

WATER BODIES, NATURAL AREAS AND BIODIVERSITY

Why should you be concerned?

Water bodies and natural areas are valuable parts of Manitoba's agricultural landscape. These areas include wetlands and riparian areas, woodlands and native prairie grasslands. These areas often provide valuable agricultural resources such as water and forage as well as diversification opportunities such as small-scale timber harvest from woodlands. They help to clean and filter water thereby providing clean water for us and our livestock. These areas also provide much of the food, protective and thermal cover and water resources that are necessary for fish and wildlife to flourish. In addition, they are important for plant and animal diversity. Some plants, like big bluestem, may be important for high quality hay, while others, like the western prairie fringed orchid, may be valued for ecological reasons.

Since rare and endangered species may occur on your land, it's important to understand both the legislation aimed at protecting these species and the associated management issues. If rare and endangered species are found on your land, then you are probably doing the right thing. Your land use practices are helping rare and endangered species live.

Water bodies

For the purpose of this chapter, water bodies include any body of naturally flowing or standing water. Wetlands and riparian areas are also included.

Wetlands, including marshes, swamps, fens and bogs, may be large or small in area. These areas are all important for wildlife and water management. Waterfowl often use these areas for nesting or staging.

Wetlands filter water, help to minimize flooding in the lower parts of watersheds, contribute to the conservation and recharge of groundwater supplies as well as provide valuable wildlife habitat. Wetlands can continue to perform these functions adequately if some management considerations are given such as; harvesting wetland plant material at a later time in the year to allow hatching of waterfowl eggs, avoiding drainage of these areas and disallowing livestock to water directly from the wetland.

Between the water's edge and the drier upland terraces, is a flood prone part of the landscape rich in vegetation as a result of abundant moisture. This is the riparian area. These areas are important for the health of rivers, streams, lakes and wetlands as well as for the maintenance of downstream water quality. The riparian area acts as a buffer between aquatic and upland ecosystems.

Native vegetation in the riparian area protects the banks or shores from being eroded due to their deep root systems. Vegetation also acts as a filter slowing the water and allowing sediments to be deposited.

Riparian areas are also attractive places for wildlife. These areas provide the basic needs of food, water and shelter. They also act as travel corridors. While riparian areas account for only 3% of Manitoba landscape, as much as 80% of prairie wildlife species will use riparian areas for all or part of their life cycle requirements.

Careful management of riparian areas can enhance overall farm productivity. However, some practices can severely affect the riparian area's ability to provide ecological functions.

Timing of livestock grazing and distribution is important, as continuous or intense grazing will reduce productivity of the riparian area thus reducing the riparian areas' ability to provide ecological functions, including sustaining water quality.

Intense browsing can destroy young trees and shrubs, which are critical to sustaining wooded riparian areas and reducing the effects of erosion. More than 85% of the stream bank vegetation should be trees and important wildlife shrubs such as willows and dogwood. In cultivated areas, removal of native riparian vegetation allows field runoff to enter streams directly and may promote soil salinization.

Natural Areas

For the purposes of this chapter, Natural Areas include both woodlands and native grasslands.

Woodlands (Trees, Shelterbelts, Woodlots and Bush)

Woodlands improve air and soil quality by releasing oxygen to the atmosphere while storing carbon in plants and soil. Trees intercept rain, delay run-off and increase groundwater recharges as well as slow spring snowmelt and reduce flooding. Windbreaks, shelterbelts, fencerows and woodlands all protect land from soil erosion. They also reduce farm energy demands and contribute to livestock productivity by providing shelter from severe weather.

Woodlands provide food, cover and breeding areas for wildlife. Ideally, wooded stands should include a variety of trees, shrubs and flowering plants as well as a range of ages, tree heights and stand densities. Wildlife requires a range of wooded stands connected across the landscape.

Native Grasslands

Manitoba's grasslands have been reduced to less than 25% of their historical level. The remaining native prairie grasslands are vitally important for maintaining populations of many species of wildlife and for preserving biodiversity. Many of Manitoba's threatened and endangered birds rely on native prairie grasslands and many rare plants only occur in grassland habitat.

While habitat loss (through the conversion of native grassland to cropland) is perceived as the prime threat to the survival of grassland wildlife, overgrazing and poor rangeland management also contribute to the loss of suitable habitat.

Sustainable management of grasslands can increase the economic return to the landowner through increased livestock weight gains and can help to provide better quality habitat for wildlife. Prescribed burning can also be an effective tool to enhance native pastures.

Biodiversity

Biodiversity is the number and variety of plant and animal life in a particular habitat. Each plant and animal requires and relies on a combination of habitat characteristics. While some species are uniquely suited to open native prairie, others are adapted to wetlands or dense riparian forests. Ideally, the agricultural landscape includes each habitat type.

Agricultural management can impact plants and animals either positively or negatively. If endangered or threatened species are present on a farm, current agricultural practices already are positive and supportive. Producers can enhance habitat characteristics by making simple modifications to their practices such as using lower density grazing, protecting riparian vegetation, or leaving marginal and sensitive areas in native tree or grass cover.

Biodiversity success will depend on the management of the area and the species present. Generally, practices which work with the natural ecosystem, and use no or low inputs will have the least negative impact. Sustainable management practices will often benefit the wildlife species present and also be more profitable for the landowner.

What can you do?

1. Maintain diverse habitats for wildlife, including a diversity of native plants, heights and patterns.
2. Find out how to manage your woodlands for profit and environmental benefits.
3. Convert marginal or sensitive land from active agricultural production to permanent cover, especially if the area is affecting water quality or is costing you money to maintain production.
4. Protect wetland areas by leaving a buffer strip between the wetland and any cropland, with larger buffers being used on sloping land.
5. Maintain travel corridors for wildlife between natural areas.
6. Harvest renewable resources (plants and animals) in a sustainable way to ensure that healthy populations are maintained.
7. Before draining a wetland consider the impact on fish and wildlife.
8. Provide off stream watering for livestock, to keep them out of the water.
9. Use this worksheet to see how well your wildlife habitat areas are managed.
10. Contact your local GO Office for additional information and support, or other appropriate agricultural extension specialist.

