

Greenspire Metropolitan District

2019 Water Rate Study

Reason for proposed adjustments in water rates

In January 2019, the District hired Centennial Consulting Group (CCG) to manage District operations, including irrigation management. In operating the irrigation system, recommendations for maintaining the financial stability of the District's non-potable water system required a study to be completed. The study and analysis show that expenditures are projected to significantly exceed revenues.

If the District continues its current course, it will lose an estimated \$20,000 per year on operations alone. Once built out, this cost deficit to the District may exceed \$176,000.

Without the proposed adjustments in water rates and charges, the District would exceed its budget and come to a deficit per watering season. The study concludes that to properly balance the District's budget and provide water services to the community, a fee for water usage will be necessary.

Fees proposed to be adopted

It is recommended that the District adopt a non-potable fee to recover the costs to operate and maintain the non-potable water system and establish reserves for major system repairs. District water rates for irrigation services are based on non-potable water rates, expected water usage, and maintenance costs. The proposal will bill non-potable users annually for District water service.

Basis upon which the fees are to be adjusted and fee to individual lots

The fee is based upon the funds required by the District to maintain and operate the District's irrigation system and for the purchase and the supply of non-potable water to individual lots. Annual fixed costs including insurance, management fees, and general maintenance are estimated to be \$10,200 per year. Variable costs per home including water acquisition fees, reserves for major repairs and incremental repair fees are estimated to be \$282.55 per home annually.

For 2019, the District has budgeted \$19,000 for water. As of the end of August, the District has spent over \$23,000 on water. This cost will only increase, putting the District's budget further into a deficit.

Per Exhibit C, Note 5 of the District's Service Plan, it was assumed that the District would need to charge a monthly fee for water service. An annual rate will save the District monthly billing fees, and additional administrative and management fees.

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Based upon the needs of the District to maintain the irrigation system, acquire the necessary amount of water to provide to lot owners at current water rates, the District will need to charge each lot owner \$325.00 annually.

Basis for proposed annual fee

The annual fee will allow the District to recuperate some of its costs to operate and maintain the non-potable irrigation system. As of October 3rd, there are 99 homes in the District. At 100 homes, the estimated cost to the District to provide this service is \$38,475 (Table 1). The proposed fee will provide \$32,500 in revenue. The fee will not cover the entire cost to the District, so it will be necessary to subsidize the non-potable water service.

It is estimated that the District will break even or have enough revenue to cover expenses when 241 homes are completed. As additional homes are added the district can begin to establish necessary reserves. These reserve funds may be used for unexpected maintenance or repair items that exceed expected maintenance costs, providing a buffer and protecting lot owners from unexpected fee increases.

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Upgrading past meters for metered billing

At the request of homeowners to find an alternative to flat annual fees, District management found that there is one alternative that may be financially feasible for the District to pursue. This alternative proposal would utilize excess funds from tap fees collected by the District to upgrade older meters installed on homes to make uniform meter reading for individual usage available.

As new construction is completed in the District, each home is equipped with a newer meter that can utilize a mobile meter reading system. These meters can be read from a system that would be equipped in a vehicle, and information regarding water usage would be received as the vehicle drives through the District. However, the 84 preexisting homes do not have meters that are compatible with a mobile meter reading system, and they will need to be upgraded to match the current meters being installed. The older meters would need to be read manually, which would incur greater costs to the District due to the amount of manhours necessary to perform this task.

Currently, Sensus iPerl meters are being installed at the new homes in the District. These meters can be read remotely from a mobile reading system, and it does not take much time to complete a reading using this system. If every home in the District were to be equipped with these meters, homes could easily be billed for actual water usage.

Meter upgrade funding proposal

The District charges a \$5,000.00 tap fee for each lot to be connected to the irrigation system. Fifty percent of this fee is dedicated to go to the debt service as dictated by the District's service plan; the other half of the fee is used for installing meters and meter pits for new homes. Based on current costs, the estimated average cost to install a meter and meter pit per lot is \$1,150.00, leaving an excess of \$1,350.00. This proposal suggests that these excess funds could help the District upgrade the older meters to the newer system.

The District estimated that it would receive \$75,000.00 in tap fees for the 2019 fiscal year. This estimation is based on collecting tap fees for sale of 15 lots. \$37,500.00 of these fees are dedicated for the debt service fund. Of the remaining \$37,500.00, an estimated \$17,250.00 would be necessary to install the meters and meter pits for the new homes, leaving \$20,250.00 in excess funds for the District. This excess would fund the majority of the cost to upgrade the older meters.

Estimated labor and equipment cost

Preferred Digging Services, LLC (PDS) is the District's current contractor installing the new meters and pits for each lot. PDS estimate that it would take one hour to remove and replace the older meters to match the meters currently being installed. PDS provided hourly cost estimate of \$40.00 per hour of labor for the work. For the 84 older homes in the District, the estimated labor cost to replace the meters is \$3,360.00.

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The Sensus iPerl meter costs \$175.00 each. Each meter will need a new meter pit cover, costing \$120.00, allowing it to send a signal receiver. The total per cost is \$295.00 or \$23,940.00 for 84 units. The overall cost of upgrading the meter system is \$27,300.00.

Expected metered costs

On average, homes in Windsor use 20,000 gallons per month to irrigate their lawns. Based on this average use, the District would need to charge \$4.15 per 1,000 gallons to properly cover the costs associated with water purchases, maintenance/repairs, and administrative/management fees. The average lot owner will spend an estimated \$332 per year using a metered water.

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Attachments

Break Even Analysis

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Water Rate Break-even Analysis

Homes at Full build-out	587	
Number of Homes	1	1
Revenue	Flat Fee per home	Price per 1000/Gallons
	325.00	4.15
Total Revenue	325.00	332.00
Water - Variable Rates	2.90	2.90
Average Use per home	20,000	20,000
Water Usage	58.00	58.00
Revenue	Annual 325.00	332.00
Variable Costs		
Water - Variable fees	232.00	232.00
Meter Reading	-	1.75
Postage	0.55	2.75
Repairs & Maintenance	25.00	25.00
Reserves	25.00	25.00
Total Variable Costs	282.55	286.50
Contribution Margin	42.45	45.50
Fixed Costs		
Property Insurance - Water System	1,110.00	1,110.00
Non-Potable Water Management Fee	2,000.00	2,000.00
Billing Fees	250.00	1,250.00
Repairs & Maintenance	6,500.00	6,500.00
Water - Flat fees	360.00	360.00
Total Fixed Costs	10,220.00	11,220.00
Total Costs	10,502.55	11,506.50
Net income (Loss)	(10,177.55)	(11,174.50)
Breakeven Units		
Fixed costs/Contribution Margin	240.75	246.59

2019 Water Consumption Rates (as of March 1, 2019)

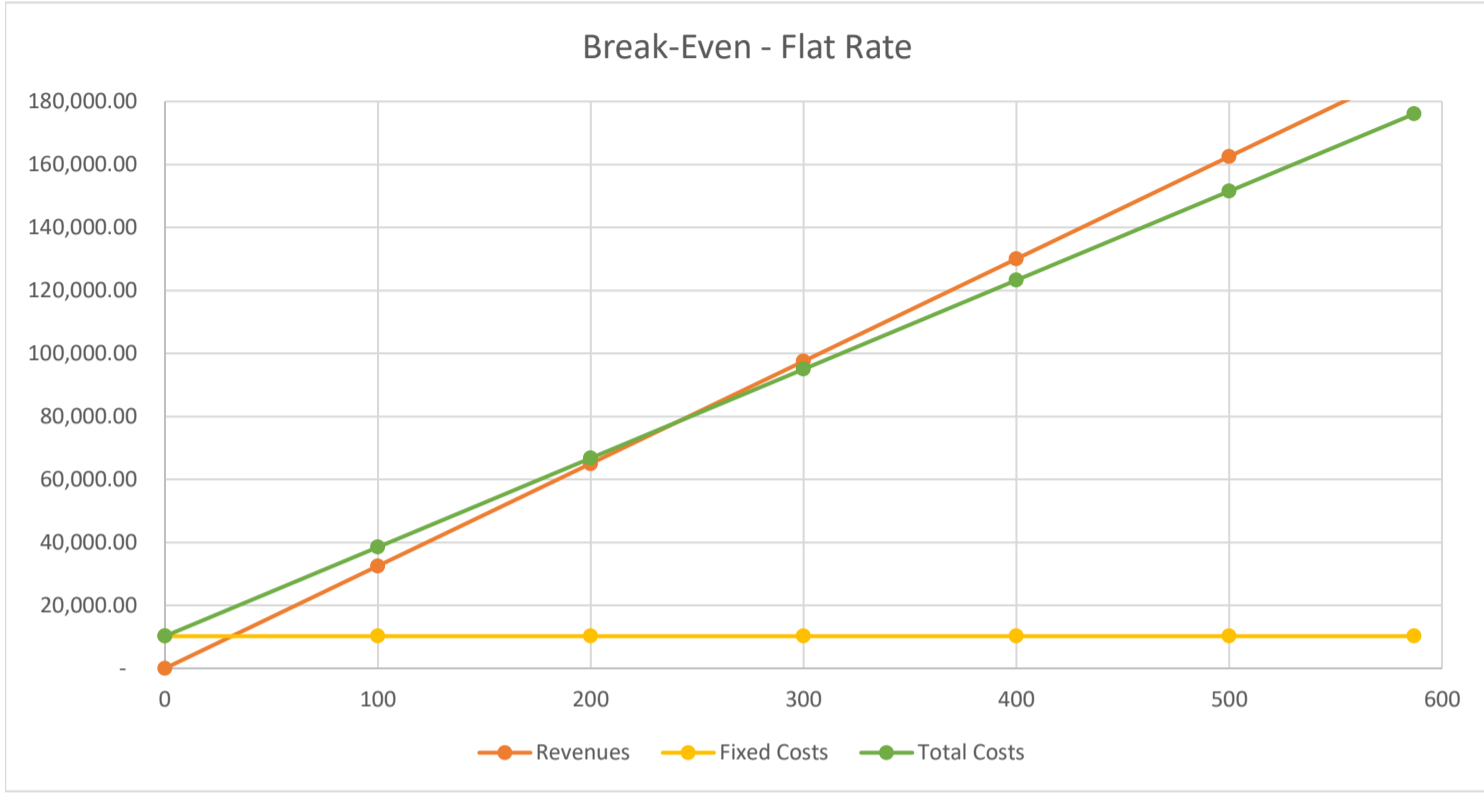
Tier 1	For up to 16,000 gallons per month	\$4.45 per 1,000 gallons
Tier 2	For 16,001 through 22,500 gallons per month	\$6.64 per 1,000 gallons
Tier 3	For use over 22,500 gallons per month	\$9.89 per 1,000 gallons

Single family residential accounts (without a dual system)

<https://www.windsorgov.com/369/Utility-Services>

<http://windsorgov.com/96/Non-Potable-Irrigation>

Units	0	100	200	300	400	500	587
Revenues	-	32,500.00	65,000.00	97,500.00	130,000.00	162,500.00	190,775.00
Variable Costs	-	28,255.00	56,510.00	84,765.00	113,020.00	141,275.00	165,856.85
Contribution Margin	-	4,245.00	8,490.00	12,735.00	16,980.00	21,225.00	24,918.15
Fixed Costs	10,220.00	10,220.00	10,220.00	10,220.00	10,220.00	10,220.00	10,220.00
Total Costs	10,220.00	38,475.00	66,730.00	94,985.00	123,240.00	151,495.00	176,076.85
Net Income (Loss)	(10,220.00)	(5,975.00)	(1,730.00)	2,515.00	6,760.00	11,005.00	14,698.15



Units	0	100	200	300	400	500	587
Revenues	-	33,200.00	66,400.00	99,600.00	132,800.00	166,000.00	194,884.00
Variable Costs	-	28,650.00	57,300.00	85,950.00	114,600.00	143,250.00	168,175.50
Contribution Margin	-	4,550.00	9,100.00	13,650.00	18,200.00	22,750.00	26,708.50
Fixed Costs	11,220.00	11,220.00	11,220.00	11,220.00	11,220.00	11,220.00	11,220.00
Total Costs	11,220.00	39,870.00	68,520.00	97,170.00	125,820.00	154,470.00	179,395.50
Net Income (Loss)	(11,220.00)	(6,670.00)	(2,120.00)	2,430.00	6,980.00	11,530.00	15,488.50

