

Town of Nederland Water and Sewer Rate Structure Review 2009- 2011

The Town of Nederland passed new rates on June 17, 2008 for water and sewer that went into affect August 2008. The new rate structure was needed in order to cover current and ongoing operating costs of the two separate utilities (water and sewer). In the past two years, 2007 and 2006, the combined utility fund (water and sewer) ran at \$215,000 and \$253,000 deficit, respectively.

Based on the new rates put in place August 2008, the water fund is projected to bring in \$352,000 in user fee revenue and the sewer fund is projected to bring in \$267,000 in user fee revenue in 2009. For the sewer fund, the current rate structure meets the cash requirements of \$265,000 and allows for us to scale the increases up evenly (\$75,000) over the next two years. However for the water fund, the current rate structure exceeds the current cash requirements of \$260,000 although it would provide for very modest increases of just \$10,000 in both 2010 and 2011.

	Water			Sewer		
	2009	2010	2011	2009	2010	2011
	260,00	310,00	370,00	265,00	340,00	415,00
Projected Cash Needs	0	0	0	0	0	0
% variable costs of total	18%	17%	18%	21%	22%	10%
Residential Users	621	621	621	492	492	492
	7	7	7	7	7	7
Commercial Users	9	9	9	1	1	1
Residential Usage 1000/Gals	24,974	24,974	24,974	17,245	17,245	17,245
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Commercial Usage 1000/Gals	278	278	278	8,476	8,476	8,476

Knowing the new debt schedule, we are able to scale back rate increase and phase it in over the next three years.

Another factor considered in reviewing the Town's rate structure was how the rate structure impacts individual users (both residential and commercial). Residential customers make up 89% of water customer base and 86% of the sewer customer base. In terms of usage however, residential customers make up 73% of the total water usage and 67% of the total sewer usage with commercial customers making of the difference. Based on the current rate structure, residential customers will contribute 74% of the revenues for water and 67% of the revenues for sewer. These percentages are in line with the percentage of usage but do not factor in make up of the customer base.

Commercial customers showed more seasonal variance; 30% difference between the low usage months and high usage months whereas residential customers varied only by 13%. Given the assumption this seasonal trend is directly related to a reduction in business and not outside watering for commercial customers, it would be inappropriate to figure a different sewer rate based on the lower usage figure. However, for residential users where the assumption is that the variance is directly related to outside watering, an additional rate analysis could be conducted on sewer rates to take this factor into account. Due to time constraints, this analysis was not done with the current study.

In addition to reviewing the customer base, the Town should factor in the cost structure of the utilities which include both fixed and variable costs. As it relates to these components, the current rate structure provides for

roughly 77-79% derived from variable revenues associated with usage while approximately 23-21% are derived from fixed revenues associated with base fees. However, our actual costs structure (fixed vs. variable) is opposite of these percentages with our variable costs running 18-21% and the fixed costs 81-79%.

With the above information and understanding of the water and sewer plants current and future operating and cash needs, the Town's staff has provided four options below. Each option is viable and the pros and cons of each option are listed beneath. Example monthly bills for residential and commercial users based on each option's pricing structure are also provided in a table below.

OPTION 1 KEEP CURRENT RATE STRUCTURE

		Water			Sewer		
		2009	2010	2011	2009	2010	2011
Base Fee	Residential	8.0	8.5	10.0	8.0	18.00	30.00
	Commercial	0	0	0	0	00	30.00
Per 1,000 g	Residential	7.9	7.9	7.9	7.9	7.90	7.90
	Commercial	0	0	0	0	90	7.90
		% variable	77%	76%	73%	79%	63%
		% residential	74%	74%	74%	67%	69%

- PROS:**
- Meets and exceeds (for Water) Cash Requirements
 - Usage charges in line with usage percentages (residential customers and commercial customers paying equitable share of usage)
 - Small base fee keeps costs low for very low users
 - For water, relatively small future increases
 - Increases fixed revenues for sewer in 2011 where 90% of the costs will be fixed

- CONS:**
- High usage fee hurts heavy users
 - High amount of revenue derived from variable costs which could materially impact actual revenues rec'd if there is a reduction in usage
 - Low (>=1000 gallons a month) users do not pay fair share of fixed costs (137 customers fall into this category)
 - Future increases for sewer are higher (on a percentage basis) for light users vs. heavy users

OPTION 2 MODIFY BASE AND USAGE RATES TO BE CLOSER TO THE CURRENT FIXED AND VARIABLE COST STRUCTURE

		Water			Sewer		
		2009	2010	2011	2009	2010	2011
Base Fee	Residential	11.0	13.5	16.0	16.0	26.	
		0	0	0	0	00	35.00
Base Fee	Commercial	11.0	13.5	16.0	16.0	26.	
		0	0	0	0	00	35.00
Per 1,000 g	Residential	4.5	5.5	6.5	6.0	6.	
		0	0	0	0	50	7.00
Per 1,000 g	Commercial	4.5	5.5	6.5	6.0	6.	
		0	0	0	0	50	7.00
	% variable	60%	60%	60%	61%	51%	45%
	% residential	78%	78%	78%	71%	72%	73%

- PROS:**
- Meets Cash Requirements
 - Increases the percentage of revenue derived from fixed costs (40% vs. current structure 20%)
 - Relatively small base fee keeps costs low for very low users
 - Low Usage fee keeps costs down for heavy users
 - Higher percentage of revenue derived from residential customers taking into account the customer base
 - Future increases go up equitably for water
 - Increases fixed revenues for sewer in 2011 where 90% of the costs will be fixed

- CONS:**
- High amount of revenue derived from variable costs which could materially impact actual revenues rec'd if there is a reduction in usage
 - Low (>=1000 gallons a month) users do not pay fair share of fixed costs (137 customers fall into this category)
 - Future increases for sewer inequitable by customer type
 - Future increases for sewer very high for light users

OPTION 3 FIXED AMOUNT (4,000 GALLONS) OF USAGE IN BASE RATE, FLAT RATE AFTER THAT

		Water			Sewer		
		2009	2010	2011	2009	2010	2011
Base Fee	Residential	22.0	28.0	33.0	35.0	44.	
		0	0	0	0	00	56.00
Base Fee	Commercial	30.0	38.0	44.0	40.0	50.	
		0	0	0	0	00	65.00
Per 1,000 g	Residential	5.5	5.7	6.2	5.5	6.	
		0	5	5	0	50	7.50
Per 1,000 g	Commercial	5.5	5.7	6.2	5.5	6.	
		0	5	5	0	50	7.50
	% variable	27%	23%	22%	21%	20%	19%
	% residential	75%	76%	77%	74%	75%	75%

- PROS:**
- Meets Cash Requirements
 - Increases the percentage of revenue derived from fixed costs (In 2011: 78% for water/81% for sewer)
 - Keeps costs relatively low for light users (556 water customers use 4,000 gallons or less)
 - Lower Usage fee keeps costs down for heavy users
 - Higher percentage of revenue derived from residential customers taking into account the customer base
 - Higher base fee for commercial users to take into account higher burdens on the system

CONS: Future increases inequitable by customer type

**OPTION 4 COMMERCIAL: BASE FEE AND FLATS RATE USAGE
RESIDENTIAL: BASE FEE AND TIERED RATE FOR USAGE**

		Water			Sewer		
		2009	2010	2011	2009	2010	2011
Base Fee	Residential	18.0	22.0	27.0	26.0	34.	
		0	0	0	0	00	44.00
Base Fee	Commercial	22.0	28.0	34.0	32.0	42.	
		0	0	0	0	00	54.00
		See	See	See	See	See	See
Per 1,000 g	Residential	below	below	below	below	below	below
		5.0	5.5	6.2	5.2	6.	
Per 1,000 g	Commercial	0	0	5	5	50	7.00
	% variable	39%	36%	34%	37%	35%	31%
	% residential	71%	71%	72%	66%	66%	68%

Tiered Blocks for 2009- would go up proportionately 2010 and 2011 with the increase in commercial user rates

Water	<4,000	10,000	30,000	50,000	>50,000	Sewer	<4,000	10,000	30,000	50,000	>50,000
	2.00	3.00	5.00	10.00	15.00		2.25	3.25	5.25	10.25	15.25

- PROS:**
- Meets Cash Requirements
 - Increases the percentage of revenue derived from fixed costs (In 2011: 66% for water/69% for sewer)
 - Keeps costs relatively low for light users (556 water customers use 4,000 gallons or less)
 - Lower Usage fee keeps costs down for heavy users
 - Higher base fee for commercial users to take into account higher burdens on the system

- CONS:**
- Future increases inequitable by customer type
 - Variable costs still a high percentage of cost structure
 - Tiered rates for business users that don't take into account their individual businesses can be anti-competitive (i.e. business that are in the higher blocks will pay more as a percentage for water/sewer as their business grows which may not be affordable).

Note: Due to time requirements, a specialized tiered block for business was not done.

EXAMPLE MONTHLY BILLS

	Water					Sewer				
	2009	2010		2011		2009	2010		2011	
-			%		%			%		%
-			<i>inc</i>		<i>inc</i>			<i>inc</i>		<i>inc</i>
Residential 3,000 Gals/Mth										
	31.	32.		33.		31.	41.		53.	
Option 1	70	20	2%	70	5%	70	70	32%	70	29%
	24.	30.		35.		34.	45.		56.	
Option 2	50	00	22%	50	18%	00	50	34%	00	23%
	22.	28.		33.		35.	44.		56.	
Option 3	00	00	27%	00	18%	00	00	26%	00	27%
	24.	28.		33.		32.	42.		51.	
Option 4	00	60	19%	82	18%	75	36	29%	27	21%
Residential 10,000 Gals/Mth										
	87.	87.		89.		87.	97.		109.	
Option 1	00	50	1%	00	2%	00	00	11%	00	12%
	56.	68.		81.		76.	91.		105.	
Option 2	00	50	22%	00	18%	00	00	20%	00	15%
	55.	62.		70.		68.	83.		101.	
Option 3	00	50	14%	50	13%	00	00	22%	00	22%
	44.	50.		56.		54.	58.		74.	
Option 4	00	60	15%	55	12%	50	14	7%	69	28%
Commercial 3,000 Gals/Mth										
	31.	32.		33.		31.	41.		53.	
Option 1	70	20	2%	70	5%	70	70	32%	70	29%
	24.	30.		35.		34.	45.		56.	
Option 2	50	00	22%	50	18%	00	50	34%	00	23%
	30.	38.		44.		40.	50.		65.	
Option 3	00	00	27%	00	16%	00	00	25%	00	30%
	37.	44.		52.		47.	61.		75.	
Option 4	00	50	20%	75	19%	75	50	29%	00	22%
Commercial 50,000 Gals/Mth										
	403.	403.		405.		403.	413.		425.	
Option 1	00	50	0%	00	0%	00	00	2%	00	3%
	236.	288.		341.		316.	351.		385.	
Option 2	00	50	22%	00	18%	00	00	11%	00	10%
	283.	302.		331.		293.	349.		410.	
Option 3	00	50	7%	50	10%	00	00	19%	00	17%
	272.	303.		346.		294.	367.		404.	
Option 4	00	00	11%	50	14%	50	00	25%	00	10%