



Caring for the Green Zone

Volume 9 Winter 2021

[View this email in your browser](#)



Happy New Year!!

We wish you all a peaceful and healthy 2021!

In This Issue

- [A New Year, A New Opportunity](#)
- [A Field-worker's Guide to Surviving the Pandemic](#)
- [Shifting From Baseline](#)
- [Painting Trees to Deter Beavers](#)
- [Growing Restoration](#)
- [Following Up from Past Investments](#)
- [Upcoming Events](#)

[Click here](#) for a download of all articles.

Did you know...?

Albertans care about riparian areas in the eastern slopes.



According to our [recent survey](#):

>80% said protecting water & riparian areas for human use & habitat is important to them!



2/3 are concerned about impacts recreational activities have on riparian areas.



Caring for the Green Zone

Cows
and
Fish

A New Year, a New Opportunity

By Amy McLeod

On the western edge of Alberta, a rocky border rises with a crescendo of snow-capped peaks. Clean, cold waters born from glacier and snow flow eastward carving their way through rocky slopes, soaking forested valleys, bathing rolling foothills, and quenching wind-swept prairies. These headwater streams sustain forests and grasslands, providing drinking water, forage for livestock, irrigation for food production, and critical habitat for fish and wildlife.



Our actions mark the landscape and what happens on the land is reflected in the water. Multiple land uses, such as mining, logging, oil and gas, agriculture, and recreation, are putting pressure on our headwaters. Like scars - reminders of risky decisions, lapses of attention, or overindulgence - the human story is written across the landscape. Decisions leave marks that can tell of explorations, adventure, and new opportunity but, without care and time for healing, can convey carelessness, expose excess, and foretell failure.

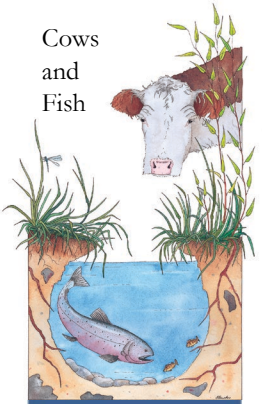
With a new year, comes new opportunity. Where land and water connect, there is an opportunity to connect our choices with the impacts on the world around us. Connecting land and water, riparian areas, when intact, help mitigate the impact of land use on water quality and protect the land from the erosive force of water. Riparian areas are a living, breathing network of life-supporting processes, the sum of which is greater than any one part, and a reminder that strength and resilience come from working together. This network of relationships is critical for the health of our headwaters and humans are part of the network. We all have an opportunity to leave our mark – What mark do you want to leave?

Conserving and improving riparian areas in the eastern slopes is critical for drought and flood resiliency, the security of Alberta's drinking water, and survival for many species, such as native trout. These areas are also critical for livestock forage, recreation and spiritual renewal. With the support of Alberta Environment and Parks and our other members and

Volume 9 Winter 2021

Caring for the Green Zone

Cows
and
Fish



Cows and Fish

supporters, Cows and Fish is increasing our focus on stewardship of riparian areas within the Eastern Slopes. The Eastern Slopes of Alberta's Rocky Mountains stretches from just south of Grande Prairie to the Montana border and east from the B.C. border past Hwy 22 and Hwy 43. We are working with landowners and land users to build local teams to take action on the ground.

Support to maintain and enhance riparian areas throughout the eastern slopes is available. **Check out** our [East slopes project page](#) for more information and connect with us to get involved. Together our actions can make a difference.

Cows and Fish has expanded our team to increase support for action in the eastern slopes. Reach out to your local Riparian Specialist or [contact us](#) through our website.

Angie Quist is a Riparian Specialist in Rocky Mountain House. Her work experience includes environmental consulting for industry, ecology work with Alberta Parks, and international ecological restoration volunteer work. Angie brings her passion for restoring ecological systems to her work with Cows and Fish promoting sustainable land use and restoration of our riparian areas in Alberta's headwaters.



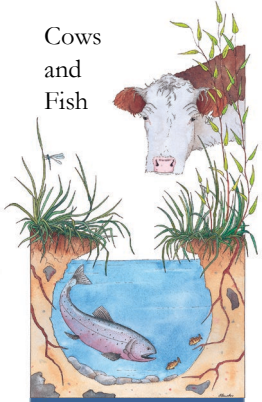
Jonathan Fearn is a Riparian Specialist located in Calgary. His past work experience includes spawning and raising trout, Public Lands management, and contract management with the Alberta Government. Jon loves to advocate for riparian stewardship through leading volunteer work, contract coordination and "walk and talks".

Erik Cline is a Riparian Specialist based out of Lethbridge. Erik brings a diverse background to the team with his 9 years of aquatic environmental consulting experience and stints with the Provincial Government and in academia. Erik is fond of collaboration and public engagement and looks forward to bringing his passion for helping others to his position at Cows and Fish.



Caring for the Green Zone

Cows
and
Fish



Cows and Fish

A Field-worker's Guide to Surviving the Pandemic

By Tonya Lwiwski

Like many other organizations, COVID-19 brought uncertainty to the Cows and Fish program in 2020. As we were all working from our makeshift home offices in early spring, adapting to many different online platforms ("Oh, this meeting was scheduled on Zoom? Sorry, I've been in the Microsoft Teams waiting room..."), we were unsure what our summer field season would, or could, look like. Typically, our field season includes in person meetings with landowners and partners, our field crew "extraordinaire" travelling around the province conducting riparian health surveys, and working with partners, hosting events to connect with people on all things riparian. COVID resulted in us having to rethink everything about how we get to the field, do our fieldwork, and meet with people.



Besides juggling options and finding acceptable accommodation for our hard-working field crew when many campgrounds or dorms were closed, we also had to pivot our plans for training new field staff. We usually set aside two to three weeks for an intensive training process, a good portion of which is in the field. Much of the training also focusses on plant identification, which often necessitates being in each other's personal space while trying to point out tiny features on delicate plants. None of these tasks are easily replaced by online learning.

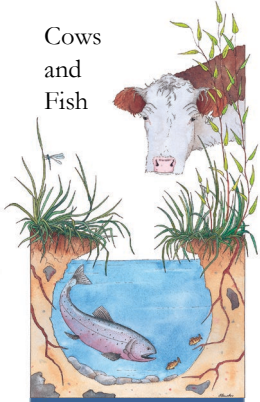
Another obstacle that we were unsure about was whether we would be able to safely meet with landowners, one of the early steps in the Riparian Health Inventory process. During these meetings, we collect important management information, and, if desired, discuss site-specific management options that may benefit their riparian areas. Learning from folks about different aspects of ranching and farming, and their motivations for wanting to improve their riparian health is generally a highlight of our summer.



Volume 9 Winter 2021

Caring for the Green Zone

Cows
and
Fish



Cows and Fish

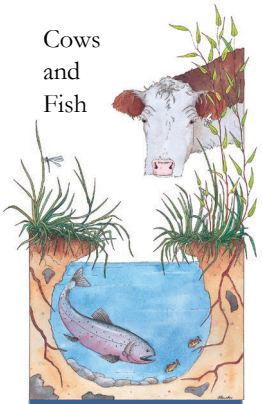
In the end, through lots of hard work from our safety committee and our dedicated board of directors, we came up with ways to make it work. We were still able to meet with landowners – just as long as we were outside and maintained proper social distancing. We managed to create innovative ways to teach our methods to our field staff through online platforms, which was then complemented by a modified outdoor training week – held in smaller regional groups to allow for distancing while learning. As COVID restrictions eased, campgrounds gradually opened up, alleviating the accommodation crunch, just in the nick of time. In the end, we were able to assess 170 riparian sites across the province and were even able to hold 8 outdoor COVID-safe extension events.

Despite all the uncertainty, we count ourselves as lucky to be able to continue our work in such uncertain times. After this summer, our field staff added a few additional skills to their already long list: the ability to identify hand sanitizer brands by smell; sipping beverages through a straw while also wearing a mask; and a sixth sense for knowing which washrooms will be open! We really appreciated how partners and landowners adjusted with us as protocols changed, and we look forward to seeing you in the field soon!



Caring for the Green Zone

Cows
and
Fish



Cows and Fish

Shifting from Baseline

Monitoring Riparian Health on Agricultural Stewardship Project Sites

By Kelsey Spicer-Rawe

Riparian areas, next to streams and wetlands, produce ecosystem services, like fish and wildlife habitat, improved water quality, and stable water quantity on the landscape. Healthy riparian areas produce these ecosystem services better than unhealthy sites. Monitoring riparian health over time, especially on sites where projects like fencing, grazing management or alternative livestock watering have been implemented, helps us to better understand how the provision of ecosystem services might shift as these areas respond to management changes. In 2019, Cows and Fish partnered with Red Deer County to monitor trends in riparian health on 13 ALUS (Alternative Land Use Services) project sites. This project was funded by the Canadian Agricultural Partnership and supported by the participating landowners within Red Deer County.



There are over 150 ALUS sites in Red Deer County producing ecosystem services.

A cumulative total of **6.5 km of stream or shore length** and **32 ha of riparian area** was assessed.

Riparian health inventories were completed on 13 sites in 2015 and again in 2019. Twelve landowners voluntarily participated in the project, all having an ALUS project they implemented in 2015. The projects included the following, with some projects having more than one management change (e.g. exclusion fencing and alternative livestock watering):

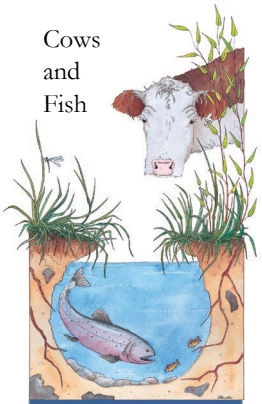
- alternative livestock watering (9 sites)
- exclusion fencing (6 sites)
- riparian pasture (2 sites)
- rotational/time controlled grazing (4 sites)
- increase buffer between crop & riparian area (2 sites)
- planting native trees/shrubs (1 site)

What Did We Find?

In a nutshell, riparian health improved, which supports the idea that these stewardship projects are aiding the recovery of riparian sites. The average riparian health score for the 13 sites in 2019 was 77% as compared to 69% in 2015, and in both years rated *healthy but with problems*.

Caring for the Green Zone

Cows
and
Fish



Cows and Fish

The average score of the 13 sites combined improved by 8%, with one site improving 40%. Not all sites improved; two sites declined in health by 6%, which is only just above the required 5% value to indicate a significant change.

- All **unhealthy** sites improved.
- Most **healthy** sites stayed *healthy* or decreased very slightly
- All **healthy with problems** sites improved or remained static.

2015 – Wetland in Red Deer County before an ALUS project was implemented.



2019 – Wetland showing improved riparian health after 3 years of sustainable grazing and alternative livestock watering.



How Do the Shifts in Riparian Health Link to Management?

- Riparian health improved at sites where grazing continued, as well as where complete rest from livestock use was provided.
- Alternative livestock water development was common to all sites that showed improvements to riparian health.

The work in Red Deer County demonstrates the Cows and Fish riparian health inventory tool can be used to verify continuous improvement by farmers and ranchers. It shows that agricultural stewards who implement projects, like fencing or alternative livestock watering, have positive impacts on riparian health and thus ecosystem services, including improved erosion control, water quality, flood mitigation, pollinator support, carbon sequestration and wildlife habitat. The ALUS program invests in farmers and ranchers who are producing ecosystem services and we are proud to partner with both ALUS and Red Deer County on this continuing project.

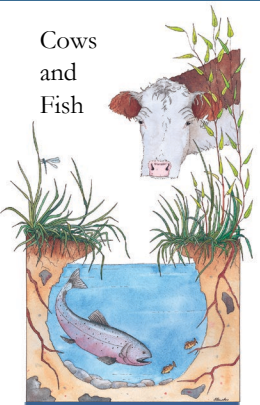


Red Deer County Check out Red Deer County's website for more information:

<https://www.rdcountry.ca/207/Conservation>

Caring for the Green Zone

Cows
and
Fish



Cows and Fish

Painting Trees to Deter Beavers

by Tonya Lwiwski

Have you ever enjoyed a picnic at the beach, only to find that the wind blew sand into your sandwich? That unpleasant feeling of grit on teeth is the idea behind the newest form of beaver co-existence and management tool being used in Fish Creek Provincial Park, in Calgary. The Friends of Fish Creek, with the help of Cows and Fish staff and Miistakis, set up a demonstration site in an aspen grove by painting the trees with sand. Yes, you read that right – we mixed coarse sand with an everyday latex paint and spread the mixture on the trunks of the trees to deter persistent beavers from taking down all the delectable trees right beside a busy pathway. If successful, this method could be one more tool in the toolbox for land managers dealing with beaver conflicts. So far, the beavers seem to have avoided more of the gritty trees and selected more unpainted trees to chew, but it is too early to tell how successful the project will be in the long-term. This project is part of our “Putting Beavers to Work” collaborative with Miistakis Institute.

For more information and project updates please visit <https://www.rockies.ca/beavers>



The paint was chosen to match the colour of the aspen, so it is almost undetectable to human passers-by. Painting to a height of 1.5 m means the beaver shouldn't be able to reach above the paint even when on two feet.



Busy beavers have chewed down many trees along the pathway in Fish Creek Provincial Park. These chewed trees were not treated with the sand paint, while the two standing trees are painted – so far it seems the treatment is working, but only time will tell its long-term effectiveness.

Caring for the Green Zone

Cows
and
Fish

Growing Restoration

When summer fades, so too does the lush shades of green cherished so dearly in the warmer months. As the nights get cooler and days shorter, the green accents of the past turn hues of gold, orange, red, and brown. For many, Autumn signifies the harvest; it is a time to gather the fruits of their labour and give thanks for all that nature and life has provided.

For nature, the turn of the season means many things. Native trout, such as westslope cutthroat trout and bull trout, that inhabit streams of the Eastern slopes of Alberta's Rockies, begin their journey through the local watershed, swimming upstream to the headwaters to spawn; their success being dependent on cool, clean, and connected streams. Plants also adapt, trees and shrubs begin to pull back the resources put towards their leaves and invest into their deep roots. This drawing in of the carbohydrates allow the plants to go dormant to survive the harsh winter climate and makes energy reserves available for new growth in the spring. Additionally, fallen leaves and grass stems blanket the ground providing sustenance and cover over the upcoming winter months for a variety of microbes, insects, and small mammals.

For those looking to repair degraded streambanks and restore native trout habitat, the falling of leaves means it is time to get to work on a technique called soil bioengineering. Soil bioengineering makes use of living materials, using pioneer species like balsam poplar and willows that will establish deep binding roots to help stabilize streambanks and eroding slopes. For this method to be put into practice, these woody plants need to be harvested while dormant, so stored energy can be used to form new roots. Stems of dormant willows and poplars can be cut, have their branches removed, and be staked into moist riparian soils to form various live structures. When spring arrives, these stakes will begin to grow roots and shoots, and in time provide stability to the soil. Once established, woody vegetation will also provide shade for the stream, filter sediments and pollutants, and provide habitat for fish and wildlife.

Now that we have enjoyed the colourful finale of fall and transitioned to the cool whites of winter, we too enter a period of turning inward, a time to reflect and prepare for new beginnings. With the new year, comes an opportunity to consider our activities and their impacts.

By Angie Quist and Amy McLeod



Volunteer soil bioengineering day in 2019 at Silvester Creek hosted by Elbow River Watershed Partnership.



Willow bundles, trimmed and ready to put in the ground. Cut willows should be about 1 m in length and as wide as your thumb at the narrowest point.

Caring for the Green Zone

Cows
and
Fish

Think about the riparian area in those places we work, live, and play throughout Alberta--the area that connects land and water, which is glued together with a diversity of water loving plants with deep root structures. Is the riparian area well covered with plants, or are there sections of the shoreline that are bare have begun to slump or are actively eroding away? If streambanks are degraded, what activities or pressures might be the cause? In many cases, restoring a riparian area by removing the pressure that is causing damage might be enough to initiate healing and regrowth, however, soil bioengineering may be used as a technique to kick-start the growth and healing process.

We all use the land in different ways and how we manage our activities on the land, is reflected in the water. As a result, we are all responsible for the health of Alberta's watersheds, native trout and their habitats. With proper management and care, riparian areas can continue to provide us with many services, including breathtaking displays of colour from trembling leaves applauding another productive year. When healthy, riparian areas can enhance flood and drought resiliency, maintain water quality, provide habitat for fish and wildlife and forage and shelter for livestock. Clean, clear, and cold waterways are best for us all — trout, habitats, and people.

If you would like more information on how to protect your shoreline or restore your riparian area, check out our factsheets: [Protecting Shorelines](#) and [Growing Restoration](#) or stay up to date on upcoming learning opportunities by following Cows and Fish on [Facebook](#) or visiting the [events page](#) on our website.



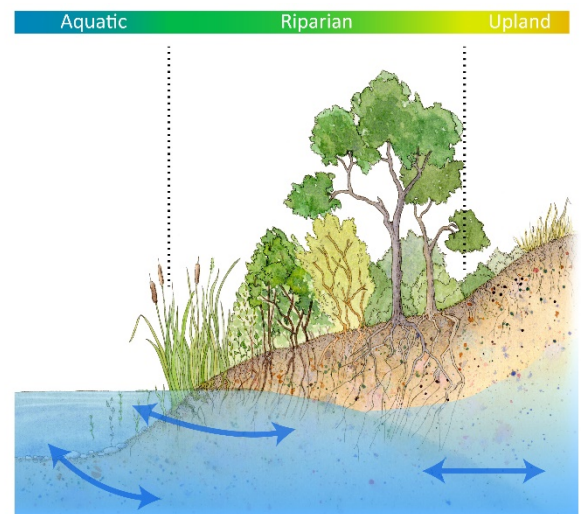
Willow cutting sprouting new growth.



Harvesting Willows



Planting harvested willows along Dutch Creek.



The Riparian Area

Caring for the Green Zone

Cows
and
Fish

Following Up on Past Investment

Two years ago, when we asked participants of our external program [evaluation](#) if they wanted Cows and Fish to follow up with them, nearly 300 people were interested in us following up, but with these interested people being scattered all over the province, we struggled on where to start, with so many requests. By gathering funding from the Hanen Society, Alberta Ecotrust Foundation, Environmental Damages Fund, Watershed Resiliency and Restoration Program and others, and getting the support of local county partners, we have begun reaching out where there are small clusters of requests, to reconnect, identify riparian health changes, as well as offer advice and input for additional management changes.

To increase the broader community's riparian awareness and expertise, we will deliver extension events with local partners, bringing together neighbours and sharing successes. If you are a landowner we worked with in the past, and want to reconnect with us, give us a call.

We go where we are invited and look forward to your invitation!

*Help inspire change
in your watershed*

**SHARE YOUR
STORY**

*Thanks to stewards like you, we know we are
making a positive impact on Alberta's landscape*

Have you worked with Cows & Fish in the past?

Would you like to:

- ⇒ **Find out how your riparian area scores now?**
- ⇒ **Have an extension event in your local community?**
- ⇒ **Share your riparian management story?**

Funding support may be available in your area.

Contact us at 403-381-5538 or 403-506-0965

riparian@cowsandfish.org

Cows and Fish



We have a new look to our [website](#)!

Take a peek at the fresh new look and new features. All our information, publications and resources are available online. Comments and feedback on our website are appreciated. We invite you to send us your thoughts via [e-mail](#).

Check out “Our Projects” and the new [Eastern Slopes Story Map project page](#).



UPCOMING EVENTS

Red-Bow Ranching Conference. February 2 and 4, 2021 Join us for the annual Ranching Opportunities and Ladies Livestock Lessons events combined into one virtual event for 2021. Presented by the Red Bow Agricultural Partnership. Register [here](#) at www.redbowag.com.

Riparian Management Course In partnership with the Agroforestry and Woodlot Extension Society (AWES) join 5 online sessions to set goals and develop strategies to reach them. Dates coming soon. Find course content here: <https://www.awes-ab.ca/riparian-management-course/>

Winter Speaker Series 2021 Join Cows and Fish and guests for a series of virtual panel discussions in the upcoming months. Topics will include Spring Development, Livestock Watercourse Crossings, Restoration, Beavers, and Recreation Use and Management in Riparian Areas. Watch for more info on our [website](#).

Urban Beavers – Building Pathways to Coexistence in Fish Creek Provincial Park January 21, 2021 at 7:00pm [Friends of Fish Creek Provincial Park Society](#) Speaker Series. Find out [more here](#) at www.friendsoffishcreek.org.

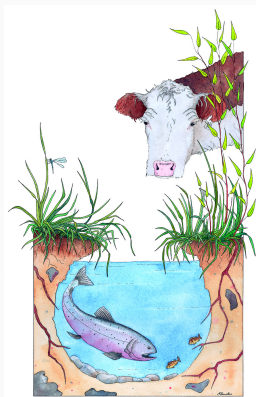


Original development of our newsletter was graciously supported by **Alberta Ecotrust Foundation**, along with our many core [funders and supporters](#). As you may know, we rely upon grants to do much of the work we do, so if you want to suggest an opportunity, collaboration, or make a donation, please do!

We'd love to get your feedback and equally importantly, we hope you'll share this with your friends and colleagues. Please [sign up](#) for our newsletter if you have not already done so.

DONATE

SUBSCRIBE NOW



We love hearing from you!

Please contact Norine Ambrose nambrose@cowsandfish.org or any Riparian Specialist, to follow up on any items in this newsletter. For full contact information, visit our website at: <https://cowsandfish.org/contact-us/>

Cows and Fish

2nd Flr, Avail Place, 530-8th Street South,
Lethbridge, AB, T1J 2J8
Ph: 403-381-5538



Producers, municipalities and community groups in Alberta

Copyright © 2021 Cows and Fish - Alberta Riparian Habitat Management Society. All rights reserved.

Want to change how you receive these emails?

You can [update your preferences](#) or [unsubscribe from this list](#).

Cows and Fish respects your privacy. We do not sell, rent or share your email address with external parties without your explicit consent.