

TOWN OF NORTHBOROUGH

Water and Sewer Rates Review



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Table of Contents

	Page
1. Water Utility	1
- Overview	2
- Revenue and Expense Analysis	4
- Option I. Rate Increase without Use of Retained Earnings and Projected Revenue	6
- Option II. Rate Increase, Use of \$50,000 Retained Earnings and Projected Revenue	7
- Option III. Rate Increase, Use of \$100,000 Retained Earnings and Projected Revenue	8
- Impact Analysis	9
- Rate Survey	10
2. Sewer Utility	11
- Overview	12
- Revenue and Expense Analysis	14
- Option I. No Rate Increase, Use of \$240,000 Retained Earnings and Projected Revenue	16
- Option II. Rate Increase, use of \$180,000 Retained Earnings and Projected Revenue	17
- Option III. Rate Increase, Use of \$150,000 Retained Earnings and Projected Revenue	18
- Impact Analysis	19
- Rate Survey	20

Water Utility

Overview of Water Utility and Rates

The town increased water rates in May 2006 in order to meet FY 07 debt service requirements and the increase in the MWRA assessment. In addition to the rate increase the FY 07 water utility budget was funded by the appropriation of \$137,644 of retained earnings. The water rates are:

<u>Usage</u>	<u>Rate</u>
0 to 4,000 cubic feet	\$31.48/1000 cubic feet
4,000 to 12,000 cubic feet	\$37.72/1000 cubic feet
12,000 Plus cubic feet	\$46.48/1000 cubic feet

The town recovers the full cost (direct, indirect, capital and debt service) of the water utility through the rates, use of retained earnings and non-rate revenue (betterments, service charges, investment income).

The principal factors influencing the water rates for FY 08 are an increase in annual costs of \$51,000 due to the increase in debt service and the increase in the MWRA as well as the board's determination of how much of the current balance of \$150,813 in retained earnings should be used to sustain the utility. In FY 09 our rate model currently shows a more significant annual growth in utility costs due to the impact of the increase in the MWRA assessment combined with the impact of bringing the Brigham Street Well on line.

In the current year the water utility should recover all costs and "break even" or slightly better. This year's activity should not add significantly to retained earnings.

The current rates will produce \$1,399,000 of revenue each year. The required rate revenue in each of the next three years is: FY 08 \$ 1,541,159; FY 09 \$1,653,276 and FY 10 \$ 1,768,479.

Generally, it is prudent policy to retain approximately five percent of retained earnings. We have presented three options for the board's consideration:

Option I. Rate Increase with No Use of Retained Earnings

Maintain the \$150,800 balance in retained earnings in light of the escalation in costs the utility is facing in FY 09 and increase rates in FY 08. This option will generate revenue to allow the utility to recover costs for the next two years, but will require the use of fund balance/retained earnings in FY 09.

Option II. Increase Rates and Use \$75,000 of Retained Earnings

This option minimizes the rate increase, will generate additional revenue and will require the use of retained earnings in FY 09 and will likely require a rate increase in FY 09 unless usage increases or costs are maintained. This option also provides for a balance of 5% in retained earnings.

Option III. Increase Rates and Use \$100,000 of Retained Earnings

This option minimizes the rate increase but will require an additional rate increase in FY 09 even with the use of retained earnings in FY 08 and FY 09.

The Revenue and Expense Analysis on the following pages shows the projected annual financial position under each option. The usage assumptions and revenues generated from each option are presented in the next sections of the report. Finally, the impact on the annual payment of an average water user (120 CCF) is presented. The report concludes with a survey of water rates in other towns.

WATER ENTERPRISE FUND
Revenue and Expense Analysis
and Projected Financial Position

	Adopted Budget 2007	Requested 2008	Forecasted 2009	Forecasted 2010	Comments
Expenditures:					
Personal Services	289,254	281,543	292,805	304,517	4% Annual Adjustment
Fringe Benefits	83,975	88,184	95,239	102,858	8% Annual Adjustment
Purchase of Services	49,590	59,930	73,129	74,591	FY 09 includes Brigham St. Well online and 2%
MWRA Purchases	787,560	809,547	866,215	926,850	FY 08 7.%; FY 09 7.%
Supplies	49,255	46,505	59,435	60,624	FY 09 includes Brigham St. Well online and 2%
Other Charges/Expenditures	3,462	3,563	3,634	3,707	2% Annual Adjustment
Capital Outlay (Meters/Trucks)	50,000	50,000	50,000	100,000	Per Plan for Trucks and Meters
Indirect Costs (Insurance/Overhead)	14,955	15,697	16,482	17,306	5% Annual Adjustment
Total O&M Expenditures:	1,328,051	1,354,969	1,456,939	1,590,453	
Debt Service:					
Existing Principal	181,500	207,500	223,200	213,400	Per Treasurer Schedule
Existing Interest	90,521	83,596	75,137	66,626	Per Treasurer Schedule
Temporary Interest	7,321	12,094	95,000	95,000	BAN's
Total Debt Service:	279,342	303,190	393,337	375,026	
Total Expenditures/Other Uses of Funds:	1,607,393	1,658,159	1,850,276	1,965,479	
Non Rate Revenue:					
Water Betterment Fees	83,202	90,000	90,000	90,000	
Water Service Fees/Misc.	17,222	18,000	18,000	18,000	
Water Connection Fees					
Water Interest	9,056	9,000	9,000	9,000	
Misc Water Revenue	-				
Total Non Rate Revenue:	109,480	117,000	117,000	117,000	
Required Rate Revenue	1,360,269	1,541,159	1,733,276	1,848,479	
OPTION I. Rate Increase					
<i>No Use of Retained Earnings</i>					
Required Rate Revenue		1,541,159	1,733,276	1,848,479	
Projected Rate Revenue at Proposed Rates		1,547,294	1,547,294	1,547,294	
Excess/Deficiency of Projected Revenue		6,135	(185,982)	(301,185)	
Use Of Retained Earnings		0	110,000	40,000	
Net Over/Under		6,135	(75,982)	(261,185)	
Projected Retained Earnings	\$150,813	\$156,948	\$46,948	\$6,948	

WATER ENTERPRISE FUND
Revenue and Expense Analysis
and Projected Financial Position

	Adopted Budget 2007	Requested 2008	Forecasted 2009	Forecasted 2010	Comments
<i>OPTION II. Rate Increase and Use of \$75,000 of Retained Earnings</i>					
Required Rate Revenue		1,541,159	1,733,276	1,848,479	
Less: Estimated Use of Retained Earnings		(75,000)	(70,000)		
Less: Estimated Annual Rate Revenue		<u>1,475,945</u>	<u>1,475,945</u>	<u>1,475,945</u>	
Projected Over/Under		<u>9,786</u>	<u>(187,331)</u>	<u>(372,534)</u>	<i>Will require increase again in FY 09, without increase in usage or reduction in costs</i>
<i>Projected Retained Earnings</i>	\$150,813	85,599	15,599	15,599	
<i>OPTION III. Rate Increase and Use of \$100,000 of Retained Earnings</i>					
Required Rate Revenue		1,541,159	1,733,276	1,848,479	
Less: Estimated Use of Retained Earnings		(100,000)	(50,000)		
Less: Estimated Annual Rate Revenue		<u>1,454,960</u>	<u>1,454,960</u>	<u>1,454,960</u>	
Projected Over/Under		<u>13,801</u>	<u>(228,316)</u>	<u>(393,519)</u>	<i>Will require increase in FY 09 greater than under Option II.</i>
<i>Projected Retained Earnings</i>	\$150,813	\$50,813	\$813	\$813	

Town of Northborough Water Utility
Projected Rate Revenue assuming No Use of Retained Earnings
and Annualized Use of 37.5 Million Cubic Feet

Option I.

Total Consumption	Number of Customers	0 To 4,000 Use	4,001 To 12,000 Use	Over 12,000 Use
0 Cubic Feet Or Less	4	-	-	-
0 To 4,000 Cubic Feet	764	1,950,693	-	-
4,001 to 12,000 Cubic Feet	2,416	9,664,000	10,144,129	-
Over 12,000 Cubic Feet	620	2,480,000	4,960,000	8,295,432
	<u>3,800</u>	<u>14,094,693</u>	<u>15,104,129</u>	<u>8,295,432</u>
			Total Use:	37,494,254

	Customers	Useage	Projected Revenue	
0 To 4,000 Cubic Feet	20.11%	5.20%	\$ 67,917	4.39%
4,001 to 12,000 Cubic Feet	63.58%	52.83%	759,666	49.10%
Over 12,000 Cubic Feet	16.32%	41.97%	719,711	46.51%
	<u>100.00%</u>	<u>100.00%</u>	<u>\$ 1,547,294</u>	<u>100.00%</u>

Recommended Rates:

Raise Required Revenue on Rate (No Use of Retained Earnings)	<i>Block 1</i>	<i>Block 2</i>	<i>Block 3</i>
	\$34.82	\$41.72	\$51.41

Town of Northborough Water Utility
Projected Rate Revenue assuming Use of \$50,000 of Retained Earnings
and Annualized Use of 37.5 Million Cubic Feet

Option II.

Total Consumption	Number of Customers	0 To 4,000 Use	4,001 To 12,000 Use	Over 12,000 Use
0 Cubic Feet Or Less	4	-	-	-
0 To 4,000 Cubic Feet	764	1,950,693	-	-
4,001 to 12,000 Cubic Feet	2,416	9,664,000	10,144,129	-
Over 12,000 Cubic Feet	620	2,480,000	4,960,000	8,295,432
	<u>3,800</u>	<u>14,094,693</u>	<u>15,104,129</u>	<u>8,295,432</u>
			Total Use:	37,494,254

	Customers	Useage	Projected Revenue	
0 To 4,000 Cubic Feet	20.11%	5.20%	\$ 64,785	4.39%
4,001 to 12,000 Cubic Feet	63.58%	52.83%	724,637	49.10%
Over 12,000 Cubic Feet	16.32%	41.97%	686,524	46.51%
	<u>100.00%</u>	<u>100.00%</u>	<u>\$ 1,475,945</u>	<u>100.00%</u>

Recommended Rates:

<i>Increase Rates and Use \$50,000 of Retained Earnings</i>	<i>Block 1</i>	<i>Block 2</i>	<i>Block 3</i>
	\$33.21	\$39.79	\$49.04

Town of Northborough Water Utility
Projected Rate Revenue assuming Use of \$100,000 of Retained Earnings

Option III.

Total Consumption	Number of Customers	0 To 4,000 Use	4,001 To 12,000 Use	Over 12,000 Use
0 Cubic Feet Or Less	4	-	-	-
0 To 4,000 Cubic Feet	764	1,950,693	-	-
4,001 to 12,000 Cubic Feet	2,416	9,664,000	10,144,129	-
Over 12,000 Cubic Feet	620	2,480,000	4,960,000	8,295,432
	3,800	14,094,693	15,104,129	8,295,432

Total Use: 37,494,254

	Customers	Useage	Projected Revenue	
0 To 4,000 Cubic Feet	20.11%	5.20%	\$ 63,864	4.39%
4,001 to 12,000 Cubic Feet	63.58%	52.83%	714,334	49.10%
Over 12,000 Cubic Feet	16.32%	41.97%	676,763	46.51%
	100.00%	100.00%	\$ 1,454,960	100.00%

Recommended Rates:

<i>Increase Rates and Use \$100,000 of Retained Earnings</i>	<i>Block 1</i>	<i>Block 2</i>	<i>Block 3</i>
	\$32.74	\$39.23	\$48.34

Impact Analysis - Water Rate Increase

Annual Payments based on Average Annual Residential Use of 120 CCF per year

	<u>Average Annual Payment</u>	<u>Increase</u>
Today	\$402.72	
0 to 4,000 Cubic Feet	\$31.48	
4001 to 12,000 Cubic Feet	\$37.72	
12,000 Plus Cubic Feet	\$46.48	
 Option I		
<i>Recovery of Full Costs</i>		
Rate Increase with No Use of Retained Earnings	\$445.44	10.6%
0 to 4,000 Cubic Feet	\$34.82	
4001 to 12,000 Cubic Feet	\$41.72	
12,000 Plus Cubic Feet	\$51.41	
 Option II		
Increased Rates		
<i>(utilizes \$75,000 of surplus for FY 08)</i>	\$424.84	5.5%
0 to 4,000 Cubic Feet	\$33.21	
4001 to 12,000 Cubic Feet	\$39.79	
12,000 Plus Cubic Feet	\$49.04	
 Option III		
Increased Rates		
<i>(utilizes \$100,000 of surplus for FY 08)</i>	\$418.84	4.0%
0 to 4,000 Cubic Feet	\$32.74	
4001 to 12,000 Cubic Feet	\$39.23	
12,000 Plus Cubic Feet	\$48.34	

The water rates presented above are set based on a policy of recovering the cost of the utility in combination with a decision on the use of retained earnings. Some utilities also review rates and annual payments in light of "Affordability Indices" such as the the annual water utility bill/payment should be no more that 1.5% of the Median Household Income (MHI)

Northborough	"Affordability
1999 MHI *	at 1.5%"
\$79,871	\$1,198

* As published by Department of Revenue's Division of Local Services

Water Rate Survey

Town:	Northborough	Grafton	Southborough	Holden	Westborough	Shrewsbury
Structure	0-4,000 CF/\$31.48/1,000CF 4,000-12,000 CF/\$37.72/1,000 CF 12,000+ CF/\$46.48/1,000 CF	(\$12.50 min per quarter) \$4.57/1,000 gallons \$ 9.90 > 120,000 gallons	\$25.07 (1st 1000cf) \$2.51/100 CF	Min. charge per quarter 0-150 CF / \$2.73 150-500 CF / \$2.15 per 100 CF 501-1,000 CF / \$2.58 per 100 CF 1,001-1,500 CF / \$3.25 per 100 CF 1,500 + / \$3.90 per 100 CF	Semi-annual min.consumption allowance up to 2,000CF/\$60 1st block rate 2,000CF-3,600CF/\$3.08CCF 2nd block rate 3,600CF-6,000CF/\$3.10CCF 3rd block rate 6,000CF-10,000CF/\$4.53CCF 10,000+/\$5.62CCF	Minimum charge \$16.5/qtr(5,000 gallons) 5,001-25,000 gal/\$2.85/1,000 gallons 25,001-50,000 gal/\$5.2/1,000 gallons 50,001 + gal/\$6.35/1,000 gallons
Billing Basis	Semi-Annual	Quarterly Monthly-Commerical & Industrial	Quarterly Monthly-Commercial	Monthly (Min.monthly \$2.75)	Semi-annual	Quarterly Minimum Quarterly \$16.50
Fund	Enterprise	Enterprise	Special Revenue	Enterprise	Enterprise	
Full Cost Recovery	Yes	Yes	Yes	Yes	Yes	
Average Annual bill 90,000 gallons (120 CCF)	\$402.72	\$461.30	\$301.08	\$431.46	\$367.41	\$265.50

Sewer Utility

Overview of Sewer Utility and Rates

The sewer utility had certified retained earnings of \$ 432,168. The utility was funded for the current year based on the rates adopted in May 2005 and the use of \$198,102 of the June 30, 2005 retained earnings. The current sewer rates are:

<u>Usage</u>	<u>Rate</u>
0 to 4,000 cubic feet	\$32.64/1000 cubic feet
4,000 to 12,000 cubic feet	\$33.86/1000 cubic feet
12,000 Plus cubic feet	\$35.38/1000 cubic feet

The town recovers the full cost (direct, indirect, capital and debt service) of the sewer utility through the rates, use of retained earnings and non-rate revenue (betterments, service charges, investment income).

In 2005 the sewer utility experienced decreased billed usage, which affected annual revenues. The May and October 2006 billings indicated return to usage consistent with normal usage history in the range of 16.2 million cubic feet per year. Based upon usage in May of 2007 consistent with last May the sewer utility will have revenues that recover the full costs of the utility through June 30, 2007.

For purposes of estimating revenues in the future we have based rate revenue projects on usage of the 16.2 million cubic feet and similar to usage patterns in 2003. The principal factors influencing the sewer rates are: the increase of \$52,000 in the FY 08 sewer budget over the FY 07 adopted sewer budget and a policy decision as to the amount of retained earnings/surplus to use to support the utility.

In light of the longer term investment needs in utility infrastructure the board's objective is to retain fifteen to twenty percent of retained earnings.

In brief the current sewer rates will produce \$551,000 of revenue each year. The rate revenue required in each of the next three years is: FY 08 \$781,000; FY 09 \$802,000 and FY 10 \$735,000.

We have presented three options for the board's consideration:

Option I. No Rate Increase.

Continue the current rates and use \$ 240,000 of retained earnings to fully fund the sewer utility for FY 08. This option would require a more robust rate increase by FY 09 to then compensate for the lack of availability of surpluses to sustain the utility.

Option II. Rate Increase and Use of \$180,000 of Retained Earnings.

This option would result in a 10% increase in the annual payment for the average user of 120 CCF and would allow continued use of retained earnings in FY 09; a rate increase would be required in FY 10.

Option III. Rate Increase and Use of \$150,000 of Retained Earnings.

This option would result in a 15% increase in the annual payment for the average user of 120 CCF and would allow continued use of retained earnings in FY 09 and FY 10 and allow the utility to break even through FY 2010.

The Revenue and Expense Analysis on the following pages shows the projected annual financial position under each option. The usage assumptions and revenues generated from each option are presented in the next sections of the report. Finally, the impact on the annual payment of an average sewer user (120 CCF) is presented. The report concludes with a survey of sewer rates in other towns.

TOWN OF NORTHBOROUGH SEWER ENTERPRISE FUND

Revenue and Expense Analysis and Projected Annual Financial Position

	Adopted 2007	Budget 2008	Estimated 2009	Estimated 2010	Comments
<u>Expenditures:</u>					
Direct and Indirect Costs:					
Personal Services	95,352	94,281	98,052	101,974	4% Annual Adjustment
Fringe Benefits	29,443	29,395	31,747	34,286	8% Annual Adjustment
Purchase of Services	252,430	234,320	243,693	253,441	4% Annual Adjustment
Supplies	3,335	3,335	3,402	3,470	2% Annual Adjustment
Other Charges/Expenditures	-	-	-	-	2% Annual Adjustment
Capital Outlay	60,000	60,000	60,000	60,000	Continued Annual Capital of \$60,000
Indirect Costs (Insurance/Overhead)	4,985	5,232	5,494	6,057	5% Annual Adjustment
Total O&M Expenditures:	445,545	426,563	442,387	459,228	
Debt Service:					
Principal (Existing Debt Service)	331,106	447,711	276,674	210,198	Per Treasurer Schedule and FY 08 includes \$105,000 Paydown Haitsma
Interest (Existing Debt Service)	95,680	82,086	68,377	59,201	Per Treasurer Schedule
Est Principal - Bond \$1.29 M 06/08	-	-	64,500	64,500	\$1.29 M 20 Yr @ 4.75%
Est Interest - Bond \$1.29 M 06/08	-	-	61,275	58,211	\$1.29 M 20 Yr @ 4.75%
BAN - \$1.29 M Sewer Construction (Art. 27)	-	56,372	-	-	FY 08 BAN = 4.0% (\$1.29 M)
BAN - Haitsma Property \$1.873 M	-	66,680	-	-	\$1.873 M (BAN)
Est Principal Haitsma	-	-	104,000	104,000	\$1.768 M 17 Yr
Est Interest Haitsman	-	-	83,096	78,208	\$1.768 M 17 Yr @ 4.75%
Profroma Milk/Porridge	-	-	60,000	60,000	Interest BANs
	155,305				
Total Debt Service:	582,091	652,849	717,922	634,318	
Total Expenditures/Other Uses of Funds:	1,027,636	1,079,412	1,160,309	1,093,546	
Other Utility Revenue:					
Non Rate Revenue:					
Sewer Betterment/Connection Fees	277,728	330,000	330,000	330,000	
Sewer Service Fees	10,286	13,000	13,000	13,000	
Sewer Investment Income	4,480	5,000	5,000	5,000	
Total Revenue:	292,494	348,000	348,000	348,000	
Required Rate Revenue	\$735,142	\$731,412	\$812,309	\$745,546	

**TOWN OF NORTHBOROUGH
SEWER ENTERPRISE FUND**

**Revenue and Expense Analysis
and Projected Annual Financial Position**

	Adopted 2007	Budget 2008	Estimated 2009	Estimated 2010	Comments
<i>OPTION I. No Rate Increase</i>					
<i>and Use of \$240,000 of Retained Earnings</i>					
Required Rate Revenue	735,142	731,412	812,309	745,546	
Projected Rate Revenue at Current Rates	537,040	551,000	551,000	551,000	
Excess/Deficiency of Projected Rate Revenue w/o Ret Earn	(198,102)	(180,412)	(261,309)	(194,546)	
Use of Retained Earnings	198,102	240,000	192,168		Use all of the \$423,168 of Retained Earnings in FY 08 and FY 09
Net Over/(Under)		59,588	(69,141)		Rate Increase will be required for FY 09 Unless significant increase in usage
Projected Retained Earnings	\$432,168	\$192,168	-		
<i>OPTION II. Rate Increase</i>					
<i>and Use of \$180,000 of Retained Earnings</i>					
Required Rate Revenue	735,102	731,412	812,309	745,546	
Less: Estimated Use of Ret. Earnings	198,102	180,000	50,000	-	
Less: Estimated Annual Rate Revenue	537,000	607,000	607,000	607,000	
Projected Over/Under	-	55,588	(155,309)	(138,546)	Continued use of Ret Earnings but if no increase in Usage and retainage of
Projected Retained Earnings	\$432,168	\$252,168	\$202,168	-	20% in Ret. Earnings will require Rate Increase in FY 09
<i>OPTION III. Rate Increase</i>					
<i>and use of \$150,000 of Retained Earnings:</i>					
Required Rate Revenue	\$735,142	\$731,412	\$812,309	\$745,546	
Less: Estimated Use of Ret. Earnings at Option III. Rates	198,102	150,000	80,000	-	
Less: Estimated Annual Rate Revenue	537,000	637,800	637,800	637,800	
Projected Over/Under		\$56,388	(\$94,509)	(\$107,746)	Additional Rate Increase in FY 09, if Retain 20% of Retained Earnings and if No Increase in Use or Reduction in Costs
Projected Retained Earnings	\$432,168	282,168	202,168	-	

**Town of Northborough Sewer Utility
No Rate Increase**

Option I.

**Projected Rate Revenue assuming Use of \$240,000 of Retained Earnings
and Annualized Usage of 16.2 Million Cubic Feet**

Total Consumption	Number of Customers	0 To 4,000 Use	4,001 To 12,000 Use	Over 12,000 Use
0 Cubic Feet Or Less	1	-	-	-
0 To 4,000 Cubic Feet	292	726,115	-	-
4,001 to 12,000 Cubic Feet	815	3,260,000	2,960,152	-
Over 12,000 Cubic Feet	295	1,180,000	2,360,000	5,737,684
	<u>1,402</u>	<u>5,166,115</u>	<u>5,320,152</u>	<u>5,737,684</u>

Total Use: 16,223,951

	Customers	Useage	Revenue	
0 To 4,000 Cubic Feet	20.83%	4.48%	\$ 23,700	4.30%
4,001 to 12,000 Cubic Feet	58.13%	38.34%	206,637	37.45%
Over 12,000 Cubic Feet	21.04%	57.19%	321,424	58.25%
	<u>100.00%</u>	<u>100.00%</u>	<u>\$ 551,762 *</u>	<u>100.00%</u>

	Block 1	Block 2	Block 3
Current Rates (No Increase)	\$32.64	\$33.86	\$35.38

Town of Northborough Sewer Utility
Projected Rate Revenue assuming Use of \$180,000 of Retained Earnings
and Annualized Usage of 16.2 Million Cubic Feet

Option II.

Total Consumption	Number of Customers	0 To 4,000 Use	4,001 To 12,000 Use	Over 12,000 Use
0 Cubic Feet Or Less	1	-	-	-
0 To 4,000 Cubic Feet	292	726,115	-	-
4,001 to 12,000 Cubic Feet	815	3,260,000	2,960,152	-
Over 12,000 Cubic Feet	295	1,180,000	2,360,000	5,737,684
	<u>1,402</u>	<u>5,166,115</u>	<u>5,320,152</u>	<u>5,737,684</u>

Total Use: 16,223,951

	Customers	Useage	Revenue	
0 To 4,000 Cubic Feet	20.83%	4.48%	\$ 26,070	4.30%
4,001 to 12,000 Cubic Feet	58.13%	38.34%	227,301	37.45%
Over 12,000 Cubic Feet	21.04%	57.19%	353,566	58.25%
	<u>100.00%</u>	<u>100.00%</u>	<u>\$ 606,938</u> *	<u>100.00%</u>

	Block 1	Block 2	Block 3
Rates with use of \$180,000 of Retained Earnings	\$35.90	\$37.25	\$38.92

* Annual Revenues Generated (\$606,938), will require use of Retained Earnings

Town of Northborough Sewer Utility **Option III.**
Projected Rate Revenue assuming Use of \$150,000 of Retained Earnings
and Annualized Usage of 16.2 Million Cubic Feet

Total Consumption	Number of Customers	0 To 4,000 Use	4,001 To 12,000 Use	Over 12,000 Use
0 Cubic Feet Or Less	1	-	-	-
0 To 4,000 Cubic Feet	292	726,115	-	-
4,001 to 12,000 Cubic Feet	815	3,260,000	2,960,152	-
Over 12,000 Cubic Feet	295	1,180,000	2,360,000	5,737,684
	<u>1,402</u>	<u>5,166,115</u>	<u>5,320,152</u>	<u>5,737,684</u>
			Total Use:	16,223,951
	Customers	Useage	Revenue	
0 To 4,000 Cubic Feet	20.83%	4.48%	\$ 27,396	4.30%
4,001 to 12,000 Cubic Feet	58.13%	38.34%	238,860	37.45%
Over 12,000 Cubic Feet	21.04%	57.19%	371,563	58.26%
	<u>100.00%</u>	<u>100.00%</u>	<u>\$ 637,820 *</u>	<u>100.00%</u>
Rates with \$150,000 of Retained Earnings		Block 1	Block 2	Block 3
		\$37.73	\$39.14	\$40.90

* Annual Revenues Generated (\$637,820), will require use of Retained Earnings

Impact Analysis - Sewer Rate Increase

Annual Payments based on Average Annual Residential Use of 120 CCF per year

	<u>Average Annual Payment</u>	<u>Increase</u>
Today	\$396.56	
0 to 4,000 Cubic Feet	\$32.64	
4001 to 12,000 Cubic Feet	\$33.86	
12,000 Plus Cubic Feet	\$35.38	
 Option I.		
No Increase in Rates	\$396.56	
<i>Use of \$240,000 of Retained Earnings</i>		
 Option II.		
Increased Rates		
<i>Use of \$180,000 of Retained Earnings</i>		
	\$436.20	10.0%
0 to 4,000 Cubic Feet	\$35.90	
4001 to 12,000 Cubic Feet	\$37.25	
12,000 Plus Cubic Feet	\$38.92	
 Option III.		
Increased Rates		
<i>Use of \$150,000 of Retained Earnings</i>		
	\$458.40	15.6%
0 to 4,000 Cubic Feet	\$37.73	
4001 to 12,000 Cubic Feet	\$39.14	
12,000 Plus Cubic Feet	\$40.90	

The sewer rates presented above are set based on a policy of recovering the cost of the utility in combination with a decision on the use of retained earnings. Some utilities also review rates and annual payments in light of "Affordability Indices" such as the the annual sewer utility bill/payment should be no more that 1.5% of the Median Household Income (MHI)

Northborough 1999 MHI*	Affordability at 1.5%
\$79,871	\$1,198

* As published by Department of Revenue's Division of Local Services

Sewer Rate Survey

Town:	Northborough	Grafton	Westborough	Shrewsbury	Holden
Sewer Rate Structure	0-4,000 CF/\$32.64/1,000CF 4,000-12,000 CF/\$33.86/1,000 CF 12,000+ CF/\$35.38/1,000 CF	\$1.75/1,000 gallons	Min. consumption allowance 1,250CF/\$50 1,250+/\$4.048CF Rates based on 80% of water usage	Residential \$2.25/1,000 gallons Commercial \$3.00/1,000 gallons	Min.charge each month \$7.78 0-450 CF / \$7.78 Per 100 CF 450-1,500 CF / \$4.38 per 100 CF 1,502-3,000 CF / \$5.26 per 100 CF 3,001-5,000 / \$6.30 per 100 CF 5,001+ / \$7.58 100 CF
Billing Basis	Semi-annual	Quarterly	Semi-annual	Quarterly	Monthly Min. monthly \$7.78
Fund	Enterprise	Enterprise	Enterprise		Enterprise
Full Cost Recovery	Yes	Yes	Yes		Yes
Average Annual bill - 90,000 gallons (120 CCF) (Residential)	\$396.56	\$158	\$408	\$203	\$382