

## Seminole County Water Bills

In the last few months there have been many questions raised about our water bills. In June 2008, it seemed that many had doubled or even tripled! This article is an attempt to explain how the SWB bills for water usage and why the amount you pay per month can vary so greatly.

Seminole Water Board uses an indexed rate for water usage. You can see their website at <http://www.seminolecountyfl.gov/envsrvs/business/rates.asp>.

<b>Single Family &amp; Commercial - Water</b>			
	<b>FIXED</b>	<b>VOLUMETRIC</b>	<b>\$ PER THOUSAND GALLONS</b>
<b>Water (per ERC)</b>	\$8.76 per month	0-10,000	\$0.73
		10,001-15,000	\$1.21
		15,001-20,000	\$2.21
		20,001-30,000	\$3.57
		30,001-50,001	\$5.13
		50,001-over	\$6.97
- 4% utility tax on water and water base for unincorporated County			
- Those within City limits may vary to 10% Winter Springs and Casselberry.			
<b>Sewer (per ERC)</b>	\$13.92 per month	0 - 15,000	\$3.16
- Sewer stops being charged at 15,000			

This allows them to give customers who use less water a price break. However, they have leeway in the number of billing days per cycle – by law they can bill anywhere from **15 to 45 days per cycle with 12 cycles per year**. This is critical to understanding why your water bill can seem so erratic.

To demonstrate, we will assume a household is using 1000 gallons per day. The table below shows how much this household's water bill would be for each of three example scenarios: with a 15, 30 or 45 day billing cycle.

Seminole County Water Charges			assume 1000 gallons used per day:						
Gallons	\$/1000 gallons		15 days		30 days		45 days		
<10000	\$0.73		10000	\$7.30	10000	\$7.30	10000	\$7.30	
10-15000	\$1.22		5000	\$6.10	5000	\$6.10	5000	\$6.10	
15-20000	\$2.21				5000	\$11.05	5000	\$11.05	
20-30000	\$3.57				10000	\$35.70	10000	\$35.70	
30-50000	\$5.13						15000	\$76.95	
>50000	\$6.97								
			15000	\$13.40	30000	\$60.15	45000	\$137.10	
			avg per 1000	\$0.89		\$2.01		\$3.05	

The bottom row shows the average price paid for 1000 gallons for each scenario. The average for the 45 day cycle is almost 3.5 times (3.4269663) the amount for the 15 day cycle. Because they bill by usage for the billing cycle, naturally everyone uses more in a cycle that is longer and therefore everyone pays higher prices during those months. Also, however, everyone pays less in the shorter cycles.

The table below shows the actual billing cycles from January 2007 to June 2008. The shortest cycle was 24 days in May 2007 and the longest was 37 days in June 2008. Again, we assume 1000 gallons per day usage and you can see how the actual bill changes from month to month even though the usage remains constant. The bill totals swing from \$38.73 to \$96.06!

Assume:	1000	per day	\$0.73	\$1.22	\$2.21	\$3.57	\$5.13	\$6.97		
Month	Days	gallons	<10000	10-15000	15-20000	20-30000	30-50000	>50000	Total	avg/1000
Jun-08	37	37000	\$7.30	\$6.10	\$11.05	\$35.70	\$35.91	\$0.00	\$96.06	\$2.60
May-08	25	25000	\$7.30	\$6.10	\$11.05	\$17.85	\$0.00	\$0.00	\$42.30	\$1.69
Apr-08	31	31000	\$7.30	\$6.10	\$11.05	\$35.70	\$5.13	\$0.00	\$65.28	\$2.11
Mar-08	32	32000	\$7.30	\$6.10	\$11.05	\$35.70	\$10.26	\$0.00	\$70.41	\$2.20
Feb-08	33	33000	\$7.30	\$6.10	\$11.05	\$35.70	\$15.39	\$0.00	\$75.54	\$2.29
Jan-08	32	32000	\$7.30	\$6.10	\$11.05	\$35.70	\$10.26	\$0.00	\$70.41	\$2.20
Dec-07	30	30000	\$7.30	\$6.10	\$11.05	\$35.70	\$0.00	\$0.00	\$60.15	\$2.01
Nov-07	29	29000	\$7.30	\$6.10	\$11.05	\$32.13	\$0.00	\$0.00	\$56.58	\$1.95
Oct-07	33	33000	\$7.30	\$6.10	\$11.05	\$35.70	\$15.39	\$0.00	\$75.54	\$2.29
Sep-07	26	26000	\$7.30	\$6.10	\$11.05	\$21.42	\$0.00	\$0.00	\$45.87	\$1.76
Aug-07	30	30000	\$7.30	\$6.10	\$11.05	\$35.70	\$0.00	\$0.00	\$60.15	\$2.01
Jul-07	35	35000	\$7.30	\$6.10	\$11.05	\$35.70	\$25.65	\$0.00	\$85.80	\$2.45
Jun-07	29	29000	\$7.30	\$6.10	\$11.05	\$32.13	\$0.00	\$0.00	\$56.58	\$1.95
May-07	24	24000	\$7.30	\$6.10	\$11.05	\$14.28	\$0.00	\$0.00	\$38.73	\$1.61
Apr-07	36	36000	\$7.30	\$6.10	\$11.05	\$35.70	\$30.78	\$0.00	\$90.93	\$2.53
Mar-07	29	29000	\$7.30	\$6.10	\$11.05	\$32.13	\$0.00	\$0.00	\$56.58	\$1.95
Feb-07	29	29000	\$7.30	\$6.10	\$11.05	\$32.13	\$0.00	\$0.00	\$56.58	\$1.95
Jan-07	34	34000	\$7.30	\$6.10	\$11.05	\$35.70	\$20.52	\$0.00	\$80.67	\$2.37
avg days	30.7778								avg avg	\$2.11

This can be frustrating at the very least when you are trying to budget from month to month. It can seem that even when you are trying hard to use less water, your bill is going higher.

It is the fact that they must bill 12 cycles per year that evens out these prices. In the next two tables we use the months July 2007 to June 2008 to demonstrate that whether the billing cycle was erratic or stable, we paid about the same per 1000 gallons of water – actually only \$.02 difference.

The first table shows the actual billing cycles used by Seminole Water Board for those months, again assuming 1000 gallons per day usage:

Assume:	1000	per day	\$0.73	\$1.22	\$2.21	\$3.57	\$5.13	\$6.97		
Month	Days	gallons	<10000	10-15000	15-20000	20-30000	30-50000	>50000	Total	avg/1000
Jun-08	37	37000	\$7.30	\$6.10	\$11.05	\$35.70	\$35.91	\$0.00	\$96.06	\$2.60
May-08	25	25000	\$7.30	\$6.10	\$11.05	\$17.85	\$0.00	\$0.00	\$42.30	\$1.69
Apr-08	31	31000	\$7.30	\$6.10	\$11.05	\$35.70	\$5.13	\$0.00	\$65.28	\$2.11
Mar-08	32	32000	\$7.30	\$6.10	\$11.05	\$35.70	\$10.26	\$0.00	\$70.41	\$2.20
Feb-08	33	33000	\$7.30	\$6.10	\$11.05	\$35.70	\$15.39	\$0.00	\$75.54	\$2.29
Jan-08	32	32000	\$7.30	\$6.10	\$11.05	\$35.70	\$10.26	\$0.00	\$70.41	\$2.20
Dec-07	30	30000	\$7.30	\$6.10	\$11.05	\$35.70	\$0.00	\$0.00	\$60.15	\$2.01
Nov-07	29	29000	\$7.30	\$6.10	\$11.05	\$32.13	\$0.00	\$0.00	\$56.58	\$1.95
Oct-07	33	33000	\$7.30	\$6.10	\$11.05	\$35.70	\$15.39	\$0.00	\$75.54	\$2.29
Sep-07	26	26000	\$7.30	\$6.10	\$11.05	\$21.42	\$0.00	\$0.00	\$45.87	\$1.76
Aug-07	30	30000	\$7.30	\$6.10	\$11.05	\$35.70	\$0.00	\$0.00	\$60.15	\$2.01
Jul-07	35	35000	\$7.30	\$6.10	\$11.05	\$35.70	\$25.65	\$0.00	\$85.80	\$2.45
Total	373								\$804.09	
avg days	31.08333							avg avg	\$67.01	\$2.13

This second table shows the same water usage billed at an even 31 days per cycle:

Assume:	1000	per day	\$0.73	\$1.22	\$2.21	\$3.57	\$5.13	\$6.97		
Month	Days	gallons	<10000	10-15000	15-20000	20-30000	30-50000	>50000	Total	avg/1000
Jun-08	31	31000	\$7.30	\$6.10	\$11.05	\$35.70	\$5.13	\$0.00	\$65.28	\$2.11
May-08	31	31000	\$7.30	\$6.10	\$11.05	\$35.70	\$5.13	\$0.00	\$65.28	\$2.11
Apr-08	31	31000	\$7.30	\$6.10	\$11.05	\$35.70	\$5.13	\$0.00	\$65.28	\$2.11
Mar-08	31	31000	\$7.30	\$6.10	\$11.05	\$35.70	\$5.13	\$0.00	\$65.28	\$2.11
Feb-08	31	31000	\$7.30	\$6.10	\$11.05	\$35.70	\$5.13	\$0.00	\$65.28	\$2.11
Jan-08	31	31000	\$7.30	\$6.10	\$11.05	\$35.70	\$5.13	\$0.00	\$65.28	\$2.11
Dec-07	31	31000	\$7.30	\$6.10	\$11.05	\$35.70	\$5.13	\$0.00	\$65.28	\$2.11
Nov-07	31	31000	\$7.30	\$6.10	\$11.05	\$35.70	\$5.13	\$0.00	\$65.28	\$2.11
Oct-07	31	31000	\$7.30	\$6.10	\$11.05	\$35.70	\$5.13	\$0.00	\$65.28	\$2.11
Sep-07	31	31000	\$7.30	\$6.10	\$11.05	\$35.70	\$5.13	\$0.00	\$65.28	\$2.11
Aug-07	31	31000	\$7.30	\$6.10	\$11.05	\$35.70	\$5.13	\$0.00	\$65.28	\$2.11
Jul-07	31	31000	\$7.30	\$6.10	\$11.05	\$35.70	\$5.13	\$0.00	\$65.28	\$2.11
Total	372								\$783.36	
avg days	31							avg avg	\$65.28	\$2.11

While the billing amounts swing radically in the first table they average out fairly close to the same total amount and only 2 cents difference per 1000 gallons. Using a different 12 month period the

average would swing to slightly less or slightly more for the total amount paid but would stay close to \$800 per 12 month period.

Some may ask: Is this a fair way to bill? Those who use less do in fact pay less than those who use more. A better question might be: **Is this billing practice accomplishing the goal of getting customers to use less water?** And the answer to that would have to be: **NO!** In order to get anyone to change a behavior there must be a reliable feedback and reward mechanism in place. Even people that are self-motivated to change need some way of gauging whether the changes they have made are working. If you ask that (or, in this case, demand that) people conserve water but their water bills don't reflect those savings and, in fact, go up they will naturally be frustrated and confused by the results and hesitate to save water in the future. Also, for people to feel they can make a change they must feel like they have some control over the outcome. The current billing policy gives people no control over what their monthly bill will actually be. The bill you get, whether online or on paper does not give a breakdown according to the indexed rates; it shows only the breakdown between water and sewage and, if you have a special hookup, irrigation.

In addition, there is the potential for the water company to use this policy to its own advantage, making longer billing cycles during high-use times and shorter cycles during low-use times. Water use can be fairly accurately predicted based on rainfall, ambient temperatures and time of year. Surely, a hot dry summer day when kids are home from school uses more water per average household than a cold wet one in winter.

In the example table below, the usage is again held constant at 1000 gallons per day but the cycle is radically lower in the winter months and higher in the summer months. The total number of billing days is the same as in the SWB billing cycle. Even though the average price per 1000 gallons is less, the total paid for the year here is \$939.49 versus \$783.36 in the constant 31 day months or \$804.09 for the SWB actual billing days. This would be a significant difference for the average household. Adding in the effect of the summer weather and more people in the house during the day and the difference would grow.

Assume:	1000	per day	\$0.73	\$1.22	\$2.21	\$3.57	\$5.13	\$6.97		
Month	Days	gallons	<10000	10-15000	15-20000	20-30000	30-50000	>50000	Total	avg/1000
Jan	15	15000	\$7.30	\$6.10	\$0.00	\$0.00	\$0.00	\$0.00	\$13.40	\$0.89
Feb	15	15000	\$7.30	\$6.10	\$0.00	\$0.00	\$0.00	\$0.00	\$13.40	\$0.89
Mar	15	15000	\$7.30	\$6.10	\$0.00	\$0.00	\$0.00	\$0.00	\$13.40	\$0.89
Apr	43	43000	\$7.30	\$6.10	\$11.05	\$35.70	\$66.69	\$0.00	\$126.84	\$2.95
May	45	45000	\$7.30	\$6.10	\$11.05	\$35.70	\$76.95	\$0.00	\$137.10	\$3.05
Jun	45	45000	\$7.30	\$6.10	\$11.05	\$35.70	\$76.95	\$0.00	\$137.10	\$3.05
Jul	45	45000	\$7.30	\$6.10	\$11.05	\$35.70	\$76.95	\$0.00	\$137.10	\$3.05
Aug	45	45000	\$7.30	\$6.10	\$11.05	\$35.70	\$76.95	\$0.00	\$137.10	\$3.05
Sep	45	45000	\$7.30	\$6.10	\$11.05	\$35.70	\$76.95	\$0.00	\$137.10	\$3.05
Oct	30	30000	\$7.30	\$6.10	\$11.05	\$35.70	\$0.00	\$0.00	\$60.15	\$2.01
Nov	15	15000	\$7.30	\$6.10	\$0.00	\$0.00	\$0.00	\$0.00	\$13.40	\$0.89
Dec	15	15000	\$7.30	\$6.10	\$0.00	\$0.00	\$0.00	\$0.00	\$13.40	\$0.89
Total	373								\$939.49	
avg days	31.08333							avg avg	\$78.29	\$2.05

To summarize, the current billing policy of the Seminole County Water Board is unnecessarily complex and impossible to plan for in the average home budget. It does not further the goal of helping customers conserve water. Is it 'fair'? – well, we will let you decide.