

Wetlands

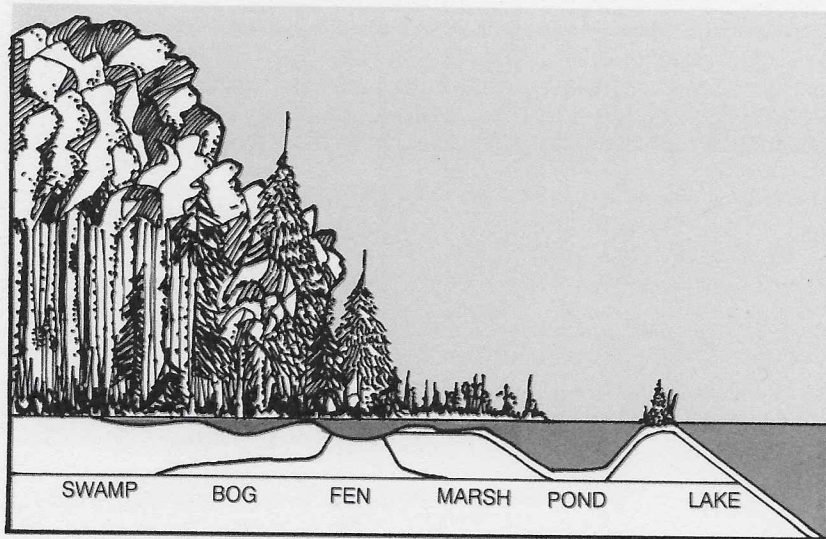
WEBBED FEET NOT REQUIRED

WHAT IN THE WORLD IS A WETLAND?

Some people say that wetlands are areas too wet to be considered land but not wet enough to be lakes. They are areas where the land is saturated with water long enough to have poorly drained soils. Wetlands also have water-loving plants and biological processes suited to wet areas.

There are many different types of wetlands in Alberta (See **Wetland Words**). Each type has certain kinds of plants and animals that live there. Most of Alberta's wetlands (93%) are bogs and fens. Although these are mostly found in the northern part of the province they extend as far south as Edmonton and Rocky Mountain House. Sloughs or marshes can be found throughout the province but are most common in central and southern Alberta.

Many wetlands, particularly *bogs* and *fens*, build up a supply of peat. Peat is a build up of partially rotted plants that grow in wet conditions. Peat is mostly made up of mosses, but also of sedges, rushes or grasses. One type, made up of Sphagnum moss, is called *peat moss*. Over the years, tonnes of peat are produced and it is gradually compacted by the weight of the new growth on top. Since plants die at a faster rate than they decompose, the decaying material builds up and forms peat. In bogs, the decay process is slowed down by wet ground, a lack of oxygen, colder temperatures and the acidic conditions.



Action In The Wetlands

Because wetlands are so rich in resources, there can be a great deal of human activity there. Some examples are hay cropping on the margins of wetlands, trapping, fishing, timber and wild rice harvesting, and peat mining.

Peat mining is the digging up of peat from wetlands. Peat accumulates very slowly, only renewing itself over a long period of time. Therefore, if peat is extracted in large amounts and the living surface is destroyed, it will not continue to renew itself. If extraction is done carefully, peat harvesting can be a sustainable activity.

Peat can be used to improve soil for gardening. Another use for peat is to burn it for fuel. There are two ways peat is harvested in Alberta. Both methods require the area to be drained to allow the peat moss to dry out. Some harvesters use a backhoe to remove the peat. Larger operations use a machine that vacuums up the dry peat (see poster front).

Wetlands can bring both costs and benefits to agriculture. The native grasses and sedges found in and around wetlands may be grazed by cattle or cut for hay. Prairie wetlands are also valuable for reducing erosion, increasing moisture in the soil and supplying water both for livestock and human use.

Wetlands can also be a hindrance to agriculture. They may result in less available land for crops and water-logged crops after rain storms. On the other hand, drainage of wetlands can make more land available for crops. It also allows earlier access to the land in the spring when the snow melts.

The most extensive use of land in the northern third of the province is from forestry. If a wetland has to be disturbed because of forestry operations, the forest company will require an approval.

Wild *rice* is a growing renewable resource industry in Alberta. In 1989, more than 45,555 kilograms of wild rice was harvested. Wild rice is grown in shallow water often found around the edges of wetlands and lakes.

Other plant and animal species are collected from wetlands for scientific study and medical supplies. Wetlands even contribute to art and culture. Willows are used for furniture and baskets, birch bark for some canoes and photographs, and paintings of wetlands hang in many places.

As water flows into fens, calcium may be deposited in the bottom sediment. This is called marl. It is mined out of some of these fens and used as cement. This is most common in the mountains but can also be found and mined in other parts of Alberta (near Edmonton).