

CHAPTER 3 SEWER USER FEES

6-3-1	PURPOSE	6-3-6	USER CHARGE REVIEW
6-3-2	DEFINITIONS	6-3-7	SEWER ADJUSTMENT
6-3-3	OPERATION AND MAINTENANCE	6-3-8	RESERVED
6-3-4	USER CHARGE RATES	6-3-9	RESERVED
6-3-4	DEFICIT		APPENDIX "A"
6-3-5	BILLING, LATE CHARGES		APPENDIX "B"
6-3-5	DENIAL OF BENEFIT OF CITY SERVICES		

6-3-1 PURPOSE It is determined and declared to be necessary and conducive to the protection of the public health, safety, welfare and convenience of the City to collect charges from all users who contribute wastewater to the City's wastewater treatment facility. The proceeds of such charges so derived will be used for the purpose of operating, maintaining, and retiring the debt for such public wastewater treatment facility.

6-3-2 DEFINITIONS. Unless the context specifically indicates otherwise, the meaning of terms used in this ordinance shall be as follows:

1. "BOD" (denoting Biochemical Oxygen Demand) shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days at 20° C, expressed in milligrams per liter (mg/l).
2. "Normal Domestic Wastewater" shall mean wastewater that has a BOD concentration of not more than 221 mg/l and a suspended solids concentration of not more than 268 mg/l.
3. "Operation and Maintenance" shall mean all expenditures during the useful life of the wastewater treatment facility for materials, labor, utilities, and other items which are necessary for managing and maintaining the wastewater treatment facility to achieve the capacity and performance for which such facilities were designed and constructed.
4. "Replacement" shall mean expenditures for obtaining and installing equipment, accessories, or appurtenances which are necessary during the useful life of the wastewater treatment facility to maintain the capacity and performance for which such facilities were designed and constructed. The term "operation and maintenance" includes replacement.
5. "Residential Contributor" shall mean any contributor to the City's wastewater treatment facility whose lot, parcel of real estate, or building is used for domestic dwelling purposes only.
6. "Shall and Will" are mandatory: "May" is permissive.
7. "SS" (denoting Suspended Solids) shall mean solids that either float on the surface of or are in suspension in water, sewage, or other liquids and which are removable by laboratory filtering.

8. “Wastewater Treatment Facility” shall mean any devices and systems for the storage, treatment, recycling, and reclamation of municipal sewage, domestic sewage, or liquid industrial wastes. These include intercepting sewers, outfall sewers, sewage collection systems, individual systems, pumping, power, and other equipment and their appurtenances: extensions, improvement, remodeling, additions and alterations thereof: elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities: and any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment: or any other method or system for preventing, abating, reducing, storing, treating, separating, or disposing of municipal waste or industrial waste, including waste in combined stormwater and sanitary sewer systems.
9. “Useful Life” shall mean the estimated period during which a wastewater treatment facility will be operated.
10. “User Charge” shall mean that portion of the total wastewater service charge which is levied in a proportional and adequate manner for the cost of operation, maintenance, and replacement of the wastewater treatment facility.
11. “Water Meter” shall mean a water volume measuring and recording device, furnished and/or installed by the City of Maquoketa or furnished and/or installed by a user and approved by the City of Maquoketa.

6-3-3 OPERATION AND MAINTENANCE.

1. The user charge system shall generate adequate annual revenues to pay costs of annual operation and maintenance including replacement and costs associated with debt retirement and bonded capital associated with financing the wastewater treatment facility which the City may by ordinance designate to be paid by the user charge system. That portion of the total user charge which is designated for operation and maintenance including replacement of the wastewater treatment facility shall be established by this ordinance.
2. That portion of the total user charge collected which is designated for operation and maintenance including replacement purposes as established in 6-3-4, shall be deposited in a separate non-lapsing fund known as the Operation, Maintenance and Replacement Fund and will be kept in two primary accounts as follows:
 - a. An account designated for the specific purpose of defraying operation and maintenance costs excluding replacement of the wastewater treatment facility (Operation and Maintenance Account).
 - b. An account designated for the specific purpose of ensuring replacement needs over the useful life of the wastewater treatment facility (Replacement Account). Deposits in the replacement account shall be made at least annually from the operation, maintenance, and replacement revenue in the amount of \$80,000 annually.
2. Fiscal year-end balances in the operation and maintenance account and the replacement account shall be carried over to the same accounts in the subsequent fiscal year and shall be used for no other purposes than those designated for these accounts. Monies which have been transferred from other sources to meet temporary shortages in the operation, maintenance and replacement fund shall be returned to their respective accounts upon appropriate adjustment of the user charge rates for operation, maintenance and

replacement, The user charge rate(s) shall be adjusted to respective accounts within the fiscal year following the fiscal year in which the monies were borrowed.

6-3-4 USER CHARGE RATE.

1. Each user shall pay for the services provided by the City based on his/her use of the wastewater treatment facility as determined by water meter(s) acceptable to the City.
3. For residential contributors, quarterly user charges will be based on average quarterly water usage during the first quarter. If a residential contributor has not established a quarterly average, his/her quarterly user charge shall be the median charge of all other residential contributors.
4. For industrial and commercial contributors, user charges shall be based on water used during the current quarter. If a commercial or industrial contributor has a consumptive use of water, or in some other manner uses water which is not returned to the wastewater collection system, the user charge for that contributor may be based on a wastewater meter(s) or separate water meter(s) installed and maintained at the contributor's expense, and in a manner acceptable to the City.
5. The Wastewater Department shall charge and collect starting on the designated dates, the following prices and rates for separate service, which rate shall include rate and all service rendered:

August 1993 Billing Cycle Rate Per 100 cu. ft. Basic Service plus 300 cu. ft. \$8.37 Over 300 cu. ft. \$0.92 per 100 cu. ft. Non-Metered Trailers \$11.75/month	January 1994 Billing Cycle Rate Per 100 cu. ft. Basic Service plus 300 cu. ft. \$9.55 Over 300 cu. ft. \$0.92 per 100 cu. ft. Non-Metered Trailers \$13.40/month
July 1994 Billing Cycle Rate Per 100 cu. ft. Basic Service plus 300 cu. ft. \$11.36 Over 300 cu. ft. \$1.13 per 100 cu. ft. Non-Metered Trailers \$15.91/month	January 1994 Billing Cycle Rate Per 100 cu. ft. Basic Service plus 300 cu. ft. \$15.60 Over 300 cu. ft. \$1.40 per 100 cu. ft. Non-Metered Trailers \$22.60/month
December 1995 Billing Cycle Rate Per 100 cu. ft. Basic Service plus 30 cu. ft. \$18.60 Over 300 cu. ft. \$1.40 per 100 cu. ft. Non-Metered Trailers \$26.60/month	March 1996 Billing Cycle Rate Per 100 cu. ft. Basic Service plus 300 cu. ft. \$21.43 Over 300 cu. ft. \$1.40 per 100 cu. ft. Non-Metered Trailers \$28.43/month
July 2009 Billing Cycle Rate Per 100 cu. ft. Basic Service plus 300 cu. ft. \$21.75 Over 300 cu. ft. \$1.421 per 100 cu. ft. Non-Metered Trailers \$28.86	July 2010 Billing Cycle Rate Per 100 cu. ft. Basic Service plus 300 cu. ft. \$22.08 Over 300 cu. ft. \$1.442 per 100 cu. ft. Non-Metered Trailers \$29.29
July 2011 Billing Cycle Rate Per 100 cu. ft. Basic Service plus 300 cu. ft. \$22.41 Over 300 cu. ft. \$1.464 per 100 cu. ft. Non-Metered Trailers \$29.73	July 2012 Billing Cycle Rate Per 100 cu. ft. Basic Service plus 300 cu. ft. \$22.75 Over 300 cu. ft. \$1.486 per 100 cu. ft. Non-Metered Trailers \$30.18
July 2013 Billing Cycle Rate Per 100 cu. ft. Basic Service plus 300 cu. ft. \$23.09 Over 300 cu. ft. \$1.508 per 100 cu. ft. Non-Metered Trailers \$30.63	

2. Bill payments received by the City on or after the delinquent date shall be for the gross amount stated on the bill which shall include a late payment penalty of 10.5% per month of the past due amount.
3. Each account shall be granted one complete forgiveness of a late payment penalty in each calendar year. The customer shall be informed of the use of the automatic forgiveness in one of the following ways: a) by phone or in person: b) by posting to the next bill: or c) by separate mailing.
4. The billing and collection of sewer user fees, including the collection of delinquent accounts and the perfection of liens on property for delinquent accounts, shall be governed by the procedures of Iowa Code §384.84.

6-3-5A DENIAL OF BENEFIT OF CITY SERVICES.

1. The City may withhold City services or disconnect City services with appropriate notice and in accordance with Iowa law to any premises if the premise has an outstanding debt and the person responsible for the outstanding debt owns, occupies, or receives the benefit of any City services provided at that location.
2. If a delinquent amount is owed by an account holder for one or more City services associated with a prior property or premises, the City may withhold City services or disconnect City services with appropriate notice and in accordance with Iowa law to any new property or premises owned or occupied by that account holder, or to any location at which that account holder receives the benefit of any City services.
3. As used in this section, “City services” include, but are not limited to, services of sewer systems, storm water drainage systems, sewage treatment, solid waste collection, water, and solid waste disposal.

6-3-6 USER CHARGE REVIEW.

1. The City will review the user charge system (at least every two years), and revise user charge rates as necessary to ensure that the system generates adequate revenues to pay the costs of operation and maintenance, including replacement, and that the system continues to provide for the proportional distribution of operation and maintenance including replacement costs among users and user classes.
2. The City will notify each user at least annually, in conjunction with a regular bill, of the rate being charged for operation, maintenance, including replacement, of the wastewater treatment facility.

6-3-7 SEWER ADJUSTMENT. Each customer is allowed a one-time adjustment on his/her sewer bill for each residence with a cap of \$500.00. This adjustment will be calculated by using the previous twelve months to get an average usage. Water, landfill, and tax will be paid in full.

6-3-8 Reserved

6-3-9 Reserved

APPENDIX “A” TO USER CHARGE ORDINANCE: (Actual Use Rate Structure)

(NOTE: The charges developed in this ordinance and appendix follow Model Nos. 1 and 2 of Appendix B to 40 CFR 35, dated September 27, 1978. It would also be acceptable to develop charges using Model No. 3, the quantity/quality formula, outlined in the referenced federal regulations.)

This appendix presents the methodology to be used in calculating user charge rates and surcharges and illustrates the calculations followed in arriving at the first year’s user charges and surcharges, The unit costs established in this appendix are based on estimates of expenses and loadings. The actual expenses and loadings that occur may differ from these estimates and certainly they will change as time passes. Therefore, the unit costs must be re-established whenever necessary to reflect actual expenses and loadings. Once the system is in use, the expenses and loadings can be determined from operating records and the unit costs can be adjusted based on these figures.

1. Expenses: The total annual expenses associated with the treatment works, as defined in Article II, section 8, are estimated as follows:

Item	Annual Expenses
Billing and Collections	\$ 23,000
Administrative	\$ 25,350
Power	\$ 0 (1)
Labor (including fringe benefits)	\$ 216,830 (1)
Material Costs	\$ 0 (1)
Replacement Costs (See Appendix B)	\$ 80,000
(Debt Service)	\$ 198,245
Other (Potential 503 Sludge Project)	\$ 52,023
TOTAL	\$590,448

1. Plant is operated under contract by People Service. These costs are lumped under “Labor” category.
2. Allocation of Expenses The total operation and maintenance including replacement expense is allocated to the appropriate pollutants in the following manner. (NOTE: If debt service allocation is to be addressed in this ordinance, it may be allocated in the same manner or it may be allocated in any other manner that the grantee desires.)

Annual \$ to Treat Annual Flow _____% annual cost allocated to flow x (total annual O&M budget minus billing & collection)

Annual \$ to Treat Annual BOD _____= % annual cost allocated to BOD x (total annual O&M budget minus billing & collection.)

Annual \$ to Treat Annual SS _____ = % annual cost allocated to SS x (total annual O&M budget minus billing and collection.)

Annual \$ to Treat Annual _____ = % annual cost allocated to pollutant x (total Other Pollutant (Specify) annual O&M budget minus billing & collection.)

(NOTE: The billing and collection expense is deducted from the total O&M budget at this point because each user will pay the same for this expense per billing period. See paragraph 5 below, in some situations other appropriate expenses may be handled in the same manner.)

3. Loadings:

The initial hydraulic loading is estimated to be 279,860,000 gal/year.

The initial BOD loading is estimated to be 400,114 lbs./year.

The initial SS loading is estimated to be 421,731 lbs./year.

The initial other pollutant loading is estimated to be _____ lbs./year.

4. Unit Costs.

Initial unit cost for flow in \$/gallons = annual \$ to treat annual flow
0.0014 gal Estimated annual hydraulic loading

Initial unit cost for BOD in \$/pound =annual \$ to treat annual BOD
\$0.40/lb. BOD Estimated annual BOD loading

Initial unit cost for SS in \$/pound =annual \$ to treat annual SS
\$0.09/lb. TSS Estimated annual SS loading

Initial unit cost for other =annual \$ to treat other annual pollutants
pollutants in \$/pound Estimated annual other pollutant loading

The unit costs for BOD, SS and Other Pollutants are to be inserted in Article IV, Section 4, of the ordinance.

5. Minimum Charge:

Annual billing and collection cost = \$ _____

Annual cost to treat infiltration/inflow = \$ _____

(assumed clear water) = unit cost to treat flow x annual infiltration/inflow

TOTAL Annual Minimum Cost = \$322,697.12 Allocated as 55% of total costs.

Minimum Charge/User/Billing Period = \$ 11.36

This minimum charge/user/billing period is to be inserted in Article IV, Section 3, of the ordinance.

(NOTE: The above procedure allocates the cost of transporting and treating infiltration/inflow according to the number of users. Other acceptable means of distributing this cost include allocation based on flow volume of the users or allocation based on the land area of the users.)

6. Residential User Unit Charge. The residential user unit charge is calculated as follows using the pollutant concentrations defining normal domestic wastewater in Article II, Section 2, of this ordinance.

Residential unit charge = unit flow charge
+ (unit BOD charge) (BODNO) (.00834)
+ (unit SS charge) (SSNO) (.00834)
where: Residential unit charge is in \$/1000 gal
unit flow charge is in \$/1000 gal from paragraph 4
unit BOD charge is in \$/lb. BOD from paragraph 4
unit SS charge is in \$/lb. SS from paragraph 4
BODNO is the normal domestic BOD strength in milligrams per liter (mg/l)
as defined in Article II, Section 2, of the ordinance

SSNO is the normal domestic SS strength in mg/l as defined in Article II,
Section 2, of the ordinance and .00834 is a unit conversion factor.

7. Extra Strength Users: For users who contribute wastewater that has greater strength than normal domestic wastewater, the user charge will be calculated as follows:

Total monthly charge to extra strength user = charge to residential user + surcharge for BOD (if appropriate) + surcharge for SS (if appropriate)

Total monthly charge to extra strength user = minimum charge
+v(residential unit charge)

+v(unit BOD charge)(BODES - BODND)(.00834)

+v(unit SS charge)(SSES - SSND)(.00834)

Where: Total monthly charge to extra strength user is in dollars.

Minimum charge is in dollars as calculated in paragraph 5 of this Appendix "A"

v is the volume of wastewater in 1000 gallons discharged by the extra strength user during the month

Residential unit charge is in \$/1000 gal, as calculated in paragraph 6 of this Appendix "A"

Unit BOD charge is in \$/lb. BOD from paragraph 4

Unit SS charge is in \$/lb. SS from paragraph 4

BODES is the average BOD concentration in milligrams per liter (mg/l) contributed by the extra strength user during the month

SSES is the average SS concentration in mg/l contributed by the extra strength user during the month

BODND is the normal domestic BOD strength in mg/l as defined in Section 3-4-1.50 of these ordinances.

SSND is the normal domestic SS strength in mg/l as defined in Section 3-4-1.50 of this ordinance and .00834 is a unit conversion factor.

An example user charge calculation for an extra strength user of the Maquoketa wastewater treatment facility follows:

Assuming: monthly flow = 56,900 gallons

Monthly average BOD concentrations = 1500 mg/l

Monthly average SS concentrations = 2700 mg/l

Example monthly charge for extra strength user: \$2.71

+ 56.9 (0.975)

$$\begin{aligned}
&+ 56.9 (0-150)(1500 \text{ mg/l} - 221 \text{ mg/l})(0.00834) \\
&+ 56.9 (0.086)(2700 \text{ mg/l} - 268 \text{ mg/l})(0.00834) \\
&= \$248.48
\end{aligned}$$

APPENDIX “B” EQUIPMENT REPLACEMENT SCHEDULE:

		Income		Balance
Year		Price	Interest	
			7%	
1		\$80,000		\$80,000
2		\$80,000	\$5,600	\$165,600
3		\$80,000	\$11,592	\$257,192
4		\$80,000	\$18,003	\$355,195
5	Replace CL2, SO2 (1.05)6 x (45,000) Systems = \$57,432 Rebuild Raw Sewage, SBR, NWLS, and S. Slope Pumps (1.05)6 x (40,625 + 28,000 + 9,000) = \$99,360	\$80,000	\$24,863	\$303,266
6		\$80,000	\$21,228	\$404,494
7		\$80,000	\$28,314	\$512,808
8		\$80,000	\$35,896	\$628,704
9		\$80,000	\$44,009	\$752,713
10	Replace CL2, SO2, Replace Pumps and Blowers and Raw Sewage, SBR, NWLS, SSLs, Sludge, Storm. Rebuild Heat Exchanger (1.05)18 x (45,000 + 160,000 + 81,250 + 22,500 + 70,000 + 25,000 + 15,000 + 15,000) = \$707,012	\$80,000	\$52,689	\$178,389
11		\$80,000	\$12,487	\$270,876
12		\$80,000	\$18,961	\$369,837

13		\$80,000	\$25,888	\$475,725
14		\$80,000	\$33,300	\$589,025
15	Replace CL2, SO2. Rebuild Raw Sewage, SBR, NWLS And S. Slope Pumps $(1.05)^{16} \times (45,000 + 40,625 + 9,000) = 255,060$	\$80,000	\$41,231	\$455,196
16		\$80,000	\$31,863	\$567,059
17		\$80,000	\$39,694	\$686,753
18		\$80,000	\$48,072	\$814,825
19		\$80,000	\$57,037	\$951,862
20	Replace CL2, SO2, Replace Pumps and Blowers and Raw Sewage, SBR, NWLS, SSSLs, Sludge, Storm. Rebuild Heat Exchanger $(1.05)^{20} \times (45,000 + 160,000 + 81,250 + 22,500 + 70,000 + 25,000 + 15,000 + 15,000 + 45,000) = \$1,268,687$	\$80,000	\$66,630	(\$170,195)

1. Replacement Fund recommended by PNG = \$80,000/Year for Wastewater.

2. Assume Average interest rate over 20 years = 7%.

3. Replacement Periods: Pumps, Blowers Rebuild Every 5 Years

Chlorinators Replace Every 5 Years

Miscellaneous Equipment Replace Every 20 Years

Pumps, Blowers Replace Every 10 Years

Assume 5% Annual Inflation

(Ord. 844, 09-19-1994)

TITLE VI PHYSICAL ENVIRONMENT

