

Temperature

pH

Solids (TDS)

(DO)

(NO<sub>3</sub>)

(PO<sub>4</sub>)

(TURB)

(ALK)



Sunlight shading from streamside forests, and groundwater (especially in small streams)

Normal, uncontaminated precipitation, respiration when it contributes CO<sub>2</sub>

Minerals from rocks, bedrock, and soils, and low levels of nutrients.

Water mixing with atmosphere from surface diffusion, tumbling over riffles, and also from photosynthesis

Decomposing organic matter, animal waste, and atmosphere

Decomposing organic matter (plants and animals) and animal waste

Inorganic matter (soil & sediments), organic matter, phytoplankton, and suspended solids

From our geology sandstone, soil, and the calcium carbonate they contain

Removing shady streamside forests, industrial discharges



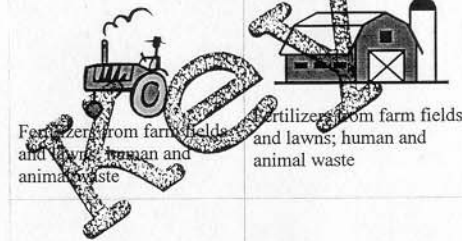
Acid rain and acid mine drainage



Road salt used in the winter, excess nutrients, and metals



Any unnatural action that warms the water, kills photosynthesizing plants, or limits surface diffusion



Fertilizer from farm fields and lawns; human and animal waste

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Soil erosion from a poorly managed riparian buffer zone



Increased acid rain and acid mine drainage inputs have reduced the effectiveness of this parameter



Fish perish/relocate because of the drastic increase in this parameter



Fish perish/relocate because of the drastic decrease (usually not an increase) of this parameter

Disrupts the process of osmosis in aquatic life



Fish perish/relocate because of a drastic decrease of this parameter

Causes eutrophication

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Higher levels of this parameter will make creek absorb heat

Little/no calcium carbonate available to raise stream pH

Disrupts the timing for starting stages of aquatic life cycles (especially adult emergence)



Low levels of this parameter will free toxic metals that were locked up in sediments and rocks

Higher salt content detected by this test will stress freshwater creatures



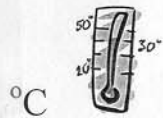
Eutrophication causes this parameter to decrease

Interferes with blood's ability to carry oxygen (blue baby syndrome and fish brown blood disease)

Because it usually is the limiting factor for plant growth, in excess it sparks algal blooms (visually displeasing)

Reduces visibility for predators and prey, clogs fish gills, smothers eggs, and fills spaces between rocks

Some streams cannot neutralize acid rain



ANSWER

mg/L

mg/L

mg/L

mg/L

JTU

mg/L

Normal creek range- 0.0-33.0

EPA Standard- none

Normal creek range- 6.16-8.80

EPA Standard- 6.5-8.5

Normal creek range- 60-460 mg/L

EPA standard- 500-750 mg/L

Normal creek range- 6.0-14.0 mg/L

EPA Standard- Only enough to maintain aerobic conditions

Normal creek range- 0-2.6 mg/L

EPA Standard- <10 mg/L

Normal creek range- 0.010-0.430 mg/L

EPA Standard- <1.0 mg/L

Normal creek range- 0-42 JTU

EPA Standard- Should not reduce the level of photosynthesis activity by more than 10%

Normal creek range- 20-200 mg/L

EPA Standard- >20 mg/L

\*\*Cards in these two rows can be INTERCHANGED