

# Seeing the Worth of Wetlands



Photo by Vineet Shrivastava

## There's something special about Minnetonka.

It starts with a rolling landscape of hills and ridges. Water flows from these high points, sluicing downslope into lower-lying areas. Wherever you go in Minnetonka, you can see evidence of this land-water connection in our city's four creeks, 13 lakes and more than 800 wetlands.

It's easy to appreciate the beauty and value of streams and lakes. By contrast, wetlands are often seen as problem spots, or they are simply overlooked. Yet wetlands are an incredibly important and defining feature of our community and natural environment.

## So... what is a wetland?

Just as the name suggests, wetlands are wet patches of land. Some hold shallow water throughout the year. Others look dry for months at a time, filling only during snowmelt or rainy periods. Whether small or large, permanently wet or sometimes dry, wetlands share three defining characteristics:

- A source of water, from the surrounding landscape or groundwater springs
- Soil that holds water especially well
- A plant community that tolerates, or even depends on, wet soil or standing water.

Wetland habitats take many forms. They often occur along lake and stream shorelines, or in floodplains wetted by occasional overflow. But shallow woodland ponds are also wetlands. So are tiny pools that fill and dry up seasonally, tree- and shrub-filled bogs, and massive marshes that capture, store and filter huge amounts of water. There might even be a remnant patch of wetland in your yard, hidden under a stubbornly soggy patch of lawn or landscaping.

# Spectacular diversity

**Spend time near a wetland and you'll see why ecologists rank them among the most diverse habitats on Earth.**

Turtles and frogs, muskrats and mink, herons and ducks are some of the many creatures that live in these special habitats. Microscopic creatures populate the water or soil, while many insects, including dragonflies, start their lives in wetlands. Young fish take shelter among the plants. And at least 138 bird species in the continental United States use wetlands for food, nest sites, or safe stopovers during long-distance migration.

How can one habitat support so many creatures? By supplying many different foods, types of shelter and nesting space – in other words, lots of plants. Depending on its size and location, a wetland might have several zones, each with its own distinctive vegetation.

In the **floodplain**, trees and shrubs grow above the ordinary high water level but can survive short-term flooding. Willow, cottonwood, ash, silver maple, boxelder and bur oak are typical here. These big trees cast cooling shade on the water. They also hold soil in place and provide vital food and shelter for wildlife.

The **shoreline** is an area directly surrounding open or flowing water. Soils in this zone are typically damp but occasionally flooded or dry – so shoreline plants, like swamp milkweed and gray dogwood, must adapt to variable conditions.

**Emergent plants**, including cattails and arrowhead, are rooted in shallow water but raise their stems, leaves, flowers and fruit into the open air.

**Floating plants** have leaves and flowers at the water's surface. Some are rooted at the bottom of the wetland, while others are free-floating. Water lily and duckweed are typical of this zone.

**Submergent plants**, like coontail and pondweed, are rooted at the bottom and grow entirely underwater.



Illustration by Maggie Wiebe, 2022

# Nurseries of life

Wetlands offer great recreational opportunities, from fishing and hunting to canoeing, hiking and bird-watching.

They also provide irreplaceable ecological services, benefitting people and nature alike.

- Wetlands are like natural sponges. Their soils capture and hold rain and snowmelt from the surrounding landscape, reducing the risk of local or downstream flooding and replenishing underground drinking water supplies. In drought, wetlands slowly release water back into streams and lakes.
- Wetland vegetation and soils can filter water to remove excess sediment, nutrients and other potential pollutants. Those same nutrients fuel plant growth that supports so many animals.
- Wetland plants and soils store large amounts of carbon, offsetting some of the impact of human activity on our climate.



Photos by Christine Petersen

# Experience a wetland

You don't have to go far to find a wetland in Minnetonka. Many city parks showcase and preserve these habitats. Explore them in all seasons to see why these places are so worth protecting. Here are just a few examples:

- **Meadow Park** (2725 Oakland Rd.) encompasses an extensive cattail marsh mixed with floodplain shrubs and trees. This site is seasonally flooded and trails may be underwater in early spring.
- **Gray's Bay Dam** (16501 Gray's Bay Blvd.) has a massive wetland and shoreline plantings flanking the headwaters and upper stretch of Minnehaha Creek.
- **Whited Fen** (Whited Ave., just south of Excelsior Blvd.) is a rare "floating mat" wetland that is being restored by Nine Mile Creek Watershed District.



Photos by Christine Petersen and Nine Mile Creek Watershed District

# At risk

The way we use land changes over time - but most uses impact wetlands in some way.

## HABITAT LOSS

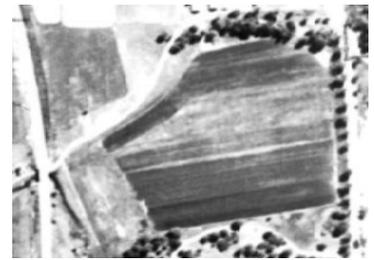
Historically, farmers drained or filled wetlands to grow crops in the rich soil. This aerial photograph of Minnetonka from 1940 provides a good example.

## EVERY CURB IS A SHORELINE

Farmland was gradually developed, creating extensive roadways, parking lots, sidewalks and rooftops that don't absorb water. Stormwater runoff flows over these hard surfaces, picking up road salt, pet waste, fertilizers, leaves and grass, sediment and other pollutants that wind up in local wetlands, streams or lakes.

## INVASIVE SPECIES

Many plants and animals have been introduced from other parts of the world. Some take hold and become invasive, outcompeting native species and changing how habitats work. Purple loosestrife is a worrisome example in wetlands. This Eurasian plant forms dense, woody clumps that can choke wetlands and doesn't support pollinators or wildlife as native wetland flowers do.



# We can make a difference

Good planning can help us reduce these impacts, and wetland protection has become a priority for local, state and federal governments. Here in Minnetonka, city staff work with other agencies to identify, restore and protect wetlands on public and private property.

Wetlands aren't always easy to find in an urban landscape, but it's worth the effort. Identifying them may involve tracking down past weather data, historical documents, maps, photos and more to determine where wetlands would naturally occur, how they have been altered, and which might be restored to regain their benefits.

Here are some ways to find and care for wetlands on your property:

- Even if you don't see standing water, identify parts of your yard where turf-grass doesn't thrive or creeping Charlie has taken hold. These might be former wetland soils.
- Use a simple test: Jump! Wetland soils feel springy under your feet.
- Consider installing native plants that thrive in damp and variable conditions (such as the raingarden pictured here). They'll need less maintenance overall - and they'll attract plenty of pollinators and wildlife.
- Wetland habitats are protected under both city ordinance and state law. Ask about wetland regulations before undertaking construction or major landscaping projects on your property if you suspect you have a wetland. Contact Natural Resources staff for more information at 952-988-8400.

