

# What Makes a River Healthy?

## 1. Flow

- Is the flow of the river very flashy with high peaks after storms and lower average flows?
- Is the river currently very low?
- Is the river currently very high?
- Is there evidence of excessive soil erosion along the banks?

## 2. Water Quality

- **Visual**
  - What is the color of the river?
  - Are there any distinct smells?
  - Are there large algae blooms?
  - Is there an oily sheen on the water?
  - Is there trash floating in the river?
  - Are there dead fish or other animals floating in the river?
- **Chemical** - There are a wide variety of chemicals you can test for, including naturally and commonly occurring nitrogen, phosphorous, oxygen as well as different forms of pesticides, heavy metals and PCBs.
- **Biological** - This includes looking at indicator species (such as macroinvertebrates) and the presence of bacteria

## 3. Habitat

- What is the composition of the bottom of the river? Is there are a variety (rocks, sand, clay)?
- Are there aquatic plants?
- Are there submerged or partially submerged logs?
- Are the edges of the river vegetated, barren, or made of man made materials?
- Are there pools and riffles?
- Do trees shade the river?
- What does the land surrounding the river look like (natural, semi-natural, suburban, urban, agricultural, industrial)

## 4. Food Energy

- Are there a variety of plants growing in the river?
- Are there a variety and abundance of macroinvertebrates?
- Are there a variety of larger animals such as fish, turtles and frogs?