

# Biosolids Material Conversion Calculations

## Converting between dry and wet tons

Use the following formulas to convert materials from dry tons to gallons or wet tons and vice versa depending on your operations and the units in the questions below.

To convert from wet tons or gallons to dry tons use the following formulas:

$$\text{Dry tons} = \text{Wet tons} \times \left( \frac{\text{percent solids}}{100} \right)$$

$$\text{Dry tons} = \left( \frac{\text{gal} \times 8.34}{2000} \right) \times \left( \frac{\text{percent solids}}{100} \right)$$

*Note: For septage assume 2% solids*

### Conversion example: biosolids cake

If you have 32 tons of wet biosolids cake at 16.5% solids, use the first formula above to determine dry tons:

$$\text{Wet tons} \times \% \text{Solids} / 100 = \text{Dry tons}$$

$$32 \text{ Wet tons} \times \left( \frac{16.5}{100} \right) = \text{Dry tons}$$

5.28 Dry tons

### Conversion example: septage

If you have 25,000 gallons of septage, use the second formula above to determine dry tons.

$$\left( \frac{\text{gallons} \times 8.34}{2000} \right) \times \left( \frac{\text{percent solids}}{100} \right) = \text{Dry tons}$$

$$\left( \frac{25,000 \times 8.34}{2000} \right) \times \left( \frac{2}{100} \right) = \text{Dry tons}$$

$$104.25 \text{ Wet tons} \times 0.02 = \text{Dry tons}$$

2.1 Dry Tons

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