



EnviroKids!

Educational Tools for Tomorrow's Environmental Heroes

Issue Created by

Spokane County
Water Resource
Center



What in the World is up with Wetlands?

Bog, marsh, swamp... you might have heard those words before, but they are simply names for a very special kind of habitat called **WETLANDS**. You can think of wetlands in really simple terms, land that is wet, but they are so much more than that. Wetlands are some of the most ecologically diverse places on our Earth. They provide shelter, food, and space for not just animals like birds, fish and insects but also unique plant species. Wetlands also help to protect humans from extreme weather and clean pollutants from our water. Wow, what can't wetlands do?!

ALL WETLANDS SHARE THESE CHARACTERISTICS



HYDROLOGY

Seasonal flooding and water present all or most of the year.



HYDROPHYTIC PLANTS

Plants that like their "feet", aka roots, wet.



HYDRIC SOILS

Full of micro organisms and decaying plant matter in waterlogged soil.

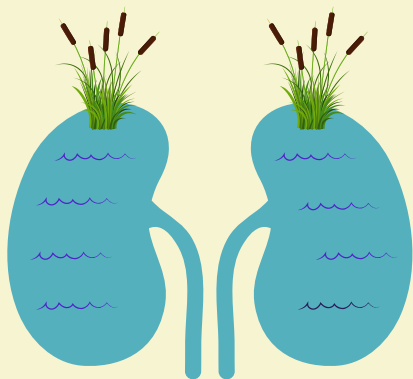


WETLANDS

Kidneys of the Earth



Like human kidneys, wetlands remove and filter impurities. When water flows into wetlands, the aquatic plants slow down and spread it out. As the water settles, excess nutrients, pollution, and sediments drop into the wetland where microbes decompose it over time.



After flowing slowly through a wetland, water drains to nearby streams, rivers, or lakes, or even soaks into the groundwater much cleaner than when it first entered the wetland.

Wetlands: **STOP** the fast, flowing water, they **DROP** the pollutants, and they **ROLL** the water out cleaner than before!

Centuries ago, scientists estimate America had about 221 million acres of wetlands. As time has gone on, America's wetlands have decreased more than half, with some states losing 85% of their original wetland area. Many people used to believe that wetlands were useless land, filled with diseases or dangerous animals. People would drain wetlands to farm or build on.

Thankfully, times change and so do people's way of thinking. We now know wetlands are some of the most valuable habitats in the world, much like rain forests and coral reefs. Over 900 different species use wetlands such as waterfowl, shorebirds, fish, amphibians, insects and mammals. Many creatures and plants have even uniquely adapted to live and thrive in wetlands.

Besides being valuable habitat, wetlands do so much to keep humans healthier and safer. Wetlands can trap impurities and pollutants in the soil and are estimated to capture almost 8.1 million tons of carbon dioxide from the atmosphere each year. Wetlands can stop flooding by absorbing large amounts of rainfall.



Again, what can't wetlands do?!



Saltese Flats Wetland



Historically, a lake existed at Saltese Flats. The schitsu'umsh people (Coeur d' Alene tribe) used Saltese Flats as a tribal gathering place and made their winter homes in the protective shadow of Mica Peak. In the 1890s, Peter Morrison and his family acquired and sought to drain the lake to be used for farmland by diverting water around their property in ditches that are still being used today. The fertile soil grew some of the best Timothy hay for over 100 years. In the 2010's, Spokane County Water Resources bought the land to be used to discharge reclaimed wastewater. The reclaimed water was eventually discharged into the Spokane River, but the County decided to restore the wetland to its natural conditions anyway. The 600-acre wetland, called "The Flats" now provide incredible habitats for all kinds of creatures and is a beautiful place for people to bird watch, ride bikes, fish, dog walk, and hike.



WETLAND FOOD WEB: WHO IS EATING WHO?



Everyone gets to eat at the Saltese Flats Wetland Buffet! Water allows aquatic plants to grow, where small animals such as **macroinvertebrates and minnows** then eat them. Those animals are food for **fish, turtles, frogs, waterfowl and songbirds**. Those animals are food for larger creatures like **coyotes and birds of prey**. All of these creatures munching each other creates a food web!



Think About It

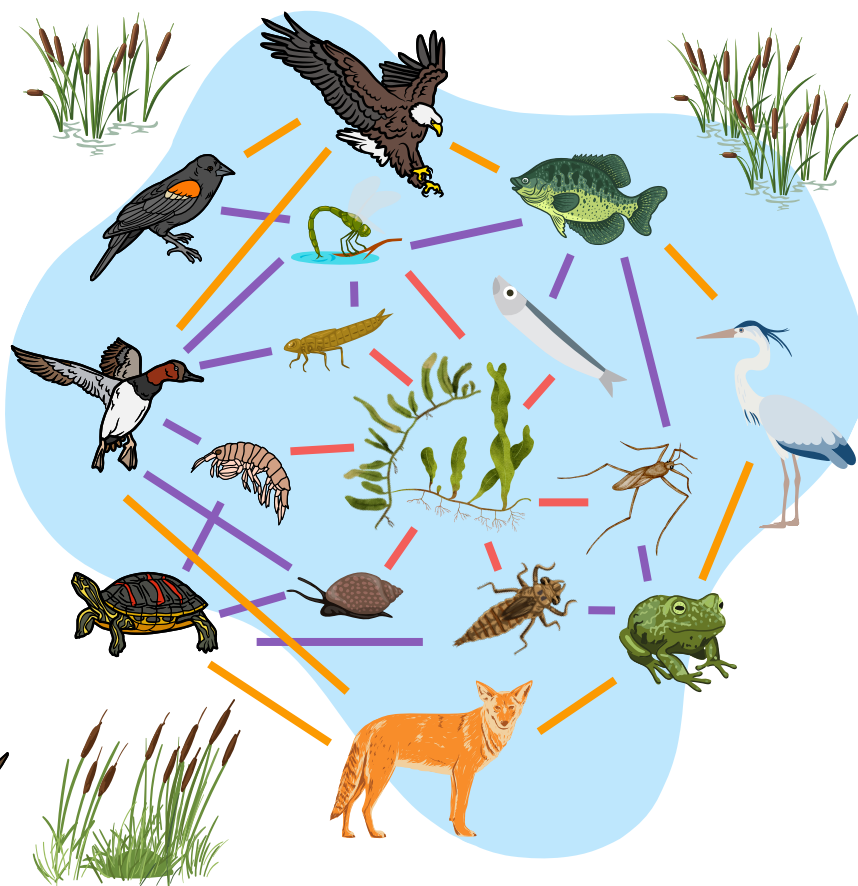


Restoring a wetland that once was farmland can bring up some "murky situations" that take a lot of creativity to come up with fair and sustainable solutions. Can you come up with a solution to this problem?

A farmer owns a portion of land that is right up against the Saltese Wetlands. One day, she finds a corner of her property flooded with water coming from the wetland.

Spokane County has been working to restore the wetlands. In doing so, they want water levels to be higher in order to help control the spread of invasive plant species. The farmer wants the County to provide an answer to her flooded property. Spokane County argues the water levels staying high is the only thing keeping the wetlands from being completely taken over by invasive species.

What do you think should be done?



Envirokids is a collaborative effort among multiple environmentally focused agencies in the Spokane region working to provide locally relevant educational resources to teachers and families.