

Caring for the Green Zone

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“Cheers”, a tribute to Lorne Fitch



We are often asked “How did Cows and Fish get started?”. It is a little more complicated than a few sentences can describe, but it is fair to say that the two biggest players in getting it started were Lorne Fitch and Barry Adams, both working for the provincial government,

as a fisheries biologist and range management specialist, respectively, in 1992. Both retired from their positions with the Alberta government some time ago, but in March, Lorne ‘officially’ retired again, from his position as Provincial Riparian Specialist with Cows and Fish. We wanted to include a little tribute to Lorne in this issue. Lorne has spent a huge portion of the last 25 years listening, sharing, and supporting landowners, colleagues, organisations and the public in riparian stewardship. Based on a very quick examination of our presentation activity database, Lorne has given at least 546 presentations (indoors or outdoors) to 20,134 people! We know many of you have heard Lorne and felt the passion and commitment he has to fostering riparian awareness, ethics and action – we at Cows and Fish, and riparian areas across Alberta and beyond, are deeply indebted to Lorne.

Lorne will continue to be our mentor and guide, involved on our Board of Directors, as well as being part of special projects for Cows and Fish, but he now has more time to spend writing, advocating for and (hopefully) enjoying the landscapes he has so long worked to help others steward.

Cheers to you Lorne, our friend and mentor,

Norine Ambrose

Executive Director



Inside this issue:

Riparian Grazing Strategies for Success	2
Meet the Staff	3
Upcoming Events	3
Beaver Mitigation Techniques	4
Implementing New Techniques for Erosion Control	5
Street to Stream	5
Riparian Facts	6



Riparian Grazing— Strategies for Success

Riparian areas, those areas next to a stream, river, lake, wetland, or spring with soils and vegetation influenced by water require some special consideration when grazing. Healthy, functioning riparian areas often produce abundant primary production with 3 to 10 times as much forage compared to surrounding uplands. This production can be variable from year to year but provides unique grazing opportunities in the right situations. These grazing opportunities can be maintained with sound grazing management, as can other riparian functions like filtering and trapping runoff, recharging groundwater, reducing erosion and supporting biodiversity.

Not all riparian areas are suitable for grazing, due to their natural characteristics (e.g. non-palatable species, too wet, etc). Those that are suitable, can be diverse and variable and thus no single grazing strategy or approach is suitable for all riparian areas; and the diversity and variability needs to be factored into grazing planning. A variety and combinations of strategies such as riparian pastures, grazeable corridors, rest rotation, deferred rotation, and exclusion fencing can be used. Any grazing strategies designed for riparian areas cannot be done in isolation, and need to fit into the entire livestock grazing operation.

Like all grazing lands, grazing riparian areas involves 4 range management principles:

- Balance grazing use with available forage
- Provide effective rest
- Avoid use during vulnerable periods
- Provide even or planned distribution

For more on riparian grazing principles and strategies see our publication [*Caring for the Green Zone: Riparian Areas and Grazing Management*](#).

Your riparian grazing goals should aim to maintain or restore riparian functions to ensure long-term grazing opportunities. Modify your grazing strategies or practices to suit your situation and monitor the impact of grazing and adjust management as needed. To better understand what pieces of your riparian area are working and which are not, you may wish to conduct a Riparian Health Assessment. Combining this knowledge with a grazing plan can be helpful for making management decisions.

Cows and Fish is currently working with landowners on riparian management and grazing with support from the Environment Canada Environmental Damages Fund (EDF) and Alberta's Watershed Resiliency and Restoration Program (WRRP). Some of our partner organisations in this work include the Agroforestry and Woodlot Extension Society (AWES), and Watershed Planning and Advisory Councils like the Battle River Watershed Alliance (BRWA).

For more information on riparian grazing contact Cows and Fish at 403-381-5538

Riparian area management does require an investment but it can be worth it. Benefits of sound riparian grazing management include:

- increased animal performance and weight gain from cleaner water
- increased forage production
- better nutrient management (keep it on the land to enrich soils)
- reduced disease, vet bills (eg. foot rot) and death (drowning)
- reduced bank erosion and loss of land
- maintained or restored animal shelter
- drought and flood proofing, resiliency
- reduced maintenance costs

Often a riparian area will change so slowly over a long period of time that we may not notice it has changed. Signs to watch for that you may need to consider adjusting your riparian grazing approach:

- unreliable or highly variable forage production
- change in plant species from water-loving to drier, upland species
- trees and shrubs are heavily browsed, flat-topped or mushroom shaped, all old or missing
- loss of wildlife and fish from the area

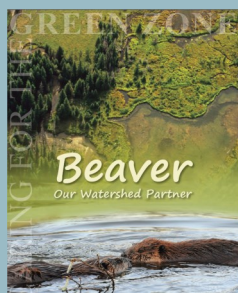


Beaver Ecology and Management

By Jennifer Caudron (Cows and Fish)

Check out these resources!

(Click on the image for more information)



Beavers are an integral part of North America, and are called nature's engineers for good reason. Their industrious nature means they do a lot and their work also means they frequently pose challenges and conflict with humans and our infrastructure. If we want to understand them, recognize their role in riparian areas and watersheds as a whole, while at the same time figure out how to live with them, a good starting point would be to educate ourselves on the science behind beaver behaviour including ecology, life history, and the connections to watersheds. Subsequently, we might then be better able to grasp the issues, challenges, options and alternatives, as well as future possibilities of living with beavers.

Beavers cheerfully ignore our property lines and issues often arise that involve several landowners. Getting together, learning about beaver together and involving people with expertise provides an opportunity for more long-lasting solutions. We might be able to solve collectively what we can't individually, suggesting the need for a community response and watershed approach. On that note, a collaborative partnership between Cows and Fish and Miistakis Institute started in 2013 with a co-existence initiative at the Ann and Sandy Cross Conservation Area near Calgary.

In addition, with the support from Watershed Restoration and Resiliency program of Alberta Environment and Parks, WWF's Loblaw Water Fund and The Calgary Foundation, the delivery of Beaver Management Techniques hands-on workshops, in partnership with Fur-bearers was possible. These implementation workshops have been held in City of Calgary, MD Foothills, counties of Barrhead, Lac Ste Anne and Starland, including two different applications: beaver exclusion devices and pond levellers, to reduce flooding. As an ongoing component of the work, these beaver demonstration sites now serve as tour sites to share beaver coexistence approaches and tools across the province.

Our staff will also be able to track the health of these demonstration sites through riparian health monitoring. We have delivered ***Beavers in Our Landscapes: Understanding and living with Beavers***, via indoor workshops, presentation and webinars, sixteen times since April 2014, at the request of local communities and groups. These workshops demonstrate some of the beaver's natural history and role they play in watershed resiliency while also showcasing some ways land managers and practitioners can realistically implement practical on-the-ground practices and tools that reduce conflicts. During these workshops we encourage lots of discussion and questions, with the end goal being that we need to figure out how to live with them, where we can.

We are still learning more about co-existence techniques that many landowners and municipalities are using, as well as taking requests to provide presentations and workshops, so contact us if you want to work with us. Watch our website and social media (Facebook and Twitter) for notices about upcoming events and opportunities to learn more about these topics.

Beaver Numbers

- 16 = "Beavers in our Landscape" or beaver ecology presentations
- 700 = number of attendees at beaver presentations
- 7 = installation workshops
- 4 = pond levellers installed
- 3 = exclusion fences installed
- 1 = pond leveller/exclusion fence combination installed



Photographs: Beaver pond leveller installation in Lac St Anne County.

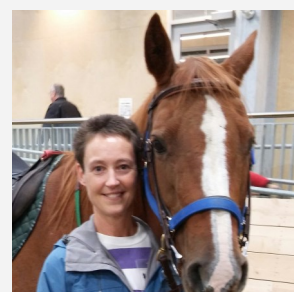
Meet the Staff!

Seven, that's the number of Riparian Analysts we have on staff at Cows and Fish. The most we've had in any of the last 20 years!

At least one of the seven has been on staff for 10 years, and our newest "spring chicken" just started this fall. A question we often get asked is if our field staff are full time, and the answer is yes. Summers are spent in the field, collecting riparian health data, photo monitoring, walking with a tuned eye through up to 200 sites along streams, rivers, wetlands and lakes in Alberta. Report writing dominates their time in winter; following up on the data collected in the summer and providing landowners with a snapshot of the health of their land.

Their backgrounds are varied, but all have a Bachelor of Science in either Environmental Sciences, Biology or Ecosystem Management, and one Analyst is currently working part-time while completing a Masters of Science degree. When you ask them for highlights of their work in the field with Cows and Fish, more than one mention finding a rare plant. Imagine a day spent alongside a wetland with blue flag iris. Rare plants and rare landscapes, our Riparian Analysts get to see many of the hidden gems on the landscape, on foot, in all types of weather, and from as far south as the Milk River to our northern watersheds, like the Peace and Athabasca. Working through intense rainstorms tops the list of worst days (and nights) in the field, especially when you arrive back at camp to a tent now looking more like a swimming pool. This calamity is followed closely by unexpected dips in waterbodies both big and small due to slips, crossings gone bad, spongy ground, or trusting the "mud" will hold while you scramble to take one more photo benchmark.

Our team of Riparian Analysts are expert riparian health practitioners, botanically savvy, field canny, an outdoor loving bunch and an integral part of the Cows and Fish team. Drop by our Lethbridge office, where most of our Riparian Analysts hang their hats, and say "Hi" to Christy, Erica, Megan, Allie, Mitch, and Kirby. Or find Kathryn (but not her horse) in our Edmonton office.



Upcoming Events

Ladies Livestock Lessons, January 20, 2018. [Click here to register.](#)

Contact Kelsey Spicer-Rowe for information at kspicer@cowssandfish.org or (403) 948-8519.

Putting Beavers to Work for Watershed Resiliency and Restoration Symposium, Cochrane. December 7, 2017 [Click here to register.](#)

Engaging Communicating with Communities— Lessons Learned. December 13, Airdrie. [Click here to register.](#)

Mark your calendars: Webinar Week with Cows and Fish. Feb 5- 8, 2018. Lunch and Learn webinars –watch our website for updates. Riparian Ecology Feb 5, Riparian and Wildlife Feb 6, Beavers Feb 7, Riparian Health Feb 8 and Riparian Grazing on Feb 9th.

Grazing Plans and Google Earth Technology workshop, March 8, 2018. Watch our website for more details.

The Original Women's Grazing School, June 12-13, 2018 Two Hills, AB.

South Alberta Grazing School for Women, July 2018. Stavelly, AB. Watch our website for dates.

Looking for a presentation at your local event or workshop? With a few exceptions, when we host our own events, most of the extension and outreach we do is at the request of local communities and partners, so give us a call or email a Riparian Specialist near you. <http://cowssandfish.org/contact.html>. Many of the areas of expertise we speak on are described on our website <http://cowssandfish.org/about/workshops.html>



Watch for our new redesigned website, coming soon!

Street to Stream: A Project Summary

The Street to Stream initiative is a collaboration between Cows and Fish and the Alberta Low Impact Development Partnership (ALIDP), to help people recognize that everything we do on our landscape is interconnected. This means that keeping our aquatic and riparian habitats healthy starts in the uplands with our development choices and how we manage stormwater runoff.

Although this linkage may seem straightforward in a rural situation where you can see how the water flows from the uplands down to the valleys, in a large city it can be hard to connect the two. As part of this project we hosted workshops in several cities across the province to begin connecting the dots and provide some strategies that can be used to retrofit upland and waterfront properties. But it's one thing to tell someone and another to have them take part and learn hands on. And that's why we also hosted several volunteer builds to show people what they can do and how they can do it. We built two riparian examples in Calgary which included native landscaping and riparian buffers, in addition to assisting with several upland examples. We also built a riparian buffer and native garden along a cottage property at Pigeon Lake. It's important to recognize that everything you do in a watershed affects its health and even small changes over a large scale can have significant impacts. Thanks to the Calgary Foundation and RBC Bluewater funding for supporting our work..

Stay tuned for our demonstration "how to" videos that will highlight two of our projects, including processes and challenges to show just what can be done to better manage water from Street to Stream.



Implementing New Techniques to Reduce Erosion

Zuni bowl, who wants one! With funding from Alberta Environment and Park's Watershed Resiliency and Restoration Program (WRRP), we had the pleasure of learning and implementing new techniques from Craig Sponholtz of Watershed Artisans (www.watershedartisans.com). His training showed us how a Zuni bowl or a log step down can stabilize actively eroding channels using natural and "around the farm" materials.

With these new techniques in our tool box, it is another option we can provide to landowners and managers to help reduce erosion and therefore sediment transport. We look forward to working with Craig again next summer on a restoration project in the Grande Prairie region.

WRRP funds have also enabled us to cost share with landowners on projects to reduce the impacts livestock have on riparian areas ranging from fencing and off-site watering to the development of springs. Our grant, and numerous other WRRP grants we are pleased to be partnering on across Alberta, aim to improve natural watershed function to maintain or improve resiliency to droughts and floods.



Photos: clockwise: Before photo of an actively eroding headcut; After photos of a Zuni bowl; log step down.

Canada Thistle Bio-Control

There are two bio-control insects gaining popularity across Alberta: the stem gall fly, *Urophora cardui*, and the stem weevil,

Hadroplontus litura. West Central

Forage, who imports the insects from

Montana, has

seen an increase in demand for these self-sustaining weed control agents.

The insects are winter hardy and

provide a self-sustaining

population that decrease thistle

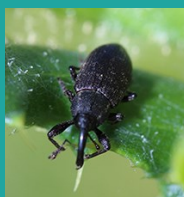
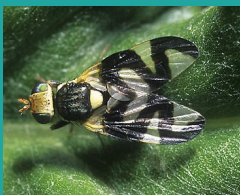
infestations. Best

results are seen over several years.

Bio-control is a great option for areas near wetlands and waterbodies, where chemical methods are prohibited.

Canada thistle is very prevalent in riparian areas in Alberta, present in 97% of riparian health sites we have examined from 2001-2012.

For more information on the ecology and benefits of bio-control check out West Country Forage <http://www.westcentralforage.com>.



"Where we have been":

Some of the communities where Cows and Fish have held field days, presentations or workshops.



Original development of our newsletter was graciously supported by Alberta Ecotrust Foundation, along with our many core funders and supporters:

(<http://cowsandfish.org/about/members.html>).

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!

[Donate Now](#)

Please sign up for our newsletter if you have not already done so:



We'd love to get your feedback and equally importantly, we hope you'll share this with your friends and colleagues.

We love hearing from you!

Please contact Norine Ambrose nambrose@cowsandfish.org to follow up on any items in this newsletter.

For full contact information, visit our website at:

<http://cowsandfish.org/contact.html>

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