

Wildlife Friendly Fences

Fences, like wildlife, are commonplace across the prairie landscape. They signify property boundaries and enclose pastures, but in doing so, they can also act as a hindrance to wildlife movement. Encounters with fences are common as animals move across the landscape. As wildlife attempt to cross fence lines, they may become trapped or entangled, often resulting in injury, death and property damage. Keeping wildlife in mind while constructing or altering fences can help minimize these conflicts, reducing property damage and time spent doing repairs and ensuring safe passage for wildlife.



Animals caught in fences die slow, painful deaths from exposure, starvation and their injuries. The pronghorn on the far left has extreme tears on its back from passing under barbed wire fences. The deer had only one hindfoot caught in the wire but could not free itself.

The Problem

- When confronted with a fence, most adult ungulates (deer, elk, moose) are capable of jumping or traveling over it. However, fences that are too high, have loose or improperly spaced wire, or barbed wire, can entangle these animals resulting in injury or a long, slow death.
- Wildlife may also become trapped by certain types of fences, such as woven wire fences, preventing wildlife from moving from one place to another. These fences may be especially harmful to animals that cannot or are unwilling to jump fences, such as bears, pronghorn, and younger animals like fawns and calves. These animals must travel under or through fences and may get blocked by a woven wire fence or wires that are too low or spaced incorrectly. This is especially dangerous for fawns and calves, which if separated from their mothers and left behind, face certain death.
- Although useful in providing birds with perching sites, fences that are not visible to birds may result in their ensnarement and death. Waterfowl (ducks, geese, swans) may fly into fences that are placed over or near water and birds of prey (owls, hawks, eagles, falcons) may become entangled in low-visibility fences when they swoop down on prey.

Building new wildlife friendly fences:

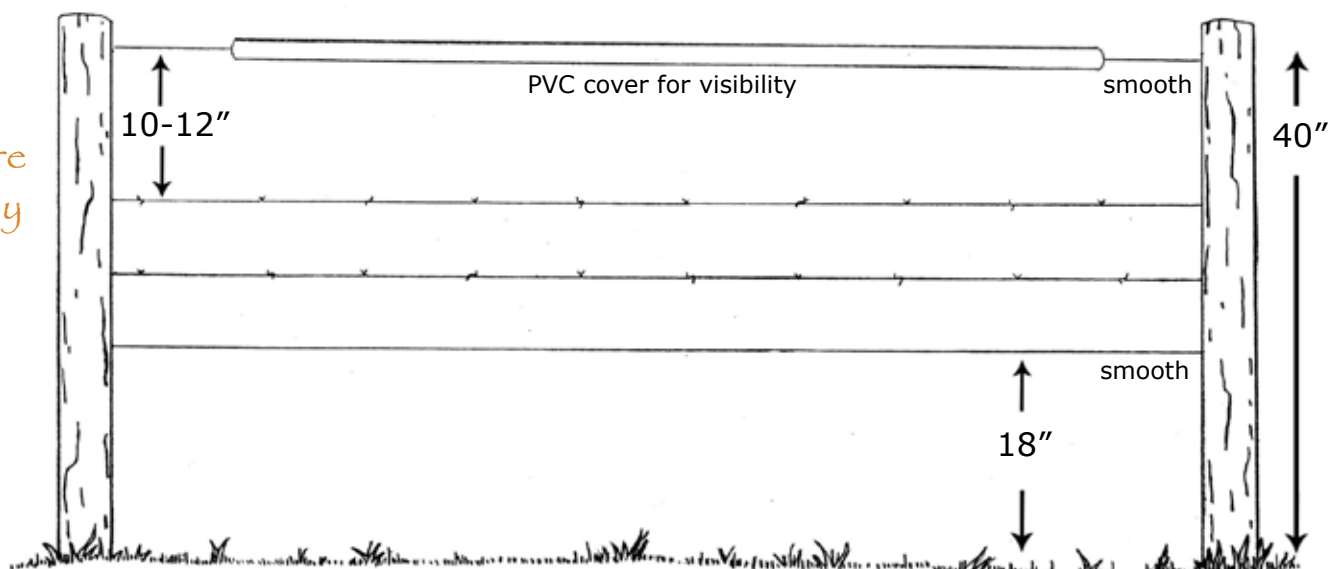
Placement:

- First of all, ask yourself, do I really need a fence? Or would a temporary electric fence meet your needs?
- When planning where to put your fence, consider important wildlife habitat and corridors. Riparian zones, which provide wildlife with food, water and cover, are important for all species of wildlife and animals should be able to move freely to and from these areas as well as up and down river valleys. Some key wildlife habitat areas (riparian zones, treed areas) will benefit from fencing out livestock to better manage grazing and protect the integrity of these areas, but fences should be wildlife friendly to allow the safe passage of animals.
- If possible, avoid placing fences across steep slopes. Fences on slopes actually increase the height that animals must jump to clear the fence.
- Take note of areas that are frequented by wildlife, daily and seasonal wildlife movements and be aware of any game trails or corridors that may be used. Riparian corridors, coulees, draws and ridges are all typically high traffic wildlife areas. Avoid restricting wildlife from water sources.

Construction:

- The top wire of a wildlife friendly fence should be no more than 100 cm (40") from the ground. This is low enough for adult ungulates to jump over.
- The two top wires should be 25-30 cm (10-12") apart and the uppermost wire should be smooth (no barbs). This will reduce the risk of leg entanglement and injury.
- The bottom wire should also be smooth and placed no less than 45 cm (18") from the ground. This will provide pronghorn, calves and fawns with enough room to safely travel under the fence.
- Position fence posts no more than 5 m (16.5') apart. This helps increase visibility.
- Avoid using woven or page wires that do not allow wildlife to pass through the fence.
- Increase fence visibility by using polycoated white wire, adding a top rail or by attaching strips of vinyl siding trim (undersill), a PVC cover or flagging. This is especially important in areas of known high wildlife movement.

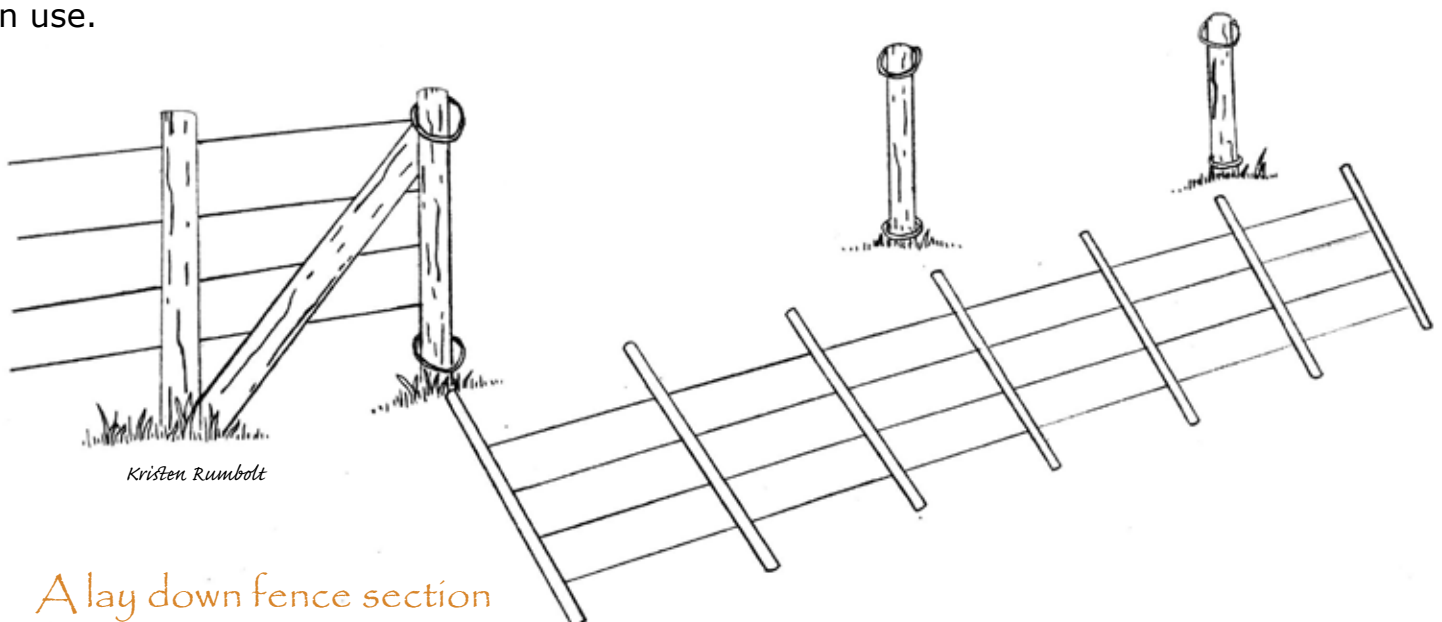
An ideal 4 wire
wildlife friendly
fence



Adjusting existing fences:

Adjusting the entire fence may not always be feasible. Adjusting only short sections in high wildlife traffic areas is a great help to wildlife and reduces your maintenance costs. The list below is in a general order of priority but priority will vary with each farm/ranch.

- Ensure existing wires are tight. Wildlife are more likely to tangle themselves in loose or sagging wires.
- Adjust the top and bottom wire heights to 100 cm (40") and 45 cm (18") respectively.
- Adjust the space between the two top wires to 25-30 cm (10-12"). Wires can be raised or lowered with various fastening mechanisms that are inexpensive and easy to use (hooks, staple locks, clips) or gathered into a PVC pipe (called "goat bars").
- Increase fence visibility. Add a top rail, strips of vinyl siding trim (undersill), a PVC cover or flagging, especially in areas of known high wildlife movement.
- Replace wires, top and bottom wires especially, with smooth wire when possible.
- Reduce the number of wires to 3-4 at most.
- Remove old fences that are no longer used.
- Safely dispose of unused or old wire.
- Leave gates open or lay down sections when pastures are not in use.



A lay down fence section

Left for Dead

An American study of 600 miles of rangeland fence had these key findings:

- On average, one ungulate per year was tangled for every 2.5 miles of fence.
- Most deaths (69% of juveniles and 77% of adults) were caused when the animal caught a leg in the top two wires while trying to jump over.
- 70% of all fence related mortalities are on fences higher than 40".
- 90% of carcasses found were fawns curled up near fences - likely separated from their mothers when they could not cross the fence.
- Woven wire fences topped with barbed wire were the most lethal.

(Harrington, J.L. and M.R. Conover, 2006. Characteristics of ungulate behavior and mortality associated with wire fences. Wildlife Society Bulletin 34 (5) 1295-1305.)

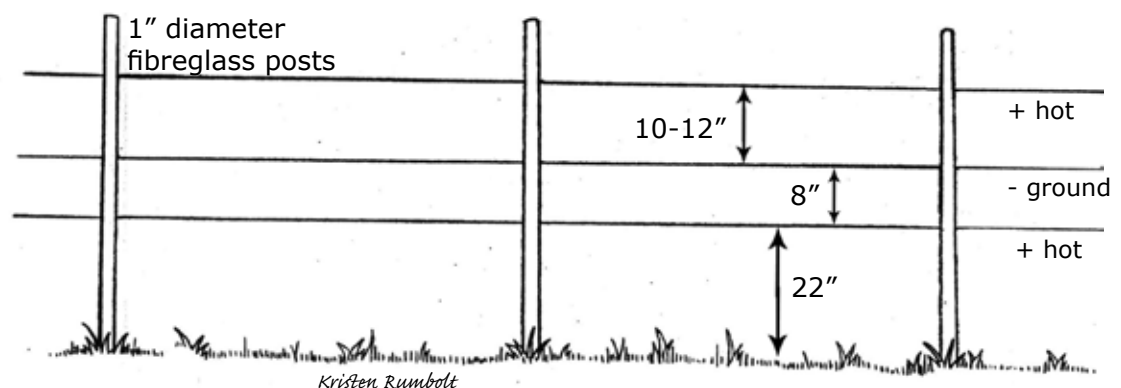
Electric Fences

- Electric fences are a good option for producers needing flexibility and are very wildlife friendly if removed when not in use.
- Study results showed a three wire high-tensile electric fence (hot-ground-hot) is effective for separating bulls from cows, calves from cows and for containing bison.
- Wild ungulates were not deterred by electric fences in the study, even with charges between 0.5-4.5 joules.
- Three wire was found to be just as effective as four wire.
- Pronghorn avoided two wire fences for an unknown reason.
- Other electric fence designs are available, below is one example found to be highly effective for demanding situations.

Construction:

- Use fibre glass posts no greater than 1" in diameter.
- Use wood posts as braces in all corners, at gates and where direction changes more than 15 degrees.
- Use proper insulators with wooden posts.
- Space posts 15m (50') or more apart if stays are used or 15m maximum if no stays are used.
- Space stays at least 9m (30') apart to allow wildlife to cross. Lesser distances may cause twisting.
- Use smooth, 12.5 gauge, class III galvanized wire with tensile strength of 170,000 PSI and breaking strength of 1,308 lbs.
- Increase visibility by using white poly-coated wire as the top wire.
- Place bottom wire 55cm (22") from the ground, second wire 8" from bottom wire and top wire 25-30cm (10-12") above second wire (100cm or 40" off the ground).
- Tighten wires to 150lbs tension. If too tight, wires are likely to break, especially if bent.
- Install solar energizer and grounding rods according to manufacturer's directions. Place rods at fence ends whenever possible.
- Keep fence electrified at all times to prevent wildlife damage, keep batteries from freezing and to prolong battery life.

A 3 wire high-tensile electric fence



Contact:

MULTISAR
2nd Floor, YPM Place, 530 - 8th Street S
Lethbridge, Alberta, T1J 2J8

www.multisar.ca

Fish and Wildlife Division - Program Coordinator
403-381-5318

Alberta Conservation Association Biologist
403-382-4364