

Calculating Target GPM for Use with an Installed Flowmeter

_____ Ammonium (NH₄) N in mg/L
ppm is the same as mg/L
 _____ TKN (Total Kjeldahl Nitrogen) in mg/L
 _____ Organic N mg/L
TKN - NH₄-N (ammonium-N) = organic N
 _____ Available N concentration (mg/L)
 _____ Number of acres in field
 _____ Expected irrigation time (hours)
 _____ Expected irrigation run time in minutes per acre
minutes/acre = (hours X 60 min/hr) ÷ number of acres
 _____ Desired nitrogen application rate (lbs N/A)

**Use total N (TKN), ammonium N or available N concentration. TKN-ammonium N = organic form N. All of the ammonium nitrogen will be immediately available to the crop. Only a portion of the organic nitrogen will be quickly available for crop uptake. Available N includes all the ammonium N plus the portion of the organic form N that is expected to become crop available during the growing season.*

_____ mg/L N* x .008345 = _____ lbs N/1000 gallons
 _____ lbs N/acre desired ÷ _____ lbs N/1000 gallons = _____ 1000 gallons
 of lagoon water needed per acre
 _____ 1000 gal/acre x 1000 = _____ gallons/acre
 _____ gallons/acre ÷ _____ minutes/acre = _____ target gpm

Calculating nitrogen applied per acre from 1000 gallons

_____ mg/L N (TKN, Ammonium N or Adjusted N)
 _____ 1000 gallons applied
 _____ acres irrigated
 _____ ppm X .008345 = _____ lbs N/1000 gallons
 _____ lbs N/1000 gallons x _____ 1000 gallons applied = _____ lbs N
 _____ lbs N ÷ _____ acres irrigated = _____ lbs N/acre