

(Published in the Ellis County Star on March 20, 1997)

ORDINANCE NO. B-393

AN ORDINANCE AMENDING ORDINANCE B-380 AS PASSED BY THE GOVERNING BODY OF THE CITY OF VICTORIA, KANSAS ON MARCH 11, 1996, AND AS PUBLISHED ON MARCH 21, 1996, BY AMENDING USER CHARGE RATES IN THE CITY OF VICTORIA, COUNTY OF ELLIS, STATE OF KANSAS, TO PROVIDE FUNDS NEEDED TO PAY FOR ALL EXPENSES ASSOCIATED WITH THE CITY'S WASTE WATER TREATMENT WORKS, AND AMENDING APPENDIX "A" TO USER CHARGE ORDINANCE (Actual Use Rate Structure).

BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF VICTORIA, KANSAS:

Section 1. Section 15-323 of the code of the City of Victoria is hereby amended to read as follows:

Actual Use Rate Structure. (Reference is made to Amend Appendix A of this Ordinance). The minimum charge per month shall be \$0.67. In addition, each contributor shall pay a user charge rate for operation and maintenance including replacement and debt retirement of \$1.67 per 1,000 gallons of water as determined in Ordinance No. B-380.

(Reference is made to Amend Appendix A of this Ordinance). For those contributors who contribute wastewater, the strength of which is greater than normal domestic sewage, a collected as determined in Section I of Ordinance No. B-306. The surcharge for operation and maintenance including replacement is:

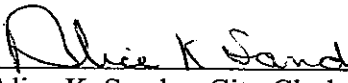
\$.313644	Per pound BOD
\$.313644	Per pound SS

Section 2. This Ordinance shall take effect April 1, 1997, and after its publication one time in the Ellis County Star, the official City newspaper.

PASSED AND APPROVED this 10th day of March, 1997.


Allen P. Dreiling, Mayor

ATTEST:


Alice K. Sander, City Clerk

APPENDIX "A" TO USER CHARGE ORDINANCE NO. B-393
(Actual Use Rate Structure)

This appendix presents the methodology to be used in calculating user charge rates and surcharges and illustrates the calculations followed in arriving at the year's user charges and surcharges. The unit costs established in this appendix are based on estimates of expense 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 reestablished whenever necessary to reflect actual expenses and loadings. Once the system is in, unit costs can be adjusted 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:

<u>Item</u>	<u>Annual Expenses</u>
Billing and Collection	\$ 2,500.00
Administrative	\$ 1,360.00
Power	\$ 3,400.00
Labor (Including fringe benefits)	\$ 28,000.00
Material Costs	\$ 9,700.00
Sewer Analysis	\$ 1,200.00
Replacement Costs (See Appendix B)	\$ 4,418.00
Debt Service (Lease Purchase)	\$ 5,231.00
Other	<u>\$ -0-</u>
 TOTAL	 <u>\$ 55,809.00</u>

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 = 40% annual cost allocated to flow x (total annual O&M budget minus billing and collection)
= .40 x 53,309 = 21,323.60

Annual \$ to Treat Annual BOD = 30% annual cost allocated to BOD x (total annual O&M budget minus billing and collection)
= .30 x 53,309 = 15,992.70

Annual \$ to Treat Annual Other = 0% annual costs allocated to pollutant x (total annual O&M budget minus billing and collection)
 = \$0.00

3. Loadings: The initial hydraulic loading is estimated to be 33,666,754 gal/year, based on total City metered usage for December 1996 through February 1997 (3 mos.) of

7,651,535 gal. x 4 = 30,606,140
 Infiltration/Inflow = 3,060,614

Total = 33,666,754

The initial BOD loading is estimated to be 50,989,828 lbs./yr., calculated as follows:

(I/I is clear water; not BOD or SS)

Wastewater = 30,606,140 million – gal./yr x 8.33 lbs./gal.
 = 25,494,914 million – pounds/yr.
 x 200 lbs. BOD/million – pounds water (200 mg/l – 200 ppm BOD in normal domestic sewage)

- 50,989,828 lbs. BOD/yr.

The initial SS loading is estimated to be 50, 989,828 lbs./yr.
 (Same as above)

4. Unit Costs:

Initial unit cost for flow in \$/gallons =
annual \$ to treat annual flow = 21,323.60
 Estimated annual hydraulic loading = 33,666,754
 = \$.4693/1000 gal.

Initial unit cost for BOD is \$/pound =
annual \$ to treat annual BOD = 15,992.70
 Estimated annual BOD loading = 50,989,828
 = \$.232414

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

5. Minimum Charge:

Annual billing and collection costs	= \$ 2,500.00
Annual cost to treat infiltration /inflow (assumed clear water) = unit cost to treat flow x annual infiltration inflow = .6333/1000 gal. x 3,060,614	= \$ 1,938.28
TOTAL Annual Minimum Cost	= \$ 4,438.28
Minimum Charge User/Billing Period (550 Users)	= \$ 0.67

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.

$$\begin{aligned}
 \text{Residential unit charge} &= \text{unit flow charge } \$0.3694/1000 \text{ gal.} = 0.6333 \\
 &+ (\text{unit BOD charge}) \quad (\text{BOD}_{\text{ND}}) \\
 (.00834) &= (\$0.313644/\text{lbs}) \quad (200 \text{ mg/l}) \quad (.00834) \quad = 0.523 \\
 &= (\text{unit SS charge}) \quad (\text{SS}_{\text{ND}}) \\
 (.00834) &= (\$0.313644/\text{lbs}) \quad (200 \text{ mg/l}) \quad (.00834) \quad = 0.523 \\
 &= 1.67
 \end{aligned}$$

Where: Residential unit charge is in \$/100 Gal – 1.67/100 gal.

Unit flow charge is in \$/1000 gal from paragraph 4

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

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

BOD_{NS} is the normal domestic SS strength in mg/l as defined in Article II, Section 2, of this ordinance

and .00834 is a unit conversion factor.

This total residential unit charge is to be inserted in Article IV, Section 3, of this ordinance,

An example of a residential charge for a resident of the City of Victoria follows:

Assume: Monthly meter reading 5000 gallons
Standard Strength Waste (200 mg/l BOD 200 mg/l SS)

Minimum Charge	\$.67
Residential Unit Charge (\$1.24/1000 gal.)	\$8.35
Monthly Bill	\$9.02

7. Extra Strength User: 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 users =
charge to residential user + surcharge for BOD (if appropriate)
= surcharge for SS (if appropriate)

Total monthly charge to extra strength users =

Minimum Charge
+ v (residential unit charge)
+ v (unit BOD charge) $(BOD_{ES} - BOD_{ND}) (.00834)$
+ v (unit SS charge) $(SS_{ES} - SS_{ND}) (.00834)$

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

Minimum charge is in dollars as calculated in paragraph 5
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

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

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

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

SS_{ES} is the average SS concentration in mg/l contributed by the extra strength user during the month

BOD_{ND} is the normal domestic BOD strength in mg/l as defined in Article II, Section 2, of this ordinance

and .00834 is a unit conversion factor.

An example user charge calculation for an extra strength user of the treatment works as follows:

Assume: Water metered to user = 20,000
BOD – 300 mg/l
SS – 400 mg/l

Minimum Charge:	\$.67
Standard Charge/1000 gallons:	
Residential Unit Charge (1.67/1000 gal.)	\$33.40

Surcharge:	
BOD20 (1000 gal) (.313644/lbs) (100mg/l) (.00834) =	\$ 5.23
SS20 (1000 gal) (.313644/lbs) (200mg/l) (.00834)	<u>\$10.46</u>
	\$49.76

(Reference is made throughout this appendix, to the original sewer user ordinance, No. B-162)