

ABC Formula/Conversion Table for Biosolids Land Application Exam

Area of Rectangle = (Length) (Width)

Application Rate = Amount Applied / [(Length x Width) / 43,560, sq ft/acre]

Biosolids Applied = (N needed – N other) / Biosolids PAN

Dry Tons, acre = (Wet Tons, acre) (Solids Content, in decimal form)

Liquid flow, gpm = Mass rate, lb/min / (% Total Solids) (8.34 lb/gal)

Mass, lbs = (Volume, gal) (% Total Solids) (8.34 lbs/gal)

Mass, lbs = (Volume, MGD) (Concentration, mg/L) (8.34 lbs/gal)

Metals Loading Rate, lb/acre = (Metal Concentration, mg/kg) (0.002) (Dry Tons Biosolids Applied, acre)

Wet Tons, acre = Dry Tons, acre / Solids Content, in decimal form

Conversion Factors:

1 acre = 43,560 square feet

1 acre = 0.405 hectare

1 acre-inch = 27,000 gallons

1 gallon = 8.34 pounds

1 metric ton = 2,200 pounds

1 metric ton = 1,000 kilograms

1 mile = 5,280 feet

1 pound = 0.454 kg

1 square mile = 640 acres

1 ton = 2,000 pounds

1% = 10,000 mg/kg or

1% = 10,000 ppm

1% = 20 lb/ton

1 mg/kg = 1ppm

1 mg/kg = 0.0001 %

1 mg/kg = 0.002 lb/ton

Abbreviations:

DW dry weight

EQ exceptional quality

MPN most probable number

NRCS Natural Resource Conservation Service

PAN plant available nitrogen

TKN Total Kjeldahl Nitrogen

VAR vector attraction reduction

VS volatile solids