

(Published in the Hays Daily News on May 26, 2000)

ORDINANCE NO. B-438

AN ORDINANCE AMENDING ORDINANCE B-420 AS PASSED BY THE GOVERNING BODY OF THE CITY OF VICTORIA, KANSAS ON MARCH 9, 1998, AND AS PUBLISHED ON MARCH 19, 1998, 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 WASTEWATER 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, Kansas, is hereby amended to read as follows:

Actual Use Rate Structure. (Reference is made to Amended Appendix A of this Ordinance). The minimum charge per month shall be \$2.75. In addition, each contributor shall pay a user charge rate for operation and maintenance including replacement and debt retirement of \$3.00 per 1,000 gallons of water as determined in Ordinance No. B-181.

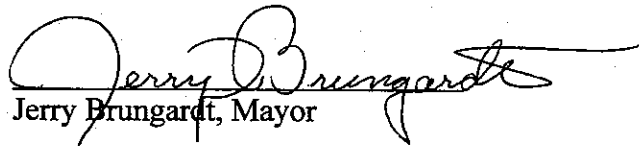
(Reference is made to Amended Appendix A of this Ordinance). For those contributors who contribute wastewater, the strength of which is greater than normal domestic sewage, a surcharge in addition to the normal user charge will be collected. The surcharge for operation and maintenance including replacement is:

\$ .2061 per pound BOD  
\$ .2061 per pound SS

Section 2. This Ordinance shall take effect June 1, 2000, after its publication one time in the Hays Daily News, the official City newspaper.

PASSED AND APPROVED this 15<sup>th</sup> day of May, 2000.



  
Jerry Brungardt, Mayor

  
Brenda Reynolds, City Clerk

AMMENDED APPENDIX "A" TO USER CHARGE  
ORDINANCE NO. B-438  
(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	\$ 2,500.00
Power	\$ 4,200.00
Labor (Including fringe benefits)	\$ 30,000.00
Material Costs	\$ 10,000.00
Replacement Costs (See Appendix B)	\$ 10,000.00
Debt Service (Lease Purchase)	\$ 51,000.00
Other	<u>\$ -0-</u>
 TOTAL	 <u>\$ 110,200.00</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 = 80% annual cost allocated to flow x (total annual O&M budget minus billing, collection and administrative)  
= .80 x 105,200 = 84,160.00

Annual \$ to Treat Annual BOD = 10% annual cost allocated to BOD x (total annual O&M budget minus billing, collection and administrative)  
= .10 x 105,200 = 10,520.00

Annual \$ to Treat Annual SS = 10% annual costs allocated to SS x (total annual O&M budget minus billing, collection and administrative)  
 = .10 x 105,200 = 10,520.00

3. Loadings: The initial hydraulic loading is estimated to be 36,500,000 gal/year, based on total City metered usage for December 1999 through February 2000 (3 mos.) of

7,650,000 gal. x 4 = 30,600,000  
 Infiltration/Inflow = 5,900,000

Total = 36,500,000

The initial BOD loading is estimated to be 51,040 lbs/yr., calculated as follows:

(I/I is clear water; no BOD or SS)  
 Wastewater = 30,600,000 gal./yr x 8.34 lbs./gal.  
 = 255.2 million lbs/yr.  
 x 200 lbs. BOD/million – pounds water (200 mg/l – 200 ppm BOD in normal domestic sewage)  
 - 51,040 lbs. BOD/yr.

The initial SS loading is estimated to be 51,040 lbs./yr.  
 (Same as above)

4. Unit Costs:

Initial unit cost for flow in \$/gallons =  

$$\frac{\text{annual \$ to treat annual flow} = 84,160}{\text{Estimated annual hydraulic loading} = 36,500,000}$$
 = \$2.3058

Initial unit cost for BOD in \$/pound =  

$$\frac{\text{annual \$ to treat annual BOD} = 10,520}{\text{Estimated annual BOD loading} = 51,040}$$
 = \$0.2061/lb of BOD

Initial unit cost for SS in \$/pound =  

$$\frac{\text{annual \$ to treat annual SS} = 10,520}{\text{Estimated annual SS loading} = 51,040}$$
 = \$0.2061/lb of SS

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, collection and administrative costs	= \$ 5,000.00
Annual cost to treat infiltration /inflow (assumed clear water) = unit cost to treat flow x annual infiltration inflow = 2.3058/1000 gal. x 5,900,000	= \$ 13,604
TOTAL Annual Minimum Cost	= \$ 18,604
Minimum Charge User/Billing Period (560 Users)	= \$ 2.77
Rounded Minimum charge = \$2.75/user/billing period	

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 per 1000 gal. = unit flow charge	= \$2.3058/1000 gal.
+	+
(unit BOD charge) x (lbs BOD/1000 gal.) = (\$0.2061/lb BOD) (BOD <sub>ND</sub> x .00834lbs/1000 gal.) = (\$0.2061/lb BOD) (200ppm x .00834lbs/1000 gal.) = (\$0.2061/lb BOD) (1.668 lbs BOD)	= \$0.3438/1000 gal.
+	+
(unit SS charge) x (lbs SS/1000 gal.) = (\$0.2061/lb SS) (SS <sub>ND</sub> x .00834lbs/1000 gal.) = (\$0.2061/lb SS) (200 ppm x .00834lbs/1000 gal.) = (\$0.2061/lb SS) (1.668 lbs SS/1000 gal.)	= \$0.3438/1000 gal.
Residential Unit Charge	= \$2.9934/1000 gal. Rounded
Rounded Residential Unit charge = \$3.00/1000 gal.	

Where:

Unit flow charge is in \$/1000 gal. from paragraph 4  
 Unit BOD charge is in \$/lb of BOD from paragraph 4  
 Unit SS charge is in \$/lb of SS from paragraph 4  
 BOD<sub>ND</sub> & SS<sub>ND</sub> are the normal strength for domestic sewage 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	\$ 2.75
Residential Unit Charge ( $\$3.00/1000$ gal.)	<u>\$15.00</u>
Monthly Bill	\$17.75

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<sub>ND</sub> & SS<sub>ND</sub> are the normal domestic 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 gallons  
BOD – 300 mg/l  
SS – 400 mg/l

Minimum Charge:	\$ 2.75
Standard Charge/1000 gallons:	
Residential Unit Charge (3.00/1000 gal.)	\$60.00

Surcharge:

BOD: 20 x (0.2061/lb BOD) x (300mg/l – 200mg/l) x (.00834) =	\$ 3.44
SS: 20 x (0.2061/lb SS) x (400 mg/l - 200mg/l) x (.00834) =	<u>\$ 6.88</u>
	\$73.07

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