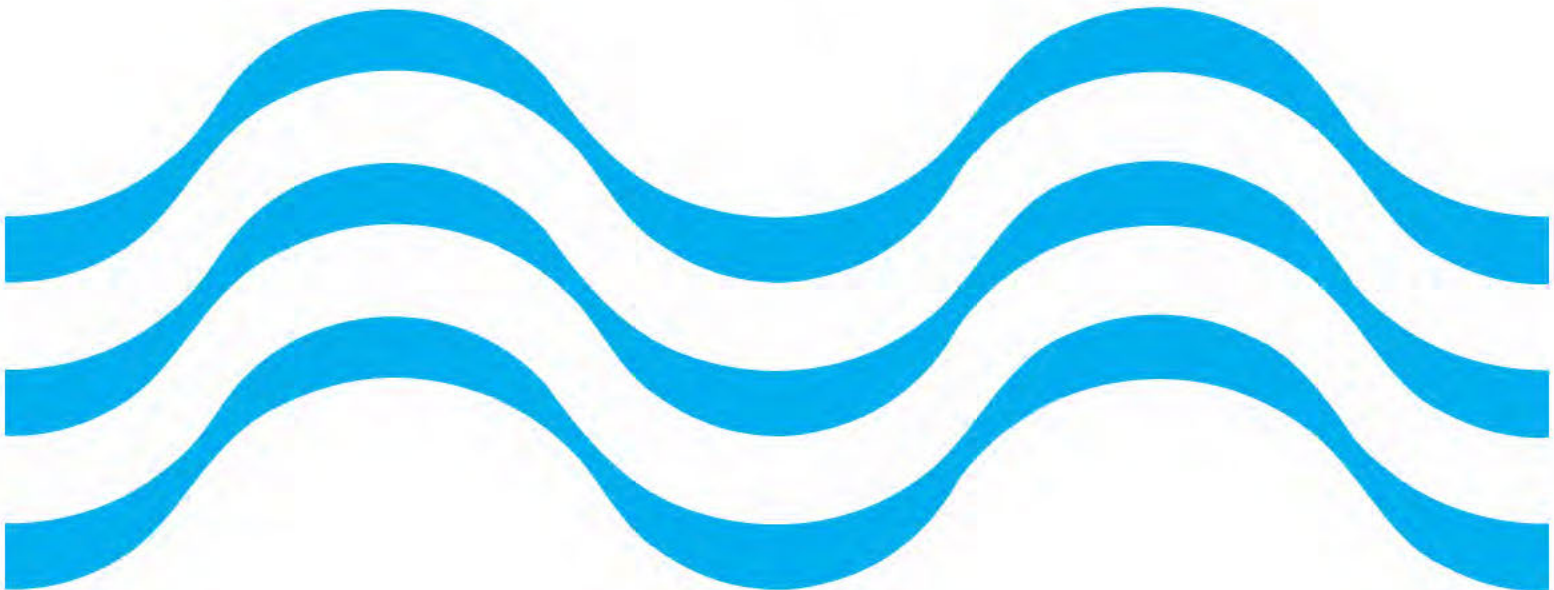




Milwaukee Metropolitan Sewerage District

Cost Recovery Procedures Manual

January 2015



260 West Seeboth Street
Milwaukee, Wisconsin 53204
414-272-5100

2015 Cost Recovery Procedures Manual

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INTRODUCTION

The Cost Recovery Procedures Manual is a document incorporated by reference into Chapter 17 of the District Rules and Regulations. This manual presents specific policies and procedures for the implementation of the user charge program, including the user charge rates (unit costs of treatment). This manual, prepared by District staff, is reviewed annually and revised as deemed appropriate by the Commission. The appeal of any section of this manual shall be in accordance with Chapter 17, Sec. 17.104(8) of the District Rules and Regulations.

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Section: 1
Title: Equivalent Residential Unit
Reference: Secs. 17.103(9), 17.208, MMSD Rules, and Appendix A (1.)(A)

The residential user class accounts for a significant share of the total wastewater generated in the service area. In accordance with EPA regulations, user charges must be apportioned to each of these users or class of users on the basis of wastewater flow and strength discharged to the system. Since it would not be reasonable to monitor each user to determine this flow and strength due to the size of the class, the user charge will be based on the characteristics of a typical residential discharge, called an Equivalent Residential Unit (ERU).

The U. S. Environmental Protection Agency (EPA) has developed a standard ERU that should be adopted unless other values can be supported by the District. This standard ERU is a flow of 100 gallons per capita/day (including Infiltration/Inflow), a BOD of 0.167 pounds per capita/day (ppcd) (200 mg/l) and TSS of 0.209 ppcd (250 mg/l).

To determine the District's ERU, select portions of the service area were monitored during the dry months of July and August of 1976, as part of the UC Study conducted for the District. Sampling stations were chosen at points downstream of six strictly residential service areas that were believed to represent the typical user.

In each of the six study areas, wastewater samples were collected every 15 minutes for an average of 20 days. These samples were used to determine 24-hour composite values for BOD and TSS for each study area. Flow rates were calculated from measurements recorded at existing gauging stations.

The results were used to calculate average per capita wastewater characteristics. A detailed description of this activity can be found in Technical Memorandum 4A of the UC/ICR Study.

The study yielded an ERU consisting of 64 gallons/capita/day (excluding Infiltration/Inflow), with BOD of 0.166 pounds per capita/day (310 mg/l) and TSS of 0.197 pounds/capita/day (370 mg/l).

The calculated domestic flow rate compared very favorably with winter water consumption data. With allowance for I/I, BOD and TSS loadings compared favorably with EPA values. Consequently, the aforementioned ERU values were used in the formula for calculating MMSD's user charges to the constituent municipalities at start-up of the program in 1979.

Surveys conducted yearly of winter water consumption in municipalities with metered water, provide a basis for updating the calculations for the flow parameter. The most recent calculation supports an ERU of 56 gallons per capita per day.

The resultant EQUIVALENT RESIDENTIAL UNIT, effective January 2015, is as follows:

Domestic Flow	56 gallons/capita/day (<u>excluding</u> Infiltration/Inflow)
B.O.D.	0.165 pounds capita/day (310 milligrams/liter)
T.S.S.	0.197 pounds/capita/day (370 milligrams/liter)

Section: 2
 Title: Residential Occupancy Factors
 Reference: Secs. 17.103(18), 17.208, MMSD Rules, and Appendix A(1.0)(A)

The residential occupancy factor means the average number of people residing in each residential housing unit. The 2015 residential occupancy factor assigned to each municipality is based on housing and population data as of January 1, 2014, and further explained in Section 5 of this manual.

MMSD relies on municipal user data transmissions and an annual housing unit survey to update the housing unit count reported in the 2010 census. Municipal reports are subject to verification by MMSD as explained in Section 8 of this manual.

Total municipal population as of January 1 is reported in October by the Wisconsin Department of Administration. To determine a residential occupancy factor, total population must be allocated between the residential and commercial sewer user classes. The residential allocation is derived by subtracting commercial population from total population. Commercial population is classified as follows:

- Apartments - Occupancy factors and vacancy rates for metered apartments are from the census. Occupancy factors for unmetered apartments served by MMSD are assigned as follows:

<u>Bedrooms</u>	<u>People/Unit</u>
1	1.5
2	2.5
3	Residential Occupancy Factor
Unknown	2.5

In lieu of using the assigned occupancy factor for apartments, a municipality may report the actual occupant count for each unmetered apartment. This occupant count must include all unmetered apartments and be updated at least once each year.

- Mixed Apartment/Business - Includes apartments in mercantile buildings such as stores or taverns. MMSD assigns an occupancy factor of 1.25 to these apartments. The rental vacancy rate from the census is used to estimate the number of vacant units.

- Mobile Home Parks - Includes all mobile homes not classified residential. Occupancy factors and vacancy rates are from the census.
- Group Quarters - Includes nursing homes, convents and monasteries, boarding houses, correctional institutions, college dormitories and other facilities without separate living and dining areas. Estimated population is based on the state report of institutional population and municipal reports of other group quarters facilities. A factor of .75 people per room is used to estimate boarding house population.
- Mixed Home/Business - Includes a business in the home classified as commercial for sewer billing. These units are assigned the residential occupancy factor.

The Residential Occupancy Factor for the District is 2.65 people per unit, computed as follows:

$$\frac{\text{2014 Population}}{725,656} \div \frac{\text{Occupied Units}}{273,760} = \frac{\text{People Per Unit}}{2.65}$$

Occupied residential units represent residential units reported to MMSD on municipal data transmissions including mixed home/business units. An update of the residential occupancy factor for each municipality is listed in Table 2-1 on page 2-3.

Table 2-1 -- RESIDENTIAL OCCUPANCY FACTORS

<u>Residential Billing Alternative</u>	<u>Municipality</u>	<u>People per Unit for UC Billings In:</u>	
		<u>2014</u>	<u>2015</u>
1 - 2 Family	Bayside	2.62	2.45
	Brookfield	2.58	2.56
	Brown Deer	2.62	2.62
	Caledonia	1.97	1.97
	Fox Point	2.45	2.47
	Franklin	2.86	2.84
	Glendale	2.30	2.28
	Muskego	2.72	2.71
	New Berlin	2.63	2.65
	Oak Creek	2.91	2.90
	Thiensville	2.43	2.42
	Wauwatosa	2.32	2.32
	West Allis	2.30	2.30
	West Milwaukee	2.54	2.53
1 - 4 Family	Butler	2.09	2.09
	Cudahy	2.30	2.30
	Elm Grove	2.44	2.45
	Germantown	2.52	2.51
	Greendale	2.63	2.62
	Greenfield	2.45	2.50
	Hales Corners	2.51	2.51
	Menomonee Falls	2.51	2.52
	Mequon	2.54	2.53
	Milwaukee	2.74	2.75
	River Hills	2.39	2.39
	St. Francis	2.67	2.66
	Shorewood	2.26	2.23
	Whitefish Bay	2.67	2.67

Section: 3
Title: Unit Process-Parameter Relationships
Reference: Secs. 17.103(25), 17.204, MMSD Rules

Unit Process-Parameter Relationships provide the basis for allocating the O & M costs of each unit process to the cost allocation parameters of flow, BOD, TSS, and connections. The relationships presented in Table 3-1 are based on the User Charge Program alternative recommended by Milwaukee County's Task Force on Metropolitan Sewerage Commission Development and its User Charge subcommittee, which alternative was adopted by the Commissions on 13 July 1978.

In 1991, a User Charge Rate and Cost Allocation Study determined that the 1991 unit process-parameter relationships were consistent with the 1978 study, except for five modifications which were recommended and adopted. The study identified the Inline Storage System (ISS) as a unit process qualifying as new and different from other existing unit processes. On November 30, 1992, the Commission adopted an alternative which allocated ISS and I/I treatment costs to the parameters of flow and connections based on a percentage of each to their totals (cost net of revenues).

In 2000, a User Charge Rate and Cost Allocation Study determined that the current unit process-parameter relationships adequately and equitably reflect process changes and capital additions since 1992 and these relationships are consistent with the 1992 study. However, 5 revisions to the unit process cost allocation procedures were recommended and adopted.

Table 3-2 summarizes, under the appropriate charge parameters, the 2015 budget dollars that Table 3-1 assigned to each unit process. Non-specific activities and miscellaneous services are apportioned to the four parameters in the same proportion as specific parameter costs bear to the total. Administrative support is distributed to the four parameters on the basis of labor costs, as charged in the operating cost centers. Adjustments to account for the surplus or deficit on each parameter in 2013 are also shown.

On September 11, 1996, the Public Service Commission ruled that capital cost recovery charges related to watercourse improvement projects can only be collected from those extraterritorial municipalities which are tributary to the watercourse being improved.

Applying this determination to O&M costs, MMSD recovers operation and maintenance costs related to watercourses only from the extraterritorial municipalities which are tributary to the watercourses being maintained. Table 3-3 summarizes the 2015 budget dollars by watercourse and assigned to the flow parameter. Table 3-4 adds the base flow rate from Table 3-2 and the watercourse rate from Table 3-3 to show a total flow rate. In addition, Table 3-4 reports the volumetric charge and average household charge. Table 3-5 shows the current status of the user charge stabilization fund.

The Commission authorized the continuous use of this formula until further notice.

2015 BUDGETED UNIT PROCESS-PARAMETER RELATIONSHIPS
IN THOUSANDS OF DOLLARS

TABLE 3-1

<u>UNIT PROCESS OR ACTIVITY</u>	<u>BUDGET</u>	<u>FLOW</u>	<u>BOD</u>	<u>TSS</u>	<u>CONNECTIONS</u>	<u>NON-SPECIFIC</u>	<u>I.W.P.P.</u>	<u>PERMIT FEES</u>	<u>VI STORAGE COSTS</u>	<u>HOUSEHOLD HAZARDOUS WASTE</u>	<u>WATERCOURSE MAINTENANCE COSTS</u>	<u>GREEN INFRASTRUCTURE</u>
<u>JONES ISLAND TREATMENT PLANT</u>												
PRIMARY TREATMENT:												
PUMPING, METERING AND SCREENING	\$3,794	\$1,252	\$0	\$0	\$2,542	\$0	\$0	\$0	\$0	\$0	\$0	\$0
PRIMARY SEDIMENTATION	\$1,439	\$1,439	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
DEBRIS/SCUM DISPOSAL	\$566	\$0	\$0	\$0	\$566	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SECONDARY TREATMENT:												
AERATION AND PROCESS AIR GENERATION	\$5,900	\$0	\$5,900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CLARIFICATION	\$982	\$982	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SLUDGE RETURN	\$1,580	\$0	\$1,580	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
ADVANCE WASTEWATER TREATMENT:												
DISINFECTION AND PHOSPHORUS REMOVAL	\$2,777	\$2,777	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
THICKENING	\$2,846	\$28	\$601	\$2,217	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
OTHER SLUDGE HANDLING PROCESSES	\$18,082	\$181	\$3,815	\$14,086	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MILORGANITE PRODUCTS	\$923	\$9	\$195	\$719	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
INTERPLANT PIPELINE	\$388	\$15	\$47	\$326	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
PERMIT FEES	\$379	\$0	\$0	\$0	\$0	\$0	\$0	\$379	\$0	\$0	\$0	\$0
OFF-PLANT FACILITIES AND PROGRAMS	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
OTHER	\$487	\$478	\$3	\$5	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0
NON-SPECIFIC ALLOCATION	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
TOTAL	\$40,143	\$7,161	\$12,141	\$17,353	\$3,109	\$0	\$0	\$379	\$0	\$0	\$0	\$0
<u>SOUTH SHORE TREATMENT PLANT</u>												
PRIMARY TREATMENT:												
PRECHLORINATION	\$257	\$257	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
COARSE SCREENING AND GRIT REMOVAL	\$1,377	\$0	\$0	\$0	\$1,377	\$0	\$0	\$0	\$0	\$0	\$0	\$0
PRIMARY SEDIMENTATION AND METER VAULT	\$1,108	\$1,108	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
DEBRIS/SCUM REMOVAL AND DISPOSAL	\$1,061	\$0	\$0	\$0	\$1,061	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SECONDARY TREATMENT:												
AERATION AND PROCESS AIR GENERATION	\$4,687	\$0	\$4,687	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CLARIFICATION	\$1,064	\$1,064	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SLUDGE RETURN	\$696	\$0	\$696	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
LAB ANALYSIS	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
ADVANCE WASTEWATER TREATMENT:												
DISINFECTION AND PHOSPHORUS REMOVAL	\$1,961	\$1,961	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
EFFLUENT PUMPING	\$467	\$467	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SOLIDS PROCESSING:												
FLOATATION THICKENING	\$285	\$11	\$34	\$240	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
OTHER SLUDGE HANDLING PROCESSES	\$3,450	\$135	\$414	\$2,901	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
PRIMARY SLUDGE SCREENING	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
AGRICULTURAL USE OF AGRI-LIFE & POLYMER	\$8	\$0	\$1	\$7	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
FILTER CAKE TO WPCO	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
INTERPLANT PIPELINE	\$1,016	\$40	\$122	\$854	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
PERMIT FEES	\$493	\$0	\$0	\$0	\$0	\$0	\$0	\$493	\$0	\$0	\$0	\$0
OTHER	\$255	\$254	\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
NON-SPECIFIC ALLOCATION	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
TOTAL	\$18,185	\$5,297	\$5,955	\$4,002	\$2,438	\$0	\$0	\$493	\$0	\$0	\$0	\$0

2015 BUDGETED UNIT PROCESS-PARAMETER RELATIONSHIPS
IN THOUSANDS OF DOLLARS

TABLE 3-1

<u>MILORGANITE</u>	<u>BUDGET</u>	<u>FLOW</u>	<u>BOD</u>	<u>TSS</u>	<u>CONNECTIONS</u>	<u>NON-SPECIFIC</u>	<u>I.W.P.P.</u>	<u>PERMIT FEES</u>	<u>WI STORAGE COSTS</u>	<u>HOUSEHOLD HAZARDOUS WASTE</u>	<u>WATERCOURSE MAINTENANCE COSTS</u>	<u>GREEN INFRASTRUCTURE</u>
REVENUE	(\$7,775)	\$0	(\$7,775)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MARKETING	<u>\$3,840</u>	<u>\$0</u>	<u>\$3,840</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
TOTAL	(\$3,935)	\$0	(\$3,935)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<u>OTHER ALLOCABLE COST CENTERS</u>												
INLINE STORAGE SYSTEM	\$1,262	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,262	\$0	\$0	\$0
HOUSEHOLD HAZARDOUS WASTE PROGRAM	\$1,311	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,311	\$0	\$0
<u>ENGINEERING:</u>												
LOCAL SEWER INSPECT/APPROVAL & MONIT. MIS/MUNI. SEWER	\$209	\$209	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
OTHER	\$6,472	\$2	\$0	\$0	\$0	\$5,580	\$0	\$0	\$0	\$0	\$0	\$890
<u>RESEARCH AND CENTRAL LAB:</u>												
ANALYSIS OF I.W.P.P.	\$105	\$0	\$0	\$0	\$0	\$0	\$105	\$0	\$0	\$0	\$0	\$0
OTHER SERVICES	\$753	\$0	\$0	\$0	\$0	\$753	\$0	\$0	\$0	\$0	\$0	\$0
<u>FIELD OPERATIONS:</u>												
SEWER CLEANING, INSPECTION AND MAINTENANCE	\$1,269	\$1,269	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
PUMP STATION AND INTERCEPTOR FACILITY	\$2,615	\$2,615	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MAINTENANCE-WATER COURSE AND VEHICLES	\$1,807	\$1,444	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$363	\$0
MAINTENANCE-BUILDINGS AND GROUNDS	\$1,839	\$1,839	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CENTRAL CONTROL SYSTEM	\$828	\$828	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
OFF-PLANT FACILITIES AND PROGRAMS	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
OTHER SERVICES	\$3,337	\$2,808	\$0	\$0	\$0	\$529	\$0	\$0	\$0	\$0	\$0	\$0
<u>INDUSTRIAL WASTE PRETREATMENT PROGRAM:</u>												
PRETREATMENT PROGRAM MANAGEMENT	\$288	\$0	\$0	\$0	\$0	\$0	\$288	\$0	\$0	\$0	\$0	\$0
SAMPLE COLLECTION AND ANALYSIS-LABOR	\$599	\$0	\$0	\$0	\$0	\$0	\$599	\$0	\$0	\$0	\$0	\$0
OFF-PLANT FACILITIES AND PROGRAMS	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
OTHER SERVICES	<u>\$1,871</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$1,871</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
TOTAL	\$24,565	\$11,014	\$0	\$0	\$0	\$8,733	\$992	\$0	\$1,262	\$1,311	\$363	\$890
SUBTOTAL	\$78,958	\$23,472	\$14,161	\$21,355	\$5,547	\$8,733	\$992	\$872	\$1,262	\$1,311	\$363	\$890
<u>OTHER ALLOCABLE COSTS AND REVENUES</u>												
ALLOCATION OF NON-SPECIFIC COSTS	\$0	\$3,159	\$1,905	\$2,874	\$746	(\$8,733)	\$0	\$0	\$0	\$0	\$49	\$0
EQUIPMENT REPLACEMENT FUND	(\$1,000)	(\$362)	(\$218)	(\$329)	(\$85)	\$0	\$0	\$0	\$0	\$0	(\$6)	\$0
UNALLOCATED RESERVE	\$2,168	\$785	\$473	\$713	\$185	\$0	\$0	\$0	\$0	\$0	\$12	\$0
INDUSTRIAL WASTE PRETREATMENT PROGRAM	(\$944)	\$0	\$0	\$0	\$0	\$0	(\$944)	\$0	\$0	\$0	\$0	\$0
HOUSEHOLD HAZARDOUS WASTE PROGRAM	(\$1,311)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$1,311)	\$0	\$0
WATERCOURSE MAINTENANCE	\$87	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$87	\$0
OTHER REVENUE	(\$1,463)	(\$523)	(\$315)	(\$475)	(\$123)	\$0	(\$19)	\$0	\$0	\$0	(\$8)	\$0
2013 SURPLUS APPLIED	(\$3,919)	(\$1,133)	(\$527)	(\$736)	(\$1,040)	\$0	(\$29)	(\$76)	\$119	\$0	(\$497)	\$0
USER CHARGE RATE STABILIZATION FUND	(\$1,000)	\$0	(\$900)	(\$100)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
IWPP RATE STABILIZATION FUND	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL	(\$7,382)	\$1,926	\$418	\$1,947	(\$317)	(\$8,733)	(\$992)	(\$76)	\$119	(\$1,311)	(\$363)	\$0
2015 BILLABLE COSTS	<u>\$71,576</u>	<u>\$25,398</u>	<u>\$14,579</u>	<u>\$23,302</u>	<u>\$5,230</u>	<u>\$0</u>	<u>\$0</u>	<u>\$796</u>	<u>\$1,381</u>	<u>\$0</u>	<u>\$0</u>	<u>\$890</u>

2015 BUDGETED UNIT PROCESS-PARAMETER RELATIONSHIPS
IN THOUSANDS OF DOLLARS

TABLE 3-2

	BUDGET	FLOW	BOD	TSS	CONNECTIONS	NON-SPECIFIC	I.W.P.P.	PERMIT FEES	I/ STORAGE COSTS	HOUSEHOLD HAZARDOUS WASTE	WATERCOURSE MAINTENANCE COSTS	GREEN INFRASTRUCTURE
JONES ISLAND TREATMENT PLANT												
BUDGETED COSTS	\$40,143	\$7,161	\$12,141	\$17,353	\$3,109	\$0	\$0	\$379	\$0	\$0	\$0	\$0
NON-SPECIFIC ALLOCATION	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SUBTOTAL	\$40,143	\$7,161	\$12,141	\$17,353	\$3,109	\$0	\$0	\$379	\$0	\$0	\$0	\$0
SOUTH SHORE TREATMENT PLANT												
BUDGETED COSTS	\$18,185	\$5,297	\$5,955	\$4,002	\$2,438	\$0	\$0	\$493	\$0	\$0	\$0	\$0
NON-SPECIFIC ALLOCATION	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SUBTOTAL	\$18,185	\$5,297	\$5,955	\$4,002	\$2,438	\$0	\$0	\$493	\$0	\$0	\$0	\$0
MILORGANITE												
MILORGANITE REVENUE	(\$7,775)	\$0	(\$7,775)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
MARKETING COST CENTER	\$3,840	\$0	\$3,840	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SUBTOTAL	(\$3,935)	\$0	(\$3,935)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
OTHER ALLOCABLE COST CENTERS												
INLINE STORAGE SYSTEM	\$1,262	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,262	\$0	\$0	\$0
HOUSEHOLD HAZARDOUS WASTE PROGRAM	\$1,311	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,311	\$0	\$0
ENGINEERING	\$6,681	\$211	\$0	\$0	\$0	\$5,580	\$105	\$0	\$0	\$0	\$0	\$890
RESEARCH AND CENTRAL LAB	\$858	\$0	\$0	\$0	\$0	\$753	\$105	\$0	\$0	\$0	\$0	\$0
INDUSTRIAL WASTE PRETREATMENT	\$2,758	\$0	\$0	\$0	\$0	\$1,871	\$887	\$0	\$0	\$0	\$0	\$0
FIELD OPERATIONS	\$11,695	\$10,803	\$0	\$0	\$0	\$529	\$0	\$0	\$0	\$0	\$363	\$0
SUBTOTAL	\$24,565	\$11,014	\$0	\$0	\$0	\$8,733	\$992	\$0	\$1,262	\$1,311	\$363	\$890
TOTAL	\$78,958	\$23,472	\$14,161	\$21,355	\$5,547	\$8,733	\$992	\$872	\$1,262	\$1,311	\$363	\$890
OTHER ALLOCABLE COSTS AND REVENUES												
NON-SPECIFIC ALLOCATION	\$0	\$3,159	\$1,905	\$2,874	\$746	(\$8,733)	\$0	\$0	\$0	\$0	\$49	\$0
EQUIPMENT REPLACEMENT FUND	(\$1,000)	(\$362)	(\$218)	(\$329)	(\$85)	\$0	\$0	\$0	\$0	\$0	(\$6)	\$0
UNALLOCATED RESERVE	\$2,168	\$785	\$473	\$713	\$185	\$0	\$0	\$0	\$0	\$0	\$12	\$0
I.W.P.P.	(\$944)	\$0	\$0	\$0	\$0	\$0	(\$944)	\$0	\$0	\$0	\$0	\$0
HOUSEHOLD HAZARDOUS WASTE PROGRAM	(\$1,311)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$1,311)	\$0	\$0
WATERCOURSE MAINTENANCE	\$87	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$87	\$0
INTEREST AND OTHER REVENUE	(\$1,463)	(\$523)	(\$315)	(\$475)	(\$123)	\$0	(\$19)	\$0	\$0	\$0	(\$8)	\$0
2013 SURPLUS APPLIED	(\$3,919)	(\$1,133)	(\$527)	(\$736)	(\$1,040)	\$0	(\$29)	(\$76)	\$119	\$0	(\$497)	\$0
USER CHARGE RATE STABILIZATION FUND	(\$1,000)	\$0	(\$900)	(\$100)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
IWPP RATE STABILIZATION FUND	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
SUBTOTAL	(\$7,382)	\$1,926	\$418	\$1,947	(\$317)	(\$8,733)	(\$992)	(\$76)	\$119	(\$1,311)	(\$363)	\$0
ESTIMATED 2015 BILLABLE COSTS	\$71,576	\$25,398	\$14,579	\$23,302	\$5,230	\$0	\$0	\$796	\$1,381	\$0	\$0	\$890
% ALLOCATION FOR I/ COSTS		82.92%			17.08%							

2015 BUDGETED UNIT PROCESS-PARAMETER RELATIONSHIPS

TABLE 3-2

2015 CONNECTIONS & PROJECTED WASTELOADS:

FLOW <u>M.G.D.</u> <u>\$179.2</u>	BOD <u>LBS./DAY</u> <u>\$342,814</u>	TSS <u>LBS./DAY</u> <u>\$408,406</u>	<u>CONNECTIONS</u> <u>\$303,378</u>
---	--	--	--

2015 UNIT COSTS (DOES NOT INCLUDE WATERCOURSE COSTS):

	<u>FLOW</u> <u>CENTS/1000 GAL.</u>	<u>BOD</u> <u>CENTS/LBS.</u>	<u>TSS</u> <u>CENTS/LBS.</u>	<u>DOLLARS/CONN.</u>
BILLABLE COSTS	\$0.38830	\$0.11651	\$0.15632	\$17.24
I/I ALLOCATION	<u>\$0.56531</u>	<u>\$0.00000</u>	<u>\$0.00000</u>	<u>\$12.64</u>
	\$0.95361	\$0.11651	\$0.15632	\$29.88
PERMIT FEE SURCHARGE	<u>\$0.01068</u>	<u>\$0.00130</u>	<u>\$0.00175</u>	<u>\$0.33</u>
	<u>\$0.96429</u>	<u>\$0.11781</u>	<u>\$0.15807</u>	<u>\$30.21</u>

UNITS OF SERVICE BY CLASS OF USER:

<u>CLASS OF USER</u>	<u>ESTIMATED</u> <u>BILLABLE FLOW</u> <u>(1000 GAL.)</u>	<u>ESTIMATED</u> <u>CONNECTIONS</u>	<u>ESTIMATED</u> <u>BOD LBS.</u>	<u>ESTIMATED</u> <u>TSS LBS.</u>	
RESIDENTIAL	17,249,355	263,567	44,589,582	53,231,512	
NON-CERTIFIED COMMERCIAL	10,414,969	37,072	26,926,865	32,138,516	
CERTIFIED COMMERCIAL	1,697,038	2,026	3,658,322	4,360,761	
CERTIFIED INDUSTRIAL	<u>3,567,954</u>	<u>713</u>	<u>39,754,716</u>	<u>18,546,582</u>	
TOTALS	<u>32,929,316</u>	<u>303,378</u>	<u>114,929,485</u>	<u>108,277,371</u>	
ESTIMATED BILLABLE WASTELOADS PER DAY	90,217,304		314,875	296,650	
ESTIMATED INFILTRATION/INFLOW PER DAY	<u>89,000,000</u>		<u>27,939</u>	<u>111,756</u>	
TOTAL DAILY WASTELOADS	<u>179,217,304</u>		<u>342,814</u>	<u>408,406</u>	TOTAL I/I COSTS
INFILTRATION/INFLOW COSTS (INCLUDES ISS)	<u>\$12,613,926</u>		<u>\$1,188,138</u>	<u>\$6,376,440</u>	<u>\$22,449,504</u>
<u>PERMIT FEES SURCHARGE:</u>					
PERMIT FEES	\$796,000				
TOTAL BUDGET W/O PERMIT FEES	<u>\$70,780,000</u>				
SURCHARGE	<u>1.12%</u>				

TABLE 3-3

ALLOCATION OF 2015 O&M WATERCOURSE COSTS

WATERCOURSE	ALLOCATION PERCENTAGES	2015 BUDGETED COSTS	2013 (SURPLUS) DEFICIT	2015 TOTAL COSTS	2015 PROJECTED BILLABLE FLOW(Q) MMSD (1000 GAL.)	2015 PROJECTED BILLABLE FLOWS (Q) BY COMMUNITY							BILLABLE FLOWS FOR WATERCOURSE (1000 GAL.)	WATERCOURSE RATE (PER 1000 GAL.)		
						BROOKFIELD	BUTLER	CALEDONIA	ELM GROVE	GERMANTOWN	MENOMONEE FALLS	MEQUON			MUSKEGO	NEW BERLIN
LINCOLN CREEK	29.3%	\$120,130	(\$106,293)	\$13,837	\$28,721,274										28,721,274	\$0.00048
MILWAUKEE RIVER	0.0%	\$0	\$0	\$0	\$28,721,274							\$573,924		\$92,818	29,388,016	\$0.00000
SOUTH BRANCH CREEK	0.4%	\$1,640	\$1,789	\$3,429	\$28,721,274										28,721,274	\$0.00012
HONEY CREEK	7.1%	\$29,110	(\$55,920)	(\$26,810)	\$28,721,274										28,721,274	(\$0.00093)
MENOMONEE RIVER	26.1%	\$107,010	\$7,532	\$114,542	\$28,721,274	432,740	84,348		155,198	594,171	864,201	573,924		883,358	32,309,214	\$0.00355
LITTLE MENOMONEE RIVER	0.1%	\$410	\$381	\$791	\$28,721,274					594,171		573,924			29,889,369	\$0.00003
UNDERWOOD CREEK	6.5%	\$26,650	\$13,729	\$40,379	\$28,721,274	432,740			155,198					883,358	30,192,570	\$0.00134
UNDERWOOD CREEK S.BRANCH	0.7%	\$2,870	(\$11,765)	(\$8,895)	\$28,721,274	432,740			155,198					883,358	30,192,570	(\$0.00029)
WHITNALL PARK CREEK	0.0%	\$0	\$0	\$0	\$28,721,274							516,513		883,358	30,121,145	\$0.00000
BEAVER CREEK	0.0%	\$0	\$0	\$0	\$28,721,274							573,924			29,295,188	\$0.00000
ROOT RIVER	5.3%	\$21,730	(\$33,410)	(\$11,680)	\$28,721,274							516,513		883,358	30,121,145	(\$0.00039)
ROOT RIVER EAST BRANCH	0.6%	\$2,460	(\$994)	\$1,466	\$28,721,274										28,721,274	\$0.00005
OAK CREEK	0.0%	\$0	\$0	\$0	\$28,721,274										28,721,274	\$0.00000
OAK CREEK N. BRANCH	0.0%	\$0	\$0	\$0	\$28,721,274										28,721,274	\$0.00000
WILSON PARK CREEK	12.7%	\$52,070	(\$37,199)	\$14,871	\$28,721,274										28,721,274	\$0.00052
KINNICKINNIC	11.0%	\$45,100	(\$274,562)	(\$229,462)	\$28,721,274										28,721,274	(\$0.00799)
LYONS CREEK	0.1%	\$410	(\$878)	(\$468)	\$28,721,274										28,721,274	(\$0.00002)
EDGERTON CHANNEL	0.1%	\$410	\$381	\$791	\$28,721,274										28,721,274	\$0.00003
INDIAN CREEK	0.0%	\$0	\$0	\$0	\$28,721,274										28,721,274	\$0.00000
TOTAL	100.0%	\$410,000	(\$497,209)	(\$87,209)												

WATERCOURSE RATES BY COMMUNITY

MMSD	(\$0.00350)
BROOKFIELD	\$0.00460
BUTLER	\$0.00355
CALEDONIA	\$0.00000
ELM GROVE	\$0.00460
GERMANTOWN	\$0.00358
MENOMONEE FALLS	\$0.00355
MEQUON	\$0.00358
MUSKEGO	(\$0.00039)
NEW BERLIN	\$0.00421
THIENSVILLE	\$0.00000

Table3-4

2015 FLOW RATE AND VOLUMETRIC CHARGES BY COMMUNITY

<u>FLOW-CENTS/1000 GAL.</u>	MMSD	BROOKFIELD	BUTLER	CALEDONIA	ELM GROVE	GERMANTOWN	MENOMONEE FALLS	MEQUON	MUSKEGO	NEW BERLIN	THIENSVILLE
BASE FLOW RATE-PER TABLE 3-2	\$0.96429	\$0.96429	\$0.96429	\$0.96429	\$0.96429	\$0.96429	\$0.96429	\$0.96429	\$0.96429	\$0.96429	\$0.96429
WATERCOURSE RATES	<u>(\$0.00350)</u>	<u>\$0.00460</u>	<u>\$0.00355</u>	<u>\$0.00000</u>	<u>\$0.00460</u>	<u>\$0.00358</u>	<u>\$0.00355</u>	<u>\$0.00358</u>	<u>(\$0.00039)</u>	<u>\$0.00421</u>	<u>\$0.00000</u>
2015 FLOW RATE BY COMMUNITY	<u>\$0.96079</u>	<u>\$0.96889</u>	<u>\$0.96784</u>	<u>\$0.96429</u>	<u>\$0.96889</u>	<u>\$0.96787</u>	<u>\$0.96784</u>	<u>\$0.96787</u>	<u>\$0.96390</u>	<u>\$0.96850</u>	<u>\$0.96429</u>
<u>VOLUMETRIC CHARGES:</u> (PER THOUSAND GALLONS)											
FLOW	\$0.960790	\$0.968890	\$0.967840	\$0.964290	\$0.968890	\$0.967870	\$0.967840	\$0.967870	\$0.963900	\$0.968500	\$0.964290
BOD	\$0.304539	\$0.304539	\$0.304539	\$0.304539	\$0.304539	\$0.304539	\$0.304539	\$0.304539	\$0.304539	\$0.304539	\$0.304539
TSS	<u>\$0.487804</u>	<u>\$0.487804</u>	<u>\$0.487804</u>	<u>\$0.487804</u>	<u>\$0.487804</u>	<u>\$0.487804</u>	<u>\$0.487804</u>	<u>\$0.487804</u>	<u>\$0.487804</u>	<u>\$0.487804</u>	<u>\$0.487804</u>
TOTAL	<u>\$1.753133</u>	<u>\$1.761233</u>	<u>\$1.760183</u>	<u>\$1.756633</u>	<u>\$1.761233</u>	<u>\$1.760213</u>	<u>\$1.760183</u>	<u>\$1.760213</u>	<u>\$1.756243</u>	<u>\$1.760843</u>	<u>\$1.755633</u>
<u>AVERAGE HOUSEHOLD CHARGE:</u>											
ANNUAL VOLUMETRIC CHARGE	\$94.96	\$92.16	\$75.19	\$70.73	\$88.20	\$90.31	\$90.66	\$91.03	\$97.28	\$95.38	\$86.89
CONNECTION CHARGE	<u>\$30.21</u>	<u>\$30.21</u>	<u>\$30.21</u>	<u>\$30.21</u>	<u>\$30.21</u>	<u>\$30.21</u>	<u>\$30.21</u>	<u>\$30.21</u>	<u>\$30.21</u>	<u>\$30.21</u>	<u>\$30.21</u>
	<u>\$125.17</u>	<u>\$122.37</u>	<u>\$105.40</u>	<u>\$100.94</u>	<u>\$118.41</u>	<u>\$120.52</u>	<u>\$120.87</u>	<u>\$121.24</u>	<u>\$127.49</u>	<u>\$125.59</u>	<u>\$117.10</u>

Table 3-5

User Charge Stabilization Fund

	Flow	BOD	TSS	Connections	Total by Year
Fund Balance at December 31, 2013	\$ 4,580,730	\$ 1,008,856	\$ 2,530,279	\$ 527,088	\$ 8,646,953
Additions/(Withdrawals) net of interest earned in the year 2014	\$ -0-	\$ -0-	\$ 550,000	\$ 450,000	\$ 1,000,000
Fund Balance at December 31, 2014	\$ 4,580,730	\$ 1,008,856	\$ 3,080,279	\$ 977,088	\$ 9,646,953
Additions/(Withdrawals) in the year 2015	\$ -0-	\$ (900,000)	\$ -0-	\$ (100,000)	\$ (1,000,000)
Fund Balance at December 31, 2015	\$ 4,580,730	\$ 108,856	\$ 3,080,279	\$ 877,088	\$ 8,646,953

Section: 4
Title: Typical Process Wastestrengths
Reference: Secs. 17.209, MMSD Rules, and Appendix A(2.)(D) and (E)

The User Charge/Cost Recovery Program adopted by the District utilizes a modified surcharge method for calculating sewer user charges. This method applies a constant rate per unit of volume to all users, plus an additional surcharge to industrial users discharging process wastewaters with wastestrengths greater than those associated with normal domestic sewage. These domestic wastestrengths are defined in Section 1 of this manual as the Equivalent Residential Unit.

For each industrial Standard Industrial Classification (SIC) code, typical process wastestrengths were characterized on a collective basis during the development of the District's User Charge/Cost Recovery Program. These typical process wastestrengths were derived from the following three sources:

1. Responses to wastestrength certification forms requested of all major industries.
2. A sampling program as described in detail in Technical Memorandum 4F.
3. An extensive literature search as described in Technical Memorandum 4C.

Table 4-1 lists industrial SIC codes and the applicable typical process wastestrengths for each SIC code. These typical process wastestrengths shall be applied to process wastewater discharges not certified by the user as to wastestrength. For industrial SIC codes not listed in Table 4-1, it should be assumed that the process wastestrengths are equal to the normal domestic wastestrengths of 310 mg/L BOD and 370 mg/L TSS.

During 1981 the District implemented its verification sampling program which consists of District personnel periodically sampling industrial users who have certified their process wastestrengths. This sampling program is producing an expanded data base which will be used to periodically review the wastestrengths appearing in Table 4-1. Revisions to Table 4-1 as a result of this periodic review will be published prior to January 1st of each year.

Table 4-1 - TYPICAL PROCESS WASTESTRENGTHS

<u>SIC Code</u>	<u>Title</u>	<u>BOD (mg/L)</u>	<u>TSS (mg/L)</u>
201	MEAT PRODUCTS		
2011	Meat Packing Plants	800	520
2013	Sausage and Other Prepared Meat Products	500	370
2016	Poultry Dressing Plants	800	520
2017	Poultry and Egg Processing	500	370
202	DAIRY PRODUCTS		
	all	2,100	370
203	CANNED AND PRESERVED FRUITS AND VEGETABLES		
	all	1,400	370
204	GRAIN MILL PRODUCTS		
	all	3,200	4,500
205	BAKERY PRODUCTS		
2051	Bread and Other Bakery Products	1,000	500
2052	Cookies and Crackers	670	390
206	SUGAR AND CONFECTIONERY PRODUCTS		
	all	1,000	370
207	FATS AND OILS		
	all	1,300	1,100
208	BEVERAGES		
2082	Malt Beverages	1,500	1,000
2083	Malt	1,000	370
2084	Wines, Brandy, and Brandy Spirits	650	370
2085	Distilled, Rectified, and Blended Liquors	650	370
2086	Bottled and Canned Soft Drinks	590	370
2087	Flavoring Extracts and Syrups; Not Elsewhere Classified	590	370
209	MISCELLANEOUS FOOD PREPARATIONS AND KINDRED PRODUCTS		
2091	Canned and Cured Fish and Seafoods	1,100	370
2092	Fresh or Frozen Packaged Fish and Seafoods	1,100	370
2099	Food Preparations, Not Elsewhere Classified	2,000	700

Table 4-1 - TYPICAL PROCESS WASTESTRENGTHS

<u>SIC Code</u>	<u>Title</u>	<u>BOD (mg/L)</u>	<u>TSS (mg/L)</u>
285	PAINTS		
2851	Paints, Varnishes, Lacquers, Enamels and Allied Products	2,500	600
289	MISCELLANEOUS CHEMICAL PRODUCTS		
2891	Adhesives and Sealants	310	900
2893	Printing Inks	310	400
2899	Chemicals and Chemical Preparations; Not Elsewhere Classified	1,250	1,300
311	LEATHER TANNING AND FINISHING		
3111	Leather Tanning and Finishing	1,300	1,700
721	LAUNDRY, CLEANING AND GARMENT SERVICES		
7211	Power Laundries, Family and Commercial	540	370
7213	Linen Supply	870	500
7218	Industrial Launderers	870	1,100

Section: 5
Title: Municipal Wholesale Billing
Reference: Secs. 17.201, 17.301, 17.302, 17.303, MMSD Rules

The municipal sewer user data transmission is the basis for the District wholesale bill to the municipality. Enclosed with the wholesale bill is a statement of charges for each certified user. The municipality should include this statement with the retail bill for each certified user.

The data transmission consists of three major user classes (UC):

1. Residential: User data includes "units" and "connections". Residential users discharge domestic strength wastewater only. Domestic strength characteristics are described in Section 1. Residential units are part of total housing units within a municipality. A housing unit may be a house, apartment, condominium, mobile home, etc., occupied as separate living quarters, or if vacant, intended for occupancy. A housing unit is classified either residential or commercial depending on the characteristics of the building. A residential structure usually accommodates 1-4* housing units as defined in Sec. 17.301, MMSD Rules.
2. Commercial: User data includes "water consumption" and "connections." Commercial users include buildings with more than 4* housing units, businesses and institutions. Commercial users are divided into three groups:
 - Noncertified. These users have not certified discharge or wastewater strength data to the District. All the water they use is discharged to the sanitary sewer, at domestic strength. Individual non-metered users are reported on Schedule F-1 (business) or Schedule F-2 (apartments). User data for metered users is reported in total.
 - Discharge Certified (UC 23). Individual users are reported on Schedule A. A percentage of the water they use is discharged to the sanitary sewer, at domestic strength.
 - Wastestrength Certified (UC 32). Individual users are reported on Schedule B. A percentage of the water they use is discharged to the sanitary sewer, at a strength based on laboratory analysis of wastewater samples.

Water consumption for a certified user with a non-metered water source is initially calculated on Schedule G. The facility user data is then transferred to either Schedule A or B as appropriate.

* or 2 or more units, depending on billing alternative adopted in municipal ordinance.

3. Industrial - User data includes water consumption and connections. Industrial users discharge process wastewater. Industrial users are divided into three groups:

- Noncertified (UC 30). These users have not certified discharge or wastestrength data to the District. Individual users are reported on Schedule C.
- Discharge Certified (UC 31). Individual users are reported on Schedule D. A percentage of the water they use is discharged to the sanitary sewer at typical process wastestrengths.
- Wastestrength Certified (UC 33). Individual users are reported on Schedule E. A percentage of the water they use is discharged to the sanitary sewer at wastestrengths based upon laboratory analysis of wastewater samples.

Water consumption for an industrial user with a non-metered water source is initially calculated on Schedule G. The facility user data is then transferred to either Schedule C, D, or E as appropriate.

A survey of employee hours should be conducted and reported to the District before April 1 of every year for each unmetered commercial and industrial user as defined in Sec. 17.306, MMSD Rules. Survey results should be reported to the District on Schedule F-1 (pg. 5-11) for commercial users and Schedule G (pg. 5-13) for industrial users. A sample form which may be used to solicit employee hour data is shown on pg. 5-15.

You may refer to the forms used for municipal wholesale billing as follows:

<u>Title</u>	<u>Pages</u>
Municipal Data Transmission Sheet	5-5
Schedule A - Discharge Certified Commercial	5-6
Schedule B - Wastestrength Certified Commercial	5-7
Schedule C - Noncertified Industrial	5-8
Schedule D - Discharge Certified Industrial	5-9
Schedule E - Wastestrength Certified Industrial	5-10
Schedule F-1 - Non-metered Business	5-11
Schedule F-2 - Non-metered Apartments and Motels	5-12
Schedule G - Non-metered Industrial/Cert. Comml.	5-13
Schedule H - Domestic Waste from Mobile Sources	5-14

Adjustments to the data transmission should be reported to the User Charge Billing Clerk. A wholesale bill may not be adjusted beyond January 1 of the year prior to the ending date of the most recently billed period. Therefore, the allowable adjustment period may extend from 13 months (last bill period ends January 31) up to 24 months (last bill period ends December 31). However, in situations where the bill adjustment is due to a materially inaccurate or falsified certification form, Sec. 17.105 and 17.202(6), MMSD Rules, allows the District to adjust billings retroactive to the date or dates when the bills based upon the inaccurate certification form were originally due.

The following reporting guidelines are intended to facilitate municipal administration of the user charge program:

- Vacant Structures. Sewer connections and units associated with vacant structures need not be reported if both: 1) public water service has been disconnected and 2) no local water or sewer user charges are billed to the vacant property.
- Multiple Water Accounts in an Apartment Building or Condominium. The number of units associated with each water account may be used to determine user class. For example, a 40 unit apartment building, generally considered commercial, may be classified residential if each unit has a separate water account. In this case 1/40 of a connection would be assigned to each water account. On the other hand, a trailer in an 89 unit mobile home park, generally considered residential, may be classified commercial if the mobile home park is served by a single water meter.
- Connection Charges for Mobile Home Parks.

Regardless of the number of water meters or the classification (residential or commercial) that is assigned to a mobile home park, the data transmission shall report one connection for each mobile home served.

Analysis has indicated that sewage collection facilities needed to serve a mobile home are not substantially different than that required to serve dwellings on 35 ft. x 125 ft. lots, which are commonplace in several communities.
- New Users. New users generally should be reported from either the date of permitted occupancy or date of connection to the sewer system, whichever is more recent. Reporting usage for part of a billing period should be consistent with local billing practice.
- Business in the Home. If all employees are family members, a business operated in a home may be classified as a residential user.

- Submeters. Some facilities have submeters to measure sprinkling water, cooling water discharged to a storm sewer, or wastewater discharged to the sanitary sewer. In most cases, the municipality may use submeter data to directly report the volume of wastewater discharged to the sanitary sewer. This water consumption should be identified as a "net" amount on the data transmission.
- Motels on Unmetered Wells. Motels served by unmetered wells are reported on Schedule F-2. An occupancy factor of 1.0 people per motel unit is used to estimate water consumption. A residence attached to the motel may also be reported on Schedule F-2 at the appropriate residential occupancy factor.
- Domestic Waste from Mobile Sources. Individual users are reported on Schedule H. The name and location of any facilities that collect and discharge domestic wastewater from the holding tanks of recreation vehicles, boats, airplanes, or any other mobile sources.
- Classification and Connection Charges for Developments with Multiple Residences. Developments with multiple residences include apartments, condominiums, cooperatives, and mobile home parks. For these developments, classification depends upon whether the development as a whole or each individual unit has a water account. The number of connection charges due depends upon the number of sewers leaving individual units, not the number of connections from the development to the public sewer. The following table provides guidance for classification and counting connections. Please contact the District to address specific questions regarding individual circumstances.

Type of Development	Water Accounts	Sewer Connections	Classification
Multiple units in one building	One per building	One	Commercial
Multiple units in one building	One per unit	One	Residential
Multiple units, multiple structures*	One per whole development	One per unit	Commercial
Multiple units, multiple structures*	One per unit	One per unit	Residential

*Includes mobile homes

The schedule of submittal dates for each municipal data transmission is shown in Table 5-1 (pg. 5-16). If requested by a municipality, the District may revise the schedule for data transmissions. The District will submit the wholesale bill to the municipality within five business days after receiving the data transmission. If the data transmission is received by the schedule date shown in Table 5-1, payment is due 45 days from receipt of the wholesale bill. If the data transmission is received after the schedule date, the 45 day remittance period will be shortened accordingly.

MUNICIPAL DATA TRANSMISSION

MUNICIPALITY OF _____ DISTRICT _____

FOR THE PERIOD FROM _____ TO _____

	Units	Connections
Residential User Class	_____	_____
Noncertified Commercial User Class:	1000 Gallons	Connections
All Metered Users	_____	_____
Non-Metered Business (Sch. F-1)	_____	_____
Non-Metered Apartments (Sch. F-2)	_____	_____
Total	=====	=====

Discharge Certified Commercial (UC 23)
Please complete Schedule A

Waste Strength Certified Commercial (UC 32)
Please complete Schedule B

Noncertified Industrial Users (UC 30)
Please complete Schedule C

Discharge Certified Industries (UC 31)
Please complete Schedule D

Waste Strength Certified Industries (UC 33)
Please complete Schedule E

Instructions: See Section 5 of the Cost Recovery Procedures Manual for information on data items and submission dates. Mail or FAX this form and all supporting schedules to:

User Charge Billing Clerk
Accounting Department
Milwaukee Metropolitan Sewerage District
260 West Seeboth Street
Milwaukee, WI 53204-1446
FAX: 414-272-0270

MUNICIPAL DATA TRANSMISSION

SCHEDULE D

Municipality of _____

For the Period from _____ to _____

DISCHARGE CERTIFIED INDUSTRIAL USERS:

<u>Local ID #</u>	<u>MMSD File #</u>	<u>Facility Name</u>	<u>Water Consumption (Gallons)</u>	<u>Connections</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

MUNICIPAL DATA TRANSMISSION

SCHEDULE G

Worksheet for Non-metered Facilities in
Industrial User Classes

Municipality of _____

For the Period from _____ to _____

Instructions: Use Schedule G to calculate water consumption for non-metered facilities not included on Schedule F-1 or F-2. Transfer user data for the facility to Schedule A, B, C, D, or E as appropriate.

<u>Local</u> <u>ID #</u>	<u>MMSD</u> <u>File#</u>	<u>SIC</u> <u>Code</u>	<u>Facility Name</u>	<u>A</u> <u>Employee</u> <u>Hr/Period</u>	<u>B*</u> <u>Gal.Per</u> <u>Empl/Hr</u>	<u>A x B</u> <u>Gallons</u>	<u>Enter</u> <u>on</u> <u>Sch.</u>
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

*If SIC Code/gallons per employee hour does not agree with Table 6-1, explain difference.

MUNICIPAL DATA TRANSMISSION

SCHEDULE H

Worksheet for Facilities Discharging
Domestic Waste from Mobile Sources

Municipality of _____

For the Period from _____ to _____

Facility Name

Address

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

SURVEY OF EMPLOYEE HOURS FOR NON-METERED BUSINESS

Owner/Facility Name _____

Business Location _____

Mailing Address if Different _____

Instructions: Sanitary sewer charges for unmetered water users are based on the number of employee hours worked at the business location. Please report the total number of hours that each employee was present at the above business location, including management, working owners, and part time employees.

Description of business operations: _____

SIC Code _____

Employee Data for _____

	<u>Number</u>	<u>Hours/Year</u>
Full Time Employees	_____	_____
Part Time Employees	_____	_____
Total	_____	_____

Do you anticipate a significant change in employee hours during the next twelve months?

yes () no ()

If yes, please explain.

Return by: _____

Signature of Certifying Official

Return to: _____

Title of Certifying Official

Date

Telephone Number

Tax Key _____

TABLE 5-1
SCHEDULES FOR TRANSMISSION OF USER DATA AND USER CHARGES

<u>Municipality</u>	<u>Class or District</u>	<u>User Data to MMSD</u>	<u>Period Covered</u>
Bayside	All	9 Apr.	(Jan-Feb-Mar)
		2 July	(Apr-May-June)
		2 Oct.	(July-Aug-Sept)
		7 Jan.	(Oct-Nov-Dec)
Brookfield	All	6 Mar.	(Jan-Feb-Mar)
		11 June	(Apr-May-June)
		11 Sept.	(July-Aug-Sept)
		10 Dec.	(Oct-Nov-Dec)
Brown Deer	All	20 Feb.	(Dec-Jan-Feb)
		21 May	(Mar-Apr-May)
		21 Aug.	(June-July-Aug)
		25 Nov.	(Sept-Oct-Nov)
Butler	All	5 Mar.	(Dec)(Jan-Feb)
		4 June	(Mar-Apr-May)
		4 Sept.	(June-July-Aug)
		3 Dec.	(Sept-Oct-Nov)
Caledonia	All	7 Jan.	(Oct-Nov-Dec)
		9 Apr.	(Jan-Feb-Mar)
		9 July	(Apr-May-June)
		9 Oct.	(July-Aug-Sept)
Crystal Ridge	All	6 Feb.	(Oct-Nov-Dec)
		8 May	(Jan-Feb-Mar)
		7 Aug.	(Apr-May-June)
		6 Nov.	(July-Aug-Sept)
Cudahy	Industries	30 Jan.	(December)
		27 Feb.	(January)
		27 Mar.	(February)
		30 April	(March)
		29 May	(April)
		26 June	(May)
		31 Jul.	(June)
		4 Sept.	(July)
		25 Sept.	(August)
		30 Oct.	(September)
		25 Nov.	(October)
4 Jan.	(November)		

**TABLE 5-1 (cont)
SCHEDULES FOR TRANSMISSION OF USER DATA AND USER CHARGES**

<u>Municipality</u>	<u>Class or District</u>	<u>User Data to MMSD</u>	<u>Period Covered</u>
Cudahy	#1	27 Feb. 26 June 30 Oct.	(Oct-Nov-Dec) (Jan) (Feb thru May) (June thru Sept)
Cudahy	#2	27 Mar. 31 Jul. 25 Nov.	(Nov-Dec) (Jan-Feb) (Mar thru June) (July thru Oct)
Cudahy	#3	30 April 4 Sept. 4 Jan.	(Dec thru Mar) (Apr thru July) (Aug thru Nov)
Cudahy	#4	30 Jan. 29 May 25 Sept.	(Sept thru Dec) (Jan thru Apr) (May thru Aug)
Cudahy	#5	27 Mar. 26 June 25 Sept. 4 Jan.	(Nov-Dec) (Jan) (Feb-Mar-Apr) (May-June-July) (Aug-Sept-Oct)
Elm Grove	All	28 Dec. 27 Mar. 2 July 25 Sept.	(Oct-Nov-Dec) (Jan-Feb-Mar) (Apr-May-June) (July-Aug-Sept)
Fox Point	All	20 Feb. 8 May 7 Aug. 6 Nov.	(Nov-Dec) (Jan) (Feb-Mar-Apr) (May-June-July) (Aug-Sept-Oct)
Franklin	All	7 Jan. 9 Apr. 2 July 2 Oct.	(Oct-Nov-Dec) (Jan-Feb-Mar) (Apr-May-June) (July-Aug-Sept)
Germantown	All	22 Jan. 10 Apr. 10 July 15 Oct.	(Oct-Nov-Dec) (Jan-Feb-Mar) (Apr-May-June) (July-Aug-Sept)

TABLE 5-1 (cont)
SCHEDULES FOR TRANSMISSION OF USER DATA AND USER CHARGES

<u>Municipality</u>	<u>Class or District</u>	<u>User Data to MMSD</u>	<u>Period Covered</u>
Glendale	#1	19 Feb. 19 May 19 Aug. 19 Nov.	(Dec) (Jan-Feb) (Mar-Apr-May) (June-July-Aug) (Sept-Oct-Nov)
Glendale	#2	18 Mar. 19 June 18 Sept. 18 Dec.	(Jan-Feb-Mar) (Apr-May-June) (July-Aug-Sept) (Oct-Nov-Dec)
Glendale	#3	21 Jan. 20 Apr. 20 July 20 Oct.	(Nov-Dec) (Jan) (Feb-Mar-Apr) (May-June-July) (Aug-Sept-Oct)
Greendale	#22	22 Jan. 23 Apr. 17 July 22 Oct.	(Oct-Nov-Dec) (Jan-Feb-Mar) (Apr-May-June) (July-Aug-Sept)
Greenfield	All	12 Jan. 17 Apr. 17 July 9 Oct.	(Oct-Nov-Dec) (Jan-Feb-Mar) (Apr-May-June) (July-Aug-Sept)
Hales Corners	All	13 Mar. 18 June 17 Sept. 17 Dec.	(Jan-Feb-Mar) (Apr-May-June) (July-Aug-Sept) (Oct-Nov-Dec)
Menomonee Falls	"A"	12 Jan. 10 Apr. 10 July 13 Oct.	(Oct-Nov-Dec) (Jan-Feb-Mar) (Apr-May-June) (July-Aug-Sept)
Menomonee Falls	"B"	12 Feb. 13 May 12 Aug. 4 Dec.	(Nov-Dec) (Jan) (Feb-Mar-Apr) (May-June-July) (Aug-Sept-Oct)

TABLE 5-1 (cont)
SCHEDULES FOR TRANSMISSION OF USER DATA AND USER CHARGES

<u>Municipality</u>	<u>Class or District</u>	<u>User Data to MMSD</u>	<u>Period Covered</u>	
Menomonee Falls	"C"	12 Mar.	(Dec)(Jan-Feb)	
		11 June	(Mar-Apr-May)	
		11 Sept.	(June-July-Aug)	
		11 Dec.	(Sept-Oct-Nov)	
Mequon	All	7 Jan.	(Oct-Nov-Dec)	
		9 Apr.	(Jan-Feb-Mar)	
		2 July	(Apr-May-June)	
		2 Oct.	(July-Aug-Sept)	
Milwaukee (Residential Non-Certified)	#1	15 Jan.	(Oct-Nov-Dec)	
		15 Apr.	(Jan-Feb-Mar)	
		15 July	(Apr-May-June)	
		15 Oct.	(July-Aug-Sept)	
Milwaukee	#2	13 Feb.	(Nov-Dec) (Jan)	
		15 May	(Feb-Mar-Apr)	
		14 Aug.	(May-June-July)	
		13 Nov.	(Aug-Sept-Oct)	
Milwaukee	#3	13 Mar.	(Dec) (Jan-Feb)	
		17 June	(Mar-Apr-May)	
		16 Sept.	(June-July-Aug)	
		16 Dec.	(Sept-Oct-Nov)	
Milwaukee (Certified Users)	#1	11-12	(Jan-Feb-Mar)	
		13-14	(Jan-Feb-Mar)	
		15-16	(Jan-Feb-Mar)	
		17-19	(Jan-Feb-Mar)	
		99	(March)	
		11-12	26 Feb.	(Jan-Feb-Mar)
		13-14	5 March	(Jan-Feb-Mar)
		15-16	12 March	(Jan-Feb-Mar)
		17-19	19 March	(Jan-Feb-Mar)
		99	26 March	(March)
		11-12	28 May	(Apr-May-June)
		13-14	4 June	(Apr-May-June)
		15-16	11 June	(Apr-May-June)
		17-19	18 June	(Apr-May-June)
		99	25 June	(June)
	11-12	27 Aug.	(July-Aug-Sept)	
	13-14	3 Sept.	(July-Aug-Sept)	
	15-16	10 Sept.	(July-Aug-Sept)	
	17-19	17 Sept.	(July-Aug-Sept)	
	99	25 Sept.	(September)	

TABLE 5-1 (cont)
SCHEDULES FOR TRANSMISSION OF USER DATA AND USER CHARGES

<u>Municipality</u>	<u>Class or District</u>	<u>User Data to MMSD</u>	<u>Period Covered</u>
	11-12	24 Nov.	(Oct-Nov-Dec)
	13-14	3 Dec.	(Oct-Nov-Dec)
	15-16	10 Dec.	(Oct-Nov-Dec)
	17-19	17 Dec.	(Oct-Nov-Dec)
	99	28 Dec.	(December)
Milwaukee (Certified Users)	#2		
	21-22	2 Jan.	(Nov-Dec-Jan)
	23-24	8 Jan.	(Nov-Dec-Jan)
	25-26	15 Jan.	(Nov-Dec-Jan)
	27-29	22 Jan.	(Nov-Dec-Jan)
	99	28 Jan.	(January)
	21-22	2 Apr.	(Feb-Mar-Apr)
	23-24	9 Apr.	(Feb-Mar-Apr)
	25-26	16 Apr.	(Feb-Mar-Apr)
	27-29	23 Apr.	(Feb-Mar-Apr)
	99	24 Apr.	(April)
	21-22	2 July	(May-June-July)
	23-24	9 July	(May-June-July)
	25-26	16 July	(May-June-July)
	27-29	23 July	(May-June-July)
	99	24 July	(July)
	21-22	1 Oct.	(Aug-Sept-Oct)
	23-24	8 Oct.	(Aug-Sept-Oct)
	25-26	15 Oct.	(Aug-Sept-Oct)
	27-29	22 Oct.	(Aug-Sept-Oct)
	99	28 Oct.	(October)
Milwaukee (Certified Users)	#3		
	31-32	29 Jan.	(Dec-Jan-Feb)
	33-34	5 Feb.	(Dec-Jan-Feb)
	35-36	12 Feb.	(Dec-Jan-Feb)
	37-39	19 Feb.	(Dec-Jan-Feb)
	99	25 Feb.	(February)
	31-32	30 Apr.	(Mar-Apr-May)
	33-34	7 May	(Mar-Apr-May)
	35-36	14 May	(Mar-Apr-May)
	37-39	21 May	(Mar-Apr-May)
	99	27 May	(May)

TABLE 5-1 (cont)
SCHEDULES FOR TRANSMISSION OF USER DATA AND USER CHARGES

<u>Municipality</u>	<u>Class or District</u>	<u>User Data to MMSD</u>	<u>Period Covered</u>
	31-32	30 July	(June-July-Aug)
	33-34	6 Aug.	(June-July-Aug)
	35-36	13 Aug.	(June-July-Aug)
	37-39	20 Aug.	(June-July-Aug)
	99	26 Aug.	(August)
	31-32	29 Oct.	(Sept-Oct-Nov)
	33-34	5 Nov.	(Sept-Oct-Nov)
	35-36	12 Nov.	(Sept-Oct-Nov)
	37-39	19 Nov.	(Sept-Oct-Nov)
	99	25 Nov.	(November)
Milwaukee Water Department	2 Plants	22 Jan. 9 Apr. 9 July 15 Oct.	(Oct-Nov-Dec) (Jan-Feb-Mar) (Apr-May-June) (July-Aug-Sept)
Muskego	All	2 Jan. 27 Mar. 2 July 1 Oct.	(Oct-Nov-Dec) (Jan-Feb-Mar) (Apr-May-June) (July-Aug-Sept)
Muskego	LF	20 Feb. 14 May 13 Aug. 13 Nov.	(Oct-Nov-Dec) (Jan-Feb-Mar) (Apr-May-June) (July-Aug-Sept)
New Berlin	All	13 Mar. 12 June 11 Sept. 11 Dec.	(Jan-Feb-Mar) (Apr-May-June) (July-Aug-Sept) (Oct-Nov-Dec)
Oak Creek	#1	20 Feb. 14 May 13 Aug. 6 Nov.	(Nov-Dec-Jan) (Feb-Mar-Apr) (May-June-July) (Aug-Sept-Oct)
Oak Creek	#2	12 Mar. 11 June 10 Sept. 10 Dec.	(Dec-Jan-Feb) (Mar-Apr-May) (June-July-Aug) (Sept-Oct-Nov)
Oak Creek	#3	9 April 9 July 15 Oct. 22 Jan.	(Jan-Feb-Mar) (Apr-May-June) (July-Aug-Sept) (Oct-Nov-Dec)

TABLE 5-1 (cont)
SCHEDULES FOR TRANSMISSION OF USER DATA AND USER CHARGES

<u>Municipality</u>	<u>Class or District</u>	<u>User Data to MMSD</u>	<u>Period Covered</u>
Oak Creek-Ash	LF	30 Jan.	(Oct-Nov-Dec)
		30 Apr.	(Jan-Feb-Mar)
		30 July	(Apr-May-June)
		30 Oct.	(July-Aug-Sept)
Oak Creek	Industries	22 Jan.	(Dec-Jan)
		20 Feb.	(Jan-Feb)
		19 Mar.	(Feb-Mar)
		17 Apr.	(Mar-Apr)
		20 May	(Apr-May)
		18 June	(May-June)
		17 July	(June-July)
		20 Aug.	(July-Aug)
		17 Sept.	(Aug-Sept)
		20 Oct.	(Sept-Oct)
		25 Nov.	(Oct-Nov)
17 Dec.	(Nov-Dec)		
River Hills	All	16 Apr.	(Jan thru Apr)
		14 Aug.	(May thru Aug)
		18 Dec.	(Sept thru Dec)
Shorewood	All	6 Mar.	(Dec) (Jan-Feb)
		5 June	(Mar-Apr-May)
		4 Sept.	(June-July-Aug)
		4 Dec.	(Sept-Oct-Nov)
St. Francis	All	6 Mar.	(Dec) (Jan-Feb)
		5 June	(Mar-Apr-May)
		4 Sept.	(June-July-Aug)
		4 Dec.	(Sept-Oct-Nov)
Thiensville	All	22 Jan.	(Oct-Nov-Dec)
		23 Apr.	(Jan-Feb-Mar)
		23 July	(Apr-May-June)
		22 Oct.	(July-Aug-Sept)

TABLE 5-1 (cont)
SCHEDULES FOR TRANSMISSION OF USER DATA AND USER CHARGES

<u>Municipality</u>	<u>Class or District</u>	<u>User Data to MMSD</u>	<u>Period Covered</u>
Wauwatosa	#1	20 Feb. 15 May 14 Aug. 25 Nov.	(Nov-Dec) (Jan) (Feb-Mar-Apr) (May-June-July) (Aug-Sept-Oct)
Wauwatosa	#2	13 Mar. 18 June 17 Sept. 18 Dec.	(Dec) (Jan-Feb) (Mar-Apr-May) (June-July-Aug) (Sept-Oct-Nov)
Wauwatosa	#3	22 Jan. 17 Apr. 17 July 16 Oct.	(Oct-Nov-Dec) (Jan-Feb-Mar) (Apr-May-June) (July-Aug-Sept)
Wauwatosa	#4	22 Jan. 20 Feb. 13 Mar. 17 Apr. 15 May 18 June 17 July 14 Aug. 17 Sept. 16 Oct. 25 Nov. 18 Dec.	(December) (January) (February) (March) (April) (May) (June) (July) (August) (September) (October) (November)
West Allis	#1	27 Feb. 29 May 28 Aug. 25 Nov.	(Nov-Dec) (Jan) (Feb-Mar-Apr) (May-June-July) (Aug-Sept-Oct)
West Allis	#2	27 Mar. 26 June 25 Sept. 29 Dec.	(Dec) (Jan-Feb) (Mar-Apr-May) (June-July-Aug) (Sept-Oct-Nov)
West Allis	#3	29 Jan. 28 Apr. 30 July 29 Oct.	(Oct-Nov-Dec) (Jan-Feb-Mar) (Apr-May-June) (July-Aug-Sept)

TABLE 5-1 (cont)
SCHEDULES FOR TRANSMISSION OF USER DATA AND USER CHARGES

<u>Municipality</u>	<u>Class or District</u>	<u>User Data to MMSD</u>	<u>Period Covered</u>
West Milwaukee	All	19 Feb. 8 May 13 Aug. 6 Nov.	(Nov-Dec) (Jan) (Feb-Mar-Apr) (May-June-July) (Aug-Sept-Oct)
West Milwaukee	Industries	28 Jan. 25 Feb. 26 Mar. 24 Apr. 27 May 25 June 24 July 26 Aug. 25 Sept. 28 Oct. 25 Nov. 28 Dec.	(January) (February) (March) (April) (May) (June) (July) (August) (September) (October) (November) (December)
Whitefish Bay	31	20 Feb. 12 June 15 Oct.	(Oct-Nov-Dec) (Jan) (Feb thru May) (June thru Sept)
Whitefish Bay	32	13 Mar. 16 July 13 Nov.	(Nov-Dec)(Jan-Feb) (Mar thru June) (July thru Oct)
Whitefish Bay	33	22 Jan. 15 May 11 Sept.	(Sept thru Dec) (Jan thru Apr) (May thru Aug)

Section: 6
Title: Typical Wastewater Discharge Rate
Reference: Secs. 17.209 and 17.303, MMSD Rules

In some municipalities, a number of commercial and industrial users rely on unmetered wells for their water supply. Section 17.303 of the District Rules specifies when the installation of meters are required on these wells. Until such installations are completed, the water consumption from these wells must be estimated. These estimates are based on the Typical Wastewater Discharge Rates in Table 6-1. For each SIC code listed, these factors relate estimated water consumption to the number of employee hours worked.

The factors listed in Table 6-1 are to be used by the District and municipalities in estimating the volume of discharge. If a Typical Wastewater Discharge Rate is needed for a SIC code not listed in Table 6-1, please contact the District.

Appeal of this section shall be in accordance with appeal provisions set forth in Chapter 17, District Rules and Regulations.

Table 6-1. TYPICAL WASTEWATER DISCHARGE RATES

<u>SIC</u> <u>CODE</u>	<u>Description</u>	<u>Gallons Per</u> <u>Employee Hour</u>
0742	Veterinary Services for Animal Specialities	20.0
0752	Animal Specialty Services	16.0
0782	Lawn and Garden Services	10.0
1446	Industrial Sand	5.0
1521	General Contractors - Residential	2.3
1541	General Contractors - Ind. Bldgs. & Warehouses	2.3
1611	General Contractors - Public Works	2.3
1711	Plumbing, Heating & Air Conditioning	2.3
1731	Electrical Work	2.3
1761	Roofing and Sheet Metal Work	2.3
1799	Special Trade Contractors, Not Elsewhere Classified	2.3
2013	Sausage & Other Prepared Meats	110.0
2065	Candy and Other Confectionery Products	50.0
2087	Flavoring Extracts & Syrups, Not Elsewhere Classified	75.0
2394	Canvas and Related Products	2.3
2431	Millwork	5.0
2434	Wood Kitchen Cabinets	5.0
2522	Metal Office Furniture	2.3
2721	Periodicals: Publishing & Printing	10.0
2731	Books: Publishing & Printing	10.0
2751	Commercial Printing, Letterpress & Screen	10.0
2752	Commercial Printing, Lithographic	10.0
2789	Bookbinding and Related Work	10.0
2795	Lithographic Platemaking & Related Services	25.0
2819	Industrial Inorganic Chemicals, Not Elsewhere Classified	10.0
2834	Pharmaceutical Preparations	10.0
2841	Soap & Other Detergents	15.0
2893	Mfg. of Printing Ink	30.0
2899	Chemicals & Chemical Preparations, Not Elsewhere Classified	10.0
3079	Misc. Plastics Products	85.0
3111	Leather Tanning & Finishing	345.0
3272	Concrete Products, Except Block & Brick	35.0
3273	Ready-Mixed Concrete	90.0
3293	Gaskets, Packing, and Sealing Devices	2.3
3325	Steel Foundries, Not Elsewhere Classified	115.0
3341	Secondary Smelting and Refining of Nonferrous Metals	2.7
3441	Fabricated Structural Metal	25.0
3442	Metal Doors, Sash, Frames, Molding and Trim	2.3
3444	Sheet Metal Work	40.0
3451	Screw Machine Products	10.0
3462	Iron and Steel Forgings	5.0
3469	Metal Stampings, Not Elsewhere Classified	5.0
3471	Electroplating, Plating, Polishing, Anodizing, etc.	50.0
3479	Coating, Engraving and Allied Services, Not Elsewhere Classified	100.0
3495	Wire Springs	2.3
3498	Fabricated Pipe & Fittings	2.3
3499	Fabricated Metal Products, Not Elsewhere Classified	25.0

Table 6-1. TYPICAL WASTEWATER DISCHARGE RATES (cont.)

<u>SIC</u> <u>CODE</u>	<u>Description</u>	<u>Gallons Per</u> <u>Employee Hour</u>
3531	Construction Machinery & Equipment	5.0
3544	Spec. Dies & Tools, Die Sets, Jigs & Fixtures, Molds	10.0
3562	Ball and Roller Bearings	5.0
3565	Industrial Patterns	5.0
3569	General Industrial Machinery & Equipment, Not Elsewhere Classified	4.0
3576	Scales and Balances, Except Laboratory	2.3
3599	Machinery, Except Electrical, Not Elsewhere Classified	10.0
3613	Switchgear & Switchboard Apparatus	5.0
3632	Household Refrigerators and Home and Farm Freezers	2.3
3694	Electrical Equipment for Internal Combustion Engines	2.3
3714	Motor Vehicle Parts & Accessories	75.0
3999	Manufacturing Industries, Not Elsewhere Classified	2.3
4141	Local Passenger Transportation Charter Service	2.3
4151	School Buses	2.3
4212	Local Trucking Without Storage	10.0
4213	Trucking, Except Local	2.3
4225	General Warehousing and Storage	2.3
4311	U. S. Postal Service	2.3
4722	Travel Agency	2.3
4811	Telephone Communication	2.3
4832	Radio Broadcasting	2.3
5042	Toys and Hobby Goods & Supplies	2.3
5063	Electrical Apparatus & Equipment	2.3
5064	Electrical Appliances	2.3
5072	Hardware - Wholesale Distribution	2.3
5082	Construction and Mining Machinery and Equipment	2.3
5084	Industrial Machinery & Equipment	2.3
5142	Frozen Foods	10.0
5149	Wholesale Groceries & Related Products, Not Elsewhere Classified	10.0
5199	Wholesale Non-Durable Goods, Not Elsewhere Classified	10.0
5211	Lumber & Other Building Materials Dealers	2.3
5231	Paint, Glass, Wallpaper	2.3
5251	Hardware - Retail Sales	2.3
5261	Retail Nurseries Lawn & Garden Supply Stores	10.0
5271	Mobile Home Dealers	2.3
5311	Department Stores	2.3
5331	Variety Stores	2.3
5411	Grocery Stores with Meat & Produce Dept.	16.0
5412	Grocery Stores without Meat & Produce Dept.	6.0
5441	Candy, Nut, and Confectionery Stores	10.0
5462	Retail Bakeries - Baking and Selling	10.0
5499	Miscellaneous Food Stores	2.3
5511	Motor Vehicle Dealers	5.0
5531	Auto and Home Supply Stores	2.3
5541	Gasoline Service Stations	15.0
5551	Boat Dealers	5.0

Table 6-1. TYPICAL WASTEWATER DISCHARGE RATES (cont.)

<u>SIC</u> <u>CODE</u>	<u>Description</u>	<u>Gallons Per</u> <u>Employee Hour</u>
5611	Clothing Stores	2.3
5661	Shoe Stores	2.3
5681	Furriers & Fur Shops	5.0
5711	Furniture, Floor Coverings, Appliances	2.3
5812	Eating Places (Restaurants)	20.0
5813	Drinking Places (Taverns)	45.0
5912	Drug Stores and Proprietary Stores	2.3
5921	Liquor Stores	2.3
5931	Used Merchandise Stores	2.3
5941	Sporting Goods Stores & Bicycle Shops	2.3
5942-9	Miscellaneous Stores	2.3
5992	Florists	10.0
5999	All Other Retail Stores	2.3
6022-59	Banks	2.3
6122-63	Savings & Loans	2.3
6311	Insurance Companies	2.3
6411	Insurance Agents	2.3
6512	Operators of Nonresidential Buildings	2.3
6515	Operators of Residential Mobile Home Sites	2.3
6531	Real Estate Agents and Managers	2.3
6553	Cemetery Subdividers and Developers	2.3
6722	Management Investment Offices	2.3
7211	Power Laundries, Family & Commercial	105.0
7212	Cleaning & Laundry Pick-up Stations	2.3
7215	Fac. Coin-Op Laundries & Dry Cleaning	910.0
7216	Dry Cleaning Plants, Except Rug Cleaning	5.0
7221	Photographic Studios	2.3
7231	Beauty Shops	16.0
7241	Barber Shops	10.0
7261	Funeral Service & Crematories	15.0
7299	Miscellaneous Services, Not Elsewhere Classified	2.3
7311	Advertising Agencies, Employment Services	2.3
7332	Blueprinting and Photocopying Services	2.3
7361	Employment Agencies	2.3
7391	Research and Development Laboratories	10.0
7395	Photofinishing Labs	10.0
7512	Passenger Car Rental & Leasing, w/o Drivers	10.0
7531	Top and Body Repair Shop	5.0
7534	Tire Retreading & Repair Shops	20.0
7538	General Automotive Repair Shops	5.0
7542	Car Washes	115.0
7622	Radio & Television Repair	2.3
7699	Repair Shops and Related Services, Not Elsewhere Classified	2.3
7814	Motion Picture and Tape Production	10.0
7832	Motion Picture Theaters, not Drive-Ins	20.0
7911	Dance Halls, Studios, and Schools	20.0
7922	Theatrical Producers	20.0

Table 6-1. TYPICAL WASTEWATER DISCHARGE RATES (cont.)

<u>SIC CODE</u>	<u>Description</u>	<u>Gallons Per Employee Hour</u>
7933	Bowling Alleys	50.0
7992	Public Golf Courses	45.0
7997	Membership Sports & Recreation Clubs	75.0
7999	Roller Rinks, Gymnasiums, Museums	20.0
8011	Offices of Physicians	10.0
8021	Offices of Dentists	10.0
8031	Offices of Osteopaths	10.0
8041	Offices of Chiropractors	10.0
8051	Skilled Nursing Care Facilities	20.0
8091	Health and Allied Service, Not Elsewhere Classified	10.0
8111	Attorneys	2.3
8211	Elementary & Secondary Schools	20.0
8221	Colleges, Universities & Prof. Schools	25.0
8231	Libraries, & Information Centers	20.0
8249	Vocational Schools, Not Elsewhere Classified	20.0
8421	Arboreta, Botanical & Zoological Gardens	45.0
8621	Professional Membership Organizations	2.3
8641	Civic, Social and Fraternal Associations	15.0
8661	Religious Organizations (hours occupied only)	20.0
8699	Membership Organizations, Not Elsewhere Classified	2.3
8911	Engineering, Architectural & Surveying Services	2.3
8931	Accountants	2.3
9199	General Government, Not Elsewhere Classified	2.3
9221	Police Protection	2.3
9224	Fire Protection	2.3
9451	Administration of Veteran's Affairs	2.3
9999	All Offices, Not Elsewhere Classified	2.3

NOTE: Parsonages should be regarded as single family residences.

Section: 7
Title: Certification Procedures
Reference: Secs. 17.103(5), 17.401, 17.402, MMSD Rules

DISCHARGE FACTOR CERTIFICATION

Any industrial or commercial user which does not discharge 100 percent of its metered water consumption to a sanitary or combined sewer will benefit by filing a Discharge Factor Certification Form (Appendix B). Discharge factors are defined as the ratio of the amounts of domestic, process and cooling water discharged to the amount of water consumed. Discharge factors will be computed by the District based on the certified water consumption and loss information provided by the user in its Discharge Factor Certification Form.

This form can be obtained by contacting the District's Industrial Waste Section at the following address:

Milwaukee Metropolitan Sewerage District
Industrial Waste Section
260 West Seeboth Street
Milwaukee, Wisconsin 53204-1446

Each discharge factor certified user who is a significant industrial user according to Sec. 11.103, MMSD Rules, or has an average daily non-domestic wastewater discharge of 10,000 gallons per day or more must annually update its Discharge Factor Certification Form on file with the District.

All other discharge factor certified users must update their Discharge Factor Certification Form at least once every three (3) years.

WASTESTRENGTH CERTIFICATION

The Wastestrength Certification Form (Appendix C) consists of the same basic information contained in the Discharge Factor Certification Form along with additional requirements for wastewater analyses of each process wastewater sewer connection. A user will benefit by filing a Wastestrength Certification Form if its process wastewater discharge has been assigned a typical process wastestrength which is greater than the actual process wastestrength.

The Wastestrength Certification Form can be obtained by contacting the District's Industrial Waste Section at the above address.

Users who elect to file Wastestrength Certification Forms become eligible for the District's verification sampling program which is explained in Section 8. In accordance with procedures established in Section 12, the costs associated with the collection and laboratory analysis of verification samples will be billed directly back to the user.

Each wastestrength certified user who is a significant industrial user according to Sec. 11.103, MMSD Rules, or has an average daily non-domestic wastewater discharge of 10,000 gallons per day or more must annually update the discharge factor portion of its Wastestrength Certification Form on file with the District.

All other wastestrength certified users must update the discharge factor portion of their Wastestrength Certification Form at least once every three (3) years, or at the request of the District.

SELF-MONITORING OF WASTEWATER FLOWS

Users who have elected to be billed sewer user charges based on metered water flow(s) rather than metered water consumption are required to maintain the accuracy of these meters.

Section: 8
Title: Data Verification Procedures
Reference: Secs. 17.203 and 17.405, MMSD Rules

The Milwaukee Metropolitan Sewerage District (District) has developed numerous procedures which it uses to periodically verify the validity of data submitted by certified commercial and industrial customers.

The District audits municipal user charge programs to test the accuracy of municipal data transmissions, verify compliance with District Rules, and update information required for wholesale billing.

The District verifies the data submitted by commercial and industrial users on Discharge Factor Certification Forms by comparing this information with other sources of data available to the District.

The District routinely samples each wastestrength certified industrial and commercial user to verify the certified analytical data submitted by that user. The main objectives of this program are to assure that user charges are being assessed for the true waste characteristics and that this assurance is achieved with a minimum of effort and expense and that user discharges are in compliance with applicable pretreatment standards. The costs associated with the collection and laboratory analysis of these samples is billed to the certified user in accordance with procedures established in Section 11 of this manual.

The District classifies wastestrength certified users based upon the amount of sewer user charge paid. The classification determines how often the District samples. Table 8-1 shows the various classes as well as the sample type and minimum sample frequency assigned to each individual class. The District may sample more frequently than shown in Table 8-1 when results of previous verification samples indicate that the certified data may be inaccurate. As with the routine verification monitoring, the costs involved with the collection and analysis of additional samples will be assessed to the individual users.

Table 8-1

Wastestrength Certified User Classes

<u>Class</u>	<u>Sewer User Charge (\$/Year)</u>	<u>Sampling Periods/year</u>	<u>Duration (Days)</u>	<u>Sample Type</u>
1	>1,000,000	3	7	24 hr FPC
2	> 200,000	2	7	24 hr FPC
3	> 100,000	3	1	24 hr FPC
4	> 10,000	2	1	24 hr FPC
5	< 10,000	1	1	24 hr FPC/TC

FPC = Flow Proportioned Composite
 TC = Time Composite

As products, materials, operations, and treatment systems change, biochemical oxygen demand (BOD) and total suspended solids (TSS) concentrations in a user's discharge may change. In response, for all waste strength certified users, the District needs to periodically review whether the BOD and TSS concentrations the District currently uses for billing continue to represent actual concentrations. The District will review this information at least once per year for each waste strength certified user.

To analyze trends, the District will use the Cumulative Sum Control Test (CUSUM), a statistical procedure that detects long-term significant deviations from a particular value. The sensitivity of CUSUM depends upon two variables: "g", the shift to be detected, expressed as a multiple of the standard deviation, and "a", the probability of detecting a shift when one has not occurred (false alarm). For purposes of the District's verification program, "g" will be equal to 1.0 and "a" will be equal to 0.1. To identify trends, CUSUM requires at least eight values. If CUSUM shows a significant deviation from the concentrations currently in use, then recertification is appropriate.

After the District performs this analysis, the District will provide to the user a summary of recent sample results and the results of the analysis. The analysis may indicate that the current concentrations remain representative. Alternatively, the analysis may indicate that the current concentrations should be replaced with either higher or lower concentrations. If replacement is appropriate, then the District will calculate flow-weighted average concentrations for both BOD and TSS, using recent sample results. If flow data is not available, then the District may use an arithmetic average.

If concentrations are increasing, then the notice will indicate that the user has two options.

1. If the user does nothing, then the District will implement the flow-weighted averages calculated by the District.
2. The user may self-monitor, calculate flow-weighted average concentrations using only the new self-monitoring results, and submit the sample results and calculated averages to the District. In this case, the District will implement the averages produced by the new monitoring. Users must sample as described below.

If concentrations are decreasing, then the notice will indicate that the user has two options.

1. The user may do nothing. In this case, the District will continue using the existing concentrations.
2. The user may self-monitor, calculate flow-weighted average concentrations using only the new self-monitoring results, and submit the sample results and calculated averages to the District. In this case, the District will implement the averages produced by the new monitoring. Users must sample as described below.

At the request of a user, the District may adjust BOD and TSS concentrations using other procedures, as long as the alternative procedures produce results that are equally or more representative. Very large users are likely to be the users most interested in alternative procedures because even small changes in the billing basis will cause large changes to user charges. An important consideration is whether the increased accuracy is worth the increased sampling cost. The following procedures are examples of approaches developed at the request of users and approved by the District.

1. The District samples for seven consecutive days every three months. The District updates the billing concentrations after each sampling event.
2. The user samples for BOD weekly and TSS daily. The District updates the certified values monthly, while also performing occasional sampling to confirm the user's values.

To ensure efficiency during implementation and record keeping, the District will always analyze and adjust BOD and TSS together.

Self-Monitoring Requirements

When a user is sampling according to this section, the user must sample on days that represent normal operations. If a user intends to sample, then the user must notify the District of the user's intent to sample within 30 days after receiving a notice described above. Users must complete self-monitoring within 60 days after receiving a notice described above. A

laboratory certified or registered according to ch. NR 149, Wis. Adm. Code, must analyze the samples. The laboratory must use methods listed in ch. NR 219, Wis. Adm. Code. Users must report results before the end of the month following the month in which the user sampled. For example, if sampling occurs in March, then results are due before the end of April. Users must sample for at least three consecutive days, unless some other period would be more representative and the District approves or requires the other period before sampling. For each day of sampling, users must report both the measured concentrations for BOD and TSS and the measured flow.

BOD Results Outside of the Analytical Range

In some cases, discharges are highly variable. This variability complicates BOD analysis because BOD analysis requires an initial estimate of the result. If the actual BOD is very different from the estimate, then the result may be outside the range of the analysis. In this case, the reported result is less than or greater than a certain value.

When the District is using this type of result in user charge calculations, the District will use the limit of the method. For example, if the reported result is "<100 mg/l", then the District will use 100 mg/l. If the reported result is ">5,000 mg/l", then the District will use 5,000 mg/l.

In cases of a less-than, this approach benefits the District. In the case of a greater-than, this approach benefits the user. Results reported as a greater-than are more common, so the user will benefit most of the time.

This approach is better than simply disregarding the result because even if a result was outside of the analytical range, the result does show the general magnitude of the concentration and user charge calculations benefit from using as many measurements as possible.

Extreme Concentrations

The dataset for calculating the BOD and TSS averages may contain values that appear unusually high or unusually low. Generally, being unusual will not stop the District from using these values in its calculations. Even if a condition is unusual, as long as it actually occurred, then including it in the analysis makes the average more representative of all possible conditions.

However, in certain conditions, the District may disregard a result. If a user identifies a particular condition as the cause of an unusual result and that condition will not recur, then the District may disregard a result. Also, if quality assurance issues make precision or accuracy less than normal, then the District may disregard a result. The presence of a less-than sign or a greater-than sign, by itself, is not a quality assurance problem.

CENTRALIZED WASTEWATER TREATMENT FACILITIES

Special procedures apply to commercial centralized wastewater treatment facilities. These facilities receive wastewater produced by others. Wastewater characteristics vary from shipment to shipment. Sources of wastewater may vary widely, from cheese manufacturing to organic chemical manufacturing and from metal finishing to catch basin cleaning. In response to this variability and unpredictability, sampling will be more frequent than sampling at other users. The District will review, and adjust if necessary, certified values according to procedures distinct to this class.

**Centralized Waste Treatment Facility
District Sampling Frequency**

Conditions	Number of District Samples per Month per Outfall
<1,000,000 gallons per month	1
>1,000,000 gallons per month, limited to food waste	1
>1,000,000 gallons per month and either: not limited to food waste or more than one violation in the preceding calendar year	2

This sampling will include both BOD and TSS, along with any pollutants of regulatory concern. This sampling will occur at each outfall. The District will bill the user for this sampling.

In addition to sampling by the District, the District will require self-monitoring at least once per month at each outfall.

Water Balance

Determining the volume discharged is another challenge. Unlike most other industrial users, most of the discharged wastewater is delivered by tank truck, rather than a metered public water supply. Water consumed from the public supply is usually limited to domestic uses and facility cleaning.

The District will use the following water balance equation for these facilities:

$$\text{Water consumption} + \text{Hauled wastewater} = \text{Process wastewater discharge} + \text{Domestic wastewater discharge}$$

The process wastewater discharge may have multiple components, depending upon the types of wastewater received.

In the absence of contrary information, for purposes of the water balance, annual water consumption will equal the annual domestic wastewater discharge. The District will determine these values by multiplying the annual average number of full-time equivalent people in the building by 5,120 gallons per person per year.

Generally, for purposes of the water balance, hauled wastewater will equal process wastewater discharges. To obtain information regarding the volume of process wastewater discharges, the District will require continuous monitoring and monthly reports.

As an alternative to these procedures, a facility may submit a detailed water balance showing actual measurements for these values. This balance may include water losses, such as wastewater hauled away or the water fraction of sludge or oil.

Resetting BOD and TSS Concentrations

During September of each year, the District will calculate flow-weighted average BOD and TSS concentrations using sample results since September 1 of the preceding calendar year. On or before September 30, the District will provide a summary of the sample results and the calculated averages.

Between September 30 and the end of the year, the user may obtain additional results for BOD and TSS, if desired, and request recalculation of the average. The user may provide other information showing why the averages calculated by the District will not represent future discharges. In this case, the user must propose alternative concentrations and explain why they are more representative.

The District will implement the new BOD and TSS concentrations starting with the first complete billing period in the next year.

The District will use flow-weighted average concentrations because they are most representative. If flow measurements are unavailable or if, for any other reason, an alternative would be more representative, then the District may use something other than a flow-weighted average.

Resetting the Water Balance

Each September, along with the recalculation of BOD and TSS concentrations, the District will update the water balance, using information from the preceding twelve months, except as provided below. The District will provide the new water balance with the new BOD and TSS concentrations. As with BOD and TSS concentrations, before the end of the year, the user may provide information to show that some other balance would be more representative of

future discharges. The District will implement the new water balance starting with the first complete billing period in the next year.

If requested by the user, then the District will update the water balance every billing cycle.

An annual update makes user charges more predictable. However, an update every billing cycle may make user charges more accurate.

Section: 9
Title: Notice of Change in Occupancy
Reference: Sec. 17.307 and 17.403, MMSD Rules

Individual user data files are maintained by the District for each certified commercial user and each industrial user. Since the municipality is responsible for maintaining retail user files, any change in the District's individual user data files should be initiated by the municipality.

In the event that one of these users is deleted from the retail user file, the municipality should notify the District of the action by submission of a Notice of Change in Occupancy Form, as presented on page 9-2. This same form should be submitted to the District if the municipality adds a user. If a new company is moving into the premises of a currently certified facility, the municipality should submit a Notice of Change in Occupancy Form and be sure to include both the name of the new company and the name of the old company. Such notice should be submitted to the District by the municipality within 30 days of the change in occupancy.

NOTICE OF CHANGE IN OCCUPANCY

To: Milwaukee Metropolitan Sewerage District
Industrial Waste Section
260 West Seeboth Street
Milwaukee, Wisconsin 53204-1446

From: Municipality of _____

Effective Date _____

Change: Addition ()

Deletion ()

Correction ()

For purposes of user charge administration, change the following certified commercial user or industrial user file as follows:

MMSD File No. _____

Company Name _____

Division or Department _____

Street Address _____

City _____ Zip Code _____

Telephone _____

SIC Code or _____

Business Description _____

Old Company Name _____
(if applicable)

Municipal Water
Account No. _____

Section: 10
 Title: Unit Costs of Treatment
 Reference: Secs. 17.103(24) and 17.205, MMSD Rules

District unit costs of treatment for 2015 are:

Flow (Base Rate)	=	\$0.96429/1,000 gal.
Flow (Watercourse Rate)	=	See Table 3-4.
BOD	=	\$0.11781/pound
TSS	=	\$0.15807/pound
Connection Charge	=	\$30.21/year

The derivation of these charges is described herein, as follows.

The net portion of the adopted 2015 Operation and Maintenance (O&M) budget billable via the user charge program is \$71,489. This total amount has been distributed to the cost allocation parameters and is described in Section 3 of the Cost Recovery Procedures Manual under UNIT PROCESS-PARAMETER RELATIONSHIPS.

That distribution yields the following breakdown between the parameters for 2015:

Flow	\$25,398,000	
BOD	14,579,000	(Biochemical oxygen demand)
TSS	23,302,000	(Total suspended solids)
Connections	5,230,000	
Permit Fees	796,000	
I/I Storage Costs	1,381,000	
Green Infrastructure	890,000	
Watercourse Costs	<u>(87,000)</u>	
	\$71,489,000	

This total treatment cost is to be recovered through a formula that recognizes that billable wasteloads of Flow, BOD, and TSS are directly traceable to users on a unit basis, and the remaining treatment costs, excluding permit fees and I/I storage costs, are best shared equally by the total number of connections to the system.

The first portion consists of assorted wastewater discharges (intentional discharges of domestic wastes, process wastes or cooling waters) comprising 50 percent of the total annual flow, 92 percent of the BOD load, and 73 percent of the TSS observed at the plants. The balance consists of the infiltration/inflow components which are extremely variable in volume and of comparatively indeterminate origin.

Dividing the various treatment costs by the corresponding total expected wasteloads yields unit costs of treatment for the coming year. Total wasteloads have been forecasted by analyzing previous years' billed quantities and projecting observed trends into 2015. Quantities assignable to wastewater discharge and infiltration/inflow are based on characterization of system users by the District, as presented in Technical Memoranda 4A through 4E for the sample year 1975, supplemented by more recent data collected by the District.

Residential flow in 2015 is expected to be lower than that forecasted a year ago for 2014. Commercial and industrial flows are expected to decrease. Sources of wastewater flow are anticipated to be as follows:

Residential - 47.3 MGD
 Commercial - 28.5 MGD (non-certified)
 4.6 MGD (657 certified businesses)
 Industrial - 9.8 MGD (410 process waste dischargers)

90.2 MGD

I/I flow is quite unpredictable. The projected amount for 2015 is 89 MGD. This is based on a five-year average. The projected sum of the wastewater and I/I flow is 179.2 MGD for 2015. Connections are expected to be 303,378.

BOD loading in the wastewater projection for 2015 is decreased 3.3% and the TSS loading is decreased 2.5% from the previous year's projection. In making these projections, actual loadings for the first six months of 2014 were used along with historical trends, and a review of 100 of the largest users of the system.

The BOD and TSS assigned to infiltration/inflow is calculated from a sampling program which yielded strengths of 50 mg/l (417#/MGD) and 200 mg/l (1668#/MGD), respectively, for the inflow portion, estimated at 66 MGD; and zero strength for the 23 MGD infiltration portion.

The resultant estimated wasteloadings for 2015 are:

	Flow <u>(MGD)</u>	BOD <u>(lbs/day)</u>	TSS <u>(lbs/day)</u>
Wastewater	90.2	314,875	296,650
I/I	<u>89.0</u>	<u>27,939</u>	<u>111,756</u>
Total	179.2	342,814	408,406

Unit Costs of Treatment Excluding Permit Fees and Watercourse:

$$\text{Flow} = \frac{\$25,398,000}{179.2 \text{ MGD}/1,000 \times 365} = \$0.38830/1,000 \text{ gal.}$$

$$\text{BOD} = \frac{\$14,579,000}{342,814 \text{ lbs.} \times 365} = \$0.11651/\text{pound}$$

$$\text{TSS} = \frac{\$23,302,000}{408,406 \text{ lbs.} \times 365} = \$0.15632/\text{pound}$$

Infiltration/Inflow Costs:

The total cost is calculated herein, and allocated to the parameters of Flow (82.92%) and connections (17.08%) based on a percentage of each to their totals:

$$\text{I/I Flow} = \frac{89.0 \text{ MGD}}{1,000} \times \$0.38830 \times 365 \text{ days} = \$12,613,926$$

$$\text{I/I BOD} = 27,939 \times \$0.11651 \times 365 \text{ days} = 1,188,138$$

$$\text{I/I TSS} = 111,756 \times \$0.15632 \times 365 \text{ days} = 6,376,440$$

$$\text{I/I Storage Costs} = 1,381,000$$

$$\text{Green Infrastructure Costs} = \underline{890,000}$$

$$\text{Total I/I Costs} = \$22,449,504$$

Flow portion of I/I:

$$\frac{\$22,449,504 \times 82.92\%}{90,217,304/1,000 \times 365} = \$0.56531/1,000 \text{ gal.}$$

District Unit Costs of Treatment Including Surcharge:

Flow =	Treatment Unit Costs	\$ 0.38830
	I/I Unit Costs	<u>0.56531</u>
		\$ 0.95361

Base Rate =	With 1.12% Surcharge	\$ 0.96429/1,000 gal.
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BOD =	Treatment Unit Costs	\$ 0.11651
	With 1.12% Surcharge	\$ 0.11781/pound

TSS =	Treatment Unit Costs	\$ 0.15632
	With 1.12% Surcharge	\$ 0.15807/pound

Volumetric Charges:

From these three rates, the volumetric charge can be computed for a given wastewater contribution. For the most common concentration, domestic strength, they can be conveniently combined into a single rate, using the equivalencies of 310 mg/l BOD = 2.585 lb/1000 gal., and 370 mg/l TSS = 3.086 lb./1000 gal., as follows:

Flow			See Table 3-4.
BOD = 2.585 lb./1000 gal. x .11781c/lb.	=		\$.304539/1,000 gal.
TSS = 3.086 lb./1000 gal. x .15807c/lb.	=		\$.487804/1,000 gal.
Volumetric charge (domestic strength)			See Table 3-4.

Connection Charge:

The cost of removing debris and other treatment costs that have not been assigned to Flow, BOD and TSS in addition to the I/I costs allocated to connection and the permit fee surcharge:

Debris and other treatment costs	=	$\frac{\$ 5,230,000}{303,378}$	=	\$ 17.24/year
I/I costs allocable to connection	=	$\frac{\$ 22,449,504 \times 17.08\%}{303,378}$	=	\$ 12.64/year
Permit fee surcharge @ 1.12%	=			$\frac{\$ 0.33/\text{year}}{\$30.21/\text{year}}$

District Average Household Charge:

See Table 3-4.

Recapitulation:

	<u>Recoverable Via Volumetric Chg.</u>	<u>Recoverable Via Connection Chg.</u>	<u>Total</u>
Flow costs	\$ 23,243,541	\$ 2,154,459	\$ 25,398,000
BOD costs	14,376,066	202,934	14,579,000
TSS costs	22,212,904	1,089,096	23,302,000
Debris & other costs	0	5,230,000	5,230,000
Watercourse costs	(87,000)	0	(87,000)
I/I storage costs	1,144,785	236,215	1,381,000
Green Infrastructure	737,769	152,231	890,000
Permit Fees	<u>695,885</u>	<u>100,115</u>	<u>796,000</u>
 Budget	 <u>\$ 62,323,950</u>	 <u>\$ 9,165,050</u>	 <u>\$ 71,489,000</u>

Since actual billings during the course of the year are dependent upon estimated wasteloads, reported water consumption (commercial and industrial) and number of units (residential), the revenue generated will not match the aforementioned budget figure. The surplus or deficit, as determined at the end of the yearly billing period, will enter into the computation of the future year's unit costs of treatment.

Section: 11
Title: Pretreatment Program and Monitoring Charges
Authority: Sections 17.103(15), 17.206, 17.207, and 17.211, MMSD Rules

In October, 1980, the Wisconsin Department of Natural Resources modified the District's WPDES discharge permits to include a schedule of compliance which required the development of an industrial waste pretreatment program. One requirement of this schedule was the development of a funding mechanism for financing the implementation and administration of this program. State and Federal regulations specified that the costs associated with the administration of such a program must be recovered solely from the industrial class. Since the user charge system adopted by the District on January 1, 1979, would recover these costs from all classes of users, it became necessary to establish a separate funding mechanism.

The funding method adopted by the District to accomplish this task also recovers the costs associated with the user charge verification sampling program (see Section 8) since both programs overlap in technical support and monitoring activities.

Technical Support Charge Derivation

The portion of the total program cost associated with technical support activities is recovered through a graduated schedule of flat fees which recognizes that users who are sampled more and have an Industrial Discharge Permit frequently are responsible for a greater percentage of these costs. This fee schedule is based on the class system for users established within the user charge wastestrength verification sampling program. This system classifies a user based upon the amount of sewer user charge paid (see Section 8), since this amount is a reflection of the wasteload contributed to the District by that user. The frequency at which the District samples a user is based upon this classification.

Based upon these sampling frequencies, a rating factor is assigned to each class which recognizes the anticipated level of effort to be expended by the District. Utilizing these rating factors and the number of users within each class, a total weight is assigned to each class. Summing the individual total weights and dividing the estimated technical costs by this total weight determines the dollar amount assigned to the base rating factor (1 X). It should be noted that Class 6 represents those users who are not sampled on a regular basis and do not have an Industrial Discharge permit but are still responsible for a portion of the overall program costs. The 2015 annual fees are as follows:

<u>Class</u>	<u>Rating Factor</u>	<u>Number of Facilities</u>	<u>Annual Fee</u>	
			<u>Permit</u>	<u>No Permit</u>
1	105X	1	\$14,917	\$ 9,944
2	70X	11	\$ 9,944	\$ 6,630
3	15X	2	\$ 2,131	\$ 1,421
4	10X	54	\$ 1,421	\$ 947
5	5X	95	\$ 710	\$ 474
6	1X	<u>212</u>		\$ 95
		<u>375</u>		

These annual fees are included on the sewer user charge billings for all users in the following classes:

- 30 Non-Certified Industrial
- 31 Discharge Certified Industrial
- 32 Wastestrength Certified Commercial
- 33 Wastestrength Certified Industrial

Notice of Intent to Discharge

The fee of \$250.00 must be paid when a Notice of Intent is submitted if the only discharge from a site is contaminated groundwater, groundwater removed from an excavation during construction, or another irregular non-domestic wastewater. The fee is required only once per calendar year per site. The payment of a fee is not required: (1) if a site is already paying a fee established according to this section for discharges other than the discharges covered by the Notice of Intent (2) if adding the fee to a routine municipal wholesale bill is practicable, such as when a municipality will be routinely billing the site for sewer service.

Monitoring Charge Derivation

Under the industrial waste program, samples are collected by District personnel for two basic purposes: 1) monitoring compliance with applicable effluent limitations; and 2) assuring that users are paying user charges which are representative of their true wastewater characteristics. The frequency at which the District conducts user charge sampling is identified within Section 8. The frequency at which the District conducts compliance sampling is prescribed by the approved pretreatment program or by a determination of the potential impact a given users discharges can have on District operations. In situations where compliance monitoring reveals that compliance with applicable effluent limitations is not being achieved, the District may increase its frequency of sampling until it is assured that consistent compliance is being achieved. The costs associated with the collection and analysis of these samples are recovered from the individual users.

The sample collection monitoring fee schedule is established annually and is based upon a series of rating factors which correspond to the level of effort involved in the collection of various types of samples. The District collects three different types of samples: 1) a grab sample, 2) time composite sample and 3) a flow proportioned composite sample.

Each of these three sample types is assigned a rating factor which represents the level of effort necessary to collect the particular type of sample. These rating factors are then multiplied by the estimated number of samples to be collected in 2015 to arrive at a total sampling weight.

The 2015 estimated monitoring costs (excluding lab analysis costs) are then divided by the total sampling weight to determine the sample collection fee for a grab sample. Multiplying this grab sample fee by the rating factors for the time composite and flow proportioned composite sample types establishes the corresponding sample collection fees for these sample types. Following are the 2015 sample collection fees.

<u>Sample Type</u>	<u>Rating Factor</u>	<u>Estimated No. of Samples</u>	<u>Weight</u>	<u>Fee</u>
Grab	1.5	945	1417	\$239
Time Composite	3.0	209	627	\$478
Flow Composite	4.5	348	1564	\$717
Continuous pH Monitoring				\$250
Continuous H ₂ S Monitoring				\$250
Flow composite, facility equipment				\$239

When sampling is done on a daily basis and used for enforcement or to ensure compliance with state federal or local limits, then the costs will be as follows:

<u>Sample Type</u>	<u>Fee</u>
Flow Composite, starting with the second day	\$478.00

This cost will be used only after the initial set-up costs have been billed.

The schedule of laboratory analysis monitoring fees is established annually and consists of a charge per pollutant based upon the labor, chemicals and equipment needed to perform a given pollutant analysis. For 2015, the fee schedule is as follows:

Semivolatile Organics by GCMS	152.00
Semivolatile Organics by GCMS (Base/Neutrals only)	114.00
BOD, 5-day total	22.00
Cyanide, (Amenable)	40.00
Cyanide, (Total)	25.00

Fluoride	12.00
Mercury, (T)	21.00

Metal analysis by ICP \$13.00/element

Available elements include; Arsenic; Barium; Cadmium; Chromium; Cobalt; Copper; Iron; Lead; Manganese; Molybdenum; Nickel; Selenium; Silver; Tin; Titanium; Zinc (others on request)

Nitrogen, Ammonia	18.00
Oil and Grease, (HEM)	45.00
Total Hydrocarbons, (SGT-HEM)	45.00
Paper Fiber count	50.00
pH	20.00
Phenols, (T)	20.00
Phosphorus, (T)	19.00
PCBs by Aroclor	58.00
Sulfide, (T)	30.00
Suspended solids, (T)	11.00
Volatile Organics by GCMS	66.00

Should it become necessary for the District to analyze for pollutants not listed above, representative charges for those pollutants will be developed by Laboratory Services.

The District at the conclusion of each sampling period bills the monitoring fees for both sample collection and laboratory analysis directly to the affected user.

In some cases, District monitoring will be only a visual inspection. The purpose of the inspection is to determine whether an obstruction is present. The District will charge for this inspection when (1) a particular user has caused the obstruction and (2) the District has previously notified the user of the obstruction and requested remedial action. The District will continue charging the user for inspections until the cause or source of the obstruction is eliminated. If an obstruction is large enough to cause an overflow, basement flooding, or other significant adverse effects, then the District may charge for the inspection without prior notice. The effort required for an inspection is similar to the effort required for a grab sample. Therefore, the inspection fee is equal to the grab sample fee, as established above.

Rate for Special Wastes

The rate will be \$0.10 per gallon for any waste discharged to the Milwaukee Metropolitan Sewerage District system for which costs are not adequately recovered by the wholesale bills of sec. 17.201, pretreatment program charges of 17.206, the monitoring bills of sec. 17.207 or the septic and holding tank fees of sec. 17.210.

Rates for Groundwater Discharges

During 2015, the rate will be \$2.50 per 1,000 gallons (\$0.0025/Gallon).

Rates for Beneficial High Strength Waste

During 2015 the rate to discharge beneficial High Strength at the South Shore Water Reclamation Facility to be used for Anaerobic Co-Digestion will be \$0.035 per gallon unless otherwise negotiated by contract.

Section: 12
Title: Late Payment Penalty
Reference: Sec. 17.105(3), MMSD Rules

The District may charge a late payment penalty when the payment of a bill is late or when an undercharge was caused by an error or omission of a municipality, user or other person receiving service from the District.

The late payment penalty for 2015 will be 12% of the amount due to the District compounded annually.

In cases of undercharges caused by fraud or other misrepresentation, the District will not waive the late payment penalty.

Section: 13
Title: Charges for Special Wastes
Reference: Secs. 17.210 and 17.211, MMSD Rules

Septic and Holding Tank Waste

At the South Shore Water Reclamation Facility, the District accepts septic and holding tank waste. This waste must comply with the requirements of MMSD Rules, Chapter 11, particularly secs. 11.701 to 11.708. This waste is limited to domestic wastewater. Any waste with a BOD that exceeds 2,500 mg/l or a TSS that exceeds 2,500 mg/l must be classified as septic tank waste.

Any vehicle that delivers septic or holding tank waste must have a license from the District. The hauler must renew the license annually, on a calendar year basis.

The following table shows the charges for holding tank waste, septic tank waste, and the vehicle license fee.

Item	Rate
Holding Tank Waste	\$25.19/thousand gallons
Septic Tank Waste	\$33.15/thousand gallons
Vehicle License Fee	\$250/vehicle per year

The charges for septic and holding tank waste include an operating component and a capital component. An owner of a septic or holding tank who is also subject to property taxation by the District may, on an annual basis, obtain a refund of the capital component. To obtain this refund, the owner must submit to the District copies of waste hauling bills for the year, a copy of the property tax bill, and the owner's social security number or tax identification number.

Groundwater Discharges

Generally, to conserve capacity within the sewerage system, the discharge of groundwater is prohibited. However, the District may occasionally approve discharges of groundwater when necessary for groundwater or soil remedial action, construction, or other special circumstances. The rate for discharging groundwater is \$2.50 per thousand gallons.

Beneficial High Strength Waste

At the South Shore Water Reclamation Facility, the District accepts high strength waste for anaerobic co-digestion. For this purpose, the preferred type of waste has a BOD concentration greater than 50,000 mg/l and a TSS concentration less than 1,000 mg/l. However, the District may accept wastes with a lower BOD or higher TSS, if these wastes will promote the best interests of the District. The District feeds this waste directly into digesters.

Generally, the rate for waste received for anaerobic co-digestion is \$0.035 per gallon. Based upon a consideration of the volume to be received, BOD or TSS concentrations other than the typical concentrations, or other factors, the District may establish an alternative rate by contract.

Miscellaneous Special Wastes

When appropriate to serve the best interests of the District, the District may accept miscellaneous special wastes for disposal. For each waste, the District will establish charges for these wastes according to MMSD Rules, sec. 17.211. Considerations will include, but are not limited to: treatment costs, monitoring costs, administration costs, risks to the sewerage system or the environment, and the generator's or hauler's avoided costs.

Section: 14
Title: Household Hazardous Waste Program Costs

The District currently has contracts with 19 municipalities listed below who are participating in the Household Hazardous Waste Program. The actual costs incurred in operating the Household Hazardous Waste Program are to be billed to each community on the basis of residential units.

A residential unit is defined as an individual residence such as a house, condominium, an apartment or mobile home (example: 4 unit apartment will be classified as 4 residential units). Apartments or condominiums that are larger than 4 units will be classified as 4 residential units). Participation municipalities shall report to the District the number of residential units within the municipality by July 31 of each year.

The Household Hazardous Waste Program Charge for 2015 will be billed to each participating community on or before March 1, 2016 and payable by April 1, 2016.

Municipalities participating in 2015:

Bayside	Oak Creek
Brown Deer	River Hills
Cudahy	South Milwaukee
Fox Point	St. Francis
Franklin	Shorewood
Glendale	Wauwatosa
Greendale	West Allis
Greenfield	West Milwaukee
Hales Corners	Whitefish Bay
Milwaukee	

APPENDIX A

CHAPTER 17

DISTRICT RULES AND REGULATIONS

**Milwaukee
Metropolitan
Sewerage
District**

User Charges

Chapter 17, MMSD Rules

Created August 18, 1982
Amended June 20, 1985
Repealed and recreated September 26, 1994
Amended January 25, 2010

Chapter 17

User Charges

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Subchapter I - General

17.101 Purpose

(1) The purpose of this chapter is to:

(a) establish cost recovery systems that:

1. generate sufficient revenue to cover operation, maintenance, and replacement costs;
2. charge sewerage system operation and maintenance costs to each municipality served by the District in proportion to each municipality's use of the District's conveyance and treatment services;
3. charge monitoring and other regulatory costs to each user in proportion to the amount of monitoring and regulatory activity associated with each user; and
4. in certain cases, charge fees for disposal services provided by the District directly to persons receiving the disposal services; and

(b) ensure that the municipalities served by the District have the procedures necessary to administer the cost recovery systems established by this chapter.

(2) The purpose of this chapter does not include the recovery of capital costs, as defined by sec. 200.21, Wis. Stats., and included in the District's capital budget.

17.102 Applicability

This chapter applies to all municipalities, all users, and all other persons served by the District.

17.103 Definitions

In addition to the definitions set forth in Chapter 1 and sec. 200.21, Wis. Stats, the following definitions apply to the terms used in this chapter:

- (1) "BOD" means 5-day biochemical oxygen demand, as determined by EPA Analytical Method 405.1 set forth in 40 CFR Part 136.
- (2) "Commercial user" means any user that is neither a residential nor an industrial user, as classified by the District for user charge purposes.

- (a) "Discharge factor certified commercial user" means a commercial user that has reported its discharge factors to the District.
 - (b) "Non-certified commercial user" means a commercial user that has not certified its discharge factors to the District.
 - (c) "Waste strength certified commercial user" means a commercial user that has reported its discharge factors and waste strengths to the District.
- (3) "Connection" means a sewer that either:
- (a) leads from a building to a private sewerage system or municipal collector system that eventually discharges to the District's sewerage system, or
 - (b) leads directly from a building to the District's sewerage system.
- (4) "*Cost Recovery Procedures Manual*" means a manual prepared by the District according to sec. 17.213.
- (5) "Discharge factor" means the ratio of wastewater discharged to total water consumed by the user from all sources.
- (a) "Domestic discharge factor" means the ratio of domestic wastewater discharged to total water consumed.
 - (b) "Non-contact cooling water to combined sewer discharge factor" means the ratio of non-contact cooling water discharged to a combined sewer to total water consumed.
 - (c) "Process wastewater discharge factor" means the ratio of process wastewater discharged to total water consumed.
- (6) "District" means the Milwaukee Metropolitan Sewerage District.
- (7) "Domestic waste" means human waste and other wastes related to personal or residential sanitation.
- (8) "Domestic wastewater" means wastewater that contains only domestic waste.
- (9) "Equivalent residential unit" and "ERU" mean the typical average daily discharge of BOD, TSS, or flow per person from a residential unit.
- (10) "Flow" means the amount of wastewater flowing through a sewer.
- (11) "Industrial user" means any user that discharges process wastewater.

- (a) "Discharge factor certified industrial user" means an industrial user that has reported its discharge factors to the District.
 - (b) "Non-certified industrial user" means an industrial user that has not reported its discharge factors to the District.
 - (c) "Waste strength certified industrial user" means an industrial user that has reported its discharge factors and waste strengths to the District.
- (12) "Maintenance" means any preventive, correctional, or replacement activity that preserves the functional integrity and efficiency of the equipment and structures of the sewerage system.
- (13) "Non-contact cooling water" means water used for cooling that does not directly contact any raw material, intermediate product, waste product, or finished product.
- (14) "Operation" means the control of the unit processes and equipment that make up the sewerage system, including financial and personnel management, records, laboratory control, process control, safety, and emergency planning.
- (15) "Pretreatment program" means the activities of the District that:
- (a) implement sec. 200.45, Wis. Stats., including, but not limited to, the implementation and enforcement of ch. 11, MMSD Rules, and any other applicable local, state, or federal pretreatment standards or requirements; and
 - (b) ensure the accuracy of the information used to calculate user charges for commercial and industrial users.
- (16) "Process wastewater" means any water that, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product.
- (17) "Replacement" means obtaining and installing any equipment and appurtenances that are necessary during the useful life of the sewerage system to maintain the capacity and the performance for which the sewerage system was designed and constructed.
- (18) "Residential occupancy factor" means the average number of people residing in each residential unit in a particular municipality.
- (19) "Residential structure" means any building exclusively accommodating residential units.
- (20) "Residential unit" means an individual residence, such as a house, an apartment, or any group of rooms or a single room either occupied as living quarters or intended for occupancy.

- (21) "Residential user" means a user who is an owner or occupant of a residential unit.
- (22) "Retail bill" means a bill from a municipality to a user.
- (23) "TSS" means total suspended solids, as determined by EPA Analytical Method 160.2 set forth in 40 CFR Part 136.
- (24) "Unit cost of treatment" means the operation and maintenance cost per connection and per unit of flow, BOD, TSS, or other parameter.
- (25) "Unit process-parameter relationship" means the operation and maintenance cost of a sewerage system unit process attributable to connections, flow, BOD, TSS, or other parameter.
- (26) "User" means any owner or occupant of any building or lot that is located within the sewerage service area and is furnished with sewerage service.
- (27) "Volumetric rate" means the charge per 1,000 gallons of wastewater that has the characteristics of an equivalent residential unit.
- (28) "Wholesale bill" means a bill from the District to a municipality.

17.104 User Charge Review

- (1) (a) If the following circumstances have occurred and caused an overcharge, then the District may issue a credit.
 - 1. An employee of the District or the municipality made a clerical error, or
 - 2. A water meter was defective and the defect was not caused by an error or omission of either the municipality or the user.
- (b) The amount of the credit shall be the amount of the overcharge, extending back either to the date when the overcharge first occurred or to January 1 of the year before the request for the credit, whichever period is shorter.
- (2) The District shall issue a credit described in sub. (1) if:
 - (a) A commercial or industrial user or a municipality has requested a credit;
 - (b) The credit request:
 - 1. is in writing,
 - 2. sets forth the reasons for finding that an overcharge occurred, and

3. accurately establishes the amount of the overcharge; and
 - (c) The credit request shows at least one of the conditions described in sub. (1)(a) by clear and convincing evidence.
- (3) The Executive Director or a designee shall be the decision-maker for credit requests.
- (4) (a) In response to a credit request, the District shall provide a written decision that includes the District's reasoning.
- (b) After receiving all of the information necessary to review the credit request, the District shall either:
1. issue a decision within 45 days, or
 2. issue a written notice to the person requesting the credit that review will require 90 days and issue a decision within 90 days.
- (5) If the District finds that a credit is due, then the District shall credit the account of the appropriate municipality. The municipality may either credit the user's account or refund money directly to the user.
- (6) Users and municipalities shall pay any disputed charges before requesting a credit.
- (7) In the following cases, the District shall correct charges only for the current and future billing periods.
- (a) A user failed to report discharge factors or reported erroneous discharge factors.
 - (b) Water leakage occurred within the user's property.
 - (c) A user discharged water directly to the waters of the state without permission from the Department of Natural Resources.
 - (d) Any other circumstances other than the circumstances listed in sub. (1) caused an overcharge and these circumstances were caused by an error or omission of either the user or the municipality.
 - (e) The dispute involves an individual residential user.

- (8) Subsequent to a decision under this section, the exclusive means for additional review of a charge, rule, or practice of the District is a complaint by a user to the Public Service Commission, according to 200.59(5), Wis. Stats. The standard of review shall be whether the charge, rule, or practice of the District is unreasonable or unjustly discriminatory. Any person aggrieved by a final decision of the Public Service Commission may seek judicial review according to ch. 227, Wis. Stats.

17.105 Collection of Undercharges and Late Payment Penalties

- (1) If the District determines that it has undercharged a municipality, user, or other person receiving service from the District, then the District shall either issue a bill for the amount of the undercharge or add the amount of the undercharge to a future bill.
- (2) (a) Except as provided in par. (b), the District shall collect undercharges going back either to when the undercharge first occurred or to six years from the date when the undercharge first became known to the District, whichever is shorter.
- (b) In cases of continuing misrepresentation or fraud, the District shall recover all undercharges.
- (3) (a) The District may charge a late payment penalty when the payment of a bill is late or when an undercharge was caused by an error or omission of a municipality, user, or other person receiving service from the District.
- (b) The late payment penalty shall be no less than 12% of the amount due the District, compounded annually. The *Cost Recovery Procedures Manual* shall establish the late payment penalty interest rate.
- (c) In cases of undercharges caused by fraud or other misrepresentation, the District may not waive the late payment penalty.

Subchapter II - District Activities

17.201 Wholesale Bills

- (1) The District shall bill municipalities within five business days after receipt of the municipal data transmission described in sec. 17.302 and any other information necessary for preparing the bill.
- (2) The wholesale bill shall include charges for all users served by the municipality. The wholesale bill shall show:
 - (a) the total amount due from each user class;
 - (b) the amount due from each discharge factor certified commercial user;
 - (c) the amount due from each waste strength certified commercial user; and
 - (d) the amount due from each industrial user.
- (3) If a municipality fails to pay a wholesale bill within 45 days, then the District may charge a late fee on the unpaid portion of the bill, according to sec. 17.105.
- (4) If a municipal data transmission occurs after the due date, then the District shall shorten the 45 day remittance period one day for each day the report is past due.

17.202 Discharge Factor and Waste Strength Certification Procedures

- (1) The District shall establish procedures for discharge factor and waste strength certification and shall publish these procedures in the *Cost Recovery Procedures Manual*.
- (2) Before January 31 of each year, the District shall request water consumption and discharge information from users that must annually re-certify their discharge factors, according to sec. 17.401(4). The District shall obtain all of the water consumption and discharge information necessary to determine discharge factors.
- (3) The District shall request water consumption and discharge information from users that must re-certify their discharge factors at least every three years, according to sec. 17.401(3), before the expiration of the three year period.
- (4) The District shall develop procedures and criteria for determining when a user must re-establish its waste strengths. The District shall include these procedures in the *Cost Recovery Procedures Manual*.

- (5) If a user fails to submit discharge factor or waste strength information, if the submitted information is inaccurate, or if a substantial change has occurred since the date of the user's last certification, then the District may establish new discharge factors or waste strengths for the user. The District shall notify the user of the new discharge factors or waste strengths and provide the basis for them.
- (6) If information obtained by the District reveals that information provided by a user is inaccurate and that the inaccuracy has caused an underpayment of user charges, then the District shall determine the correct user charges retroactive to the first bill based upon the inaccurate statement and issue a bill for the deficiency. The District may add a late payment penalty to this bill according to sec. 17.105.

17.203 Discharge Factor and Waste Strength Verification

- (1) The District may monitor wastewater discharges, conduct inspections, or undertake other activities necessary to verify discharge factors and waste strengths.
- (2) If District monitoring or inspections identify discharge factors or waste strengths significantly different from the certified discharge factors or waste strengths, then the District may calculate user charges using the discharge factors or waste strengths identified by the District.
- (3) When necessary to verify discharge factors or waste strengths, the District may order a user to construct monitoring facilities according to the specifications set forth in sec. 11.603, MMSD Rules.

17.204 Unit Process-Parameter Relationships

The District shall annually distribute operation and maintenance costs of the various unit processes within the sewerage system to connections, flow, BOD, TSS, or other parameters selected by the District. The District shall publish these unit process-parameter relationships in the *Cost Recovery Procedures Manual*.

17.205 Unit Costs of Treatment

- (1) The District shall annually establish unit costs of treatment for connections, flow, BOD, and TSS. The District may develop unit costs of treatment for other parameters.
- (2) To establish a unit cost of treatment, the District shall divide the operation and maintenance cost allocated to a parameter by either the estimated waste-load for that parameter or, for costs assigned to connections, the number of connections.
- (3) The District shall publish the unit costs of treatment in the *Cost Recovery Procedures Manual*, along with a discussion of how the District determined the unit costs of treatment.

17.206 Pretreatment Program Administrative Costs

To recover the administrative costs of the pretreatment program, the District shall establish fees in the *Cost Recovery Procedures Manual*. The *Cost Recovery Procedures Manual* shall describe the basis for these fees.

17.207 Monitoring Costs

- (1) The District may recover sample collection, preparation, and analysis costs when the District monitors discharges to either verify compliance with an applicable pretreatment standard or requirement or assure the accuracy of the facility's user charges.
- (2) The District shall establish fees for sample collection, preparation, and analysis and list these fees in the *Cost Recovery Procedures Manual*.
- (3) The District shall directly bill the monitored facility.
- (4) If a facility fails to pay a monitoring bill in full within 30 days, then the District may charge a late payment penalty according to sec. 17.105.

17.208 Equivalent Residential Unit and Residential Occupancy Factors

- (1) The District shall estimate the amount of flow, BOD, and TSS discharged by the typical residential user of the sewerage system. The District shall publish these typical discharge rates in the *Cost Recovery Procedures Manual*.
- (2) The District shall annually establish residential occupancy factors for each municipality served by the District. The District shall publish these residential occupancy factors in the *Cost Recovery Procedures Manual*.

17.209 Typical Process Waste Strengths and Typical Wastewater Discharge Rates

- (1) The District shall identify typical process waste strengths for process wastewater from various industries and publish these waste strengths in the *Cost Recovery Procedures Manual*.
- (2) For various commercial and industrial activities, the District shall identify typical wastewater discharge rates that estimate the amount of water discharged per the number of employee hours worked at a facility or other appropriate parameter. The District shall publish these typical wastewater discharge rates in the *Cost Recovery Procedures Manual*.

17.210 Fees for Septic and Holding Tank Wastes

- (1) The District shall establish fees for the disposal of septic tank and holding tank waste hauled to the District for disposal. To establish these fees, the District shall consider waste strength, disposal site monitoring costs, administrative costs, hauled waste's share of capital improvement costs, and any other relevant factors, according to sec. 144.08, Wis. Stats.
- (2) The District shall publish hauled waste fees in the *Cost Recovery Procedures Manual*, along with a discussion of how the District determined the fees.
- (3) The District may establish fees for facilities that collect and discharge domestic wastewater from the holding tanks of vehicles, boats, or airplanes. The District shall publish any fees established under this subsection in the *Cost Recovery Procedures Manual*, along with the basis for the fees.

17.211 Fees for Other Services Provided by the District

- (1) If the District provides services for which costs are not adequately recovered by the wholesale bills of sec. 17.201, pretreatment program charges of 17.206, the monitoring bills of sec. 17.207, or the septic and holding tank fees of sec. 17.210, then the District may establish other appropriate fees. The services for which the District may establish these fees include, but are not limited to, the disposal of wastewater related to groundwater or soil remedial actions undertaken according to federal, state, or local requirements.
- (2) If the District finds that fees proportionate to sewerage system costs are not practicable, then the District may base the fees developed according to this section upon any combination of the following considerations or upon other appropriate consideration:
 - (a) Market rates for commercial centralized wastewater treatment or hazardous waste treatment, storage, or disposal;
 - (b) Avoided direct discharge costs or other avoided costs;
 - (c) Administrative costs;
 - (d) Promoting pollution prevention and waste minimization; and
 - (e) The risks to the sewerage system or the environment.
- (3) The District shall publish any fee established under this section in the *Cost Recovery Procedures Manual*, along with the basis for the fee.

17.212 Direct Billing

When the costs of services provided by the District would not be completely recovered by a wholesale bill according to sec. 17.201 or when collecting fees established according to secs. 17.210 or 17.211, the District may bill users directly.

17.213 Cost Recovery Procedures Manual

(1) The District shall adopt a *Cost Recovery Procedures Manual* and revise it as necessary.

(2) The *Cost Recovery Procedures Manual* shall include:

- (a) equivalent residential unit discharge rates;
- (b) residential occupancy factors;
- (c) unit process-parameter relationships;
- (d) typical process waste strengths;
- (e) a schedule and forms for municipal data transmissions;
- (f) instructions and information for estimating discharges, such as typical wastewater discharge rates;
- (g) discharge factor and waste strength certification procedures;
- (h) the techniques the District will use to verify certified waste strengths;
- (i) procedures for reporting changes in occupancy or use;
- (j) unit costs of treatment;
- (k) pretreatment program fees;
- (l) sample collection, preparation, and analysis fees;
- (m) the interest rates that the District will use to calculate late payment penalties;
- (n) septic and holding tank disposal fees;
- (o) any fees established according to sec. 17.211; and
- (p) any other information the District finds necessary to implement the user charge systems established by this chapter.

17.214 Municipal Audits

The District may audit municipal user charge programs to ensure compliance with this chapter.

Subchapter III - Municipal Activities

17.301 Municipal User Charge Ordinance

- (1) Each municipality shall adopt an ordinance authorizing the municipality to collect from users the charges of the District as established by this chapter.
- (2) Before the creation or modification of a municipal user charge ordinance, a municipality shall give the District an opportunity to review the proposed ordinance or modifications.
- (3) (a) The municipal user charge ordinance shall include one of the following rules for classifying residential structures for user charge purposes, except as provided in par. (b):
 1. If a structure contains one or two residential units, then each unit is a residential user. If a structure contains more than two residential units, then the structure is a commercial user.
 2. If a structure contains one to four residential units, then each unit is a residential user. If a structure contains more than four residential units, then the structure is a commercial user.
- (b) The municipal user charge ordinance may allow the municipality to classify each unit in a multi-unit residential structure as a residential unit, regardless of the number of units in the structure, if each unit has the attributes of a single family home, such as more than 1,500 square feet of living space and one or more of the following characteristics: an exclusive entrance, individual laundry facilities, an individual water heater, or individual heating and cooling systems.

17.302 Municipal Data Transmissions

- (1) Each municipality shall report the following information to the District:
 - (a) the number of residential units and residential connections;
 - (b) the water consumption of non-certified commercial users;
 - (c) the number of non-certified commercial connections;
 - (d) individual water consumption for each certified commercial user and each industrial user;
 - (e) the number of connections for each certified commercial user and each industrial user;
 - (f) the dates of the billing period covered by the municipal data transmission; and

- (g) the name and location of any facilities that collect and discharge domestic wastewater from the holding tanks of recreational vehicles, boats, airplanes, or any other mobile sources.
- (2) Municipalities shall use the forms provided in the *Cost Recovery Procedures Manual* for their municipal data transmissions.
- (3) Municipal data transmissions are due according to the schedule established in the *Cost Recovery Procedures Manual*. Municipalities may report according to an alternative schedule if the Municipality has provided the alternative schedule to the District and the District has approved it.
- (4) For the purposes of counting residential connections for the municipal data transmission, each structure served by a sanitary sewer shall have at least one connection.

17.303 Determining Water Consumption and Wastewater Discharges

- (1) The water consumption data reported to the District in municipal data transmissions shall be from a water meter for all commercial and industrial users who discharge more than 1,000 gallons per day to the sewerage system.
- (2) If a site contains multiple occupants, then the criterion set forth in sub. (1) applies to the sum of the discharges from each occupant.
- (3) A decision regarding whether a water meter is required may be based upon either:
 - (a) direct measurement of the discharge rate, or
 - (b) an estimate of the discharge rate using typical wastewater discharge rates established according to sec. 17.209 or other appropriate techniques.
- (4) Water meters required by this section shall meet the accuracy requirements of sec. PSC 185.65, Wis. Adm. Code.
- (5) (a) If a water meter is required and if the user is not served by a public water utility required to periodically test water meters according to sec. PSC 185.76, Wis. Adm. Code, then municipalities shall test water meters according to the following schedule:

Meter Size (Inches)	Minimum Test Interval (Years)
1 or less	8
1.5 and 2	4
3 and 4	2
6 and over	1

- (b) Water meter testing shall occur more frequently than required by par. (a) if more frequent testing is necessary to maintain accuracy.

(c) If a municipality demonstrates to the District that the water meter will maintain its accuracy for a period longer than the minimum test interval established by par. (a), then the District may allow a test interval longer than the interval set forth in par. (a).

(d) Municipalities may delegate meter testing requirements to users.

(6) To estimate the amount of water discharged by un-metered users, municipalities shall use the typical wastewater discharge rates published in the *Cost Recovery Procedures Manual*.

17.304 Housing Unit Survey

Before July 31 of every year, each municipality shall report to the District the number of residential units within the municipality.

17.305 Winter Quarter Water Consumption Report

Before July 31 of every year, each municipality shall report the winter quarter water consumption for all metered residential users.

17.306 Employee Hours at Un-metered Businesses Report

For each un-metered commercial and industrial user served by a municipality, the municipality shall annually determine the number of employee hours worked in the preceding year. Each municipality shall report this information to the District before April 1 of every year.

17.307 Reporting Changes in Occupancy or Use

If a municipality becomes aware of a change in the occupancy or use of a building with a discharge factor certified or waste strength certified user, then the municipality shall report this information to the District within 30 days.

17.308 Retail Bills

(1) Each municipality shall bill each user served by the municipality.

(2) Municipalities shall bill the District's user charges according to the formulas set forth in Appendix A.

17.309 Payment of Wholesale Bills

Each municipality shall pay the District in full within 45 days after the due date of the municipal data transmission.

17.310 Notice to Users of Discharge Factor and Waste Strength Certification Opportunities

Each municipality shall implement procedures for notifying appropriate users of the opportunities for discharge factor and waste strength certification.

Subchapter IV - Commercial and Industrial User Responsibilities

17.401 Discharge Factor Certification

- (1) Any commercial user that has a metered water supply may determine its discharge factors and report them to the District.
- (2) All industrial users that have a metered water supply shall determine their discharge factors and report them to the District.
- (3) Except as provided in sub. (4), discharge factor certified users shall update their discharge factors every three years or when requested by the District. Users shall provide water consumption and discharge information within 60 days after the District requests it.
- (4)
 - (a) A discharge factor certified user shall annually update its discharge factors if the user:
 1. is a significant industrial user according to sec. 11.103, or
 2. has an average daily non-domestic wastewater discharge of 10,000 gallons per day or more.
 - (b) If a user meets the requirements of par. (a), then the user shall submit updated water consumption and discharge information to the District before March 31 of each year.
- (5) Users shall include the following certification when reporting their water consumption and discharge information:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
- (6) If a user fails to provide updated water consumption and discharge information on or before the due date, then the user shall pay bills based upon a discharge of all water consumed for all billing periods including and after the due date.
- (7) If an industrial user has never reported discharge factors to the District, then the user shall pay bills based upon a discharge of all water consumed and typical process waste strengths.

- (8) The information reported by users for discharge factor certification purposes shall represent, as accurately as possible, the user's circumstances in future billing periods. If a change in the user's circumstances makes previously submitted information inaccurate, then the user shall submit new information.

17.402 Waste Strength Certification

- (1) Any industrial or commercial user that has a metered water supply may certify its waste strengths.
- (2) The District may request any user to certify the average strength of the user's wastewater. If the District has requested a waste strength certification, then the user shall complete the certification within 60 days after receiving the request, unless additional time is approved by the District in advance.
- (3) A waste strength determination shall include analysis for all characteristics specified by the District over a time period specified by the District.
- (4) Users shall include the following certification when reporting their waste strengths:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

- (5) If a user fails to provide requested waste strength information before the due date, then the District shall calculate bills based upon either typical waste strengths or the highest waste strength on record for the user, whichever is higher, for all billing periods including and after the due date.
- (6) The information reported by users for waste strength certification purposes shall represent, as accurately as possible, the user's circumstances in future billing periods. If a change in the user's circumstances makes previously submitted information inaccurate, then the user shall submit new information.

17.403 Reports of Changes in Occupancy or Use

- (1) Whenever a change occurs in the occupancy or use of a building containing a discharge factor or waste strength certified user, the building's owner or occupant shall report the following information to the District and to the municipality in which the building is located:
 - (a) the address;

- (b) the new use or the identity of the new occupant and the new occupant's business, whichever is appropriate;
 - (c) the location of connections to the sewerage system; and
 - (d) estimates for water consumption, wastewater discharges, and waste strengths under the new conditions.
- (2) Users shall submit the report required by sub. (1) according to the procedures set forth in the *Cost Recovery Procedures Manual*.
- (3) Users shall submit the report required by sub. (1) within 30 days of the change in occupancy or use.

17.404 Payment of Bills

If the District has issued a bill to a user according to sec. 17.207 or sec. 17.212, then the user shall pay the bill within thirty days after the issue date. If a user fails to pay a bill before the due date, then the user shall pay any penalty charged according to sec. 17.207(4).

17.405 District Inspection and Sampling

- (1) Users shall receive the benefits of discharge factor or waste strength certification only if the user consents to inspection and sampling by District personnel, District representatives, or officials from other governmental agencies assisting the District, according to the limitations set forth in subs. (4) to (6).
- (2) Discharge factor and waste strength certified users shall allow:
- (a) entry to the user's premises at any reasonable time for the purposes of inspection, sampling, or examining records;
 - (b) access to the user's monitoring facilities as necessary to obtain representative samples; and
 - (c) the use of any devices necessary for collecting samples or measuring flows.
- (3) Before sample collection or inspection begins, the user shall disclose whether production activities and discharges are representative of normal operations.
- (4) The District shall inspect and sample according to an annually established schedule. The frequency of inspections or sampling shall be established based upon the volume of flow, waste strength, and other appropriate factors. The District shall keep this schedule confidential. The custodian of records may not release the schedule, except to authorized representatives of superior governments when they are auditing the District's activities under this chapter.

- (5) Areas subject to inspection are limited to the processes, equipment, and operations that result in wastewater discharged to the sewerage system or result any reported water losses. The scope of the inspection or sampling shall be limited to determining whether the discharge factor or waste strength information certified by the user is accurate. For purposes of inspection and sampling, a reasonable time is any time when the user is operating any process, equipment, or operation that results in wastewater or when the facility is discharging wastewater to the sewerage system.
- (6) Users shall allow access to and copying of records supporting the derivation of any discharge factor or waste strength. For purposes of reviewing records, reasonable time means the user's regular business hours.

Subchapter V - Wholesale and Retail Billing

17.501 General

- (1) The District shall prepare a wholesale bill for each municipality served by the District, according to sec. 17.201. Municipalities shall prepare a retail bill for the individual users served by the municipality, according to sec. 17.303.
- (2) The charges included in wholesale and retail bills shall be based upon the following factors:
 - (a) the volume of water discharged by a user to the sewerage system;
 - (b) the mass of BOD and TSS discharged by a user to the sewerage system;
 - (c) the user's number of connections to the sewerage system;
 - (d) other parameters for which the District has established unit costs of treatment according to sec. 17.205;
 - (e) the activities necessary to ensure the accuracy of the information used to calculate user charges;
 - (f) the Pretreatment Program activities necessary to evaluate compliance with ch. 11, MMSD Rules, and any other applicable local, state, or federal pretreatment standards or requirements; and
 - (g) any other factors necessary to ensure that the user charge system complies with sec. NR 128.13, Wis. Adm. Code or other applicable local, state, or federal requirements.

17.502 Calculating Bills

- (1) The District and municipalities shall calculate wholesale and retail bills according to the formulas set forth in Appendix A.
- (2) For retail residential bills, municipalities may use any one of the four methods provided in Appendix A.
- (3) For retail bills for non-certified commercial users, municipalities may use either one of the two methods provided in Appendix A.
- (4) For discharge factor and waste strength certified commercial users and all industrial users, the retail user charge shall be equal to each individual wholesale user charge.

APPENDIX A

I. WHOLESALE BILLING FORMULAS:

A. Wholesale Residential Users

The District shall use the following formula:

Volumetric Charge + Connection Charge

The Volumetric Charge Is:

Residential Occupancy Factor	x	Number of Residential Units	x	ERU Flow Rate	x	Days in Billing Period	/	1000 Gals.	X	Volumetric Rate per 1000 Gals.
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The Connection Charge Is:

Number of Residential Connections	x	Prorated Annual Connection Charge
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B. Wholesale Non-Certified Commercial Users

The District shall use the following formula:

Volumetric Charge + Connection Charge

The Volumetric Charge Is:

Total Non-Certified Commercial Water Consumption	x	Volumetric Rate Per 1000 Gals.
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The Connection Charge Is:

Number of Non-Certified Commercial Connections	x	Prorated Annual Connection Charge
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C. Wholesale Certified Commercial Users

1. Discharge Factor Certified Users

- a) The wholesale bill shall be the sum of the individual charges for each discharge factor certified commercial user.
- b) The District shall use the following formula for calculating individual charges.

Volumetric Charge + Connection Charge

The Volumetric Charge Is:

Flow Charge	+	BOD Charge	+	TSS Charge
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WHOLESALE BILLING FORMULAS:

C. Wholesale Certified Commercial Users (continued)

• **The Flow Charge is:**

$$\begin{array}{rcccl} \text{Total Water} & & \text{Domestic} & & \text{Non-Contact} & & \text{Unit} \\ \text{Consumption per} & \times & \text{Wastewater} & + & \text{Cooling Water} & \times & \text{Cost} \\ 1000 \text{ Gals.} & & \text{Discharge} & & \text{Discharge} & & \text{of Flow} \\ & & \text{Factor} & & \text{Factor} & & \end{array}$$

• **The BOD Charge is:**

$$\begin{array}{rcccl} \text{Total Water} & & \text{Domestic} & & \text{Domestic} & & \text{Unit} \\ \text{Consumption per} & \times & \text{Wastewater} & \times & \text{BOD} & \times & \text{Cost} \\ 1000 \text{ Gals.} & & \text{Discharge} & & \text{Wastrength} & & \text{of BOD} \\ & & \text{Factor} & & & & \end{array}$$

• **The TSS Charge is:**

$$\begin{array}{rcccl} \text{Total Water} & & \text{Domestic} & & \text{Domestic} & & \text{Unit} \\ \text{Consumption per} & \times & \text{Wastewater} & \times & \text{TSS} & \times & \text{Cost} \\ 1000 \text{ Gals.} & & \text{Discharge Factor} & & \text{Wastrength} & & \text{of TSS} \\ & & & & & & \end{array}$$

The Connection Charge Is:

$$\begin{array}{rcc} \text{Number of} & & \text{Prorated} \\ \text{Connections} & \times & \text{Annual} \\ & & \text{Connection Charge} \end{array}$$

2. Wastrength Factor Certified Users

a) The wholesale bill shall be the sum of the individual charges for each wastrength factor certified commercial user.

b) The District shall use the following formula for calculating individual charges:

$$\text{Volumetric Charge} + \text{Connection Charge} + \text{Pretreatment Surcharge}$$

The Volumetric Charge Is:

$$\begin{array}{r} \text{Flow} + \text{BOD} + \text{TSS} \\ \text{Charge} + \text{Charge} + \text{Charge} \end{array}$$

• **The Flow Charge is:**

$$\begin{array}{rcccl} \text{Total Water} & & \text{Domestic} & & \text{Non-Contact} & & \text{Unit} \\ \text{Consumption per} & \times & \text{Wastewater} & + & \text{Cooling Water} & \times & \text{Cost} \\ 1000 \text{ Gals.} & & \text{Discharge Factor} & & \text{Discharge Factor} & & \text{of Flow} \\ & & & & & & \end{array}$$

• **The BOD Charge is:**

$$\begin{array}{rcccl} \text{Total Water} & & \text{Domestic} & & \text{Certified} & & \text{Unit} \\ \text{Consumption per} & \times & \text{Wastewater} & \times & \text{BOD} & \times & \text{Cost} \\ 1000 \text{ Gals.} & & \text{Discharge} & & \text{Wastrength} & & \text{of BOD} \\ & & \text{Factor} & & & & \end{array}$$

WHOLESALE BILLING FORMULAS:

C. Wholesale Certified Commercial Users (continued)

• **The TSS Charge Is:**

$$\begin{array}{rcccl} \text{Total Water} & & \text{Domestic} & & \text{Certified} & & \text{Unit} \\ \text{Consumption per} & & \text{Wastewater} & & \text{TSS} & & \text{Cost} \\ 1000 \text{ Gals.} & \times & \text{Discharge} & \times & \text{Wastestrength} & \times & \text{of TSS} \\ & & \text{Factor} & & & & \end{array}$$

The Connection Charge Is:

$$\begin{array}{rcc} \text{Number} & & \text{Prorated} \\ \text{of} & & \text{Annual} \\ \text{Connections} & \times & \text{Connection Charge} \end{array}$$

D. Wholesale Non-Certified Industrial Users

- 1) The wholesale bill shall be the sum of the individual charges for each non-certified industrial user.
- 2) The District shall use the following formula for calculating individual charges:

$$\text{Volumetric Charge} + \text{Connection Charge} + \text{Pretreatment Surcharge}$$

The Volumetric Charge Is:

$$\begin{array}{rcccl} \text{Flow} & & \text{BOD} & & \text{TSS} \\ \text{Charge} & + & \text{Charge} & + & \text{Charge} \end{array}$$

• **The Flow Charge is:**

$$\begin{array}{rcc} \text{Total Water} & & \text{Unit} \\ \text{Consumption per} & \times & \text{Cost} \\ 1000 \text{ Gals.} & & \text{of Flow} \end{array}$$

• **The BOD Charge is:**

$$\begin{array}{rcccl} \text{Total Water} & & \text{Typical} & & \text{Unit} \\ \text{Consumption per} & \times & \text{Industrial BOD} & \times & \text{Cost} \\ 1000 \text{ Gals.} & & \text{Wastestrength} & & \text{of BOD} \end{array}$$

• **The TSS Charge is:**

$$\begin{array}{rcccl} \text{Total Water} & & \text{Typical} & & \text{Unit} \\ \text{Consumption per} & \times & \text{Industrial TSS} & \times & \text{Cost} \\ 1000 \text{ Gals.} & & \text{Wastestrength} & & \text{of TSS} \end{array}$$

The Connection Charge Is:

$$\begin{array}{rcc} \text{Number} & & \text{Prorated} \\ \text{of} & & \text{Annual} \\ \text{Connections} & \times & \text{Connection Charge} \end{array}$$

WHOLESALE BILLING FORMULAS:

E. Wholesale Certified Industrial Users

1. Discharge Factor Certified Users

- a) The wholesale bill shall be the sum of the individual charges for each discharge factor certified industrial user.
- b) The District shall use the following formula for calculating individual charges:

$$\text{Volumetric Charge} + \text{Connection Charge} + \text{Pretreatment Surcharge}$$

The Volumetric Charge Is:

$$\text{Flow Charge} + \text{BOD Charge} + \text{TSS Charge}$$

- **The Flow Charge is:**

$$\text{Total Water Consumption per 1000 Gals.} \times \text{Domestic Wastewater Discharge Factor} + \text{Process Wastewater Discharge Factor} + \text{Non-Contact Cooling Water Discharge Factor} \times \text{Unit Cost of Flow}$$

- **The BOD Charge is:**

Domestic Wastewater:

$$\text{Total Water Consumption per 1000 Gals.} \times \text{Domestic Wastewater Discharge Factor} \times \text{Domestic BOD Wastestrength} \times \text{Unit Cost of BOD}$$

Plus Process Wastewater:

$$\text{Total Water Consumption per 1000 Gals.} \times \text{Process Wastewater Discharge Factor} \times \text{Typical Industrial BOD Wastestrength} \times \text{Unit Cost of BOD}$$

- **The TSS Charge is:**

Domestic Wastewater:

$$\text{Total Water Consumption per 1000 Gals.} \times \text{Domestic Wastewater Discharge Factor} \times \text{Domestic TSS Wastestrength} \times \text{Unit Cost of TSS}$$

Plus Process Wastewater:

$$\text{Total Water Consumption per 1000 Gals.} \times \text{Process Wastewater Discharge Factor} \times \text{Typical Industrial TSS Wastestrength} \times \text{Unit Cost of TSS}$$

WHOLESALE BILLING FORMULAS:

E. Wholesale Certified Industrial Users (continued)

The Connection Charge Is:

$$\begin{array}{r} \text{Number} \\ \text{of} \\ \text{Connections} \end{array} \times \begin{array}{r} \text{Prorated} \\ \text{Annual} \\ \text{Connection Charge} \end{array}$$

2. Wastestrength Factor Certified Users:

- a) The wholesale bill shall be the sum of the individual charges for each wastestrength factor certified industrial user.
- b) The District shall use the following formula for calculating individual charges.

$$\text{Volumetric Charge} + \text{Connection Charge} + \text{Pretreatment Surcharge}$$

The Volumetric Charge Is:

$$\begin{array}{r} \text{Flow} \\ \text{Charge} \end{array} + \begin{array}{r} \text{BOD} \\ \text{Charge} \end{array} + \begin{array}{r} \text{TSS} \\ \text{Charge} \end{array}$$

- **The Flow Charge is:**

$$\begin{array}{r} \text{Total Water} \\ \text{Consumption per} \\ \text{1000 Gals.} \end{array} \times \begin{array}{r} \text{Domestic} \\ \text{Wastewater} \\ \text{Discharge} \\ \text{Factor} \end{array} + \begin{array}{r} \text{Process} \\ \text{Wastewater} \\ \text{Discharge} \\ \text{Factor} \end{array} + \begin{array}{r} \text{Non-Contact} \\ \text{Cooling Water} \\ \text{Discharge} \\ \text{Factor} \end{array} \times \begin{array}{r} \text{Unit} \\ \text{Cost} \\ \text{of Flow} \end{array}$$

- **The BOD Charge is:**

Domestic Wastewater:

$$\begin{array}{r} \text{Total Water} \\ \text{Consumption per} \\ \text{1000 Gals.} \end{array} \times \begin{array}{r} \text{Domestic} \\ \text{Wastewater} \\ \text{Discharge} \\ \text{Factor} \end{array} \times \begin{array}{r} \text{Certified} \\ \text{or} \\ \text{Domestic BOD} \\ \text{Wastestrength} \end{array} \times \begin{array}{r} \text{Unit} \\ \text{Cost} \\ \text{of BOD} \end{array}$$

Plus Process Wastewater:

$$\begin{array}{r} \text{Total Water} \\ \text{Consumption per} \\ \text{1000 Gals.} \end{array} \times \begin{array}{r} \text{Process} \\ \text{Wastewater} \\ \text{Discharge} \\ \text{Factor} \end{array} \times \begin{array}{r} \text{Certified} \\ \text{Industrial} \\ \text{BOD} \\ \text{Wastestrength} \end{array} \times \begin{array}{r} \text{Unit} \\ \text{Cost} \\ \text{of BOD} \end{array}$$

- **The TSS Charge is:**

Domestic Wastewater:

$$\begin{array}{r} \text{Total Water} \\ \text{Consumption per} \\ \text{1000 Gals.} \end{array} \times \begin{array}{r} \text{Domestic} \\ \text{Wastewater} \\ \text{Discharge} \\ \text{Factor} \end{array} \times \begin{array}{r} \text{Certified} \\ \text{or} \\ \text{Domestic TSS} \\ \text{Wastestrength} \end{array} \times \begin{array}{r} \text{Unit} \\ \text{Cost} \\ \text{of TSS} \end{array}$$

WHOLESALE BILLING FORMULAS:

E. Wholesale Certified Industrial Users (continued)

Plus Process Wastewater:

$$\begin{array}{rcccl} \text{Total Water} & & \text{Process} & & \text{Certified} & & \text{Unit} \\ \text{Consumption per} & \times & \text{Wastewater} & \times & \text{Industrial} & \times & \text{Cost} \\ 1000 \text{ Gals.} & & \text{Discharge} & & \text{TSS} & & \text{of TSS} \\ & & \text{Factor} & & \text{Wastestrength} & & \end{array}$$

The Connection Charge Is:

$$\begin{array}{rcc} \text{Number} & & \text{Prorated} \\ \text{of} & \times & \text{Annual} \\ \text{Connections} & & \text{Connection Charge} \end{array}$$

F. VOLUMETRIC RATE FORMULA:

$$\begin{array}{rcccl} \text{Unit} & + & \text{Domestic} & \times & \text{Unit} & + & \text{Domestic} & \times & \text{Unit} \\ \text{Cost} & & \text{BOD per} & & \text{Cost} & & \text{TSS per} & & \text{Cost} \\ \text{of Flow} & & 1000 \text{ Gals.} & & \text{of BOD} & & 1000 \text{ Gals.} & & \text{of TSS} \end{array}$$

II. RETAIL BILLING FORMULAS

A. Retail Residential Users

Option 1: Uniform Charge - Method 1

$$\text{Total Wholesale Residential Charges} \times \frac{\text{User's Number of Residential Units}}{\text{Total Residential Units in the Municipality}}$$

Option 2: Uniform Charge - Method 2

$$\text{Total Wholesale Residential Charges} - \text{Total Residential Connection Charges} \times \frac{\text{User's Number of Residential Units}}{\text{Total Residential Units in the Municipality}}$$

Plus:

$$\text{User's Number of Connections} \times \text{Connection Charge}$$

Option 3: Volumetric Charge - Method 1

$$\text{Total Wholesale Residential Charges} \times \frac{\text{User's Water Consumption}}{\text{Total Residential Water Consumption in the Municipality}}$$

Option 4: Volumetric Charge - Method 2

$$\text{Total Wholesale Residential Charges} - \text{Total Residential Connection Charges} \times \frac{\text{User's Water Consumption}}{\text{Total Residential Water Consumption in the Municipality}}$$

Plus:

$$\text{User's Number of Connections} \times \text{Connection Charge}$$

B. Retail Non-Certified Commercial Users

Option 1: Volumetric Charge - Method 1

$$\text{Total Wholesale Non-Certified Commercial Charges} \times \frac{\text{User's Water Consumption}}{\text{Total Non-Certified Commercial Water Consumption in the Municipality}}$$

Option 2: Volumetric Charge - Method 2

$$\text{Total Wholesale Non-Certified Commercial Charges} - \text{Total Residential Connection Charges} \times \frac{\text{User's Water Consumption}}{\text{Total Non-Certified Commercial Water Consumption in the Municipality}}$$

Plus:

$$\text{User's Number of Connections} \times \text{Connection Charge}$$

APPENDIX B

Discharge Factor & Waste Strength Certification

Water Balance Form



Preserving The Environment •
Improving Water Quality

Milwaukee Metropolitan Sewerage District
260 West Seeboth Street
Milwaukee WI 53204-1446

**Discharge Factor & Waste Strength Certification
Water Balance Form**

Please complete the entire form. Type or clearly print. If necessary to provide complete information or describe special circumstances, attach extra sheets. The signing official must have authority to provide the required information.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature _____ Date _____
(Corporate official identified below)

Section A. General Information

1. Facility Name _____
2. Division Name _____
3. Facility Address
 - a. Street _____
 - b. City, Zip Code _____
4. Mailing Address
 - a. Street _____
 - b. City, State, Zip Code _____
5. Corporate Official
 - a. Name _____
 - b. Title _____
 - c. Telephone _____
6. Technical Contact
 - a. Name _____
 - b. Title _____
 - c. Telephone _____ d. Fax _____
 - e. Email _____
7. Description of the activities at this facility

8. Classification Code (4 digit SIC or 5 digit NAICS) _____
9. Number of full-time-equivalent employees _____
10. List equipment or processes that discharge process wastewater

11. List any wastewater treatment equipment or systems

12. Number of connections to the combined or sanitary sewer system _____

Section B. Water Consumption

1. Water sources _____
List all that apply, such as municipality, private well, steam, or other source.
2. List all municipal water account numbers (Continue on a separate page if necessary)

3. Total Consumption

		Hundreds of Cubic Feet ¹	Thousands of Gallons
	Water Purchases		
a.	1 st quarter 20 ____		
b.	2 nd quarter 20 ____		
c.	3 rd quarter 20 ____		
d.	4 th quarter, 20 ____		
e.	Total Water Purchased (sum of lines a through d)		
f.	Volume from wells and other non-municipal sources		
g.	Total consumption		(use this value in line E1)

1. To convert hundreds of cubic feet to thousands of gallons, multiply by 0.748

Section C. Discharges to Sanitary or Combined Sewers

Show the total discharges to sanitary or combined sewers in the last twelve months in thousands of gallons per year through each connection. Fill one column for each connection identified in Line A12. Continue this table on another page if necessary.

1. Connection Number					Total for All Connections
2. Non-Contact Cooling ¹					
3. Domestic					
4. Process					
5. Total					6. Grand Total ²

1. Applicable only to facilities in the combined sewer area. Discharging non-contact cooling wastewater to sanitary sewers is prohibited. Include other wastewater that is neither a process nor a domestic wastewater.

2. Use the value in line C6 for calculating the value in line E2.

Section D. Losses

		Thousands of gallons per year
1.	Discharges to surface water or storm sewers ¹	
2.	Evaporation	
3.	Lawn irrigation	
4.	Incorporated into product	
5.	Hauled away	
6.	Other (describe):	
7.	Total ²	

1. Such as single pass non-contact cooling wastewater, reverse osmosis concentrate, or cooling tower blowdown

2. Use the value in line D7 for calculating the value in line E2.

Section E. Water Balance

		Thousands of gallons per year
1.	Total Consumption (Line B3g)	
2.	Total Discharges and Losses(Sum of Lines C6 and D7)	

Line 1 must equal Line 2

APPENDIX C

WATER BALANCE INSTRUCTIONS



Preserving The Environment •
Improving Water Quality

Milwaukee Metropolitan Sewerage District
260 West Seeboth Street
Milwaukee WI 53204-1446

Water Balance Instructions

The purpose of this form is determine how discharges relate to water consumption. Determining the volume of each type of wastewater discharged to combined or sanitary sewers is critical for assessing sewer user charges. Careful completion of this form ensures that you receive all possible reductions in user charges for water losses.

Certification

The person signing the certification must be the person identified in line A5.

Section A. General Information

1. Provide the official corporate or business name.
2. Provide a division name, if applicable.
3. Identify the location of the facility.
4. Provide a mailing address, if different from the facility address.
5. Identify the highest ranking local facility representative, such as a corporate President, Vice-President or Secretary; Plant Manager or General Manager; General Partner; or Owner.
6. If different from the person in line 5, identify someone with technical knowledge of how water is used.
7. Briefly describe the type of business
8. Provide the facility's Standard Industrial Classification or North American Industrial Classification System Code. The United States Office of Management and Budget defines these codes. Classification manuals are available at public libraries. Various sites on the internet provide classification information. Various tax or census forms or U.S. Occupational Safety and Health Administration reports will show the code that your facility has used in the past.
9. Provide the number of full-time-equivalent employees. For example, count two employees each working half-time as one full time equivalent employee.
10. In brief and general terms, describe the operations that discharge process wastewater. Examples include parts washing, electroplating, and equipment cleaning.
11. In brief and general terms, describe wastewater treatment equipment. Examples include oil skimming, metals precipitation, ion exchange, and pH adjustment.
12. Identify the number of sewers that connect the facility to combined or sanitary sewer system. Sewers may combine on the facility's property before connecting to the public sewer. In this case, count the number of sewers at the point that they leave a building. Do not count sewers that connect to a storm sewer system.

Section B. Water Consumption

1. List all of the sources that provide water.
2. List all municipal water account numbers. Water bills or the municipal water department can provide this information.
3. Provide information for total water consumption information for the most recent four consecutive quarters for which you have information. These four quarters do not need to be a calendar year. Include water provided by a municipality in lines a through d. If the municipality reports water consumption to you in hundreds of cubic feet, enter this value in the center column and then multiply it by 0.748 to obtain thousands of gallons and enter this value in the right column. Sum total purchases in line e. If you obtain water from wells, steam condensate, raw materials, or other sources, enter the total annual volume in line f. Add lines e and f to get the total annual consumption and enter this result in line g and in line E1.

Section C. Discharges to Sanitary or Combined Sewers

For each connection, estimate the annual volume of each type of wastewater discharged. Only facilities in the combined sewer area should use line 2, which is for any wastewater that is neither a process nor a domestic wastewater. Domestic wastewater is from toilets, bathroom and lunch room sinks, and the cleaning of these areas. One option to calculate this flow is to use 2.3 gallons per employee-hour, 20 gallons per full-time-equivalent employee per day, or 5,120 gallons per full-time-equivalent employee per year. Process wastewater is water that contacts a raw material, intermediate product, final product, or waste product during manufacturing or processing. To obtain reasonable estimates, an iterative process may be necessary. Various sources may provide information, including, but not limited to, water meters, equipment specifications, engineering calculations, production records, or extrapolations from short-term measurements.

Section D. Losses

Estimate the annual volume of water not discharged to a combined or sanitary sewer. As with the previous section, various sources may provide information, including, but not limited to, water meters, equipment specifications, engineering calculations, production records, waste disposal records, or extrapolations from short-term measurements.

Section E. Water Balance

Enter the value from line B3g into line E1. Enter the sum of lines C6 and D7 into line E2. Total consumption must equal the sum of total discharges and total losses.

Thank You for Your Cooperation