

ORDINANCE NO. 29
CITY OF MAPLE LAKE, MINNESOTA

**ORDINANCE ESTABLISHING A SEWER SERVICE CHARGE SYSTEM FOR THE
CITY OF MAPLE LAKE, MINNESOTA**

An Ordinance providing for sewer service charges to recover costs associated with:

1. Operation, maintenance, and replacement to ensure effective functioning of the City's wastewater treatment system.
2. Local capital costs incurred in the construction of the City's wastewater treatment system.

29.01 **DEFINITIONS**

Unless the context specifically indicates otherwise, the meaning of the terms used in this ordinance shall be as hereafter designated:

1. **Administration Costs** - Those fixed costs attributable to administration of the wastewater treatment works (i.e., billing and associated bookkeeping and accounting costs).
2. **Biochemical Oxygen Demand or Bod₅**, - 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.
3. **City** - The area within the corporate boundaries of the City of Maple Lake, as presently established or as amended by ordinance or other legal actions at a future time. When used herein the term City may also refer to the city council or its authorized representative.
4. **Commercial User** - Any place of business which discharges sanitary waste as distinct from industrial wastewater.
5. **Commercial Wastewater** - Domestic wastewater emanating from a place of business as distinct from industrial wastewater.
6. **Debt Service Charge** - A charge levied on users of wastewater treatment facilities for the cost of repaying money bonded to construct said facilities.
7. **Normal Domestic Strength Wastewater** - Wastewater that is primarily produced by residential users, with BOD₅ concentrations not greater than 268 mg/l, suspended solids concentrations not greater than 285 mg/l, and phosphorus concentrations not greater than 20 mg/l. Concentrations shall be revised annually according to procedures described in the sewer service charge system report.
8. **Extra Strength Waste** - Wastewater having a BOD, TSS, and/or phosphorus concentration greater than domestic waste as defined in 29.01:7 above and not otherwise classified as an incompatible waste.
9. **Governmental User** - Users which are units, agencies or instrumentalities of federal, state, or local government discharging normal domestic strength wastewater.

10. **Incompatible Waste** - Waste that either singly or by interaction with other wastes interferes with any waste treatment process, constitutes a hazard to humans or animals, creates a public nuisance or creates any hazard in the receiving waters of the wastewater treatment works.
11. **Industrial Users or Industries**
- A. Entities that discharge into a publicly owned wastewater treatment works, liquid wastes resulting from the processes employed in industrial or manufacturing processes, or from the development of any natural resources. These are identified in the Standard Industrial Classification Manual, 1972, Office of Management and Budget, as amended and supplemented under one of the following divisions:
- Division A. Agriculture, Forestry and Fishing
Division B. Mining
Division D. Manufacturing
Division E. Transportation, Communications, Electric, Gas, and Sanitary Sewers
Division I. Services
- For the purpose of this definition, domestic waste shall be as defined in 29.07, above.
- B. Any nongovernmental user of a publicly owned treatment works which discharges wastewater to the treatment works which contains toxic pollutants or poisonous solids, liquids, or gases in sufficient quantity, either singly or by interaction with other wastes, to contaminate the sludge of any municipal systems, or to injure or to interfere with any sewage treatment process, or which constitutes a hazard to humans or animals, creates any hazard in or has an adverse effect on the waters receiving any discharge from the treatment works.
12. **Industrial Wastewater** - The liquid processing wastes from an industrial manufacturing process, trade, or business, including but not limited to all Standard Industrial Classification Manual Divisions A, B, D, E and I manufacturers as distinct from domestic wastewater.
13. **Institutional User** - Users other than commercial, governmental, industrial or residential users, discharging primarily normal domestic strength wastewater (e.g. nonprofit organizations).
14. **Operation and Maintenance** - Activities required to provide for the dependable and economical functioning of the treatment works, throughout the design or useful life of the treatment works, whichever is longer, and at the level of performance for which the treatment works were constructed. Operation and maintenance includes replacement.
15. **Operation and Maintenance Costs** - Expenditures for operation and maintenance, including replacement.
16. **Public Wastewater Collection System** - A system of sanitary sewers owned, maintained, operated and controlled by the City.

17. **Replacement** - Obtaining and installing equipment, accessories, or appurtenances which are necessary during the design or useful life of the treatment works, whichever is longer, to maintain the capacity and performance for which such works were designed and constructed.
18. **Replacement Costs** - Expenditures for replacement.
19. **Residential User** - A user of the treatment facilities whose premises or building is used primarily as a residence for one or more persons, including dwelling units such as detached and semi-detached housing, apartments, and mobile homes; and which discharges primarily normal domestic strength sanitary wastes.
20. **Sanitary Sewer** - A sewer intended to carry only liquid and water carried wastes from residences, commercial buildings, industrial plants, and institutions, together with minor quantities of ground, storm, and surface waters which are not admitted intentionally.
21. **Sewer Service Charge** - The aggregate of all charges, including charges for operation, maintenance, replacement, debt service, and other sewer related charges that are billed periodically to users of the City's wastewater treatment facilities.
22. **Sewer Fund** - A fund into which income from sewer service charges is deposited along with other income. Expenditures from the Sewer Fund will be for operation, maintenance and replacement costs, and to retire debt incurred through capital expenditure for wastewater treatment.
24. **Slug** - Any discharge of water or wastewater which in concentration of any given constituent or in quantity of flow exceeds for any period of duration longer than 15 minutes more than five times the average 24 hour concentration or flows during normal operation and shall adversely affect the collection system and/or performance of the wastewater treatment works.
25. **Standard Industrial Classification Manual** - Office of Management and Budget, 1972.
26. **Suspended Solids (SS) or Total Suspended Solids (TSS)** - The total suspended matter that either floats on the surface or is in suspension in water, wastewater or other liquids, and is removable by laboratory filtering as prescribed Standard Methods for the Examination of Water and Wastewater latest edition and referred to as non-filterable residue.
27. **Toxic Pollutant** - The concentration of any pollutant or combination of pollutants as defined in standards issued pursuant to Section 307(a) of the Act, which upon exposure to or assimilation into any organism will cause adverse effects.
28. **User Charge** - A charge levied on users of a treatment works for the user's proportionate share of the cost of operation and maintenance, including replacement.
29. **Users** - Those residential, commercial, governmental, institutional and industrial establishments which are connected to the public sewer collection system.

30. **Wastewater** - The spent water of a community, also referred to as sewage. From the standpoint of source it may be a combination of the liquid and water-carried wastes from residences, commercial buildings, industrial plants, and institutions together with any ground water, surface water and storm water that may be present.
31. **Wastewater Treatment Works or Treatment Works** - An arrangement of any devices, facilities, structures, equipment, or processes owned or used by the City for the purpose of the transmission, storage, treatment, recycling, and reclamation of municipal sewage, domestic sewage or industrial wastewater, or structure necessary to recycle or reuse water including interceptor sewers, outfall sewers, collection sewers, pumping, power, and other equipment and their appurtenances; extensions, improvements, remodeling, additions and alterations thereof; elements essential to provide a reliable recycled water supply such as standby treatment units and clear well facilities; and any works including land which is an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment.

29.02 **ESTABLISHMENT OF A SEWER SERVICE CHARGE SYSTEM**

1. The City of Maple Lake hereby establishes a Sewer Service Charge System (SSCS) whereby all revenue collected from users of the wastewater treatment facilities will be used to affect all expenditures incurred for annual operation, maintenance, replacement, and for debt service on capital expenditure incurred in constructing the wastewater treatment works.
2. Each user shall pay its proportionate share of operation, maintenance and replacement costs of the treatment works, based on the users proportionate contribution to the total wastewater loading from all users.
3. Each user shall pay debt service charges to retire local capital costs as determined by the City Council.
4. Sewer service rates and charges to users of the wastewater treatment facility shall be determined and fixed in a "sewer service charge system" developed according to the provisions of this ordinance. Changes in sewer service rates and charges shall be adopted by council resolution and shall be published in summary form in the local newspaper.
5. Revenues collected for sewer service shall be deposited in a separate fund known as the Sewer Fund. Income from revenues collected will be expended to offset the cost of operation, maintenance and equipment replacement for the facility and to retire the debt for capital expenditure.
6. Sewer service charges and the Sewer Fund will be administrated in accordance with the provisions in Ordinance 29.05.

29.03 **DETERMINATION OF SEWER SERVICE CHARGES**

1. Users of the City of Maple Lake wastewater treatment works shall be identified as belonging to one of the following user classes:
 - A. Residential
 - B. Commercial
 - C. Industrial
 - D. Institutional
 - E. Governmental

The allocation of users to these categories for the purpose of assessing user charges and debt service charges shall be the responsibility of the city clerk. Allocation of users to user classes shall be based on the substantive intent of the definitions of these classes contained herein.

2. The user shall pay operation, maintenance, and replacement costs in proportion to the user's proportionate contribution of wastewater flows and loadings to the treatment plant, with the minimum rate for loadings of BOD, TSS, and phosphorus being the rate established for concentrations of 280 mg/l BOD, 268 mg/l TSS, and 20 mg/l phosphorus (i.e.. normal domestic strength wastewater).
3. Unit costs for fixed service and treatment of flow, BOD, TSS, and phosphorus shall be determined and fixed annually in the sewer service charge system according to the following procedure:
 - A. Determine the annual OM&R budget.
 - B. Allocate total annual OM&R costs to fixed service, flow, BOD, TSS, and phosphorus proportionately, according to the costs of collection, and of the specific treatment processes required to affect or reduce fixed service, flow, BOD, TSS, and phosphorus.
 - C. Divide the OM&R costs attributable to fixed service, flow, BOD, TSS, and phosphorus, respectively, by the total annual billable volume and loadings of fixed service, flow, BOD, TSS, and phosphorus to arrive at unit costs.

For purposes of determining user charges, the following definitions of unit costs shall apply:

U_{FS}	=	Unit cost for fixed service in \$/billing period.
U_F	=	Unit cost for treatment of flow in \$/1,000 gals.
U_{BOD}	=	Unit cost for treatment of BOD in \$/lb.
U_{TSS}	=	Unit cost for treatment of TSS in \$/lb.
U_p	=	Unit cost for treatment of phosphorus in \$/lb.

Unit costs for 1987 are provided in Table 6 of the Sewer Service Charge System. Subsequent calculations of unit costs shall be according to the substantive intent of this SSCS.

4. User Charges for Normal Domestic Strength Users

- A. Calculating Billable Flows and Loadings - The billable amount of flow will be calculated from the volume of metered water usage. For residential users, the bi-monthly billable flow shall be equal to the bi-monthly metered water usage determined for each billing period. For non-residential users discharging NDSW, billable flow shall be equal to bi-monthly water usage measured throughout the year.

For users discharging NDSW but not connected to the City water system, the billable amount of flow will be calculated from the volume of metered water usage or, at the discretion of the City, from the measurement of effluent flow at the user's point of discharge. Measurements shall be according to a regular program prescribed by the City.

Determination of Loadings from Metered Water Usage - The billable amounts of BOD, TSS, and phosphorus will be calculated from the volume of metered water usage, as determined above, where the billable quantities will be those attributable to a wastewater concentration of 280 mg/l BOD, 268 mg/l TSS, and 20 mg/l phosphorus (i.e., normal domestic strength wastewater).

- B. Calculating User Charges - $U_{C(NDS)} = U_{FS} + (U_F \times F) + (U_{BOD} \times K_{BOD} \times F) + (U_{TSS} \times K_{TSS} \times F) + (U_p \times K_p \times F)$

Where: $U_{C(NDS)}$ = User charge for treatment of normal domestic strength wastewater.

U_{FS} = Unit Cost for fixed service in \$/billing period.

U_F = Unit Cost for treatment of flow in \$/1,000 gals.

F = Billable flow in 1,000 gals.

U_{BOD} = Unit cost for treatment of BOD in \$/lb.

K_{BOD} = Constant used to calculate the quantity of BOD in lbs/1,000 gals of NDS waste (280 mg/l BOD) as follows:
 $K_{BOD} = .00834 \times 280 \text{ mg/l (BOD Concentration of NDS waste)}$.

U_{TSS} = Unit cost for treatment of TSS in \$/lb.

K_{TSS} = Constant used to calculate the quantity of TSS in lbs/1,000 gals of NDS waste (268 mg/l TSS) as follows:
 $K_{TSS} = .00834 \times 268 \text{ mg/l (TSS concentration of NDS waste)}$.

U_p = Unit cost for treatment of phosphorus in \$/lb.

K_p = Constant used to calculate the quantity of phosphorus in

lbs/1,000 gals. of NDS waste (20 mg/l phosphorus) as follows: $K_p = 0.00834 \times 20$ mg/l (phosphorus concentration of NDS waste)

5. User Charges for Users Contributing Wastes Greater than Normal Domestic Strength.

- A. Calculating Billable Flows and Loadings - The billable amount of flow will be calculated from the volume of metered water usage, or at the discretion of the city, from the measurement of effluent flow at user's point of discharge. Measurements shall be according to a regular program prescribed by the City.

The billable amounts of BOD, TSS, and phosphorus will be calculated by the measurement of these wastes according to a program prescribed by the City in keeping with the latest edition of Standard Methods for the Examination of Water and Wastewater and in accordance with Ordinance No. 28, "An Ordinance Establishing Sewer Use Regulations."

- B. Calculating User Charges - $U_{C(GNDS)} = U_{FS} + (U_F \times F) + (U_{BOD} \times Q_{BOD}) + (U_{TSS} \times Q_{TSS}) + (U_P \times Q_P)$

Where: $U_{C(GNDS)}$ = User charge for treatment of wastewater that is greater than normal domestic strength.

U_{FS} = Unit Cost for fixed service in \$/billing period.

U_F = Unit cost for treatment of flow in \$/1,000 gals.

F = Billable flow in Kgal.

U_{BOD} = Unit cost for treatment of BOD in \$/lb.

Q_{BOD} = Quantity of BOD in lbs.

U_{TSS} = Unit cost for treatment of TSS in \$/lb.

Q_{TSS} = Quantity of TSS in lbs.

U_P = Unit cost for treatment of phosphorus in \$/lb.

Q_P = Quantity of phosphorus in lbs.

6. The City may, at its discretion require non-residential users to install wastewater flow meters or such additional water meters as may be necessary to determine wastewater volume. The City may require residential connections to install water meters for the purpose of determining wastewater volume. When so required, such meters shall be of a type approved by the City equipped with remote registering recorders, and located at an accessible site on the owner's property.

7. Sewer Service Charge for Recovery of Local Construction Costs

Local construction costs for the wastewater treatment facility will be recovered from users in proportion to their contributions of wastewater flow and loadings into the treatment facility as follows:

Unit costs for debt service of capital expenditures attributable to fixed service, flow, BOD, TSS, and phosphorus shall be calculated according to the sewer service charge system as provided in Tables 5 and 6. For purposes of determining debt service charges, the following definitions shall apply:

D_{FS} = Unit cost for fixed service in \$/billing period.

D_F = Unit cost for debt service of capital expenditures attributable to flow.

D_{BOD} = Unit cost for debt service of capital expenditures attributable to BOD.

D_{TSS} = Unit cost for debt service of capital expenditures attributable to TSS.

D_P = Unit cost for debt service of capital expenditures attributable to phosphorus.

A. Calculating Flows and Loadings - The calculation of flows and loadings for the debt service charge shall be the same as described in 29.03, Sections 4 and 5.

B. Calculating Debt Service Charges

1. For Normal Domestic Strength Users

$$D_{C(NDS)} = D_{FS} + (D_F \times F) + (D_{BOD} \times K_{BOD} \times F) + (D_{TSS} \times K_{TSS} \times F) + (D_P \times K_P \times F)$$

2. For Users Contributing Wastes Greater than Normal Domestic Strength.

$$D_{C(GNDS)} = D_{FS} + (D_F \times F) + (D_{BOD} \times Q_{BOD}) + (D_{TSS} \times Q_{TSS}) + (D_P \times Q_P)$$

Where: $D_{C(NDS)}$ = Debt service charge to normal domestic strength users.

$D_{C(GNDS)}$ = Debt service charge to users contributing wastewater that is greater than normal domestic strength.

D_{FS} = Unit cost for fixed service in \$/billing period.

D_F = Unit cost for debt service of capital expenditures attributable to flow in \$/1,000 gals.

- F = Billable flow in 1,000 gals.
- D_{BOD} = Unit cost for debt service of capital expenditures attributable to BOD in \$/lb.
- K_{BOD} = Constant used to calculate the quantity of BOD in lbs/1,000 gals. of NDSW (280 mg/l BOD) as follows: $K_{BOD} = .00834 \times 280$ mg/l (BOD concentration of NDS waste).
- D_{TSS} = Unit cost for debt service of capital expenditures attributable to TSS in \$/lb
- K_{TSS} = Constant used to calculate the quantity of TSS in lbs/1,000 gals of NDSW (268 mg/l TSS as follows: $K_{TSS} = .00834 \times 268$ mg/l (TSS concentration of NDS waste).
- D_p = Unit cost for debt service of capital expenditures attributable to phosphorus in \$/lb.
- K_p = Constant used to calculate the quantity of phosphorus in lbs/1,000 gals. of NDSW (20 mg/l phosphorus) as follows: $K_p = .00834 \times 20$ mg/l (phosphorus concentration of NDS waste).
- Q_{BOD} = Quantity of BOD in lbs.
- Q_{TSS} = Quantity of TSS in lbs.
- Q_p = Quantity of phosphorus in lbs.
- SSC = $U_c + D_c$
SSC = Annual sewer service charge
 U_c = Annual User Charge
 D_c = Annual Debt Service Charge

29.04 **SEWER SERVICE FUND**

1. The City of Maple Lake hereby establishes a "Sewer Service Fund" as an income fund to receive all revenues generated by the sewer service charge system, and all other income dedicated to the operation, maintenance, replacement and construction of the wastewater treatment works, including taxes, special charges, fees, and assessments intended to retire construction debt.

The City establishes the following accounts as income and expenditure accounts within the Sewer Service Fund:

- 1) Operation and Maintenance Account (Sewer Fund)

- 2) Equipment Replacement Account (WWTP Fund)
 - 3) Debt Retirement Account (Sewer Bond Fund)
2. All revenue generated by the Sewer Service Charge System, and all other income pertinent to the treatment system, including taxes and special assessments dedicated to retire construction debt, shall be held by the clerk, separate and apart from all other funds of the City. Funds received by the Sewer Service Fund shall be placed in the Sewer Fund and transferred to the WWTP Fund and the Sewer Bond Fund in compliance with state and federal regulations and the provisions of this ordinance.
 3. Revenue generated by the Sewer Service Charge System sufficient to insure adequate replacement throughout the design of useful life, whichever is longer, of the wastewater facility shall be held separate and apart in the "WWTP Fund" and dedicated to affecting replacement costs. Interest income generated by the WWTP Fund shall remain in the WWTP Fund.
 4. Revenue generated by the Sewer Service Charge System sufficient for operation and maintenance shall be held separate and apart in the "Sewer Fund".
 5. Revenue generated by Sewer Service Charge System sufficient for payment of debt service stemming from the wastewater facility shall be held separate and apart in the "Sewer Bond Fund"

29.05 **ADMINISTRATION**

The Sewer Service Charge System and Sewer Service Fund shall be administrated according to the following provisions:

1. The city clerk shall maintain a proper system of accounts suitable for determining the operation and maintenance, equipment replacement and debt retirement costs of the treatment works, and shall furnish the City Council with a report of such costs annually in October.

The City Council shall annually determine whether or not sufficient revenue is being generated for the effective operation, maintenance, replacement and management of the treatment works, and whether sufficient revenue is being generated for debt retirement. The City Council will also determine whether the user charges are distributed proportionately to each user in accordance with Ordinance 29.02.2 and Section 204(b)(2)(A) of the Federal Water Pollution Control Act, as amended.

The City shall thereafter, but not later than the end of the year, reassess, and as necessary revise the Sewer Service Charge System then in use to insure the proportionality of the user charges and to insure the sufficiency of funds to maintain the capacity and performance to which the facilities were constructed, and to retire the construction debt.

2. In accordance with federal and state requirements each user will be notified annually, in conjunction with a regular billing, of that portion of the Sewer Service Charge attributable to operation, maintenance and replacement.
3. In accordance with federal and state requirements, the city clerk shall be responsible for

maintaining all records necessary to document compliance with the Sewer Service Charge System adopted.

4. Bills for Sewer Service Charges shall be rendered on a bi-monthly basis succeeding the period for which the service was rendered and shall be due on the 15th day of the month following the date of rendering. Any bill not paid in full by the due date will be considered delinquent. At that time, the City shall notify the delinquent owner/occupant in writing regarding the delinquent bill and subsequent penalty. The penalty shall be computed as 1½ % per month of the remaining balance.
5. The owner premises shall be liable to pay for the service to such premises, and the service is furnished to the premises by the City only upon the condition that the owner of the premises is liable therefore to the City.
6. Any additional costs caused by discharges to the treatment works of toxins or other incompatible wastes, including the cost of restoring wastewater treatment services, clean up and restoration of the receiving waters and environs, and sludge disposal, shall be borne by the discharger(s) of said wastes, at no expense to the City.

29.06 **PENALTIES**

1. Each and every sewer service charge levied by and pursuant to this ordinance is hereby made a lien upon the lot or premises served, and all such charges which are on October 31 of each year past due and delinquent, shall be certified to the county auditor as taxes or assessments on the real estate. Nothing in this ordinance shall be held or construed as in any way stopping or interfering with the right of the City to levy as taxes or assessments against any premises affected any delinquent or past due sewer service charges.
2. As an alternative to levying a lien, the City may, at its discretion, file suit in a civil action to collect such amounts as are delinquent and due against the occupant, owner, or user of the real estate, and, in addition, shall collect all attorney's fees, costs, and disbursements incurred by the City in filing the civil action. Such attorney's fees shall be fixed by order of the court.
3. In addition to all penalties and costs attributable and chargeable to recording notices of the lien, or filing a civil action, the owner or user of the real estate being serviced by the treatment works shall be liable for interest upon all unpaid balances at the rate of 1½ % per month.

29.06 **SEVERABILITY AND VALIDITY**

1. If any section or subdivision of this ordinance shall be held invalid, the invalidity thereof shall not affect the validity of the other provisions of this ordinance, which shall continue in full force and effect.
2. The sewer service charge system shall take precedence over any terms or conditions of agreements or contracts which are inconsistent with the requirements of section 204(b) (1) (A) of the act and federal regulation 40 CFR (Code of Federal Regulations) 35.2140 of the Environmental Protection Agency's grant regulations.