

Cumulative Impacts

Water Policy Interim Committee
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Cumulative Impacts

I. State-Wide Ambient Monitoring Programs

Surface Water (DEQ/USGS)

<http://deq.mt.gov/wqinfo/monitoring/index.asp>

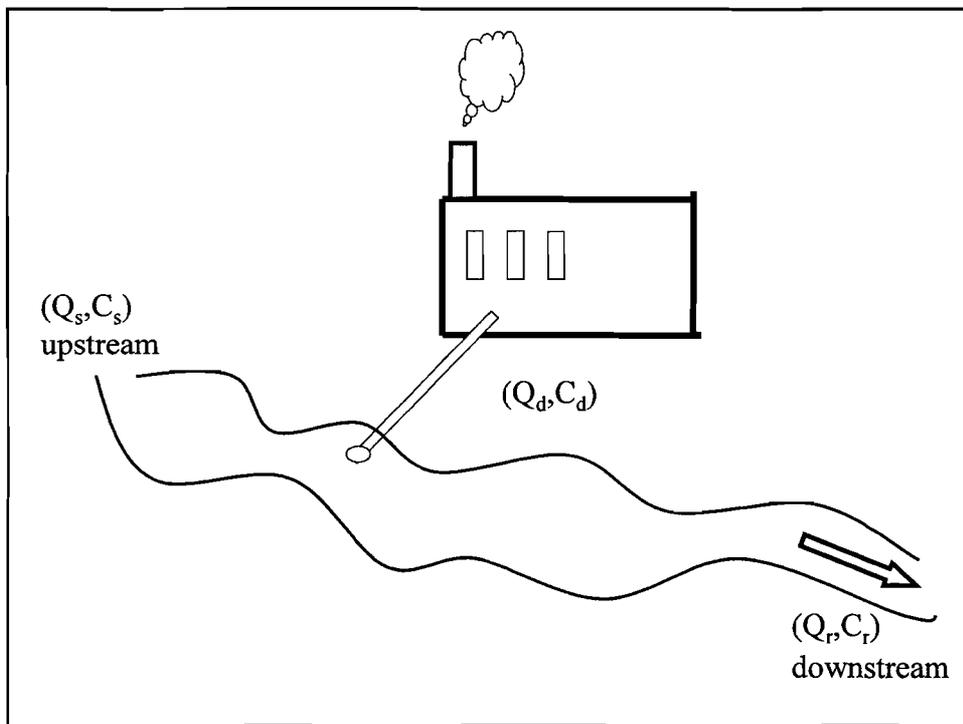
<http://waterdata.usgs.gov/mt/nwis/rt>

Ground Water (MBMG)

II. Point Source or Permitted Activities

Cumulative Impact Analysis Point Sources

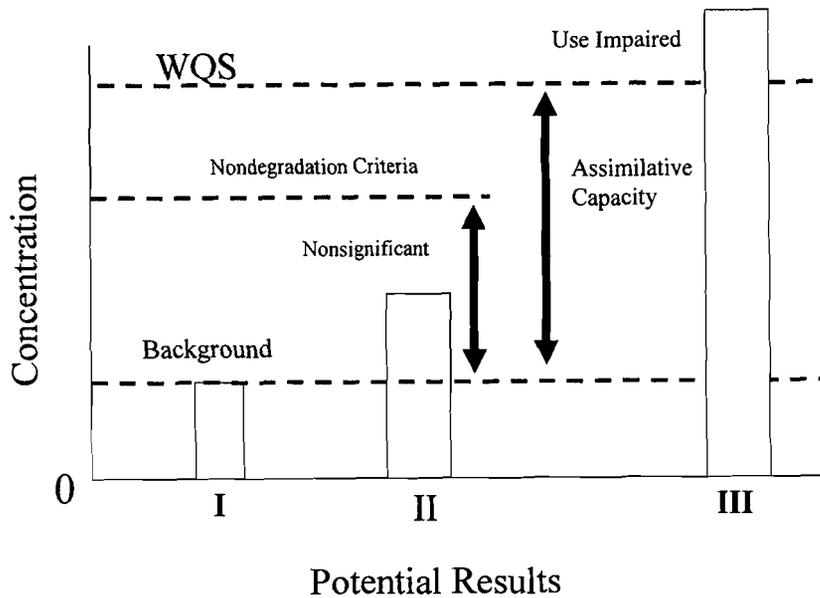
- Considers upstream/upgradient existing water quality (baseline)
- Considers downstream/downgradient impacts (relative to water quality standard)
- For ground water, analyze impact on nearest downgradient surface water



Mass Balance Equation

$$C_d = \frac{C_r(Q_s + Q_d) - C_s Q_s}{Q_d}$$

Background, Nondegradation and Water Quality Standards



$$\text{TMDL} = \text{LC} = \text{LA} + \text{WLA} + \text{MOS}$$

- TMDL = Total Maximum Daily Load
- LC = Loading Capacity
- LA = Nonpoint or Natural
- WLA = Existing or Future Point Sources
- MOS = Margin of Safety (7-Q-10)