

Physical/Chemical Assessment

Monitoring current stream conditions

Physical/Chemical Assessment

- Recommended monitoring frequency = monthly
- Monitor facing **upstream**, at **transect**, in **thalweg**
- Check expiration dates
- Understand ‘expected’ values
- Extreme natural variations

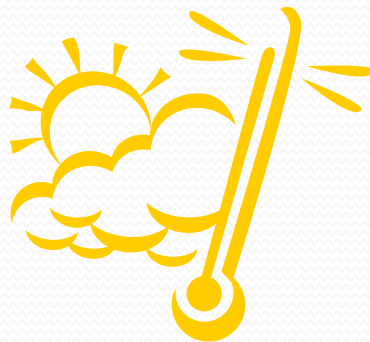
Temperature

Air

- Keep dry
- Keep out of direct sun

Water

- Let the thermometer stabilize
- Could take 2 + minutes

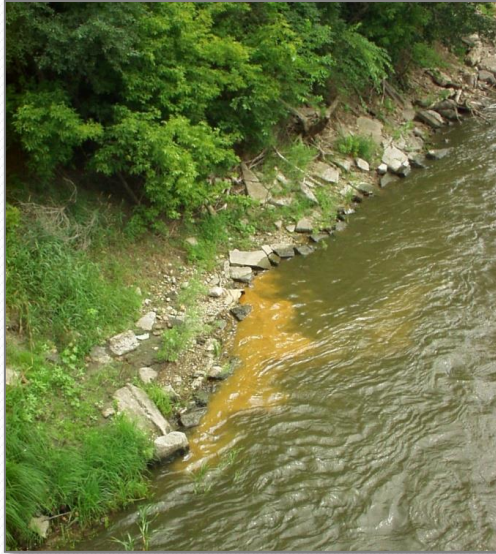


Precipitation

- Rain decreases point source pollution because of dilution effect
- Rain increases non-point source pollution because of surface run-off
- Record for past 24 hours



Water Color

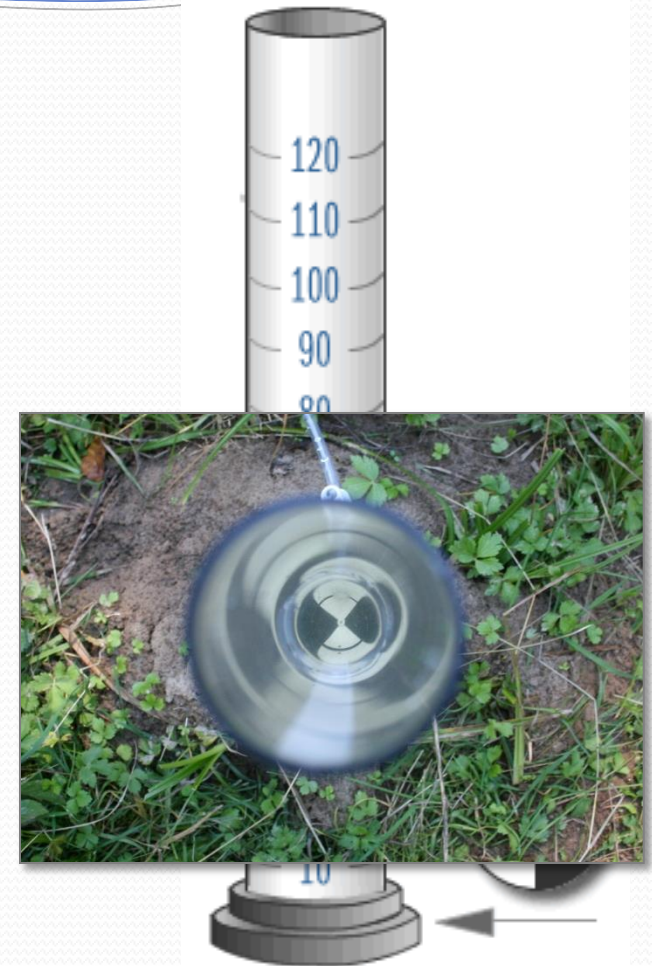


Water Odor

- Manure or sewage
 - Rotten eggs
 - Petroleum
 - Fishy
- Urban or animal waste
- Low oxygen levels
- Petroleum source
- Stressed biological life

Transparency

- Transparency is a measure of how clear the water is
- Turbidity is a measure of how dirty water is
- Measured in centimeters

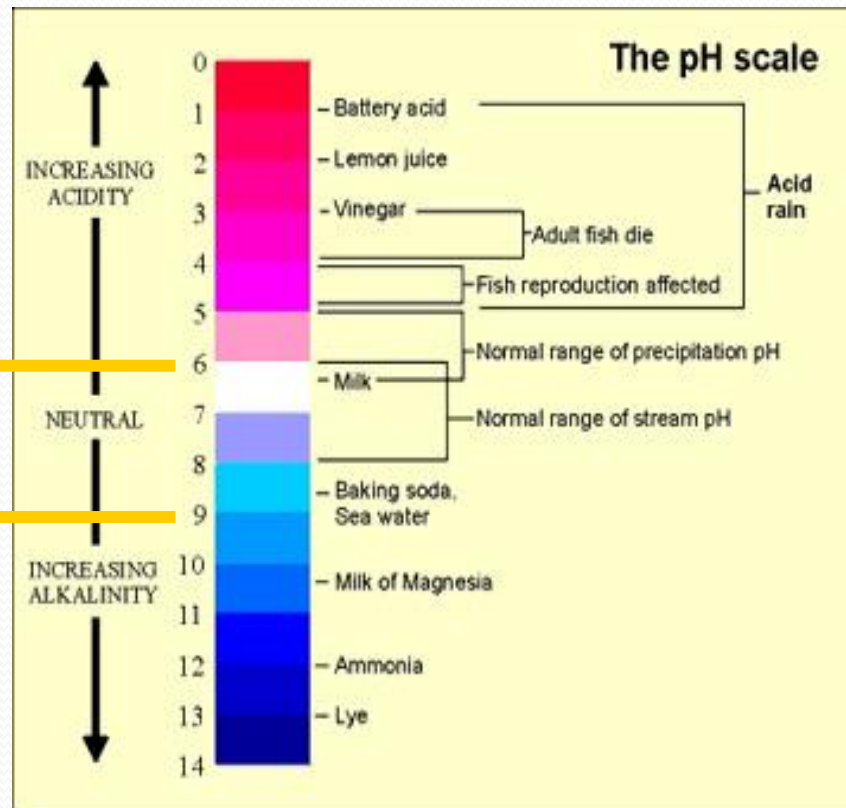


University of Idaho
Extension

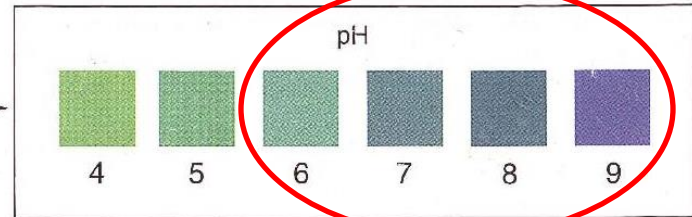
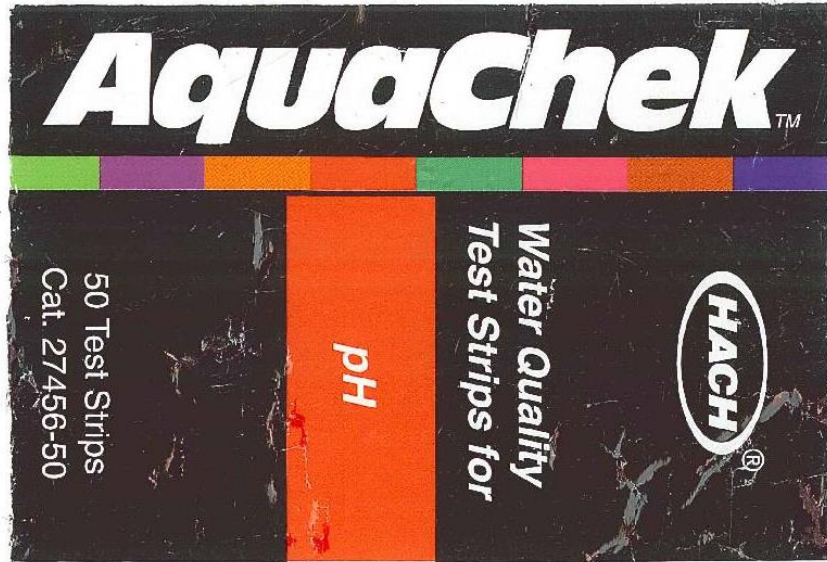
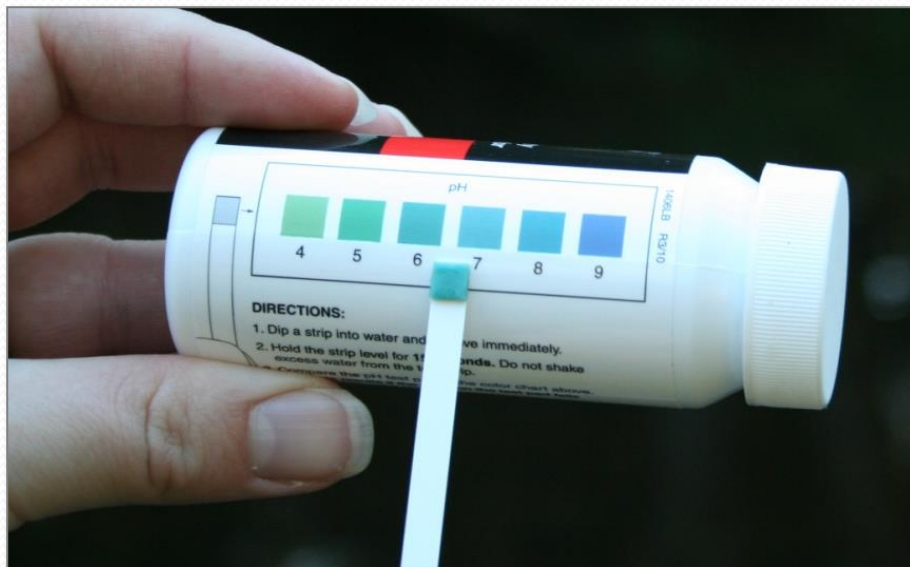
IDAHO₂**O**
MASTER WATER STEWARDS

pH

**Aquatic Life
Standard**



pH



1406LB R11/99

DIRECTIONS:

1. Dip a strip into water and remove immediately.
2. Hold the strip level for **15 seconds**. Do not shake excess water from the test strip.
3. Compare the pH test pad to the color chart above. Estimate results if the color on the test pad falls between two color blocks.

*pH results may be incorrectly low if alkalinity is less than 80 ppm.

IMPORTANT: KEEP CAP ON TIGHT BETWEEN USES. STORE AT ROOM TEMPERATURE.

USE BY DATE
ON BOTTOM

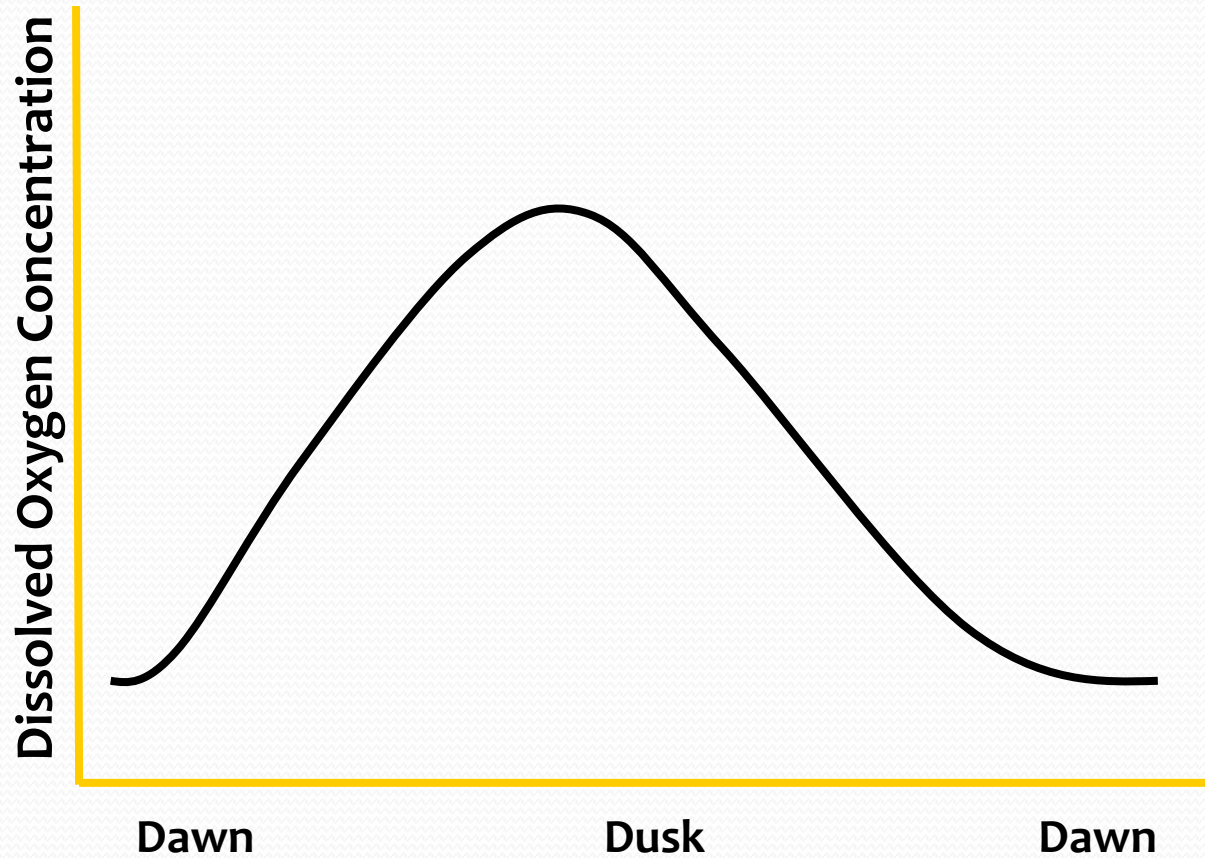


Hach Company, P.O. Box 389, Loveland, CO 80539 U.S.A.
(800) 227-4224 Outside U.S.A. (970) 669-3050

Dissolved Oxygen

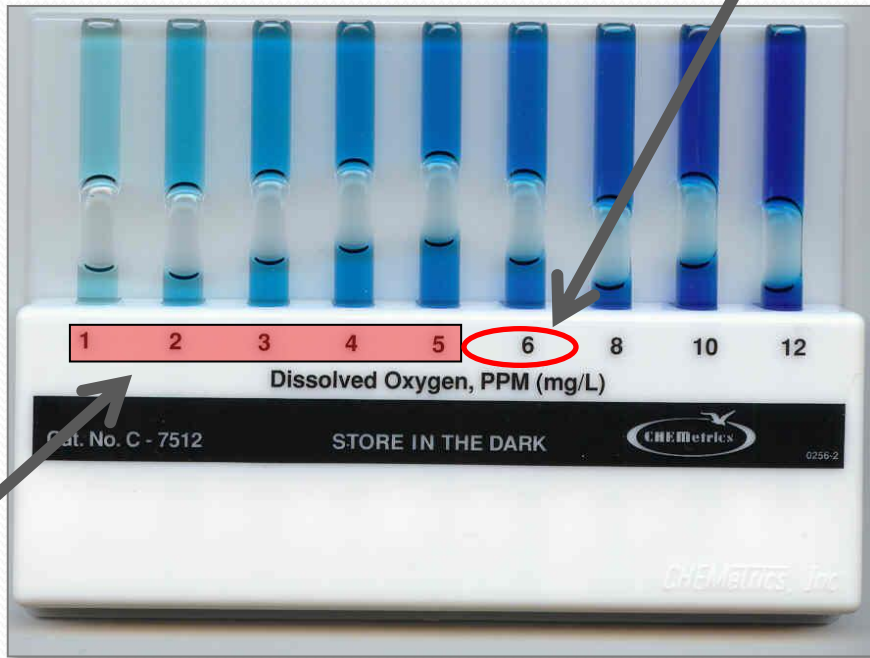
- Idaho requires a minimum of **6 mg/L**
- Necessary for aquatic life to survive
- Affected by numerous variables:
 - Water temperature
 - Season
 - Habitat types
 - Suspended sediments
 - Aquatic plants

D.O.

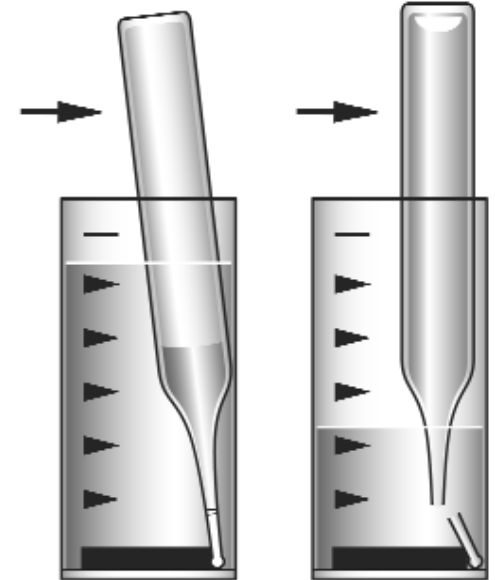


D.O.

Idaho standard
for aquatic life



Hypoxia
Zone

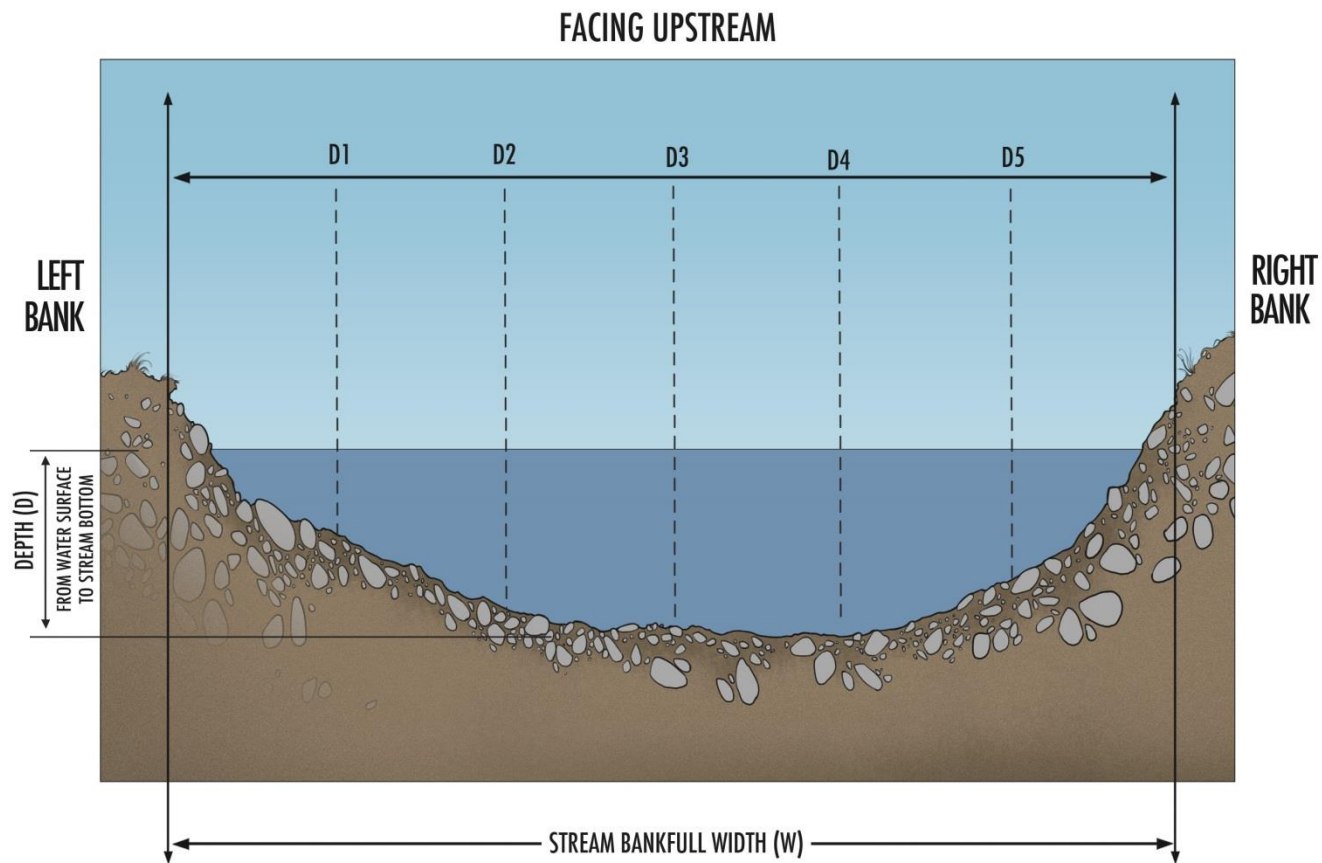


Chloride

- Found in salts
- Sources:
 - Wastewater treatment
 - Septic systems
 - Road deicing
- Values >100 mg/L are of concern
- Optional testing



Stream Width and Depth



Stream Velocity

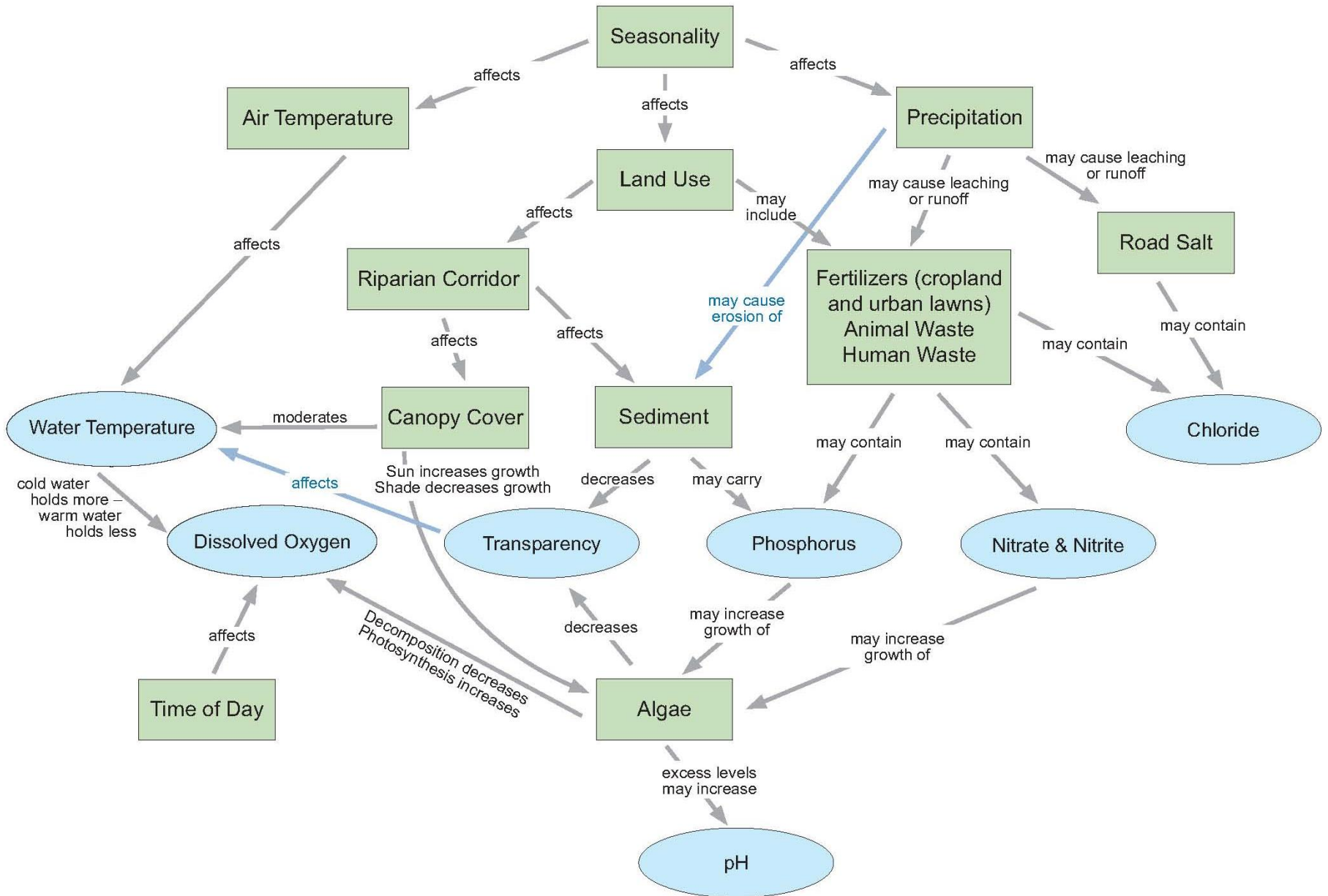


Measure in 1 m
increments along
stream transect

Stream Flow (Discharge)

- Strong influence on water quality
- Measured from depth, width and velocity
- Estimate if you do not have equipment
 - High
 - Normal
 - Low
 - Not sure

Interrelationship among Chemical and Physical Parameters

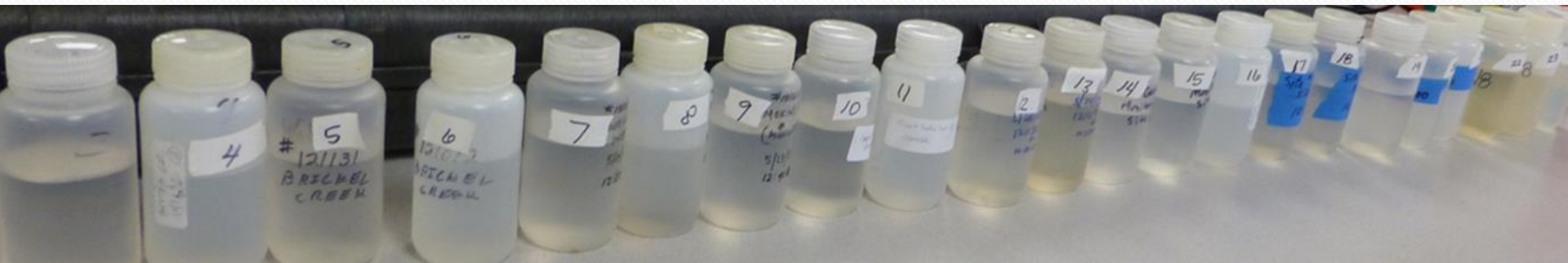


Snapshot Parameters

Special event sampling

Snapshot Sampling

- Occurs twice a year
 - Spring
 - Fall
- \$10/sample for Nitrate, total Phosphorus, total coliform and *E. coli*

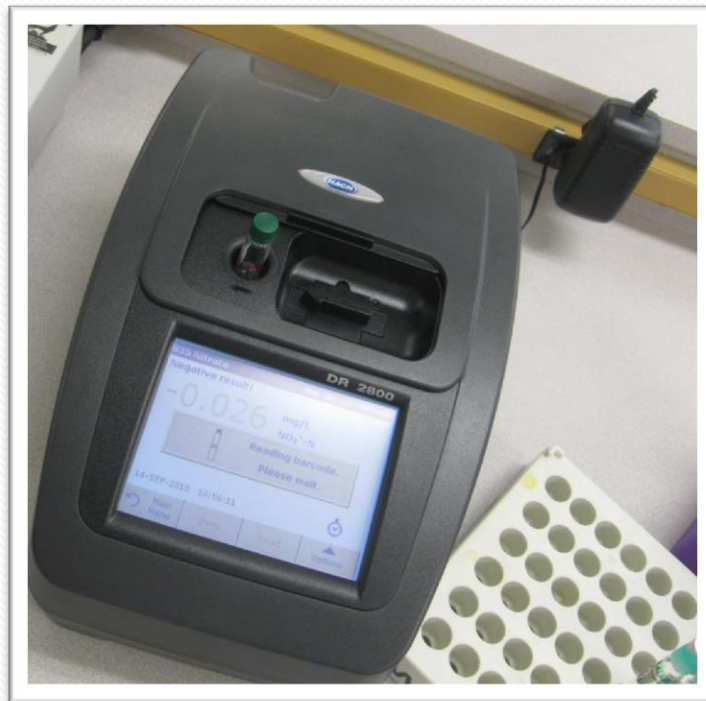


Snapshot Procedure

- Register for Snapshot online
- Sample bottles will be sent out
- Samples must be:
 - Collected on day of Snapshot
 - Kept cool during transport
 - Returned by time indicated
- All samples will be analyzed at UI Coeur d'Alene water lab
- Assistance in lab welcome

Nitrate

- EPA Drinking Water Standards
 - Nitrate must be below 10 mg/L



Total Phosphorus

- Causes excessive plant growth
- Decomposition lowers oxygen levels



Questions?

