

Basic Conversion Factors

Wastewater Certification

Revised 11/21

UNITS

1 million = 1,000,000
 $\pi = 3.14$

LENGTH

1 foot = 12 inches
1 yard = 3 feet
1 mile = 5280 feet
1 inch = 2.54 cm
1 meter = 100 cm
1 meter = 3.28 ft
1 km = 1000 meters

AREA

1 hectare = 10,000 sq meters
1 sq ft = 144 sq in
1 acre = 43,560 sq ft
1 sq mi = 640 acres
1 hectare = 2.47 acres

VOLUME

1 gallon = 231 cu in
1 cu ft = 7.48 gal
1 liter = 1000 mL
1 gallon = 3.785 L

WEIGHT

1 gram = 1000 mg
1 kg = 1000 gm
1 lb = 454 gm
1 lb = 16 oz
1 oz = 28.4 gm
1 gm = 15.4 grains
1 kg = 2.2 lb
1 ton = 2000 lb
1 gal water = 8.34 lb
1 cu ft water = 62.4 lb

TIME

1 minute = 60 sec
1 hour = 60 min
1 day = 24 hr
1 day = 1440 min

POWER

1 HP = 0.746 kw
1 HP = 550 ft-lb/sec
1 HP = 3960 gpm-ft (water)

DENSITY

1 cu ft H₂O = 62.4 lbs
1 gal H₂O = 8.34 lbs

DOSAGE

1 grain/gal = 17.1 mg/L
1 mg/L = 1.0 ppm

PRESSURE

1 atm = 76 cm Hg
1 psi = 2.31 ft water
1 ft water = 0.433 psi
1 in mercury = 1.133 ft water
1 atm = 14.7 psia

DISCHARGE RATES

1 CFS = 0.646 MGD
1 MGD = 694 GPM
1 MGD = 1.55 CFS
1 cu m/sec = 22.83 MGD

TEMPERATURE

0°C = 32°F
100°C = 212°F
°C = (°F - 32) x 5/9
°F = 1.8°C + 32

HYDRAULIC LOADING

1 ft/hr = 180 gpd/sf
1.0 gpm/sf = 8.02 ft/hr