

FRIENDS OF THE  
MISSISSIPPI RIVER

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ONLINE LESSON  
SERIES:  
WADE INTO  
WETLANDS

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2020

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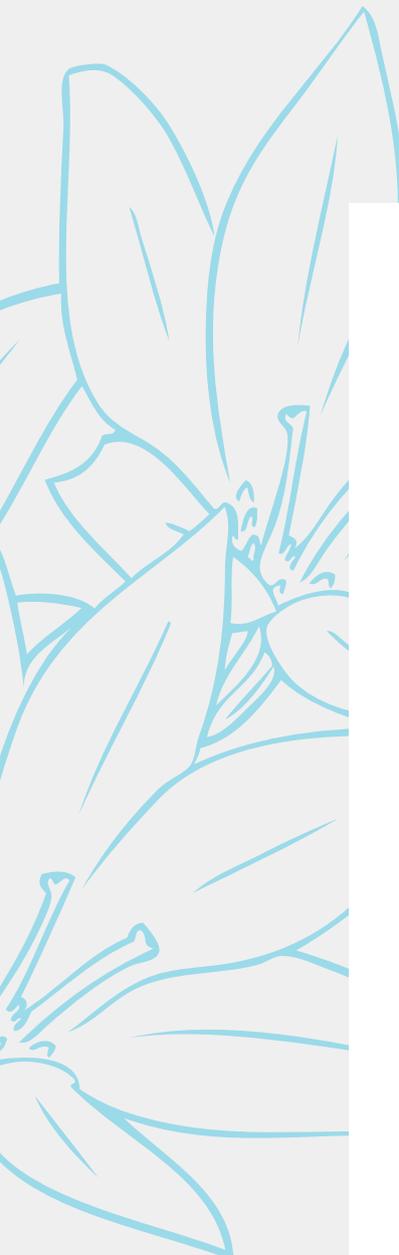
## INTRODUCTION

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**Friends of the Mississippi River** engages people to protect, restore, and enhance the Mississippi River and its watershed in the Twin Cities region. This in-person, classroom lesson has been adapted for homeschooling and remote teaching. This lesson also has a corresponding video and presentation that can be found on the FMR website ([www.fmr.org/news/2020/07/28/wade-wetlands-online-lesson](http://www.fmr.org/news/2020/07/28/wade-wetlands-online-lesson)).

An **ecosystem** is made up of the living and non-living things that interact with each other in a specific area. **Wetlands** are **transitional ecosystems**, meaning they exist as both **terrestrial** (land) and **aquatic** (water) ecosystems and are covered by fresh water for most or part of the year ([www.epa.gov/wetlands/what-wetland](http://www.epa.gov/wetlands/what-wetland)). There are many different types of wetlands that have different names. Some common names you may have heard include swamps, mangroves, estuaries, marshes, deltas or mudflats. Each of these wetlands has its own description and characteristics, but they all have an amazing diversity of plant and animal life, some that are found in no other habitat on earth!

We have four main types of wetlands in Minnesota: swamps, marshes, bogs and fens. **Swamps** have water in them year round, and their main plant life is **woody species**, which are plants that produce wood. In other words, swamps are forests that are always flooded. **Marshes** also have water present all year long, but marshes do not have trees. Their plant life is mostly **grasses** (which have narrow leaves and round stems), **rushes** (which have round stems) and **sedges** (which mostly have triangular stems). An easy way to remember the difference between rushes and sedges is the rhyme



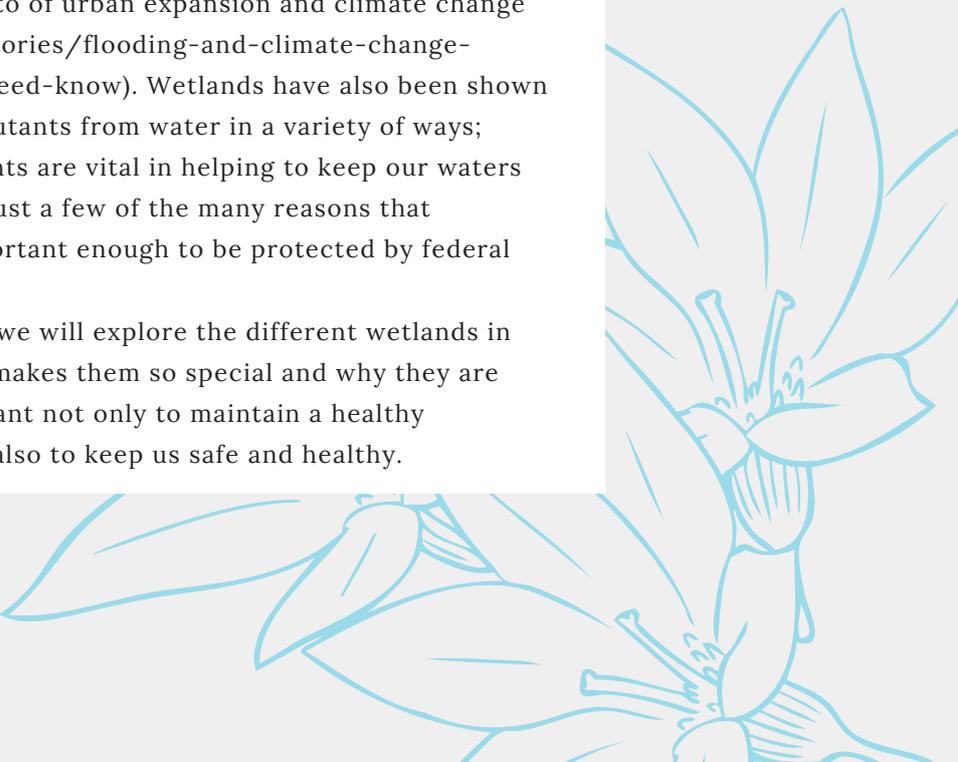
“sedges have edges.”

**Bogs** and **fens** both have plant life that is largely comprised of mosses; both often do not have visible amounts of standing water. The difference between the two is that bogs only receive water from **precipitation** (rain or snow) whereas fens have a water source flowing into or through them ([www.dnr.state.mn.us/wetlands/index.html](http://www.dnr.state.mn.us/wetlands/index.html)).

A wide variety of plants can grow in wetlands, and many of these plants are only found in wetlands. A good example is Minnesota’s state flower, the showy lady slipper. This flower is a rare orchid that is only found in swamps, fens and bogs in North America. Due to the wide range of plants and constant presence of water that can support a large food web and offer protection from predators, wetlands also support a large amount of wildlife. Birds may stop in wetlands during migration due to an abundance of food. Similarly, other wildlife species may raise young in wetlands not only for the ease of finding food but also for the protection that water provides from predators, many who can not swim or travel across water easily.

Wetlands are important not only to plants and wildlife but also to humans. We depend on wetlands because they act as sponges to soak up extra water from rainstorms and spring snow melt. Because they soak up water, wetlands help to prevent the flooding of roads and neighborhoods, which often occurs due to of urban expansion and climate change ([www.nrdc.org/stories/flooding-and-climate-change-everything-you-need-know](http://www.nrdc.org/stories/flooding-and-climate-change-everything-you-need-know)). Wetlands have also been shown to help clean pollutants from water in a variety of ways; thus, wetland plants are vital in helping to keep our waters clean. These are just a few of the many reasons that wetlands are important enough to be protected by federal law.

In this lesson, we will explore the different wetlands in Minnesota, what makes them so special and why they are incredibly important not only to maintain a healthy environment but also to keep us safe and healthy.



## WETLAND INVESTIGATORS

Please take the CDC recommendations seriously and only go outside if you feel comfortable doing so and can stay six or more feet away from others. Please also wash your hands as soon as you return to your home and always let an adult know about your plans to be outside.

### MATERIALS

- Writing utensil
  - Paper
- Something hard to write or draw on
- Clear container that can hold water



## DIRECTIONS

1. Find a body of water and survey the area.
2. Write and draw observations on your paper. How does water flow into this body, or is it filled by rain or humans? How or does it leave? How different is the plant life? Are there trees, shrubs, grasses, plants floating on the water? What different wildlife can you see?
3. Sit with the scene, making observations for 10 minutes or more.
4. Using your clear container, take a scoop of water, set it down and let it settle.
5. Closely observe the container to see if there is anything in the water. There are many animals that live in the water that we can barely see, so be sure to look closely and you may see tiny dots swimming around in the water. What types of different plants and wildlife, if any, can you see in the water?
6. Describe or draw what you see on your paper.
7. Sit with the container of water making observations for 10 minutes or more. When you are finished, don't forget to return the water in your container to the pond.