

Grassland Stewardship

A grassland is a very diverse landscape, including grassy areas, shrubby areas, open forests, wetlands, and stream corridors. This variety of habitats is able to provide food, water, and shelter to a great number of plant and animal species. The grasslands of British Columbia are one of the most threatened habitats in Canada. Grasslands make up only 0.8% of the land base in the province, but almost $\frac{3}{4}$ of BC's grasslands are held in private ownership.

These areas of BC are unique in Canada, and dominated by plant species seldom found east of the Rocky Mountains. The mix of plant species found in BC grasslands is also different to those in similar areas of Oregon and Washington.

Traditionally, First Nations have used grasslands extensively for hunting, plant gathering, travel, and settlement areas. Today, grasslands are utilized for wildlife habitat, settlements, ranching, agriculture, recreation, and hunting for wild game. Elk, mule deer, and white-tailed deer all use the grassland of BC as winter range, while bighorn sheep forage on the south-facing slopes. The tall cover provided by grasses and shrubs creates important nesting and

shelter areas for birds and other small animals.

Of the species on BC's Threatened or Endangered List, more than 25% are closely associated with grasslands. As of 1992, less than 2% of BC grasslands were protected. Some of the species at risk that are found in grasslands include badger, Rocky Mountain bighorn sheep, Lewis' woodpecker, bobolink, long-billed curlew, prairie falcon, turkey vulture, rubber boa, Townsend's big-eared bat, and sharp-tailed grouse.

Historically, grasslands were modified by fire on an average cycle of every 5-20 years. Today, fire suppression has allowed Ponderosa Pine and Douglas Fir trees to regenerate unchecked. This filling-in of open forests is called *in-growth*. The lack of fire also allows forests to spread into grassland sites, a process called *encroachment*. Both of these processes reduce the diversity of the habitat and plants such as rough fescue and saskatoon are replaced by pinegrass.



Is Your Grassland Healthy?

Answer the following questions to get a picture of the health the grassland areas on your property.

Conifer trees are well-spaced and no "dog-hair" thickets are present.	Y	N
No bare ground is present.	Y	N
Native bunchgrasses dominant the grassland.	Y	N
No noxious weeds are present.	Y	N

If you answered "no" to one or more of these questions, your grassland may be at risk. Learning about potential problems is the first step, now is the time to make positive change on your property.

Threats to Grasslands

Many aspects of human behavior have damaged or currently threaten grassland habitat. Relatively little of the province is grassland, and at the rate it is being lost, grasslands in BC are more endangered than old-growth forests.

In-growth & Encroachment

Fire suppression in fire-maintained ecosystems allows numerous conifer seedlings, usually Douglas-fir, to become established in open forests. This filling-in of open forests is called in-growth. The lack of fire also allows forests to spread into previously open grassland sites, a process called encroachment. Both of these processes reduce the amount and quality of forage available for deer, elk, and cattle.

Removing ingrowth can be a difficult and time consuming process. While it is not recommended that landowners use fire to control ingrowth on their properties, hand-clearing of thick patches of small or mid-sized trees can be very effective.

Agricultural Conversion

Many hectares of native grassland have been converted into cropland, permanently altering the ecosystem and reducing the amount of land available to support native plants and animals.

Landscape Development

A large proportion of our grasslands have been converted or fragmented by the spread of human habitation and support structure such as roads,

pipelines, power lines, and recreational areas.

Noxious Weeds

More than 20 plant species, some poisonous to humans, livestock, and wildlife, have been declared 'noxious' due to their invasive nature. Because these plants have no native predators, they are able to out-compete native plant species and will severely impact the biodiversity and productivity of an area.

Over-grazing

Forage found in grasslands is an essential food source for many

species of wildlife, and grasses have adapted to light grazing. Humans have added grazing by cattle and other livestock to the pressures on the ecosystem. Poorly managed grazing can seriously degrade the resource, reducing both the quality and quantity of forage, and allowing for take-over by undesirable species.

Grasslands, like forests, have a 'succession' of growth. To recover from disturbance they also go through cycles of dominance until they reach an 'old growth' community. A natural regeneration of forest recovering from a burn is a good example of the detail that goes into creating a healthy ecosystem. First, hardy plants adapted to disturbed conditions establish. These first plants to emerge (preliminary succession) are typically mosses, lichens and small ground cover plants. Plants like fireweed and other forbes establish next. These plants continue to grow and die, becoming part of a new soil layer. As generations of plants establish and re-establish, they help generate rich soils and create stable and long lasting seed banks. In a forest ecosystem this process takes hundreds of years. Even for grasslands, which seem simple in comparison, it is now suggest it can take fifty years or more to reach a mature community after major disturbance. As well, unless the majority of surrounding grassland areas are pristine, new plant communities often loose sensitive species that are rare in surrounding distribution.

