

Allocation of Proforma Amounts Between Hingham and Hull

This schedule allocates the five year average of the total revenue requirements between Hingham and Hull. The allocation percentages were obtained from a report prepared by a consultant for the Hingham Water Company. The consultant completed a detailed review and analysis of the functions, plant, equipment, etc. and allocated amounts between Hingham and Hull. The result was percentage relationships for each account number. We used the report results as the basis for this schedule. The debt service percentage is based on the total expense relationship of Hingham and Hull.

HINGHAM, MASSACHUSETTS  
 ALLOCATION OF PRO-FORMA AMOUNTS BETWEEN HINGHAM AND HULL  
 Municipal - No treatment plant

1989

DESCRIPTION	ACCOUNT NUMBER	TOTAL	HINGHAM		HULL	
			%	AMOUNT	%	AMOUNT
MAINT. SOURCE WATER SUPPLY	601	22,930	57.17%	13,109	42.83%	9,821
PUMPING LABOR	603.1	83,561	57.17%	47,772	42.83%	35,789
BOILER FUEL	603.2	557	62.66%	349	37.34%	208
ELECTRIC POWER PURCHASED	603.4					
High Service		31,258	100.00%	31,258	0.00%	0
Main Service						
Demand		19,643	47.44%	9,319	52.56%	10,324
Energy		119,909	56.09%	67,257	43.91%	52,652
MISC. PUMP STATION SUP & EXP	603.5	11,290	57.17%	6,455	42.83%	4,836
MAINT. POWER PUMP BLDG & FIX	604.1	21,366	57.17%	12,215	42.83%	9,151
MAINT. PUMPING EQUIPMENT	604.2	6,317	57.17%	3,612	42.83%	2,706
TOTAL PUMPING		293,902		178,236		115,666
PURIFICATION LABOR	605.1	81,023	57.17%	46,321	42.83%	34,702
PURIFICATION SUP & EXP.	605.2					
High Service		82,192	100.00%	82,192	0.00%	0
Main Service		1,339	56.09%	751	43.91%	588
MAINT. PURIFICATION EQUIPMENT	606.2	9,370	57.17%	5,357	42.83%	4,013
TOTAL PURIFICATION EXPENSE		173,924	3.46%	134,621	96.54%	39,303
INSPECTING CUSTOMER INSTALL	607	226	57.20%	129	42.80%	97
MISC TRANS & DIST SUP & EXP	608					
Storage Facilities		1,380	50.00%	690	50.00%	690
Tran & Dist Lines		36,045	65.20%	23,501	34.80%	12,544
Meters		88,502	20.65%	18,276	79.35%	70,226
Balance		27,455	65.20%	17,901	34.80%	9,554
MAINT TRANS & DIST MAINS	609.2	30,771	65.20%	20,062	34.80%	10,708
MAINT STORAGE RESERV & TANKS	609.3	5,065	51.35%	2,601	48.65%	2,464
MAINT OF SERVICES	609.4	41,940	57.20%	23,990	42.80%	17,950
MAINT OF METERS	609.5	25,848	57.20%	14,785	42.80%	11,063
MAINT OF HYDRANTS	609.6	306	63.31%	194	36.69%	112
MAINT FOUNTAINS & TROUGHS	609.7	1,450	65.20%	945	34.80%	505
TOTAL TRANS & DIST		258,988		123,074		135,914
CUSTOMER CHARGES	610.8	9,203	100.00%	9,203	0.00%	0
SALARY OFFICER/CLERK	610.1	197,542	100.00%	197,542	0.00%	0
GEN OFFICE SUP & EXP	610.2	95,856	100.00%	95,856	0.00%	0
LAW EXPENSE GENERAL	610.3	85,889	100.00%	85,889	0.00%	0
INSURANCE	610.4					
Employee		17,579	100.00%	17,579	0.00%	0
Balance		14,441	100.00%	14,441	0.00%	0
ACCIDENTS AND DAMAGES	610.5	0	100.00%	0	0.00%	0
MAINT OF GENERAL STRUCTURES	610.9	1,913	100.00%	1,913	0.00%	0
MISC GENERAL EXPENSE	610.11					
Pension & Emp Welfare		70,946	100.00%	70,946	0.00%	0
Balance		41,133	100.00%	41,133	0.00%	0
TOTAL GENERAL & ADMIN		534,503		534,503		0
TOTAL OPERATING EXPENSES		1,284,246		983,543		300,704
UNCOLLECT OPERATING REV		0	53.11%	0	46.89%	0
PAYROLL TAXES		44,551	54.84%	24,432	45.16%	20,119
PROPERTY TAXES		88,549	71.30%	63,135	28.70%	25,413
OTHER TAXES		0	58.33%	0	41.62%	0
DEPRECIATION		0	62.77%	0	37.23%	0
TOTAL EXPENSES		1,417,346		1,071,110		346,236
DEBT SERVICE		864,802	63.30%	547,419	36.70%	317,382
TOTAL		2,282,147		1,618,529		663,618

DESCRIPTION	NUMBER	TOTAL	%	AMOUNT	%	AMOUNT
MAINT. SOURCE WATER SUPPLY	601	25,916	57.17%	14,816	42.83%	11,100
PUMPING LABOR	603.1	119,731	57.17%	68,450	42.83%	51,281
BOILER FUEL	603.2	557	62.66%	349	37.34%	208
ELECTRIC POWER PURCHASED	603.4					
High Service		31,258	100.00%	31,258	0.00%	0
Main Service						
Demand		19,643	47.44%	9,319	52.56%	10,324
Energy		119,909	56.09%	67,257	43.91%	52,652
MISC. PUMP STATION SUP & EXP	603.5	12,125	57.17%	6,932	42.83%	5,193
MAINT. POWER PUMP BLDG & FIX	604.1	29,735	57.17%	17,000	42.83%	12,736
MAINT. PUMPING EQUIPMENT	604.2	8,210	57.17%	4,694	42.83%	3,516
TOTAL PUMPING		341,170		205,259		135,911
PURIFICATION LABOR	605.1	116,133	57.17%	66,393	42.83%	49,740
PURIFICATION SUP & EXP.	605.2					
High Service		77,057	100.00%	77,057	0.00%	0
Main Service		1,764	56.09%	989	43.91%	774
MAINT. PURIFICATION EQUIPMENT	606.2	12,616	57.17%	7,213	42.83%	5,403
TOTAL PURIFICATION EXPENSE		207,569	3.46%	151,652	96.54%	55,917
INSPECTING CUSTOMER INSTALL	607	323	57.20%	185	42.80%	138
MISC TRANS & DIST SUP & EXP	608					
Storage Facilities		1,947	50.00%	974	50.00%	974
Tran & Dist Lines		50,843	65.20%	33,150	34.80%	17,693
Meters		124,837	20.65%	25,779	79.35%	99,058
Balance		38,727	65.20%	25,250	34.80%	13,477
MAINT TRANS & DIST MAINS	609.2	40,893	65.20%	26,662	34.80%	14,231
MAINT STORAGE RESERV & TANKS	609.3	5,270	51.35%	2,706	48.65%	2,564
MAINT OF SERVICES	609.4	56,151	57.20%	32,119	42.80%	24,033
MAINT OF METERS	609.5	33,924	57.20%	19,405	42.80%	14,520
MAINT OF HYDRANTS	609.6	437	63.31%	276	36.69%	160
MAINT FOUNTAINS & TROUGHS	609.7	1,588	65.20%	1,035	34.80%	553
TOTAL TRANS & DIST		354,941		167,541		187,400
SALARY OFFICER/CLERK	610.1	359,019	59.02%	211,893	40.98%	147,126
GEN OFFICE SUP & EXP	610.2	127,195	59.02%	75,071	40.98%	52,125
LAW EXPENSE GENERAL	610.3	2,889	56.43%	1,630	43.57%	1,259
INSURANCE	610.4					
Employee		78,513	54.84%	43,057	45.16%	35,456
Balance		64,498	56.43%	36,396	43.57%	28,102
ACCIDENTS AND DAMAGES	610.5	0	56.43%	0	43.57%	0
MAINT OF GENERAL STRUCTURES	610.9	1,127	56.43%	636	43.57%	491
MISC GENERAL EXPENSE	610.11					
Pension & Emp Welfare		67,817	54.84%	37,191	45.16%	30,626
Balance		39,319	56.43%	22,188	43.57%	17,131
TOTAL GENERAL & ADMIN		740,378		428,062		312,317
TOTAL OPERATING EXPENSES		1,669,975		967,330		702,645
UNCOLLECT OPERATING REV		7,682	53.11%	4,080	46.89%	3,602
PAYROLL TAXES		63,490	54.84%	34,818	45.16%	28,672
PROPERTY TAXES		284,707	71.30%	202,996	28.70%	81,711
OTHER TAXES		29,988	58.38%	17,507	41.62%	12,481
DEPRECIATION		116,545	71.30%	83,097	28.70%	33,449
TOTAL EXPENSES		2,172,286		1,200,222		972,064
RATE OF RETURN		564,847	60.29%	340,571	39.71%	224,276

HINGHAM, MASSACHUSETTS

ALLOCATION OF PRO-FORMA AMOUNTS BETWEEN HINGHAM AND HULL  
District No treatment plant 1989

DESCRIPTION	ACCOUNT NUMBER	TOTAL	HINGHAM		HULL	
			%	AMOUNT	%	AMOUNT
MAINT. SOURCE WATER SUPPLY	601	24,807	57.17%	14,182	42.83%	10,625
PUMPING LABOR	603.1	103,673	57.17%	59,270	42.83%	44,403
BOILER FUEL	603.2	0	62.66%	0	37.34%	0
ELECTRIC POWER PURCHASED	603.4					
High Service		31,258	100.00%	31,258	0.00%	0
Main Service						
Demand		19,643	47.44%	9,319	52.56%	10,324
Energy		119,909	56.09%	67,257	43.91%	52,652
MISC. PUMP STATION SUP & EXP	603.5	11,875	57.17%	6,789	42.83%	5,086
MAINT. POWER PUMP BLDG & FIX	604.1	26,086	57.17%	14,913	42.83%	11,172
MAINT. PUMPING EQUIPMENT	604.2	6,825	57.17%	3,902	42.83%	2,923
TOTAL PUMPING		319,270		192,708		126,562
PURIFICATION LABOR	605.1	100,544	57.17%	57,481	42.83%	43,063
PURIFICATION SUP & EXP.	605.2					
High Service		83,545	100.00%	83,545	0.00%	0
Main Service		1,579	56.09%	886	43.91%	693
MAINT. PURIFICATION EQUIPMENT	606.2	11,192	57.17%	6,398	42.83%	4,793
TOTAL PURIFICATION EXPENSE		196,860	3.46%	148,310	96.54%	48,550
INSPECTING CUSTOMER INSTALL	607	280	57.20%	160	42.80%	120
MISC TRANS & DIST SUP & EXP	608					
Storage Facilities		1,697	50.00%	849	50.00%	849
Tran & Dist Lines		44,317	65.20%	28,895	34.80%	15,422
Meters		108,813	20.65%	22,470	79.35%	86,343
Balance		33,757	65.20%	22,009	34.80%	11,747
MAIT TRANS & DIST MAINS	609.2	36,459	65.20%	23,771	34.80%	12,688
MAINT STORAGE RESERV & TANKS	609.3	5,181	51.35%	2,661	48.65%	2,521
MAINT OF SERVICES	609.4	49,956	57.20%	28,575	42.80%	21,381
MAINT OF METERS	609.5	31,913	57.20%	18,255	42.80%	13,659
MAINT OF HYDRANTS	609.6	379	63.31%	240	36.69%	139
MAINT FOUNTAINS & TROUGHS	609.7	1,528	65.20%	996	34.80%	532
TOTAL TRANS & DIST		314,281		148,880		165,401
CUSTOMER CHARGES	610.8	15,713	58.57%	9,203	41.43%	6,510
SALARY OFFICER/CLERK	610.1	262,448	59.02%	154,897	40.98%	107,551
GEN OFFICE SUP & EXP	610.2	113,528	59.02%	67,004	40.98%	46,524
LAW EXPENSE GENERAL	610.3	33,932	56.43%	19,148	43.57%	14,784
INSURANCE	610.4					
Employee		31,723	54.84%	17,397	45.16%	14,326
Balance		26,060	56.43%	14,706	43.57%	11,354
ACCIDENTS AND DAMAGES	610.5	0	56.43%	0	43.57%	0
MAINT OF GENERAL STRUCTURES	610.9	2,256	56.43%	1,273	43.57%	983
MISC GENERAL EXPENSE	610.11					
Pension & Emp Welfare		87,182	54.84%	47,811	45.16%	39,372
Balance		50,546	56.43%	28,523	43.57%	22,023
TOTAL GENERAL & ADMIN		623,388		359,961		263,427
TOTAL OPERATING EXPENSES		1,478,606		864,042		614,564
UNCOLLECT OPERATING REV		0	53.11%	0	46.89%	0
PAYROLL TAXES		55,371	54.84%	30,365	45.16%	25,005
PROPERTY TAXES		284,707	71.30%	202,996	28.70%	81,711
OTHER TAXES		0	58.33%	0	41.62%	0
DEPRECIATION		0	62.77%	0	37.23%	0
TOTAL EXPENSES		1,818,683		1,097,403		721,280
DEBT SERVICE		961,427	63.30%	608,583	36.70%	352,844
TOTAL		2,780,110		1,705,987		1,074,124

HINGHAM, MASSACHUSETTS  
 ALLOCATION OF PRO-FORMA AMOUNTS BETWEEN HINGHAM AND HULL  
 Municipal - Treatment plant

1989

DESCRIPTION	ACCOUNT NUMBER	TOTAL	HINGHAM		HULL	
			%	AMOUNT	%	AMOUNT
MAINT. SOURCE WATER SUPPLY	601	26,165	57.17%	14,958	42.83%	11,206
PUMPING LABOR	603.1	85,719	57.17%	49,005	42.83%	36,713
BOILER FUEL	603.2	557	62.66%	349	37.34%	208
ELECTRIC POWER PURCHASED	603.4					
High Service		37,993	100.00%	37,993	0.00%	0
Main Service						
Demand		23,875	47.44%	11,326	52.56%	12,549
Energy		145,744	56.09%	81,748	43.91%	63,996
MISC. PUMP STATION SUP & EXP	603.5	12,826	57.17%	7,332	42.83%	5,493
MAINT. POWER PUMP BLDG & FIX	604.1	21,811	57.17%	12,469	42.83%	9,342
MAINT. PUMPING EQUIPMENT	604.2	6,422	57.17%	3,672	42.83%	2,751
TOTAL PUMPING		334,946		203,895		131,052
PURIFICATION LABOR	605.1	83,120	57.17%	47,519	42.83%	35,600
PURIFICATION SUP & EXP.	605.2					
High Service		109,227	100.00%	109,227	0.00%	0
Main Service		1,358	56.09%	762	43.91%	596
MAINT. PURIFICATION EQUIPMENT	606.2	31,004	57.17%	17,725	42.83%	13,279
TOTAL PURIFICATION EXPENSE		224,709	3.46%	175,233	96.54%	49,476
INSPECTING CUSTOMER INSTALL	607	232	57.20%	132	42.80%	99
MISC TRANS & DIST SUP & EXP	608					
Storage Facilities		1,414	50.00%	707	50.00%	707
Tran & Dist Lines		36,928	65.20%	24,077	34.80%	12,851
Meters		90,669	20.65%	18,723	79.35%	71,946
Balance		28,128	65.20%	18,339	34.80%	9,788
MAINT TRANS & DIST MAINS	609.2	31,307	65.20%	20,412	34.80%	10,895
MAINT STORAGE RESERV & TANKS	609.3	5,074	51.35%	2,605	48.65%	2,468
MAINT OF SERVICES	609.4	42,653	57.20%	24,398	42.80%	18,255
MAINT OF METERS	609.5	26,486	57.20%	15,150	42.80%	11,336
MAINT OF HYDRANTS	609.6	312	63.31%	198	36.69%	115
MAINT FOUNTAINS & TROUGHS	609.7	1,456	65.20%	949	34.80%	507
TOTAL TRANS & DIST		264,658		125,691		138,967
CUSTOMER CHARGES	610.8	9,203	100.00%	9,203	0.00%	0
SALARY OFFICER/CLERK	610.1	202,168	100.00%	202,168	0.00%	0
GEN OFFICE SUP & EXP	610.2	97,460	100.00%	97,460	0.00%	0
LAW EXPENSE GENERAL	610.3	86,511	100.00%	86,511	0.00%	0
INSURANCE	610.4					
Employee		18,183	100.00%	18,183	0.00%	0
Balance		14,937	100.00%	14,937	0.00%	0
ACCIDENTS AND DAMAGES	610.5	0	100.00%	0	0.00%	0
MAINT OF GENERAL STRUCTURES	610.9	1,947	100.00%	1,947	0.00%	0
MISC GENERAL EXPENSE	610.11					
Pension & Emp Welfare		72,666	100.00%	72,666	0.00%	0
Balance		42,130	100.00%	42,130	0.00%	0
TOTAL GENERAL & ADMIN		545,206		545,206		0
TOTAL OPERATING EXPENSES		1,395,684		1,064,983		330,701
UNCOLLECT OPERATING REV		0	53.11%	0	46.89%	0
PAYROLL TAXES		45,594	54.84%	25,004	45.16%	20,590
PROPERTY TAXES		88,549	71.30%	63,135	28.70%	25,413
OTHER TAXES		0	58.33%	0	41.62%	0
DEPRECIATION		0	62.77%	0	37.23%	0
TOTAL EXPENSES		1,529,827		1,153,122		376,705
DEBT SERVICE		1,626,096	63.30%	1,029,319	36.70%	596,777
TOTAL		3,155,923		2,182,441		973,482

DESCRIPTION	AMOUNT	TOTAL	PERCENT	AMOUNT	PERCENT	AMOUNT
2 MAINT. SOURCE WATER SUPPLY	601	29,180	57.17%	16,682	42.83%	12,498
PUMPING LABOR	603.1	122,333	57.17%	69,938	42.83%	52,395
BOILER FUEL	603.2	557	62.66%	349	37.34%	208
ELECTRIC POWER PURCHASED	603.4					
High Service		37,993	100.00%	37,993	0.00%	0
Main Service						
Demand		23,875	47.44%	11,326	52.56%	12,549
Energy		145,744	56.09%	81,748	43.91%	63,996
MISC. PUMP STATION SUP & EXP	603.5	13,661	57.17%	7,810	42.83%	5,851
MAINT. POWER PUMP BLDG & FIX	604.1	30,271	57.17%	17,306	42.83%	12,965
MAINT. PUMPING EQUIPMENT	604.2	8,337	57.17%	4,766	42.83%	3,571
TOTAL PUMPING		382,770		231,235		151,535
PURIFICATION LABOR	605.1	118,660	57.17%	67,838	42.83%	50,822
PURIFICATION SUP & EXP.	605.2					
High Service		101,808	100.00%	101,808	0.00%	0
Main Service		1,788	56.09%	1,003	43.91%	785
MAINT. PURIFICATION EQUIPMENT	606.2	34,285	57.17%	19,601	42.83%	14,684
TOTAL PURIFICATION EXPENSE		256,541	3.46%	190,249	96.54%	66,291
INSPECTING CUSTOMER INSTALL	607	330	57.20%	189	42.80%	141
MISC TRANS & DIST SUP & EXP	608					
Storage Facilities		1,988	50.00%	994	50.00%	994
Tran & Dist Lines		51,900	65.20%	33,839	34.80%	18,061
Meters		127,431	20.65%	26,315	79.35%	101,117
Balance		39,532	65.20%	25,775	34.80%	13,757
MAIT TRANS & DIST MAINS	609.2	41,538	65.20%	27,083	34.80%	14,455
MAINT STORAGE RESERV & TANKS	609.3	5,280	51.35%	2,711	48.65%	2,569
MAINT OF SERVICES	609.4	57,009	57.20%	32,609	42.80%	24,400
MAINT OF METERS	609.5	34,633	57.20%	19,810	42.80%	14,823
MAINT OF HYDRANTS	609.6	445	63.31%	281	36.69%	163
MAINT FOUNTAINS & TROUGHS	609.7	1,595	65.20%	1,040	34.80%	555
TOTAL TRANS & DIST		361,682		170,646		191,035
SALARY OFFICER/CLERK	610.1	364,592	59.02%	215,182	40.98%	149,410
GEN OFFICE SUP & EXP	610.2	129,126	59.02%	76,210	40.98%	52,916
LAW EXPENSE GENERAL	610.3	3,511	56.43%	1,981	43.57%	1,530
INSURANCE	610.4					
Employee		79,503	54.84%	43,600	45.16%	35,904
Balance		65,312	56.43%	36,855	43.57%	28,456
ACCIDENTS AND DAMAGES	610.5	0	56.43%	0	43.57%	0
MAINT OF GENERAL STRUCTURES	610.9	1,140	56.43%	643	43.57%	497
MISC GENERAL EXPENSE	610.11					
Pension & Emp Welfare		69,170	54.84%	37,933	45.16%	31,237
Balance		40,104	56.43%	22,630	43.57%	17,473
TOTAL GENERAL & ADMIN		752,458		435,035		317,423
TOTAL OPERATING EXPENSES		1,782,630		1,043,848		738,782
UNCOLLECT OPERATING REV		8,200	53.11%	4,355	46.89%	3,845
PAYROLL TAXES		64,749	54.84%	35,508	45.16%	29,240
PROPERTY TAXES		441,207	71.30%	314,581	28.70%	126,627
OTHER TAXES		153,778	58.38%	89,775	41.62%	64,002
DEPRECIATION		211,045	71.30%	150,475	28.70%	60,570
TOTAL EXPENSES		2,661,609		1,638,543		1,023,066
RATE OF RETURN		1,398,283	61.56%	860,813	38.44%	537,470
TOTAL		4,059,892		2,499,356		1,560,536

## HINGHAM, MASSACHUSETTS

1989

## ALLOCATION OF PRO-FORMA AMOUNTS BETWEEN HINGHAM AND HULL

District - Treatment plant

DESCRIPTION	ACCOUNT NUMBER	TOTAL	HINGHAM %	AMOUNT	HULL %	AMOUNT
MAINT. SOURCE WATER SUPPLY	601	28,042	57.17%	16,031	42.83%	12,010
PUMPING LABOR	603.1	105,831	57.17%	60,504	42.83%	45,328
BOILER FUEL	603.2	0	62.66%	0	37.34%	0
ELECTRIC POWER PURCHASED	603.4					
High Service		37,993	100.00%	37,993	0.00%	0
Main Service						
Demand		23,875	47.44%	11,326	52.56%	12,549
Energy		145,744	56.09%	81,748	43.91%	63,996
MISC. PUMP STATION SUP & EXP	603.5	13,410	57.17%	7,667	42.83%	5,744
MAINT. POWER PUMP BLDG & FIX	604.1	26,530	57.17%	15,167	42.83%	11,363
MAINT. PUMPING EQUIPMENT	604.2	6,930	57.17%	3,962	42.83%	2,968
TOTAL PUMPING		360,314		218,367		141,947
PURIFICATION LABOR	605.1	102,641	57.17%	58,680	42.83%	43,961
PURIFICATION SUP & EXP.	605.2					
High Service		110,683	100.00%	110,683	0.00%	0
Main Service		1,599	56.09%	897	43.91%	702
MAINT. PURIFICATION EQUIPMENT	606.2	32,826	57.17%	18,767	42.83%	14,059
TOTAL PURIFICATION EXPENSE		247,748	3.46%	189,026	96.54%	58,722
INSPECTING CUSTOMER INSTALL	607	286	57.20%	164	42.80%	122
MISC TRANS & DIST SUP & EXP	608					
Storage Facilities		1,731	50.00%	866	50.00%	866
Tran & Dist Lines		45,200	65.20%	29,470	34.80%	15,730
Meters		110,980	20.65%	22,917	79.35%	88,063
Balance		34,429	65.20%	22,448	34.80%	11,981
MAIT TRANS & DIST MAINS	609.2	36,995	65.20%	24,120	34.80%	12,874
MAINT STORAGE RESERV & TANKS	609.3	5,190	51.35%	2,665	48.65%	2,525
MAINT OF SERVICES	609.4	50,669	57.20%	28,983	42.80%	21,686
MAINT OF METERS	609.5	32,551	57.20%	18,619	42.80%	13,932
MAINT OF HYDRANTS	609.6	386	63.31%	244	36.69%	142
MAINT FOUNTAINS & TROUGHS	609.7	1,534	65.20%	1,000	34.80%	534
TOTAL TRANS & DIST		319,951		151,497		168,454
CUSTOMER CHARGES	610.8	15,713	58.57%	9,203	41.43%	6,510
SALARY OFFICER/CLERK	610.1	267,073	59.02%	157,627	40.98%	109,447
GEN OFFICE SUP & EXP	610.2	115,132	59.02%	67,951	40.98%	47,181
LAW EXPENSE GENERAL	610.3	34,554	56.43%	19,499	43.57%	15,055
INSURANCE	610.4					
Employee		32,543	54.84%	17,846	45.16%	14,696
Balance		26,734	56.43%	15,086	43.57%	11,648
ACCIDENTS AND DAMAGES	610.5	0	56.43%	0	43.57%	0
MAINT OF GENERAL STRUCTURES	610.9	2,290	56.43%	1,293	43.57%	998
MISC GENERAL EXPENSE	610.11					
Pension & Emp Welfare		88,902	54.84%	48,754	45.16%	40,148
Balance		51,544	56.43%	29,086	43.57%	22,458
TOTAL GENERAL & ADMIN		634,485		366,344		268,141
TOTAL OPERATING EXPENSES		1,590,540		941,265		649,275
UNCOLLECT OPERATING REV		0	53.11%	0	46.89%	0
PAYROLL TAXES		56,414	54.84%	30,938	45.16%	25,477
PROPERTY TAXES		441,207	71.30%	314,581	28.70%	126,627
OTHER TAXES		0	58.33%	0	41.62%	0
DEPRECIATION		0	62.77%	0	37.23%	0
TOTAL EXPENSES		2,088,161		1,286,783		801,378
DEBT SERVICE		1,801,374	63.30%	1,140,270	36.70%	661,104
TOTAL		3,889,536		2,427,053		1,462,482

### Operating Expense Worksheet

This is a series of five schedules each representing a year from January 1, 1985 through December 31, 1989 with a five year average calculated on the 1989 worksheet. The proforma adjusted for inflation and unadjusted expenses was determined as follows:

Year operating expenses - The beginning expenses were obtained from the 1983 Annual Report of the Hingham Water Company. The first year 1983 was adjusted for any negative amounts by averaging the five year period 1979 to 1983. In order to calculate the five year proforma period it was necessary to make numerous assumptions because the details of the Hingham Water Company operations were not available for our review and analysis other than information on file with the DPU. We calculated proforma adjustments for expenses that would normally increase with inflation. However, in order to have a starting point for adjusted and unadjusted expenses we relied on the data filed by the Company during Docket #1590. The following years beginning operating expenses are brought forward from the prior year. The calculations for the adjusts were calculated as follows.

Unadjusted percent - The schedule from the Company's rate filing Docket #1590 on page 29c operating expenses 12 months ended 3/31/83 was used to determine the percentage of unadjusted expenses by account number. The percentages provided the starting basis to determine the unadjusted amounts.

Unadjusted amounts - This column is a result of the calculation of the

unadjusted expenses, above, times the yearly operating expenses and represents the amount by account number that must be increased for inflation.

Adjust with inflation - This column is a result of the calculation of the unadjusted amounts column times the estimated inflation rate for the year. Based on the trend of the inflation rate we used 5% as the inflation rate through 1989.

Plus yearly payroll - This column total was calculated in the salaries and wages schedule and was transferred to this worksheet. The detailed allocation is based on the percentage by account number from Docket #1590 company schedule 29c operating expenses - payroll.

Pension - This column was calculated in the pension schedule and was transferred to this worksheet for the private company and district. The town of Hingham does not have a pension plan expense.

Chemical - This column was calculated in the chemical schedule and was transferred to this worksheet.

Workmens compensation - This column was calculated in the workmens compensation schedule and was transferred to this worksheet.

Power - This column was calculated in the power schedule and was transferred to this worksheet.

Employee welfare - This column was calculated in the employee welfare schedule and was transferred to this worksheet.

Capital payroll - The company incurs wages that are to be capitalized. We relied on the percentage relationship that the company incurred on page 29c operating expenses 12 months ended 3/31/83 docket #1590. The amounts shown are a reduction to expense and are capitalized. The effect of the capitalization results in an increase to rate base and depreciation expense. We did not develop a capitalized payroll for the municipal and district because all expenditures are current costs.

Lab costs - This column is a reduction to the lab costs due to the company providing service to other water companies in the American Water Works Service Company system. This additional expense will also terminate for the municipal and district.

Billing - This column was calculated in the billing schedule and was transferred to the worksheet. This column only affects municipal and district.

Professional - This column was calculated in the outside professional services schedule and was transferred to the worksheet. This column only affects municipal and district.

Debt Service - This column was calculated in the debt service schedule and was transferred to the worksheet. This column only affects municipal and district.

Central Service - This column only affects the municipal operation. The Town of Hingham can provide accounting, treasury and other central services to the municipal water department. An annual charge to cover the costs of central services was included in the report.

Five year total - The operating expense worksheet for 1989 records the total of the five years operating expenses. This is an addition of the five total adjust column.

Five year average - This column is a result of dividing the five year total column by five.

HINGHAM, MASSACHUSETTS  
 OPERATING EXPENSE WORKSHEET - MUNICIPALLY OWNED - 1989  
 No treatment plant

DESCRIPTION	ACCOUNT NUMBER	PAYROLL PERCENT	UNADJUST PERCENT	1988			PLUS 89 PAYROLL	PENSION CHEMICAL	WORKCOMP BILLING	PROPTAX POWER	PAYTAX EMPWEL	PROF SERVICE CO LABCOST	LEASED VEHICLES	DEBT SERVICE CENT SERV	TOTAL ADJUSTED	FIVE YEAR	FIVE YEAR
				OPERATE EXPENSE	UNADJUST AMOUNTS	ADJUST WITH INFL									1989	TOTAL	AVERAGE
<b>SOURCE OF SUPPLY</b>																	
Maint. water supply building/fixtures	601.1	0.03%	7.12%	191	14	14	186								200	918	186
Maintenance of surface source	601.2	0.57%	58.01%	7,386	4,284	4,499	3,537								17,441	82,048	16,401
Maint. of Ground Source of Water Sup.	601.3	0.30%	7.41%	16,661	1,235	1,296	1,862								25,677	114,650	22,931
<b>TOTAL SOURCE OF SUPPLY</b>				24,238	5,533	5,809	5,585			14,283	0				0	0	0
<b>PUMPING</b>																	
Pumping Labor	603.1	14.72%	0.63%	87,542	552	579	91,340								0	0	0
Boiler Fuel	603.2		100.00%	583	583	613	0								0	0	0
Purchased power	603.4			172,370	0	0	0								91,919	417,803	83,561
Miscellaneous pumping station supply	603.5		54.28%	11,239	6,101	6,406	0			180,989					613	2,785	551
Misc. power pumping building/fixtures	604.1	2.28%	40.69%	22,645	9,214	9,675	14,148			5,101					180,989	854,054	170,811
Maintenance pumping equipment	604.2	0.56%	35.41%	5,356	1,896	1,991	3,475								11,507	56,451	11,291
<b>TOTAL PUMPING</b>				299,735	18,346	19,264	108,963			186,090	0				23,823	106,831	21,368
<b>PURIFICATION</b>																	
Labor	605.1	14.36%	0.01%	84,871	8	9	89,106								5,466	31,587	293,901
Supplies and expense	605.2		23.15%	86,096	19,931	20,928	0								314,316	1,469,511	0
Maintenance building/fixtures	606.1	0.08%	74.69%	1,539	1,149	1,207	496	69,473							89,115	405,116	81,021
Maintenance equipment	606.2	0.83%	48.96%	9,677	4,738	4,975	5,150								90,401	410,960	82,191
<b>TOTAL PURIFICATION</b>				182,184	25,827	27,118	94,753	69,473		0	0				1,703	6,693	1,339
<b>TRANSMISSION AND DISTRIBUTION</b>																	
Inspecting customers installations	607	0.04%		236	0	0	248								10,125	46,850	9,370
Misc. trans and dist. supp & exp	608	21.71%	18.75%	158,690	29,754	31,242	134,714								0	0	0
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	30,242	14,301	15,016	16,258			612					248	1,128	226
Maint. of Stor, Reserv, Tanks, Standpipes	609.3	0.03%	93.81%	5,160	4,840	5,082	186								166,568	766,911	153,382
Maint. of Services	609.4	3.20%	59.17%	45,177	26,731	28,068	19,857								31,274	153,853	30,771
Maint. of Meters	609.5	4.01%	12.36%	27,040	3,342	3,509	24,883								5,269	25,327	5,065
Maint. of Hydrants	609.6	0.03%	58.50%	377	221	232	186								47,925	209,700	41,940
Maint. of Fountains & Troughs	609.7	0.02%	94.68%	1,555	1,472	1,546	124								28,392	129,242	25,848
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				268,477	80,662	84,695	196,455			612	0				418	1,528	306
<b>GENERAL AND MISCELLANEOUS</b>																	
Salary-officers & clerks	610.1	26.94%	23.08%	206,974	47,770	50,158	167,167								1,670	7,250	1,450
Gen. office supply & exp.	610.2	7.49%	53.65%	97,438	52,276	54,890	46,477								281,763	1,294,940	258,988
outside professional exp.	610.3		0.00%	87,815	0	0	0								0	0	0
Insurance	610.4		21.27%	36,813	7,830	8,222	0			3,061					217,325	987,709	197,542
Accidents and Damages	610.5		100.00%	0	0	0	0								101,366	479,281	95,856
Stores expense	610.6			0	0	0	0								94,261	429,443	85,889
Customer charges	610.8			0	0	0	0								41,242	160,102	32,020
Maintenance of general structures	610.9	0.18%	36.28%	1,724	626	657	1,117								10,659	46,015	9,203
Depreciation	610.1			0	0	0	0								1,774	9,564	1,913
Miscellaneous general expense	610.11		18.84%	117,958	22,223	23,334	0								0	0	0
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				558,250	130,724	137,261	214,761	104,867	10,659	3,061	33,021	21,200	0	70,000	128,202	560,397	112,079
<b>TOTAL OPERATING EXPENSES</b>																	
Uncollectible operating revenue		100.00%		1,332,884	261,093	274,147	620,516	174,340	10,659	204,046	33,021	21,200	0	70,000	0	0	0
Payroll taxes				0	0	0	0								0	0	0
Property taxes				46,569	0	0	0								0	0	0
Other taxes				90,707	0	0	0								48,682	222,753	44,551
<b>TOTAL EXPENSES</b>				1,470,160	261,093	274,147	620,516	174,340	10,659	297,021	81,702	21,200	0	70,000	92,975	442,744	88,549
<b>DEBT SERVICE</b>																	
				958,002											0	0	0
<b>TOTAL REVENUE REQUIREMENTS</b>				2,428,162	261,093	274,147	620,516	174,340	10,659	297,021	81,702	21,200	0	1,028,002	0	2,507,588	11,410,737





HINGHAM, MASSACHUSETTS  
 OPERATING EXPENSE WORKSHEET - MUNICIPALLY OWNED - 1986  
 No treatment plant

DESCRIPTION	ACCOUNT NUMBER	1985		UNADJUSTED AMOUNTS	ADJUST WITH INFL	PLUS 86 PAYROLL	PENSION CHEMICAL BILLING	WORKCOMP	PROPTAX POWER	PAYTAX EMPWEL	PROF SERVICE CO LABCOST	LEASED VEHICLES	DEBT SERVICE CEN SERV	TOTAL	
		PERCENT	PERCENT											EXPENSE	ADJUSTED
<b>SOURCE OF SUPPLY</b>															
Maint. water supply building/fixtures	601.1	0.03%	7.12%	171	12	13	161								174
Maintenance of surface source	601.2	0.57%	58.01%	4,114	2,386	2,506	3,055								5,561
Maint. of Ground Source of Water Sup.	601.3	0.30%	7.41%	15,638	1,159	1,217	1,608								15,780
<b>TOTAL SOURCE OF SUPPLY</b>				19,923	3,557	3,735	4,824	0	0	12,955	12,955	0	0	0	21,515
<b>PUMPING</b>															
Pumping Labor	603.1	14.72%	0.63%	75,566	476	500	78,903								0
Boiler Fuel	603.2		100.00%	504	504	529	0								0
Purchased power	603.4			164,162	0	0	0								79,403
Miscellaneous pumping station supply	603.5		54.28%	11,391	6,183	6,492	0			164,162					529
Misc. power pumping building/fixtures	604.1	2.28%	40.69%	18,691	7,605	7,985	12,221			4,627					164,162
Maintenance pumping equipment	604.2	0.56%	35.41%	8,937	3,165	3,323	3,002								11,119
<b>TOTAL PUMPING</b>				279,251	17,933	18,830	94,126	0	0	168,789	0	0	0	0	20,207
<b>PURIFICATION</b>															
Labor	605.1	14.36%	0.01%	73,318	7	8	76,973								0
Supplies and expense	605.2		23.15%	74,375	17,218	18,079	0	60,013							0
Maintenance building/fixtures	606.1	0.08%	74.69%	931	696	731	429								76,981
Maintenance equipment	606.2	0.83%	48.96%	8,794	4,306	4,521	4,449								78,092
<b>TOTAL PURIFICATION</b>				157,419	22,227	23,338	81,851	60,013	0	0	0	0	0	0	1,159
<b>TRANSMISSION AND DISTRIBUTION</b>															
Inspecting customers installations	607	0.04%		204	0	0	214								0
Misc. trans and dist. supp & exp	608	21.71%	18.75%	144,812	27,152	28,510	116,371								0
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	32,456	15,349	16,116	14,044		555						214
Maint. of Stor, Reserv, Tanks, Standpipes	609.3	0.03%	93.81%	4,276	4,574	4,803	161								145,436
Maint. of Services	609.4	3.20%	59.17%	35,261	20,864	21,907	17,153								30,160
Maint. of Meters	609.5	4.01%	12.36%	23,509	2,906	3,051	21,495								4,964
Maint. of Hydrants	609.6	0.03%	58.50%	153	90	94	161								39,060
Maint. of Fountains & Troughs	609.7	0.02%	94.68%	1,240	1,174	1,233	107								24,546
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				242,512	72,109	75,714	169,706	0	0	555	0	0	0	0	255
<b>GENERAL AND MISCELLANEOUS</b>															
Salary-officers & clerks	610.1	26.94%	23.08%	178,610	41,223	43,284	144,405								1,340
Gen. office supply & exp.	610.2	7.49%	53.65%	93,348	50,081	52,585	40,148								245,975
Outside professional exp.	610.3		0.00%	90,776	0	0	0								0
Insurance	610.4		21.27%	21,073	4,482	4,706	0			2,776					187,690
Accidents and Damages	610.5		100.00%	0	0	0	0				23,575				92,734
Stores expense	610.6			0	0	0	0								75,076
Customer charges	610.8			9,068	0	0	0								28,282
Maintenance of general structures	610.9	0.18%	36.28%	2,438	885	929	965		7,998						0
Depreciation	610.1			0	0	0	0								0
Miscellaneous general expense	610.11		18.84%	101,695	19,159	20,117	0	83,084	0						7,998
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				497,009	115,831	121,622	185,518	83,084	7,998	2,776	23,575	17,300	0	55,000	1,894
<b>TOTAL OPERATING EXPENSES</b>															
Uncollectible operating revenue		100.00%		1,196,114	231,656	243,239	536,025	143,097	7,998	185,076	23,575	17,300	0	55,000	0
Payroll taxes				40,305	0	0	0								0
Property taxes				84,231	0	0	0								0
Other taxes				0	0	0	0			86,336					42,641
<b>TOTAL EXPENSES</b>				1,320,650	231,656	243,239	536,025	143,097	7,998	271,412	66,216	17,300	0	55,000	86,336
<b>DEBT SERVICE</b>															
<b>TOTAL REVENUE REQUIREMENTS</b>				1,812,650	231,656	243,239	536,025	143,097	7,998	271,412	66,216	17,300	0	55,000	0
														958,002	958,002
														0	2,298,289





HINGHAM, MASSACHUSETTS  
 OPERATING EXPENSE WORKSHEET - PRIVATELY OWNED 1988

DESCRIPTION	ACCT NO.	PAY %	UNADJ %	1987				PENSION CHEMICAL	WORKCOMP RATE/CASE	PROPTAX POWER	PAYTAX EMP/WEL	CAPITAL PAYROLL	LABCOSTS	TOTAL ADJUSTED 1988
				OPERATE EXPENSE	UNADJUST AMOUNT	ADJUST WITH INFL	PLUS 88 PAYROLL							
SOURCE OF SUPPLY														
Maint. water supply build/fix	601.1	0.03%	7.12%	232	17	17	256							246
Maintenance of surface source	601.2	0.57%	58.01%	9,206	5,340	5,607	4,869					(28)		10,477
Maint. of Source of Water Sup.	601.3	0.30%	7.41%	16,973	1,258	1,321	2,563			13,603		(325)		17,161
TOTAL SOURCE OF SUPPLY				26,411	6,615	6,945	7,688	0	0	13,603	0	(353)	0	27,883
PUMPING														
Pumping Labor	603.1	14.72%	0.63%	119,374	752	790	125,747							0
Boiler Fuel	603.2		100.00%	556	556	583	0							126,536
Purchased power	603.4			172,370	0	0	0							583
Misc pumping station supply	603.5		54.28%	11,816	6,414	6,735	0			172,370				172,370
Misc. power pumping build/fix	604.1	2.28%	40.69%	30,171	12,277	12,277	19,477			4,858				11,593
Maint pumping equipment	604.2	0.56%	35.41%	7,492	2,653	2,785	4,784							32,368
TOTAL PUMPING				341,779	22,651	23,784	150,008	0	0	177,229	0	0	0	7,569
PURIFICATION														
Labor	605.1	14.36%	0.01%	115,739	12	12	122,671							0
Supplies and expense	605.2		23.15%	75,589	17,499	18,374	0	60,695						122,684
Maintenance building/fixtures	606.1	0.08%	74.69%	1,796	1,342	1,409	683							79,069
Maintenance equipment	606.2	0.83%	48.96%	12,711	6,223	6,534	7,090							2,092
TOTAL PURIFICATION				205,835	25,075	26,329	130,445	60,695	0	0	0	0	0	13,625
TRANSMISSION AND DISTRIBUTION														
Inspecting customers install	607	0.04%		322	0	0	342							0
Misc trans and dist supp & exp	608	21.71%	18.75%	215,595	40,424	42,445	185,459			583				342
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	40,385	19,098	20,053	22,382							228,488
Maint of Stor Reserv Tanks	609.3	0.03%	93.81%	5,258	4,932	5,179	256							42,435
Maint of Services	609.4	3.20%	59.17%	57,179	33,833	35,524	27,336							5,435
Maint of Meters	609.5	4.01%	12.36%	33,942	4,195	4,405	34,256							62,861
Maint of Hydrants	609.6	0.03%	58.50%	463	271	284	256					(2,672)		35,989
Maint of Fountains & Troughs	609.7	0.02%	94.68%	1,579	1,495	1,570	171							541
TOTAL TRANSMISSION AND DISTRIBUTION				354,723	104,248	109,461	270,458	0	0	583	0	(2,672)	0	1,741
GENERAL AND MISCELLANEOUS														
Salary-officers & clerks	610.1	26.94%	23.08%	324,836	74,972	78,721	230,137		25,932					0
Gen office supply & exp	610.2	7.49%	53.65%	127,306	68,300	71,715	63,984							334,790
Law Expense - General	610.3		0.00%	2,915	0	0	0							135,699
Insurance	610.4		21.27%	146,579	31,177	32,736	0			2,915				2,915
Accidents and Damages	610.5		100.00%	0	0	0	0		11,637		119,973			164,346
Stores expense	610.6			0	0	0	0							0
Inventory adjustments	610.8			0	0	0	0							0
Maint of general structures	610.9	0.18%	36.28%	898	326	342	1,538							0
Depreciation	610.1			128,542	0	0	0					(1,055)		825
Miscellaneous general expense	610.1		18.84%	105,719	19,917	20,913	0	90,978	0				128,603	128,603
TOTAL GENERAL AND MISCELLANEOUS				836,796	194,693	204,427	295,659	90,978	37,569	2,915	119,973	(1,055)	0	879,070
TOTAL OPERATING EXPENSES														
Uncollectible operating revenue		100.00%		1,765,544	353,282	370,946	854,258	151,673	37,569	194,330	119,973	(4,080)	0	1,853,272
Payroll taxes				7,530	0	0	0							7,933
Property taxes				63,438	0	0	0							66,895
Other taxes				303,799	0	0	0			311,394				311,394
TOTAL EXPENSES				2,184,125	353,282	370,946	854,258	151,673	37,569	505,724	186,868	(4,080)	0	2,239,722
RATE OF RETURN				672,822	0	0	0							657,780
TOTAL REVENUE REQUIREMENTS				2,856,947	353,282	370,946	854,258	151,673	37,569	505,724	186,868	(4,080)	0	665,713

HINGHAM, MASSACHUSETTS





HINGHAM, MASSACHUSETTS  
OPERATING EXPENSE WORKSHEET - PRIVATELY OWNED 1985

DESCRIPTION	ACCT NO.	1983		UNADJ AMOUNTS	ADJUST WITH INFL	PLUS 85 PAYROLL	PENSION CHEMICAL	WORKCOMP RATECASE	PROPTAX POWER	PAYTAX EMPWEL	CAPITAL PAYROLL	LABCOSTS	DEPR.	UNCOLREV	TOTAL ADJUSTED 1985
		PAY %	UNADJ %												
<b>SOURCE OF SUPPLY</b>															
Maint. water supply build/fix	601.1	0.03%	7.12%	241	17	18	215								210
Maintenance of surface source	601.2	0.57%	58.01%	2,018	1,171	1,229	4,088								5,318
Maint. of Source of Water Sup.	601.3	0.30%	7.41%	14,801	1,097	1,152	2,152								15,985
TOTAL SOURCE OF SUPPLY				17,060	2,285	2,399	6,455	0	0	12,955	0	(23)	0	0	21,513
<b>PUMPING</b>															
Pumping Labor	603.1	14.72%	0.63%	63,559	400	420	105,579								0
Boiler Fuel	603.2		100.00%	480	480	504	0								0
Purchased power	603.4			159,021	0	0	0								106,000
Misc pumping station supply	603.5		54.28%	15,221	8,262	8,675	0			164,162					504
Misc. power pumping build/fix	604.1	2.28%	40.69%	18,021	7,333	7,699	16,353			4,627					164,162
Maint pumping equipment	604.2	0.56%	35.41%	16,348	5,789	6,078	4,017								13,302
TOTAL PUMPING				272,650	22,264	23,377	125,949	0	0	168,789	0	0	0	0	24,053
<b>PURIFICATION</b>															
Labor	605.1	14.36%	0.01%	99,583	10	10	102,997								0
Supplies and expense	605.2		27.57%	96,325	26,557	27,885	0	52,430							0
Maintenance building/fixtures	606.1	0.08%	74.69%	667	498	523	574					(5,801)			103,008
Maintenance equipment	606.2	0.83%	48.96%	8,865	4,340	4,557	5,953								74,514
TOTAL PURIFICATION				205,440	31,405	32,976	109,524	52,430	0	0	0	0	0	0	1,097
<b>TRANSMISSION AND DISTRIBUTION</b>															
Inspecting customers install	607	0.04%		360	0	0	287								0
Misc trans and dist supp & exp	608	21.71%	18.75%	181,889	34,104	35,809	155,715								0
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	38,767	18,333	19,250	18,792			555					287
Maint of Stor Reserv Tanks	609.3	0.03%	93.81%	4,795	4,498	4,723	215								192,080
Maint of Services	609.4	3.20%	59.17%	30,921	18,296	19,211	22,952								38,042
Maint of Meters	609.5	4.01%	12.36%	23,669	2,925	3,072	28,762								4,938
Maint of Hydrants	609.6	0.03%	58.50%	1,145	1,084	1,138	143								42,163
Maint of Fountains & Troughs	609.7	0.02%	94.68%	1,145	1,084	1,138	143								29,590
TOTAL TRANSMISSION AND DISTRIBUTION				281,546	79,241	83,203	227,082	0	0	555		(2,243)	0	0	215
<b>GENERAL AND MISCELLANEOUS</b>															
Salary-officers & clerks	610.1	26.94%	57.14%	379,558	216,879	227,723	193,227								1,282
Gen office supply & exp	610.2	7.49%	53.65%	99,671	53,473	56,147	53,722			24,697					0
Law Expense - General	610.3		0.00%	205	0	0	0								445,648
Insurance	610.4		0.00%	105,973	0	0	0			2,776					109,869
Accidents and Damages	610.5		100.00%	0	0	0	0			9,771					2,776
Stores expense	610.6			0	0	0	0								95,282
Inventory adjustments	610.8			0	0	0	0								0
Maint of general structures	610.9	0.18%	36.28%	3,988	1,447	1,519	1,291								0
Depreciation	610.1			102,938	0	0	0								0
Miscellaneous general expense	610.1		18.84%	114,081	21,493	22,568	0	76,387	0			(886)		98,430	1,925
TOTAL GENERAL AND MISCELLANEOUS				806,414	293,293	307,957	248,241	76,387	34,468	2,776	85,511	(886)	0	98,430	98,430
<b>TOTAL OPERATING EXPENSES</b>															
Uncollectible operating revenue		100.00%		1,583,110	428,487	449,912	717,251	128,818	34,468	185,076	85,511	(3,426)	(5,801)	98,430	0
Payroll taxes				0	0	0	0								0
Property taxes				0	0	0	0								7,322
Other taxes				0	0	0	0			241,560					56,382
TOTAL EXPENSES				1,583,110	428,487	449,912	717,251	128,818	34,468	426,636	141,893	(3,426)	(5,801)	148,097	241,560
<b>RATE OF RETURN</b>															
TOTAL REVENUE REQUIREMENTS				1,583,110	428,487	449,912	717,251	128,818	34,468	426,636	141,893	(3,426)	(5,801)	148,097	49,667
														7,322	2,045,169
														431,268	431,268
														438,590	2,476,437

HINGHAM, MASSACHUSETTS  
 OPERATING EXPENSE WORKSHEET - DISTRICT OWNED - 1989  
 No treatment plant

DESCRIPTION	1988		UNADJUST AMOUNTS	ADJUST WITH INFL	PLUS 89 PAYROLL	PENSION CHEMICAL	WORKCOMP BILLING	PROPTAX POWER	PAYTAX EMPWEL	SERVICE CO	PROF LABCOST	LEASED VEHICLE	DEBT SERVICE	TOTAL ADJUSTED 1989	FIVE YEAR TOTAL	FIVE YEAR AVERAGE
	ACCOUNT NUMBER	PAYROLL PERCENT														
<b>SOURCE OF SUPPLY</b>																
Maint. water supply building/fixtures	601.1	0.03%	7.12%	237	17	18	231									
Maintenance of surface source	601.2	0.57%	58.01%	9,104	5,281	5,545	4,389									
Maint. of Ground Source of Water Sup.	601.3	0.30%	7.41%	17,123	1,269	1,332	2,310									
<b>TOTAL SOURCE OF SUPPLY</b>				26,463	6,567	6,895	6,930							249	1,134	227
<b>PUMPING</b>																
Pumping Labor	603.1	14.72%	0.63%	108,634	684	719	113,347							9,934	38,689	7,738
Boiler Fuel	603.2		100.00%	0	0	0	0							17,926	84,210	16,842
Purchased power	603.4			0	0	0	0							28,109	124,034	24,807
Miscellaneous pumping station supply	603.5			172,370	0	0	0							0	0	0
Misc. power pumping building/fixtures	604.1	2.28%	40.69%	11,487	6,235	6,547	0	180,989						114,066	518,367	103,673
Maintenance pumping equipment	604.2	0.56%	35.41%	28,004	11,395	11,965	17,557	5,101						0	0	0
<b>TOTAL PUMPING</b>				326,977	20,609	21,640	135,216							180,989	854,054	170,811
<b>UTILIZATION</b>																
Supplies and expense	605.1	14.36%	0.01%	105,320	11	11	110,575							11,648	59,374	11,875
Maintenance building/fixtures	606.1	0.08%	74.69%	86,402	20,002	21,002	0	69,536						29,521	130,428	26,086
Maintenance equipment	606.2	0.83%	48.96%	1,849	1,381	1,450	616							6,722	34,126	6,825
<b>TOTAL UTILIZATION</b>				205,430	27,200	28,560	117,583							342,946	1,596,349	319,270
<b>WATER PURIFICATION</b>																
Inspecting customers installations	607	0.04%		293	0	0	308							90,539	417,725	83,545
Misc. trans and dist. supp & exp	608	21.71%	18.75%	196,702	36,882	38,726	167,172							2,066	7,894	1,579
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	36,980	17,488	18,362	20,175	612						12,488	55,959	11,192
Maint. of Stor, Reserv, Tanks, Standpipes	609.3	0.03%	93.81%	5,315	4,986	5,236	231							0	0	0
Maint. of Services	609.4	3.20%	59.17%	55,017	32,554	34,181	24,641							0	0	0
Maint. of Meters	609.5	4.01%	12.36%	33,554	4,147	4,355	30,878							0	0	0
Maint. of Hydrants	609.6	0.03%	58.50%	468	274	287	231							0	0	0
Maint. of Fountains & Troughs	609.7	0.02%	94.68%	1,660	1,572	1,650	154							0	0	0
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				329,989	97,902	102,797	243,789							215,679	984,300	196,860
<b>GENERAL AND MISCELLANEOUS</b>																
Salary-officers & clerks	610.1	26.94%	23.08%	261,149	60,273	63,287	207,444							0	0	0
Gen. office supply & exp.	610.2	7.49%	53.65%	118,671	63,667	66,850	57,675							0	0	0
Outside professional exp.	610.3		0.00%	32,915	0	0	0							0	0	0
Insurance	610.4		21.27%	59,118	12,574	13,203	0	3,061						270,731	1,312,238	262,448
Accidents and Damages	610.5		100.00%	0	0	0	0							124,525	567,641	113,528
Stores expense	610.6			0	0	0	0							33,061	169,658	33,932
Customer costs	610.8			16,267	0	0	0							65,127	288,913	57,783
Maintenance of general structures	610.9	0.18%	36.28%	2,120	769	807	1,386	18,199						0	0	0
Depreciation	610.1			0	0	0	0							0	0	0
Miscellaneous general expense	610.11		18.84%	146,336	27,570	28,948	0							18,199	78,565	15,713
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				636,576	164,854	173,096	266,505							2,194	11,282	2,256
<b>NET OPERATING EXPENSES</b>																
Uncollectible operating revenue		100.00%		1,525,435	317,131	332,988	770,023	199,670	28,678	204,046	41,444			159,082	688,643	137,729
Payroll taxes				57,875	0	0	0							672,918	3,116,942	623,388
Property taxes				311,394	0	0	0							0	0	0
Other taxes				0	0	0	0							0	0	0
<b>TOTAL EXPENSES</b>				1,894,705	317,131	332,988	770,023	199,670	28,678	523,225	101,941			319,179	1,423,533	284,707
<b>DEBT SERVICE</b>																
Debt Service				1,017,284	0	0	0							0	0	0
<b>TOTAL REVENUE REQUIREMENTS</b>				2,911,989	317,131	332,988	770,023	199,670	28,678	523,225	101,941			0	1,017,284	1,818,683
														3,003,810	13,900,552	2,780,110

HINGHAM, MASSACHUSETTS  
 OPERATING EXPENSE WORKSHEET - DISTRICT OWNED - 1988  
 No treatment plant

DESCRIPTION	ACCOUNT NUMBER	1987		UNADJUST AMOUNTS	ADJUST WITH INFL	PLUS 88 PAYROLL	PENSION CHEMICAL	WORKCOMP BILLING	PROPTAX POWER	PAYTAX EMPWEL	SERVICE CO	PROF LABCOST	LEASED VEHICLE	DEBT SERVICE	TOTAL ADJUSTED 1988
		PAYROLL PERCENT	UNADJUST PERCENT												
<b>SOURCE OF SUPPLY</b>															
Maint. water supply building/fixtures	601.1	0.03%	7.12%	226	16	17	220								237
Maintenance of surface source	601.2	0.57%	58.01%	8,083	4,689	4,924	4,180								9,104
Maint. of Ground Source of Water Sup.	601.3	0.30%	7.41%	16,959	1,257	1,319	2,200								17,123
<b>TOTAL SOURCE OF SUPPLY</b>				25,268	5,962	6,260	6,600	0	0	13,603	0	0	0	0	26,463
<b>PUMPING</b>															
Pumping Labor	603.1	14.72%	0.63%	103,461	652	684	107,950								0
Boiler Fuel	603.2		100.00%	0	0	0	0								0
Purchased power	603.4			172,370	0	0	0								108,634
Miscellaneous pumping station supply	603.5		54.28%	11,630	6,313	6,628	0			172,370					0
Misc. power pumping building/fixtures	604.1	2.28%	40.69%	26,410	10,746	11,284	16,721			4,858					172,370
Maintenance pumping equipment	604.2	0.56%	35.41%	6,386	2,261	2,374	4,107								11,487
<b>TOTAL PUMPING</b>				320,258	19,972	20,971	128,777	0	0	177,229	0	0	0	0	28,004
<b>PURIFICATION</b>															
Labor	605.1	14.36%	0.01%	100,305	10	11	105,310								0
Supplies and expense	605.2		23.15%	83,005	19,216	20,176	0								0
Maintenance building/fixtures	606.1	0.08%	74.69%	1,609	1,202	1,262	587	66,225							105,320
Maintenance equipment	606.2	0.83%	48.96%	11,229	5,498	5,773	6,087								86,402
<b>TOTAL PURIFICATION</b>				196,149	25,926	27,222	111,983	66,225	0	0	0	0	0	0	11,860
<b>TRANSMISSION AND DISTRIBUTION</b>															
Inspecting customers installations	607	0.04%		279	0	0	293								0
Misc. trans and dist. supp & exp	608	21.71%	18.75%	187,465	35,150	36,907	159,211								0
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	35,778	16,920	17,766	19,214			583					293
Maint. of Stor, Reserv, Tanks, Standpipes	609.3	0.03%	93.81%	5,173	4,853	5,095	220								196,702
Maint. of Services	609.4	3.20%	59.17%	50,781	30,047	31,550	23,467								36,980
Maint. of Meters	609.5	4.01%	12.36%	31,948	3,949	4,146	29,408								5,315
Maint. of Hydrants	609.6	0.03%	58.50%	404	236	248	220								55,017
Maint. of Fountains & Troughs	609.7	0.02%	94.68%	1,522	1,441	1,513	147								33,554
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				313,352	92,596	97,225	232,180	0	0	583	0	0	0	0	468
<b>GENERAL AND MISCELLANEOUS</b>															
Salary-officers & clerks	610.1	26.94%	23.08%	262,372	60,555	63,583	197,566								1,660
Gen. office supply & exp.	610.2	7.49%	53.65%	113,155	60,707	63,743	54,928								0
outside professional exp.	610.3		0.00%	22,915	0	0	0								261,149
Insurance	610.4		21.27%	54,170	11,522	12,098	0			2,915					118,671
Accidents and Damages	610.5		100.00%	0	0	0	0	9,980		37,040			30,000		32,915
Stores expense	610.6			0	0	0	0								59,118
Customer costs	610.8			14,961	0	0	0								0
Maintenance of general structures	610.9	0.18%	36.28%	2,099	762	800	1,320				16,267				0
Depreciation	610.1			0	0	0	0								16,267
Miscellaneous general expense	610.11		18.84%	135,474	25,523	26,799	0								2,120
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				605,146	159,070	167,023	253,814	119,537	0	119,537	0	0	0	0	0
<b>TOTAL OPERATING EXPENSES</b>															
Uncollectible operating revenue		100.00%		1,460,172	303,525	318,701	733,355	185,762	26,247	194,330	37,040	30,000	0	0	0
Payroll taxes				0	0	0	0								0
Property taxes				55,378	0	0	0								0 1,525,435
Other taxes				303,799	0	0	0								0
<b>TOTAL EXPENSES</b>				1,819,349	303,525	318,701	733,355	185,762	26,247	505,724	94,915	30,000	0	0	0
<b>DEBT SERVICE</b>															
<b>TOTAL REVENUE REQUIREMENTS</b>				1,017,284	303,525	318,701	733,355	185,762	26,247	505,724	94,915	30,000	0	0	0 1,894,705
				2,836,633	303,525	318,701	733,355	185,762	26,247	505,724	94,915	30,000	0	1,017,284	0 1,017,284
													0	1,017,284	0 2,911,989

HINGHAM, MASSACHUSETTS  
 OPERATING EXPENSE WORKSHEET - DISTRICT OWNED - 1987  
 No treatment plant

DESCRIPTION	1986			OPERATE EXPENSE	UNADJUST AMOUNTS	ADJUST WITH INFL	PLUS 87 PAYROLL	PENSION CHEMICAL	WORKCOMP BILLING	PROPTAX POWER	PAYTAX EMPWEL	SERVICE CO	PROF LABCOST	LEASED VEHICLE	DEBT SERVICE	TOTAL ADJUSTED 1987	
	ACCOUNT NUMBER	PAYROLL PERCENT	UNADJUST PERCENT														
<b>SOURCE OF SUPPLY</b>																	
Maint. water supply building/fixtures	601.1	0.03%	7.12%	215	15	16	210										226
Maintenance of surface source	601.2	0.57%	58.01%	6,735	3,907	4,102	3,981										8,083
Maint. of Ground Source of Water Sup.	601.3	0.30%	7.41%	16,196	1,200	1,260	2,095										16,959
<b>TOTAL SOURCE OF SUPPLY</b>				23,146	5,122	5,379	6,286			13,603							25,268
<b>PUMPING</b>																	
Pumping Labor	603.1	14.72%	0.63%	98,533	621	652	102,809										0
Boiler Fuel	603.2		100.00%	0	0	0	0										0
Purchased power	603.4			164,162	0	0	0										103,461
Miscellaneous pumping station supply	603.5		54.28%	11,881	6,449	6,772	0			172,370							0
Misc. power pumping building/fixtures	604.1	2.28%	40.69%	24,543	9,987	10,486	15,924			4,858							172,370
Maintenance pumping equipment	604.2	0.56%	35.41%	6,655	2,357	2,475	3,911										11,630
<b>TOTAL PUMPING</b>				305,776	19,413	20,384	122,645			177,229							26,410
<b>PURIFICATION</b>																	
Labor	605.1	14.36%	0.01%	95,529	10	10	100,295										0
Supplies and expense	605.2		23.15%	82,004	18,984	19,933	0										0
Maintenance building/fixtures	606.1	0.08%	74.69%	1,340	1,001	1,051	559	63,072									100,305
Maintenance equipment	606.2	0.83%	48.96%	10,567	5,174	5,432	5,797										83,005
<b>TOTAL PURIFICATION</b>				189,440	25,168	26,426	106,651	63,072		0	0	0					1,609
<b>TRANSMISSION AND DISTRIBUTION</b>																	
Inspecting customers installations	607	0.04%		266	0	0	279										0
Misc. trans and dist. supp & exp	608	21.71%	18.75%	179,060	33,574	35,252	151,630										0
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	35,202	16,647	17,480	18,299			583							279
Maint. of Stor, Reserv, Tanks, Standpipes	609.3	0.03%	93.81%	5,039	4,727	4,963	210										187,465
Maint. of Services	609.4	3.20%	59.17%	45,762	27,078	28,431	22,350										35,778
Maint. of Meters	609.5	4.01%	12.36%	30,368	3,753	3,941	28,007										5,173
Maint. of Hydrants	609.6	0.03%	58.50%	316	185	194	210										50,781
Maint. of Fountains & Troughs	609.7	0.02%	94.68%	1,391	1,317	1,382	140										31,948
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				297,404	87,281	91,645	221,124	0	0	583	0						404
<b>GENERAL AND MISCELLANEOUS</b>																	
Salary-officers & clerks	610.1	26.94%	23.08%	306,240	70,680	74,214	188,158										0
Gen. office supply & exp.	610.2	7.49%	53.65%	108,005	57,945	60,842	52,313										0
Outside professional exp.	610.3		0.00%	22,776	0	0	0										262,372
Insurance	610.4		21.27%	51,760	11,009	11,560	0			2,915			20,000				113,155
Accidents and Damages	610.5		100.00%	0	0	0	0		9,505		33,105						22,915
Stores expense	610.6			0	0	0	0										54,170
Customer costs	610.8			13,656	0	0	0										0
Maintenance of general structures	610.9	0.18%	36.28%	2,210	802	842	1,257		14,961								0
Depreciation	610.1			0	0	0	0										14,961
Miscellaneous general expense	610.11		18.84%	126,991	23,925	25,121	0	110,353	0								2,099
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				631,638	164,361	172,579	241,728	110,353	24,466	2,915	33,105		20,000	0	0		135,474
<b>TOTAL OPERATING EXPENSES</b>																	
Uncollectible operating revenue		100.00%		1,447,404	301,346	316,413	698,434	173,424	24,466	194,330	33,105		20,000	0	0		0
Payroll taxes				0	0	0	0										0
Property taxes				53,000	0	0	0										0
Other taxes				247,600	0	0	0			303,799	55,378						55,378
<b>TOTAL EXPENSES</b>				1,748,004	301,346	316,413	698,434	173,424	24,466	498,129	88,484		20,000	0	0		303,799
<b>DEBT SERVICE</b>																	
<b>TOTAL REVENUE REQUIREMENTS</b>				1,017,284	301,346	316,413	698,434	173,424	24,466	498,129	88,484		20,000	0	0		0
				2,765,288	301,346	316,413	698,434	173,424	24,466	498,129	88,484		20,000	0	0	1,017,284	0
																1,017,284	0
																0	2,836,633

HINGHAM, MASSACHUSETTS  
 OPERATING EXPENSE WORKSHEET - DISTRICT OWNED - 1986  
 No treatment plant

DESCRIPTION	ACCOUNT NUMBER	1985		UNADJUST AMOUNTS	ADJUST WITH INFL	PLUS 86 PAYROLL	PENSION CHEMICAL	WORKCOMP BILLING	PROPTAX POWER	PAYTAX EMPWEL	SERVICE CO	PROF LAB COST	LEASED VEHICLES	DEBT SERVICE	TOTAL ADJUSTED 1986
		PERCENT	PERCENT												
<b>SOURCE OF SUPPLY</b>															
Maint. water supply building/fixtures	601.1	0.03%	7.12%	208	15	16	200								215
Maintenance of surface source	601.2	0.57%	58.01%	4,833	2,803	2,944	3,791								16,196
Maint. of Ground Source of Water Sup.	601.3	0.30%	7.41%	16,007	1,186	1,245	1,996								6,735
<b>TOTAL SOURCE OF SUPPLY</b>				21,048	4,004	4,205	5,987	0	0	12,955	12,955	0	0	0	16,196
<b>PUMPING</b>															
Pumping Labor	603.1	14.72%	0.63%	93,672	590	620	97,914								0
Boiler Fuel	603.2		100.00%	0	0	0	0								0
Purchased power	603.4			164,162	0	0	0								98,533
Miscellaneous pumping station supply	603.5		54.28%	12,729	6,909	7,255	0			164,162					0
Misc. power pumping building/fixtures	604.1	2.28%	40.69%	21,949	8,931	9,377	15,166			4,627					11,881
Maintenance pumping equipment	604.2	0.56%	35.41%	7,882	2,791	2,931	3,725								24,543
<b>TOTAL PUMPING</b>				300,393	19,221	20,182	116,805	0	0	168,789	0	0	0	0	6,655
<b>PURIFICATION</b>															
Labor	605.1	14.36%	0.01%	90,981	9	10	95,519								0
Supplies and expense	605.2		27.57%	75,776	20,891	21,936	0	60,068							95,529
Maintenance building/fixtures	606.1	0.08%	74.69%	1,030	769	808	532								82,004
Maintenance equipment	606.2	0.83%	48.96%	9,815	4,806	5,046	5,521								1,340
<b>TOTAL PURIFICATION</b>				177,602	26,475	27,799	101,572	60,068	0	0	0	0	0	0	10,567
<b>TRANSMISSION AND DISTRIBUTION</b>															
Inspecting customers installations	607	0.04%		253	0	0	266								0
Misc. trans and dist. supp & exp	608	21.71%	18.75%	173,183	32,472	34,095	144,409								0
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	35,797	16,928	17,775	17,428			555					266
Maint. of Stor, Reserv, Tanks, Standpipes	609.3	0.03%	93.81%	4,913	4,609	4,839	200								179,060
Maint. of Services	609.4	3.20%	59.17%	39,397	23,311	24,477	21,286								35,202
Maint. of Meters	609.5	4.01%	12.36%	28,465	3,518	3,694	26,674								5,039
Maint. of Hydrants	609.6	0.03%	58.50%	190	111	117	200								45,762
Maint. of Fountains & Troughs	609.7	0.02%	94.68%	1,265	1,198	1,258	133								30,368
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				283,463	82,147	86,255	210,594	0	0	555	0	0	0	0	316
<b>GENERAL AND MISCELLANEOUS</b>															
Salary-officers & clerks	610.1	26.94%	57.14%	211,746	120,992	127,041	179,198								1,391
Gen. office supply & exp.	610.2	7.49%	53.65%	103,286	55,413	58,183	49,822								297,404
Outside professional exp.	610.3		0.00%	57,991	0	0	0								0
Insurance	610.4		21.27%	58,738	12,494	13,118	0			2,776			20,000		306,240
Accidents and Damages	610.5		100.00%	0	0	0	0				29,590				108,005
Stores expense	610.6			0	0	0	0								22,776
Customer costs	610.8			15,483	0	0	0								51,760
Maintenance of general structures	610.9	0.18%	36.28%	2,659	965	1,013	1,197				13,656				0
Depreciation	610.11			0	0	0	0								13,656
Miscellaneous general expense	610.11		18.84%	120,760	22,751	23,889	0	103,102	0						2,210
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				570,664	212,614	223,245	230,217	103,102	22,708	2,776	29,590	20,000	0	0	126,991
<b>TOTAL OPERATING EXPENSES</b>															
Uncollectible operating revenue		100.00%		1,353,170	344,462	361,685	665,175	163,170	22,708	185,076	29,590	20,000	0	0	0
Payroll taxes				50,102	0	0	0								0
Property taxes				241,560	0	0	0								0
Other taxes				0	0	0	0			247,600					53,000
<b>TOTAL EXPENSES</b>				1,644,833	344,462	361,685	665,175	163,170	22,708	432,675	82,590	20,000	0	0	247,600
<b>DEBT SERVICE</b>															
<b>TOTAL REVENUE REQUIREMENTS</b>				2,382,833	344,462	361,685	665,175	163,170	22,708	432,675	82,590	20,000	0	1,017,284	0
													0	1,017,284	1,017,284
													0	1,017,284	2,765,288



HINGHAM, MASSACHUSETTS  
 OPERATING EXPENSE WORKSHEET - MUNICIPALLY OWNED - 1989  
 Treatment Plant

DESCRIPTION	ACCOUNT NUMBER	PAYROLL PERCENT	UNADJUST PERCENT	1988				PENSION CHEMICAL	WORKCOMP BILLING	PROPTAX POWER	PAYTAX EMPWEL	PROF SERVICE CO LAB COST	LEASED VEHICLES	DEBT SERVICE CENT SERV PLT MTH	TOTAL ADJUSTED	FIVE YEAR TOTAL	FIVE YEAR AVERAGE
				OPERATE EXPENSE	UNADJUST AMOUNTS	ADJUST WITH INFL	PLUS 89 PAYROLL								1989	1989	1989
<b>SOURCE OF SUPPLY</b>																	
Maint. water supply building/fixtures	601.1	0.03%	7.12%	199	14	15	194								209	941	188
Maintenance of surface source	601.2	0.57%	58.01%	7,605	4,412	4,632	3,682								8,315	32,321	6,464
Maint. of Ground Source of Water Sup.	601.3	0.30%	7.41%	21,871	1,621	1,702	1,938			19,282					22,922	97,562	19,512
<b>TOTAL SOURCE OF SUPPLY</b>				29,675	6,046	6,349	5,814	0	0	19,282	0	0	0	0	31,445	130,824	26,165
<b>PUMPING</b>																	
Pumping Labor	603.1	14.72%	0.63%	91,143	574	603	95,097								95,700	428,594	85,719
Boiler Fuel	603.2		100.00%	583	583	613	0								613	2,785	557
Purchased power	603.4			232,700	0	0	0			244,335					244,335	1,038,059	207,612
Miscellaneous pumping station supply	603.5		54.28%	13,908	7,550	7,927	0			6,887					14,814	64,128	12,826
Misc. power pumping building/fixtures	604.1	2.28%	40.69%	23,425	9,532	10,008	14,730								24,738	109,054	21,811
Maintenance pumping equipment	604.2	0.56%	35.41%	5,540	1,962	2,060	3,618								5,678	32,112	6,422
<b>TOTAL PUMPING</b>				367,300	20,200	21,211	113,445	0	0	251,222	0	0	0	0	385,877	1,674,732	334,946
<b>PURIFICATION</b>																	
Labor	605.1	14.36%	0.01%	88,363	9	9	92,772								92,781	415,598	83,120
Supplies and expense	605.2		23.15%	133,211	30,838	32,380	0	109,644							142,025	546,136	109,227
Maintenance building/fixtures	606.1	0.08%	74.69%	1,573	1,175	1,234	517								1,750	6,792	1,358
Maintenance equipment	606.2	0.83%	48.96%	47,830	23,417	24,588	5,362						25,000		54,950	155,020	31,004
<b>TOTAL PURIFICATION</b>				270,977	55,439	58,211	98,651	109,644	0	0	0	0	25,000	0	291,506	1,123,545	224,709
<b>TRANSMISSION AND DISTRIBUTION</b>																	
Inspecting customers installations	607	0.04%		246	0	0	258								258	1,158	232
Misc. trans and dist. supp & exp	608	21.71%	18.75%	165,202	30,975	32,524	140,256			826					173,606	785,692	157,138
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	31,180	14,745	15,482	16,926								32,408	156,533	31,307
Maint. of Stor, Reserv, Tanks, Standpipes	609.3	0.03%	93.81%	5,174	4,854	5,096	194								5,290	25,370	5,074
Maint. of Services	609.4	3.20%	59.17%	46,416	27,464	28,837	20,673								49,511	213,265	42,653
Maint. of Meters	609.5	4.01%	12.36%	28,136	3,478	3,651	25,906								29,558	132,431	26,486
Maint. of Hydrants	609.6	0.03%	58.50%	389	227	239	194								433	1,562	312
Maint. of Fountains & Troughs	609.7	0.02%	94.68%	1,564	1,481	1,555	129								1,684	7,279	1,456
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				278,306	83,224	87,385	204,537	0	0	826	0	0	0	0	292,748	1,323,288	264,658
<b>GENERAL AND MISCELLANEOUS</b>																	
Salary-officers & clerks	610.1	26.94%	23.08%	215,035	49,630	52,112	174,044								226,155	1,010,838	202,168
Gen. office supply & exp.	610.2	7.49%	53.65%	100,236	53,777	56,466	48,389								104,854	487,301	97,460
outside professional exp.	610.3		0.00%	88,835	0	0	0			4,132			70,000		95,332	432,555	86,511
Insurance	610.4		21.27%	38,709	8,233	8,645	0								43,435	165,603	33,121
Accidents and Damages	610.5		100.00%	0	0	0	0								0	0	0
Stores expense	610.6			0	0	0	0								0	0	0
Customer charges	610.8			9,527	0	0	0			10,659					10,659	46,015	9,203
Maintenance of general structures	610.9	0.18%	36.28%	1,784	647	680	1,163								1,843	9,734	1,947
Depreciation	610.1			0	0	0	0								0	0	0
Miscellaneous general expense	610.11		18.84%	122,644	23,106	24,261	0	109,181	0						133,443	573,983	114,797
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				576,771	135,394	142,163	223,595	109,181	10,659	4,132	34,790	21,200	0	70,000	615,720	2,726,029	545,206
<b>TOTAL OPERATING EXPENSES</b>																	
Uncollectible operating revenue		100.00%		1,523,028	300,304	315,319	646,042	218,826	10,659	275,462	34,790	21,200	0	70,000	2,167,297	6,978,419	1,395,684
Payroll taxes				48,307	0	0	0				50,507				50,507	227,972	45,594
Property taxes				90,707	0	0	0			92,975					92,975	442,744	88,549
Other taxes				0	0	0	0								0	0	0
<b>TOTAL EXPENSES</b>				1,662,042	300,304	315,319	646,042	218,826	10,659	368,437	85,297	21,200	0	70,000	1,760,779	7,649,134	1,529,827
EBT SERVICE				2,184,712	0	0	0								2,184,712	8,130,479	1,626,096
<b>TOTAL REVENUE REQUIREMENTS</b>				3,846,754	300,304	315,319	646,042	218,826	10,659	368,437	85,297	21,200	0	2,254,712	3,945,491	15,779,613	3,155,923



HINGHAM, MASSACHUSETTS  
 OPERATING EXPENSE WORKSHEET - MUNICIPALLY OWNED - 1987  
 Treatment Plant

DESCRIPTION	1986			UNADJUST AMOUNTS	ADJUST WITH INFL	PLUS 87 PAYROLL	PENSION CHEMICAL	WORKCOMP BILLING	PROPTAX POWER	PAYTAX EMPWEL	PROF SERVICE COLAB COSTS	LEASED VEHICLES	DEBT SERVICE CENT SERV PLT MTN	TOTAL ADJUSTED 1987
	ACCOUNT NUMBER	PAYROLL PERCENT	UNADJUST PERCENT											
<b>SOURCE OF SUPPLY</b>														
Maint. water supply building/fixtures	601.1	0.03%	7.12%	174	12	13								189
Maintenance of surface source	601.2	0.57%	58.01%	5,561	3,226	3,387								6,727
Maint. of Ground Source of Water Sup.	601.3	0.30%	7.41%	15,780	1,169	1,228								21,350
<b>TOTAL SOURCE OF SUPPLY</b>				21,515	4,408	4,628			18,364					28,266
<b>PUMPING</b>														
Pumping Labor	603.1	14.72%	0.63%	79,403	500	525								86,781
Boiler Fuel	603.2		100.00%	529	529	556								556
Purchased power	603.4			164,162					232,700					232,700
Miscellaneous pumping station supply	603.5		54.28%	11,119	6,035	6,337			6,559					12,896
Misc. power pumping building/fixtures	604.1	2.28%	40.69%	20,207	8,222	8,633								21,994
Maintenance pumping equipment	604.2	0.56%	35.41%	6,325	2,240	2,352								5,633
<b>TOTAL PUMPING</b>				281,745	17,527	18,403			239,259					360,559
<b>PURIFICATION</b>														
Labor	605.1	14.36%	0.01%	76,981	8	8								84,155
Supplies and expense	605.2		23.15%	78,092	18,078	18,982		99,451						118,433
Maintenance building/fixtures	606.1	0.08%	74.69%	1,159	866	909								1,378
Maintenance equipment	606.2	0.83%	48.96%	8,970	4,392	4,611								13,973
<b>TOTAL PURIFICATION</b>				165,202	23,344	24,511		99,451					25,000	238,441
<b>TRANSMISSION AND DISTRIBUTION</b>														
Inspecting customers installations	607	0.04%		214	0	0								214
Misc. trans and dist. supp & exp	608	21.71%	18.75%	145,436	27,269	28,633			787					174,505
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	30,160	14,263	14,976								49,400
Maint. of Stor, Reserv, Tanks, Standpipes	609.3	0.03%	93.81%	4,964	4,657	4,890								10,511
Maint. of Services	609.4	3.20%	59.17%	39,060	23,112	24,267								66,439
Maint. of Meters	609.5	4.01%	12.36%	24,546	3,034	3,186								27,766
Maint. of Hydrants	609.6	0.03%	58.50%	255	149	157								461
Maint. of Fountains & Troughs	609.7	0.02%	94.68%	1,340	1,269	1,332								2,941
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				245,975	73,752	77,440		99,451	787					325,455
<b>GENERAL AND MISCELLANEOUS</b>														
Salary-officers & clerks	610.1	26.94%	23.08%	187,690	43,319	45,485								236,494
Gen. office supply & exp.	610.2	7.49%	53.65%	92,734	49,752	52,239								144,725
outside professional exp.	610.3		0.00%	75,076	0	0			3,935					79,011
Insurance	610.4		21.27%	28,282	6,016	6,316				27,789			60,000	62,121
Accidents and Damages	610.5		100.00%	0	0	0								0
Stores expense	610.6			0	0	0								0
Customer charges	610.8			7,998	0	0								7,998
Maintenance of general structures	610.9	0.18%	36.28%	1,894	687	721		8,763						11,365
Depreciation	610.11			0	0	0								0
Miscellaneous general expense	610.11		18.84%	103,201	19,443	20,415								143,059
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				496,874	119,216	125,177		92,585	8,763	3,935	27,789	18,600	60,000	655,555
<b>TOTAL OPERATING EXPENSES</b>														
Uncollectible operating revenue		100.00%		1,211,310	238,246	250,158	585,979	192,035	8,763	262,345	27,789	18,600	0	60,000
Payroll taxes				0	0	0								0
Property taxes				42,641	0	0								42,641
Other taxes				86,336	0	0			88,495					174,831
<b>TOTAL EXPENSES</b>				1,340,287	238,246	250,158	585,979	192,035	8,763	350,840	74,001	18,600	0	1,565,376
<b>DEBT SERVICE</b>														
				1,084,343									60,000	2,184,712
<b>TOTAL REVENUE REQUIREMENTS</b>				2,424,630	238,246	250,158	585,979	192,035	8,763	350,840	74,001	18,600	0	3,750,088

HINGHAM, MASSACHUSETTS  
 OPERATING EXPENSE WORKSHEET - MUNICIPALLY OWNED - 1986  
 Treatment plant

DESCRIPTION	ACCOUNT NUMBER	1985		OPERATE EXPENSE	UNADJUST AMOUNTS	ADJUST WITH INFL	PLUS 86 PAYROLL	PENSION CHEMICAL	WORKCOMP BILLING	PROPTAX POWER	PAYTAX EMPWEL	PROF SERVICE CO LAB COST	LEASED VEHICLES	DEBT SERVICE CEN SERV	PLT MTN	TOTAL ADJUSTED 1986
		PAYROLL PERCENT	UNADJUST PERCENT													
<b>SOURCE OF SUPPLY</b>																
Maint. water supply building/fixtures	601.1	0.03%	7.12%	171	12	13	161									174
Maintenance of surface source	601.2	0.57%	58.01%	4,114	2,386	2,506	3,055									5,561
Maint. of Ground Source of Water Sup.	601.3	0.30%	7.41%	15,638	1,159	1,217	1,608			12,955						15,780
<b>TOTAL SOURCE OF SUPPLY</b>				19,923	3,557	3,735	4,824	0	0	12,955	0		0	0	0	21,515
<b>PUMPING</b>																
Pumping Labor	603.1	14.72%	0.63%	75,566	476	500	78,903									79,403
Boiler Fuel	603.2		100.00%	504	504	529	0									529
Purchased power	603.4			164,162	0	0	0			164,162						164,162
Miscellaneous pumping station supply	603.5		54.28%	11,391	6,183	6,492	0			4,627						11,119
Misc. power pumping building/fixtures	604.1	2.28%	40.69%	18,691	7,605	7,985	12,221									20,207
Maintenance pumping equipment	604.2	0.56%	35.41%	8,937	3,165	3,323	3,002									6,325
<b>TOTAL PUMPING</b>				279,251	17,933	18,830	94,126	0	0	168,789	0		0	0	0	281,745
<b>PURIFICATION</b>																
Labor	605.1	14.36%	0.01%	73,318	7	8	76,973									76,981
Supplies and expense	605.2		23.15%	74,375	17,218	18,079	0	60,013								78,092
Maintenance building/fixtures	606.1	0.08%	74.69%	931	696	731	429									1,159
Maintenance equipment	606.2	0.83%	48.96%	8,794	4,306	4,521	4,449									8,970
<b>TOTAL PURIFICATION</b>				157,419	22,227	23,338	81,851	60,013	0	0	0		0	0	0	165,202
<b>TRANSMISSION AND DISTRIBUTION</b>																
Inspecting customers installations	607	0.04%		204	0	0	214									214
Misc. trans and dist. supp & exp	608	21.71%	18.75%	144,812	27,152	28,510	116,371			555						145,436
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	32,456	15,349	16,116	14,044									30,160
Maint. of Stor, Reserv, Tanks, Standpipes	609.3	0.03%	93.81%	4,876	4,574	4,803	161									4,964
Maint. of Services	609.4	3.20%	59.17%	35,261	20,864	21,907	17,153									39,060
Maint. of Meters	609.5	4.01%	12.36%	23,509	2,906	3,051	21,495									24,546
Maint. of Hydrants	609.6	0.03%	58.50%	153	90	94	161									255
Maint. of Fountains & Troughs	609.7	0.02%	94.68%	1,240	1,174	1,233	107									1,340
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				242,512	72,109	75,714	169,706	0	0	555	0		0	0	0	245,975
<b>GENERAL AND MISCELLANEOUS</b>																
Salary-officers & clerks	610.1	26.94%	23.08%	178,610	41,223	43,284	144,405									187,690
Gen. office supply & exp.	610.2	7.49%	53.65%	93,348	50,081	52,585	40,148									92,734
Outside professional exp.	610.3		0.00%	90,776	0	0	0			2,776		17,300		55,000		75,076
Insurance	610.4		21.27%	21,073	4,482	4,706	0				23,575					28,282
Accidents and Damages	610.5		100.00%	0	0	0	0									0
Stores expense	610.6			0	0	0	0									0
Customer charges	610.8			9,068	0	0	0		7,998							7,998
Maintenance of general structures	610.9	0.18%	36.28%	2,438	885	929	965									1,894
Depreciation	610.1			0	0	0	0									0
Miscellaneous general expense	610.11		18.84%	101,695	19,159	20,117	0	83,084	0							103,201
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				497,009	115,831	121,622	185,518	83,084	7,998	2,776	23,575	17,300	0	55,000	0	496,874
<b>TOTAL OPERATING EXPENSES</b>		100.00%		1,196,114	231,656	243,239	536,025	143,097	7,998	185,076	23,575	17,300	0	55,000	0	1,211,310
Uncollectible operating revenue				0	0	0	0									0
Payroll taxes				40,305	0	0	0				42,641					42,641
Property taxes				84,231	0	0	0			86,336						86,336
Other taxes				0	0	0	0									0
<b>TOTAL EXPENSES</b>				1,320,650	231,656	243,239	536,025	143,097	7,998	271,412	66,216	17,300	0	55,000	0	1,340,287
<b>DEBT SERVICE</b>				492,000										1,084,343		1,084,343
<b>TOTAL REVENUE REQUIREMENTS</b>				1,812,650	231,656	243,239	536,025	143,097	7,998	271,412	66,216	17,300	0	1,139,343	0	2,424,630

HINGHAM, MASSACHUSETTS  
OPERATING EXPENSE WORKSHEET - MUNICIPALLY OWNED 1985

DESCRIPTION	1983							PENSION CHEMICAL	WORKCOMP BILLING	PROPTAX POWER	PAYTAX EMPWEL	PROF SERVICE CO LABCOST	LEASED VEHICLES	DEBT SERVICE CENT SERV PLT MNT	TOTAL ADJUSTED 1985
	ACCOUNT NUMBER	PAYROLL PERCENT	UNADJUST PERCENT	OPERATE EXPENSE	UNADJUST AMOUNTS	ADJUST WITH INFL	PLUS 85 PAYROLL								
<b>SOURCE OF SUPPLY</b>															
Maint. water supply building/fixtures	601.1	0.03%	7.12%	241	.17	18	153								171
Maintenance of surface source	601.2	0.57%	58.01%	2,018	1,171	1,229	2,910						(25)		4,114
Maint. of Ground Source of Water Sup.	601.3	0.30%	7.41%	14,801	1,097	1,152	1,532								15,638
<b>TOTAL SOURCE OF SUPPLY</b>				17,060	2,285	2,399	4,595	0	0	12,955	0	0	0	(25)	19,923
<b>PUMPING</b>															
Pumping Labor	603.1	14.72%	0.63%	63,559	400	420	75,146								0
Boiler Fuel	603.2		100.00%	480	480	504	0								75,566
Purchased power	603.4			159,021	0	0	0			164,162					504
Miscellaneous pumping station supply	603.5		54.28%	15,221	8,262	8,675	0			4,627					164,162
Misc. power pumping building/fixtures	604.1	2.28%	40.69%	18,021	7,333	7,699	11,639						(1,911)		11,391
Maintenance pumping equipment	604.2	0.56%	35.41%	16,348	5,789	6,078	2,859						(648)		18,691
<b>TOTAL PUMPING</b>				272,650	22,264	23,377	89,644	0	0	168,789	0	0	0	(2,559)	279,251
<b>PURIFICATION</b>															
Labor	605.1	14.36%	0.01%	99,583	10	10	73,308								0
Supplies and expense	605.2		27.57%	96,325	26,557	27,885	0	57,156					(8,738)	(1,928)	73,318
Maintenance building/fixtures	606.1	0.08%	74.69%	667	498	523	408								74,375
Maintenance equipment	606.2	0.83%	48.96%	8,865	4,340	4,557	4,237								931
<b>TOTAL PURIFICATION</b>				205,440	31,405	32,976	77,953	57,156	0	0	0	0	(8,738)	(1,928)	157,419
<b>TRANSMISSION AND DISTRIBUTION</b>															
Inspecting customers installations	607	0.04%		360	0	0	204								0
Misc. trans and dist. supp & exp	608	21.71%	18.75%	181,889	34,104	35,809	110,830			555					204
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	38,767	18,333	19,250	13,375						(2,382)		144,812
Maint. of Stor, Reserv, Tanks, Standpipes	609.3	0.03%	93.81%	4,795	4,498	4,723	153						(168)		32,456
Maint. of Services	609.4	3.20%	59.17%	30,921	18,296	19,211	16,336								4,876
Maint. of Meters	609.5	4.01%	12.36%	23,669	2,925	3,072	20,471						(286)		35,261
Maint. of Hydrants	609.6	0.03%	58.50%	0	0	0	153						(34)		23,509
Maint. of Fountains & Troughs	609.7	0.02%	94.68%	1,145	1,084	1,138	102								153
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				281,546	79,241	83,203	161,624	0	0	555	0	0	0	(2,871)	1,240
<b>GENERAL AND MISCELLANEOUS</b>															
Salary-officers & clerks	610.1	26.94%	57.14%	379,558	216,879	227,723	137,529								0
Gen. office supply & exp.	610.2	7.49%	53.65%	99,671	53,473	56,147	38,236					(186,642)			178,610
Outside professional exp.	610.3		0.00%	205	0	0	0			2,776				(1,035)	93,348
Insurance	610.4		0.00%	105,973	0	0	0			0		38,000		50,000	90,776
Accidents and Damages	610.5		100.00%	0	0	0	0				21,073				21,073
Stores expense	610.6			0	0	0	0								0
Customer charges	610.8			0	0	0	0			9,068					9,068
Maintenance of general structures	610.9	0.18%	36.28%	3,988	1,447	1,519	919								2,438
Depreciation	610.1			102,938	0	0	0								0
Miscellaneous general expense	610.11		18.84%	114,081	21,493	22,568	0	79,128	0						0
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				806,414	293,293	307,957	176,684	79,128	9,068	2,776	21,073	(186,642)	38,000	(1,035)	101,695
<b>TOTAL OPERATING EXPENSES</b>		100.00%		1,583,110	428,487	449,912	510,500	136,283	9,068	185,076	21,073	(186,642)	29,262	(8,418)	1,196,114
Uncollectible operating revenue				0	0	0	0								0
Payroll taxes				0	0	0	0				40,305				40,305
Property taxes				0	0	0	0			84,231					84,231
Other taxes				0	0	0	0								0
<b>TOTAL EXPENSES</b>				1,583,110	428,487	449,912	510,500	136,283	9,068	269,306	61,378	(186,642)	29,262	(8,418)	1,320,650
<b>DEBT SERVICE</b>				0	0	0	0	0	0	0	0	0	0	492,000	492,000
<b>TOTAL REVENUE REQUIREMENTS</b>				1,583,110	428,487	449,912	510,500	136,283	9,068	269,306	61,378	(186,642)	29,262	(8,418)	1,812,650

HINGHAM, MASSACHUSETTS  
 OPERATING EXPENSE WORKSHEET - PRIVATELY OWNED 1989  
 Treatment plant

DESCRIPTION	ACCT NO.	PAY %	UNADJ %	1988			PLUS 89 PAYROLL	PENSION CHEMICAL	WORKCOMP RATECASE	PROPTAX POWER	PAYTAX EMPWEL	CAPITAL PAYROLL	PLT MIN LAB COSTS	OTHER TAX DEPR	RRB UNCOLREV	TOTAL	FIVE	FIVE
				OPERATE EXPENSE	UNADJUST AMOUNT	ADJUST WITH INFL										ADJUSTED 1989	YEAR TOTAL	YEAR AVERAGE
SOURCE OF SUPPLY																		
Maint. water supply build/fix	601.1	0.03%	7.12%	254	18	19	281											
Maintenance of surface source	601.2	0.57%	58.01%	10,740	6,230	6,542	5,338					(31)						
Maint. of Source of Water Sup.	601.3	0.30%	7.41%	22,375	1,658	1,741	2,810											
TOTAL SOURCE OF SUPPLY				33,369	7,906	8,302	8,429	0	0	19,282	0	(357)	0	0		269	1,191	238
PUMPING																		
Pumping Labor	603.1	14.72%	0.63%	130,876	825	866	137,863											
Boiler Fuel	603.2		100.00%	583	583	613	0											
Purchased power	603.4			232,700	0	0	0											
Misc pumping station supply	603.5		54.28%	14,262	7,742	8,129	0			244,335								
Misc. power pumping build/fix	604.1	2.28%	40.69%	33,305	13,552	14,229	21,354			6,887								
Maint pumping equipment	604.2	0.56%	35.41%	7,791	2,759	2,897	5,245											
TOTAL PUMPING				419,518	25,460	26,733	164,462	0	0	251,222	0	0	0	0		8,141	41,685	8,337
PURIFICATION																		
Labor	605.1	14.36%	0.01%	126,892	13	13	134,492											
Supplies and expense	605.2		23.15%	122,203	28,290	29,705	0	100,507										
Maintenance building/fixtures	606.1	0.08%	74.69%	2,133	1,593	1,673	749											
Maintenance equipment	606.2	0.83%	48.96%	51,838	25,380	26,649	7,774											
Leased Plant				0	0	0	0						25,000					
TOTAL PURIFICATION				303,066	55,276	58,039	143,015	100,507	0	0	0	0	25,000	0		8,141	41,685	8,337
TRANSMISSION AND DISTRIBUTION																		
Inspecting customers install	607	0.04%		353	0	0	375											
Misc trans and dist supp & exp	608	21.71%	18.75%	236,275	44,301	46,517	203,330											
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	43,562	20,600	21,630	24,538			826								
Maint of Stor Reserv Tanks	609.3	0.03%	93.81%	5,452	5,115	5,370	281											
Maint of Services	609.4	3.20%	59.17%	64,348	38,075	39,978	29,970											
Maint of Meters	609.5	4.01%	12.36%	37,205	4,599	4,828	37,557											
Maint of Hydrants	609.6	0.03%	58.50%	555	324	341	281											
Maint of Fountains & Troughs	609.7	0.02%	94.68%	1,752	1,659	1,742	187											
TOTAL TRANSMISSION AND DISTRIBUTION				389,501	114,673	120,407	296,519	0	0	826	0	(2,929)	0	0		622	2,223	445
GENERAL AND MISCELLANEOUS																		
Salary-officers & clerks	610.1	26.94%	23.08%	344,488	79,508	83,483	252,313											
Gen office supply & exp	610.2	7.49%	53.65%	139,060	74,606	78,336	70,149											
Law Expense - General	610.3		0.00%	3,935	0	0	0											
Insurance	610.4		21.27%	167,461	35,619	37,400	0			4,132								
Accidents and Damages	610.5		100.00%	0	0	0	0	13,056		134,597								
Stores expense	610.6			0	0	0	0											
Inventory adjustments	610.8			0	0	0	0											
Maint of general structures	610.9	0.18%	36.28%	848	308	323	1,686											
Depreciation	610.1			286,103	0	0	0					(1,156)						
Miscellaneous general expense	610.1		18.84%	115,595	21,778	22,867	0											
TOTAL GENERAL AND MISCELLANEOUS				1,057,489	211,818	222,409	324,148	99,745	0	99,745	40,285	4,132	134,597	(1,156)	0	286,168	1,055,227	211,045
TOTAL OPERATING EXPENSES																		
Uncollectible operating revenue		100.00%		2,202,943	415,133	435,889	936,573	200,252	40,285	275,462	134,597	(4,473)	25,000	286,168	0	1,110,327	4,817,516	963,503
Payroll taxes				8,817	0	0	0											
Property taxes				68,990	0	0	0											
Other taxes				580,509	0	0	0											
TOTAL EXPENSES				57,843	0	0	0			595,022								
NET OF RETURN																		
TOTAL REVENUE REQUIREMENTS				2,919,103	415,133	435,889	936,573	200,252	40,285	870,484	207,378	(4,473)	25,000	113,826	9,400	3,120,782	13,308,045	2,661,609
				2,034,038	0	0	0											
				4,953,141	415,133	435,889	936,573	200,252	40,285	870,484	207,378	(4,473)	25,000	399,994	2,017,395	5,128,776	20,299,461	4,059,892

HINGHAM, MASSACHUSETTS  
OPERATING EXPENSE WORKSHEET - PRIVATELY OWNED 1988  
Treatment Plant

DESCRIPTION	ACCT NO.	PAY %	UNADJ %	1987			UNADJUST AMOUNT	ADJUST WITH INFL	PLUS 88 PAYROLL	PENSION CHEMICAL	WORKCOMP RATECASE	PROPTAX POWER	PAYTAX EMPWEL	CAPITAL PAYROLL	PLT MTN LABCOSTS	OTHER TAX DEPR	RRB UNCOLREV	TOTAL ADJUSTED 1988
				OPERATE EXPENSE	UNADJUST	ADJUST												
<b>SOURCE OF SUPPLY</b>																		
Maint. water supply build/fix	601.1	0.03%	7.12%	239	17	18			265									254
Maintenance of surface source	601.2	0.57%	58.01%	9,364	5,432	5,703			5,036									(29)
Maint. of Source of Water Sup.	601.3	0.30%	7.41%	21,807	1,616	1,697			2,651									
<b>TOTAL SOURCE OF SUPPLY</b>				31,410	7,065	7,418			7,952			18,364		(337)				10,740
<b>PUMPING</b>																		
Pumping Labor	603.1	14.72%	0.63%	123,443	778	817	130,060											0
Boiler Fuel	603.2		100.00%	556	556	583			0									0
Purchased power	603.4			232,700	0	0			0									130,876
Misc. power pumping station supply	603.5		54.28%	13,517	7,337	7,704			0			232,700						583
Misc. power pumping build/fix	604.1	2.28%	40.69%	30,801	12,533	13,160			20,145			6,559						232,700
Maint. pumping equipment	604.2	0.56%	35.41%	7,646	2,708	2,843			4,948									14,262
<b>TOTAL PUMPING</b>				408,663	23,911	25,106	155,153		0	0	239,259		0	(366)	0	0	0	33,369
<b>PURIFICATION</b>																		
Labor	605.1	14.36%	0.01%	119,709	12	13	126,879											0
Supplies and expense	605.2		23.15%	108,947	25,221	26,482			0	95,721								0
Maintenance building/fixtures	606.1	0.08%	74.69%	1,818	1,358	1,426			707									126,892
Maintenance equipment	606.2	0.83%	48.96%	37,940	18,576	19,504			7,334									122,203
<b>TOTAL PURIFICATION</b>				268,414	45,167	47,425	134,919		95,721	0	0	0	0	0	25,000	0	0	51,838
<b>TRANSMISSION AND DISTRIBUTION</b>																		
Inspecting customers install	607	0.04%		333	0	0			353									0
Misc trans and dist supp & exp	608	21.71%	18.75%	221,800	41,588	43,667	191,821											0
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	41,109	19,441	20,413			23,149			787						353
Maint of Stor Reserv Tanks	609.3	0.03%	93.81%	5,266	4,940	5,187			265									236,275
Maint of Services	609.4	3.20%	59.17%	58,063	34,356	36,074			28,274									43,562
Maint of Meters	609.5	4.01%	12.36%	34,964	4,322	4,538			35,431									5,452
Maint of Hydrants	609.6	0.03%	58.50%	471	276	290			265					(2,764)				64,348
Maint of Fountains & Troughs	609.7	0.02%	94.68%	1,585	1,500	1,575			177									37,205
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				363,593	106,422	111,743	279,735		0	0	787	0	(2,764)	0	0	0	0	555
<b>GENERAL AND MISCELLANEOUS</b>																		
Salary-officers & clerks	610.1	26.94%	23.08%	332,283	76,691	80,525	238,031											389,501
Gen office supply & exp	610.2	7.49%	53.65%	129,377	69,411	72,881			66,179									0
Law Expense - General	610.3			1,935	0	0			0									344,488
Insurance	610.4		21.27%	148,923	31,676	33,260			0			3,935						139,060
Accidents and Damages	610.5		100.00%	0	0	0			0		12,317		121,885					3,935
Stores expense	610.6			0	0	0			0									167,461
Inventory adjustments	610.8			0	0	0			0									0
Maint of general structures	610.9	0.18%	36.28%	914	332	348			1,590									0
Depreciation	610.1			286,042	0	0			0					(1,091)				0
Miscellaneous general expense	610.1	18.84%		108,663	20,472	21,496			0	94,099	0					286,103		848
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				1,010,136	198,581	208,510	305,800		94,099	38,249	3,935	121,885	(1,091)	0	286,103	0	0	286,103
<b>TOTAL OPERATING EXPENSES</b>		100.00%		2,082,216	381,146	400,203	883,559		189,820	38,249	262,345	121,885	(4,220)	25,000	286,103	0	0	1,057,489
Uncollectible operating revenue				8,262	0	0			0									0
Payroll taxes				65,414	0	0			0									8,817
Property taxes				541,346	0	0			0									68,990
Other taxes				498,592	0	0			0		580,509							580,509
<b>TOTAL EXPENSES</b>				3,195,831	381,146	400,203	883,559		189,820	38,249	842,854	190,875	(4,220)	25,000	343,946	57,843	8,817	57,843
<b>RATE OF RETURN</b>				1,752,325	0	0			0		0							2,919,103
<b>TOTAL REVENUE REQUIREMENTS</b>				4,948,156	381,146	400,203	883,559		189,820	38,249	842,854	190,875	(4,220)	25,000	343,946	1,694,588	8,817	1,694,588
																1,703,406		4,613,691

HINGHAM, MASSACHUSETTS  
 OPERATING EXPENSE WORKSHEET - PRIVATELY OWNED 1987  
 Treatment Plant

DESCRIPTION	ACCT NO.	PAY %	UNADJ %	1986			UNADJUST AMOUNT	ADJUST WITH INFL	PLUS 87 PAYROLL	PENSION CHEMICAL	WORKCOMP RATECASE	PROPTAX POWER	PAYTAX EMPWEL	CAPITAL PAYROLL	PLT MTN LABCOSTS	OTHER TAX DEPR	RRB UNCOLREV	TOTAL
				OPERATE EXPENSE	UNADJUST AMOUNT	ADJUST WITH INFL												PLUS 87 PAYROLL
<b>SOURCE OF SUPPLY</b>																		
Maint. water supply build/fix	601.1	0.03%	7.12%	219	16	16	250											239
Maintenance of surface source	601.2	0.57%	58.01%	7,573	4,393	4,612	4,751							(27)				9,364
Maint. of Source of Water Sup.	601.3	0.30%	7.41%	16,190	1,200	1,260	2,501					18,364		(318)				21,807
<b>TOTAL SOURCE OF SUPPLY</b>				23,982	5,608	5,889	7,502			0	0	18,364		(345)				31,410
<b>PUMPING</b>																		
Pumping Labor	603.1	14.72%	0.63%	112,615	709	745	122,698											0
Boiler Fuel	603.2		100.00%	529	529	556	0											123,443
Purchased power	603.4			164,162	0	0	0											556
Misc. power station supply	603.5		54.28%	12,208	6,627	6,958	0				232,700							232,700
Misc. power pumping build/fix	604.1	2.28%	40.69%	27,611	11,235	11,797	19,005				6,559							13,517
Maint pumping equipment	604.2	0.56%	35.41%	8,011	2,837	2,979	4,668											30,801
<b>TOTAL PUMPING</b>				325,137	21,937	23,034	146,371			0	0	239,259		0	0	0	0	7,646
<b>PURIFICATION</b>																		
Labor	605.1	14.36%	0.01%	109,188	11	11	119,697											0
Supplies and expense	605.2		23.15%	73,164	16,938	17,784	0			91,163								119,709
Maintenance building/fixtures	606.1	0.08%	74.69%	1,468	1,097	1,152	667											108,947
Maintenance equipment	606.2	0.83%	48.96%	11,714	5,735	6,022	6,918											1,818
<b>TOTAL PURIFICATION</b>				195,534	23,780	24,969	127,283			91,163	0	0	0	0	25,000	0	0	37,940
<b>TRANSMISSION AND DISTRIBUTION</b>																		
Inspecting customers install	607	0.04%		304	0	0	333											0
Misc trans and dist supp & exp	608	21.71%	18.75%	203,429	38,143	40,050	180,963											0
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	38,809	18,353	19,270	21,839				787							333
Maint of Stor Reserv Tanks	609.3	0.03%	93.81%	5,092	4,777	5,016	250											221,800
Maint of Services	609.4	3.20%	59.17%	50,524	29,895	31,390	26,673											41,109
Maint of Meters	609.5	4.01%	12.36%	31,950	3,949	4,146	33,425											5,266
Maint of Hydrants	609.6	0.03%	58.50%	360	211	221	250							(2,607)				58,063
Maint of Fountains & Troughs	609.7	0.02%	94.68%	1,426	1,350	1,418	167											34,964
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				331,895	96,678	101,512	263,901			0	0	787	0	(2,607)	0	0	0	471
<b>GENERAL AND MISCELLANEOUS</b>																		
Salary-officers & clerks	610.1	26.94%	23.08%	337,516	77,899	81,794	224,557											363,593
Gen office supply & exp	610.2	7.49%	53.65%	118,838	63,756	66,944	62,433				25,932							0
Law Expense - General	610.3		0.00%	2,776	0	0	0											332,283
Insurance	610.4		21.27%	127,357	27,089	28,443	0					3,935						129,377
Accidents and Damages	610.5		100.00%	0	0	0	0				11,619		108,860					3,935
Stores expense	610.6			0	0	0	0											148,923
Inventory adjustments	610.8			0	0	0	0											0
Maint of general structures	610.9	0.18%	36.28%	1,163	422	443	1,500											0
Depreciation	610.1			98,484	0	0	0							(1,029)				0
Miscellaneous general expense	610.1		18.84%	100,546	18,943	19,890	0			88,773	0							914
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				786,679	188,109	197,514	288,490			88,773	37,551	3,935	108,860	(1,029)	0	286,042	0	286,042
<b>TOTAL OPERATING EXPENSES</b>		100.00%		1,663,227	336,112	352,918	833,546			179,935	37,551	262,345	108,860	(3,981)	25,000	286,042	0	2,082,216
Uncollectible operating revenue				7,198	0	0	0											8,262
Payroll taxes				60,176	0	0	0											65,414
Property taxes				247,600	0	0	0											541,346
Other taxes				53,681	0	0	0											541,346
<b>TOTAL EXPENSES</b>				2,031,882	336,112	352,918	833,546			179,935	37,551	803,691	174,274	(3,981)	25,000	498,592	0	498,592
<b>RATE OF RETURN</b>				415,215	0	0	0									784,634	8,262	3,195,831
<b>TOTAL REVENUE REQUIREMENTS</b>				2,447,096	336,112	352,918	833,546			179,935	37,551	803,691	174,274	(3,981)	25,000	784,634	1,752,325	1,752,325
																1,760,587	8,262	4,948,156

HINGHAM, MASSACHUSETTS  
OPERATING EXPENSE WORKSHEET - PRIVATELY OWNED - 1986  
Treatment Plant

DESCRIPTION	ACCT NO.	PAY %	1985		UNADJUST AMOUNT	ADJUST WITH INFL	PLUS 86 PAYROLL	PENSION CHEMICAL	WORKCOMP RATECASE	PROPTAX POWER	PAYTAX EMPWEL	CAPITAL PAYROLL	LABCOSTS	OTHER TAX DEPR	RRB UNCOLREV	TOTAL	
			UNADJ %	OPERATE EXPENSE												ADJUSTED 1986	
<b>SOURCE OF SUPPLY</b>																	
Maint. water supply build/fix	601.1	0.03%	7.12%	210	15	16	228										219
Maintenance of surface source	601.2	0.57%	58.01%	5,318	3,085	3,239	4,334					(25)					7,573
Maint. of Source of Water Sup.	601.3	0.30%	7.41%	15,985	1,185	1,244	2,281			12,955		(290)					16,190
<b>TOTAL SOURCE OF SUPPLY</b>				21,513	4,284	4,498	6,843	0	0	12,955	0	(315)	0	0	0	0	23,982
<b>PUMPING</b>																	
Pumping Labor	603.1	14.72%	0.63%	106,000	668	701	111,914										0
Boiler Fuel	603.2		100.00%	504	504	529	0										112,615
Purchased power	603.4			164,162	0	0	0										529
Misc pumping station supply	603.5		54.28%	13,302	7,220	7,581	0			164,162							164,162
Misc. power pumping build/fix	604.1	2.28%	40.69%	24,053	9,787	10,276	17,335			4,627							12,208
Maint pumping equipment	604.2	0.56%	35.41%	10,095	3,575	3,753	4,258										27,611
<b>TOTAL PUMPING</b>				318,116	21,754	22,841	133,506	0	0	168,789	0	0	0	0	0	0	325,137
<b>PURIFICATION</b>																	
Labor	605.1	14.36%	0.01%	103,008	10	11	109,177										0
Supplies and expense	605.2		23.15%	74,514	17,250	18,113	0	55,052									109,188
Maintenance building/fixtures	606.1	0.08%	74.69%	1,097	819	860	608										73,164
Maintenance equipment	606.2	0.83%	48.96%	10,511	5,146	5,403	6,310										1,468
<b>TOTAL PURIFICATION</b>				189,129	23,226	24,387	116,096	55,052	0	0	0	0	0	0	0	0	195,534
<b>TRANSMISSION AND DISTRIBUTION</b>																	
Inspecting customers install	607	0.04%		287	0	0	304										0
Misc trans and dist supp & exp	608	21.71%	18.75%	192,080	36,015	37,816	165,058			555							304
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	38,042	17,990	18,889	19,919										203,429
Maint of Stor Reserv Tanks	609.3	0.03%	93.81%	4,938	4,633	4,864	228										38,809
Maint of Services	609.4	3.20%	59.17%	42,163	24,948	26,195	24,329										5,092
Maint of Meters	609.5	4.01%	12.36%	29,590	3,657	3,840	30,487										50,524
Maint of Hydrants	609.6	0.03%	58.50%	215	126	132	228					(2,378)					31,950
Maint of Fountains & Troughs	609.7	0.02%	94.68%	1,282	1,214	1,274	152										360
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				308,596	88,582	93,011	240,707	0	0	555	0	(2,378)	0	0	0	0	1,426
<b>GENERAL AND MISCELLANEOUS</b>																	
Salary-officers & clerks	610.1	26.94%	23.08%	445,648	102,856	107,998	204,821		24,697								0
Gen office supply & exp	610.2	7.49%	53.65%	109,869	58,945	61,892	56,945										337,516
Law Expense - General	610.3		0.00%	2,776	0	0	0										118,838
Insurance	610.4		21.27%	95,282	20,266	21,280	0		10,357	2,776	95,720						2,776
Accidents and Damages	610.5		100.00%	0	0	0	0										127,357
Stores expense	610.6			0	0	0	0										0
Inventory adjustments	610.8			0	0	0	0										0
Maint of general structures	610.9	0.18%	36.28%	1,925	698	733	1,369										0
Depreciation	610.1			98,430	0	0	0					(939)					1,163
Miscellaneous general expense	610.1		18.84%	98,955	18,643	19,575	0	80,970	0					98,484			98,484
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				852,884	201,408	211,479	263,135	80,970	35,054	2,776	95,720	(939)	0	98,484	0	0	100,546
<b>TOTAL OPERATING EXPENSES</b>		100.00%		1,690,238	339,253	356,216	760,286	136,022	35,054	185,076	95,720	(3,631)	0	98,484	0	0	786,679
Uncollectible operating revenue				7,322	0	0	0									7,198	7,198
Payroll taxes				56,382	0	0	0				60,176						60,176
Property taxes				241,560	0	0	0			247,600							247,600
Other taxes				44,945	0	0	0							53,681			53,681
<b>TOTAL EXPENSES</b>				2,040,447	339,253	356,216	760,286	136,022	35,054	432,675	155,896	(3,631)	0	152,165	7,198	2,031,882	
<b>RATE OF RETURN</b>				431,268	0	0	0										415,215
<b>TOTAL REVENUE REQUIREMENTS</b>				2,471,715	339,253	356,216	760,286	136,022	35,054	432,675	155,896	(3,631)	0	152,165	422,413	2,447,096	



HINGHAM, MASSACHUSETTS  
 OPERATING EXPENSE WORKSHEET - DISTRICT OWNED - 1989  
 Treatment plant

DESCRIPTION	1988			OPERATE EXPENSE	UNADJUST AMOUNTS	ADJUST WITH INFL	PLUS 89 PAYROLL	PENSION CHEMICAL	WORKCOMP BILLING	PROPTAX POWER	PAYTAX EMPWEL	SERVICE CO	PROF LABCOST	LEASED VEHICLE	DEBT SERVICE	PLT MTN	TOTAL	FIVE	FIVE	
	ACCOUNT NUMBER	PAYROLL PERCENT	UNADJUST PERCENT														ADJUSTED 1989	YEAR TOTAL	YEAR AVERAGE	
SOURCE OF SUPPLY																				
Maint. water supply building/fixtures	601.1	0.03%	7.12%	245	17	18	239										257	1,157	23	
Maintenance of surface source	601.2	0.57%	58.01%	9,323	5,408	5,679	4,535										10,213	39,319	7,86	
Maint. of Ground Source of Water Sup.	601.3	0.30%	7.41%	22,332	1,655	1,738	2,387										23,407	99,732	19,94	
TOTAL SOURCE OF SUPPLY				31,900	7,080	7,434	7,160	0	0	19,282	0						33,877	140,208	28,04	
PUMPING																				
Pumping Labor	603.1	14.72%	0.63%	112,235	707	742	117,105										0	0	0	
Boiler Fuel	603.2		100.00%	0	0	0	0										0	0	0	
Purchased power	603.4			232,700	0	0	0										117,847	529,157	105,83	
Miscellaneous pumping station supply	603.5			14,156	7,684	8,068	0			244,335							0	0	0	
Misc. power pumping building/fixtures	604.1	2.28%		28,784	11,712	12,298	18,139			6,887							244,335	1,038,059	207,61	
Maintenance pumping equipment	604.2	0.56%	35.41%	6,665	2,360	2,478	4,455										14,955	67,051	13,41	
TOTAL PUMPING				394,541	22,463	23,587	139,698	0	0	251,222	0						30,436	132,651	26,53	
PURIFICATION																				
Labor	605.1	14.36%	0.01%	108,812	11	11	114,241										6,933	34,651	6,93	
Supplies and expense	605.2			133,696	30,951	32,498	0	109,861									414,507	1,801,570	360,31	
Maintenance building/fixtures	606.1	0.08%		1,883	1,406	1,477	636										0	0	0	
Maintenance equipment	606.2	0.83%	48.96%	50,012	24,486	25,710	6,603										114,252	513,204	102,64	
TOTAL PURIFICATION				294,403	56,854	59,697	121,480	109,861	0	0	0						142,359	553,415	110,68	
TRANSMISSION AND DISTRIBUTION																				
Inspecting customers installations	607	0.04%		303	0	0	318										2,113	7,994	1,59	
Misc. trans and dist. supp & exp	608	21.71%	18.75%	203,213	38,103	40,008	172,714			826							57,313	164,129	32,82	
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	37,918	17,931	18,828	20,843										0	0	0	
Maint. of Stor, Reserv, Tanks, Standpipes	609.3	0.03%	93.81%	5,330	5,000	5,250	239										318	1,429	28	
Maint. of Services	609.4	3.20%	59.17%	56,255	33,286	34,951	25,458										213,548	961,700	192,34	
Maint. of Meters	609.5	4.01%	12.36%	34,649	4,283	4,497	31,902										39,671	184,973	36,99	
Maint. of Hydrants	609.6	0.03%	58.50%	480	281	295	239										5,488	25,950	5,19	
Maint. of Fountains & Troughs	609.7	0.02%	94.68%	1,669	1,581	1,660	159										60,408	253,345	50,66	
TOTAL TRANSMISSION AND DISTRIBUTION				339,817	100,463	105,487	251,871	0	0	826	0						36,398	162,757	32,55	
GENERAL AND MISCELLANEOUS																				
Salary-officers & clerks	610.1	26.94%	23.08%	269,210	62,134	65,240	214,321										1,819	7,670	1,53	
Gen. office supply & exp.	610.2	7.49%	53.65%	121,469	65,168	68,426	59,587										358,184	1,599,754	319,95	
Outside professional exp.	610.3			33,935	0	0	0										0	0	0	
Insurance	610.4			61,698	13,123	13,779	0			4,132			30,000				279,561	1,335,367	267,07	
Accidents and Damages	610.5			0	0	0	0										128,013	575,661	115,13	
Stores expense	610.6			0	0	0	0										34,132	172,770	34,55	
Customer costs	610.8			16,267	0	0	0		11,071		43,213						68,064	296,380	59,27	
Maintenance of general structures	610.9	0.18%	36.28%	2,179	791	830	1,432		18,199								0	0	0	
Depreciation	610.1			0	0	0	0										18,199	78,565	15,71	
Miscellaneous general expense	610.11			151,023	28,453	29,875	0	134,448	0								2,262	11,452	2,29	
TOTAL GENERAL AND MISCELLANEOUS				655,781	169,668	178,152	275,340	134,448	29,270	4,132	43,213		30,000	0	0	0	164,323	702,229	140,44	
NON-OPERATING EXPENSES																				
Collectible operating revenue		100.00%		1,716,442	356,529	374,356	795,549	244,309	29,270	275,462	43,213		30,000	0	0	0	694,555	3,172,425	634,48	
Payroll taxes				0	0	0	0										0	0	0	
Property taxes				59,614	0	0	0										25,000	1,817,159	7,952,698	
Other taxes				580,509	0	0	0										0	0	0	
EXPENSES				2,356,565	356,529	374,356	795,549	244,309	29,270	870,484	105,536		30,000	0	0	0	62,322	282,072	56,41	
SERVICE				2,319,902	356,529	374,356	795,549	244,309	29,270	870,484	105,536		30,000	0	0	0	595,022	2,206,037	441,20	
TOTAL REVENUE REQUIREMENTS				4,676,467	356,529	374,356	795,549	244,309	29,270	870,484	105,536		30,000	0	0	0	2,319,902	2,474,503	10,440,807	
																	25,000	2,319,902	9,006,872	
																	25,000	4,794,405	19,447,679	

HINGHAM, MASSACHUSETTS  
 OPERATING EXPENSE WORKSHEET - DISTRICT OWNED - 1988  
 Treatment plant

DESCRIPTION	1987			OPERATE EXPENSE	UNADJUST AMOUNTS	ADJUST WITH INFL	PLUS 88 PAYROLL	PENSION CHEMICAL	WORKCOMP BILLING	PROPTAX POWER	PAYTAX EMPWEL	SERVICE CO	PROF LABCOST	LEASED VEHICLE	DEBT SERVICE	PLT MTN	TOTAL ADJUSTED 1988
	ACCOUNT NUMBER	PAYROLL PERCENT	UNADJUST PERCENT														
<b>SOURCE OF SUPPLY</b>																	
Maint. water supply building/fixtures	601.1	0.03%	7.12%	233	17	17	227										245
Maintenance of surface source	601.2	0.57%	58.01%	8,215	4,766	5,204	4,319										9,323
Maint. of Ground Source of Water Sup.	601.3	0.30%	7.41%	21,789	1,615	1,695	2,273			18,364							9,323
<b>TOTAL SOURCE OF SUPPLY</b>				30,237	6,397	6,717	6,819	0	0	18,364	0						22,332
<b>PUMPING</b>																	
Pumping Labor	603.1	14.72%	0.63%	106,869	673	707	111,528										0
Boiler Fuel	603.2		100.00%	0	0	0	0										0
Purchased power	603.4			232,700	0	0	0			232,700							0
Miscellaneous pumping station supply	603.5		54.28%	13,330	7,236	7,597	0			6,559							232,700
Misc. power pumping building/fixtures	604.1	2.28%	40.69%	26,938	10,961	11,509	17,275										14,156
Maintenance pumping equipment	604.2	0.56%	35.41%	6,515	2,307	2,422	4,243										28,784
<b>TOTAL PUMPING</b>				386,353	21,177	22,236	133,046	0	0	239,259	0						6,665
<b>PURIFICATION</b>																	
Labor	605.1	14.36%	0.01%	103,630	10	11	108,801										0
Supplies and expense	605.2		23.15%	119,580	27,683	29,067	0	104,629									0
Maintenance building/fixtures	606.1	0.08%	74.69%	1,628	1,216	1,277	606										108,812
Maintenance equipment	606.2	0.83%	48.96%	36,421	17,832	18,723	6,289										133,696
<b>TOTAL PURIFICATION</b>				261,259	46,741	49,078	115,696	104,629	0	0	0					25,000	50,012
<b>TRANSMISSION AND DISTRIBUTION</b>																	
Inspecting customers installations	607	0.04%		289	0	0	303										0
Misc. trans and dist. supp & exp	608	21.71%	18.75%	192,696	36,130	37,937	164,489			787							0
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	36,385	17,207	18,067	19,851										303
Maint. of Stor, Reserv, Tanks, Standpipes	609.3	0.03%	93.81%	5,180	4,859	5,102	227										203,213
Maint. of Services	609.4	3.20%	59.17%	51,522	30,486	32,010	24,245										37,918
Maint. of Meters	609.5	4.01%	12.36%	32,877	4,064	4,267	30,382										5,330
Maint. of Hydrants	609.6	0.03%	58.50%	411	240	252	227										56,255
Maint. of Fountains & Troughs	609.7	0.02%	94.68%	1,527	1,446	1,518	152										34,649
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				320,886	94,431	99,153	239,877	0	0	787	0					25,000	294,403
<b>GENERAL AND MISCELLANEOUS</b>																	
Salary-officers & clerks	610.1	26.94%	23.08%	268,610	61,995	65,095	204,115										1,669
Gen. office supply & exp.	610.2	7.49%	53.65%	114,889	61,638	64,720	56,749										339,817
outside professional exp.	610.3		0.00%	23,935	0	0	0										0
Insurance	610.4		21.27%	56,120	11,937	12,533	0		10,544	3,935			30,000				121,469
Accidents and Damages	610.5		100.00%	0	0	0	0				38,621						33,935
Stores expense	610.6			0	0	0	0										61,698
Customer costs	610.8			14,961	0	0	0										0
Maintenance of general structures	610.9	0.18%	36.28%	2,141	777	816	1,364										0
Depreciation	610.1			0	0	0	0										16,267
Miscellaneous general expense	610.11		18.84%	139,132	26,212	27,523	0	123,500	0								2,179
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				619,787	162,559	170,687	262,228	123,500	26,811	3,935	38,621		30,000	0	0	0	151,023
<b>TOTAL OPERATING EXPENSES</b>																	
Uncollectible operating revenue		100.00%		1,618,523	331,305	347,871	757,666	228,129	26,811	262,345	38,621		30,000	0	0	0	655,781
Payroll taxes				57,034	0	0	0										0
Property taxes				541,346	0	0	0			580,509	59,614						0
Other taxes				0	0	0	0										59,614
<b>TOTAL EXPENSES</b>				2,216,902	331,305	347,871	757,666	228,129	26,811	842,854	98,234		30,000	0	0	25,000	2,356,565
<b>DEBT SERVICE</b>																	
<b>TOTAL REVENUE REQUIREMENTS</b>				4,536,804	331,305	347,871	757,666	228,129	26,811	842,854	98,234		30,000	0	2,319,902	25,000	4,676,467

HINGHAM, MASSACHUSETTS  
 OPERATING EXPENSE WORKSHEET - DISTRICT OWNED - 1987  
 Treatment plant

DESCRIPTION	1986										1987					TOTAL ADJUSTED 1987
	ACCOUNT NUMBER	PAYROLL PERCENT	UNADJUST PERCENT	OPERATE EXPENSE	UNADJUST AMOUNTS	ADJUST WITH INFL	PLUS 87 PAYROLL	PENSION CHEMICAL	WORKCOMP BILLING	PROPTAX POWER	PAYTAX EMPWEL	SERVICE CO	PROF LABCOST	LEASED VEHICLE	DEBT SERVICE	
<b>SOURCE OF SUPPLY</b>																
Maint. water supply building/fixtures	601.1	0.03%	7.12%	215	15	16	216									
Maintenance of surface source	601.2	0.57%	58.01%	6,735	3,907	4,102	4,113									
Maint. of Ground Source of Water Sup.	601.3	0.30%	7.41%	16,196	1,200	1,260	2,165			18,364						
<b>TOTAL SOURCE OF SUPPLY</b>				23,146	5,122	5,379	6,494	0	0	18,364	0					
<b>PUMPING</b>																
Pumping Labor	603.1	14.72%	0.63%	98,533	621	652	106,218									
Boiler Fuel	603.2		100.00%	0	0	0	0									
Purchased power	603.4			164,162	0	0	0									
Miscellaneous pumping station supply	603.5		54.28%	11,881	6,449	6,772	0			232,700						
Misc. power pumping building/fixtures	604.1	2.28%	40.69%	24,543	9,987	10,486	16,452			6,559						
Maintenance pumping equipment	604.2	0.56%	35.41%	6,655	2,357	2,475	4,041									
<b>TOTAL PUMPING</b>				305,776	19,413	20,384	126,711	0	0	239,259	0					
<b>PURIFICATION</b>																
Labor	605.1	14.36%	0.01%	95,529	10	10	103,620									
Supplies and expense	605.2		23.15%	82,004	18,984	19,933	0	99,647								
Maintenance building/fixtures	606.1	0.08%	74.69%	1,340	1,001	1,051	577									
Maintenance equipment	606.2	0.83%	48.96%	10,567	5,174	5,432	5,989									
<b>TOTAL PURIFICATION</b>				189,440	25,168	26,426	110,186	99,647	0	0	0				25,000	36,421
<b>TRANSMISSION AND DISTRIBUTION</b>																
Inspecting customers installations	607	0.04%		266	0	0	289									
Misc. trans and dist. supp & exp	608	21.71%	18.75%	179,060	33,574	35,252	156,656			787						
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	35,202	16,647	17,480	18,906									
Maint. of Stor, Reserv, Tanks, Standpipes	609.3	0.03%	93.81%	5,039	4,727	4,963	216									
Maint. of Services	609.4	3.20%	59.17%	45,762	27,078	28,431	23,091									
Maint. of Meters	609.5	4.01%	12.36%	30,368	3,753	3,941	28,936									
Maint. of Hydrants	609.6	0.03%	58.50%	316	185	194	216									
Maint. of Fountains & Troughs	609.7	0.02%	94.68%	1,391	1,317	1,382	144									
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				297,404	87,281	91,645	228,454	0	0	787	0				25,000	261,259
<b>GENERAL AND MISCELLANEOUS</b>																
Salary-officers & clerks	610.1	26.94%	23.08%	306,240	70,680	74,214	194,395									
Gen. office supply & exp.	610.2	7.49%	53.65%	108,005	57,945	60,842	54,047									
Outside professional exp.	610.3		0.00%	22,776	0	0	0									
Insurance	610.4		21.27%	51,760	11,009	11,560	0			3,935		20,000				
Accidents and Damages	610.5		100.00%	0	0	0	0									
Stores expense	610.6			0	0	0	0									
Customer costs	610.8			13,656	0	0	0									
Maintenance of general structures	610.9	0.18%	36.28%	2,210	802	842	1,299				14,961					
Depreciation	610.1			0	0	0	0									
Miscellaneous general expense	610.11		18.84%	126,991	23,925	25,121	0	114,011	0							
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				631,638	164,361	172,579	249,741	114,011	25,003	3,935	34,518	20,000	0	0	0	139,132
<b>TOTAL OPERATING EXPENSES</b>																
Uncollectible operating revenue		100.00%		1,447,404	301,346	316,413	721,587	213,658	25,003	262,345	34,518	20,000	0	0	25,000	1,618,523
Payroll taxes				53,000	0	0	0									0
Property taxes				247,600	0	0	0									57,034
Other taxes				0	0	0	0			541,346						541,346
<b>TOTAL EXPENSES</b>				1,748,004	301,346	316,413	721,587	213,658	25,003	803,691	91,552	20,000	0	0	25,000	2,216,902
<b>DEBT SERVICE</b>																
<b>TOTAL REVENUE REQUIREMENTS</b>				3,057,170	301,346	316,413	721,587	213,658	25,003	803,691	91,552	20,000	0	2,319,902	25,000	4,536,804

HINGHAM, MASSACHUSETTS  
OPERATING EXPENSE WORKSHEET - DISTRICT OWNED - 1986

DESCRIPTION	ACCOUNT NUMBER	PAYROLL PERCENT	UNADJUST PERCENT	1985				PENSION CHEMICAL	WORKCOMP BILLING	PROPTAX POWER	PAYTAX EMPWEL	SERVICE CO	PROF LABCOST	LEASED VEHICLES	DEBT SERVICE	PLT MTN	TOTAL ADJUSTED 1986
				OPERATE EXPENSE	UNADJUST AMOUNTS	ADJUST WITH INFL	PLUS 86 PAYROLL										
<b>SOURCE OF SUPPLY</b>																	
Maint. water supply building/fixtures	601.1	0.03%	7.12%	208	15	16	200										215
Maintenance of surface source	601.2	0.57%	58.01%	4,833	2,803	2,944	3,791										6,735
Maint. of Ground Source of Water Sup.	601.3	0.30%	7.41%	16,007	1,186	1,245	1,996			12,955							16,196
<b>TOTAL SOURCE OF SUPPLY</b>				<b>21,048</b>	<b>4,004</b>	<b>4,205</b>	<b>5,987</b>	<b>0</b>	<b>0</b>	<b>12,955</b>	<b>0</b>						<b>23,146</b>
<b>PUMPING</b>																	
Pumping Labor	603.1	14.72%	0.63%	93,672	590	620	97,914										0
Boiler Fuel	603.2		100.00%	0	0	0	0										0
Purchased power	603.4			164,162	0	0	0			164,162							98,533
Miscellaneous pumping station supply	603.5		54.28%	12,729	6,909	7,255	0		4,627								164,162
Misc. power pumping building/fixtures	604.1	2.28%	40.69%	21,949	8,931	9,377	15,166										11,881
Maintenance pumping equipment	604.2	0.56%	35.41%	7,882	2,791	2,931	3,725										24,543
<b>TOTAL PUMPING</b>				<b>300,393</b>	<b>19,221</b>	<b>20,182</b>	<b>116,805</b>	<b>0</b>	<b>0</b>	<b>168,789</b>	<b>0</b>						<b>305,776</b>
<b>PURIFICATION</b>																	
Labor	605.1	14.36%	0.01%	90,981	9	10	95,519										0
Supplies and expense	605.2		27.57%	75,776	20,891	21,936	0	60,068									95,529
Maintenance building/fixtures	606.1	0.08%	74.69%	1,030	769	808	532										82,004
Maintenance equipment	606.2	0.83%	48.96%	9,815	4,806	5,046	5,521										1,340
<b>TOTAL PURIFICATION</b>				<b>177,602</b>	<b>26,475</b>	<b>27,799</b>	<b>101,572</b>	<b>60,068</b>	<b>0</b>	<b>0</b>	<b>0</b>						<b>189,440</b>
<b>TRANSMISSION AND DISTRIBUTION</b>																	
Inspecting customers installations	607	0.04%		253	0	0	266										0
Misc. trans and dist. supp & exp	608	21.71%	18.75%	173,183	32,472	34,095	144,409			555							266
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	35,797	16,928	17,775	17,428										179,060
Maint. of Stor, Reserv, Tanks, Standpipes	609.3	0.03%	93.81%	4,913	4,609	4,839	200										35,202
Maint. of Services	609.4	3.20%	59.17%	39,397	23,311	24,477	21,286										5,039
Maint. of Meters	609.5	4.01%	12.36%	28,465	3,518	3,694	26,674										45,762
Maint. of Hydrants	609.6	0.03%	58.50%	190	111	117	200										30,368
Maint. of Fountains & Troughs	609.7	0.02%	94.68%	1,265	1,198	1,258	133										316
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				<b>283,463</b>	<b>82,147</b>	<b>86,255</b>	<b>210,594</b>	<b>0</b>	<b>0</b>	<b>555</b>	<b>0</b>						<b>1,391</b>
<b>GENERAL AND MISCELLANEOUS</b>																	
Salary-officers & clerks	610.1	26.94%	57.14%	211,746	120,992	127,041	179,198										0
Gen. office supply & exp.	610.2	7.49%	53.65%	103,286	55,413	58,183	49,822										306,240
Outside professional exp.	610.3		0.00%	57,991	0	0	0										108,005
Insurance	610.4		21.27%	58,738	12,494	13,118	0			2,776			20,000				22,776
Accidents and Damages	610.5		100.00%	0	0	0	0				9,052		29,590				51,760
Stores expense	610.6			0	0	0	0										0
Customer costs	610.8			15,483	0	0	0										0
Maintenance of general structures	610.9	0.18%	36.28%	2,659	965	1,013	1,197										13,656
Depreciation	610.11			0	0	0	0										2,210
Miscellaneous general expense	610.11		18.84%	120,760	22,751	23,889	0	103,102	0								0
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				<b>570,664</b>	<b>212,614</b>	<b>223,245</b>	<b>230,217</b>	<b>103,102</b>	<b>22,708</b>	<b>2,776</b>	<b>29,590</b>	<b>20,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>126,991</b>
<b>TOTAL OPERATING EXPENSES</b>		<b>100.00%</b>		<b>1,353,170</b>	<b>344,462</b>	<b>361,685</b>	<b>665,175</b>	<b>163,170</b>	<b>22,708</b>	<b>185,076</b>	<b>29,590</b>	<b>20,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>631,638</b>
Uncollectible operating revenue				0	0	0	0										0
Payroll taxes				50,102	0	0	0										0
Property taxes				241,560	0	0	0			247,600							53,000
Other taxes				0	0	0	0										247,600
<b>TOTAL EXPENSES</b>				<b>1,644,833</b>	<b>344,462</b>	<b>361,685</b>	<b>665,175</b>	<b>163,170</b>	<b>22,708</b>	<b>432,675</b>	<b>82,590</b>	<b>20,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,748,004</b>
<b>DEBT SERVICE</b>				<b>738,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,309,166</b>
<b>TOTAL REVENUE REQUIREMENTS</b>				<b>2,382,833</b>	<b>344,462</b>	<b>361,685</b>	<b>665,175</b>	<b>163,170</b>	<b>22,708</b>	<b>432,675</b>	<b>82,590</b>	<b>20,000</b>	<b>0</b>	<b>1,309,166</b>	<b>0</b>	<b>0</b>	<b>3,057,170</b>

HINGHAM, MASSACHUSETTS  
OPERATING EXPENSE WORKSHEET - DISTRICT OWNED - 1985

DESCRIPTION	1983			UNADJUST AMOUNTS	ADJUST WITH INFL	PLUS 85 PAYROLL	PENSION CHEMICAL	WORKCOMP BILLING	PROPTAX POWER	PAYTAX EMPWEL	SERVICE CO.	PROF LABCOSTS	LEASED VEHICLES	DEBT SERVICE	PLT MTN	TOTAL ADJUSTED 1985
	ACCOUNT NUMBER	PAYROLL PERCENT	UNADJUST PERCENT													
<b>SOURCE OF SUPPLY</b>																
Maint. water supply building/fixtures	601.1	0.03%	7.12%	241	17	18	190									208
Maintenance of surface source	601.2	0.57%	58.01%	2,018	1,171	1,229	3,611									4,833
Maint. of Ground Source of Water Sup.	601.3	0.30%	7.41%	14,801	1,097	1,152	1,901		12,955	1,901			(8)			16,007
<b>TOTAL SOURCE OF SUPPLY</b>				17,060	2,285	2,399	5,702	0	12,955	0	0	0	(8)	0	0	21,048
<b>PUMPING</b>																
Pumping Labor	603.1	14.72%	0.63%	63,559	400	420	93,251									93,672
Boiler Fuel	603.2			480	0	0	0									0
Purchased power	603.4			159,021	0	0	0		164,162							164,162
Miscellaneous pumping station supply	603.5		54.28%	15,221	8,262	8,675	0		4,627							12,729
Misc. power pumping building/fixtures	604.1	2.28%	40.69%	18,021	7,333	7,699	14,444						(573)			21,949
Maintenance pumping equipment	604.2	0.56%	25.25%	16,348	4,128	4,334	3,548						(195)			7,882
<b>TOTAL PUMPING</b>				272,650	20,123	21,129	111,243	0	168,789	0	0	0	(768)	0	0	300,393
<b>PURIFICATION</b>																
Labor	605.1	14.36%	0.01%	99,583	10	10	90,971									90,981
Supplies and expense	605.2		27.57%	96,325	26,557	27,885	0	57,208					(8,738)	(578)		75,776
Maintenance building/fixtures	606.1	0.08%	74.69%	667	498	523	507									1,030
Maintenance equipment	606.2	0.83%	48.96%	8,865	4,340	4,557	5,258									9,815
<b>TOTAL PURIFICATION</b>				205,440	31,405	32,976	96,735	57,208	0	0	0	0	(8,738)	(578)	0	177,602
<b>TRANSMISSION AND DISTRIBUTION</b>																
Inspecting customers installations	607	0.04%		360	0	0	253									253
Misc. trans and dist. supp & exp	608	21.71%	18.75%	181,889	34,104	35,809	137,533		555							173,183
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	38,767	18,333	19,250	16,598						(715)			35,797
Maint. of Stor, Reserv, Tanks, Standpipes	609.3	0.03%	93.81%	4,795	4,498	4,723	190						(51)			4,913
Maint. of Services	609.4	3.20%	59.17%	30,921	18,296	19,211	20,272						(86)			39,397
Maint. of Meters	609.5	4.01%	12.36%	23,669	2,925	3,072	25,403						(10)			28,465
Maint. of Hydrants	609.6	0.03%	58.50%	0	0	0	190									190
Maint. of Fountains & Troughs	609.7	0.02%	94.68%	1,145	1,084	1,138	127									1,265
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				281,546	79,241	83,203	200,566	0	555	0	0	0	(861)	0	0	283,463
<b>GENERAL AND MISCELLANEOUS</b>																
Salary-officers & clerks	610.1	26.94%	57.14%	379,558	216,879	227,723	170,665					(186,642)				211,746
Gen. office supply & exp.	610.2	7.49%	53.65%	99,671	53,473	56,147	47,449						(311)			103,286
Outside professional exp.	610.3		100.00%	205	205	215	0		2,776							57,991
Insurance	610.4		21.27%	105,973	22,540	23,667	0	8,621		26,449	0	55,000	0	0	0	58,738
Accidents and Damages	610.5		100.00%	0	0	0	0									0
Stores expense	610.6			0	0	0	0									0
Customer costs	610.8			0	0	0	0	15,483								15,483
Maintenance of general structures	610.9	0.18%	36.28%	3,988	1,447	1,519	1,140									2,659
Depreciation	610.1			102,938	0	0	0									0
Miscellaneous general expense	610.11		18.84%	114,081	21,493	22,568	0	98,193	0							120,760
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				806,414	316,038	331,840	219,254	98,193	24,104	2,776	26,449	(186,642)	55,000	(311)	0	570,664
<b>TOTAL OPERATING EXPENSES</b>																
Uncollectible operating revenue		100.00%		1,583,110	449,092	471,546	633,500	155,400	24,104	185,076	26,449	(186,642)	46,262	(2,526)	0	1,353,170
Payroll taxes				0	0	0	0									0
Property taxes				0	0	0	0		241,560							241,560
Other taxes				0	0	0	0									0
<b>TOTAL EXPENSES</b>				1,583,110	449,092	471,546	633,500	155,400	24,104	426,636	76,551	(186,642)	46,262	(2,526)	0	1,644,833
<b>DEBT SERVICE</b>																
<b>TOTAL REVENUE REQUIREMENTS</b>				1,583,110	449,092	471,546	633,500	155,400	24,104	426,636	76,551	(186,642)	46,262	(2,526)	738,000	738,000
															738,000	0 2,382,833

### Debt service

The debt service for the municipal and district water operations was calculated based on having a treatment plant and not having a treatment plant. Without a treatment plant the assumed construction was \$2,000,000 for transmission and distribution expense and with a treatment plant the total construction cost was assumed to be \$12,500,000 with \$10,500,000 as treatment expense and \$2,000,000 as transmission and distribution expense.

The funding required to purchase the water company was calculated to be \$6,200,000.

We had extensive discussions with the Municipal Bond Department of the State Street Bank to determine the expected interest rates both for the need for short term borrowing through bond anticipation notes and long term bonds to pay of the debt. The bond market is in the best position it has been in a number of years. Because of this situation the interest rates have been reduced quite substantially.

The exhibits that follow outline the annual interest and principal payments that would be incurred assuming 15 year bonds for the purchase of the water company and payment of the debt incurred for improvements. The purchase of the water company will require BAN's for one year until the bonds could be sold. The improvements to the system bonds would be sold in 1987, the use of BAN's would provide the temporary cash to pay for the work.

HINGHAM, MASSACHUSETTS  
Municipal owned no treatment plant

	1985	1986	1987	1988	1989
6,200,000/6%/1yr/Par	372,000				
6,200,000/bonds/8%/15yr		724,343	724,343	724,343	724,343
Purchase of Co.	372,000	724,343	724,343	724,343	724,343
2,000,000/6%/1yr/Par	120,000				
2,000,000/8%/15yr		233,659	233,659	233,659	233,659
Total improvements	120,000	233,659	233,659	233,659	233,659
Total	492,000	958,002	958,002	958,002	958,002

HINGHAM, MASSACHUSETTS  
District owned no treatment plant

	1985	1986	1987	1988	1989
6,200,000/9%/1yr/Par	558,000				
6,200,000/bonds/9%/15yr		769,166	769,166	769,166	769,166
Purchase of Co.	558,000	769,166	769,166	769,166	769,166
2,000,000/9%/1yr/Par	180,000				
2,000,000/9%/15yr		248,118	248,118	248,118	248,118
Total improvements	180,000	248,118	248,118	248,118	248,118
Total	738,000	1,017,284	1,017,284	1,017,284	1,017,284

## HINGHAM, MASSACHUSETTS

## Municipal owned treatment plant

	1985	1986	1987	1988	1989
6,200,000/6%/1yr/Ban	372,000				
6,200,000/bonds/8%/15yr		724,343	724,343	724,343	724,343
Purchase of Co.	372,000	724,343	724,343	724,343	724,343
2,000,000/6%/1yr/Ban	120,000				
6,000,000/6%/1yr/Ban		360,000			
12,500,000/bonds/8%/15yr			1,460,369	1,460,369	1,460,369
Treatment plant bonds	120,000	360,000	1,460,369	1,460,369	1,460,369
Total	492,000	1,084,343	2,184,712	2,184,712	2,184,712

## HINGHAM, MASSACHUSETTS

## District owned treatment plant

	1985	1986	1987	1988	1989
6,200,000/9%/1yr/Ban	558,000				
6,200,000/bonds/9%/15yr		769,166	769,166	769,166	769,166
Purchase of company	558,000	769,166	769,166	769,166	769,166
2,000,000/9%/1yr/Ban	180,000				
6,000,000/9%/1yr/Ban		540,000			
12,500,000/bonds/9%/15yr			1,550,736	1,550,736	1,550,736
Treatment plant bonds	180,000	540,000	1,550,736	1,550,736	1,550,736
Total	738,000	1,309,166	2,319,902	2,319,902	2,319,902

The use of level payments was used in the calculation for both the municipal and district operation.

Salary and Wages

Private Company

This schedule presents the five year proforma estimate of salaries and wages. The 31 personnel represent the present staffing of the Hingham Water Company and we have assumed that the staffing will not increase during the five years unless the company constructs a treatment plant which will result in one additional personnel. The information used to complete this schedule was determined as follows.

Position title - the titles represent the present positions of each of the 31 employees.

Office or field - This column identifies each position as to the workmens compensation status as (O) office and (F) field. The status was obtained from the workpapers provided by the Company during the last rate case docket #1590.

1984 actual - This column represents the salary or wage of each of the 31 employees for the year 1984 and was provided by the Company during docket #1590 on the payroll calculation and fringe benefit worksheet.

Yearly % increase - The proforma yearly increase for salary and wages is based on the recent history of the Company. Recent increases have been approximately 6%. We have no reason to assume that they will revised the percentage, therefore, we have used the 6% for the five

years.

Yearly amount - This column is a result of the calculation of each previous years salary or wage times the 6% increase.

#### Municipal Water Department

The municipal salaries and wages were calculated in the same method as the private water company except for the inflation percentage and number of employees.

The number of employes[ required to operate the municipal water department will be 23 for no treatment plant and 24 with a treatment plant. Since the town of Hull will be responsible for their own billing and local maintenance fewer employes[ are required. The addition of a chief accountant is necessary to coordinate the financial aspects of the water department with the town. The town. The town would provide certain central services that would reduce the need for personnel at the water department.

The inflation factor used is 5 percent.

#### Water District

The district salaries and wages were calculated in the same method as the private water company except for the inflation percentage and number of employees.

The number of employees required to operate the district water company will be 29 for no treatment plant and 30 with a treatment plant. The district concept will result in the need for additional administrative employees and we have included a treasurer, chief accountant and an additional accounting clerk. Many of the other administrative responsibilities would be shared by a non paid board.

The inflation factor used for future raises is 5 percent.

#### Payroll Taxes

This schedule presents the associated payroll taxes for the salary and wages calculated on the salary and wage schedule. The following calculations were completed.

FICA - It is assumed that no employee will exceed the maximum for FICA taxes, therefore, each years calculation uses the entire years payroll in the calculation of the tax amount. The rates that will be in effect during this period have been established by the Social Security Administration.

Federal unemployment - The present federal unemployment rate is .08% and we have assumed the rate will remain the same during the five year period. The \$7,000 maximum on which the taxes are calculated are assumed to remain the same through 1989.

State unemployment - The present state unemployment rate is 2.6% and we have assumed that the rate will remain the same through 1989. The \$7,000 maximum on which the taxes are calculated are assumed to

remain the same through 1989.

HINGHAM, MASSACHUSETTS  
SALARY AND WAGES  
ANNUAL SALARY AND WAGES

No Treatment Plant  
MUNICIPALLY OWNED

POSITION TITLE	OFFICE OR FIELD	1985		1986		1987		1988		1989		
		1984 ACTUAL	% INC	AMOUNT	% INC	AMOUNT	% INC	AMOUNT	% INC	AMOUNT	% INC	
Superintendent	O	0	105.00%	35,000	105.00%	36,750	105.00%	38,588	105.00%	40,517	105.00%	42,543
	O	0	105.00%		105.00%	0	105.00%	0	105.00%	0	105.00%	0
Treatment Supervisor	O	0	105.00%	30,000	105.00%	31,500	105.00%	33,075	105.00%	34,729	105.00%	36,465
Distribution Supervisor	O	0	105.00%	30,000	105.00%	31,500	105.00%	33,075	105.00%	34,729	105.00%	36,465
Billing Supervisor	O	0	105.00%	25,000	105.00%	26,250	105.00%	27,563	105.00%	28,941	105.00%	30,388
	O	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
Billing Clerk/Secretary	O	0	105.00%	16,000	105.00%	16,800	105.00%	17,640	105.00%	18,522	105.00%	19,448
Billing Clerk/Secretary	O	0	105.00%	16,000	105.00%	16,800	105.00%	17,640	105.00%	18,522	105.00%	19,448
Billing Clerk/Secretary	O	0	105.00%	16,000	105.00%	16,800	105.00%	17,640	105.00%	18,522	105.00%	19,448
	O	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
Chief Operator	O	0	105.00%	25,000	105.00%	26,250	105.00%	27,563	105.00%	28,941	105.00%	30,388
	O	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
	O	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
	O	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
Chief Accountant	O	0	105.00%	25,000	105.00%	26,250	105.00%	27,563	105.00%	28,941	105.00%	30,388
	O	0	105.00%		105.00%	0	105.00%	0	105.00%	0	105.00%	0
			105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
			105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
			105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
			105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
Meter Reader/Repairman	F	0	105.00%	19,000	105.00%	19,950	105.00%	20,948	105.00%	21,995	105.00%	23,095
Meter Reader/Repairman	F	0	105.00%	19,000	105.00%	19,950	105.00%	20,948	105.00%	21,995	105.00%	23,095
	F	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
	F	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
Maintenance I		0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Maintenance Helper	F	0	105.00%	18,500	105.00%	19,425	105.00%	20,396	105.00%	21,416	105.00%	22,487
	F	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
Operator II	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Operator II	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Operator II	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Operator II	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Laborer	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Laborer	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Laborer	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Laborer	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Heavy Equipment Operat	F	0	105.00%	22,000	105.00%	23,100	105.00%	24,255	105.00%	25,468	105.00%	26,741
	F	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
Foreman	F	0	105.00%	25,000	105.00%	26,250	105.00%	27,563	105.00%	28,941	105.00%	30,388
		0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
TOTAL		0		510,500		536,025		562,826		590,968		620,516

HINGHAM, MASSACHUSETTS  
SALARY AND WAGES  
ANNUAL SALARY AND WAGES  
No Treatment Plant  
PRIVATELY OWNED

POSITION TITLE	OFFICE OR FIELD	1985		1986		1987		1988		1989		
		1984 ACTUAL	% INC	AMOUNT	% INC	AMOUNT	% INC	AMOUNT	% INC	AMOUNT	% INC	
Manager	O	37,000	106.00%	39,220	106.00%	41,573	106.00%	44,068	106.00%	46,712	106.00%	49,514
Secretary	O	13,000	106.00%	13,780	106.00%	14,607	106.00%	15,483	106.00%	16,412	106.00%	17,397
Operations Manager	O	32,200	106.00%	34,132	106.00%	36,180	106.00%	38,351	106.00%	40,652	106.00%	43,091
Distribution Supt.	O	29,400	106.00%	31,164	106.00%	33,034	106.00%	35,016	106.00%	37,117	106.00%	39,344
Production Supt.	O	29,400	106.00%	31,164	106.00%	33,034	106.00%	35,016	106.00%	37,117	106.00%	39,344
Customer Service Supt.	O	25,000	106.00%	26,500	106.00%	28,090	106.00%	29,775	106.00%	31,562	106.00%	33,456
Accounting Supt.	O	19,000	106.00%	20,140	106.00%	21,348	106.00%	22,629	106.00%	23,987	106.00%	25,426
Accounting Clerk	O	12,126	106.00%	12,854	106.00%	13,625	106.00%	14,442	106.00%	15,309	106.00%	16,227
Customer Service Clerk	O	18,782	106.00%	19,909	106.00%	21,103	106.00%	22,370	106.00%	23,712	106.00%	25,135
Cust. Service Rep.	O	12,667	106.00%	13,427	106.00%	14,233	106.00%	15,087	106.00%	15,992	106.00%	16,951
Cust. Service Rep.	O	12,334	106.00%	13,074	106.00%	13,858	106.00%	14,690	106.00%	15,571	106.00%	16,506
Receptionist	O	11,960	106.00%	12,678	106.00%	13,438	106.00%	14,245	106.00%	15,099	106.00%	16,005
Chemist	O	23,200	106.00%	24,592	106.00%	26,068	106.00%	27,632	106.00%	29,289	106.00%	31,047
Serviceman A (M&R)	O	22,588	106.00%	23,943	106.00%	25,380	106.00%	26,903	106.00%	28,517	106.00%	30,228
Chief Accountant	O			0	106.00%	0	106.00%	0	106.00%	0	106.00%	0
Accounting Clerk	O			0	106.00%	0	106.00%	0	106.00%	0	106.00%	0
				0	106.00%	0	106.00%	0	106.00%	0	106.00%	0
				0	106.00%	0	106.00%	0	106.00%	0	106.00%	0
				0	106.00%	0	106.00%	0	106.00%	0	106.00%	0
				0	106.00%	0	106.00%	0	106.00%	0	106.00%	0
				0	106.00%	0	106.00%	0	106.00%	0	106.00%	0
				0	106.00%	0	106.00%	0	106.00%	0	106.00%	0
Meter Reader	F	21,299	106.00%	22,577	106.00%	23,932	106.00%	25,367	106.00%	26,889	106.00%	28,503
Meter Reader	F	21,299	106.00%	22,577	106.00%	23,932	106.00%	25,367	106.00%	26,889	106.00%	28,503
Serviceman A (O/F)	F	22,173	106.00%	23,503	106.00%	24,914	106.00%	26,408	106.00%	27,993	106.00%	29,672
Serviceman A (O/F)	F	22,173	106.00%	23,503	106.00%	24,914	106.00%	26,408	106.00%	27,993	106.00%	29,672
				0	106.00%	0	106.00%	0	106.00%	0	106.00%	0
Maintenance	F	24,753	106.00%	26,238	106.00%	27,812	106.00%	29,481	106.00%	31,250	106.00%	33,125
Operator I	F	23,701	106.00%	25,123	106.00%	26,630	106.00%	28,228	106.00%	29,922	106.00%	31,717
Operator II	F	23,210	106.00%	24,603	106.00%	26,079	106.00%	27,643	106.00%	29,302	106.00%	31,060
Operator II	F	23,210	106.00%	24,603	106.00%	26,079	106.00%	27,643	106.00%	29,302	106.00%	31,060
Operator II	F	23,210	106.00%	24,603	106.00%	26,079	106.00%	27,643	106.00%	29,302	106.00%	31,060
Operator II	F	23,210	106.00%	24,603	106.00%	26,079	106.00%	27,643	106.00%	29,302	106.00%	31,060
Laborer	F	20,550	106.00%	21,783	106.00%	23,090	106.00%	24,475	106.00%	25,944	106.00%	27,501
Laborer	F	20,610	106.00%	21,847	106.00%	23,157	106.00%	24,547	106.00%	26,020	106.00%	27,581
Meter Repairman	F	22,381	106.00%	23,724	106.00%	25,147	106.00%	26,656	106.00%	28,255	106.00%	29,951
Laborer	F	20,550	106.00%	21,783	106.00%	23,090	106.00%	24,475	106.00%	25,944	106.00%	27,501
Serviceman A (M&R)	F	22,173	106.00%	23,503	106.00%	24,914	106.00%	26,408	106.00%	27,993	106.00%	29,672
Serviceman A	F	22,173	106.00%	23,503	106.00%	24,914	106.00%	26,408	106.00%	27,993	106.00%	29,672
Serviceman B	F	21,320	106.00%	22,599	106.00%	23,955	106.00%	25,392	106.00%	26,916	106.00%	28,531
				0	106.00%	0	106.00%	0	106.00%	0	106.00%	0
TOTAL		676,652		717,251		760,286		805,903		854,258		905,513

HINGHAM, MASSACHUSETTS  
 SALARY AND WAGES  
 ANNUAL SALARY AND WAGES  
 Not Treatment Plant  
 DISTRICT OWNED

POSITION TITLE	OFFICE OR	1985		1986		1987		1988		1989		
		1984 FIELD	% ACTUAL INC	AMOUNT	% INC	AMOUNT	% INC	AMOUNT	% INC	AMOUNT	% INC	AMOUNT
Superintendent	O	0	105.00%	35,000	105.00%	36,750	105.00%	38,588	105.00%	40,517	105.00%	42,543
Treasurer	O	0	105.00%	30,000	105.00%	31,500	105.00%	33,075	105.00%	34,729	105.00%	36,465
Treatment Supervisor	O	0	105.00%	30,000	105.00%	31,500	105.00%	33,075	105.00%	34,729	105.00%	36,465
Distribution Supervisor	O	0	105.00%	30,000	105.00%	31,500	105.00%	33,075	105.00%	34,729	105.00%	36,465
Billing Supervisor	O	0	105.00%	25,000	105.00%	26,250	105.00%	27,563	105.00%	28,941	105.00%	30,388
	O	0	105.00%		105.00%	0	105.00%	0	105.00%	0	105.00%	0
Billing Clerk/Secretary	O	0	105.00%	16,000	105.00%	16,800	105.00%	17,640	105.00%	18,522	105.00%	19,448
Billing Clerk/Secretary	O	0	105.00%	16,000	105.00%	16,800	105.00%	17,640	105.00%	18,522	105.00%	19,448
Billing Clerk/Secretary	O	0	105.00%	16,000	105.00%	16,800	105.00%	17,640	105.00%	18,522	105.00%	19,448
Billing Clerk/Secretary	O	0	105.00%	16,000	105.00%	16,800	105.00%	17,640	105.00%	18,522	105.00%	19,448
	O	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
Chief Operator	O	0	105.00%	25,000	105.00%	26,250	105.00%	27,563	105.00%	28,941	105.00%	30,388
	O	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
Chief Accountant	O	0	105.00%	25,000	105.00%	26,250	105.00%	27,563	105.00%	28,941	105.00%	30,388
Accounting Clerk	O	0	105.00%	16,000	105.00%	16,800	105.00%	17,640	105.00%	18,522	105.00%	19,448
	O	0	105.00%		105.00%	0	105.00%	0	105.00%	0	105.00%	0
		0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
		0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
		0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
		0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
		0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
Meter Reader/Repairman	F	0	105.00%	19,000	105.00%	19,950	105.00%	20,948	105.00%	21,995	105.00%	23,095
Meter Reader/Repairman	F	0	105.00%	19,000	105.00%	19,950	105.00%	20,948	105.00%	21,995	105.00%	23,095
Meter Reader/Repairman	F	0	105.00%	19,000	105.00%	19,950	105.00%	20,948	105.00%	21,995	105.00%	23,095
	F	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
		0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
Maintenance I	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Maintenance Helper	F	0	105.00%	18,500	105.00%	19,425	105.00%	20,396	105.00%	21,416	105.00%	22,487
Operator	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Operator	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Operator	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Operator	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Laborer	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Laborer	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Laborer	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Laborer	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Laborer	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Laborer	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Laborer	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Heavy Equipment Operat	F	0	105.00%	22,000	105.00%	23,100	105.00%	24,255	105.00%	25,468	105.00%	26,741
Foreman	F	0	105.00%	25,000	105.00%	26,250	105.00%	27,563	105.00%	28,941	105.00%	30,388
TOTAL		0		633,500		665,175		698,434		733,355		770,023

HINGHAM, MASSACHUSETTS  
SALARY AND WAGES  
ANNUAL SALARY AND WAGES  
Treatment plant  
MUNICIPALLY OWNED

POSITION TITLE	OFFICE OR FIELD	1984		1985		1986		1987		1988		1989	
		ACTUAL	INC	AMOUNT									
Superintendent	O	0	105.00%	35,000	105.00%	36,750	105.00%	38,588	105.00%	40,517	105.00%	42,543	
	O	0	105.00%		105.00%	0	105.00%	0	105.00%	0	105.00%	0	
Treatment Supervisor	O	0	105.00%	30,000	105.00%	31,500	105.00%	33,075	105.00%	34,729	105.00%	36,465	
Distribution Supervisor	O	0	105.00%	30,000	105.00%	31,500	105.00%	33,075	105.00%	34,729	105.00%	36,465	
Billing Supervisor	O	0	105.00%	25,000	105.00%	26,250	105.00%	27,563	105.00%	28,941	105.00%	30,388	
	O	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	
Billing Clerk/Secretary	O	0	105.00%	16,000	105.00%	16,800	105.00%	17,640	105.00%	18,522	105.00%	19,448	
Billing Clerk/Secretary	O	0	105.00%	16,000	105.00%	16,800	105.00%	17,640	105.00%	18,522	105.00%	19,448	
Billing Clerk/Secretary	O	0	105.00%	16,000	105.00%	16,800	105.00%	17,640	105.00%	18,522	105.00%	19,448	
	O	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	
Chief Operator	O	0	105.00%	25,000	105.00%	26,250	105.00%	27,563	105.00%	28,941	105.00%	30,388	
	O	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	
	O	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	
	O	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	
Chief Accountant	O	0	105.00%	25,000	105.00%	26,250	105.00%	27,563	105.00%	28,941	105.00%	30,388	
	O	0	105.00%		105.00%	0	105.00%	0	105.00%	0	105.00%	0	
			105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	
			105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	
			105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	
			105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	
			105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	
Meter Reader/Repairman	F	0	105.00%	19,000	105.00%	19,950	105.00%	20,948	105.00%	21,995	105.00%	23,095	
Meter Reader/Repairman	F	0	105.00%	19,000	105.00%	19,950	105.00%	20,948	105.00%	21,995	105.00%	23,095	
	F	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	
	F	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	
Maintenance I		0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526	
Maintenance Helper	F	0	105.00%	18,500	105.00%	19,425	105.00%	20,396	105.00%	21,416	105.00%	22,487	
Operator (new)	F	0	105.00%	0	105.00%	0	105.00%	23,153	105.00%	24,311	105.00%	25,526	
Operator II	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526	
Operator II	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526	
Operator II	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526	
Operator II	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526	
Laborer	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526	
Laborer	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526	
Laborer	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526	
Laborer	F	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526	
Heavy Equipment Operat	F	0	105.00%	22,000	105.00%	23,100	105.00%	24,255	105.00%	25,468	105.00%	26,741	
	F	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	
Foreman	F	0	105.00%	25,000	105.00%	26,250	105.00%	27,563	105.00%	28,941	105.00%	30,388	
		0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	
TOTAL		0		510,500		536,025		585,979		615,278		646,042	

ANNUAL SALARY AND WAGES

PRIVATELY OWNED Treatment plant OFFICE												
POSITION TITLE	OR	1985		1986		1987		1988		1989		
		1984	%	AMOUNT								
Manager	O	37,000	106.00%	39,220	106.00%	41,573	106.00%	44,068	106.00%	46,712	106.00%	49,514
Secretary	O	13,000	106.00%	13,780	106.00%	14,607	106.00%	15,483	106.00%	16,412	106.00%	17,397
Operations Manager	O	32,200	106.00%	34,132	106.00%	36,180	106.00%	38,351	106.00%	40,652	106.00%	43,091
Distribution Supt.	O	29,400	106.00%	31,164	106.00%	33,034	106.00%	35,016	106.00%	37,117	106.00%	39,344
Production Supt.	O	29,400	106.00%	31,164	106.00%	33,034	106.00%	35,016	106.00%	37,117	106.00%	39,344
Customer Service Supt.	O	25,000	106.00%	26,500	106.00%	28,090	106.00%	29,775	106.00%	31,562	106.00%	33,456
Accounting Supt.	O	19,000	106.00%	20,140	106.00%	21,348	106.00%	22,629	106.00%	23,987	106.00%	25,426
Accounting Clerk	O	12,126	106.00%	12,854	106.00%	13,625	106.00%	14,442	106.00%	15,309	106.00%	16,227
Customer Service Clerk	O	18,782	106.00%	19,909	106.00%	21,103	106.00%	22,370	106.00%	23,712	106.00%	25,135
Cust. Service Rep.	O	12,667	106.00%	13,427	106.00%	14,233	106.00%	15,087	106.00%	15,992	106.00%	16,951
Cust. Service Rep.	O	12,334	106.00%	13,074	106.00%	13,858	106.00%	14,690	106.00%	15,571	106.00%	16,506
Receptionist	O	11,960	106.00%	12,678	106.00%	13,438	106.00%	14,245	106.00%	15,099	106.00%	16,005
Chemist	O	23,200	106.00%	24,592	106.00%	26,068	106.00%	27,632	106.00%	29,289	106.00%	31,047
Serviceman A (M&R)	O	22,588	106.00%	23,943	106.00%	25,380	106.00%	26,903	106.00%	28,517	106.00%	30,228
Chief Accountant	O			0	106.00%	0	106.00%	0	106.00%	0	106.00%	0
Accounting Clerk	O			0	106.00%	0	106.00%	0	106.00%	0	106.00%	0
				0	106.00%	0	106.00%	0	106.00%	0	106.00%	0
				0	106.00%	0	106.00%	0	106.00%	0	106.00%	0
				0	106.00%	0	106.00%	0	106.00%	0	106.00%	0
				0	106.00%	0	106.00%	0	106.00%	0	106.00%	0
				0	106.00%	0	106.00%	0	106.00%	0	106.00%	0
Meter Reader	F	21,299	106.00%	22,577	106.00%	23,932	106.00%	25,367	106.00%	26,889	106.00%	28,503
Meter Reader	F	21,299	106.00%	22,577	106.00%	23,932	106.00%	25,367	106.00%	26,889	106.00%	28,503
Serviceman A (O/F)	F	22,173	106.00%	23,503	106.00%	24,914	106.00%	26,408	106.00%	27,993	106.00%	29,672
Serviceman A (O/F)	F	22,173	106.00%	23,503	106.00%	24,914	106.00%	26,408	106.00%	27,993	106.00%	29,672
Operator(new)	F			0	106.00%	0	106.00%	27,643	106.00%	29,302	106.00%	31,060
Maintenance	F	24,753	106.00%	26,238	106.00%	27,812	106.00%	29,481	106.00%	31,250	106.00%	33,125
Operator I	F	23,701	106.00%	25,123	106.00%	26,630	106.00%	28,228	106.00%	29,922	106.00%	31,717
Operator II	F	23,210	106.00%	24,603	106.00%	26,079	106.00%	27,643	106.00%	29,302	106.00%	31,060
Operator II	F	23,210	106.00%	24,603	106.00%	26,079	106.00%	27,643	106.00%	29,302	106.00%	31,060
Operator II	F	23,210	106.00%	24,603	106.00%	26,079	106.00%	27,643	106.00%	29,302	106.00%	31,060
Operator II	F	23,210	106.00%	24,603	106.00%	26,079	106.00%	27,643	106.00%	29,302	106.00%	31,060
Laborer	F	20,550	106.00%	21,783	106.00%	23,090	106.00%	24,475	106.00%	25,944	106.00%	27,501
Laborer	F	20,610	106.00%	21,847	106.00%	23,157	106.00%	24,547	106.00%	26,020	106.00%	27,581
Meter Repairman	F	22,381	106.00%	23,724	106.00%	25,147	106.00%	26,656	106.00%	28,255	106.00%	29,951
Laborer	F	20,550	106.00%	21,783	106.00%	23,090	106.00%	24,475	106.00%	25,944	106.00%	27,501
Serviceman A (M&R)	F	22,173	106.00%	23,503	106.00%	24,914	106.00%	26,408	106.00%	27,993	106.00%	29,672
Serviceman A	F	22,173	106.00%	23,503	106.00%	24,914	106.00%	26,408	106.00%	27,993	106.00%	29,672
Serviceman B	F	21,320	106.00%	22,599	106.00%	23,955	106.00%	25,392	106.00%	26,916	106.00%	28,531
				0	106.00%	0	106.00%	0	106.00%	0	106.00%	0
TOTAL		676,652		717,251		760,286		833,546		883,559		936,573

YEAR 1984  
 ANNUAL SALARY AND WAGES  
 Treatment plant  
 DISTRICT OWNED

POSITION TITLE	OFFICE OR	1984		1985		1986		1987		1988		1989	
		FIELD	ACTUAL	INC	AMOUNT								
Superintendent	O	0	0	105.00%	35,000	105.00%	36,750	105.00%	38,588	105.00%	40,517	105.00%	42,543
Treasurer	O	0	0	105.00%	30,000	105.00%	31,500	105.00%	33,075	105.00%	34,729	105.00%	36,465
Treatment Supervisor	O	0	0	105.00%	30,000	105.00%	31,500	105.00%	33,075	105.00%	34,729	105.00%	36,465
Distribution Supervisor	O	0	0	105.00%	30,000	105.00%	31,500	105.00%	33,075	105.00%	34,729	105.00%	36,465
Billing Supervisor	O	0	0	105.00%	25,000	105.00%	26,250	105.00%	27,563	105.00%	28,941	105.00%	30,388
	O	0	0	105.00%		105.00%	0	105.00%	0	105.00%	0	105.00%	0
Billing Clerk/Secretary	O	0	0	105.00%	16,000	105.00%	16,800	105.00%	17,640	105.00%	18,522	105.00%	19,448
Billing Clerk/Secretary	O	0	0	105.00%	16,000	105.00%	16,800	105.00%	17,640	105.00%	18,522	105.00%	19,448
Billing Clerk/Secretary	O	0	0	105.00%	16,000	105.00%	16,800	105.00%	17,640	105.00%	18,522	105.00%	19,448
Billing Clerk/Secretary	O	0	0	105.00%	16,000	105.00%	16,800	105.00%	17,640	105.00%	18,522	105.00%	19,448
	O	0	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
Chief Operator	O	0	0	105.00%	25,000	105.00%	26,250	105.00%	27,563	105.00%	28,941	105.00%	30,388
	O	0	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
Chief Accountant	O	0	0	105.00%	25,000	105.00%	26,250	105.00%	27,563	105.00%	28,941	105.00%	30,388
Accounting Clerk	O	0	0	105.00%	16,000	105.00%	16,800	105.00%	17,640	105.00%	18,522	105.00%	19,448
	O	0	0	105.00%		105.00%	0	105.00%	0	105.00%	0	105.00%	0
	O	0	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
	O	0	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
	O	0	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
	O	0	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
	O	0	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
Meter Reader/Repairman	F	0	0	105.00%	19,000	105.00%	19,950	105.00%	20,948	105.00%	21,995	105.00%	23,095
Meter Reader/Repairman	F	0	0	105.00%	19,000	105.00%	19,950	105.00%	20,948	105.00%	21,995	105.00%	23,095
Meter Reader/Repairman	F	0	0	105.00%	19,000	105.00%	19,950	105.00%	20,948	105.00%	21,995	105.00%	23,095
	F	0	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0	105.00%	0
Operator(new)	F	0	0	105.00%	0	105.00%	0	105.00%	23,153	105.00%	24,311	105.00%	25,526
Maintenance I	F	0	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Maintenance Helper	F	0	0	105.00%	18,500	105.00%	19,425	105.00%	20,396	105.00%	21,416	105.00%	22,487
Operator	F	0	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Operator	F	0	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Operator	F	0	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Operator	F	0	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Laborer	F	0	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Laborer	F	0	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Laborer	F	0	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Laborer	F	0	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Laborer	F	0	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Laborer	F	0	0	105.00%	21,000	105.00%	22,050	105.00%	23,153	105.00%	24,310	105.00%	25,526
Heavy Equipment Operat	F	0	0	105.00%	22,000	105.00%	23,100	105.00%	24,255	105.00%	25,468	105.00%	26,741
Foreman	F	0	0	105.00%	25,000	105.00%	26,250	105.00%	27,563	105.00%	28,941	105.00%	30,388
TOTAL		0			633,500		665,175		721,587		757,666		795,549

HINGHAM, MASSACHUSETTS  
 PAYROLL TAXES  
 MUNICIPALLY OWNED - NO TREATMENT PLANT

1985

	EMP	EARNINGS	TAX RATE	AMOUNT
FICA		510,500	0.0705	35,990
FEDERAL UNEMPLOYMENT	23	7,000	0.0008	129
STATE UNEMPLOYMENT	23	7,000	0.026	4,186
TOTAL				40,305

1986

FICA		536,025	0.0715	38,326
FEDERAL UNEMPLOYMENT	23	7,000	0.0008	129
STATE UNEMPLOYMENT	23	7,000	0.026	4,186
TOTAL				42,641

1987

FICA		562,826	0.0715	40,242
FEDERAL UNEMPLOYMENT	23	7,000	0.0008	129
STATE UNEMPLOYMENT	23	7,000	0.026	4,186
TOTAL				44,557

1988

FICA		590,968	0.0715	42,254
FEDERAL UNEMPLOYMENT	23	7,000	0.0008	129
STATE EMPLOYMENT	23	7,000	0.026	4,186
TOTAL				46,569

1989

FICA		620,516	0.0715	44,367
FEDERAL UNEMPLOYMENT	23	7,000	0.0008	129
STATE UNEMPLOYMENT	23	7,000	0.026	4,186
TOTAL				48,682

HINGHAM, MASSACHUSETTS  
 PAYROLL TAXES  
 PRIVATE OWNED - NO TREATMENT PLANT

1985

			TAX	
	EMP	EARNINGS	RATE	AMOUNT
FICA		717,251	0.0705	50,566
FEDERAL UNEMPLOYMENT	31	7,000	0.0008	174
STATE UNEMPLOYMENT	31	7,000	0.026	5,642
TOTAL				56,382

1986

FICA		760,286	0.0715	54,360
FEDERAL UNEMPLOYMENT	31	7,000	0.0008	174
STATE UNEMPLOYMENT	31	7,000	0.026	5,642
TOTAL				60,176

1987

FICA		805,903	0.0715	57,622
FEDERAL UNEMPLOYMENT	31	7,000	0.0008	174
STATE UNEMPLOYMENT	31	7,000	0.026	5,642
TOTAL				63,438

1988

FICA		854,258	0.0715	61,079
FEDERAL UNEMPLOYMENT	31	7,000	0.0008	174
STATE EMPLOYMENT	31	7,000	0.026	5,642
TOTAL				66,895

1989

FICA		905,513	0.0715	64,744
FEDERAL UNEMPLOYMENT	31	7,000	0.0008	174
STATE UNEMPLOYMENT	31	7,000	0.026	5,642

## DISTRICT OWNED

1985

	EMP	EARNINGS	TAX RATE	AMOUNT
FICA		633,500	0.0705	44,662

FEDERAL UNEMPLOYMENT	29	7,000	0.0008	162
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STATE UNEMPLOYMENT	29	7,000	0.026	5,278
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TOTAL				50,102
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1986

FICA		665,175	0.0715	47,560
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FEDERAL UNEMPLOYMENT	29	7,000	0.0008	162
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STATE UNEMPLOYMENT	29	7,000	0.026	5,278
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TOTAL				53,000
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1987

FICA		698,434	0.0715	49,938
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FEDERAL UNEMPLOYMENT	29	7,000	0.0008	162
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STATE UNEMPLOYMENT	29	7,000	0.026	5,278
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TOTAL				55,378
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1988

FICA		733,355	0.0715	52,435
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FEDERAL UNEMPLOYMENT	29	7,000	0.0008	162
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STATE EMPLOYMENT	29	7,000	0.026	5,278
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TOTAL				57,875
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1989

FICA		770,023	0.0715	55,057
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FEDERAL UNEMPLOYMENT	29	7,000	0.0008	162
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STATE UNEMPLOYMENT	29	7,000	0.026	5,278
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TOTAL				60,497
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HINGHAM, MASSACHUSETTS  
 PAYROLL TAXES  
 MUNICIPALLY OWNED

1985 Treatment plant

	EMP	EARNINGS	TAX RATE	AMOUNT
FICA		510,500	0.0705	35,990
FEDERAL UNEMPLOYMENT	23	7,000	0.0008	129
STATE UNEMPLOYMENT	23	7,000	0.026	4,186
TOTAL				40,305

1986

FICA		536,025	0.0715	38,326
FEDERAL UNEMPLOYMENT	23	7,000	0.0008	129
STATE UNEMPLOYMENT	23	7,000	0.026	4,186
TOTAL				42,641

1987

FICA		585,979	0.0715	41,898
FEDERAL UNEMPLOYMENT	24	7,000	0.0008	129
STATE UNEMPLOYMENT	24	7,000	0.026	4,186
TOTAL				46,212

1988

FICA		615,278	0.0715	43,992
FEDERAL UNEMPLOYMENT	24	7,000	0.0008	129
STATE UNEMPLOYMENT	24	7,000	0.026	4,186
TOTAL				48,307

1989

FICA		646,042	0.0715	46,192
FEDERAL UNEMPLOYMENT	24	7,000	0.0008	129
STATE UNEMPLOYMENT	24	7,000	0.026	4,186

BINGHAM, MASSACHUSETTS

PAYROLL TAXES

PRIVATE OWNED

1985 Treatment plan

	EMP	EARNINGS	TAX RATE	AMOUNT
FICA		717,251	0.0705	50,566
FEDERAL UNEMPLOYMENT	31	7,000	0.0008	174
STATE UNEMPLOYMENT	31	7,000	0.026	5,642
TOTAL				56,382

1986

FICA		760,286	0.0715	54,360
FEDERAL UNEMPLOYMENT	31	7,000	0.0008	174
STATE UNEMPLOYMENT	31	7,000	0.026	5,642
TOTAL				60,176

1987

FICA		833,546	0.0715	59,599
FEDERAL UNEMPLOYMENT	32	7,000	0.0008	174
STATE UNEMPLOYMENT	32	7,000	0.026	5,642
TOTAL				65,414

1988

FICA		883,559	0.0715	63,174
FEDERAL UNEMPLOYMENT	32	7,000	0.0008	174
STATE UNEMPLOYMENT	32	7,000	0.026	5,642
TOTAL				68,990

1989

FICA		936,573	0.0715	66,965
FEDERAL UNEMPLOYMENT	32	7,000	0.0008	174
STATE UNEMPLOYMENT	32	7,000	0.026	5,642

TOTAL

BINGHAM, MASSACHUSETTS  
PAYROLL TAXES  
DISTRICT OWNED

1985 Treatment plant

	EMP	EARNINGS	TAX RATE	AMOUNT
FICA		633,500	0.0705	44,662
FEDERAL UNEMPLOYMENT	29	7,000	0.0008	162
STATE UNEMPLOYMENT	29	7,000	0.026	5,278
TOTAL				50,102

1986

FICA		665,175	0.0715	47,560
FEDERAL UNEMPLOYMENT	29	7,000	0.0008	162
STATE UNEMPLOYMENT	29	7,000	0.026	5,278
TOTAL				53,000

1987

FICA		721,587	0.0715	51,593
FEDERAL UNEMPLOYMENT	30	7,000	0.0008	162
STATE UNEMPLOYMENT	30	7,000	0.026	5,278
TOTAL				57,034

1988

FICA		757,666	0.0715	54,173
FEDERAL UNEMPLOYMENT	30	7,000	0.0008	162
STATE UNEMPLOYMENT	30	7,000	0.026	5,278
TOTAL				59,614

1989

FICA		795,549	0.0715	56,882
FEDERAL UNEMPLOYMENT	30	7,000	0.0008	162
STATE UNEMPLOYMENT	30	7,000	0.026	5,278
TOTAL				62,322

## Workmens Compensation

### Private

This schedule presents the workmens compensation insurance that will be incurred as a result of the salary and wages. The insurance for the office and field employees is calculated at the present Company rate of .0015/\$100 for the office and .0232/\$100 for the field.

### Municipal

The municipal workmens compensation is self funding in the town of Hingham, therefore, we have assumed no payments during the five year period.

### District

The district workmens compensation is assumed to be the same as the private company because we were unable to receive a reasonable estimate from an insurance broker.

HINGHAM, MASSACHUSETTS  
 OPERATING EXPENSE WORKSHEET - MUNICIPALLY OWNED - 1989  
 No treatment plant

DESCRIPTION	1988							PENSION CHEMICAL	WORKCOMP BILLING	PROPTAX POWER	PAYTAX EMWEL	PROF SERVICE CO	LEASED VEHICLES	DEBT CENT	SERVICE SERV	TOTAL	FIVE	FIVE
	ACCT	PAYROLL	UNADJUST	OPERATE	UNADJUST	ADJUST	PLS 89									ADJUSTED	YEAR	YEAR
	NUMBER	PERCENT	PERCENT	EXPENSE	AMOUNTS	WITH INFL	PAYROLL								1989	TOTAL	AVERAGE	
<b>SOURCE OF SUPPLY</b>																		
Maint. water supply building/fixtures	601.1	0.03%	7.12%	191	14	14	186								200	918	184	
Maintenance of surface source	601.2	0.57%	58.01%	7,386	4,284	4,499	3,537								8,036	31,692	6,338	
Maint. of Ground Source of Water Sup.	601.3	0.30%	7.41%	16,661	1,235	1,296	1,862			14,283					17,441	82,040	16,408	
<b>TOTAL SOURCE OF SUPPLY</b>				24,238	5,533	5,809	5,585	0	0	14,283	0	0	0	0	25,677	114,650	22,930	
<b>PUMPING</b>																		
Pumping Labor	603.1	14.72%	0.63%	87,542	552	579	91,340								91,919	417,803	83,561	
Boiler Fuel	603.2		100.00%	583	583	613	0								613	2,785	557	
Purchased power	603.4			172,370	0	0	0			180,989					180,989	854,054	170,811	
Miscellaneous pumping station supply	603.5		54.28%	11,239	6,101	6,406	0			5,101					11,507	56,451	11,290	
Misc. power pumping building/fixtures	604.1	2.28%	40.69%	22,645	9,214	9,675	14,148								23,823	106,831	21,366	
Maintenance pumping equipment	604.2	0.56%	35.41%	5,356	1,991	1,896	3,475								5,466	31,587	6,317	
<b>TOTAL PUMPING</b>				299,735	18,346	19,264	108,963	0	0	186,090	0	0	0	0	314,316	1,469,511	293,902	
<b>PURIFICATION</b>																		
Labor	605.1	14.36%	0.01%	84,871	8	9	89,106								89,115	405,116	81,023	
Supplies and expense	605.2		23.15%	86,096	19,931	20,928	0	69,473							90,401	410,960	82,192	
Maintenance building/fixtures	606.1	0.08%	74.69%	1,539	1,149	1,207	496								1,703	6,693	1,339	
Maintenance equipment	606.2	0.83%	48.96%	9,677	4,738	4,975	5,150								10,125	46,850	9,370	
<b>TOTAL PURIFICATION</b>				182,184	25,827	27,118	94,753	69,473	0	0	0	0	0	0	191,344	869,618	173,924	
<b>TRANSMISSION AND DISTRIBUTION</b>																		
Inspecting customers installations	607	0.04%		236	0	0	248								248	1,128	226	
Misc. trans and dist. supp & exp	608	21.71%	18.75%	158,690	29,754	31,242	134,714			612					166,568	766,911	153,382	
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	30,242	14,301	15,016	16,258								31,274	153,853	30,771	
Maint. of Stor, Reserv, Tanks, Standpipes	609.3	0.03%	93.81%	5,160	4,840	5,082	186								5,269	25,327	5,065	
Maint. of Services	609.4	3.20%	59.17%	45,177	26,731	28,068	19,857								47,925	209,700	41,940	
Maint. of Meters	609.5	4.01%	12.36%	27,040	3,342	3,509	24,883								28,392	129,242	25,848	
Maint. of Hydrants	609.6	0.03%	58.50%	377	221	232	186								418	1,528	306	
Maint. of Fountains & Troughs	609.7	0.02%	94.68%	1,555	1,472	1,546	124								1,670	7,250	1,450	
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				268,477	80,662	84,695	196,455	0	0	612	0	0	0	0	281,763	1,294,940	258,988	
<b>GENERAL AND MISCELLANEOUS</b>																		
Salary-officers & clerks	610.1	26.94%	23.08%	206,974	47,770	50,158	167,167								217,325	987,709	197,542	
Gen. office supply & exp.	610.2	7.49%	53.65%	97,438	52,276	54,890	46,477								101,366	479,281	95,856	
outside professional exp.	610.3		0.00%	87,815	0	0	0								94,261	429,443	85,889	
Insurance	610.4		21.27%	36,813	7,830	8,222	0			3,061		21,200		70,000	41,242	160,102	32,020	
Accidents and Damages	610.5		100.00%	0	0	0	0				33,021				0	0	0	
Stores expense	610.6			0	0	0	0								0	0	0	
Customer charges	610.8			9,527	0	0	0								0	0	0	
Maintenance of general structures	610.9	0.18%	36.28%	1,724	626	657	1,117								10,659	46,015	9,203	
Depreciation	610.1			0	0	0	0								1,774	9,564	1,913	
Miscellaneous general expense	610.11		18.84%	117,958	22,223	23,334	0	104,867	0						0	0	0	
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				558,250	130,724	137,261	214,761	104,867	10,659	3,061	33,021	21,200	0	70,000	128,202	560,397	112,079	
<b>TOTAL OPERATING EXPENSES</b>																		
Uncollectible operating revenue		100.00%		1,332,884	261,093	274,147	620,516	174,340	10,659	204,046	33,021	21,200	0	70,000	1,407,929	6,421,232	1,284,246	
Payroll taxes				46,569	0	0	0				48,682				0	0	0	
Property taxes				90,707	0	0	0			92,975					48,682	222,753	44,551	
Other taxes				0	0	0	0								92,975	442,744	88,549	
<b>TOTAL EXPENSES</b>				1,470,160	261,093	274,147	620,516	174,340	10,659	297,021	81,702	21,200	0	70,000	1,549,586	7,086,729	1,417,346	
<b>DEBT SERVICE</b>																		
				700,977	0	0	0								700,977	3,163,908	632,782	
<b>TOTAL REVENUE REQUIREMENTS</b>																		
				2,171,137	261,093	274,147	620,516	174,340	10,659	297,021	81,702	21,200	0	770,977	2,250,563	10,250,637	2,050,127	

HINGHAM, MASSACHUSETTS  
WORKMENS COMPENSATION  
NO TREATMENT PLANT  
MUNICIPALLY OWNED

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	PAYROLL	RATE	AMOUNT
OFFICE	0	0	0
FIELD	0	0	0
TOTAL	0		0

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1986

	PAYROLL	RATE	AMOUNT
OFFICE	0	0	0
FIELD	0	0	0
TOTAL	0		0

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1987

	PAYROLL	RATE	AMOUNT
OFFICE	0	0	0
FIELD	0	0	0
TOTAL	0		0

---

1988

	PAYROLL	RATE	AMOUNT
OFFICE	0	0	0
FIELD	0	0	0
TOTAL	0		0

---

1989

	PAYROLL	RATE	AMOUNT
OFFICE	0	0	0
FIELD	0	0	0
TOTAL	0		0

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HINGHAM, MASSACHUSETTS  
WORKMENS COMPENSATION  
NO TREATMENT PLANT  
PRIVATELY OWNED

	PAYROLL	TAX RATE	AMOUNT
OFFICE	316,576	0.0015	475
FIELD	400,675	0.0232	9,296
TOTAL	717,251		9,771

	PAYROLL	1986 TAX RATE	AMOUNT
OFFICE	335,571	0.0015	503
FIELD	424,715	0.0232	9,853
TOTAL	760,286		10,357

	PAYROLL	1987 TAX RATE	AMOUNT
OFFICE	355,705	0.0015	534
FIELD	450,198	0.0232	10,445
TOTAL	805,903		10,978

	PAYROLL	1988 TAX RATE	AMOUNT
OFFICE	377,048	0.0015	566
FIELD	477,210	0.0232	11,071
TOTAL	854,258		11,637

	PAYROLL	1989 TAX RATE	AMOUNT
OFFICE	399,670	0.0015	600
FIELD	505,843	0.0232	11,736
TOTAL	905,513		12,335

HINGHAM MASSACHUSETTS  
WORKMENS COMPENSATION  
NO TREATMENT PLANT  
DISTRICT OWNED

	PAYROLL	RATE	AMOUNT
OFFICE	280,000	0.0015	420
FIELD	353,500	0.0232	8,201
TOTAL	633,500		8,621

1986

	PAYROLL	RATE	AMOUNT
OFFICE	294,000	0.0015	441
FIELD	371,175	0.0232	8,611
TOTAL	665,175		9,052

1987

	PAYROLL	RATE	AMOUNT
OFFICE	308,700	0.0015	463
FIELD	389,734	0.0232	9,042
TOTAL	698,434		9,505

1988

	PAYROLL	RATE	AMOUNT
OFFICE	324,135	0.0015	486
FIELD	409,220	0.0232	9,494
TOTAL	733,355		9,980

1989

	PAYROLL	RATE	AMOUNT
OFFICE	340,342	0.0015	511
FIELD	429,681	0.0232	9,969
TOTAL	770,023		10,479

INGHAM, MASSACHUSETTS  
WORKMENS COMPENSATION  
treatment plant  
MUNICIPALLY OWNED

1985

	PAYROLL	RATE	AMOUNT
OFFICE	0	0	0
FIELD	0	0	0
TOTAL	0		0

1986

	PAYROLL	RATE	AMOUNT
OFFICE	0	0	0
FIELD	0	0	0
TOTAL	0		0

1987

	PAYROLL	RATE	AMOUNT
OFFICE	0	0	0
FIELD	0	0	0
TOTAL	0		0

1988

	PAYROLL	RATE	AMOUNT
OFFICE	0	0	0
FIELD	0	0	0
TOTAL	0		0

1989

	PAYROLL	RATE	AMOUNT
OFFICE	0	0	0
FIELD	0	0	0
TOTAL	0		0

WINGHAM, MASSACHUSETTS  
WORKMENS COMPENSATION  
Treatment plant  
PRIVATELY OWNED

	PAYROLL	TAX RATE	AMOUNT
OFFICE	316,576	0.0015	475
FIELD	400,675	0.0232	9,296
TOTAL	717,251		9,771

	PAYROLL	1986 TAX RATE	AMOUNT
OFFICE	335,571	0.0015	503
FIELD	424,715	0.0232	9,853
TOTAL	760,286		10,357

	PAYROLL	1987 TAX RATE	AMOUNT
OFFICE	355,705	0.0015	534
FIELD	477,841	0.0232	11,086
TOTAL	833,546		11,619

	PAYROLL	1988 TAX RATE	AMOUNT
OFFICE	377,048	0.0015	566
FIELD	506,512	0.0232	11,751
TOTAL	883,559		12,317

	PAYROLL	1989 TAX RATE	AMOUNT
OFFICE	399,670	0.0015	600
FIELD	536,902	0.0232	12,456
TOTAL	936,573		13,056

INGHAM MASSACHUSETTS  
WORKMENS COMPENSATION  
Treatment plant  
DISTRICT OWNED

1985

	PAYROLL	RATE	AMOUNT
OFFICE	280,000	0.0015	420
ELD	353,500	0.0232	8,201
TOTAL	633,500		8,621

1986

	PAYROLL	RATE	AMOUNT
OFFICE	294,000	0.0015	441
ELD	371,175	0.0232	8,611
TOTAL	665,175		9,052

1987

	PAYROLL	RATE	AMOUNT
OFFICE	308,700	0.0015	463
ELD	412,887	0.0232	9,579
TOTAL	721,587		10,042

1988

	PAYROLL	RATE	AMOUNT
OFFICE	324,135	0.0015	486
ELD	433,531	0.0232	10,058
TOTAL	757,666		10,544

1989

	PAYROLL	RATE	AMOUNT
OFFICE	340,342	0.0015	511
ELD	455,208	0.0232	10,561
TOTAL	795,549		11,071

Employee Welfare

This schedule presents the employee welfare that the Company provides to each employee. We based the salary on the number of employees.

Private

Employee welfare from the privately owned water company is paid by the Company on behalf of its employees. The type of insurance, payroll and employee basis and the monthly rates for 1985 are as follows:

<u>Type</u>	<u>Payment/Employee Base</u>	<u>Monthly Rate</u>
<u>Active Employees</u>		
Basic life	717,251	.00079
ADD	272,555	.000038
AS regular	16	.024
H. Insurance - per.	31	89.77
H. Insurnac[ - dep[.	22	137.72
<u>Inactive Employees</u>		
Basic life	107,588	.00079
Per. Comp. - ret.	2	77.99
Dep[. Comp.	1	119.61
Medicare - ret.	10	23.55
Medicare - dep[.	5	23.55

Assume a 5% increase per year in payroll through 1989. For all insurances paid by Water Company on behalf of employees, excluding death insurance, assume a 7% increase per year through 1989.

Municipal

Employee benefits for the municipally owned water company is paid for by the municipally owned water company. The type of insurance, the number of employees covered, and the monthly rates are as follows:

<u>Type</u>	<u># Empl.</u>	<u>Classification</u>	<u>Monthly Rate</u>
Blue Cross	16	Family	92.10
Blue Cross	7	Individual	34.11
L. Ins.	23		1.90

Assume a 12% increase in Blue Cross rates per year based on analysis of rates over the past three years. The documentation used to analyze was obtained from the Massachusetts Insurance Commission - Bureau of Rates.

District

The district basis of health and life insurance was assumed to be the same as the municipal department.

HINGHAM, MASSACHUSETTS  
 EMPLOYEE WELFARE

MUNICIPAL NO TREATMENT PLANT

1985			MONTHLY	TOTAL
TYPE	EMPLOYEE	CLASSIFICATION	RATE	COST
BLUECROSS	16	FAMILY	92.10	17,683
BLUECROSS	7	INDIVIDUAL	34.11	2,865
L.INS.	23		1.90	524
				21,073

1986			MONTHLY	TOTAL
TYPE	EMPLOYEE	CLASSIFICATION	RATE	COST
BLUECROSS	16	FAMILY	103.15	19,805
BLUECROSS	7	INDIVIDUAL	38.20	3,209
L.INS.	23		2.03	561
				23,575

1987			MONTHLY	TOTAL
TYPE	EMPLOYEE	CLASSIFICATION	RATE	COST
BLUECROSS	16	FAMILY	115.53	22,182
BLUECROSS	7	INDIVIDUAL	42.79	3,594
L.INS.	23		2.18	600
				26,376

1988			MONTHLY	TOTAL
TYPE	EMPLOYEE	CLASSIFICATION	RATE	COST
BLUECROSS	16	FAMILY	129.39	24,844
BLUECROSS	7	INDIVIDUAL	47.92	4,025
L.INS.	23		2.33	642
				29,511

1989			MONTHLY	TOTAL
TYPE	EMPLOYEE	CLASSIFICATION	RATE	COST
BLUECROSS	16	FAMILY	144.92	27,825
BLUECROSS	7	INDIVIDUAL	53.67	4,509
L.INS.	23		2.49	687
				33,021

HINGHAM, MASSACHUSETTS  
 EMPLOYEE WELFARE  
 PRIVATE 1985 NO TREATMENT PLANT

TYPE	PAYROLL/EMPLOYEE BASE	MONTHLY RATE	TOTAL COST
ACTIVE EMPLOYEE			
BASIC LIFE	717,251	0.00079	567
AD&D	272,555	0.000038	10
A&S REGULAR	16	0.024	0
H. INS.-PER.	31	89.77	2,783
H. INS.-DEPD	22	138.72	3,052
INACTIVE EMLP.			
BASIC LIFE	107,588	0.00079	85
PER. COMP.-RET	2	77.99	156
DEPEN. COMP.	1	119.61	120
MEDICARE-RET.	10	23.55	236
MEDICARE-DEPEND	5	23.55	118
TOTAL MONTHLY			7,126
TOTAL ANNUALLY			85,511

1986

TYPE	PAYROLL/EMPLOYEE BASE	MONTHLY RATE	TOTAL COST
ACTIVE EMPL.			
BASIC LIFE	760,286	0.0008	643
A.D.&D	288,909	0.00004	12
A&S REGULAR	17	0.02688	0
H. INS.-PER.	31	100.54	3,117
H. INS.-DEP.	22	155.37	3,418
INACTIVE EMPL.			
BASIC LIFE	114,043	0.0008	96
PER. COMP.-RET.	2	83.45	167
DEP. COMP.	1	127.98	128
MEDICARE-RET.	10	26.38	264
MEDICARE-DEP.	5	26.38	132
TOTAL MONTHLY			7,977
TOTAL ANNUALLY			95,720

1987

TYPE	PAYROLL/EMPLOYEE BASE	MONTHLY RATE	TOTAL COST
ACTIVE EMPLOYEES			
BASIC LIFE	805,903	0.0009	729
A.D.&D	306,243	0.00004	13
A&S REGULAR	19	0.030105	1
H. INS.-PER.	31	112.61	3,491
H. INS.-DEP.	22	174.01	3,828
INACTIVE EMPLOYEES			
BASIC LIFE	120,886	0.0009	109
PER. COMP.-RET.	2	89.29	179
DEP. COMP.	1	136.94	137
MEDICARE-RET.	10	29.54	295
MEDICARE-DEP.	5	29.54	148
TOTAL MONTHLY			8,930
TOTAL ANNUALLY			107,158

1988

TYPE	PAYROLL/EMPLOYEE BASE	MONTHLY RATE	TOTAL COST
ACTIVE EMPL.			
BASIC LIFE	854,258	0.000968	827
A.D.&D	324,618	0.000046	15
A&S REGULAR	20	0.033718	1
H. INS.-PER.	31	126.1203	3,910
H. INS.-DEP.	22	194.8916	4,288
INACTIVE EMPL.			
BASIC LIFE	128,139	0.0010	124
PER. COMP.-RET.	2	95.54	191
DEP. COMP.	1	146.53	147
MEDICARE-RET.	10	33.09	331
MEDICARE-DEP.	5	33.09	165
TOTAL MONTHLY			9,998
TOTAL ANNUALLY			119,973

1989

TYPE	BASE	RATE	COST
ACTIVE EMPL.			
BASIC LIFE	905,513	0.0010	938
A.D.&D	344,095	0.00005	17
A&S REGULAR	21	0.037764	1
H. INS.-PER.	31	141.25	4,379
H. INS.-DEP.	22	218.28	4,802
INACTIVE EMPL.			
BASIC LIFE	135,827	0.0010	141
PER. COMP.-RET.	2	102.23	204
DEP. COMP.	1	156.78	
MEDICARE-RET.	10	37.06	371
MEDICARE-DEP.	5	37.06	185
TOTAL MONTHLY			11,038
TOTAL ANNUALLY			132,451

INGHAM, MASSACHUSETTS  
 EMPLOYEE WELFARE DISTRICT  
 of treatment plant  
 1985

TYPE	EMPLOYEE	CLASSIFICATION	MONTHLY RATE	TOTAL COST
BLUE CROSS	20	FAMILY	92.10	22,104
BLUE CROSS	9	INDIVIDUAL	34.11	3,684
. INS.	29		1.90	661
				26,449

1986

TYPE	EMPLOYEE	CLASSIFICATION	MONTHLY RATE	TOTAL COST
BLUE CROSS	20	FAMILY	103.15	24,756
BLUE CROSS	9	INDIVIDUAL	38.20	4,126
. INS.	29		2.03	707
				29,590

1987

TYPE	EMPLOYEE	CLASSIFICATION	MONTHLY RATE	TOTAL COST
BLUE CROSS	20	FAMILY	115.53	27,727
BLUE CROSS	9	INDIVIDUAL	42.79	4,621
. INS.	29		2.18	757
				33,105

1988

TYPE	EMPLOYEE	CLASSIFICATION	MONTHLY RATE	TOTAL COST
BLUE CROSS	20	FAMILY	129.39	31,055
BLUE CROSS	9	INDIVIDUAL	47.92	5,176
. INS.	29		2.33	810
				37,040

1989

TYPE	EMPLOYEE	CLASSIFICATION	MONTHLY RATE	TOTAL COST
BLUE CROSS	20	FAMILY	144.92	34,781
BLUE CROSS	9	INDIVIDUAL	53.67	5,797
. INS.	29		2.49	867
				41,444

INGHAM, MASSACHUSETTS

EMPLOYEE WELFARE

MUNICIPAL

Treatment plant

1985

TYPE	EMPLOYEE	CLASSIFICATION	MONTHLY RATE	TOTAL COST
BLUECROSS	16	FAMILY	92.10	17,683
BLUECROSS	7	INDIVIDUAL	34.11	2,865
.INS.	23		1.90	524
				21,073

1986

TYPE	EMPLOYEE	CLASSIFICATION	MONTHLY RATE	TOTAL COST
BLUECROSS	16	FAMILY	103.15	19,805
BLUECROSS	7	INDIVIDUAL	38.20	3,209
.INS.	23		2.03	561
				23,575

1987

TYPE	EMPLOYEE	CLASSIFICATION	MONTHLY RATE	TOTAL COST
BLUECROSS	17	FAMILY	115.53	23,568
BLUECROSS	7	INDIVIDUAL	42.79	3,594
.INS.	24		2.18	626
				27,789

1988

TYPE	EMPLOYEE	CLASSIFICATION	MONTHLY RATE	TOTAL COST
BLUECROSS	17	FAMILY	129.39	26,396
BLUECROSS	7	INDIVIDUAL	47.92	4,025
.INS.	24		2.33	670
				31,092

1989

TYPE	EMPLOYEE	CLASSIFICATION	MONTHLY RATE	TOTAL COST
BLUECROSS	17	FAMILY	144.92	29,564
BLUECROSS	7	INDIVIDUAL	53.67	4,509
.INS.	24		2.49	717
				34,790

HINGHAM, MASSACHUSETTS  
 EMPLOYEE WELFARE  
 PRIVATE 1985

Treatment plant  
 TYPE

	PAYROLL/EMPLOYEE BASE	MONTHLY RATE	TOTAL COST
<b>ACTIVE EMPLOYEE</b>			
BASIC LIFE	717,251	0.00079	567
AD&D	272,555	0.000038	10
A&S REGULAR	16	0.024	0
I. INS.-PER.	31	89.77	2,783
H. INS.-DEPD	22	138.72	3,052
<b>INACTIVE EMLP.</b>			
BASIC LIFE	107,588	0.00079	85
PER. COMP.-RET	2	77.99	156
DEPEN. COMP.	1	119.61	120
MEDICARE-RET.	10	23.55	236
MEDICARE-DEPEND	5	23.55	118
TOTAL MONTHLY			7,126
TOTAL ANNUALLY			85,511

1986

TYPE	PAYROLL/EMPLOYEE BASE	MONTHLY RATE	TOTAL COST
<b>ACTIVE EMPL.</b>			
BASIC LIFE	760,286	0.0008	643
A.D.&D	288,909	0.00004	12
A&S REGULAR	17	0.02688	0
I. INS.-PER.	31	100.54	3,117
H. INS.-DEP.	22	155.37	3,418
<b>INACTIVE EMPL.</b>			
BASIC LIFE	114,043	0.0008	96
PER. COMP.-RET.	2	83.45	167
DEP. COMP.	1	127.98	128
MEDICARE-RET.	10	26.38	264
MEDICARE-DEP.	5	26.38	132
TOTAL MONTHLY			7,977
TOTAL ANNUALLY			95,720

1987

TYPE	PAYROLL/EMPLOYEE BASE	MONTHLY RATE	TOTAL COST
<b>ACTIVE EMPLOYEES</b>			
BASIC LIFE	833,546	0.0009	754
A.D.&D	316,748	0.00004	14
A&S REGULAR	19	0.030105	1
H. INS.-PER.	32	112.61	3,603
H. INS.-DEP.	22	174.01	3,828
<b>INACTIVE EMPLOYEES</b>			
BASIC LIFE	125,032	0.0009	113
PER. COMP.-RET.	2	89.29	179
DEP. COMP.	1	136.94	137
MEDICARE-RET.	10	29.54	295
MEDICARE-DEP.	5	29.54	148
TOTAL MONTHLY			9,072
TOTAL ANNUALLY			108,860

1988

TYPE	PAYROLL/EMPLOYEE BASE	MONTHLY RATE	TOTAL COST
ACTIVE EMPL.			
BASIC LIFE	883,559	0.000968	855
A.D.&D	335,752	0.000046	16
A&S REGULAR	20	0.033718	1
I. INS.-PER.	32	126.1203	4,036
I. INS.-DEP.	22	194.8916	4,288
INACTIVE EMPL.			
BASIC LIFE	132,534	0.0010	128
PER. COMP.-RET.	2	95.54	191
DEP. COMP.	1	146.53	147
MEDICARE-RET.	10	33.09	331
MEDICARE-DEP.	5	33.09	165
TOTAL MONTHLY			10,157
TOTAL ANNUALLY			121,885

1989

TYPE	BASE	RATE	COST
ACTIVE EMPL.			
BASIC LIFE	936,573	0.0010	970
A.D.&D	355,898	0.00005	18
A&S REGULAR	22	0.037764	1
I. INS.-PER.	32	141.25	4,520
I. INS.-DEP.	22	218.28	4,802
INACTIVE EMPL.			
BASIC LIFE	140,486	0.0010	145
PER. COMP.-RET.	2	102.23	204
DEP. COMP.	1	156.78	
MEDICARE-RET.	10	37.06	371
MEDICARE-DEP.	5	37.06	185
TOTAL MONTHLY			11,216
TOTAL ANNUALLY			134,597

INGHAM, MASSACHUSETTS  
 EMPLOYEE WELFARE DISTRICT  
 treatment plant  
 1985

TYPE	EMPLOYEE	CLASSIFICATION	MONTHLY RATE	TOTAL COST
LUE CROSS	20	FAMILY	92.10	22,104
LUE CROSS	9	INDIVIDUAL	34.11	3,684
. INS.	29		1.90	661
				26,449

1986

TYPE	EMPLOYEE	CLASSIFICATION	MONTHLY RATE	TOTAL COST
LUE CROSS	20	FAMILY	103.15	24,756
LUE CROSS	9	INDIVIDUAL	38.20	4,126
. INS.	29		2.03	707
				29,590

1987

TYPE	EMPLOYEE	CLASSIFICATION	MONTHLY RATE	TOTAL COST
LUE CROSS	21	FAMILY	115.53	29,114
LUE CROSS	9	INDIVIDUAL	42.79	4,621
. INS.	30		2.18	783
				34,518

1988

TYPE	EMPLOYEE	CLASSIFICATION	MONTHLY RATE	TOTAL COST
LUE CROSS	21	FAMILY	129.39	32,607
LUE CROSS	9	INDIVIDUAL	47.92	5,176
. INS.	30		2.33	838
				38,621

1989

TYPE	EMPLOYEE	CLASSIFICATION	MONTHLY RATE	TOTAL COST
LUE CROSS	21	FAMILY	144.92	36,520
LUE CROSS	9	INDIVIDUAL	53.67	5,797
. INS.	30		2.49	897
				43,213

Pension Costs

Private

This schedule presents the pension costs of the Company based on the gross payroll times the rate in the docket #1590 as presented by the Company during a data request. We have assumed that the rate will not change through 1989.

Municipal and District

The amounts are based on the current Plymouth County retirement plan rates and the estimated increases through 1989.

HINGHAM, MASSACHUSETTS  
 PENSION COSTS  
 NO TREATMENT PLANT  
 PRIVATELY OWNED PENSION  
 PAYROLL RATE AMOUNT

1985	717,251	0.1065	76,387 0
1986	760,286	0.1065	80,970 0
1987	805,903	0.1065	85,829 0
1988	854,258	0.1065	90,978 0
1989	905,513	0.1065	96,437

HINGHAM, MASSACHUSETTS  
 PENSION COSTS

	MUNICIPAL OWNED PAYROLL RATE		PENSION AMOUNT
1985	510,500	0.155	79,128 0
1986	536,025	0.155	83,084 0
1987	562,826	0.158	88,927 0
1988	590,968	0.163	96,328 0
1989	620,516	0.169	104,867

HINGHAM, MASSACHUSETTS  
 PENSION COSTS

	DISTRICT OWNED PAYROLL RATE		PENSION AMOUNT
1985	633,500	0.155	98,193 0
1986	665,175	0.155	103,102 0
1987	698,434	0.158	110,353 0
1988	733,355	0.163	119,537 0
1989	770,023	0.169	130,134

## HINGHAM, MASSACHUSETTS

## PENSION COSTS

Treatment plant

PRIVATELY OWNED PENSION  
PAYROLL RATE AMOUNT

1985	717,251	0.1065	76,387 0
1986	760,286	0.1065	80,970 0
1987	833,546	0.1065	88,773 0
1988	883,559	0.1065	94,099 0
1989	936,573	0.1065	99,745

## HINGHAM, MASSACHUSETTS

## PENSION COSTS

Treatment plant

MUNICIPAL OWNED PENSION  
PAYROLL RATE AMOUNT

1985	510,500	0.155	79,128 0
1986	536,025	0.155	83,084 0
1987	585,979	0.158	92,585 0
1988	615,278	0.163	100,290 0
1989	646,042	0.169	109,181

## HINGHAM, MASSACHUSETTS

## PENSION COSTS

Treatment plant

DISTRICT OWNED PENSION  
PAYROLL RATE AMOUNT

1985	633,500	0.155	98,193 0
1986	665,175	0.155	103,102 0
1987	721,587	0.158	114,011 0
1988	757,666	0.163	123,500 0
1989	795,549	0.169	134,448

## Chemicals

This schedule presents the chemical costs based on the Company's estimate presented in docket #1590 and the actual consumption as presented in the Company's 1983 Annual Report.

### No treatment plant

#### Private, Municipal and District

The chemical usage amounts will remain constant for all years through 1989. The chemical unit cost will increase at a rate of 5% per year. The following unit costs have been calculated through the analysis of the Hingham Water Company's chemical contract at March 31, 1983, and current chemical costs quoted from chemical suppliers. The Municipal and district costs are higher because the private company purchases for a number of locations and therefore can purchase in larger quantities under contract at lower prices.

### Treatment plant

The construction of a treatment plant changes the chemical needs of the operations. Whitman & Howard, Inc. provide us with the chemical needs considering a new treatment plant. We used the same costs per unit to purchase chemical for the same consumption. The effect is a substantial increase in overall costs of approximately 58 percent for the municipal operation.

HINGHAM, MASSACHUSETTS  
CHEMICALS

No Treatment Plant

PRIVATE

MUNICIPAL

DISTRICT

NAME	QTY/1000		TOTAL			TOTAL			TOTAL	
	GALLONS	COST	QTY	AMOUNT	COST	QTY	AMOUNT	COST	QTY	AMOUNT
1985										
CHLORINE	0.01331	0.2067	17,888	3,697	0.18	17,888	3,220	0.18	17,888	3,220
LIME	0.05168	0.0492	69,456	3,417	0.015	69,456	1,042	0.015	69,456	1,094
SILICO FLUORIDE	0.00442	0.2173	5,940	1,291	0.185	5,940	1,099	0.185	5,940	1,099
SODIUM FLORIDE	0.00744	0.5363	9,999	5,362	0.65	9,999	6,499	0.65	9,999	6,499
POTASSIUM PERMANGANTE	0.00342	1.0812	4,596	4,970	1.2	4,596	5,516	1.2	4,596	5,516
SODIUM HYPOCHLORITE	0.0004	0.8321	538	447	0.39	538	210	0.39	538	210
POTASSIUM HYDROXIDE	0.01011	1.6661	13,587	22,638	1.89	13,587	25,680	1.89	13,587	25,680
CELITE	0.02166	0.2267	29,110	6,599	0.325	29,110	9,461	0.325	29,110	9,461
HYDROFLUOSILICIC ACID	0.00186	0.0976	2,500	244	0.25	2,500	625	0.25	2,500	625
ALUM	0.00048	0.09	645	58	0.09	645	58	0.09	645	58
SODIUM HEXAMETPHOSPHATE	0.00404	0.6826	5,430	3,706	0.69	5,430	3,746	0.69	5,430	3,746
TOTAL				52,430			57,156			57,208

HINGHAM, MASSACHUSETTS  
CHEMICALS

PRIVATE

MUNICIPAL

DISTRICT

NAME	QTY/1000		TOTAL			TOTAL			TOTAL	
	GALLONS	COST	QTY	AMOUNT	COST	QTY	AMOUNT	COST	QTY	AMOUNT
1986										
CHLORINE	0.01331	0.2170	17,888	3,882	0.189	17,888	3,381	0.189	17,888	3,381
LIME	0.05168	0.0516	69,456	3,588	0.015	69,456	1,094	0.016	69,456	1,149
SILICO FLUORIDE	0.00442	0.2281	5,940	1,355	0.194	5,940	1,154	0.194	5,940	1,154
SODIUM FLORIDE	0.00744	0.5631	9,999	5,631	0.682	9,999	6,824	0.682	9,999	6,824
POTASSIUM PERMANGANATE	0.00342	1.1352	4,596	5,218	1.26	4,596	5,791	1.26	4,596	5,791
SODIUM HYPOCHLORITE	0.0004	0.8737	538	470	0.409	538	220	0.409	538	220
POTASSIUM HYDROXIDE	0.01011	1.7494	13,587	23,770	1.984	13,587	26,964	1.984	13,587	26,964
CELITE	0.02166	0.2380	29,110	6,929	0.341	29,110	9,934	0.341	29,110	9,934
HYDROFLUOSILICIC ACID	0.00186	0.1024	2,500	256	0.262	2,500	656	0.262	2,500	656
ALUM	0.00048	0.0945	645	61	0.094	645	61	0.094	645	61
SODIUM HEXAMETAPHOSPHATE	0.00404	0.7167	5,430	3,892	0.724	5,430	3,934	0.724	5,430	3,934
TOTAL				55,052			60,013			60,068

HINGHAM, MASSACHUSETTS  
CHEMICALS

PRIVATE

MUNICIPAL

DISTRICT

NAME	QTY/1000		TOTAL			TOTAL			TOTAL	
	GALLONS	COST	QTY	AMOUNT	COST	QTY	AMOUNT	COST	QTY	AMOUNT
1987										
CHLORINE	0.01331	0.2278	17,888	4,076	0.198	17,888	3,550	0.198	17,888	3,550
LIME	0.05168	0.0542	69,456	3,767	0.016	69,456	1,149	0.017	69,456	1,206
SILICO FLUORIDE	0.00442	0.2395	5,940	1,423	0.203	5,940	1,212	0.203	5,940	1,212
SODIUM FLORIDE	0.00744	0.5912	9,999	5,912	0.716	9,999	7,166	0.716	9,999	7,166

POTASSIUM PERMANGANATE	0.00342	1.1920	4,596	5,479	1.323	4,596	6,081	1.323	4,596	6,081
SODIUM HYPOCHLORITE	0.0004	0.9173	538	493	0.429	538	231	0.429	538	231
POTASSIUM HYDROXIDE	0.01011	1.8368	13,587	24,958	2.083	13,587	28,312	2.083	13,587	28,312
CELITE	0.02166	0.2499	29,110	7,276	0.358	29,110	10,431	0.358	29,110	10,431
HYDROFLUOSILICIC ACID	0.00186	0.1076	2,500	269	0.275	2,500	689	0.275	2,500	689
ALUM	0.00048	0.0992	645	64	0.099	645	64	0.099	645	64
SODIUM HEXAMETAPHOSPHATE	0.00404	0.7525	5,430	4,086	0.760	5,430	4,130	0.760	5,430	4,130
TOTAL			57,805			63,014			63,072	

0

HINGHAM, MASSACHUSETTS  
CHEMICALS

NAME	PRIVATE			MUNICIPAL			DISTRICT			
	QTY/1000 GALLONS	COST	TOTAL QTY	AMOUNT	COST	TOTAL QTY	AMOUNT	COST	TOTAL QTY	AMOUNT
1988										
CHLORINE	0.01331	0.2392	17,888	4,280	0.208	17,888	3,727	0.208	17,888	3,727
LIME	0.05168	0.0569	69,456	3,956	0.017	69,456	1,206	0.018	69,456	1,266
SILICO FLUORIDE	0.00442	0.2515	5,940	1,494	0.214	5,940	1,272	0.214	5,940	1,272
SODIUM FLORIDE	0.00744	0.6208	9,999	6,208	0.752	9,999	7,524	0.752	9,999	7,524
POTASSIUM PERMANGANATE	0.00342	1.2516	4,596	5,753	1.389	4,596	6,385	1.389	4,596	6,385
SODIUM HYPOCHLORITE	0.0004	0.9632	538	518	0.451	538	243	0.451	538	243
POTASSIUM HYDROXIDE	0.01011	1.9287	13,587	26,206	2.187	13,587	29,728	2.187	13,587	29,728
CELITE	0.02166	0.2624	29,110	7,639	0.376	29,110	10,952	0.376	29,110	10,952
HYDROFLUOSILICIC ACID	0.00186	0.1129	2,500	282	0.289	2,500	723	0.289	2,500	723
ALUM	0.00048	0.1041	645	67	0.104	645	67	0.104	645	67
SODIUM HEXAMETAPHOSPHATE	0.00404	0.7901	5,430	4,290	0.798	5,430	4,337	0.798	5,430	4,337
TOTAL			60,695			66,165			66,225	

HINGHAM, MASSACHUSETTS  
CHEMICALS

NAME	PRIVATE			MUNICIPAL			DISTRICT			
	QTY/1000 GALLONS	COST	TOTAL QTY	AMOUNT	COST	TOTAL QTY	AMOUNT	COST	TOTAL QTY	AMOUNT
1989										
CHLORINE	0.01331	0.2512	17,888	4,494	0.218	17,888	3,914	0.218	17,888	3,914
LIME	0.05168	0.0598	69,456	4,154	0.018	69,456	1,266	0.019	69,456	1,330
SILICO FLUORIDE	0.00442	0.2641	5,940	1,569	0.224	5,940	1,336	0.224	5,940	1,336
SODIUM FLORIDE	0.00744	0.6518	9,999	6,518	0.790	9,999	7,900	0.790	9,999	7,900
POTASSIUM PERMANGANATE	0.00342	1.3142	4,596	6,041	1.458	4,596	6,704	1.458	4,596	6,704
SODIUM HYPOCHLORITE	0.0004	1.0114	538	544	0.474	538	255	0.474	538	255
POTASSIUM HYDROXIDE	0.01011	2.0251	13,587	27,517	2.297	13,587	31,214	2.297	13,587	31,214
CELITE	0.02166	0.2755	29,110	8,021	0.395	29,110	11,500	0.395	29,110	11,500
HYDROFLUOSILICIC ACID	0.00186	0.1186	2,500	297	0.303	2,500	760	0.303	2,500	760
ALUM	0.00048	0.1093	645	71	0.109	645	71	0.109	645	71
SODIUM HEXAMETAPHOSPHATE	0.00404	0.8297	5,430	4,505	0.838	5,430	4,554	0.838	5,430	4,554
TOTAL			63,730			69,473			69,536	

HINGHAM, MASSACHUSETTS  
CHEMICALS  
Treatment plant

NAME	PRIVATE			MUNICIPAL			DISTRICT			
	QTY/1000 GALLONS	COST	TOTAL QTY	AMOUNT	COST	TOTAL QTY	AMOUNT	COST	TOTAL QTY	AMOUNT
1985										
CHLORINE	0.01331	0.2067	17,888	3,697	0.18	17,888	3,220	0.18	17,888	3,220
LIME	0.05168	0.0492	69,456	3,417	0.015	69,456	1,042	0.015	69,456	1,094
SILICO FLUORIDE	0.00442	0.2173	5,940	1,291	0.185	5,940	1,099	0.185	5,940	1,099
SODIUM FLORIDE	0.00744	0.5363	9,999	5,362	0.65	9,999	6,499	0.65	9,999	6,499
POTASSIUM PERMANGANTE	0.00342	1.0812	4,596	4,970	1.2	4,596	5,516	1.2	4,596	5,516
SODIUM HYPOCHLORITE	0.0004	0.8321	538	447	0.39	538	210	0.39	538	210
POTASSIUM HYDROXIDE	0.01011	1.6661	13,587	22,638	1.89	13,587	25,680	1.89	13,587	25,680
CELITE	0.02166	0.2267	29,110	6,599	0.325	29,110	9,461	0.325	29,110	9,461
HYDROFLUOSILICIC ACID	0.00186	0.0976	2,500	244	0.25	2,500	625	0.25	2,500	625
ALUM	0.00048	0.09	645	58	0.09	645	58	0.09	645	58
SODIUM HEXAMETPHOSPHATE	0.00404	0.6826	5,430	3,706	0.69	5,430	3,746	0.69	5,430	3,746
TOTAL				52,430			57,156			57,208

HINGHAM, MASSACHUSETTS  
CHEMICALS

NAME	PRIVATE			MUNICIPAL			DISTRICT			
	QTY/1000 GALLONS	COST	TOTAL QTY	AMOUNT	COST	TOTAL QTY	AMOUNT	COST	TOTAL QTY	AMOUNT
1986										
CHLORINE	0.01331	0.21703	17,888	3,882	0.189	17,888	3,381	0.189	17,888	3,381
LIME	0.05168	0.05166	69,456	3,588	0.015	69,456	1,094	0.016	69,456	1,149
SILICO FLUORIDE	0.00442	0.22816	5,940	1,355	0.194	5,940	1,154	0.194	5,940	1,154
SODIUM FLORIDE	0.00744	0.56311	9,999	5,631	0.682	9,999	6,824	0.682	9,999	6,824
POTASSIUM PERMANGANATE	0.00342	1.13526	4,596	5,218	1.26	4,596	5,791	1.26	4,596	5,791
SODIUM HYPOCHLORITE	0.0004	0.87370	538	470	0.409	538	220	0.409	538	220
POTASSIUM HYDROXIDE	0.01011	1.74940	13,587	23,770	1.984	13,587	26,964	1.984	13,587	26,964
CELITE	0.02166	0.23803	29,110	6,929	0.341	29,110	9,934	0.341	29,110	9,934
HYDROFLUOSILICIC ACID	0.00186	0.10248	2,500	256	0.262	2,500	656	0.262	2,500	656
ALUM	0.00048	0.0945	645	61	0.094	645	61	0.094	645	61
SODIUM HEXAMETAPHOSPHATE	0.00404	0.71673	5,430	3,892	0.724	5,430	3,934	0.724	5,430	3,934
TOTAL				55,052			60,013			60,068

HINGHAM, MASSACHUSETTS  
CHEMICALS

NAME	PRIVATE			MUNICIPAL			DISTRICT			
	QTY/1000 GALLONS	COST	TOTAL QTY	AMOUNT	COST	TOTAL QTY	AMOUNT	COST	TOTAL QTY	AMOUNT
1987										
CHLORINE	0.02716	0.22788	36,502	8,318	0.198	36,502	7,244	0.198	36,502	7,244
LIME	0.17653	0.05424	237,249	12,869	0.016	237,249	3,924	0.017	237,249	4,120
POLYMER	0.00951	0.0005	12,781	6	0.203	12,781	2,607	0.203	12,781	2,607
SODIUM FLORIDE	0.02037	0.59127	27,376	16,187	0.716	27,376	19,619	0.716	27,376	19,619
POTASSIUM PERMANGANATE	0.01548	1.19202	20,804	24,799	1.323	20,804	27,524	1.323	20,804	27,524
ACTIVATED CARBON	0.01738	0.03	23,358	701	0.429	23,358	10,043	0.429	23,358	10,043
			0	0		0	0		0	0

			0	0		0	0		0	0
			0	0		0	0		0	0
ALUM	0.0679	0.09922	91,255	9,055	0.099	91,255	9,055	0.099	91,255	9,055
SODIUM HEXAMETAPHOSPHATE	0.01901	0.75256	25,549	19,227	0.760	25,549	19,435	0.760	25,549	19,435
TOTAL				91,163			99,451			99,647

HINGHAM, MASSACHUSETTS  
CHEMICALS

NAME	QTY/1000		PRIVATE			MUNICIPAL			DISTRICT	
	GALLONS	COST	TOTAL QTY	AMOUNT	COST	TOTAL QTY	AMOUNT	COST	TOTAL QTY	AMOUNT
1988										
CHLORINE	0.02716	0.23928	36,502	8,734	0.208	36,502	7,606	0.208	36,502	7,606
LIME	0.17653	0.05695	237,249	13,513	0.017	237,249	4,120	0.018	237,249	4,326
POLYMER	0.00951	0.00052	12,781	7	0.214	12,781	2,737	0.214	12,781	2,737
SODIUM FLORIDE	0.02037	0.62083	27,376	16,996	0.752	27,376	20,600	0.752	27,376	20,600
POTASSIUM PERMANGANATE	0.01548	1.25162	20,804	26,039	1.389	20,804	28,901	1.389	20,804	28,901
ACTIVATED CARBON	0.01738	0.0315	23,358	736	0.451	23,358	10,546	0.451	23,358	10,546
			0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0
ALUM	0.0679	0.10418	91,255	9,507	0.104	91,255	9,507	0.104	91,255	9,507
SODIUM HEXAMETAPHOSPHATE	0.01901	0.79019	25,549	20,188	0.798	25,549	20,407	0.798	25,549	20,407
TOTAL				95,721			104,423			104,629

HINGHAM, MASSACHUSETTS  
CHEMICALS

NAME	QTY/1000		PRIVATE			MUNICIPAL			DISTRICT	
	GALLONS	COST	TOTAL QTY	AMOUNT	COST	TOTAL QTY	AMOUNT	COST	TOTAL QTY	AMOUNT
1989										
CHLORINE	0.02716	0.25124	36,502	9,171	0.218	36,502	7,986	0.218	36,502	7,986
LIME	0.17653	0.05980	237,249	14,188	0.018	237,249	4,326	0.019	237,249	4,542
POLYMER	0.00951	0.00055	12,781	7	0.224	12,781	2,874	0.224	12,781	2,874
SODIUM FLORIDE	0.02037	0.65187	27,376	17,846	0.790	27,376	21,630	0.790	27,376	21,630
POTASSIUM PERMANGANATE	0.01548	1.31420	20,804	27,341	1.458	20,804	30,346	1.458	20,804	30,346
ACTIVATED CARBON	0.01738	0.03307	23,358	773	0.474	23,358	11,073	0.474	23,358	11,073
			0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0
ALUM	0.0679	0.10939	91,255	9,983	0.109	91,255	9,983	0.109	91,255	9,983
SODIUM HEXAMETAPHOSPHATE	0.01901	0.82970	25,549	21,198	0.838	25,549	21,428	0.838	25,549	21,428
TOTAL				100,507			109,644			109,861

Property taxes

This schedule presents the property tax proforma estimates for the five year period.

No treatment plant

Private

The valuation of property and the relative property tax rates in effect for 1985 for the various towns as compiled by the respective town tax assessors are as follows:

<u>Town</u>	<u>Property Assessment Value</u>	<u>Property Tax Rate</u>
Hull	\$2,615,000	\$24.88
Norwell	601,500	21.85
Rockland	35,000	23.30
Cohasset	300,000	19.00
Hingham	6,610,500	23.80

No assumptions could be estimated by the various towns tax assessors for property tax rates with any accuracy. Therefore, we assumed the maximum possible rate increase allowed under Proposition 2 1/2.

Municipally Owned

The valuation of property and relative property tax rates in effect for 1985 for the various towns as compiled by the respective town tax assessors for the municipally owned water company is as follows:

<u>Town</u>	<u>Property Assessment Value</u>	<u>Property Tax Rate</u>
Hull	\$2,615,000	\$24.88
Norwell	601,500	21.85
Rockland	35,000	23.30

Cohasset	300,000	19.00
Hingham	-0-	-0-

The Hingham Water Company, if municipally owned, will not pay property taxes to the Town of Hingham. Therefore, the property tax expense will be reduced accordingly. No assumptions could be estimated by the various town tax assessors for property taxes rates with any accuracy. Therefore we assumed the maximum possible rate increase under Proposition 2 1/2.

District Owned

The valuation of property and the relative property tax rates in effect for 1985 for the various towns as compiled by the respective town tax assessors are as follows:

<u>Town</u>	<u>Property Assessment Value</u>	<u>Property Tax Rate</u>
Hull	\$2,615,000	\$24.88
Norwell	601,500	21.85
Rockland	35,000	23.30
Cohasset	300,000	19.00
Hingham	6,610,500	23.80

No assumptions could be estimated by the various towns tax assessors for property tax rates with any accuracy. Therefore, we assumed the maximum possible rate increase allowed under Proposition 2 1/2.

Treatment plant

The construction of a treatment plant and the transmission and

distribution improvements cost have been included for tax purposes at 100 percent of valuation.

HINGHAM, MASSACHUSETTS  
 PROPERTY TAXES MUNICIPALLY OWNED

1985  
 No treatment plant

TOWNS	ASSESSMT	RATE	AMOUNT
HINGHAM	0	0.000	0
COHASSET	300,000	0.019	5,700
HULL	2,615,900	0.025	65,084
NORWELL	601,500	0.021	12,632
ROCKLAND	35,000	0.023	816
TOTAL			84,231

1986

HINGHAM	0	0.000	0
COHASSET	300,000	0.019	5,843
HULL	2,615,900	0.026	66,711
NORWELL	601,500	0.022	12,947
ROCKLAND	35,000	0.024	836
TOTAL			86,336

1987

HINGHAM	0	0.000	0
COHASSET	300,000	0.020	5,989
HULL	2,615,900	0.026	68,378
NORWELL	601,500	0.022	13,271
ROCKLAND	35,000	0.024	857
TOTAL			88,495

1988

HINGHAM	0	0.000	0
COHASSET	300,000	0.020	6,138
HULL	2,615,900	0.027	70,088
NORWELL	601,500	0.023	13,603
ROCKLAND	35,000	0.025	878
TOTAL			90,707

1989

HINGHAM	0	0.000	0
COHASSET	300,000	0.021	6,292
HULL	2,615,900	0.027	71,840
NORWELL	601,500	0.023	13,943
ROCKLAND	35,000	0.026	900
TOTAL			92,975

## HINGHAM, MASSACHUSETTS

## PROPERTY TAXES DISTRICT OWNED

1985

No treatment plant

TOWNS	ASSESSMT	RATE	AMOUNT
HINGHAM	6,610,500	0.024	157,330
COHASSET	300,000	0.019	5,700
HULL	2,615,900	0.025	65,084
NORWELL	601,500	0.021	12,632
ROCKLAND	35,000	0.023	816
TOTAL			241,560

1986

HINGHAM	6,610,500	0.024	161,263
COHASSET	300,000	0.019	5,843
HULL	2,615,900	0.026	66,711
NORWELL	601,500	0.022	12,947
ROCKLAND	35,000	0.024	836
TOTAL			247,600

1987

HINGHAM	8,610,500	0.025	215,304
COHASSET	300,000	0.020	5,989
HULL	2,615,900	0.026	68,378
NORWELL	601,500	0.022	13,271
ROCKLAND	35,000	0.024	857
TOTAL			303,799

1988

HINGHAM	8,610,500	0.026	220,687
COHASSET	300,000	0.020	6,138
HULL	2,615,900	0.027	70,088
NORWELL	601,500	0.023	13,603
ROCKLAND	35,000	0.025	878
TOTAL			311,394

1989

HINGHAM	8,610,500	0.026	226,204
COHASSET	300,000	0.021	6,292
HULL	2,615,900	0.027	71,840
NORWELL	601,500	0.023	13,943
ROCKLAND	35,000	0.026	900
TOTAL			319,179

HINGHAM, MASSACHUSETTS  
PROPERTY TAXES      MUNICIPALLY OWNED

1985 Treatment plant

TOWNS	ASSESSMT	RATE	AMOUNT
HINGHAM	0	0.000	0
COHASSET	300,000	0.019	5,700
HULL	2,615,900	0.025	65,084
NORWELL	601,500	0.021	12,632
ROCKLAND	35,000	0.023	816
<b>TOTAL</b>			<b>84,231</b>

1986

HINGHAM	0	0.000	0
COHASSET	300,000	0.019	5,843
HULL	2,615,900	0.026	66,711
NORWELL	601,500	0.022	12,947
ROCKLAND	35,000	0.024	836
<b>TOTAL</b>			<b>86,336</b>

1987

HINGHAM	0	0.000	0
COHASSET	300,000	0.020	5,989
HULL	2,615,900	0.026	68,378
NORWELL	601,500	0.022	13,271
ROCKLAND	35,000	0.024	857
<b>TOTAL</b>			<b>88,495</b>

1988

HINGHAM	0	0.000	0
COHASSET	300,000	0.020	6,138
HULL	2,615,900	0.027	70,088
NORWELL	601,500	0.023	13,603
ROCKLAND	35,000	0.025	878
<b>TOTAL</b>			<b>90,707</b>

1989

HINGHAM	0	0.000	0
COHASSET	300,000	0.021	6,292
HULL	2,615,900	0.027	71,840
NORWELL	601,500	0.023	13,943
ROCKLAND	35,000	0.026	900
<b>TOTAL</b>			<b>92,975</b>

## HINGHAM, MASSACHUSETTS

## PROPERTY TAXES PRIVATELY OWNED

## 1985 Treatment plant

TOWN	ASSESSMT	RATE	AMOUNT
HINGHAM	6,610,500	0.024	157,330
COHASSET	300,000	0.019	5,700
HULL	2,615,900	0.025	65,084
NORWELL	601,500	0.021	12,632
ROCKLAND	35,000	0.023	816
TOTAL			241,560

## 1986

HINGHAM	6,610,500	0.024	161,263
COHASSET	300,000	0.019	5,843
HULL	2,615,900	0.026	66,711
NORWELL	601,500	0.022	12,947
ROCKLAND	35,000	0.024	836
TOTAL			247,600

## 1987

HINGHAM	18,110,500	0.025	452,851
COHASSET	300,000	0.020	5,989
HULL	2,615,900	0.026	68,378
NORWELL	601,500	0.022	13,271
ROCKLAND	35,000	0.024	857
TOTAL			541,346

## 1988

HINGHAM	19,110,500	0.026	489,802
COHASSET	300,000	0.020	6,138
HULL	2,615,900	0.027	70,088
NORWELL	601,500	0.023	13,603
ROCKLAND	35,000	0.025	878
TOTAL			580,509

## 1989

HINGHAM	19,110,500	0.026	502,047
COHASSET	300,000	0.021	6,292
HULL	2,615,900	0.027	71,840
NORWELL	601,500	0.023	13,943
ROCKLAND	35,000	0.026	900
TOTAL			595,022

HINGHAM, MASSACHUSETTS  
 PROPERTY TAXES DISTRICT OWNED

1985 Treatment plant

TOWNS	ASSESSMT.	RATE	AMOUNT
HINGHAM	6,610,500	0.024	157,330
COHASSET	300,000	0.019	5,700
HULL	2,615,900	0.025	65,084
NORWELL	601,500	0.021	12,632
ROCKLAND	35,000	0.023	816
TOTAL			241,560

1986

HINGHAM	6,610,500	0.024	161,263
COHASSET	300,000	0.019	5,843
HULL	2,615,900	0.026	66,711
NORWELL	601,500	0.022	12,947
ROCKLAND	35,000	0.024	836
TOTAL			247,600

1987

HINGHAM	18,110,500	0.025	452,851
COHASSET	300,000	0.020	5,989
HULL	2,615,900	0.026	68,378
NORWELL	601,500	0.022	13,271
ROCKLAND	35,000	0.024	857
TOTAL			541,346

1988

HINGHAM	19,110,500	0.026	489,802
COHASSET	300,000	0.020	6,138
HULL	2,615,900	0.027	70,088
NORWELL	601,500	0.023	13,603
ROCKLAND	35,000	0.025	878
TOTAL			580,509

1989

HINGHAM	19,110,500	0.026	502,047
COHASSET	300,000	0.021	6,292
HULL	2,615,900	0.027	71,840
NORWELL	601,500	0.023	13,943
ROCKLAND	35,000	0.026	900
TOTAL			595,022

Power

Private, Municipal, District

No treatment plant

Assume a constant level of KWH usage for the years through 1989. The unit cost for power will increase at a rate of 5% per year through 1989. Based on these assumptions, power costs for the years through 1989 will be as follows:

<u>Year</u>	<u>KWH</u>	<u>Unit Cost</u>
1985	1,850,758	0.1
1986	1,850,758	0.1
1987	1,850,758	0.105
1988	1,850,758	0.105
1989	1,850,758	0.11025

Treatment plant

The construction of a treatment plant will have a profound impact on the on the cost of power. Whitman & Howard, Inc. estimate a 35 percent increase in the cost once the plant is fully operational.

INGHAM, MASSACHUSETTS

POWER COSTS

NO TREATMENT PLANT

PRIVATE, MUNICIPAL, DISTRICT

YEAR	KWH	UNIT COST	TOTAL COST
1985	1,850,758	0.1	185,076
1986	1,850,758	0.1	185,076
1987	1,850,758	0.105	194,330
1988	1,850,758	0.105	194,330
1989	1,850,758	0.11025	204,046

HINGHAM, MASSACHUSETTS

POWER COSTS

Treatment plant

PRIVATE, MUNICIPAL, DISTRICT

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YEAR	KWH	UNIT COST	TOTAL COST
1985	1,850,758	0.1	185,076
1986	1,850,758	0.1	185,076
1987	2,498,523	0.105	262,345
1988	2,498,523	0.105	262,345
1989	2,498,523	0.11025	275,462

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### Billing costs

The billing costs are necessary for the municipal and district operation.

We obtained quotes from two company's that complete such processing for water departments. There is an initial set up cost which we have included in the first year with the additional charges for mailing. We assumed a semi-annual billing cycle because of the cost of postage, billing charge and the cost to make data changes. The municipal operation includes Hingham's costs only because Hull will be expected to bill their own customers. The district operation will bill all customers.

The fact that a treatment plant may be constructed has no bearing on the cost of billing.

## HINGHAM, MASSACHUSETTS / NO TREATMENT PLANT

Billing costs - includes data processing

Description	District				
	1985	1986	1987	1988	1989
No. of customers	10,444	10,444	10,444	10,444	10,444
Initial set up	3,133				
Billing cost					
Semi-annual charge	6,266	7,311	8,355	9,400	10,444
25% changes	444	496	548	601	653
Postage	4,595	4,595	4,595	4,595	5,222
Supplies	1,044	1,253	1,462	1,671	1,880
<b>Total</b>	<b>15,483</b>	<b>13,656</b>	<b>14,961</b>	<b>16,267</b>	<b>18,199</b>

## HINGHAM, MASSACHUSETTS

Billing costs - includes data processing

Description	Municipal				
	1985	1986	1987	1988	1989
No. of customers	6,117	6,117	6,117	6,117	6,117
Initial set up	1,835				
Billing cost					
Semi-annual charge	3,670	4,282	4,894	5,505	6,117
25% changes	260	291	321	352	382
Postage	2,691	2,691	2,691	2,691	3,059
Supplies	612	734	856	979	1,101
<b>Total</b>	<b>9,068</b>	<b>7,998</b>	<b>8,763</b>	<b>9,527</b>	<b>10,659</b>

Outside professional services

The outside professional services are necessary for the municipal and district operations. We have developed the estimated expenses based on Whitman & Howard, Inc. estimate of engineering fees and our estimate of accounting, rate setting and administrative expenses.

HINGHAM, MASSACHUSETTS / NO TREATMENT PLANT

Outside professional services - Municipal

	1985	1986	1987	1988	1989
Engineering	10,000	11,000	12,000	13,000	14,000
Accounting					
New system	15,000				
Audit	3,000	3,300	3,600	3,900	4,200
Rate setting	10,000	3,000	3,000	3,000	3,000
Legal	10,000	5,000	5,000	5,000	5,000
Total accounting	<u>28,000</u>	<u>6,300</u>	<u>6,600</u>	<u>6,900</u>	<u>7,200</u>
Total	<u>38,000</u>	<u>17,300</u>	<u>18,600</u>	<u>19,900</u>	<u>21,200</u>

HINGHAM, MASSACHUSETTS

Outside professional services - District

	1985	1986	1987	1988	1989
Engineering	10,000	11,000	12,000	13,000	14,000
Accounting					
New system	25,000				
Audit	5,000	5,000	5,000	5,000	5,000
Rate setting	10,000	5,000	5,000	5,000	5,000
Annual	5,000	5,000	5,000	5,000	5,000
Legal	10,000	5,000	5,000	5,000	5,000
Data processing				10,000	10,000
Total Accounting	<u>55,000</u>	<u>20,000</u>	<u>20,000</u>	<u>30,000</u>	<u>30,000</u>

Municipal Ownership with a \$6 Million Grant for the Treatment Plant  
and a Purchase Price of \$6.2 Million.

This series of schedules presents the 5th year operating expenses and the five year average operating expenses, the revenues to be generated at the rates and the detailed rates for each meter size and fire protection for municipal ownership at the highest price with a grant.

INGHAM, MASSACHUSETTS  
 Municipal owned treatment plant

	1985	1986	1987	1988	1989
5,200,000/6%/1yr/Ban	372,000				
5,200,000/bonds/8%/15yr		724,343	724,343	724,343	724,343
purchase of Co.	372,000	724,343	724,343	724,343	724,343
1,000,000/6%/1yr/Ban	120,000				
5,000,000/6%/1yr/Ban		360,000			
5,500,000/bonds/8%/15yr			759,392	759,392	759,392
treatment plant bonds	120,000	360,000	759,392	759,392	759,392
<b>Total</b>	<b>492,000</b>	<b>1,084,343</b>	<b>1,483,735</b>	<b>1,483,735</b>	<b>1,483,735</b>

INGHAM, MASSACHUSETTS  
 Municipal - Treatment plant.  
 Revenue to be generated at proposed rates - Hingham

<u>Fire protection charges</u>		Annual Revenue
501	Public hydrants at 334	167,106
	<u>Private Hydrants</u>	
8	4" connections at 167	1,334
65	6" connections at 334	21,680
38	8" connections at 767	29,152
1	10" connections at 1,267	1,267
		<u>53,434</u>
	Total Fire Protection	<u>220,540</u>

Metered Revenue

Minimum charge

ter ze	No. of meters	Quarterly charge	Quarterly revenue	Annual revenue	
3/8-3/4	5,747	\$18.95	108,910	435,641	
1/4	15	\$28.43	426	1,706	
	214	\$47.38	10,139	40,555	
1/2	53	\$94.75	5,022	20,088	
	72	\$151.61	10,916	43,663	
	4	\$303.21	1,213	4,851	
	4	\$473.77	1,895	7,580	
	7	\$947.54	6,633	26,531	
	1	\$2,179.34	2,179	8,717	
	<u>6117</u>		<u>147,333</u>	<u>589,331</u>	589,331

MUNICIPAL TREATMENT PLANT

Water consumption charge

Water allowed in service charge

Allowed CCF in the minimum charge.	28
No. of customers	6,117

Total CCF allowed	171,276
1st step rate	\$2.3286

Revenue from minimum charge	<u>398,835</u>
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Metered water

Balance of base consumption at 1st step

	HINGHAM	HULL
1st step consumption in CCF	248,590	395,008
Consumption in minimum in CCF	171,276	

Balance of consumption at 1st step CCF	<u>77,314</u>	<u>395,008</u>
1st step rate	\$2.3286	\$1.6700

Balance of revenue from 1st step	180,034	659,668
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Extra capacity consumption at 2nd step

2nd step consumption in CCF	474,807	0
2nd step rate	\$1.1109	\$0.0000

Revenue from 2nd step	<u>527,470</u>	<u>0</u>
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Total water consumption revenue	<u>1,106,339</u>	<u>659,668</u>
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Total revenue		<u>2,575,878</u>
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Revenue requirements		2,575,878
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Variance		<u>0</u>
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HINGHAM, MASSACHUSETTS  
OPERATING EXPENSE WORKSHEET - MUNICIPALLY OWNED - 1989  
Treatment Plant

DESCRIPTION	1988							PENSION CHEMICAL	WORKCOMP BILLING	PROPTAX POWER	PAYTAX EMPWEL	SERVICE CO	PROF LABCOST	LEASED VEHICLES	DEBT SERVICE CENT SERV PLT MIN	TOTAL ADJUSTED 1989	FIVE YEAR TOTAL	FIVE YEAR AVERAGE	
	ACCOUNT NUMBER	PAYROLL PERCENT	UNADJUST PERCENT	OPERATE EXPENSE	UNADJUST AMOUNTS	ADJUST WITH INFL	PLUS 89 PAYROLL												
<b>SOURCE OF SUPPLY</b>																			
Maint. water supply building/fixtures	601.1	0.03%	7.12%	199	14	15	194									209	941	188	
Maintenance of surface source	601.2	0.57%	58.01%	7,605	4,412	4,632	3,682									8,315	32,321	6,466	
Maint. of Ground Source of Water Sup.	601.3	0.30%	7.41%	21,871	1,621	1,702	1,938			19,282						22,922	97,562	19,511	
<b>TOTAL SOURCE OF SUPPLY</b>				29,675	6,046	6,349	5,814	0	0	19,282	0				0	31,445	130,824	26,166	
<b>PUMPING</b>																			
Pumping Labor	603.1	14.72%	0.63%	91,143	574	603	95,097									0	0	0	
Boiler Fuel	603.2		100.00%	583	583	613	0									95,700	428,594	85,711	
Purchased power	603.4			232,700	0	0	0									613	2,785	55	
Miscellaneous pumping station supply	603.5		54.28%	13,908	7,550	7,927	0			244,335						244,335	1,038,059	207,611	
Misc. power pumping building/fixtures	604.1	2.28%	40.69%	23,425	9,532	10,008	14,730			6,887						14,814	64,128	12,821	
Maintenance pumping equipment	604.2	0.56%	35.41%	5,540	1,962	2,060	3,618									24,738	109,054	21,811	
<b>TOTAL PUMPING</b>				367,300	20,200	21,211	113,445	0	0	251,222	0				0	385,877	1,674,732	334,941	
<b>PURIFICATION</b>																			
Labor	605.1	14.36%	0.01%	88,363	9	9	92,772									0	0	0	
Supplies and expense	605.2		23.15%	133,211	30,838	32,380	0	109,644								92,781	415,598	83,121	
Maintenance building/fixtures	606.1	0.08%	74.69%	1,573	1,175	1,234	517									142,025	546,136	109,221	
Maintenance equipment	606.2	0.83%	48.96%	47,830	23,417	24,588	5,362									1,750	6,792	1,351	
<b>TOTAL PURIFICATION</b>				270,977	55,439	58,211	98,651	109,644	0	0	0				25,000	54,950	155,020	31,001	
<b>TRANSMISSION AND DISTRIBUTION</b>																			
Inspecting customers installations	607	0.04%		246	0	0	258									0	0	0	
Misc. trans and dist. supp & exp	608	21.71%	18.75%	165,202	30,975	32,524	140,256									258	1,158	231	
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	31,180	14,745	15,482	16,926			826						173,606	785,692	157,131	
Maint. of Stor, Reserv, Tanks, Standpipes	609.3	0.03%	93.81%	5,174	4,854	5,096	194									32,408	156,533	31,301	
Maint. of Services	609.4	3.20%	59.17%	46,416	27,464	28,837	20,673									5,290	25,370	5,071	
Maint. of Meters	609.5	4.01%	12.36%	28,136	3,478	3,651	25,906									49,511	213,265	42,651	
Maint. of Hydrants	609.6	0.03%	58.50%	389	227	239	194									29,558	132,431	26,481	
Maint. of Fountains & Troughs	609.7	0.02%	94.68%	1,564	1,481	1,555	129									433	1,562	311	
<b>TOTAL TRANSMISSION AND DISTRIBUTION</b>				278,306	83,224	87,385	204,537	0	0	826	0				0	1,684	7,279	1,451	
<b>GENERAL AND MISCELLANEOUS</b>																			
Salary-officers & clerks	610.1	26.94%	23.08%	215,035	49,630	52,112	174,044									0	0	0	
Gen. office supply & exp.	610.2	7.49%	53.65%	100,236	53,777	56,466	48,389									226,155	1,010,838	202,161	
Outside professional exp.	610.3		0.00%	88,835	0	0	0									104,854	487,301	97,461	
Insurance	610.4		21.27%	38,709	8,233	8,645	0			4,132			21,200		70,000	95,332	432,555	86,511	
Accidents and Damages	610.5		100.00%	0	0	0	0			0						43,435	165,603	33,121	
Stores expense	610.6			0	0	0	0									0	0	0	
Customer charges	610.8			9,527	0	0	0									0	0	0	
Maintenance of general structures	610.9	0.18%	36.28%	1,784	647	680	1,163			10,659						10,659	46,015	9,201	
Depreciation	610.1			0	0	0	0									1,843	9,734	1,941	
Miscellaneous general expense	610.11		18.84%	122,644	23,106	24,261	0	109,181		0						0	0	0	
<b>TOTAL GENERAL AND MISCELLANEOUS</b>				576,771	135,394	142,163	223,595	109,181	10,659	4,132	34,790		21,200	0	70,000	0	615,720	2,726,029	545,201
<b>TOTAL OPERATING EXPENSES</b>																			
Uncollectible operating revenue		100.00%		1,523,028	300,304	315,319	646,042	218,826	10,659	275,462	34,790		21,200	0	70,000	25,000	1,617,297	6,978,419	1,395,681
Payroll taxes				48,307	0	0	0									0	0	0	
Property taxes				90,707	0	0	0									50,507	227,972	45,591	
Other taxes				0	0	0	0			92,975						92,975	442,744	88,541	
<b>TOTAL EXPENSES</b>				1,662,042	300,304	315,319	646,042	218,826	10,659	368,437	85,297		21,200	0	70,000	25,000	1,760,779	7,649,134	1,529,821
<b>DEBT SERVICE</b>																			
<b>TOTAL REVENUE REQUIREMENTS</b>				1,483,735	300,304	315,319	646,042	218,826	10,659	368,437	85,297		21,200	0	1,483,735	25,000	1,483,735	6,027,548	1,205,511
				3,145,777	300,304	315,319	646,042	218,826	10,659	368,437	85,297		21,200	0	1,553,735	25,000	3,244,514	13,676,682	2,735,331

HINGHAM, MASSACHUSETTS  
 Municipal - Treatment plant  
 Revenue to be generated at proposed rates - Hingham

<u>Fire protection charges</u>		Annual Revenue
501 Public hydrants at	314	157,090
<u>Private Hydrants</u>		
8 4" connections at	157	1,254
65 6" connections at	314	20,381
38 8" connections at	721	27,405
1 10" connections at	1,192	1,192
		<u>50,231</u>
Total Fire Protection		<u>207,321</u>

Metered Revenue

Minimum charge

<u>Meter size</u>	<u>No. of meters</u>	<u>Quarterly charge</u>	<u>Quarterly revenue</u>	<u>Annual revenue</u>	
5/8-3/4	5,747	\$17.46	100,326	401,304	
3/4	15	\$26.19	393	1,571	
1	214	\$43.64	9,340	37,358	
1 1/2	53	\$87.29	4,626	18,505	
2	72	\$139.66	10,055	40,221	
3	4	\$279.31	1,117	4,469	
4	4	\$436.43	1,746	6,983	
6	7	\$872.86	6,110	24,440	
8	1	\$2,007.57	2,008	8,030	
	<u>6117</u>		<u>135,720</u>	<u>542,881</u>	542,881

MUNICIPAL TREATMENT PLANT

Water consumption charge

Water allowed in service charge

Allowed CCF in the minimum charge.	28
No. of customers	6,117
Total CCF allowed	171,276
1st step rate	\$2.1451
Revenue from minimum charge	<u>367,399</u>

Metered water

Balance of base consumption at 1st step

	HINGHAM	HULL
1st step consumption in CCF	248,590	395,008
Consumption in minimum in CCF	171,276	
Balance of consumption at 1st step CCF	<u>77,314</u>	<u>395,008</u>
1st step rate	\$2.1451	\$1.4544
Balance of revenue from 1st step	165,844	574,517
Extra capacity consumption at 2nd step		

2nd step consumption in CCF	474,807	0
2nd step rate	\$1.0234	\$0.0000

Revenue from 2nd step	<u>485,895</u>	<u>0</u>
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Total water consumption revenue	<u>1,019,139</u>	<u>574,517</u>
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Total revenue		<u>2,343,858</u>
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Revenue requirements		<u>2,343,858</u>
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Variance		<u>0</u>
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HINGHAM, MASSACHUSETTS  
 Municipal - Treatment plant  
 Metered Sales Rate calculation

Description	Hingham	Hull	
Use Costs			
Revenue to be recovered through metered sales	1,019,139	574,517	
Less: Extra-capacity	485,895	0	
Use Cost to all users	<u>533,244</u>	<u>574,517</u>	
Use consumption in CCF	248,590	395,008	
Total base step rate		\$2.1451	\$1.4544
		=====	=====
Extra-capacity Costs	485,895	0	
Extra consumption in CCF	474,807	0	
Total extra step rate		\$1.0234	\$0.0000
		=====	=====
Consumption statistics			
Total metered consumption CCF	723,397	395,008	
Base consumption 100/291#	248,590	135,742	
Extra consumption	<u>474,807</u>	<u>259,266</u>	
	=====	=====	

‡ Based on 1983 maximum day demand to average day demand  
 1,030mill. gal/3,682mill. gal = 1.91

HINGHAM, MASSACHUSETTS  
 Municipal Treatment plant  
 quarterly minimum customer service charge

meter size	Charge/equivalent meter Hingham	equivalent meter Hull	Ratio Equivalent	Charge/ meter size Hingham	meter size Hull	Charge for 700CF Hingham	equivalent meter Hull	Charge for 700CF Hull	Customer charge with 700CF Hingham	equivalent meter Hull	Charge for 700CF Hull
5/8"-3/4"	\$17.46	\$0.00	1	\$17.46	\$0.00	\$15.02	\$0.00	\$15.02	\$32.47	\$0.00	\$0.00
3/4"	\$17.46	\$0.00	1.5	\$26.19	\$0.00	\$15.02	\$0.00	\$15.02	\$41.20	\$0.00	\$0.00
1"	\$17.46	\$0.00	2.5	\$43.64	\$0.00	\$15.02	\$0.00	\$15.02	\$58.66	\$0.00	\$0.00
1 1/2"	\$17.46	\$0.00	5	\$87.29	\$0.00	\$15.02	\$0.00	\$15.02	\$102.30	\$0.00	\$0.00
2"	\$17.46	\$0.00	8	\$139.66	\$0.00	\$15.02	\$0.00	\$15.02	\$154.67	\$0.00	\$0.00
3"	\$17.46	\$0.00	16	\$279.31	\$0.00	\$15.02	\$0.00	\$15.02	\$294.33	\$0.00	\$0.00
4"	\$17.46	\$0.00	25	\$436.43	\$0.00	\$15.02	\$0.00	\$15.02	\$451.44	\$0.00	\$0.00
5"	\$17.46	\$0.00	50	\$872.86	\$0.00	\$15.02	\$0.00	\$15.02	\$887.87	\$0.00	\$0.00
6"	\$17.46	\$0.00	115	\$2,007.57	\$0.00	\$15.02	\$0.00	\$15.02	\$2,022.58	\$0.00	\$0.00

HINGHAM, MASSACHUSETTS  
 OPERATING EXPENSE WORKSHEET - MUNICIPALLY OWNED - 1989  
 Treatment Plant

DESCRIPTION	ACCOUNT NUMBER	PAYROLL PERCENT	UNADJUST PERCENT	1988				ELLS 89	PENSION	WORKCOMP	PROP TAX POWER	PAMTAX EMPWEL	HCF SERVICE CO	LEASED LAB COST VEHICLES	DEBT SERVICE CENT SERV	TOTAL ADJUSTED 1989	FIVE YEAR TOTAL	FIVE YEAR AVERAGE
				OPERATE EXPENSE	UNADJUST AMOUNTS	ADJUST WITH INFL	PLT MIN											
SOURCE OF SUPPLY																		
Maint. water supply building/fixtures	601.1	0.03%	7.12%	199	14	15	194									209	941	188
Maintenance of surface source	601.2	0.57%	58.01%	7,605	4,412	4,632	3,682									8,315	32,321	6,464
Maint. of Ground Source of Water Sup.	601.3	0.30%	7.41%	21,871	1,621	1,702	1,938			19,282						22,922	97,562	19,512
TOTAL SOURCE OF SUPPLY				29,675	6,046	6,349	5,814	0	0	19,282	0					31,445	130,824	26,165
PUMPING																		
Pumping Labor	603.1	14.72%	0.63%	91,143	574	603	95,097									95,700	428,594	85,719
Boiler Fuel	603.2		100.00%	583	583	613	0									613	2,785	557
Purchased power	603.4			232,700	0	0	0			244,335						244,335	1,038,059	207,612
Miscellaneous pumping station supply	603.5		54.28%	13,908	7,550	7,927	0			6,887						14,814	64,128	12,826
Misc. power pumping building/fixtures	604.1	2.28%	40.69%	23,425	9,532	10,008	14,730									24,738	109,054	21,811
Maintenance pumping equipment	604.2	0.56%	35.41%	5,540	1,962	2,060	3,618									5,678	32,112	6,422
TOTAL PUMPING				367,300	20,200	21,211	113,445	0	0	251,222	0					385,877	1,674,732	334,946
PURIFICATION																		
Labor	605.1	14.36%	0.01%	88,363	9	9	92,772									92,781	415,598	83,120
Supplies and expense	605.2		23.15%	133,211	30,838	32,380	0	109,644								142,025	546,136	109,227
Maintenance building/fixtures	606.1	0.08%	74.69%	1,573	1,175	1,234	517									1,750	6,792	1,358
Maintenance equipment	606.2	0.83%	48.96%	47,830	23,417	24,588	5,362							25,000		54,950	155,020	31,004
TOTAL PURIFICATION				270,977	55,439	58,211	98,651	109,644	0	0	0			25,000		291,506	1,123,545	224,709
TRANSMISSION AND DISTRIBUTION																		
Inspecting customers installations	607	0.04%		246	0	0	258									258	1,158	232
Misc. trans and dist. supp & exp	608	21.71%	18.75%	165,202	30,975	32,524	140,256			826						173,606	785,692	157,138
Maint. of Trans & Dist Mains	609.2	2.62%	47.29%	31,180	14,745	15,482	16,926									32,408	156,533	31,307
Maint. of Stor, Reserv, Tanks, Standpipes	609.3	0.03%	93.81%	5,174	4,854	5,096	194									5,290	25,370	5,074
Maint. of Services	609.4	3.20%	59.17%	46,416	27,464	28,837	20,673									49,511	213,265	42,653
Maint. of Meters	609.5	4.01%	12.36%	28,136	3,478	3,651	25,906									29,558	132,431	26,486
Maint. of Hydrants	609.6	0.03%	58.50%	389	227	239	194									433	1,562	312
Maint. of Fountains & Troughs	609.7	0.02%	94.68%	1,564	1,481	1,555	129									1,684	7,279	1,456
TOTAL TRANSMISSION AND DISTRIBUTION				278,306	83,224	87,385	204,537	0	0	826	0			0		292,748	1,323,288	264,658
GENERAL AND MISCELLANEOUS																		
Salary-officers & clerks	610.1	26.94%	23.08%	215,035	49,630	52,112	174,044									226,155	1,010,838	202,168
Gen. office supply & exp.	610.2	7.49%	53.65%	100,236	53,777	56,466	48,389									104,854	487,301	97,460
outside professional exp.	610.3		0.00%	88,835	0	0	0									88,835	0	0
Insurance	610.4		21.27%	38,709	8,233	8,645	0			4,132		21,200		70,000		95,332	432,555	86,511
Accidents and Damages	610.5		100.00%	0	0	0	0				34,790					43,435	165,603	33,121
Stores expense	610.6			0	0	0	0									0	0	0
Customer charges	610.8			9,527	0	0	0									9,527	0	0
Maintenance of general structures	610.9	0.18%	36.28%	1,784	647	680	1,163									10,659	46,015	9,203
Depreciation	610.1			0	0	0	0									1,843	9,734	1,947
Miscellaneous general expense	610.11		18.84%	122,644	23,106	24,261	0	109,181	0							133,443	573,983	114,797
TOTAL GENERAL AND MISCELLANEOUS				576,771	135,394	142,163	223,595	109,181	10,659	4,132	34,790	21,200	0	70,000	0	615,720	2,726,029	545,206
TOTAL OPERATING EXPENSES																		
Uncollectible operating revenue		100.00%		1,523,028	300,304	315,319	646,042	218,826	10,659	275,462	34,790	21,200	0	70,000	25,000	1,617,297	6,978,419	1,395,684
Payroll taxes				48,307	0	0	0				50,507					50,507	227,972	45,594
Property taxes				90,707	0	0	0			92,975						92,975	442,744	88,549
Other taxes				0	0	0	0									0	0	0
TOTAL EXPENSES				1,662,042	300,304	315,319	646,042	218,826	10,659	368,437	85,297	21,200	0	70,000	25,000	1,760,779	7,649,134	1,529,827
DEBT SERVICE																		
TOTAL REVENUE REQUIREMENTS				1,226,710	300,304	315,319	646,042	218,826	10,659	368,437	85,297	21,200	0	1,226,710	25,000	1,226,710	4,867,448	973,490
				2,888,752	300,304	315,319	646,042	218,826	10,659	368,437	85,297	21,200	0	1,296,710	25,000	2,987,489	12,516,582	2,503,316

Private Ownership with the Town Building the Treatment Plant and Leasing it to the HWC.

This series of schedules presents the 5th year operating expenses and the five year average operating expenses, the revenue to be generated at the rates and the detailed rates for each meter size and fire protection for private ownership with the town leasing a treatment plant to the company.

## HINGHAM, MASSACHUSETTS

Privately owned - treatment plant

Revenue to be generated at proposed rates - Hingham

No units	Fire protection charges \$/unit	Annual Revenue	No. of Units	Hull Annual Revenue	Cohasset Annual Revenue
501	Public hydrants at Basic Private Hydrants	435	217,796	4	1,739 153,056 12,606
8	4" connections at	217	1,739		
65	6" connections at	435	28,257	17	7,390
38	8" connections at	1,000	37,995		
1	10" connections at	1,652	1,652		
			69,643		
	Total Fire Protection		287,439	162,185	12,606

Metered Revenue

Minimum charge

Meter size	No. of meters	----- Hingham -----			----- Hull -----			
		Quarterly charge	Quarterly revenue	Annual revenue	No. of Meters	Quarterly Charge	Quarterly Revenue	Annual Revenue
5/8-3/4	5,747	\$16.34	93,882	375,530	3,510	\$18.64	65,423	261,691
3/4	15	\$24.50	368	1,470	700	\$219.01		153,306
1	214	\$40.84	8,740	34,959	92	\$46.60	4,287	17,148
1 1/2	53	\$81.68	4,329	17,316	11	\$93.19	1,025	4,101
2	72	\$130.69	9,409	37,638	11	\$149.11	1,640	6,561
3	4	\$261.37	1,045	4,182	0	\$298.22	0	0
4	4	\$408.40	1,634	6,534	2	\$465.97	932	3,728
6	7	\$816.80	5,718	22,870	1	\$931.95	932	3,728
8	1	\$1,878.63	1,879	7,515	0	\$2,143.48	0	0
	6,117		127,003	508,014	4,327		74,239	450,261

Privately owned - . . . treatment plant

Water consumption charge

Water allowed in service charge

	Hingham	Hull
Allowed CCF in the minimum charge.	28	28
No. of customers	6,117	4,327
Total CCF allowed	171,276	121,156
1st step rate	\$3.1435	\$3.6447
Revenue from minimum charge	<u>538,412</u>	<u>441,582</u>

Metered water

Balance of base consumption at 1st step

1st step consumption in CCF	248,590	135,742
Consumption in minimum in CCF	171,276	121,156
Balance of consumption at 1st step CCF	<u>77,314</u>	<u>14,586</u>
1st step rate	\$3.1435	\$3.6447
Balance of revenue from 1st step	243,039	53,161

Extra capacity consumption at 2nd step

2nd step consumption in CCF	474,807	259,266
2nd step rate	\$1.4836	\$1.7223
Revenue from 2nd step	<u>704,406</u>	<u>446,539</u>

Total water consumption revenue	<u>1,485,857</u>	<u>941,281</u>
Total revenue	<u>2,281,310</u>	<u>1,566,333</u>
Revenue requirements	2,281,310	1,566,333
Variance	<u>0</u>	<u>0</u>

HINGHAM, MASSACHUSETTS  
 ... treatment plant - Privately owned  
 Quarterly minimum customer service charge

Meter Size	Charge/equivalent meter		Ratio Equivalent	Charge/ meter size		Charge for 700CF		Customer charge with 700CF	
	Hingham	Hull		Hingham	Hull	Hingham	Hull	Hingham	Hull
5/8"-3/4"	\$16.34	\$18.64	1	\$16.34	\$18.64	\$22.00	\$25.51	\$38.34	\$44.15
Hull seasonal		\$219.01	1		\$219.01		\$25.51		\$244.52
3/4"	\$16.34	\$18.64	1.5	\$24.50	\$27.96	\$22.00	\$25.51	\$46.51	\$53.47
1"	\$16.34	\$18.64	2.5	\$40.84	\$46.60	\$22.00	\$25.51	\$62.84	\$72.11
1 1/2"	\$16.34	\$18.64	5	\$81.68	\$93.19	\$22.00	\$25.51	\$103.68	\$118.71
2"	\$16.34	\$18.64	8	\$130.69	\$149.11	\$22.00	\$25.51	\$152.69	\$174.62
3"	\$16.34	\$18.64	16	\$261.37	\$298.22	\$22.00	\$25.51	\$283.38	\$323.74
4"	\$16.34	\$18.64	25	\$408.40	\$465.97	\$22.00	\$25.51	\$430.40	\$491.49
6"	\$16.34	\$18.64	50	\$816.80	\$931.95	\$22.00	\$25.51	\$838.80	\$957.46
8"	\$16.34	\$18.64	115	\$1,878.63	\$2,143.48	\$22.00	\$25.51	\$1,900.63	\$2,168.99

HINGHAM, MASSACHUSETTS

Customer Account Calculation for Minimum Quarterly Charges

treatment plant - Privately owned

Description

Description	Hingham	----- Hull -----	
		Regular	Seasonal
Total Allocated to Customer Accounts	508,014	349,144	153,306
Equivalent Meters	7,775	4,683	700
Basic customer charge - annual	\$65.34	\$74.56	\$219.01
Basic customer charge - quarterly	\$16.34	\$18.64	

HINGHAM, MASSACHUSETTS  
 . treatment plant - Privately owned  
 Metered Sales Rate calculation

Description	Hingham	Hull
Base Costs		
Revenue to be recovered through metered sales	1,485,857	941,281
Less: Extra-capacity	704,406	446,539
Base Cost to all users	<u>781,451</u>	<u>494,742</u>
Base consumption in CCF	248,590	135,742
Total base step rate	<u>\$3.1435</u>	<u>\$3.6447</u>
Extra-capacity Costs		
Extra consumption in CCF	474,807	259,266
Total extra step rate	<u>\$1.4836</u>	<u>\$1.7223</u>
Consumption statistics		
Total metered consumption CCF	723,397	395,008
Base consumption 100/291#	248,590	135,742
Extra consumption	<u>474,807</u>	<u>259,266</u>

# Based on 1983 maximum day demand to average day demand  
 7,030mill. gal/3,682mill. gal = 1.91



Municipal Ownership with a \$4 Million Purchase Price and no Grant

This series of schedules presents the 5th year operating expenses and the five year average operating expenses, the revenue to be generated at the rates and the detailed rates for each meter size and fire protection for municipal ownership at the lowest price without a treatment plant grant.

## HINGHAM, MASSACHUSETTS

Municipally owned - No treatment plant

Revenue to be generated at proposed rates - Hingham

<u>Fire protection charges</u>		Annual Revenue
501 Public hydrants at	401	200,757
<u>Private Hydrants</u>		
8 4" connections at	200	1,603
65 6" connections at	401	26,046
38 8" connections at	922	35,022
1 10" connections at	1,523	1,523
		<u>64,194</u>
Total Fire Protection		<u>264,951</u>
Metered Revenue		

Minimum charge

<u>Meter size</u>	<u>No. of meters</u>	<u>Quarterly charge</u>	<u>Quarterly revenue</u>	<u>Annual revenue</u>
5/8-3/4	5,747	\$15.04	86,445	345,779
3/4	15	\$22.56	338	1,354
1	214	\$37.60	8,047	32,189
1 1/2	53	\$75.21	3,986	15,944
2	72	\$120.33	8,664	34,656
3	4	\$240.67	963	3,851
4	4	\$376.04	1,504	6,017
6	7	\$752.09	5,265	21,058
8	1	\$1,729.80	1,730	6,919
	<u>6117</u>		<u>116,942</u>	<u>467,768</u>
				467,768

Municipally owned - No treatment plant

Water consumption charge

Water allowed in service charge

Allowed CCF in the minimum charge.	28
No. of customers	6,117
Total CCF allowed	171,276
1st step rate	\$1.5532
Revenue from minimum charge	<u>266,029</u>

Metered water

Balance of base consumption at 1st step

	HINGHAM	HULL
1st step consumption in CCF	248,590	395,008
Consumption in minimum in CCF	171,276	
Balance of consumption at 1st step CCF	<u>77,314</u>	<u>395,008</u>
1st step rate	\$1.5532	\$1.0697
Balance of revenue from 1st step	120,085	422,531
Extra capacity consumption at 2nd step		
2nd step consumption in CCF	474,807	0
2nd step rate	\$0.7431	\$0.0000
Revenue from 2nd step	<u>352,827</u>	<u>0</u>
Total water consumption revenue	<u>738,941</u>	<u>422,531</u>
Total revenue		<u>1,894,191</u>
Revenue requirements		1,894,191
Variance		<u>0</u>

HINGHAM, MASSACHUSETTS  
Municipally owned - No treatment plant  
Metered Sales Rate calculation

Description	Hingham	Hull	
Base Costs			
Revenue to be recovered through metered sales	738,941	422,531	
Less: Extra-capacity	352,827	0	
Base Cost to all users	<u>386,114</u>	<u>422,531</u>	
Base consumptionn in CCF	248,590	395,008	
Total base step rate			\$1.0697
		\$1.5532	=====
Extra-capacity Costs	352,827	0	
Extra consumption in CCF	474,807	0	
Total extra step rate			\$0.0000
		\$0.7431	=====
Consumption statistics			
Total metered consumption CCF	723,397	395,008	
Base consumption 100/291#	248,590	135,742	
Extra consumption	<u>474,807</u>	<u>259,266</u>	
	=====	=====	

# Based on 1983 maximum day demand to average day demand  
7,030mill. gal/3,682mill. gal = 1.91

HINGHAM, MASSACHUSETTS

Municipally owned - No treatment plant  
 quarterly minimum customer service charge

meter size	Charge/equivalent meter Ratio		Charge/ meter size		Charge for 700CF		Customer charge with 700CF	
	Hingham	Hull	Hingham	Hull	Hingham	Hull	Hingham	Hull
5/8"-3/4"	\$15.04	\$0.00	\$15.04	\$0.00	\$10.87	\$0.00	\$25.91	\$0.00
3/4"	\$15.04	\$0.00	\$22.56	\$0.00	\$10.87	\$0.00	\$33.44	\$0.00
1"	\$15.04	\$0.00	\$37.60	\$0.00	\$10.87	\$0.00	\$48.48	\$0.00
1 1/2"	\$15.04	\$0.00	\$75.21	\$0.00	\$10.87	\$0.00	\$86.08	\$0.00
2"	\$15.04	\$0.00	\$120.33	\$0.00	\$10.87	\$0.00	\$131.21	\$0.00
3"	\$15.04	\$0.00	\$240.67	\$0.00	\$10.87	\$0.00	\$251.54	\$0.00
4"	\$15.04	\$0.00	\$376.04	\$0.00	\$10.87	\$0.00	\$386.92	\$0.00
6"	\$15.04	\$0.00	\$752.09	\$0.00	\$10.87	\$0.00	\$762.96	\$0.00
8"	\$15.04	\$0.00	\$1,729.80	\$0.00	\$10.87	\$0.00	\$1,740.67	\$0.00

HINGHAM, MASSACHUSETTS

Customer Account Calculation for Minimum Quarterly Charges

Municipally owned - No treatment plant

Description

Hingham Hull

Total Allocated to Customer Accounts

467,768 98,370

Equivalent Meters

7,775 4,683

Basic customer charge - annual

60.17 21.01

Basic customer charge - quarterly

15.04 5.25