

Freshwater Wetland Ecosystems

Information Sheet

Environmental Protection and Stewardship

What are Wetlands?

In the simplest terms, wetlands contain land that is wet. There are many types of freshwater wetlands including, swamps, marshes, bogs, fens, seeps, and vernal ponds. Some wetlands are covered in shallow water year-round, whereas others are only wet for a few months of the year. The main distinguishing features of wetlands are water-loving plants and vegetation, and soil formed under low-oxygen conditions.

Where are wetlands?

Many of the wetlands that once existed in the capital region have been lost to development, however a few remain and can be visited:

- Rithet's Bog, once used for a variety of agricultural purposes, is now protected as a Saanich park.
- Quick's Bottom Park, in the Colquitz watershed, encompasses 19 hectares of wetlands.
- Swan Lake Nature Sanctuary includes the lake and adjacent wetlands, and has an interpretive centre and trails.
- Blenkinsop Lake can be viewed from a bridge that forms part of the Lochside Regional Trail.
- Panama Flats, a former farmland in the Colquitz watershed now provides important wetland habitat and flood control.



Wetlands are sometimes referred to as “nurseries” because so many animals begin their lives within them.



Importance of wetlands.

Wetlands are powerhouses of energy and life. They are among the most highly productive ecosystems on Earth. The food webs of wetlands nourish terrestrial and aquatic organisms and connect many other ecosystems. Wetlands provide many essential environmental services such as:

- **Habitat and shelter.** Wetlands provide food and shelter for plants, animals and microbes.
- **Regulating water flow.** Wetlands act like sponges that soak up rainwater in the wet season, and slowly release it in the dry season.
- **Improving water quality.** Wetlands filter the water that flows through them. Microbes break down contaminants, plant roots trap sediment, reducing excess nutrients such as nitrates and phosphates.
- **Capturing carbon.** Wetlands store carbon in living plants and decomposed plant matter such as peat, helping to reduce the effects of climate change.

Wetlands support biodiversity.

Wetlands are home to an enormous variety of plants and animals. Wetland plants are able to flourish in wet soils and tolerate flooding. Plant species will differ based on specific water levels and flow, geology and acidity of a site. Some common wetland plants include:

- Trees like red alder and Western red cedar;
- Cattails, bulrush, skunk cabbage, horsetails and yellow pond lilies;
- Bog-based plants like *Sphagnum* peat mosses, white bog orchid, bunchberry and Labrador tea;
- Fen-based plants including sedges, St. John's wort, and buckbean.

Almost all wildlife, directly or indirectly, relies on wetlands. Some examples of animals most closely associated with wetlands include:

- Birds, including ducks, great blue heron, osprey, owls, kingfishers, and red-winged blackbirds;
- Reptiles and amphibians, turtles, snakes, frogs, newts, toads, and salamanders;
- Mammals, such as bats, mice, muskrats, mink, river otters, beavers, deer and bear, which live or hunt and graze in wetlands;
- Fish, including juvenile Pacific salmon and cutthroat trout, which use wetlands before migrating to saltwater;
- Invertebrates, including worms, snails, slugs and insects.

Threats to Wetlands.

Wetlands were long considered to be worthless landscapes, full of undesirable pests, unsuitable for building on or developing, and useful only if filled in and converted to “practical” land uses. Consequently, a great many wetlands have been mistreated and destroyed. Today’s wetlands continue to face numerous threats such as:

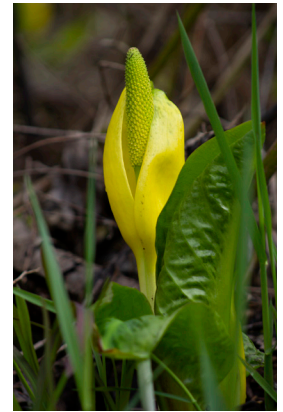
- **Habitat destruction.** Whether through removal of vegetation, construction of roads or buildings, or trampling, habitat destruction remains a key threat to wetlands.
- **Altered hydrology or flow of water.** Changes to the water balance due to drought, climate change, or stream diversion will impact wetland ecosystems.
- **Invasive species.** Invasive plants or animals compete with native species and change the ecosystem balance in wetlands.



Mallards and introduced red-eared slider turtles.



Red-winged blackbird



Skunk cabbage

We all have a role to play in protecting the environment.

There are simple ways you can help wetlands:

1. Learn about wetland ecosystems and how to recognize them.
 - Go on a nature tour.
 - Join a bird watching or native plant group.
2. Visit and enjoy wetlands.
 - Stay on designated paths or trails.
 - Keep pets under control.
 - Pack out any waste.
3. Take Action.
 - Join a local community stewardship group and help with invasive plant removal, restoration activities, or other community events.
 - Garden with native plants to support local biodiversity.
 - If you own property that contains a wetland, consider options to help protect and preserve it.

Visit crd.bc.ca/biodiversity for more resources.

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Making a difference...together