



Prairie Wetlands Support Species at Risk

Wetlands provide very important habitat to a wide variety of wildlife and several species at risk. There are two types of wetlands, permanent and temporary. Temporary wetlands are called ephemeral wetlands and only hold water in wet years.

In Alberta 64% of wetlands have disappeared, mostly due to draining for crop production. Alberta's remaining wetlands are being impacted by contamination from sediments, pesticides, fertilizers and invasive species. The loss of wetland habitat has been the main reason for the decline of several species at risk. Wetlands are also important for water filtration, flood and stormwater control, shoreline protection and groundwater replenishment. The loss of these services costs Albertans financially and jeopardizes the ecosystem's ability to function properly.

Species at risk that rely on prairie wetlands:



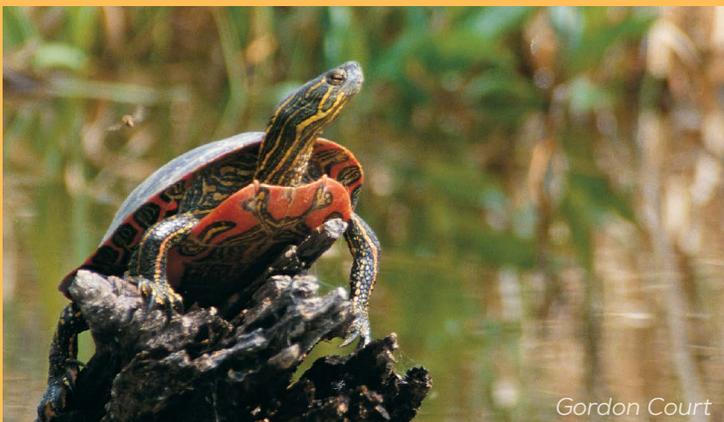
Northern Leopard Frog - At Risk - Threatened

- Disappeared from much of its range since the 1970s.
- Few remaining populations are continuing to experience declines.
- Successful reintroduction at several sites.



Plains Spadefoot Toad - May be at Risk

- Populations are likely stable but highly variable from year to year.
- Susceptible to loss of habitat and pesticide use.



Western Painted Turtle - Sensitive

- Native to the Milk River and Oldman River Watersheds.
- Fewer than 100 individuals remain in the native population in Alberta.
- Several non-native populations exist in other parts of Alberta as a result of released pets.



Great Plains Toad - Sensitive - Special Concern

- Populations difficult to monitor because of yearly variability.
- Vulnerable to habitat loss and pesticide use.

Northern Leopard Frog Life Cycle

April

Emerge from overwintering sites.

Males arrive first at breeding pond and call for females.



Adam Moltzahn

April - late June

Breed during optimal temperatures only.

600 to 7000 eggs are laid in one mass.

Eggs hatch after 5-9 days, longer if cold weather.

Tadpoles disperse after 2-3 days.

July - early August

Tadpoles metamorphose into frogs after 60-90 days.

August - September

Once metamorphosed, frogs become carnivorous. Tadpoles are herbivorous.

Adults move to overwintering sites.

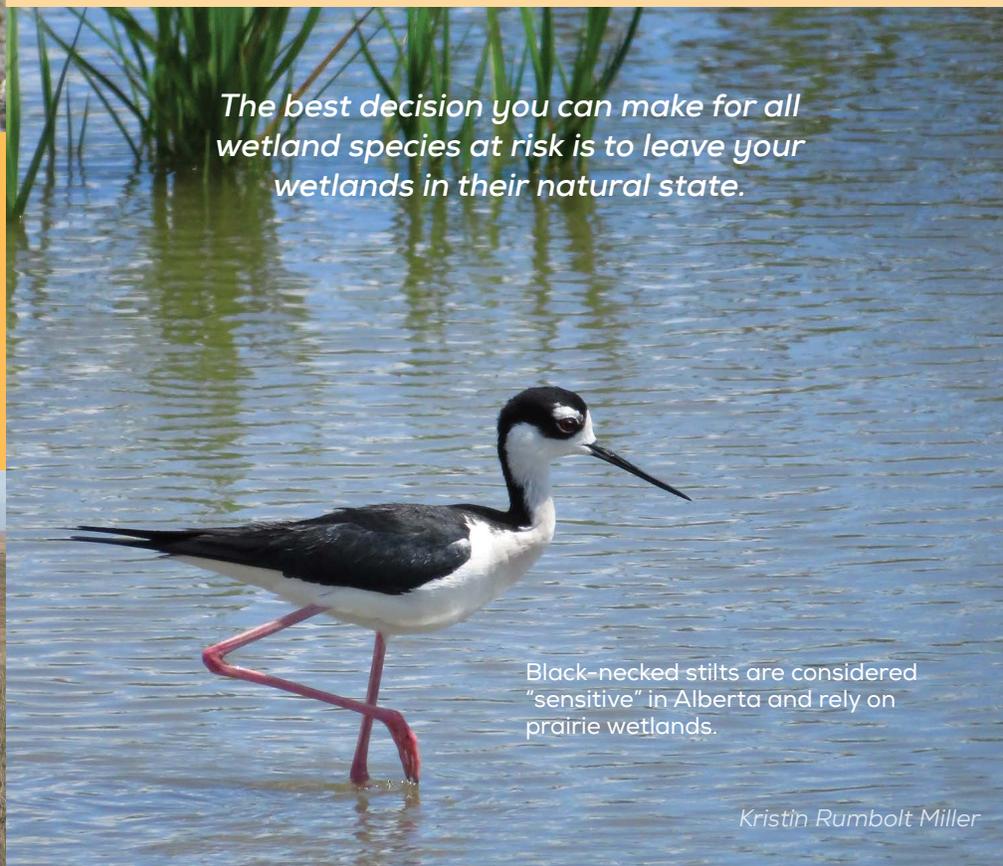


Adam Moltzahn

Prairie wetlands are vital to many other species of wildlife. Shorebirds, such as the black-necked stilt, and waterfowl, such as the Northern pintail, rely on them for nesting, foraging and raising young.

The high insect productivity of prairie wetlands make them important foraging areas for a variety of insectivores such as bats and swallows. Bats also use prairie wetlands as a source of drinking water.

Plains spadefoots and great plains toads live in temporary wetlands (called ephemeral wetlands). They spend most of their time underground, emerging to mate and feed in wet years. When temporary wetlands are tilled these amphibians may be killed and lose their valuable breeding habitat.



The best decision you can make for all wetland species at risk is to leave your wetlands in their natural state.

Black-necked stilts are considered "sensitive" in Alberta and rely on prairie wetlands.



Kristin Rumbolt Miller

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Beneficial Management Practices

for Wetland Species

General

Maintain native prairie and wetlands in their natural state.

Maintain or re-establish natural corridors between native prairie habitat patches and wetlands.

Restore drained wetlands and prevent further drainage of others.

Avoid the creation of dams and reservoirs on natural prairie creeks and rivers.

Leave a minimum 30m buffer of native vegetation around all wetlands. This prevents erosion and improves water quality by filtering out sediments and contaminants.

Avoid using pesticides and chemical fertilizers near known habitat of species at risk. Chemical runoff into wetlands can cause mutation, paralysis and death in amphibians.

Tolerate Richardson's ground squirrels if they are not causing excessive damage. Their burrows are used as refuges by toads.

Watch for amphibians and snakes on roads when near wetland habitats.

Do not introduce game fish into natural wetlands. They eat amphibian eggs and larvae.

Do not release pet turtles into the wild. They can transmit diseases and compete with native species.

Adhere to the Alberta Wetland Policy (www.alberta.ca/alberta-wetland-policy).

Ephemeral Wetlands

Leave them natural and unaltered.

Do not cultivate, even in dry years. This may decrease their ability to hold water in wet years. Also, these areas have poor soils that are not as productive as the surrounding uplands.

Do not convert to permanent water bodies or dig dugouts in them. This decreases their suitability for breeding sites.

Grazed Land

Defer grazing near known toad and frog breeding ponds from late April to mid July. This is an especially sensitive time for breeding and hatching. Also, banks are soft and will be easily trampled and eroded.

Place salt and minerals at least 1km from natural water bodies if possible. This encourages cattle to make better use of the range and reduces the time cattle spend near ponds.

Create variability in the pasture by strategically placing water sources. A range of grass heights is desirable.

Use low to moderate stocking rates in pastures that contain or connect ponds that have these species living in them.

Ensure adequate carry-over and litter. A 25-50% utilization rate is recommended for mixed grass and dry mixed grass prairie. A 40% utilization rate is recommended for fescue grasslands.

When grazing riparian areas use 25-50% utilization rates to ensure vegetative cover remains intact. Allow rest after grazing.

Provide gravelled or hardened surfaces for cattle to access water bodies. Locate these away from toad and frog breeding areas.

In August, leopard frog young emerge from their breeding ponds, so avoid grazing at this time.

Provide alternative watering sites (troughs) to reduce the impact on natural water bodies.

If known breeding ponds are severely damaged fence them out to restore water quality and vegetation. Monitor and allow grazing again once restored. Too much vegetation will impede frog/toad movement.

Modify existing dugouts to create a low shoreline gradient with shallow, marshy edges to attract great plains toads.



Riparian Zones

Riparian zones are the green ribbons of lush plant growth that surround streams, lakes and wetlands. They are transition zones between the water body and the uplands. These wetter areas support unique varieties of plants and animals.

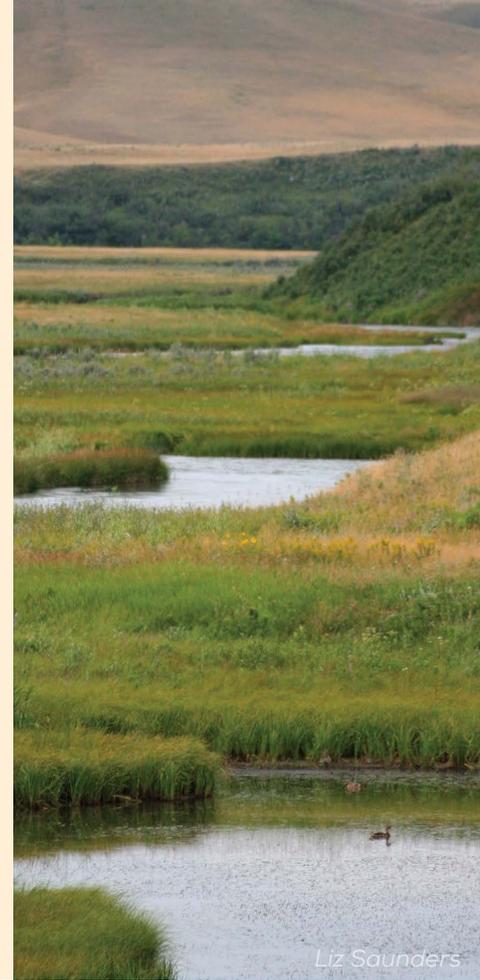
Riparian zones perform these key ecological functions:

- Trap and store sediment
- Build and maintain banks and shorelines
- Store water and energy
- Recharge aquifers
- Filter and buffer water
- Reduce and dissipate energy of the water
- Maintain biodiversity
- Create primary productivity (vegetation growth)

Special attention and management is required to maintain these fragile zones. Cows and Fish is a non-profit organization that specializes in Riparian Health Assessments, a valuable tool used to measure key functions. They work with communities and landholders on riparian and grazing management. You can obtain a workbook, factsheets and advice from them to help you assess your riparian zones.

Contact Cows and Fish Program Manager - (403) 381-5538

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Liz Saunders



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Katheryn Taylor

Healthy riparian zones have several different layers of vegetation cover that protect the soil from erosion and keep the banks from slumping.

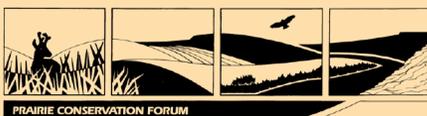
Riparian areas and wetlands provide water filtration, flood and stormwater control, shoreline protection, groundwater replenishment and habitat for species at risk.



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Conserving Alberta's Wild Side



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