

Mass & Loading Rate
Practice Problems

1. A wastewater plant has a flow of 5,000,000 gpd (18,939 m³/day). The effluent C.O.D. has been measured at 4.7 mg/L. How many pounds per day (kg/day) of C.O.D. does the wastewater plant discharge?
 - A. 195.99 lbs/day (89.02 kg/day)
 - B. 47 lbs/day (21.34 kg/day)
 - C. 4.7 lbs/day (2.13 kg/day)
 - D. 19.6 lbs/day (8.90 kg/day)

2. A basin holds 150,000 gallons (568 m³) of water. The water is completely mixed in the basin and a sample has determined that the water contains manganese at a concentration of 0.05 mg/L. How many pounds (kg) of manganese is in the basin?
 - A. 0.6 lbs (0.27 kg)
 - B. 6 lbs (2.72 kg)
 - C. 0.06 lbs (0.03 kg)
 - D. 62,550 lbs (28,398 kg)

3. A plant has a flow of 2.5 MGD (9,470 m³/day). Water entering the plant contains 12 mg/L of ammonia. How many pounds per day (kg/day) of ammonia are entering the plant?
 - A. 12 lbs/day (5.45 kg/day)
 - B. 30 lbs/day (13.62 kg/day)
 - C. 120 lbs/day (54.48 kg/day)
 - D. 250.2 lbs/day (113.64 kg/day)