



Antidegradation Illustrations for Nitrate Discharges to Groundwater

Scenario	First Encountered Groundwater	Discharge Conc.	Volume-Weighted Average in Mgt. Zone			Down-gradient Drinking Water Well		
			Current	+20 yrs. w/o discharge	+20 yrs. w/ discharge	Current	+20 yrs. w/o discharge	+20 yrs. w/ discharge
A	20	18	5	7	6 ↓	18	20	19 ↓
B	20	30	5	7	8 ↑	18	20	21 ↑
C	20	18	5	7	6 ↓	8	12	11 ↓
D	20	30	5	7	8 ↑	8	12	13 ↑
E	20	18	5	7	6 ↓	8	9	10 ↑
F	20	30	5	7	8 ↑	8	9	11 ↑
G	3	8	1	1	2 ↑	1	1	2 ↑

Note: values represent nitrate-nitrogen (mg/L); red >MCL; green <MCL; arrows indicate change in concentration.

Context:

- 1) Proposal to establish a Management Zone.
- 2) Permit to cover all NPS discharges to groundwater in the Management Zone.
- 3) Dischargers propose to provide alternative drinking water supply for all nitrate-impaired wells in the Management Zone.

Question: For each scenario, is the proposed discharge and associated ACP eligible to be authorized using an allocation of assimilative capacity?