$$Sludge Volume Index (SVI)= \frac{30 Min Settled Sludge Volume \{mL/L\} ×1000}{MLSS \left\{mg/L\right\}}$$

$$Pounds= Flow \left\{MGD\right\} ×Concentration \left\{mg/L\right\}×8.34 $$

$$Food to Mass Ratio (F/M) = \frac{Primary Effluent BOD Lbs}{Lbs of Solids under Aeration}$$

$$Sludge Age \left\{Days\right\}= \frac{Lbs of Solids under Aeration}{Primary Effluent TSS Lbs}$$

$$Solids Retention Time (SRT) \left\{Days\right\}= \frac{Lbs of Solids under Aeration}{Lbs of Solids leaving Aeration}$$

$$MCRT \left\{Days\right\}= \frac{Solids in Secondary System}{Lbs of Solids removed from system}$$

$$MCRT \left\{Days\right\}= \frac{Volatile Solids in Aeration}{Volatile Solids Leaving Aeration}$$

$$Sludge Yield= \frac{Secondary Lbs Wasted}{Lbs removed in Secondary System}$$

$$Population Equilvalent BOD= \frac{Influent BOD Loading \{Lbs\}}{0.167}$$

$$Degrees F= 1.8 ×Deg C+32$$

$$Degrees C=\frac{\left(Deg F-32\right)}{1.8}$$

$$MGD= GPM× \frac{1440}{1,000,000} =GPM×0.00144$$