

-USER CHARGE DEVELOPMENT-

The Village of New Auburn Sanitary Sewer Service Charge System shall be developed in accordance with accepted practices and will consist of a minimum charge, debt charge, user charge and surcharge. The system shall develop a flat charge for unmetered, non-industrial users of the treatment facility. A summary shall be included in this system development to illustrate that adequate revenues will be collected to cover the estimated expenses of the WWTF.

A. Users of the System:

The following is a summary of the existing users of the New Auburn WWTF.

<u>USER CLASS</u>	<u>No. of Services</u>	<u>Annual Flow: (Gals.)</u>	<u>Annual BOD: (Lbs)</u>	<u>Population Equivalent</u>
<u>Residential:</u>				
Residential -----	199	7,965,310	18,299	295
Residential (Outside of Vill.Limits) --	8	280,100	644	10
<u>Commercial:</u>				
Commercial -----	20	974,120	2,238	36
Grimm's Sausage -----	1	163,500	3,000	48
<u>Institutional:</u>				
Public Authorities & Churches -----	18	340,240	806	13
Public School -----	1	649,360	1,489	24
TOTALS -----	247	10,372,630	26,476	426

NOTES:

- 1-Flows based on water pumpage PSC Report.
- 2-BOD Loadings based on WWTF influent lab reports (275 mg/L).
- 3-Population Equivalent based on 0.17 Lb. BOD per capita/day.
- 4-Average Residential usage = 110 g/d (Equivalent Dwelling Unit).
- 5-School usage based on 8 g/d/student & staff.

6-All users discharge wastewater at domestic sewage strength and are charged accordingly, except Grimm's Sausage.

7-Pounds of SS is assumed equal to pounds of BOD for calculation purposes only.

It should be noted that an annual review and assessment of New Auburn's wastewater strength (BOD & SS) shall be made. If there are any significant changes from the established strengths previously listed, this portion of the document shall be modified to reflect those changes.

B. DEBT RETIREMENT CHARGE:

At this point in time, the Village of New Auburn's WWTF has no outstanding, long-term debt. However, if a debt is incurred at some future point in time, the incurred debt should be based on the number of individual connections; regardless of quantity used. Thus:

$$\text{DEBT RETIREMENT CHARGE} = \frac{\text{Annual Payback on Debt}}{\text{Total Number of Users}}$$

C. TREATMENT CHARGE:

The Treatment Charge should be total cost of Operation & Maintenance, plus replacement and Planning Account Cost, proportional to the flow, BOD and SS in the same ratio as they relate to the Wastewater Treatment Facility. The ratio is:

$$\text{Flow @ 70\%, BOD @ 25\% and SS @ 5\%} = 100\%$$

For the residential rate, these will be based on 1,000 gallons of flow at maximum domestic strength.

Note in the following calculation, Grimm's Sausage wastewater was not included because it is in excess of domestic strength.

$$\text{Flow User Charge} = 70\% \times \frac{(48,250 + 5,400 + 10,000)}{10,209.13} = \$4.36/1,000 \text{ gal.}$$

$$\text{BOD User Charge} = 25\% \times \frac{(48,250 + 5,400 + 10,000)}{23,476} = 0.68/\text{Lb. BOD}$$

$$\text{SS User Charge} = 5\% \times \frac{(48,250 + 5,400 + 10,000)}{23,476} = 0.14/\text{Lb. SS}$$

Therefore, the total cost per 1,000 gallons of domestic strength sewage is:

$$\text{BOD} = \frac{1,000 \times 8.34}{1,000,000} \times 275 @ 0.68 = \$1.56$$

$$\text{SS} = \frac{1,000 \times 8.34}{1,000,000} \times 275 @ 0.14 = 0.32$$

$$\text{Flow} = 1,000 @ 4.36 \text{ -----} = \underline{4.36}$$

$$\text{Treatment Charge} \text{ -----} = \$6.24 \text{ per 1,000 gals.}$$

D. MINIMUM CHARGE:

The minimum charge is the cost of Billing, Collection & Administration. This cost is divided by the total number of users to obtain the minimum charge per user and is calculated as shown below.

$$\text{Minimum Charge} = \frac{19,760}{247} \div 4 = \$20.00 \text{ per Quarter}$$

E. FLAT RATE CHARGE:

The flat rate charge shall be based on 12,000 gallons per quarter and shall be computed using the Minimum Charge, the Debt Retirement (if applicable) and treatment charge for domestic strength wastewater.

$$\text{A-Minimum Charge} \text{ -----} = \$20.00$$

$$\text{B-Debt Service} \text{ -----} = -0-$$

$$\text{C-Treatment Charge (12 x 6.24)} = \underline{74.88}$$

$$\text{FLAT RATE CHARGE} \text{ -----} = \$94.88 \text{ per Quarter}$$

F. SURCHARGES:

Any user discharging wastewater containing concentrations of BOD and suspended solids (SS) in excess of 275 mg/L shall be charged a surcharge on the excess poundage of both BOD and SS as listed below, based on debt service (if applicable) and proportional treatment costs.

$$\text{BOD Surcharge} = \$0.68 \text{ per Lb.}$$

$$\text{SS Surcharge} = \$0.14 \text{ per Lb.}$$