



Grazing at the Water's Edge



Ranchers and agricultural producers are the most important conservationists of riparian areas. Riparian areas are the green buffers next to streams, lakes and wetlands where vegetation is influenced by high water levels. They are high value ecosystems that stabilize streambanks, protect water quality by filtering nutrients and pollutants, regulate water temperature, provide critical wildlife habitat and travel corridors, and help support healthy aquatic habitat.

How to identify a riparian area:

1. Lots of water seasonally or consistently that is close to, or on the surface.
2. The vegetation that is present is associated with high water environments.
3. Soils have been modified by the abundance of water.

From a grazing perspective, wetlands and streams provide year round forage and life-sustaining water to livestock, and in drought years can determine the success of an operation. Waterbodies naturally and cost-effectively store water for

a non-rainy day. There are legal requirements to conserve riparian areas; however, healthy functioning riparian areas are an insurance policy for your business. While cows require a certain quantity of water, the quality of water can influence their performance. Cattle gain more weight when drinking from a convenient, clean water source, with up to 23% more in gains associated with drinking from a water trough than from a dugout. Cattle and other livestock are attracted to riparian areas for not just water, but also forage, shade, and protection from wind.

Strategies that allow livestock access to water while protecting riparian areas and keeping manure out of water provide benefits to wildlife, the ecosystem, and animal health.

The simplest thing that you can do to protect streams and wetlands is to follow the basic principles of range management. This will also improve overall range health and translate to improved animal production and economic return. The four principles of range management are:

1. **Balance animal needs with available forage supply**—Take some but leave lots.
2. **Distribute livestock evenly**—Choose tools from the next page to prevent livestock congregating in sensitive areas.
3. **Avoid or minimize grazing the area during fragile or vulnerable periods**—Be aware of seasonal conditions like increased moisture which make banks more susceptible to pugging, hummocking, and sloughing.
4. **Provide effective rest during the growing season**—Allow plants to increase their root reserves before grazing occurs again.

RIPARIAN MANAGEMENT GUIDELINES FOR AGRICULTURAL PRODUCERS

1. Alter the distribution or congregation of livestock using methods such as salting, riding, drift fencing or herding. The type of livestock can also make a difference. Yearlings tend to disperse themselves naturally more than cow/calf pairs.
2. Like water, livestock will choose the path of least resistance. Create an easy access point to the water or provide an off-stream option that cows will prefer to use, minimizing the disturbance in other areas.
3. Channel the third principle of range management and alter the timing of grazing in pastures with sensitive riparian areas or without alternate methods. Grazing when the stream banks are drier is one option. If shrubs are being heavily utilized, avoid grazing in the fall when they are important sustenance for wildlife.
4. On the fence? Create riparian pastures by fencing the riparian area into a separate pasture, with separate management objectives and strategies. Or use exclusion fencing in extreme situations to completely rest an area.

Pugging: Animal tracks left in soft soils that leave an uneven surface.

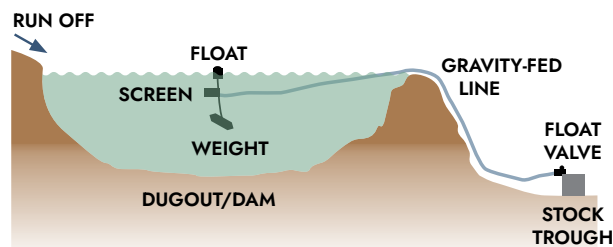
Hummocking: Raised mounds of soil resulting from animal overuse of soft soils.

On the right track? Use an assessment form to get a feel for the riparian health on your range. If changes are required, assess again 2-3 years after making adjustments. For more information on monitoring, go to tnccollaborative.org/bmp-grazing/#monitoring



CONCRETE SOLUTIONS

Some new and old technology can assist you in your riparian management goals. The following are some common improvements used in the Thompson-Nicola region.



Gravity-fed water trough: Long before electricity, there was gravity. Gravity-fed water troughs can work in the right conditions as long as you have an uphill water source, good piping and a float valve. Once this system is properly set up it never needs to be refilled and never freezes.



Vermilion River Watershed Alliance

Solar-powered water pump: This uses a regular pump with an electric motor to pump water from one location to another. Electricity is generated on-site through a solar panel. Variations of this can include a battery to store power when the sun is not powerful enough to power the pump.



Nose pumps: Livestock pump their own drinking water with a mechanical piston pump from a shallow well. This device can be used year round as it does not freeze (as long as the lines are buried).

Geogrid/geosynthetics:

These are polymer synthetic materials or grids that can be used in conjunction with gravel to stabilize the ground around a wetland or pond and prevent muddy conditions. In addition to the improved health of the pond this will prevent cattle from getting stuck and perishing in the mud, an unfortunately common problem on the range.



Purdue Extension, Phil Reid



Nose ins: This is a corridor fence along a stream that has the fence notched in a v formation to allow cattle to access water without entering it.

Electric fencing:

Electric fencing can provide temporary, transportable fencing options to exclude cattle from small areas. New technology such as the Range Ward electric fencing unit makes setting up and powering the electric fence unit more convenient than it has been in the past.



National Center for Appropriate Technology (NCAT)



Fairfield Soil & Water Conservation District

Engagement with industry projects: If you have a grazing tenure on public land it is likely that you share your range with multiple industries carrying out different projects. Stakeholders are usually required to consult with other land users and you can use this to your advantage to integrate range use into initial project design. For example, while stream crossings are being installed, laying a gravel apron for five metres upstream of the culvert would provide cattle with an accessible drinking point and eliminate pugging and erosion of the stream bank.

Any of these methods that you chose will require some investment of money, labour and management. These changes however will lead to some improvement in production and there's a good chance you will be eligible for funding to support the project of your choice or receive tax credits for conserving riparian values. Check out tncollaborative.org/resources for more information on the funding and support available.

Looking for more information? Contact or visit:

- AgriService BC
Telephone: 1 888 221-7141
Email: AgriServiceBC@gov.bc.ca
- An Environmental Farm Plan Advisor or your local Range Agrologist:
iafbc.ca/environmental-farm-plan
- Farmland-Riparian Interface Stewardship Program:
cattlemen.bc.ca/frisp.htm
- BC Forage Council: bcforagecouncil.ca
- Canadian Forage and Grassland Association, Advanced Grazing Systems: canadianfga.ca/en/projects-projects/advanced-grazing-systems

