



Annual Revenue Requirements And  
Rate Study for  
Wastewater Services



May 2024

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May 30, 2024

Mayor and Members of Council  
THE CITY OF EUCLID  
585 East 222<sup>nd</sup> Street  
Euclid, Ohio 44123

Honorable Mayor and Members of Council:

B. Fink Consulting has prepared this annual revenue requirements study and rate review for Wastewater Services. **Specifically, our forecast of revenue requirements has been based on actual revenues and expenditures during calendar year 2023.** This report also projects the annual requirements for calendar years 2024 through 2026. In doing this, we have relied on the budget performance reports for calendar year 2023 provided by Euclid's Finance Department. This report includes budget performance report information for the Treatment Plant operating fund, the Peterson fund, the Waterline fund, Equipment Replacement fund, as well as Streets and Sewers fund.

**The purpose of our study was to review whether the rates approved and implemented and adjusted each year in January meet the required revenues needed to recover operating costs as well as expenses and debt payment requirements related to Consent Decree mandated projects.**

Based on our prior review completed in 2022, it was shown that Fund 510 would end with a negative fund balance in 2023 and no longer be adequate to meet the City's objective of meeting operating costs and debt service requirements. Therefore, the sewer rate components related to Fund 510 operating and debt service were increased beginning in January 2023 by legislation passed in October 2022. Legislation passed in 2023 increased the sewer rate components related to Fund 510 operating and debt service beginning January 2024. The sewer rate adjustments planned through 2025 are included in a rate structure table included in this report in Tab 5.

The rate structure in place and planned through 2025 was developed taking into consideration projected cost of operations along with initial estimates of projects required under the Consent Decree initially under a schedule for completion by 2025. Most of the Consent Decree plant and SSO projects have been completed and actual costs for those projects have been incorporated in this analysis. Cost estimates for remaining Consent Decree projects were updated in 2021 and are subject to further updating given potential design revisions and evolving market conditions as well as schedule adjustments extending beyond 2025. Therefore, ending annual fund balances will be driven by the timing of the various phases of the Sewer Plant, SSO and CSO projects.

## KEY ASSUMPTIONS ABOUT CASH NEEDS

USEPA recommends that: (1) a wastewater utility generate sufficient revenue to cover operating, maintenance, and replacement (OM&R) costs; and (2) costs be distributed to users in a proportionate manner. OWDA loan conditions also require service agreements for OM&R services and for capital cost allocations if a wastewater treatment system serves more than one community.

Additionally, the wastewater treatment plant operating fund (#510); the equipment replacement fund (#511); and the Peterson sewer line improvement fund (#515) operate as self-sustaining enterprise funds, which rely primarily on user charges for wastewater treatment services. As enterprise funds, minimum available cash balances should be maintained. The Government Finance Offices Association (GFOA) recommends a minimum balance equal to sixty (60) days cash requirements to cover operating and debt service costs for each enterprise. **Thus, the recommended combined sixty day cash balance within the forecast period is \$5M to operate on a self-sustaining basis in fund 510 and maintain a fund balance enough to cover twice a year large debt payments.**

To comply with OWDA loan requirements and in keeping with the intent of the governmental accounting standards, the City of Euclid must generate sufficient annual revenues to cover operating and debt service costs. This can only be accomplished on a long-term basis if rates are adjusted periodically to reflect cost in the year(s) in which they occur.

## COST DISTRIBUTIONS AMONG CUSTOMER CLASSES

WWTP costs are distributed among customer classes through the base rate structure. **The authorized rates for the year of this review (2023) are presented in the Table below:**

COMMUNITY	RATES
Euclid	\$ 62.70 per MCF
Cuyahoga County & Willoughby Hills	\$ 62.70 per MCF
Wickliffe	\$ 3.70 per 1,000 gal
Willowick	\$ 3.70 per 1,000 gal

The authorized rates in the above table exclude the additional pro-rata administrative fee for meter reading and customer billing services provided by the Cleveland Department of Public Utilities. The current administrative charge imposed by the City of Cleveland for meter reading, customer billing and collection services is \$2.40 per MCF.

In addition, pursuant to the Agreement with Cuyahoga County effective June 20, 2006, the County assigned its user accounts to Euclid including the administrative authority to establish, bill, and collect all of such accounts. Under the agreement, charges for County users are set to be at the same basic sewer services rates and under the same terms and conditions as are or may hereafter be charged or applied to Euclid users, including the minimum one MCF charge per quarter. Currently this fee charged by Euclid to these user accounts is \$1.50 per MCF.

#### **OTHER REPORT ASSUMPTIONS**

It is assumed that \$600,000 will continue to be withdrawn from the Operating Fund #510, to be deposited annually in the Equipment Replacement and Repair Fund in accordance with Section 2 of Euclid Ordinance 154-1997.

In addition, \$1,145,000, which includes \$545,000 for purposes of satisfying maintenance requirements of the consent decree, would continue to be transferred annually from the Operating Fund #510 and Peterson Fund 515 and deposited in the Creeks and Sewers Fund. Of the \$545,000 M&O expense, \$299,750 should be charged to Fund 510 and \$245,250 should be charged to Fund 515 as originally forecasted in the rate structure. **Therefore, the \$1,145,000 previously transferred from Fund 510 would be reduced to \$899,750.**

The accompanying cash forecast has been prepared on the basis of information and assumptions set forth in this report. We have relied upon information provided to us by City Officials and its consulting engineers.

This financial forecast is based on the City of Euclid's assumptions concerning future events and circumstances. These assumptions are significant to the forecasts, rate recommendations, and overall results. Although it is believed that the information and assumptions are reasonable bases for the forecasts, fluctuating economic conditions and regulatory or technological factors may materially impact both the forecast and report recommendations. Therefore, actual results may vary from the forecasts and such variations could be material. B. Fink Consulting, Inc. has no obligation under the terms of our engagement to update this report for events and changes in conditions that occur after the date of this report.

The cooperation and assistance given me in performing this study has been greatly appreciated, especially Service Director Dan Knecht and staff of the Finance Department. I am available to meet with you for further review and discussion of this report.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert J. Fink".

Robert J. Fink  
President  
B. Fink Consulting, Inc.

## EXECUTIVE SUMMARY

The City of Euclid authorized B. Fink Consulting to revise and update the City's annual independent financial report regarding the cost of service and revenue requirements for Euclid's wastewater treatment services. The updated report based on FY2023 financial information is now respectfully submitted for final review and acceptance by the City of Euclid.

Essential to determining the revenue requirements for wastewater treatment services are the assumptions made concerning the customer base and cost escalations. This study is based on key assumptions drawn from: a) water consumption levels by community; b) cash revenue, cash expenditure, and budget estimates for the years 2024 through 2026; c) wastewater flow statistics.

Water consumption reports reflect the seasonal changes in water consumption that occur annually. Water consumption levels and wastewater flows at the plant are key criteria in developing reliable revenue projections and should be regularly monitored.

The estimated additional debt service that supports Euclid's ongoing program of capital improvements required under the current Consent Decree has been incorporated into the rate model. The capital cost rate components that correspond to this debt service are included later in this report. Additionally, improvement projects have begun that are outside the Consent Decree required projects and will be paid from the Peterson Fund. The Monterey Avenue Sewer Replacement and the E.200 and E.221 sewer line replacements are several of these currently completed.

There are three wastewater customer classes in this rate study and user charge report. The customer classes are: 1) the cities of Euclid, South Euclid, Willoughby Hills, Richmond Heights, and Highland Heights. Taken together, these cities represent a single customer class. 2) The City of Willowick; and 3) the City of Wickliffe. This study considered each customer class's relative share of the total flow of wastewater into the treatment plant.

Operation, maintenance, and repair costs for wastewater services have been thoroughly analyzed. Meter reading and customer billing and collections costs charged by the City of Cleveland and by Lake County have also been reviewed. Euclid's estimated capital improvement needs under the Consent Decree have been incorporated in our financial review along with estimated costs of projects outside the Consent Decree requirements.

**Based on the current information provided and examination, the sewer rate increase passed for 2024 may not provide sufficient fund balance at end of year 2024. The sewer rate initially proposed for 2025 needs to be modified and increased to meet higher revenue requirements for years 2025 and 2026.**

## INTRODUCTION

### A. BACKGROUND

The purpose of this study is to revise and update the previous financial review of the wastewater treatment plant and system. This analysis performed by B. Fink Consulting, Inc. includes a thorough review and update of the wastewater treatment plant and system's revenue requirements for operations and maintenance, repair and replacement, and capital improvements and debt service requirements.

The current user charge system developed is consistent with the guidelines established by the Ohio Environmental Protection Agency (OEPA). An extra-strength surcharge was established in 1992 as requested by the OEPA. It is recommended that this extra-strength surcharge be continued for permitted industrial customers that exceed their permit limits. Permitted Industrial Users are listed in a table further in this report.

**The three-year flow estimate previously assumed that the flows in the three-year forecast period would mirror the pattern experienced in Northeast Ohio during the previous three year period. However, in this report's three-year forecast, based on the last three years, it shows a slight decrease in consumption. Therefore, this current report assumes that there will be a 1% decrease each year in the forecast period.**

This B. Fink Consulting, Inc. study focuses its analyses on these general topics:

- Revenue Requirements:
  - a) Operation and maintenance
  - b) Transmission and collection
  - c) Repair and replacement
- Capital Improvement Projects and Financing
- Cost Components and Rate Structure

### B. METHODOLOGY

The methods used in this rate study adhere to the generally accepted policies and procedures of the American Water Works Association and the American Public Works Association. These standards prescribe rates and a rate structure that generate sufficient revenues to maintain a self-supporting enterprise fund, which does not unduly discriminate toward any class of customers (customer equity).

The procedures for this general approach include:

- Determine total annual revenue requirements for the period the rates will be in effect and identify those expenses that must be recovered directly from rates.
- Distribute cost components to various customer classes.

This cost analysis was performed to evaluate the financial capacity of Euclid's Wastewater Treatment Plant Fund (510) and other pertinent funds including the Equipment Replacement Fund (511), Creeks and Sewer Fund (512) and the Peterson Line Improvement Fund (515). All of these funds are used to finance the provision of wastewater treatment at current service levels.

Additionally, included in this report is a summary of revenue and expenditures for the Waterline Fund for informational purposes. An analysis and projections of revenues and expenditures for this fund was not included in the scope of the current rate study.

The definition of revenue requirements is often unique to a given utility. In all cases, conformance to bond covenants and regulatory constraints provide one measure of revenue sufficiency.

Also, it is a goal of every self-sustaining utility to avoid operating losses. A common measure for this is cash flow, which tests whether cash receipts meet or exceed cash outlays. Excluded from this test are major capital projects to be funded through debt service. Minor capital outlays are generally included, reflecting the ongoing need for small capital repairs or replacements.

Another goal of many utilities is to maintain positive earnings. Since earnings include a deduction for depreciation, this measure allows for a generation of funds to replace plant and equipment as it wears out. However, as previously indicated over the years, depreciation funding will not be considered for the wastewater treatment plant fund. Thus, the funding from the operating fund (510) annually to the Equipment Replacement Fund (511).

Our study treats and addresses the wastewater treatment operating fund (510) as an activity that is self-supporting. In so doing, a proper "matching" of revenues and expenditures is developed for the wastewater plant. An additional analysis was performed to evaluate the "matching" of revenues and expenditures for the equipment replacement fund (511) and for the Peterson Sewer Fund (515).

## REVENUE REQUIREMENTS

### A. GENERAL

This analysis projects revenue requirements for the years 2024 through 2026, based on actual cash expenditures for the year 2023. "Actual" revenues, expenditures, and cash balances were derived directly from the City of Euclid's budget performance reports, certificates of fund balances, and Comprehensive Annual Financial Report (CAFR), as provided by Euclid's Finance Department.

The revenue estimates that have been made for the years 2024 through 2026 are based on the average actual water consumption volumes (adjusted for estimated minimum charge customers) and the wastewater flows for past **three** years.

Residential usage has not been adjusted to reflect the implementation of the summer sprinkling rate adjustment that began in 2003 as this adjustment does not materially impact the life of the rates.

Wastewater flow projections are based on actual water consumption billing information supplied by the City of Cleveland for the Cities of (1) Euclid; (2) South Euclid; (3) Highland Heights; and (4) Richmond Heights. In addition, the Lake County Utility Department handles the billings for: (1) the City of Willoughby Hills (which is based on water consumption) and (2) the Cities of Willowick and Wickliffe, which are master-metered for wastewater. These master meters measure wastewater flow at the point of entry into the City of Euclid's sewer system. Service bills for Willowick and Wickliffe are based solely on actual wastewater flows through those respective master meters.

Cost projections for the years 2024 through 2026 are premised on 2023 actual expenditures adjusted for inflation. A 3% annual price inflation factor was used to make cost projections for plant labor operating cost categories. Additionally, a 2% annual price inflation factor was used for non-labor plant operating cost categories.

Capital improvements are broken into two components: Major Capital Improvements (CIP) funded by debt, and non-capital improvements (non-CIP) funded by the rates. Major Capital Improvements are typified by high costs and long service lives. All other capital improvements (consisting of routine operation and maintenance activities, and office equipment and furniture) are classified as non-CIP improvements and are characterized by relatively low costs and short service lives.

### B. SERVICE AREA POPULATION

The population of the contributing communities has a direct impact on the wastewater flow. The actual census results for the year 2020 are listed in Tab7 in this report. The overall population of the total service area had been declining in prior census reporting period but now showing small overall increase. Several communities show some increase while others show some decrease.

## C. WASTEWATER FLOW

The wastewater flow is measured at two places in the system and at the wastewater treatment plant. The City of Euclid measures the flows from the Cities of Wickliffe and Willowick at the corporation line of Euclid. The flow records for calendar years 2019 through 2023 are shown below:

WASTEWATER FLOW MGD

	2019	2020	2021	2022	2023
EUCLID ET AL	8.69	8.92	10.13	11.14	13.04
WICKLIFFE	2.18	2.32	1.93	2.18	2.29
WILLOWICK	1.73	1.89	1.69	1.80	1.84
TOTAL	12.60	13.13	13.75	15.12	17.17

This study has relied on average annual flows for the years 2019 through 2023 to normalize the statistics used for the allocation of OM&R costs among customer classes. Accordingly, the average annual flow rates utilized in this report are as follows: (1) Euclid et al 10.38 MGD; (2) Wickliffe 2.18 MGD; (3) Willowick 1.79 MGD.

If infiltration/inflow is significantly reduced through future sewer rehabilitation projects, as was anticipated in Wickliffe a few years ago, then total flow into the Euclid wastewater treatment plant will be reduced as well. 2018 and 2020 as well as 2023 may have been influenced by a "rainy" year. Significant flow reduction could and should cause future rate adjustments. As can be seen in the table above, in 2021 Wickliffe and Willowick were at their lowest in the five-year period.

## D. WATER CONSUMPTION

The records of water consumption for the communities were obtained from the City of Cleveland and Lake County. For purposes of this report, the data for 2021, 2022, and 2023 are shown for comparison purposes. This information is shown in a table further in this report in "Tab 11".

## **E. WASTEWATER TREATMENT PLANT SERVICES**

### **E-1 CUSTOMERS**

Customer accounts have been broken down by community based on water consumption versus actual wastewater flow through a master meter agreement. The communities whose wastewater service is based on water consumption are; the City of Euclid; the city of Willoughby Hills; and the cities in the Cuyahoga County Sewer District (South Euclid, Highland Heights, and Richmond Heights). The two communities whose wastewater service is based on master-metered flow are the cities of Willowick and Wickliffe. The customers whose service is based on water consumption are treated as a single customer class, as are both of the two master-metered communities.

In as much as there are customers outside the City of Euclid, the study does not differentiate between inside and outside customers. There is no evidence or justification to treat inside customers differently than outside customers. This assumption has been supported by the Ohio EPA dating back to 1991. Therefore, projections are basically separated by water consumption-based customers from the wastewater master meter flow based customers.

### **E-2 ESTIMATED REVENUES AND VOLUME**

Rate revenues have been forecasted on a cash basis using data from Euclid's budget performance reports, trial balance reports, and from CAFR documents provided by the Finance Department. The revenue projections for the years 2024 through 2026 are based on the expected wastewater flows from each community in the service area based on their water consumption estimated to decline by 1% yearly.

In addition to rates, several other sources contribute to the wastewater utility's income. These include late fees, rental services, license and permits, etc., classified as miscellaneous income in both the budget document and financial statements.

### **E-3 OPERATING EXPENSES**

Actual operating expense are provided for the year ended 2021, 2022 and year ended 2023, utilizing budget performance report for the Wastewater Treatment Fund (#510) along with the Peterson Improvement Fund (#515).

Overall cost increases are expected due to inflation. Thus, cost escalation factors are incorporated in the model. We have assumed that salary related costs will increase by 4% percent in 2024 and 3% yearly after that. Other line items costs increase typically by 2% per year. **However, in this current year of review, overall costs are projected to increase for 2024 as a result of known increases in cost of materials and supplies in certain line item expenses.** It is currently difficult to anticipate in 2024 where we will be as it relates to current increase in costs. Projections of operating expenses by object code are summarized and shown in Table 2 under "operating expenses".

The annual contribution to the Equipment Replacement and Repair Fund, \$600,000, meets the requirements of Euclid Ordinance 154-1997. The R & R contribution that is presented in Table 2, is considered to be a recurring operating need (for routine parts, equipment, and repair needs). Equipment R & R contributions are included with plant operating expenses and are assumed to be paid from customer revenues for the purpose of this study.

#### **E-4 DEBT SERVICE OBLIGATIONS**

The City makes semi-annual debt service obligations to OWDA and OPWC as well as General Obligation Bonds. Various tables are included in this report in Tab10 projecting the various payments due on debt service related to various projects under the Consent Decree and from which fund the payments are made from. These payments made are typically due on the first of January and July.

## **RATE DESIGN**

### **A. GENERAL**

Euclid's current rate structure was reviewed and evaluated for cost recovery. It was used to develop the projected revenue requirements for 2024 through 2026. The revenue forecasts in this report assume that the current rate structure proposed will be maintained in future years for both master-metered communities and water consumption-based communities. Legislation passed in 2023 only raised the rate in 2024 to see how the proposed increased rate structure through the year 2025 would fare.

### **B. MASTER METERED COMMUNITIES**

The City of Euclid operates under a master meter agreement with the Cities of Wickliffe and Willowick. These agreements stipulate that Euclid will provide wastewater treatment and conveyance for the wastewater generated within the communities. Most of the wastewater from Wickliffe and Willowick is metered at the corporation line between the communities. In the following paragraphs, we will discuss each community and its arrangement with Euclid.

### **WICKLIFFE**

The City of Wickliffe obtains services from the City of Euclid for the conveyance of wastewater and treatment of said wastewater at Euclid's treatment facility. The current contract rate through 2022 was authorized by Euclid Ordinance in March of 2012, which set the rate at \$2.96/1,000 gallons for year 2022. Legislation passed in 2022 increased the rate for 2023 to \$3.70/1,000 gallons. Legislation passed in 2023 increased the rate for 2024 to \$4.24/1,000 gallons. Wastewater conveyance is by the sewer interceptor that is under Lakeshore Boulevard.

There are several areas within the Wickliffe sewer system and the Euclid sewer system that are interconnected prior to the meters at the Euclid/Wickliffe corporation line. In these instances, wastewater from Euclid flows into the City of Wickliffe's sanitary sewer. The three points of inter-connection are at Forestview Avenue and Lloyd Road; Arthur Road and the Euclid Corporation line; and Lakeshore Boulevard and Lloyd Road. In addition, there is a portion of Wickliffe on Bishop Road that flows into the sanitary sewer from Willoughby Hills, and a portion of Willowick that flows into the Wickliffe sanitary sewer system. Willowick enters the Wickliffe sewer system at East 305 and the Wickliffe/Willowick corporation line.

The interconnections are known to all three communities, and are not at issue, based on assumptions that the flows from these interconnects are offsetting. Euclid has in place a geographic information system that documents and maps wastewater flows throughout the entire Euclid service area.

The agreement between Euclid and Wickliffe requires that rate increases by Euclid be subject to approval. The component of the rate for 2023 covering operation, maintenance and repair needs was \$1.98. This component has been raised to \$2.38 in 2024. An additional charge of \$1.72 per 1,000 gallons in the 2023 rate is collected to cover capital costs. This component has been raised to \$1.86 in 2024. An additional charge of \$.061 per 1,000 gallons continues to be collected for maintenance of the Lakeshore Trunk Sewer Line.

## **WILLOWICK**

The City of Willowick obtains services from the City of Euclid for the conveyance of wastewater and treatment of said wastewater at Euclid's treatment facility. The contract rate authorized in 2012 by Euclid Ordinance set the rate at \$2.96/1,000 gallons for year 2022. Legislation passed in 2022 increased the rate for 2023 to \$3.70/1,000 gallons. Legislation passed in 2023 increased the rate for 2024 to \$4.24/1,000 gallons.

Wastewater conveyance is by the sewer interceptor that is under Lakeshore Boulevard. Willowick's wastewater enters the Euclid sanitary sewer system at Lakeshore Boulevard and the Euclid Corporation line.

The agreement between Euclid and Willowick requires that rate increases by Euclid be subject to Willowick's approval. The component of the rate covering operation, maintenance and repair needs was \$1.98. This component has been raised to \$2.38 in 2024. An additional charge of \$1.72 per 1,000 gallons in the rate is collected to cover capital costs. This component has been raised to \$1.86 in 2024. An additional charge of \$.061 per 1,000 gallons continues to be collected for maintenance of the Lakeshore Trunk Sewer Line.

**For both Wickliffe and Willowick, the adequacy of the rates are totally dependent on what flows through the master meters and billed per 1,000 gallons. Customer sewer usage and weather-related occurrences (rainy year or not) impact the revenues received from these two communities.**

## **C. WATER CONSUMPTION BASED CUSTOMERS**

- **Highland Heights**
- **Richmond Heights**
- **Willoughby Hills**
- **South Euclid**

The cities of Highland Heights, Richmond Heights, Willoughby Hills, and South Euclid are treated as direct service customers by the City of Euclid. Thus, these communities

are charged the same rate for wastewater treatment as a resident of Euclid, in accordance with provisions of Euclid City Ordinance.

The **City of Willoughby Hills** obtains water meter reading from the Lake County Water Department and uses this data to calculate the bill for sewerage treatment. Per the rate legislation approved in March of 2012, the rate for 2022 was billed at \$50.27 per MCF of water consumption. The rate for Willoughby Hills was raised to \$62.70 per MCF for 2023. The rate then was raised to \$74.70 per MCF for 2024. A copy of the water consumption records for Willoughby Hills from the Lake County Utility Department are sent monthly to the City of Euclid.

Pursuant to the Agreement with Cuyahoga County, effective June 20, 2006, the County assigned its user accounts (**South Euclid, Highland Heights, and Richmond Heights**) to Euclid including the administrative authority to establish, bill, and collect all of such accounts. Under the agreement, charges for County users are set to be at the same basic sewer service rates and under the same terms and conditions as are or may hereafter be charged or applied to Euclid users, including the minimum one MCF charge per quarter and the following additional increments:

- \$2.40 per MCF to pay Cleveland Water Department for other collection service charges
- \$1.50 per MCF to reimburse the City of Euclid for additional administrative expenses by reason of fulfilling the administrative functions for the Cuyahoga County Service Area.

## CITY OF EUCLID RATE STRUCTURE

### EUCLID USERS

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
	New Rates										
OM&R	25.60	26.60	26.60	27.60	27.60	28.60	28.60	29.60	33.60	40.60	45.60
Capital	9.95	11.18	13.97	17.06	20.62	20.62	20.62	20.62	29.10	34.10	34.10
Cleve fee	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.30	2.30	2.30
Peterson Fund	18.37	18.37	19.37	20.15	21.04	21.04	21.04	21.04	21.04	21.04	21.04
Waterline Construction Fund	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	11.00	12.00
Total	66.23	68.46	72.25	77.12	81.57	82.57	82.57	83.57	96.04	109.04	115.04

### OTHER CUYAHOGA COMMUNITIES

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
	New Rates										
Euclid Fee	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
CW Billing	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.30	2.30	2.30
Capital	5.78	5.78	8.85	12.34	16.21	20.67	20.67	20.67	29.10	34.10	34.10
OM&R	25.60	26.60	26.60	27.60	27.60	28.60	28.60	29.60	33.60	40.60	45.60
Total	35.19	36.19	39.26	43.75	47.62	53.08	53.08	54.08	66.50	78.50	83.50

### WILLOUGHBY HILLS

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
	New Rates										
Capital	5.78	5.78	8.85	12.34	16.21	20.67	20.67	20.67	29.10	34.10	34.10
OM&R	25.60	26.60	26.60	27.60	27.60	28.60	28.60	29.60	33.60	40.60	45.60
Total	31.38	32.38	35.45	39.94	43.81	49.27	49.27	50.27	62.70	74.70	79.70

### WICKLIFFE & WILLOWICK

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
	New Rates										
Capital	0.39	0.39	0.53	0.73	0.96	1.22	1.22	1.22	1.72	1.86	1.86
OM&R	1.71	1.72	1.72	1.73	1.73	1.74	1.74	1.74	1.98	2.38	2.67
Total	2.10	2.11	2.25	2.46	2.69	2.96	2.96	2.96	3.70	4.24	4.53

## **BILLING TABULATION**

B. Fink Consulting, Inc. compiled consumption data from Cuyahoga County and Lake County communities for use in this report. At a minimum, consumption had to be segregated between residential and commercial customers. Optimally, the user charge report should further segregate residential, commercial, and industrial customer classes.

## **METHODOLOGY**

Water consumption data and billing reports were received from the City of Cleveland and from Lake County. Cleveland Water Department and Lake County Utility Department reporting both identify the number of accounts by meter size for its water and wastewater customers.

- The City of Cleveland bills the City of Euclid customers.
- The City of Euclid bills the cities of South Euclid, Highland Heights and Richmond Heights.
- Lake County bills the cities of Wickliffe, Willowick and Willoughby Hills.

The sewer billings and sewer rate structure are based on water consumption.

## SERVICE AREA POPULATION

COMMUNITY	1990 Actual	2000 Actual	2010 Actual	2020
Euclid	55,000	52,717	48,920	49,692
South Euclid	23,866	23,537	22,295	21,893
Richmond Heights	9,611	10,944	10,546	10,801
Highland Heights	6,400	8,082	8,345	8,719
Willoughby Hills	8,500	8,595	9,485	10,019
Wickliffe	14,148	13,484	12,750	12,652
Willowick	15,692	14,361	14,171	14,204
<b>Service Area Total</b>	<b>133,217</b>	<b>131,720</b>	<b>126,512</b>	<b>127,980</b>

\* Actual figures from US Census Bureau

## REVENUE ALLOCATION

	2023 Actual Revenue
Euclid - Residential	4,105,076
Euclid - Commercial	2,575,733
Industrial Pretreat	0
Willoughby Hills Res	314,999
Willoughby Hills Comm	548,485
Wickliffe Residential	945,985
Wickliffe Commercial	816,610
Willowick Residential	1,122,354
Willowick Commercial	287,815
	<b>\$10,717,057</b>

SUMMARY REVENUE TYPE		
Residential	6,488,414	
Commercial	4,228,643	
		<b>\$10,717,057</b>

	2023 Actual Consumption	2023 Actual Revenue	
Euclid - Residential	81,670.6	86.20%	3,538,743
S. Euclid - Residential	1,214.5	1.28%	52,624
Rich. Hts. - Residential	11,824.4	12.48%	512,345
High. Hts. - Residential	31.5	0.03%	1,365
	<u>94,741.0</u>	<u>4,105,076</u>	61.45%

Euclid - Commercial	55,309.0	93.04%	2,396,509
S. Euclid - Commercial	30.6	0.05%	1,326
Rich. Hts. - Commercial	4,105.7	6.91%	177,898
High. Hts. - Commercial	0.0	0.00%	0
	<u>59,445.3</u>	<u>2,575,733</u>	38.55%

Wlby Hills			
Residential	7,666.5	36.48%	314,999
Commercial	<u>13,349.2</u>	<u>63.52%</u>	<u>548,485</u>
	<u>21,015.7</u>		<u>863,484</u>

Wickliffe			
Residential	28,181.1	53.67%	945,985
Commercial	<u>24,331.5</u>	<u>46.33%</u>	<u>816,610</u>
	<u>52,512.6</u>		<u>1,762,595</u>

Willowick			
Residential	31,299.8	79.59%	1,122,354
Commercial	<u>8,028.8</u>	<u>20.41%</u>	<u>287,815</u>
	<u>39,328.6</u>		<u>1,410,169</u>

TABLE 2

FUND 510	2021 Actual	2022 Estimated	2022 Actual	2023 Estimated	2023 Actual	2024 Estimated	2025 Estimated	2026 Estimated
<b>WWT OPERATING REVENUES:</b>								
EUCLID (Operating component of rate)	4,974,623	5,173,340	5,007,584	5,548,239	5,397,496	6,223,731	6,621,969	6,560,749
CUYAHOGA COUNTY (Operating component)	1,217,509	658,835	1,153,038	687,560	1,283,313	761,101	794,308	786,365
WILLOUGHBY HILLS (Operating component)	573,384	548,056	458,713	656,547	863,484	804,252	939,246	929,853
WICKLIFFE (Operating component of rate)	1,296,738	1,361,211	1,385,635	1,548,964	1,762,595	1,853,199	2,037,637	2,017,260
WILLOWICK (Operating component of rate)	1,100,220	1,124,127	1,181,805	1,296,019	1,410,169	1,543,420	1,697,028	1,680,058
INDUSTRIAL PRE-TREATMENT PERMITS	1,410	3,000	1,900	3,000	1,350	3,000	3,000	3,000
CLEVELAND METER READING	402,571	413,646	381,934	390,618	373,204	365,831	365,831	365,831
LICENSES/PERMITS/REFUNDS/REIMB.	17,289	13,725	5,900	13,725	79,310	13,725	13,725	13,725
WWTP INTEREST REVENUES								
ARREARAGE								
CAPITAL FUND REVENUE (From all communities)								
TRANSFER								
SUMMER SPRINKLING PROGRAM		260	410	260	170	260	260	260
<b>WWT RATE REVENUES</b>	<b>\$9,583,723</b>	<b>\$9,296,200</b>	<b>\$9,586,919</b>	<b>\$10,144,932</b>	<b>\$11,171,091</b>	<b>\$11,568,519</b>	<b>\$12,473,004</b>	<b>\$12,357,101</b>
<b>PLANT OPERATING EXPENSES:</b>								
CITY CENTRAL SERVICE COSTS								
<b>FUND OPERATING EXPENSES FROM TAB 3</b>	<b>10,091,759</b>	<b>10,789,765</b>	<b>9,155,372</b>	<b>10,123,304</b>	<b>10,237,688</b>	<b>10,337,268</b>	<b>10,414,738</b>	<b>10,645,455</b>
TRANSFER TO CREEKS & SEWERS	320,000	1,038,053	1,038,053	899,750	899,750	899,750	899,750	899,750
S.S.D.C.P. IMPLEMENTATION (3259)			510,510	510,510	519,815	519,815	519,815	519,815
CLEVELAND WATER DEPT EXPENSE								
MOTOR MAINTENANCE (3258)								
SANITARY SEWER MAINT (3252)								
LABORATORIES (3254)								
LAKESHORE (3256)								
LAKELAND (3257)								
PRE-TREATMENT EXPENSES (3259)	600,000	650,000	600,000	600,000	600,000	600,000	600,000	600,000
EQUIPMENT R&R EXPENSE								
NEW ACCT SYSTEM ADJUSTMENT 2017								
<b>PLANT OM &amp; R EXPENSES</b>	<b>11,011,758</b>	<b>12,477,818</b>	<b>11,303,935</b>	<b>12,133,564</b>	<b>12,257,253</b>	<b>12,356,833</b>	<b>12,434,303</b>	<b>12,665,020</b>
<b>NET OPERATING INCOME (DEFICIT)</b>	<b>(1,428,036)</b>	<b>(3,181,618)</b>	<b>(1,717,018)</b>	<b>(1,988,632)</b>	<b>(1,086,162)</b>	<b>(788,314)</b>	<b>38,701</b>	<b>(307,919)</b>
<b>NON-OPERATING REVENUES (EXPENSES)</b>								
GRANTS FUND 510			349,054		62,020			
GRANT EXPENDITURES FUND 510			(377,867)		(95,950)			
<b>CAPITAL FUND REVENUE (From all communities)</b>	<b>5,688,852</b>	<b>5,818,737</b>	<b>5,620,040</b>	<b>7,982,180</b>	<b>7,430,895</b>	<b>8,753,837</b>	<b>8,457,175</b>	<b>8,372,602</b>
SYSTEM IMPROVEMENTS [510](3259)								
DEBT SERVICE:								
11.19% OWDA LOAN [510]								
5.20% OWDA LOAN [510]								
4.56% OWDA LOAN [510]								
0.00% OPWC BABBITT & EUCLID AVE (510)								
0.00% OPWC BRANDYWINE (510)								
<b>CONSENT DECREE DEBT SERVICE (510)</b>	<b>(7,447,252)</b>	<b>(7,946,189)</b>	<b>(8,117,696)</b>	<b>(8,159,043)</b>	<b>(8,136,919)</b>	<b>(8,444,625)</b>	<b>(8,731,083)</b>	<b>(8,652,492)</b>
5.20% OWDA LOAN [515]								
4.56% OWDA LOAN [515]								
0.00% OPWC LOANS [515]								
4.06% GO BOND 2004 (515)								
E. 272nd PROJECT GO NOTE [515]								
HONEYWELL RETROFIT (510)								
CONSENT DECREE EXPENSE (515)								
INTEREST REVENUES (515)								
REV NOTE/BOND PAYMENTS (515)								
PROCEEDS FROM BORROWINGS 515								
OTHER REFUND/REIMB (515)								
NON-OPERATING								
<b>NET INCOME (DEFICIT)</b>	<b>(1,758,400)</b>	<b>(2,127,452)</b>	<b>(2,526,469)</b>	<b>(176,863)</b>	<b>(739,954)</b>	<b>309,212</b>	<b>(273,908)</b>	<b>(279,890)</b>
<b>COMBINED EARNINGS (DEFICIT)</b>	<b>(3,186,436)</b>	<b>(5,309,070)</b>	<b>(4,243,485)</b>	<b>(2,165,495)</b>	<b>(1,826,116)</b>	<b>(479,102)</b>	<b>(235,207)</b>	<b>(587,809)</b>
<b>BEGINNING CASH BALANCE</b>	<b>12,086,613</b>	<b>8,900,178</b>	<b>8,900,178</b>	<b>4,656,693</b>	<b>4,656,693</b>	<b>2,830,577</b>	<b>2,351,475</b>	<b>2,116,268</b>
<b>CUMULATIVE BALANCE</b>	<b>\$8,900,178</b>	<b>\$3,591,108</b>	<b>\$4,656,693</b>	<b>\$2,491,198</b>	<b>\$2,830,577</b>	<b>\$2,351,475</b>	<b>\$2,116,268</b>	<b>\$1,528,458</b>
	2021	2022	2022	2023	2023	2024	2025	2026

DETAILED OPERATING EXPENDITURES: FUND 510

SANITATION	2021	2021	2022	2022	2023	2023	2024	2025	2026
	Estimated	Actual	Estimated	Actual	Estimated	Actual	Estimated	Estimated	Estimated
SALARIES & WAGES	\$2,452,639	\$2,578,299	\$2,653,588	2,646,564	\$2,725,961	\$2,764,215	\$2,847,141	\$2,932,558	\$3,020,532
PART TIME / SEASONAL WAGES									
OVERTIME	\$198,266	\$190,912	\$198,266	201,686	\$198,266	\$169,211	\$200,000	\$200,000	\$200,000
RETIREMENT/SEPARATION PAY	\$1,058	\$129,248	\$1,089	108,034	\$1,122	\$38,670	\$230,000	\$100,000	\$100,000
HEALTHCARE	\$580,720	\$620,247	\$632,652	604,409	\$756,168	\$732,921	\$747,580	\$762,531	\$777,782
VISION INSURANCE	\$5,932	\$5,736	\$5,851	5,381	\$5,489	\$5,144	\$5,247	\$5,352	\$5,459
DENTAL INSURANCE	\$17,351	\$17,079	\$17,420	17,392	\$17,740	\$17,177	\$17,521	\$17,871	\$18,229
LIFE INSURANCE	\$5,682	\$5,715	\$5,829	5,766	\$5,881	\$5,837	\$5,953	\$6,072	\$6,194
MANDATORY MEDICARE	\$37,180	\$39,801	\$40,995	40,550	\$41,361	\$40,845	\$42,070	\$43,333	\$44,633
P.E.R.S.	\$370,897	\$396,200	\$408,086	398,040	\$406,001	\$416,515	\$429,011	\$441,881	\$455,137
UNEMPLOYMENT COMPENSATION									
WORKER'S COMPENSATION	\$59,423	\$59,730	\$60,925	55,642	\$56,755	\$55,724	\$56,838	\$57,975	\$59,134
CLOTHING/UNIFORM ALLOWANCE	\$58,956	\$57,800	\$58,956	58,650	\$59,823	\$62,010	\$63,250	\$64,515	\$65,806
TRAINING	\$4,381	\$5,890	\$6,008		7,966	\$8,125	\$3,220	\$3,284	\$3,350
COBRA									
AUDIT COSTS	\$6,110	\$5,983	\$6,103	5,919	\$6,037	\$5,805	\$5,921	\$6,039	\$6,160
ACCOUNTING SERVICES	286,456	286,456	286,456	286,456	286,456	286,456	286,456	286,456	286,456
ENGINEERING SERVICES	\$222,628	\$704,441	\$718,529	459,690	\$468,884	\$401,579	\$409,611	\$417,803	\$426,159
OUTSIDE LEGAL SERVICES	\$2,031	\$45,352	\$80,000	110,214	\$112,418	\$29,778	\$30,374	\$30,981	\$31,601
OTHER PROF SERVICES	\$575,137	\$568,350	\$579,717	168,375	\$171,743	\$86,589	\$88,321	\$90,087	\$91,889
TECH SER-LAB TESTS	\$16,325	\$21,745	\$22,180	22,980	\$23,440	\$25,554	\$26,065	\$26,586	\$27,118
COLLECTION SERVICES									
DISPOSAL SERVICES	\$533,438	\$718,001	\$900,000	902,789	\$920,845	\$1,038,235	\$1,058,999	\$1,080,179	\$1,101,783
CUSTODIAL SERVICES									
VEHICLE SERVICES	\$234		\$239		\$243	\$0	\$1,000	\$1,000	\$1,000
OFFICE EQUIP SERVICES									
OTHER EQUIPMENT REPAIR	\$0		\$0	498	\$508	\$4,297	\$508	\$518	\$528
RENTAL OF EQUIP	\$101,610	\$203,883	\$250,000	722	\$250,000	\$632	\$645	\$657	\$671
CONSTRUCTION SERVICES	\$247,534	\$270,551	\$350,000	284,873	\$290,570	\$572,443	\$296,382	\$302,310	\$308,356
OFFICE SUPPLIES	\$3,764	\$4,437	\$4,526	3,478	\$3,548	\$3,622	\$3,694	\$3,768	\$3,844
JANITORIAL/MAINT SUPPLIES	\$31,200	\$32,432	\$33,081	39,913	\$40,711	\$37,383	\$38,130	\$38,893	\$39,671
VEHICLE/EQUIPMENT PARTS	\$7,036	\$8,792	\$8,967	12,504	\$12,754	\$115,850	\$13,009	\$13,269	\$13,535
POSTAGE	\$279	\$47	\$48	89	\$91	\$682	\$91	\$93	\$94
BOOKS AND PERIODICALS			\$300		\$300	\$0	\$300	\$300	\$300
OTHER SUPPLIES	\$8,970	\$2,756	\$5,000	23,031	\$23,492	\$9,988	\$10,187	\$10,391	\$10,599
CHEMICAL SUPPLIES	\$791,327	\$590,902	\$1,000,000	596,915	\$1,000,000	\$601,903	\$613,941	\$626,220	\$638,745
INS OTHER THAN EMP BENEFIT	\$61,357	\$100,097	\$100,000		\$100,000	\$210,977	\$215,197	\$219,500	\$223,890
TELEPHONE/COMMUNICATIONS	\$9,356	\$9,826	\$10,022	10,197	\$10,401	\$11,865	\$12,102	\$12,344	\$12,591
LEGAL ADVERTISING	\$1,589	\$1,198	\$1,222	2,845	\$2,902	\$1,173	\$1,197	\$1,221	\$1,245
TRAVEL	\$6,790		\$6,926	20	\$20	\$2,252	\$20,000	\$2,297	\$2,343
MEMBERSHIP DUES/LICENSES	\$42,568	\$63,970	\$65,249	74,282	\$75,768	\$55,398	\$56,606	\$57,637	\$58,789
REFUNDS/REIMBURSEMENTS	\$20	\$20	\$20	10		10			
PROPERTY DAMAGE									
JUDGEMENTS									
MORAL CLAIMS									
PERSONAL INJURY									
WATER/SEWERAGE UTILITY	\$592,337	\$785,924	\$801,643	411,139	\$419,362	\$657,932	\$671,090	\$684,512	\$698,202
NATURAL GAS	\$87,739	\$118,864	\$121,242	138,946	\$141,725	\$64,727	\$141,725	\$144,559	\$147,451
ELECTRICITY	\$631,486	\$789,215	\$804,998	955,888	\$975,006	\$1,120,667	\$1,143,080	\$1,165,942	\$1,189,261
GASOLINE	\$9,586	\$35,290	\$36,995	25,258	\$25,763	\$24,441	\$24,930	\$25,428	\$26,937
MOTOR OIL									
LAND									
BLDG/OTHER IMPROVEMENTS									
VEHICLES	\$0	\$586,575	\$475,000	411,734	\$419,969	\$459,563	\$468,754	\$478,129	\$487,692
FURNITURE & FIXTURES	\$1,655	\$5,495	\$5,605	8,803	\$8,775	\$2,230	\$2,275	\$2,321	\$2,367
OTHER EQUIPMENT	\$51,029	\$26,502	\$27,032	47,924	\$48,882	\$94,168	\$48,882	\$49,860	\$50,857
LEAF COLLECTORS									
TOTAL EXPENSES	\$8,122,075	\$10,091,759	\$10,789,765	\$9,155,372	\$10,123,304	\$10,237,688	\$10,337,268	\$10,414,738	\$10,645,455

City of Euclid, Ohio  
 Wastewater Treatment Plant Rate Study  
 Revenue Requirements:

FUND 515	2021 Actual	2022 Estimated	2022 Actual	2023 Estimated	2023 Actual	2024 Estimated	2025 Estimated	2026 Estimated
<b>FUND 515 REVENUES:</b>								
REIMBURSEMENTS	37,984		65,328					
GRANTS								
SEWER SERVICE CHARGES	<u>3,666,268</u>	<u>3,321,860</u>	<u>3,564,721</u>	<u>3,161,159</u>	<u>3,411,869</u>	<u>2,966,190</u>	<u>2,824,698</u>	<u>2,796,451</u>
<b>REVENUE TOTALS</b>	<b>3,704,252</b>	<b>3,321,860</b>	<b>3,630,049</b>	<b>3,161,159</b>	<b>3,411,869</b>	<b>2,966,190</b>	<b>2,824,698</b>	<b>2,796,451</b>
<b>FUND 515 EXPENSES:</b>								
DEPARTMENT 432 SANITARY SEWER MAINT								
ENGINEERING SERVICES								
CONSTRUCTION SERVICES								
LEGAL ADVERTISING								
NEW ACCTG SYSTEM ADJUSTMENT 2017								
DEPARTMENT 432 SANITATION TOTALS	513,928	2,000,000	540,770 46,129	2,000,000	556,903 0	800,000 500,000	500,000 0	500,000 0
<b>BOND DEBT SERVICE TOTALS</b>	<b>513,928</b>	<b>2,000,000</b>	<b>586,899</b>	<b>2,000,000</b>	<b>556,903</b>	<b>1,300,000</b>	<b>500,000</b>	<b>500,000</b>
DEBT SERVICE BONDS PRINCIPAL PAYMENTS								
DEBT SERVICE BONDS INTEREST PAYMENTS								
<b>NOTE DEBT SERVICE TOTALS</b>	<b>1,003,362</b>	<b>1,881,101</b>	<b>1,027,936</b>	<b>1,113,489</b>	<b>1,084,226</b>	<b>1,038,061</b>	<b>1,023,812</b>	<b>1,010,409</b>
DEBT SERVICE NOTES PRINCIPAL PAYMENTS								
DEBT SERVICE NOTES INTEREST PAYMENTS								
<b>FISCAL AGENT FEES</b>								
TRANSFER								
OUTSIDE LEGAL SERVICES:	900,000	245,250	282,948	245,250	585,250	585,250	585,250	585,250
GRANT EXPENDITURES:								
ENGINEERING SERVICES								
CONSTRUCTION SERVICES								
<b>ISSUE II EXPENSE TOTALS</b>	<b>2,128</b>	<b>222,665</b>			<b>1,994</b>			
<b>FUND 515 EXPENDITURE TOTAL</b>	<b>224,793</b>				<b>1,994</b>			
<b>NET INCOME (DEFICIT)</b>	<b>1,062,169</b>	<b>(559,241)</b>	<b>1,732,266</b>	<b>47,670</b>	<b>1,183,496</b>	<b>42,879</b>	<b>715,636</b>	<b>700,792</b>
EARNINGS (DEFICIT)	1,062,169	(559,241)	1,732,266	47,670	1,183,496	42,879	715,636	700,792
BEGINNING CASH BALANCE	<u>15,040,496</u>	<u>15,102,664</u>	<u>16,102,664</u>	<u>17,834,930</u>	<u>17,834,930</u>	<u>19,018,426</u>	<u>19,061,305</u>	<u>19,776,941</u>
<b>CUMULATIVE BALANCE</b>	<b>\$16,102,664</b>	<b>\$15,543,423</b>	<b>\$17,834,930</b>	<b>\$17,882,600</b>	<b>\$19,018,426</b>	<b>\$19,061,306</b>	<b>\$19,776,941</b>	<b>\$20,477,733</b>

**EQUIPMENT REPLACEMENT FUND**

FUND 511	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Actual	2023 Actual
REFUNDS/REIMBURSEMENTS						6,444	6,000
TRANSFER FROM WWT FUND 510		600,000	650,000	610,819	600,000	600,000	600,000
<b>REVENUE TOTAL</b>		<b>600,000</b>	<b>650,000</b>	<b>610,819</b>	<b>600,000</b>	<b>606,444</b>	<b>606,000</b>
<b>EXPENSES</b>							
3252 SANITARY SEWER MAINTENANCE							
OTHER SUPPLIES							
OTHER EQUIPMENT							
3256 LAKESHORE PLANT							
OTHER EQUIPMENT REPAIR							
RENTAL OF EQUIP & VEHICLE							
OTHER EQUIPMENT							
3257 LAKELAND PLANT							
OTHER EQUIPMENT REPAIR							
OTHER EQUIPMENT							
<b>TOTAL EXPENSES</b>		<b>589,298</b>	<b>611,146</b>	<b>578,186</b>	<b>383,375</b>	<b>337,190</b>	<b>789,954</b>
<b>NET OPERATING INCOME (DEFICIT)</b>		10,702	38,854	32,633	216,625	269,254	-183,954
BEGINNING CASH BALANCE		139,446	150,148	189,002	221,635	438,260	707,514
<b>CUMULATIVE BALANCE</b>		<b>150,148</b>	<b>189,002</b>	<b>221,635</b>	<b>438,260</b>	<b>707,514</b>	<b>523,560</b>

CREEKS & SEWERS FUND

FUND 512	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Actual	2023 Actual
REFUNDS/REIMBURSEMENTS					50	
TRANSFER FROM WWT FUND 510	1,145,000	1,145,000	1,145,000	1,220,000	1,321,001	1,485,000
<b>REVENUE TOTAL</b>	<b>1,145,000</b>	<b>1,145,000</b>	<b>1,145,000</b>	<b>1,220,000</b>	<b>1,321,051</b>	<b>1,485,000</b>
<b>EXPENSES</b>						
DEPT 429 OTHER PROTECTION						
FLOOD CONTROL						
ELECTRICITY	<u>1,488</u>	<u>1,488</u>				
DEPT 531 HIGHWAYS AND STREETS						
STORM DRAINAGE						
SALARIES & WAGES	630,391	673,083	751,841	758,188	738,533	776,978
SHIFT DIFF/ACTING PAY				2,960		
OVERTIME	31,000	34,755	35,431	30,060	62,065	36,515
LONGEVITY						
CONTINUOUS SERVICE PYMT						
RETIREMENT/SEPARATION PAY					48,485	8
MEDICAL INSURANCE - ADMIN						
LIFE INSURANCE	8,196	7,577	8,377	8,377	8,110	7,462
VISION INSURANCE	1,500	139	78	66	46	61
DENTAL INSURANCE	1,000	533	230	197	145	194
PRESCRIPTION DRUG INSURANCE						
MEDICAL INSURANCE - PREMIUM	187,396	163,753	160,435	177,815	165,071	178,952
ACA FEES						
MANDATORY MEDICARE	9,479	10,601	11,265	11,409	12,110	10,679
P.E.R.S.	88,255	94,232	110,474	112,546	110,678	113,104
WORKER'S COMPENSATION	21,000	18,282	14,274	14,635	15,528	14,816
UNIFORMS			17,076	16,800	16,800	15,400
CLOTHING ALLOWANCE	<u>12,967</u>	<u>3,161</u>	<u>3,330</u>	<u>2,822</u>	<u>1,911</u>	<u>0</u>
SALARIES & FRINGES	991,183	1,023,192	1,112,534	1,135,875	1,179,482	1,154,169
OTHER PROFESSIONAL SERVICES	1,803		210		4,169	4,271
VEHICLE SERVICES	429	473	695			
TELEPHONE/COMMUNICATIONS	473	491	440	499	490	386
ILLUMINATING CO			1,596	1,560	1,659	1,753
OFFICE SUPPLIES	100	100	100	100		2,058
JANITORIAL/MAINT SUPPLIES	288	236	350	300	200	200
VEHICLE/EQUIPMENT PARTS	12,167	18,836	26,561	17,664	26,313	20,109
OTHER SUPPLIES	16,938	16,927	15,770	20,387	27,234	21,442
GASOLINE	18,000	21,646	18,779	25,000	27,000	25,500
MOTOR OIL	279	161	0	452	144	0
SERVICES & SUPPLIES TOTAL	50,478	60,466	64,465	66,061	87,303	73,966
<b>STORM DRAINAGE TOTAL</b>	<b>1,041,661</b>	<b>1,083,658</b>	<b>1,176,999</b>	<b>1,201,936</b>	<b>1,266,785</b>	<b>1,228,135</b>
DEPT 571 SANITATION						
SANITARY SEWER MAINTENANCE						
DISPOSAL SERVICES	44,304	42,273	40,104	39,138	38,858	49,729
VEHICLE SERVICES	342	2,150	1,745			
VEHICLE/EQUIPMENT PARTS	13,038	29,591	15,514	30,552	26,560	15,069
OTHER SUPPLIES	5,945	7,040	5,277	2,066	5,822	7,345
GASOLINE	16,509	7,313	3,520	10,000	5,889	442
<b>SANITARY SEWER MAINT TOTAL</b>	<b>80,137</b>	<b>88,367</b>	<b>66,160</b>	<b>81,756</b>	<b>77,129</b>	<b>72,585</b>
NEW ACCTS SYSTEM ADJUSTMENT 2017						
<b>TOTAL EXPENSES</b>	<b>1,123,286</b>	<b>1,172,025</b>	<b>1,243,159</b>	<b>1,283,692</b>	<b>1,343,914</b>	<b>1,300,720</b>
<b>NET OPERATING INCOME (DEFICIT)</b>	21,714	(27,025)	(98,159)	(63,692)	(22,863)	184,280
BEGINNING CASH BALANCE	206,943	228,657	201,631	103,472	39,780	16,917
<b>CUMULATIVE BALANCE</b>	<b>228,657</b>	<b>201,631</b>	<b>103,472</b>	<b>39,780</b>	<b>16,917</b>	<b>201,197</b>

**WATER LINE IMPROVEMENT FUND**

FUND 516	2019 Actual	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Estimated	2025 Estimated	2026 Estimated
<b>REVENUES</b>								
ISSUE 2	1,731,309	198,794						
REFUNDS/REIMBURSEMENTS	754,572	2,204,765	2,154,700	457,626	2,869,697	500,000		
SEWER SERVICE CHARGES	1,817,702	1,771,804	1,739,680	1,897,486	1,620,621	1,550,765	1,550,765	1,550,765
<b>REVENUE TOTAL</b>	<b>4,303,583</b>	<b>4,175,363</b>	<b>3,894,381</b>	<b>2,155,112</b>	<b>4,490,318</b>	<b>2,050,765</b>	<b>1,550,765</b>	<b>1,550,765</b>
<b>EXPENSES</b>								
<b>DEPT 431 HIGHWAYS AND STREETS</b>								
ENGINEERING SERVICES	84,853	146,278	341,925	254,036	611,964	400,000		
CONSTRUCTION SERVICES	1,298,835	2,438,826	1,800,608	1,398,245	3,962,091	3,000,000		
REFUNDS/REIMBURSEMENTS			139,222		2,344			
NEW ACCTG SYSTEM ADJUSTMENT 2017								
LEGAL ADVERTISING								
	<b>1,383,688</b>	<b>2,585,105</b>	<b>2,281,755</b>	<b>1,652,281</b>	<b>4,476,399</b>	<b>3,400,000</b>		
<b>DEBT SERVICE BONDS</b>								
BOND PRINCIPAL PAYMENTS								
BOND INTEREST PAYMENTS								
	1,192,445	948,105	749,207	698,783	699,781	<b>745,181</b>	<b>723,392</b>	<b>723,418</b>
<b>DEBT SERVICE NOTES</b>								
NOTE PRINCIPAL PAYMENTS								
NOTE INTEREST PAYMENTS								
<b>FISCAL AGENT FEES</b>								
ISSUANCE COSTS								
GRANT EXPENSES (CONST)								
<b>DEBT SERVICE TOTALS</b>	<b>1,182,445</b>	<b>948,105</b>	<b>749,207</b>	<b>698,783</b>	<b>699,781</b>	<b>745,181</b>	<b>723,392</b>	<b>723,418</b>
<b>ENGINEERING SERVICES</b>								
CONSTRUCTION SERVICES	1,731,309							
	1,731,309							
<b>TOTAL EXPENSES</b>	<b>4,307,442</b>	<b>3,533,209</b>	<b>3,030,962</b>	<b>2,351,064</b>	<b>5,176,180</b>	<b>4,145,181</b>	<b>723,392</b>	
<b>NET OPERATING INCOME (DEFICIT)</b>	<b>(3,858)</b>	<b>642,153</b>	<b>863,418</b>	<b>(195,952)</b>	<b>(685,862)</b>	<b>(2,094,416)</b>		
BEGINNING CASH	<b>5,052,037</b>	<b>5,048,179</b>	<b>5,690,332</b>	<b>6,553,750</b>	<b>6,357,798</b>	<b>5,671,936</b>		
<b>CUMULATIVE BALANCE</b>	<b>5,048,179</b>	<b>5,690,332</b>	<b>6,553,750</b>	<b>6,357,798</b>	<b>5,671,936</b>	<b>3,577,520</b>		

## EUCLID WASTEWATER TREATMENT

## DEBT SERVICE SCHEDULE - FUND 510

Project name	#	Payoff Date	2018	2019	2020	2021	2022	2023	2024	2025	2026
Euclid Ave Improvements	CA19K	Jan/32	23,479	23,479	11,739	23,479	23,479	23,479	23,479	23,479	23,479
Euclid Ave/Babbit San.	CA10H	Jan/29	23,836	23,836	11,918	23,836	23,836	23,836	23,836	23,836	23,836
Brandywine/Balmoral Dr	CA12H	Jan/28	16,918	16,918	8,459	16,918	16,918	16,918	16,918	16,918	16,918
Brandywine Pump SSO	CA01S	Jul/38		20,323	10,162	20,323	20,323	20,323	20,323	20,323	20,323
OWDA Land Acquisition	6264	Jan/38	54,022	54,022	54,022	54,022	54,022	54,022	54,022	54,022	54,022
Edgecliff 1	6803	Jan/36	112,257	112,257	0	0	0	114,916	114,100	114,156	114,214
Headworks Part A	6927	Jul/36	953,924	953,924	953,924	476,962	0	0	286,312	572,624	572,624
Headworks Part B	7101	Jan/38	1,964,013	3,928,026	3,928,026	3,928,026	3,928,026	3,928,026	3,928,026	3,928,026	3,928,026
MBR Procurement	7070	Jan/39		722,616	1,445,231	1,445,231	1,445,231	1,445,231	1,445,231	1,445,231	1,445,231
MBR Construction	7557	Jan/51			1,131,564	2,263,129	2,263,129	2,263,129	2,263,129	2,263,129	2,282,242
Sludge Line	6775	Jan/36	177,288	161,249	171,064	171,143	171,225	171,309	171,395	171,485	171,577
Supplemental Loan								97,854	97,854	97,854	0
<b>TOTALS</b>			3,325,737	6,016,650	6,594,544	7,291,504	7,946,189	8,159,043	8,444,625	8,731,083	8,652,492

**EUCLID WASTEWATER TREATMENT  
DEBT SERVICE SCHEDULE - FUND 515**

## PETERSON FUND

Crystal/E220/E194/E222	6679	Jul-35	344,634	345,520	346,437	347,386	348,368	349,384	350,435	351,523	352,648
Edgecliffe SSO Elimin	CA17N	Jul/38	19,216	38,431	19,216	38,431	38,431	38,431	38,431	38,431	38,431
Edgecliffe 2	7069	Jan/37	33,843	33,843	33,843	33,843	33,843	33,843	33,843	33,843	33,843
Effingham	7905	Jan/39		47,179	86,359	86,359	86,359	86,359	86,359	86,359	86,359
Brandywine	7604	Jan/38		15,218	25,408	25,408	25,408	25,408	25,408	25,408	25,408
E219/E221 I & I	7596	Jan/38	29,983	59,014	59,331	59,331	59,331	59,331	59,331	59,331	59,331
E222nd Street	CA08U	Jul/40		84,767	84,767	84,767	84,767	84,767	84,767	84,767	84,767
CSO 6 & 9											
CSO 7 & 12											
CSO 8											
CSO 11											
CSO 20											
CSO 22											
Monterey	CA01W	Jan/51				36,855	73,710	73,710	73,710	73,710	73,710
E.220 & E.221 Sewer line	CA15Z								55,954	111,907	
<b>TOTALS</b>			1,090,294 2018	1,113,921 2019	929,775 2020	1,104,196 2021	1,132,404 2022	1,113,489 2023	1,038,061 2024	1,023,812 2025	1,010,409 2026

**EUCLID WASTEWATER TREATMENT**  
**DEBT SERVICE SCHEDULE - FUND 516**

**WATERLINE FUND**

Project name	#	Payoff Date	2018	2019	2020	2021	2022	2023	2024	2025	2026
Waterline 1 & 2	GO 2008	Jan/28	147,000	0							
US Bank A	GO 2011A	Jan/21	341,020	344,840	340,080	0					
US Bank B	GO 2011B	Jan/31	463,086	463,986	463,616	466,136	412,796	413,794	413,980	414,040	414,040
Miller Ave Line Replace	CA02B	Jan/21	84,495	84,495	42,248	42,248	0				
East 214th Line Replace	CA03B	Jan/21	13,137	13,137	6,568	6,568	0				
East 222nd Line Replace	CA03D	Jan/24	43,748	43,748	21,874	43,748	43,748	43,748	21,874	0	
Road & Utiltiy Improve.	CA09M	Jan/33	34,668	34,668	17,334	34,668	34,668	34,668	34,668	34,668	34,668
E214/Lakeshore Improve.	CA15K	Jul/32	28,849	28,849	14,425	28,849	28,849	28,849	28,849	28,849	28,849
E248 and Shoreview Imp	CA17L	Jul/42	21,727	21,727	10,863	21,727	21,727	21,727	21,727	21,727	21,727
Dille & E204th Improve.	CA23K	Jan/32	11,126	11,126	47,500	47,500	47,500	47,500	47,500	47,500	47,500
E222 & I90 Reconstruct	CA04I	Jan/30	83,519	83,519	41,759	83,519	83,519	83,519	83,519	83,519	83,519
E222 & Tungsten Imp.	CA18L	Jul/46	25,977	25,977	12,988	25,977	25,977	25,977	25,977	25,977	25,977
SSO 30,31,32 E274, E275	6551	Jan/34	88,344	88,344	66,995	67,017	67,040	67,063	67,087	67,112	67,138
<b>TOTALS</b>			1,386,696	1,244,416	1,086,250	867,957	765,824	766,845	745,181	723,392	723,418

City of Euclid, Ohio - Wastewater Treatment Plant Fund Rate Study  
Water Consumption by Community (MCF)

Entity	2021	2022	2023	2021	2022	2023	3 Year Average
	Accounts	Accounts	Accounts	Consumption	Consumption	Consumption	
<b>Euclid</b>							
Residential	15,400	15,498	15,551	86,462.90	83,217.50	81,670.60	83,783.67
Commercial	878	812	759	60,469.50	55,806.30	55,309.00	57,194.93
Total	16,278	16,310	16,310	146,932.40	139,023.80	136,979.60	140,978.60
<b>South Euclid</b>							
Residential	227	224	226	1,349.90	1,294.30	1,214.50	1,286.23
Commercial	3	2	4	49.70	29.70	30.60	36.67
Total	230	226	230	1,399.60	1,324.00	1,245.10	1,322.90
<b>Richmond Heights</b>							
Residential	2,115	2,121	2,126	12,115.90	11,996.10	11,824.40	11,978.80
Commercial	99	93	92	5,787.80	4,336.70	4,105.70	4,743.40
Total	2,214	2,214	2,218	17,903.70	16,332.80	15,930.10	16,722.20
<b>Highland Heights</b>							
Residential	4	4	4	34.50	33.90	31.50	33.30
Commercial	0	0	0	0.00	0.00	0.00	0.00
Total	4	4	4	34.50	33.90	31.50	33.30
<b>Wickliffe</b>							
Residential	5,007	5,001	4,986	30,598.40	26,357.50	28,181.10	28,379.00
Commercial	329	320	289	22,119.20	29,637.20	24,331.50	25,362.63
Total	5,336	5,321	5,275	52,717.60	55,994.70	52,512.60	53,741.63
<b>Willowick</b>							
Residential	5,644	5,619	5,602	33,383.70	32,681.00	31,299.80	32,454.83
Commercial	110	107	134	7,483.60	6,944.10	8,028.80	7,485.50
Total	5,754	5,726	5,736	40,867.30	39,625.10	39,328.60	39,940.33
<b>Willoughby Hills</b>							
Residential	1,182	1,189	1,190	8,190.10	8,300.50	7,666.50	8,052.37
Commercial	79	82	86	12,282.20	9,639.00	13,349.20	11,756.80
Total	1,261	1,271	1,276	20,472.30	17,939.50	21,015.70	19,809.17
<b>District</b>							
Residential	29,579	29,656	29,685	172,135.40	163,880.80	161,888.40	165,968.20
Commercial	1,498	1,416	1,364	108,192.00	106,393.00	105,154.80	106,579.93
Total	31,077	31,072	31,049	280,327.40	270,273.80	267,043.20	272,548.13

**City of Euclid, Ohio - Wastewater Treatment Plant**  
**Consumption by Entity/Class**  
**2021, 2022 & 2023**

<b>Entity</b>	<b># of</b>	<b>Total</b>	<b># of</b>	<b>Total</b>	<b># of</b>	<b>Total</b>
	<b>Accounts</b>	<b>Consump</b>	<b>Accounts</b>	<b>Consump</b>	<b>Accounts</b>	<b>Consump</b>
	<b>2021</b>		<b>2022</b>		<b>2023</b>	
<b>Euclid</b>						
Residential	15,400	86,462.9	15,498	83,217.5	15,551	81,670.6
Commercial	878	60,469.5	812	55,806.3	759	55,309.0
Total	16,278	146,932.4	16,310	139,023.8	16,310	136,979.6
<b>South Euclid</b>						
Residential	227	1,349.9	224	1,294.3	226	1,214.5
Commercial	3	49.7	2	29.7	4	30.6
Total	230	1,399.6	226	1,324.0	230	1,245.1
<b>Richmond Hts</b>						
Residential	2,115	12,115.9	2,121	11,996.1	2,126	11,824.4
Commercial	99	5,787.8	93	4,336.7	92	4,105.7
Total	2,214	17,903.7	2,214	16,332.8	2,218	15,930.1
<b>Highland Hts</b>						
Residential	4	34.5	4	33.9	4	31.5
Commercial	0	0.0	0	0.0	0	0.0
Total	4	34.5	4	33.9	4	31.5
<b>District</b>						
Residential	17,746	99,963.2	17,847	96,541.8	17,907	94,741.0
Commercial	980	66,307.0	907	60,172.7	855	59,445.3
Total	18,726	166,270.2	18,754	156,714.5	18,762	154,186.3

Source: City of Cleveland Department of Public Utilities Annual Water & Sewer Account Consumption Reports

## LAKE COUNTY COMPARISON

City	2021		2022		2,023	
	# of Accounts	Consumption (in Cu Ft)	# of Accounts	Consumption (in Cu Ft)	# of Accounts	Consumption (in Cu Ft)
<b>Wickliffe</b>						
Residential	5,007	30,598,400	5,001	26,357,500	4,986	28,181,100
Commercial	329	22,119,200	320	29,637,200	289	24,331,500
Total	5,336	52,717,600	5,321	55,994,700	5,275	52,512,600
<b>Willowick</b>						
Residential	5,644	33,383,700	5,619	32,681,000	5,602	31,299,800
Commercial	110	7,483,600	107	6,944,100	134	8,028,800
Total	5,754	40,867,300	5,726	39,625,100	5,736	39,328,600
<b>Wiley Hills</b>						
Residential	1,182	8,190,100	1,189	8,300,500	1,190	7,666,500
Commercial	79	12,282,200	82	9,639,000	86	13,349,200
Total	1,261	20,472,300	1,271	17,939,500	1,276	21,015,700
<b>Lake Totals</b>						
Residential	11,833	72,172,200	11,809	67,339,000	11,778	67,147,400
Commercial	518	41,885,000	509	46,220,300	509	45,709,500
Total	12,351	114,057,200	12,318	113,559,300	12,287	112,856,900

#### USER COMMUNITIES - PERCENT OF FLOW TO PLANT

## RATIO OF MASTER METERED COMMUNITIES TO EUCLID ET AL

	2019	2020	2021	2022	2023	5 year average
Plant flows	12.60	13.13	13.75	15.12	17.17	14.35
Wick/Willo	3.91	31.03%	4.21	32.06%	3.62	26.33%
Euclid et al	8.69	68.97%	8.92	67.94%	10.13	73.67%

### **Euclid Water Reclamation (Influent Flow Meter)**

*All wastewater that passes through the Influent Flow meter is a combination of  
the City of Euclid's flow and that of Wickliffe and Willowick*

<b>Year</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>January</b>	<b>13.05</b>	<b>14.43</b>	<b>14.18</b>	<b>14.52</b>	<b>27.49</b>
<b>February</b>	<b>12.92</b>	<b>15.01</b>	<b>13.20</b>	<b>12.52</b>	<b>17.78</b>
<b>March</b>	<b>10.92</b>	<b>13.72</b>	<b>13.21</b>	<b>19.74</b>	<b>21.48</b>
<b>April</b>	<b>13.47</b>	<b>13.82</b>	<b>12.95</b>	<b>19.31</b>	<b>17.81</b>
<b>May</b>	<b>15.05</b>	<b>12.81</b>	<b>13.45</b>	<b>17.64</b>	<b>16.39</b>
<b>June</b>	<b>14.45</b>	<b>11.80</b>	<b>11.87</b>	<b>11.49</b>	<b>16.58</b>
<b>July</b>	<b>12.05</b>	<b>11.88</b>	<b>13.46</b>	<b>13.27</b>	<b>15.80</b>
<b>August</b>	<b>12.22</b>	<b>11.83</b>	<b>12.82</b>	<b>13.51</b>	<b>18.56</b>
<b>September</b>	<b>10.75</b>	<b>10.76</b>	<b>12.41</b>	<b>15.76</b>	<b>10.64</b>
<b>October</b>	<b>11.46</b>	<b>13.58</b>	<b>16.55</b>	<b>15.65</b>	<b>14.11</b>
<b>November</b>	<b>12.14</b>	<b>12.72</b>	<b>15.73</b>	<b>16.22</b>	<b>12.72</b>
<b>December</b>	<b>12.85</b>	<b>15.14</b>	<b>15.07</b>	<b>11.85</b>	<b>16.76</b>
<b>Total Monthly MG</b>	<b>151.33</b>	<b>157.50</b>	<b>164.90</b>	<b>181.48</b>	<b>206.12</b>
<b>Average MGD</b>	<b>12.61</b>	<b>13.13</b>	<b>13.74</b>	<b>15.12</b>	<b>17.18</b>
<b>Combined 5 Year Average</b>			<b>14.36</b>		

## Euclid

*This includes the wastewater from the City of Euclid and satellite areas that are not metered separately, minus the flow from the Cities of Wickliffe and Willowick*

Year	2019	2020	2021	2022	2023
January	8.47	9.76	10.23	10.74	20.35
February	7.68	10.66	9.72	5.80	13.51
March	7.40	8.52	9.85	15.32	15.70
April	7.77	10.00	9.16	14.29	13.69
May	10.24	8.40	10.24	13.46	12.38
June	9.23	8.47	8.57	8.98	13.30
July	9.01	8.62	9.71	10.32	12.79
August	8.99	8.24	9.53	10.60	13.53
September	8.09	8.14	9.57	11.47	8.07
October	8.97	8.04	12.41	11.53	10.73
November	8.97	8.78	11.34	12.31	9.86
December	9.51	9.42	11.18	8.86	12.61
<b>Total Monthly MGD</b>	<b>104.33</b>	<b>107.04</b>	<b>121.51</b>	<b>133.68</b>	<b>156.49</b>
<b>Average MGD</b>	<b>8.69</b>	<b>8.92</b>	<b>10.13</b>	<b>11.14</b>	<b>13.04</b>
<b>Five Year Average MGD</b>			<b>10.38</b>		

### **Wickliffe**

<b>Year</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>January</b>	<b>2.59</b>	<b>2.55</b>	<b>2.16</b>	<b>2.01</b>	<b>3.91</b>
<b>February</b>	<b>2.93</b>	<b>2.38</b>	<b>1.83</b>	<b>3.61</b>	<b>2.35</b>
<b>March</b>	<b>1.97</b>	<b>2.85</b>	<b>1.81</b>	<b>2.41</b>	<b>3.18</b>
<b>April</b>	<b>3.11</b>	<b>2.14</b>	<b>2.05</b>	<b>2.74</b>	<b>2.26</b>
<b>May</b>	<b>2.72</b>	<b>2.42</b>	<b>1.77</b>	<b>2.33</b>	<b>2.28</b>
<b>June</b>	<b>2.94</b>	<b>1.88</b>	<b>1.81</b>	<b>1.38</b>	<b>1.82</b>
<b>July</b>	<b>1.75</b>	<b>1.77</b>	<b>2.09</b>	<b>1.70</b>	<b>1.74</b>
<b>August</b>	<b>1.84</b>	<b>1.91</b>	<b>1.80</b>	<b>1.50</b>	<b>2.90</b>
<b>September</b>	<b>1.50</b>	<b>1.45</b>	<b>1.52</b>	<b>2.37</b>	<b>1.44</b>
<b>October</b>	<b>1.37</b>	<b>3.07</b>	<b>2.21</b>	<b>2.34</b>	<b>1.84</b>
<b>November</b>	<b>1.71</b>	<b>2.24</b>	<b>2.28</b>	<b>2.17</b>	<b>1.55</b>
<b>December</b>	<b>1.79</b>	<b>3.13</b>	<b>1.83</b>	<b>1.65</b>	<b>2.26</b>
<b>Total Monthly MG</b>	<b>26.20</b>	<b>27.78</b>	<b>23.16</b>	<b>26.19</b>	<b>27.54</b>
<b>Average MGD</b>	<b>2.18</b>	<b>2.32</b>	<b>1.93</b>	<b>2.18</b>	<b>2.29</b>
<b>Five Year Average MGD</b>			<b>2.18</b>		

### Willowick

Year	2019	2020	2021	2022	2023
January	1.99	2.12	1.79	1.77	3.24
February	2.31	1.97	1.65	3.11	1.92
March	1.56	2.35	1.55	2.01	2.60
April	2.59	1.69	1.74	2.28	1.86
May	2.09	1.99	1.45	1.85	1.73
June	2.28	1.45	1.49	1.12	1.46
July	1.29	1.50	1.67	1.26	1.28
August	1.39	1.67	1.48	1.41	2.14
September	1.16	1.17	1.31	1.93	1.13
October	1.12	2.47	1.93	1.78	1.53
November	1.47	1.71	2.11	1.75	1.32
December	1.56	2.59	2.06	1.34	1.89
<b>Total Monthly MG</b>	<b>20.80</b>	<b>22.68</b>	<b>20.23</b>	<b>21.61</b>	<b>22.09</b>
<b>Average MGD</b>	<b>1.73</b>	<b>1.89</b>	<b>1.69</b>	<b>1.80</b>	<b>1.84</b>
<b>Five Year Average MGD</b>			<b>1.79</b>		

PRETREATMENT PROGRAM 2016/17

COMPANIES UNDER PERMIT

Company	Address	City
Babcock & Wilcox/Nuclear Operations Grd	24703 Euclid Ave	Euclid
Consolidate Prescicion Products	26855 Bluestone Blvd	Euclid
CSX Euclid	20400 North Lakeland Blvd	Euclid
Continental Products	1150 East 222nd Street	Euclid
Consolidate Prescison Products	26855 Bluestone Blvd	Euclid
Eaton Industrial Corporation	23555 Euclid Ave.	Euclid
Euclid Hospital	18901 Lakeshore Blvd.	Euclid
HBP Euclid Corporation	23555 Euclid Ave.	Euclid
Highland Quartz Plant/Momentive Perform	24400 Highland Rd.	Richmond
H. C. Starck Inc. - Rolling	21801 Tungsten Rd.	Euclid
Lake Erie Design/PCC Airfoils Inc.	1470 East 289th Street	Wickliffe
Lincoln Electric	22801 St. Clair Ave.	Euclid
Lubrizol Corporation	29400 Lakeland Blvd.	Wickliffe
Microsheen	1100 East 222nd Street	Euclid
PMC Industries	29100 Lakeland Blvd.	Euclid
PPG Industries	23000 St. Clair Ave.	Euclid
Powdermet Inc.	24112 Rockwell Drive	Euclid
Sherwood Metal Products/PCC Airfoils	29501 Clayton Ave.	Wickliffe
Stamco	26650 Lakeland Blvd.	Euclid
Thermal Heat Treat/HiTech Metal	28910 Lakeland Blvd.	Wickliffe
Turbine Engine Components/ Whitcraft	23555 Euclid Ave.	Euclid
Tylok International	1061 East 260th Street	Euclid
UHHS Richmond Hts Hospital	27100 Chardon Rd.	Richmond
Universal Metal Products	29980 Lakeland Blvd.	Wickliffe

<b>Company</b>	<b>Address</b>	<b>Contact</b>	<b>Phone</b>	<b>Renewal Date</b>
Angel Dental Care	19551 Euclid Ave.	Gloria / Dr. Wensink	216-692-3777	5/31/2024
Dr. Lisa & Steven Petti	29090 Euclid Ave.	Helene	440-943-0266	5/31/2024
Dr. Donald Nevar DDS	26300 Euclid Ave, ste #510	Donald Nevar	216-731-5600	5/31/2024
Herbert Orlansky, DMD, LLC	26300 Euclid Ave., ste #928	Herbert Orlansky Michelle - office mgr	216-797-1401	5/31/2024
Andrea Doczy-Saliba DMD, Inc.	26300 Euclid Ave., ste #724	Andrea Doczy-Saliba	216-731-9001	5/31/2024
EOM Properties	26300 Euclid Ave.	Anita Church	216-289-8501	5/31/2024
Cary Goldstein DDS	29134 Euclid Ave	Cary Goldstein	440-943-3003	5/31/2024
Hudec Dental	26000 Lakeshore Blvd	Laurie (ext 1208)	216-289-0890	5/31/2024
Panther Pediatric Dentistry	26300 Euclid Ave, #203	Karrie Cunningham	216-938-8501	5/31/2024