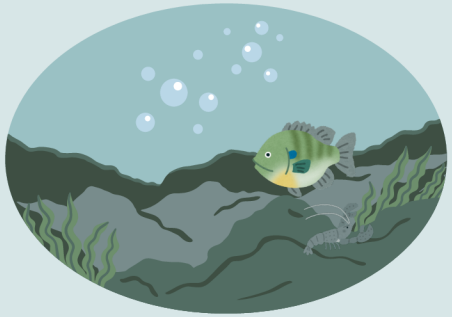
What makes a stream "healthy"?

A "healthy" stream has stable water quality conditions that sustain a functioning aquatic ecosystem.

Fish and wildlife propagation is the most basic **beneficial use** for all streams, and some organisms are **more sensitive** to polluted water than others.



"Sensitive" organisms can include fish, insects, and microbes and can be used by biologists to determine how **"healthy"** a stream is based on the presence of these species!

When streams become polluted with various things such as **sediment, chemicals, and waste**, ecosystem-sustaining water quality conditions can dwindle, and chemicals could be toxic to specific organisms.

It is important to be mindful of local water quality! Streams run into rivers, and lakes- many of which could supply your drinking water!

The main agency in Oklahoma that assesses stream health is the **Oklahoma Conservation Commission**. The Conservation Commission releases Watershed Health reports on a rotating schedule.

OKLAHOMA CONSERVATION COMMISSION

In 2-year intervals, the OCC conducts regular water quality monitoring, fish collections, and macroinvertebrate collections and compiles a report to characterize a defined basin.

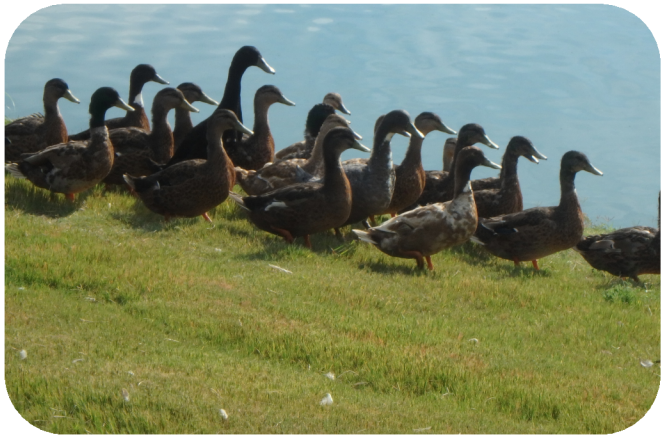
There are 5 "groups," or basins that the OCC monitors on a rotating schedule.

To learn more about water quality reports, visit:
https://conservation.ok.gov/wq-statewide-rotating-basin-monitoring-program/

GCSA
Green Country Stormwater Alliance

For more resources, visit
StormwaterOK.net

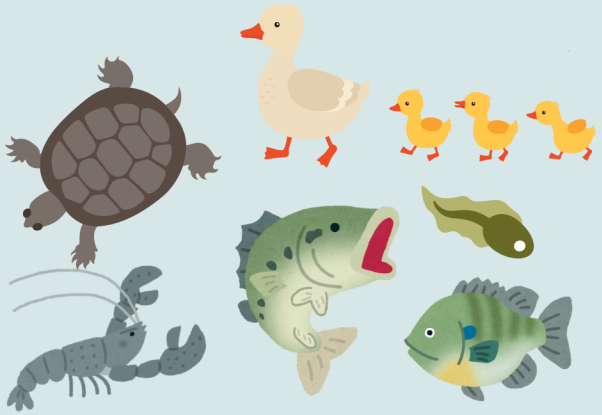
Ecology of Oklahoma Streams



Fish & Wildlife

Many species of fish can live in Oklahoma's freshwater streams, including bluegill, bass, darters, sunfish, and more.

Other animals also call streams home, such as otters, beavers, ducks, crawfish, and turtles.



Insects & Microbiota

Benthic macroinvertebrates are aquatic bugs that live in streams, typically under rocks or soil. These organisms are important for stream health, and include nymphs for mayflies, dragonflies, and more.

Microorganisms, like bacteria, cyanobacteria, and daphnia are also important residents of streams.

Plants & Algae

Freshwater plants provide habitat for insects and fish, and provide shade over a stream.

Also important are riparian buffers, which are the trees, grasses, and other plants that naturally grow on a stream bank.

Oklahoma's Ecoregions

Stream ecology is heavily dependent on the **ecoregion** where a stream is located.

An **ecoregion** is defined by area with similar ecology, weather, and conditions. **Oklahoma** is home to **twelve** distinct ecoregions, and 46 smaller categories within those.

Western Oklahoma is defined mostly by arid ecoregions, while Eastern Oklahoma contains a mix of mountainous regions and plains.

Can you locate the ecoregion that you live in on the map?

Source: U.S. EPA