

Water Pollution Types

Six Major Types of Pollutants in Water

- Biodegradable waste
- Plant nutrients
- Heat
- Sediments
- Hazardous and toxic chemicals
- Radioactive waste
- **RESOURCES**- Read the Overview Packet intro and the paragraph(s) about your pollutant. Then read the handout specific to your pollutant.

Presentation or Poster Requirements

*Posters MUST have a **picture**.

- Definition of your pollutant. What is it?
List examples.
- What are the sources of this pollutant?
Where is it coming from?
- What are the problems this pollutant causes
- What's being done to help address the problems from these pollutants?

Biodegradable waste

- From sewers, food scraps, human and animal waste/sewage, other organic material (like compost)
- The nutrients make bacteria grow rapidly.
- Bacteria consume oxygen and lower DO levels.
- Can spread disease from bacteria, too (typhoid, cholera)



Biodegradable Waste- Solutions

- Create buffers to capture and clean waste before it reaches streams
- Keep cows out of streams
- Repair leaky sewage pipes



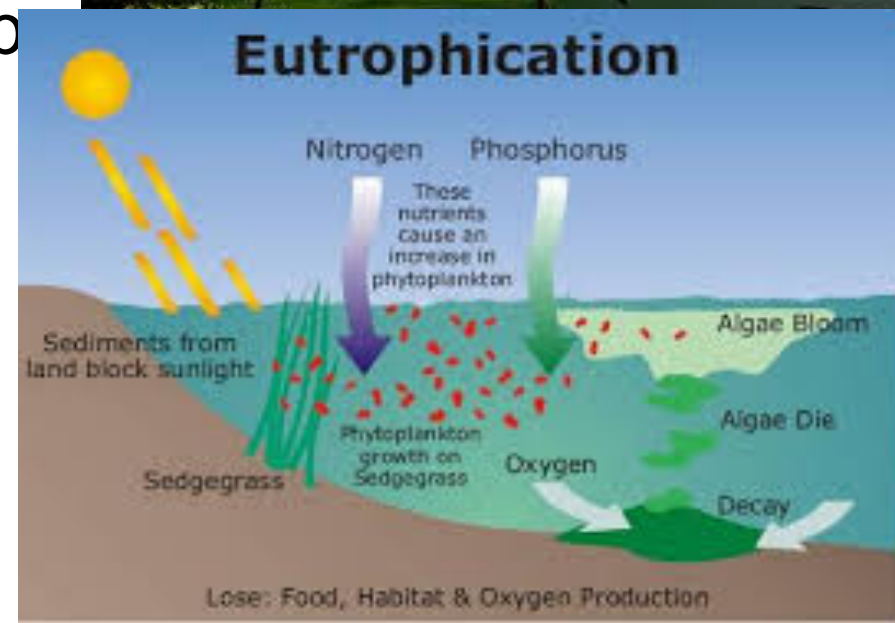
Plant nutrients

- From fertilizer run-off, detergents, livestock and industrial waste (nitrates and phosphorus)
- Promotes plant growth in lakes and rivers (often algae blooms) which takes oxygen away from aquatic life when it decomposes
- This process is called **eutrophication**- Leads to death of aquatic organisms due to loss of oxygen



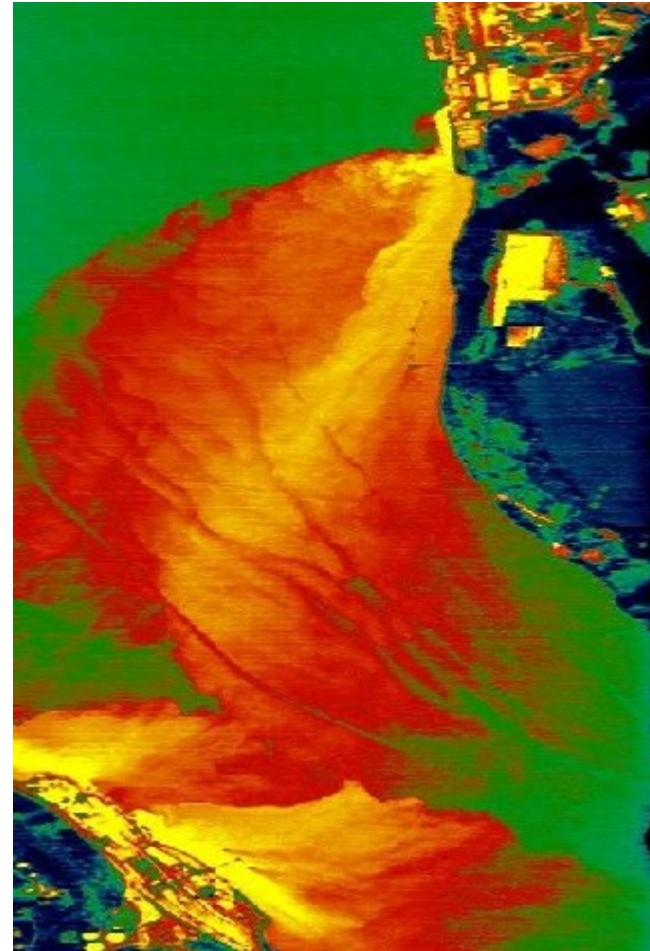
Plant Nutrient Pollution

- **Solutions**
- **Reduce the amount of phosphorus used in everyday products (dish soap use less fertilizer) and in agriculture.**



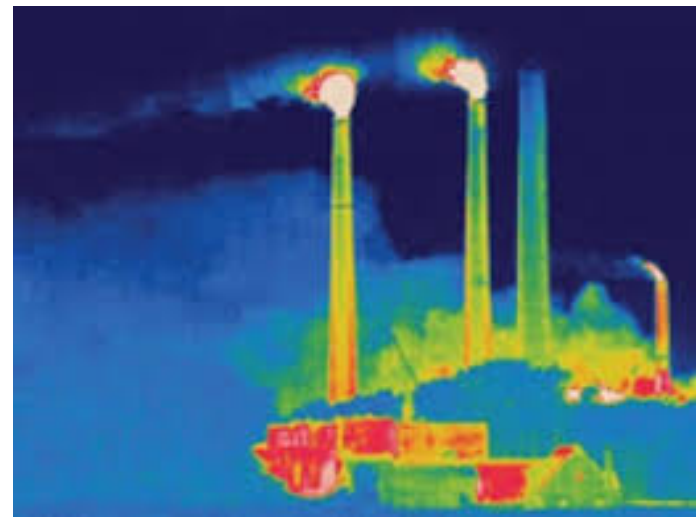
Heat / Thermal

- From industrial cooling, dams and removal of trees/forests—
- It increases water temperatures that exceed natural temperature ranges
- More heat results in lower oxygen levels for aquatic life



Thermal Pollution- Solutions

- Grow a healthy **riparian area** with trees that provide shade to cool rivers
- Make industries cool water before releasing it back to streams
- Have dams keep water levels as high as possible



- # Sediment
- From erosion, human activity, logging and construction, farming
 - Causes minerals, rocks and soil to get into water
 - Creates thermal pollution by darkening water so it absorbs more sun/heat and lowers oxygen levels for fish and aquatic organisms.



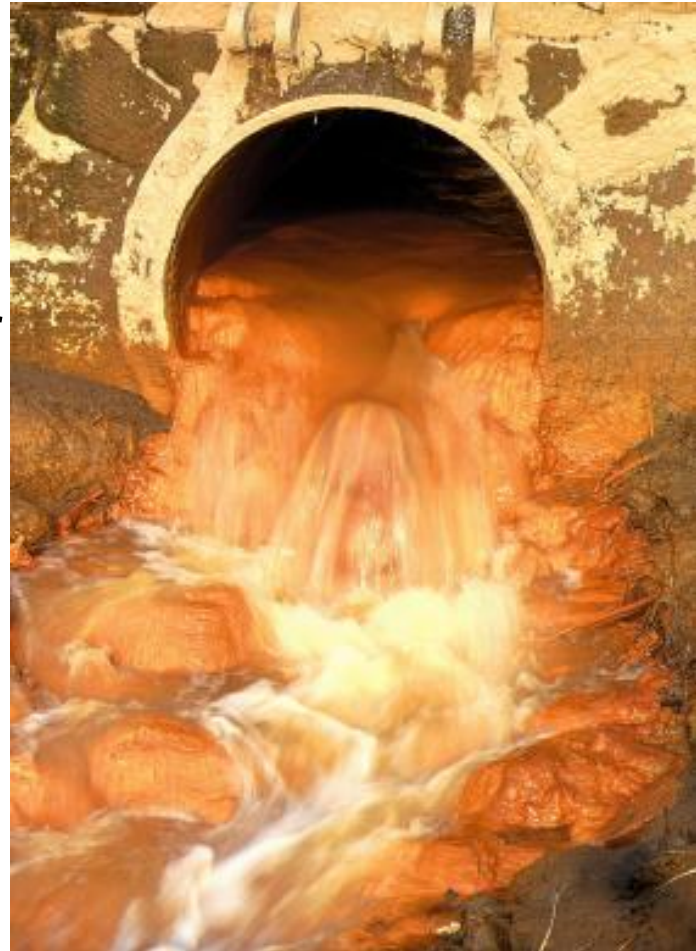
Sediments- Solutions

- Filter stormwater runoff
- Contain spills
- Protect construction projects and road building with a barrier
- Place buffers and swales along farmland



Hazardous and toxic chemicals

- From homes and industry and storm water runoff from roads.
- Many people dispose of chemicals in homes incorrectly—pour down sink and industry dumps into water.
- Many are toxic to living organisms; exposure kills organisms



Hazardous Chemicals- Solutions

- Disposing chemical waste properly!!
- Using chemicals as directed only

Radioactive Waste

- Natural and human made
- From wastewater discharge from nuclear power plants and other industry and hospitals
- Also occurs naturally too (radon)
- Causes cancer and death in high concentrations;
Persists in environment.



Radioactive Waste- Solutions

- Store and dispose of it as directed.
- Be sure its use is carefully regulated.
- Be sure Nuclear plants are earthquake safe.

