Nutrient response to contemporary forest practices regulations

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Nitrate significantly increased

Brown, Gahler and Marston 1973 WRR
Findings

- Nitrate concentration increased as did flux (kg/ha/yr)
- Nitrate returned to pretreatment after 6 years
- P unchanged
- K increased significantly, 2 month recovery
Subsequent research

- recognized fall flush of oxidized nitrogen and seasonal changes
- influence of vegetation type and hydraulic conductivity
- variability of water quality in time and space
Higher nitrate at upper NB than lower NB

Dilution and in-stream processing

Harvesting June-September 2009
Summary

- Streamside vegetation -- nitrate concentrations similar to original results
- No change in ammonia
- Little transport of N or P in organic forms
- Total P less than proposed standard of 0.050mg/L
- Downstream response influenced by upstream response
- Recovery time? data synthesis ongoing
Thank you.