

Commercial Sewer Bill EDU Calculation Example

Example (Restaurant):

	<u>AWV</u> <i>hcf/yr.</i>	<u>SFBOD</u> <i>Mg/L</i>	<u>SFTSS</u> <i>Mg/L</i>	<u>C1</u>	<u>C2</u>	<u>C3</u>	=	<u>Lbs./Yr.</u>
BOD lbs./Yr. =	372.00	1,000		0.00624	0.4679		=	1086 lbs./yr.
TSS lbs./Yr. =	372.00		600	0.00624		0.5858	=	816 lbs./yr.

Calculation of Pounds of BOD and TSS:

Lbs. of BOD/yr. = AWW x SFBOD x C1 x C2

Lbs. of TSS/yr. = AWW x SFTSS x C1 x C3

AWW = Annualized Winter Volume (hcf/yr.)

SFBOD = BOD Strength Factor in Mg/L (varies by customer class)

SFTSS = TSS Strength Factor in Mg/L (varies by customer class)

C1 = CONVERSION FACTOR FROM Mg/L to Lbs/year = $7418 \times 8.34 / 10^6 = 0.00624$

C2 = Treatment Plant Mass Balance Adjustment Factor for BOD = 0.4679

C3 = Treatment Plant Mass Balance Adjustment Factor for TSS = 0.5858

Example of EDU Formula for Commercial Customer Notice:

$$\left[\frac{100 \text{ hcf/mo.}}{9.4 \text{ hcf/mo.}} \times 60\% \right] + \left[\frac{32.6 \text{ lbs. BOD/mo.}}{3.33 \text{ lbs. BOD/mo.}} \times 20\% \right] + \left[\frac{28.9 \text{ lbs. TXX/mo.}}{4.17 \text{ lbs. TSS/mo.}} \times 20\% \right]$$

$$= 6.38 \text{ EDU} \quad + \quad 1.96 \text{ EDU} \quad + \quad 1.39 \text{ EDU}$$

$$= 9.73 \text{ EDU}$$