

First Order Streams

Definition

A headwater stream with no tributaries leading to it

Characteristics:

Small Insects

No fish

Groundwater

Precipitation that runs off the ground

stored beneath the earth's surface

22% of all freshwater is groundwater

victim to contaminants like septic waste, fertilizers, chemical spills, mining, etc.

Velocity

The Distance water flows during some period of time such as meters per second.

A decrease in slope leads to an average increase in stream velocity

most fish species are unaffected by velocity

pH

Definition:

Concentration of hydrogen ions in solution

Usage

helps determine stream health

Scale:

0-14.

0 is very acidic, 14 is very basic

7.0 is ideal for water

Organic Matter

Definition:

Any substrate that is made of living things or the remains of living things

Examples:

plankton, algae, wood, decaying organisms, leaves

Second Order Streams

Definition:

Two first order streams joined together

Characteristics:

Plants

Game Fish

Definitions

Headwaters Where a stream or river begins

Mouth Where a stream or river ends by flowing into a larger body of water

Watershed a region drained by or one that contributes water to a stream, lake, or other body of water

Substrate The material that organisms live in or around

Algae

autotrophs: Plant-like protists that make their own food

form the base of most aquatic food chains

freshwater algae use energy from the sun and dissolved nutrients to make food

Dissolved Oxygen

Definition:

Oxygen dissolved in water

Effects

organisms rely on oxygen for life

Affected By:

higher temperature= lower Dissolved oxygen

Dissolved Solids

Examples

Magnesium, calcium, iron, sodium, potassium

effects

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Dissolved Solids (cont)

Excessive nutrients cause algal blooms which deplete oxygen and create dead zones

Third Order Streams

Definition:

The point where two second-order streams meet

Characteristics:

Algae

Fish

Other Aquatic Organisms

Stream load

Bed Load	Suspended Load	Dissolved Load
sediment too heavy to be carried in suspension	sediment within body of flowing water	dissolved minerals that enter the stream from (generally) groundwater
sand, pebbles, boulders	fine sediment; silt and clay	magnesium, aluminum
	measured by turbidity	measured by conductivity

Turbidity

Definition:

the amount of suspended matter in the water

Factors that affect turbidity

increase in erosion

heavy rains/snow

Warmer Temperature=higher turbidity



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