

## Commercial Sewer Bill EDU Calculation Example

Example (Restaurant):

	$\frac{AWV}{hcf/yr.}$	$\frac{SF_{BOD}}{Mg/L}$	$\frac{SF_{TSS}}{Mg/L}$	$C_1$	$C_2$	$C_3$	=	Lbs./Yr.
BOD lbs/Yr. =	372.00	1,000		0.00624	0.4679		=	1,086 lbs./yr.
TSS lbs/Yr. =	372.00		600	0.00624		0.5858	=	816 lbs./yr.

### Calculation of Pounds of BOD and TSS:

$$\text{Lbs. of BOD/yr.} = AWV \times SF_{BOD} \times C_1 \times C_2$$

$$\text{Lbs. of TSS/yr.} = AWV \times SF_{TSS} \times C_1 \times C_3$$

AWV = Annualized Winter Volume (hcf/yr.)

$SF_{BOD}$  = BOD Strength Factor in Mg/L (varies by customer class)

$SF_{TSS}$  = TSS Strength Factor in Mg/L (varies by customer class)

$C_1$  = Conversion factor from Mg/L to Lbs/year =  $748 \times 8.34 / 10^6 = 0.00624$

$C_2$  = Treatment Plant Mass Balance Adjustment Factor for BOD = 0.4679

$C_3$  = Treatment Plant Mass Balance Adjustment Factor for BOD = 0.5858

### Example of EDU formula for Commercial Customer Notice:

$$\begin{aligned}
 & \left[ \frac{100 \text{ hcf/mo.}}{9.4 \text{ hcf/mo.}} \times 60\% \right] + \left[ \frac{32.6 \text{ lbs. BOD/mo.}}{3.6 \text{ lbs. BOD/mo.}} \times 20\% \right] + \left[ \frac{28.9 \text{ lbs. TSS/mo.}}{4.3 \text{ lbs. TSS/mo.}} \times 20\% \right] \\
 = & \quad 6.38 \text{ EDU} \quad + \quad 1.81 \text{ EDU} \quad + \quad 1.34 \text{ EDU} \\
 = & \quad 9.53 \text{ EDU}
 \end{aligned}$$