**Memorandum**

**TO: Village of Orland Park Board of Directors**

**FROM: Municipal & Financial Services Group**

**DATE: February 29, 2016**

**SUBJECT: Water, Sewer and Stormwater Rate Study Results and Recommendations**

The following document summarizes the results of MFSG’s analysis of the Village’s water, sewer, and stormwater rates.

Purpose of the Study

* Develop a multi-year financial plan for the Village’s water, sewer and stormwater funds that maintains a minimum cash balance as determined by Village policy
* Analyze the Village’s water, sewer and stormwater rate structures and propose alternative rate structures based on historical consumption data and other utility pricing goals, such as the encouragement of conservation and sensitivity to customer bill impact

**Scope of Work**

* MFSG’s scope of work included several tasks related to the Village’s water, sewer and stormwater funds:
  + Develop system revenue requirements based on the most recently available data including operational costs, capital spending, and reserve contribution budgets and projections
  + Analyze past and current water, sewer and stormwater customer data including customer counts and consumption patterns, especially as it relates to the Village’s tiered water structure
  + Project future customer and consumption growth based on the most recent estimates
  + Calculate rates that generate sufficient revenues in order to maintain the financial health of the Village’s utility funds
  + Analyze possible rate structure alternatives regarding the water rate tiers and stormwater billing methodology (water consumption vs. impervious area) and determine possible customer impacts of such alternatives

**Findings and Conclusions**

* Regarding water rates:
  + Recommended water rates:

|  |  |  |
| --- | --- | --- |
|  | **Previous**  **FY 2015** | **Proposed FY 2016** |
| **Service Charge per Bill** | **$9.00** | **$9.00** |
|  |  |  |
| **Volume Charges (per 1,000 gallons)** |  |  |
| Tier 1: 0 – 9,000 | $5.85 |  |
| Tier 2: 9,000 – 18,000 | $7.23 |  |
| Tier 3: Over 18,000 | $8.62 |  |
|  |  |  |
|  |  |  |
| Tier 1: 0 – 7,000 |  | $5.62 |
| Tier 2: 7,000 – 12,000 |  | $7.02 |
| Tier 3: 12,000 – 22,000 |  | $8.43 |
| Tier 4: Over 22,000 |  | $9.83 |

* Why change from three tiers to four, and why alter the tier levels?
  + MFSG developed the updated rate structure with several goals in mind:
    - Sufficient revenue generation
    - Encouragement of conservation
    - Affordability, especially for low users
    - Ease of administration

MFSG analyzed the specific consumption habits of all of Orland Park’s customers in order to develop rate tiers that achieved the above goals. The first tier is targeted at capturing usage levels that reflect conservation standards set by the American Water Works Association’s Manual M1, the industry standard water rate setting manual. A family of two using about 60 gallons per day per person will only ever be charged the first tier rate. The second tier is set at 12,000 gallons to capture all usage under the median usage of residential users. That is, 50% of incorporated customer bills will never reach above tier two. Tier three is set at 22,000 to capture up to 75% of the water use billed by the Village. Tier four, above 22,000 per bi-monthly billing period, captures the remaining 25% of consumption used by very high water users. The usage in this tier is responsible for incurring additional costs related to the supply, storage, and delivery of water.

* Why set the differentials between the tiers?
  + The differentials between the rate tiers are as follows:

|  |  |  |
| --- | --- | --- |
|  | **Differential** | **Rate** |
| Tier 1: 0 – 7,000 | 1.00 | $5.62 |
| Tier 2: 7,000 – 12,000 | 1.25 | $7.02 |
| Tier 3: 12,000 – 22,000 | 1.50 | $8.43 |
| Tier 4: Over 22,000 | 1.75 | $9.83 |

In general, water providers have a high level of discretion when setting rates within defined customer classes. The Village does not charge different rates to different customer classes (residential, commercial, industrial, etc.). The Village’s desire to encourage a certain level of conservation is achieved by charging an inclining block structure. The proposed structure achieves a level of conservation encouragement while only generating revenues equal to the costs of running the water system – the top tier rates are not set above and beyond the cost of water service. MFSG considers the proposed rate differentials to be reasonable.

* Recommended sewer rates:

|  |  |  |
| --- | --- | --- |
|  | **Previous**  **FY 2015** | **Proposed FY 2016** |
| **Service Charge per Bill** | **-** | **-** |
|  |  |  |
| **Volume Charges (per 1,000 gallons)** | $0.84 | $0.90 |

MFSG is not proposing a change is the Village’s sewer rate structure.

* Recommended stormwater rates:

|  |  |  |
| --- | --- | --- |
|  | **Previous**  **FY 2015** | **Proposed FY 2016** |
| **Service Charge per Bill** | **-** | **-** |
|  |  |  |
| **Volume Charges (per 1,000 gallons)** | $0.88 | $1.76 |

MFSG investigated an alternative method of charging the Village’s customers for stormwater mitigation costs. The alternative method was based on each parcel’s impervious area without consideration of the parcel’s water usage. The result of using an impervious area charge is a shift in costs from smaller parcels (typically residential parcels) to larger parcels (typically commercial or not-for-profit parcels). MFSG and Village staff determined that the current methodology of billing stormwater charges based on water usage was most desirable for the Village.

* Customer Impact of Recommended Rates

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Current** | **Proposed** | **%** |  | **Current** | **Proposed** | **%** |
| **Bi-Monthly Bill** | **FY 2015** | **FY 2016** | **Increase** | **Bi-Monthly Bill** | **FY 2015** | **FY 2016** | **Increase** |
| 1 | $16.57 | $17.28 | 4.3% | 34 | $323.12 | $376.13 | 16.4% |
| 2 | $24.14 | $25.56 | 5.9% | 35 | $333.46 | $388.63 | 16.5% |
| 3 | $31.71 | $33.83 | 6.7% | 36 | $343.80 | $401.12 | 16.7% |
| 4 | $39.28 | $42.11 | 7.2% | 37 | $354.14 | $413.61 | 16.8% |
| 5 | $46.85 | $50.39 | 7.6% | 38 | $364.48 | $426.10 | 16.9% |
| 6 | $54.42 | $58.67 | 7.8% | 39 | $374.82 | $438.59 | 17.0% |
| 7 | $61.99 | $66.94 | 8.0% | 40 | $385.16 | $451.09 | 17.1% |
| 8 | $69.56 | $76.63 | 10.2% | 41 | $395.50 | $463.58 | 17.2% |
| 9 | $77.13 | $86.31 | 11.9% | 42 | $405.84 | $476.07 | 17.3% |
| 10 | $86.08 | $95.99 | 11.5% | 43 | $416.18 | $488.56 | 17.4% |
| 11 | $95.03 | $105.67 | 11.2% | 44 | $426.52 | $501.05 | 17.5% |
| 12 | $103.98 | $115.36 | 10.9% | 45 | $436.86 | $513.55 | 17.6% |
| 13 | $112.93 | $126.44 | 12.0% | 46 | $447.20 | $526.04 | 17.6% |
| 14 | $121.88 | $137.53 | 12.8% | 47 | $457.54 | $538.53 | 17.7% |
| 15 | $130.83 | $148.62 | 13.6% | 48 | $467.88 | $551.02 | 17.8% |
| 16 | $139.78 | $159.71 | 14.3% | 49 | $478.22 | $563.51 | 17.8% |
| 17 | $148.73 | $170.79 | 14.8% | 50 | $488.56 | $576.01 | 17.9% |
| 18 | $157.68 | $181.88 | 15.3% | 51 | $498.90 | $588.50 | 18.0% |
| 19 | $168.02 | $192.97 | 14.8% | 52 | $509.24 | $600.99 | 18.0% |
| 20 | $178.36 | $204.06 | 14.4% | 53 | $519.58 | $613.48 | 18.1% |
| 21 | $188.70 | $215.14 | 14.0% | 54 | $529.92 | $625.97 | 18.1% |
| 22 | $199.04 | $226.23 | 13.7% | 55 | $540.26 | $638.47 | 18.2% |
| 23 | $209.38 | $238.72 | 14.0% | 56 | $550.60 | $650.96 | 18.2% |
| 24 | $219.72 | $251.21 | 14.3% | 57 | $560.94 | $663.45 | 18.3% |
| 25 | $230.06 | $263.71 | 14.6% | 58 | $571.28 | $675.94 | 18.3% |
| 26 | $240.40 | $276.20 | 14.9% | 59 | $581.62 | $688.43 | 18.4% |
| 27 | $250.74 | $288.69 | 15.1% | 60 | $591.96 | $700.93 | 18.4% |
| 28 | $261.08 | $301.18 | 15.4% | 61 | $602.30 | $713.42 | 18.4% |
| 29 | $271.42 | $313.67 | 15.6% | 62 | $612.64 | $725.91 | 18.5% |
| 30 | $281.76 | $326.17 | 15.8% | 63 | $622.98 | $738.40 | 18.5% |
| 31 | $292.10 | $338.66 | 15.9% | 64 | $633.32 | $750.89 | 18.6% |
| 32 | $302.44 | $351.15 | 16.1% | 65 | $643.66 | $763.39 | 18.6% |
| 33 | $312.78 | $363.64 | 16.3% | 66 | $654.00 | $775.88 | 18.6% |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Current** | **Proposed** | **%** |
| **Bi-Monthly Bill** | **FY 2015** | **FY 2016** | **Increase** |
| 67 | $664.34 | $788.37 | 18.7% |
| 68 | $674.68 | $800.86 | 18.7% |
| 69 | $685.02 | $813.35 | 18.7% |
| 70 | $695.36 | $825.85 | 18.8% |
| 71 | $705.70 | $838.34 | 18.8% |
| 72 | $716.04 | $850.83 | 18.8% |
| 73 | $726.38 | $863.32 | 18.9% |
| 74 | $736.72 | $875.81 | 18.9% |
| 75 | $747.06 | $888.31 | 18.9% |
| 76 | $757.40 | $900.80 | 18.9% |
| 77 | $767.74 | $913.29 | 19.0% |
| 78 | $778.08 | $925.78 | 19.0% |
| 79 | $788.42 | $938.27 | 19.0% |
| 80 | $798.76 | $950.77 | 19.0% |
| 81 | $809.10 | $963.26 | 19.1% |
| 82 | $819.44 | $975.75 | 19.1% |
| 83 | $829.78 | $988.24 | 19.1% |
| 84 | $840.12 | $1,000.73 | 19.1% |
| 85 | $850.46 | $1,013.23 | 19.1% |
| 86 | $860.80 | $1,025.72 | 19.2% |
| 87 | $871.14 | $1,038.21 | 19.2% |
| 88 | $881.48 | $1,050.70 | 19.2% |
| 89 | $891.82 | $1,063.19 | 19.2% |
| 90 | $902.16 | $1,075.69 | 19.2% |
| 91 | $912.50 | $1,088.18 | 19.3% |
| 92 | $922.84 | $1,100.67 | 19.3% |
| 93 | $933.18 | $1,113.16 | 19.3% |
| 94 | $943.52 | $1,125.65 | 19.3% |
| 95 | $953.86 | $1,138.15 | 19.3% |
| 96 | $964.20 | $1,150.64 | 19.3% |
| 97 | $974.54 | $1,163.13 | 19.4% |
| 98 | $984.88 | $1,175.62 | 19.4% |
| 99 | $995.22 | $1,188.11 | 19.4% |
| 100 | $1,005.56 | $1,200.61 | 19.4% |

* How can a customer conserve in order to eliminate the proposed rate increases?
  + In general, if a customer conserves a percentage of water equal to the percentage increase in their proposed bill, the increase would be eliminated. That is, their bill would remain at about the FY 2015 level.