Water Quality Indicator	What is it?	Why is it important?	What affects it?
Temperature			
pH			
Total Dissolved Solids (TDS)			
Dissolved Oxygen (DO)			

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Nitrogen			
Phosphorus			
Alkalinity			
Turbidity			

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Temperature	Temperature is the measure of how hot or cold an object is, recorded in degrees Celsius or degrees Fahrenheit	Warmer water has less oxygen available for aquatic life; warmer water increases decomposition rates, which produces more CO2 and results in less oxygen available	Source of water, depth of water, amount of shade along stream banks
pH	pH is a measure of how acidic or basic a solution is	Aquatic organisms have a specific pH range in which they can live	Stream's alaklinity (ability to buffer pH), acid rain, polluted runoff, acid mine drainage
Total Dissolved Solids (TDS)	A measure of the amount of minerals, organic matter, and nutrients that are dissolved in the water	Constant level of TDS is essential for aquatic life; sudden changes can be deadly	Runoff can wash solids into a stream, increasing TDS; acid rain dissolves more solids and increases TDS
Dissolved Oxygen (DO)	Measure of the amount of dissolved oxygen; oxygen molecules that fill the spaces between water molecules	Aquatic life needs oxygen to survive	Higher water temperatures hold less oxygen; increased decomposition reduces oxygen

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Nitrogen	Nutrients required for plant growth; in the form of ammonia, nitrites, and nitrates	Plants need some nitrogen to grow; too much nitrogen can cause excessive plant growth	runoff carries fertilizers and animal wastes from farms; loss of riparian zones prevents filtering of runoff
Phosphorus	Nutrients required for the growth and metabolism of plants and animals	Necessary for growth of organisms; too much can cause excessive plant growth	runoff carries fertilizers from farms; loss of riparian zones prevents filtering of runoff
Alkalinity	The ability of a water system to resist changes in pH (or acidity)	High alkalinity can protect streams from sudden changes in pH	Watersheds with sandstone and limestone have high alkalinity; watersheds with igneous rock have low
Turbidity	measure of the cloudiness of water	Cloudy water can affect the amount of light that reaches plants, makes it difficult for predators to find food, and can clog fishes gills	Land practices that increase erosion impact turbidity; loss of riparian zones increases turbidity