

Cultivating Conservation

Keeping Cattle Moving, Keeping Creeks Healthy



How virtual fencing can support ranching and riparian stewardship

On working ranches, managing where cattle graze is an important part of caring for both livestock and the land. Across the Okanagan and Similkameen, ranchers are exploring new tools that help them manage grazing more precisely while protecting sensitive habitats such as creeks, wetlands and riparian areas.

One emerging tool is virtual fencing, sometimes called e-collars. Using GPS-enabled collars and digitally mapped boundaries, ranchers can influence where cattle graze without installing traditional fencing along every boundary. The technology uses audio cues, followed by an electrical stimulus when necessary, to train cattle to respond to virtual boundaries.

While not a replacement for good grazing management, e-collars can offer ranchers greater flexibility in managing livestock movement and reducing pressure on sensitive areas.

Why keep cattle out of riparian areas?

Riparian areas are the green ribbons of vegetation found alongside creeks, rivers and wetlands. In our semi-arid region, they are among the most productive and important habitats on the landscape.

Healthy riparian vegetation does a remarkable amount of work. Deep-rooted willows, shrubs, grasses and other native plants stabilize streambanks, filter sediment, provide shade and help maintain water quality.

When cattle spend extended periods in these areas, trampling and concentrated grazing can damage streambanks, compact soils and reduce vegetation cover. Over time, this can contribute to erosion, warmer water and declining riparian health.





Giving riparian areas room to recover benefits both the ecosystem and the ranch.

The ranching benefits of healthy riparian buffers

- Better water quality: Vegetated buffers help filter sediment and nutrients before they reach waterways.
- More stable streambanks: Deep-rooted native vegetation reduces erosion and helps protect valuable ranchland.
- Improved grazing management: Strategic livestock distribution can reduce pressure on sensitive areas and encourage more balanced forage use.
- Greater drought resilience: Healthy riparian soils and vegetation help retain moisture and support ecosystem function during dry periods.
- Reduced infrastructure challenges: Virtual boundaries may provide flexibility where conventional fencing is difficult to install or maintain.

Nature-based solutions in action

Virtual fencing can be particularly useful where ranchers want to manage seasonal access to riparian areas, protect recovering vegetation or adjust grazing patterns throughout the year.

Unlike permanent fences, virtual boundaries can be moved as management needs change. This may allow ranchers to adapt grazing plans to forage availability, seasonal conditions and habitat protection priorities.

The technology does have limitations. It requires appropriate livestock training, reliable equipment, ongoing monitoring and careful consideration of animal welfare. It is not a physical barrier, and conventional fencing or other management measures may still be necessary where complete livestock exclusion is essential.

Working landscapes, healthy watersheds

Protecting riparian areas doesn't mean removing livestock from the landscape. It means finding ways to manage grazing that maintain productive ranching operations while allowing sensitive habitats to function.

By combining ranchers' knowledge of their land with new management tools and established riparian best practices, we can support healthy cattle, healthy creeks and resilient working landscapes.

For more information on applying nature-based solutions to your farm, visit our website at www.farmstewards.ca

Okanagan Similkameen Stewardship Society