ROUGE RIVER NATIONAL WET WEATHER **DEMO**NSTRATION PROJECT

DemoInfo

Wetlands

Wetlands are areas of land that are covered with water at least part of the year and contain plants and animals that are adapted to these conditions. Wetlands are one of the most biologically diverse systems in the world and can be compared to tropical rain forests and coral reefs in the diversity of species they support.

Wetlands Are Important

Wetlands, also called bogs, swamps and marshes, are vital to the Rouge River Watershed. Wetlands provide many benefits including: water quality improvements; food and habitat for fish and wildlife; flood control and shoreline erosion control; and recreation.

Water Quality Improvements

Wetlands improve water quality by filtering out pollutants before they reach the river. These pollutants include nutrients and sediments.

Nutrients such as nitrogen and phosphorus from fertilizers, contribute a large amount of pollution to the Rouge River. Excess nutrients contribute to increased algae growth, which reduces the amount of oxygen in the water. Wetlands can filter as much as 91% of the phosphorus and 86% of the nitrogen.

Sediments that are suspended in running water can also be removed by wetlands. As the running water enters a wetland, the water slows and the sediments settle out. Some wetlands can retain as much as 94% of the sediment (dirt). Clean sediments are important because they contain air pockets that aquatic life depend upon to exist. These spaces provide habitat for aquatic organisms to lay their eggs and contributes oxygen that is essential for their survival.

THE ROUGE RIVER PROJECT
A WORLD CLASS EFFORT
BRINGING OUR RIVER BACK TO LIFE

This wetland, located in West Bloomfield Township, is also a Great Blue Heron Rookery.

Flood and Shoreline Erosion Control

Wetlands function like big sponges, slowing down and absorbing excess water during storms. This combined action of slowing and storing water reduces flooding downstream and shoreline erosion.

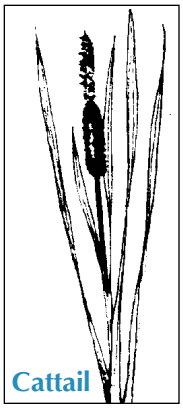
Food and Habitat for Fish and Wildlife

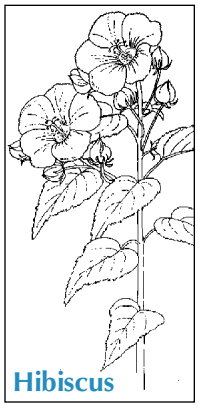
Fish. Wetlands serve three major functions for fish communities. They provide breeding grounds, act as sources of food and provide cover from predators. Most species of freshwater fish are dependent on wetlands for one or more of these functions.

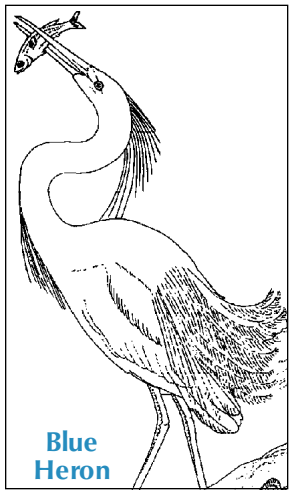
Wildlife. Many varieties of waterfowl and non-game birds depend on wetlands for feeding and resting areas during their spring and fall migration. Resident birds rely on them for nesting and as primary feeding areas. Other wildlife, such as the mink, muskrat and beavers, rely on wetlands.

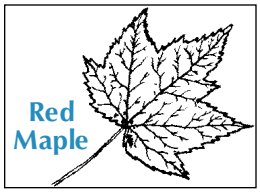
In addition, wetlands are a productive habitat for insects. Waterfowl, non-game birds and a variety of reptiles and amphibians depend on insect-based food webs. Many species of turtles, snakes, frogs and toads live in and rely upon wetlands.

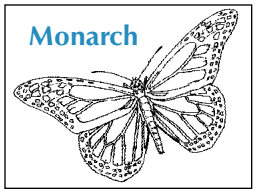
Typical Wetland Species

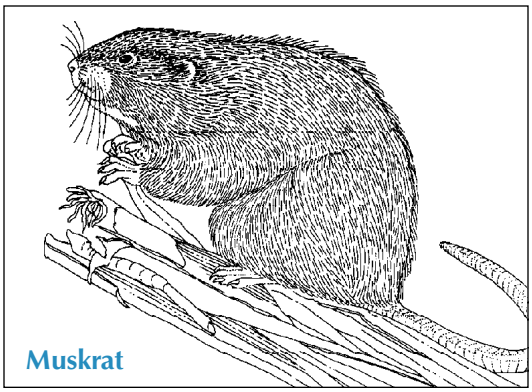


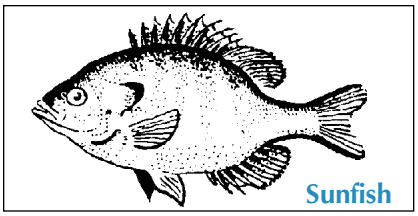


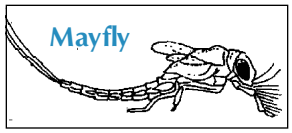












Endangered Species. Wetlands are vital to the survival of various plants and animals, including threatened and endangered species. Approximately 30% of Michigan's threatened and endangered plants and 60% of the threatened and endangered animals are wetland species.

Recreation

There are many recreational activities that involve wetlands. Hunting and fishing for wetland dependent species is a major recreational activity in Michigan. In addition, people enjoy wetlands for hiking, birdwatching and photography.

Types of Wetlands

Natural wetlands include swamps, bogs and marshes. These wetlands occur naturally within the Rouge River Watershed.

Enhanced. Some land areas have historically been wetlands, but were changed due to some outside influence, such as draining the area for farming and development. These wetlands can be restored by leaving them undrained. This can be accomplished by plugging the ditches or breaking the tiles that lead to the drain.

Constructed wetlands create a wetland where one previously did not exist. Wetland design, site selection and a maintenance plan must be developed in order for the constructed wetlands to function properly.

Rouge Project Activities

The Rouge Project has initiated projects that utilize existing, enhanced and constructed wetlands to demonstrate the effectiveness of wetlands in treating stormwater runoff. This evaluation will identify the pollutants eliminated and the removal rate by the wetlands. In addition, the water quality and quantity will be measured to determine the effect of the wetland on the River.

This fact sheet was prepared as part of the Rouge River National Wet Weather Demonstration Project, USEPA grant #X995743-02.

If you have any questions about Wetlands or the Project in general, please call the Rouge Hotline at (888) 223-2363 or visit our web site at http://www.rougeriver.com.