

# Hazen *Technical Memorandum*

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City of North Olmsted

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## **North Olmsted Rate Structure Modification**

**DRAFT**

The following memo details the proposed rate structure changes for the City of North Olmsted's sanitary sewer service. The sanitary sewer service billing is based on water usage from the Cleveland Water Department, which recently switched from quarterly to monthly billing. In order to simplify billing and continue collecting similar revenue, a new rate structure was proposed by Hazen and Sawyer at the request of North Olmsted.

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## 1. Background

North Olmsted’s current user charge system is intended to distribute the cost of sanitary sewer service according to the demand on the system. Sewer use charges for in-city users are currently based on water consumption, with an industrial waste surcharge and pretreatment fees for certain users that fall into this category. The user charges set forth in Section 915.04 of the City’s Codified Ordinances were last updated in 2011. At that time, rate increases were planned yearly through 2019. Customers in North Olmsted are billed based on their water usage by the City of Cleveland Water Department (CWD) as agent for the City.

In 2016, the CWD implemented changes to its billing procedures to allow for customers to be billed monthly rather than quarterly. CWD worked with North Olmsted to modify the billing formula so bills would be calculated similarly to the rates customers were previously paying. However, due to the structure of the City’s original quarterly rate, the resulting calculation was difficult to explain to customers. This memo summarizes suggested changes to the rate structure that will allow the City to continue collecting similar revenue, minimize the impact to individual customers, and simplify the overall rate structure.

## 2. Present Rate Structure

### 2.1 Quarterly Rate Structure

The present Codified Ordinance provides quarterly rates to be charged are shown in Table 1.

**Table 1: Usage Tiers of Existing Rate Structure**

For customers using	Charges
Less than 1 mcf per quarter	<ul style="list-style-type: none"> <li>Fixed Debt Service and Capital Improvement and Replacement (\$30.38/quarter for 2019)</li> <li>Operation, Maintenance and Repairs fee based on the volume of water metered (\$55.68/mcf for 2019)</li> </ul>
1 mcf or more	<ul style="list-style-type: none"> <li>Debt Service and Capital Improvement and Replacement fee based on the volume of water metered (\$30.38/mcf for 2017)</li> <li>Operation, Maintenance and Repairs fee based on the volume of water metered (\$55.68/mcf for 2019)</li> </ul>

The result is essentially a tiered rate structure, in which customers using less than 1 mcf per quarter are charged a different usage rate from those using 1 mcf or more. This is reflected in the way CWD prepares the bills sent to customers, which are calculated as follows, but results in the same over all charges outlined in Table 1.

#### Quarterly Charges

- *Fixed Charge/Quarter/Acct: \$30.38*
- *Wastewater charge for the first 1.0 MCF: \$55.68*
- *Wastewater Charge for every mcf (or partial) after the first 1.0: \$86.06 (\$30.38+\$55.68)*

## 2.2 Monthly Rate Structure

When CWD converted its billing to monthly rather than quarterly, the City wanted to preserve the same rate structure in the Codified Ordinance, and minimize any impacts to customer bills, such that customers would essentially pay the same amount they previously paid quarterly, except spread over individual months. However, because tiered rates were previously based on 1.0 mcf per quarter, dividing this into monthly terms results in the Tier 1 cutoff being changed to 0.333 mcf/month. Given the meters can only calculate to the nearest 0.1 mcf, the resulting unit is both obscure and abstract. However, if the tiered rate was simplified to change at 0.3 mcf, the City would observe a change in revenue, as would customers experience a change in their overall charges. As such, the City is currently using the 0.333 mcf tiered approach to preserve the original intent of the ordinance, until a new rate structure can be approved, resulting in the following charges:

### Monthly Charges

- *Fixed Charge/Month/Acct: \$10.12*
- *Wastewater charge for the first 0.333 MCF: \$55.68*
- *Wastewater Charge for every mcf (or partial) after the first 0.333: \$86.06*

## 3. Proposed Rate Structure

In order to simplify billing and avoid the issue of abstract meter readings a new monthly rate structure was suggested. In this rate structure there is a minimum charge of \$10.51 for everyone that receives sewer service. If the usage charge is less than the minimum charge, the customer would be billed the minimum charge of \$10.51. If the usage charge is greater than \$10.51, the customer would be billed based on their usage with no additional fee. The usage charge was set to minimize the impact to customer bills, which will result in similar revenue being collected in 2019, and therefore not increase by 3.0% as has been done in previous years. The updated rate model shows that North Olmsted is in good financial health, and their operating and coverage ratios meet or exceed goals for the next 8 years so the minimal impact to revenue should not be a concern.

### Proposed Revised Monthly Charges

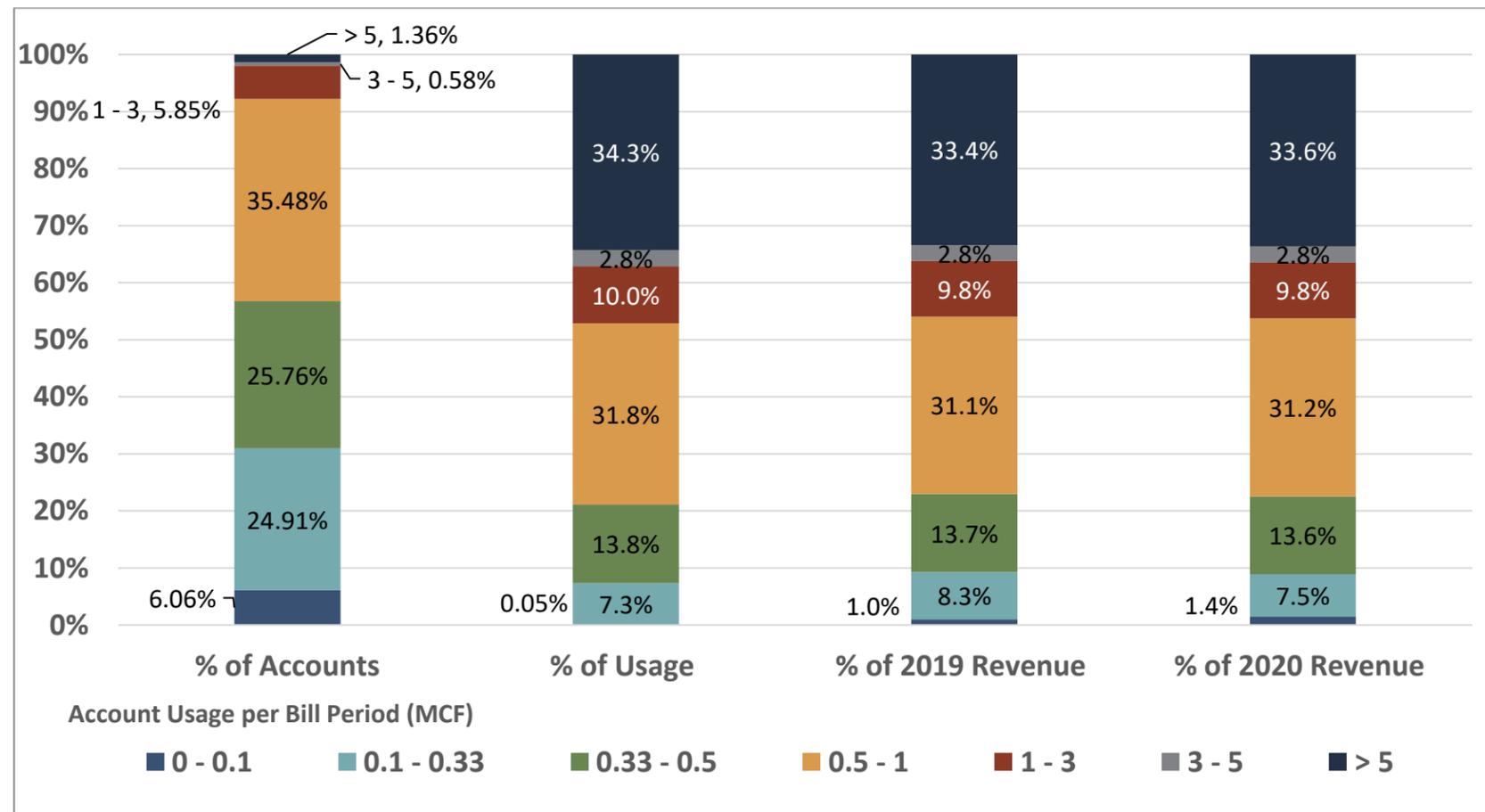
- *Minimum charge/month: \$10.51 (If you exceed this based on usage charge, you are not charged this fee)*
- *Wastewater charge: \$86.06/mcf*

The average change to monthly bills and overall revenue is shown in Table 1 based on average usage. While the impact to individual customer bills will vary, the overall burden of the cost does not shift dramatically from one usage class to another as shown in Figure 1.

**Table 1: Option 1 - Minimize Customer Impact**

FY2019 Anticipated Revenue								Revised Rate Revenue				
Customer Class (MCF/Month)	Average Usage (MCF/Month)	# of Accounts	% of Accounts	% of Usage	Total Revenue (Calculated)	% of Revenue	Monthly Bill for Average Usage	Total Revenue (Calculated)	% of Revenue	Monthly Bill for Average Usage	Projected FY2019 to FY2020 Dollar Change in Monthly Bill	Projected FY2019 to FY2020 Percent Change in Monthly Bill
0 - 0.1	0.04	723	6.06%	0.05%	\$91,594	1.0%	\$12.27	\$136,008	1.4%	\$10.51	-\$1.76	-14.3%
0.1 - 0.33	0.23	2,970	24.91%	7.3%	\$793,318	8.3%	\$23.02	\$705,683	7.5%	\$19.94	-\$3.08	-13.4%
0.33 - 0.5	0.42	3,071	25.76%	13.8%	\$1,305,856	13.7%	\$35.85	\$1,290,318	13.6%	\$35.84	\$0.00	0.0%
0.5	0.50	n/a	n/a	n/a	n/a	n/a	\$43.03	n/a	n/a	\$43.03	\$0.00	0.0%
0.5 - 1	0.69	4,229	35.48%	31.8%	\$2,959,564	31.1%	\$59.06	\$2,957,165	31.2%	\$59.06	\$0.00	0.0%
1 - 3	1.34	697	5.85%	10.0%	\$929,481	9.8%	\$114.91	\$929,344	9.8%	\$114.91	\$0.00	0.0%
3 - 5	3.86	69	0.58%	2.8%	\$262,605	2.8%	\$331.85	\$262,545	2.8%	\$331.84	\$0.00	0.0%
> 5	19.95	162	1.36%	34.3%	\$3,184,895	33.4%	\$1,717.11	\$3,184,861	33.6%	\$1,717.11	\$0.00	0.0%
<b>Total</b>		<b>11,921</b>	<b>100%</b>	<b>100%</b>	<b>\$9,527,314</b>	<b>100.0%</b>		<b>\$9,465,923</b>	<b>100%</b>			

**Figure 1: Rate Block Statistics for North Olmsted Usage**



Using a minimum fixed charge is a commonly accepted approach for utility rates. This minimum fee is established to recover a portion of capacity-related (including inflow and infiltration (I/I) costs) and customer/meter-related costs regardless of the quantity of flow being contributed by the individual customer for the given billing period. One disadvantage to implementing a minimum fee is that it can disproportionately impact lowest water-users. Because low usage is not necessarily directly related to low income customers, it is recommended that financial assistance or discount programs be available which can be targeted to those that need assistance, rather than artificially minimizing the minimum or flat fees, which may or may not help the lowest income users.

CWD provided a list of accounts in North Olmsted currently receiving the Homestead Exemption. Using the proposed 2020 rate schedule, the total estimated charges to be collected from these accounts is approximately \$161,700, about 1.7% of the total North Olmsted sewer revenue. Determining the rate for those eligible for the Homestead Exemption is up to the individual utility. Table 2 below shows one option in comparison to the fees charged by CWD.

**Table 2 – Potential Homestead Discount Program Rates (2020)**

Fiscal Year	North Olmsted 2020 Rate	North Olmsted Potential Homestead Discount Program	CWD 2020 Homestead Discount Program
Fixed Charge	N/A	N/A	\$ 5.80
Minimum Charge	\$ 10.51	\$ 5.25 (50% Discount)	N/A
Usage charge (per MCF)	\$ 86.06	\$ 43.03 (50% Discount)	\$ 18.46 <sup>1</sup>

CWD also provided a list of accounts in North Olmsted currently receiving the Affordability Discount. Using the proposed 2020 rate schedule, the total estimated charges to be collected from these accounts is approximately \$25,500. The current version of the rate model shows a 50% discount for Affordability accounts, which results in the same rate as those in the Homestead Program.

**3.1 Proposed Rate Adjustments**

If the proposed approach is adopted, it is recommended that the minimum charge and the wastewater usage charge both be increased 2.0% annually—until FY2026 when it is increased to 2.5%—to account for inflation and rising costs. Table 3 shows the proposed rates for the next 8 years. North Olmsted should also determine whether they would like the Homestead Discount rates to increase at the same percentage or otherwise. The model provided assumes that the Homestead Discount and Affordability Discount rates will increase at the same rate as the standard rate.

**Table 3 – Proposed Rates 2020 through 2027**

Fiscal Year	Proposed Increase	Minimum Fee	Usage Charge (per mcf)
2020	0.0%	\$10.51	\$86.06
2021	0.0%	\$10.51	\$86.06
2022	2.0%	\$10.72	\$87.78
2023	2.0%	\$10.93	\$89.54
2024	2.0%	\$11.15	\$91.33
2025	2.0%	\$11.38	\$93.15
2026	2.5%	\$11.66	\$95.48
2027	2.5%	\$11.95	\$97.87

<sup>1</sup> Based on the first high service area.