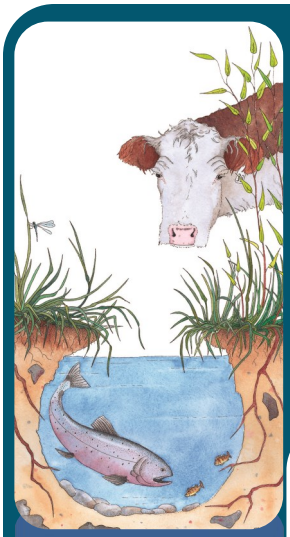
VOLUME 6 SPRING 2019



Caring for the Green Zone

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Cows and Fish

Introducing new staff...

Cows and Fish has a number of new faces bringing fresh ideas and expertise to our team. Our new Provincial Riparian Specialist, Amy Mcleod, joined us in February, to help increase our connections to provincial partners and provide expertise at the provincial level. Amy comes to us with over a decade of water quality experience, in sampling, compliance and water quality modelling. Her recent graduate work on the social side of conservation behaviour gives her a unique understanding of how people make decisions. This perspective will support our work to build stewardship with landowners and land managers. Do you have ideas on new collaborations or partnerships with Cows and Fish? Feel free to reach out to Amy at amcleod@cowsandfish.org or 403-978-5814.

Shortly after Amy started, Kyla Rushton, a recent grad with range science experience, joined us as a Riparian Range Specialist, based in Lethbridge. Kyla collaborates primarily with the MULTISAR program, leading the riparian health work that will be combined with upland range and wildlife surveys to develop habitat conservation strategies and management recommendations for ranchers in the south who are taking part in SARPAL (Species at Risk Partnerships on Agricultural Landscapes).

This spring, we have four new Riparian Resource Analysts—who we affectionately call our 'field crew'. Mark Claxton, Enna Graham, Alyssa Barbero and Madison Rehm will be walking through riparian areas across the province, clipboard in hand, capturing photographs and riparian health details on sites we've been asked to assess, to put together riparian health summaries for landowners and partners this coming winter. These riparian health reports have proven to be a cornerstone of our work, increasing awareness of landowners about their land, and helping them make management changes to improve health.

Inside this issue:

State of the Beaver Conference 2019

by Kerri O'Shaughnessy, Cows and Fish and Holly Kinas, Miistakis Institute

In February, Miistakis and Cows and Fish participated in the 'State of the Beaver Conference' in Canyonville, Oregon, hosted by the Beaver Advocacy Committee (BAC) of the South Umpqua Rural Community Partnership (SURCP).

Participants from municipalities, non-government organizations, academic institutions, and individual communities travelled from across North America and Europe to attend the event and discuss all things related to beaver management: project successes ranging from relocation to advocacy to coexistence projects; new techniques and tools being used for restoration and coexistence; new and reviewed science of beavers on the landscape; policy challenges; urban design to allow for enhanced coexistence…the list is nearly endless!

A key similarity many of the groups shared was some of the challenges, whether they are beaver-made or human-made, faced by those working with beavers on their landscape. Coexistence tools such as pond levellers and culvert protectors have been very successful in mitigating many concerns that beavers cause yet it can be an uphill hike to implement these techniques on a large scale. On a regulatory front, many groups found commonality in the barriers that exist when using a 'new' tool, but with persistence and research, this challenge too, can be overcome.

One of the things we realized from attending the conference is that in Europe, groups are going to great lengths to reintroduce beavers (*Castor fiber*) to countries where they have been extirpated for hundreds of years. In comparison, in Alberta, and much of Canada and the United States, while still very much below their historic population numbers, we still have beavers present, and we have the opportunity and the technology now to coexist with them and reap the benefits they afford us. We should not take that for granted! Another realization is that we have a unique partnership here in Alberta with governments, non-government organizations and private landowners working together to better understand beaver and human behavior, develop new or apply an existing variety of tools and approaches for living with beaver, and sharing those experiences. The opportunity to collaborate in a proactive way is something we should also not take for granted! We are grateful to the Calgary Foundation and Watershed Resiliency and Restoration Program (Alberta Environment and Parks) for helping us lead this learning in Alberta.

If you want to learn more about our collaborative beaver project, check out our 'Putting Beavers to Work' website and sign-up for the mailing list on the homepage.

PUTTING BEAVERS TO WORK

THE CALGARY FOUNDATION

Alberta

Bridges and Troubled Waters

by Kerri O-Shaughnessy Cows & Fish and Adam Norris, Mighty Peace Watershed Alliance

Management is an ever-present and ongoing aspect of life in the twenty-first century; we do it and things happen often without a second thought. The vast majority of people heat their houses with gas and to ensure the house is warm, we need to pay the bills, change the filters, and check to make sure that is on. Similarly, water comes out of the faucet for most as long as the bill is paid. These services are available because infrastructure has been installed and management of these systems is occurring. Many of the services that we want are automated and so we just need to manage (or take part in) the system, for things to continue.

Ecosystem goods and services such as flood and drought mitigation, water quality improvement or bank stability are often just there – until they are not. We live on a managed landscape and our management actions do not always consider maintaining *ecosystem goods and services*. Sometimes we unintentionally impair the ability of stream channels or riparian zones to function and provide us with services like water storage, clean water and biodiversity. To ensure that we see the outcome we want, our management of ecosystems needs to be intentional.

The Agroforestry Woodlot Extension Society, Alberta Conservation Association, the County of Grande Prairie, Cows and Fish, and Mighty Peace Watershed Alliance are lucky to be working with several landowners doing very good intentional management. In some cases, proactive efforts are being made to maintain *ecosystem goods and services* through existing management and in other cases, efforts are being made to restore services lost through past management actions. This work is being supported by the Alberta Government's Watershed Resiliency and Restoration Program (WRRP).

The Streambank Stabilization and Extension Project is focussing on a stream that began eroding the bed and banks as a result of straightening the channel and removing riparian area several years ago. The erosion is causing the loss of valuable soil, parts of the field, and lowering the water table. In September 2018, with the help of Craig Sponholtz (www.watershedartisans.com), some equipment, and the manual efforts of several volunteers at a workshop, *rock baffles* and *willow baffles* were installed to restore or induce meandering. *One rock dams* were installed to begin raising the channel bed by capturing sediment. Improvements have already started, as soil is captured (see photo below).

Left: One rock dam being constructed by volunteers in the September 2018 workshop.

Right: One rock dam in May 2019 showing trapped sediment.

Photo Credit: Kerri O'Shaughnessy (Cows and Fish)

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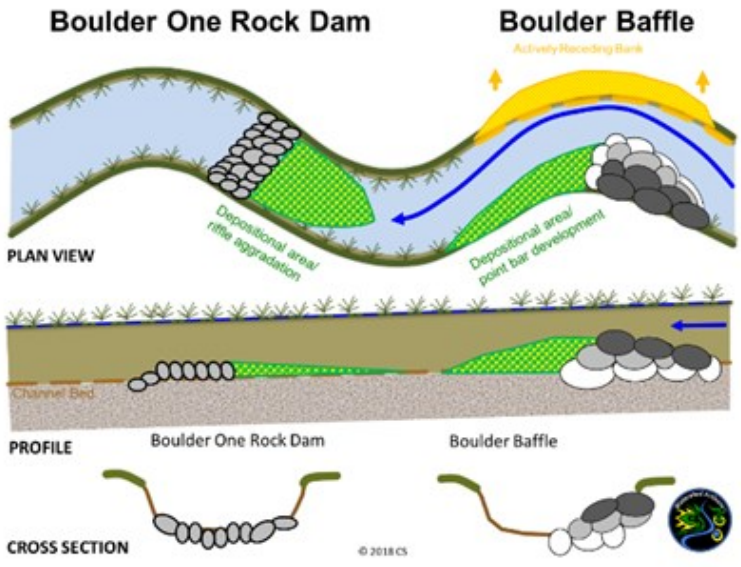


Image Credit: Watershed Artisans, Inc.

Photo Credit: Adam Norris (MPWA) May 2019

The baffles are in stream and are placed to direct water in a serpentine or meandering path. The existing vegetation in the valley bottom, along with the added willow and rocks, will help stabilize the channel bed, trap sediment, and direct water into the opposing bank so that the stream meanders, which reduces energy and begins to create a new balanced pattern of erosion and deposition. The riparian re-vegetation on the terrace will begin this field season in order to support the bank stabilization efforts and improve the functions of water filtration, soil retention, and habitat creation, among others.

The Improved Livestock Crossings Project is creating location based, affordable crossing solutions.

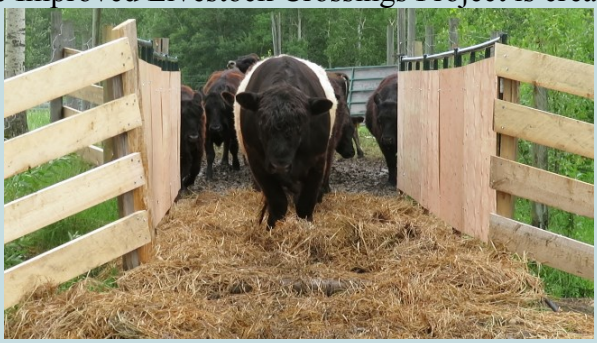


Photo Credit: Jerry Kitt. (Landowner)

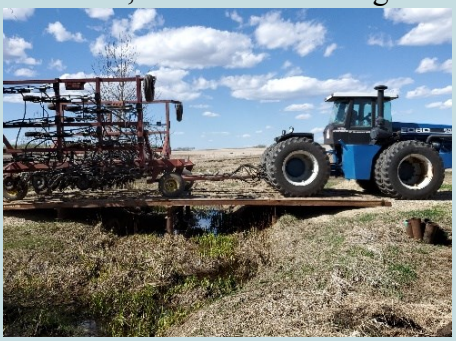


Photo Credit: Rebekah Adams (AWES)

Providing a well designed crossing for livestock makes it easier for the producer to move animals from one side of a watercourse to the other and is a good management approach to lessen impacts on the riparian area and stream channel. Livestock that cross waterbodies without a crossing structure often degrade and destabilize the banks, remove riparian vegetation, disturb the stream channel and introduce sediment and manure into the water. Reducing the physical impacts improves the site's ability to rebound after flood and drought; reducing sediment and livestock waste improves water quality. Similar structures can be designed for equipment crossing a watercourse, which addresses some of the same riparian issues caused by vehicles going through the stream.

Want to learn more about crossings? Check out this factsheet "How to get Livestock Across a Creek-Watercourse Crossing". **For more information on these and other projects**, visit www.mightypeacewatershedalliance.org.

Meet the Staff continued!

Kyla Rushton
Riparian Specialist

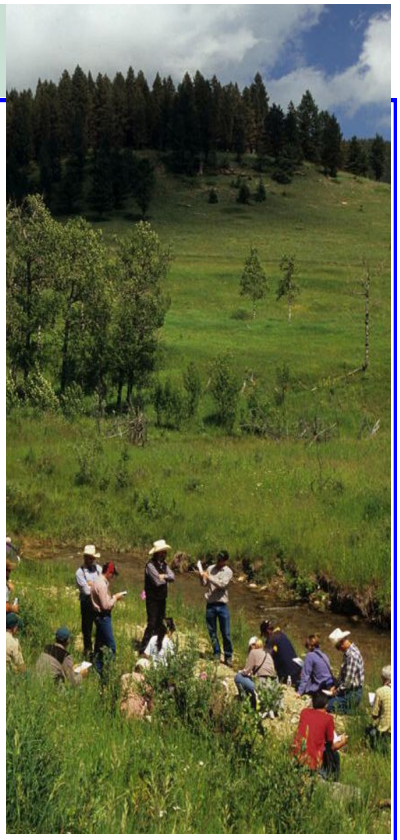
Amy McLeod
Provincial Riparian Specialist

Survey Needs Agricultural Producers!

Cows and Fish is collaborating with Dr. Jeremy Pittman from the Univ. of Waterloo's School of Planning (Canada) on a research project about ranchers' and farmers' preferences for species-at-risk and endangered species conservation programs in B,C., AB, SK, and MB. We seek your insights into what conservation programs are desirable and best suited for your operations.

Participation in this study involves completing a **15-min online survey**. In appreciation for your time, you will have the opportunity to **enter a draw to win one of 40 gift cards ($100 value)** (odds of winning are based on the number of individuals who participate, but 10 prizes per province will be awarded) This study has been reviewed and received ethics clearance through a Univ. of Waterloo Research Ethics Committee. To participate: https://uwaterloo.ca1.qualtrics.com/jfe/form/SV_bw7CeipWl5yTg69

Upcoming Events



Southern Alberta Grazing School for Women. July 16 & 17, 2019. County of Warner, AB. Download the "save the date" poster for more information. The more detailed brochure will be available soon! Register at **2019sagsw.eventbrite.com.** Contact Kristi Stebanuk to learn more at: kstebanuk@cowsandfish.org or (403) 382-0927.

Riparian Health Assessment Training. July 23, 2019 Location TBA (Edmonton / Red Deer corridor). Join Cows and Fish staff to refresh you skills or learn the basics of riparian health assessment for streams and small rivers. Attend to better understand riparian ecology, health, function and riparian plant identification. Download the poster for more information and registration details .Register at Eventbrite.

Alberta Range Stewardship Course. July 30-31, 2019. Buffalo, AB. Save the dates! The 2019 Alberta Range Stewardship Course dates have been announced. Download the poster for more information. Visit the Alberta Prairie Conservation Forum website for more information.

Looking for an engaging speaker on the key role riparian areas play in your watershed? On lakeshore health or grazing management? Invite us to your event. Check out the many topics we can cover: http://cowsandfish.org/about/workshops

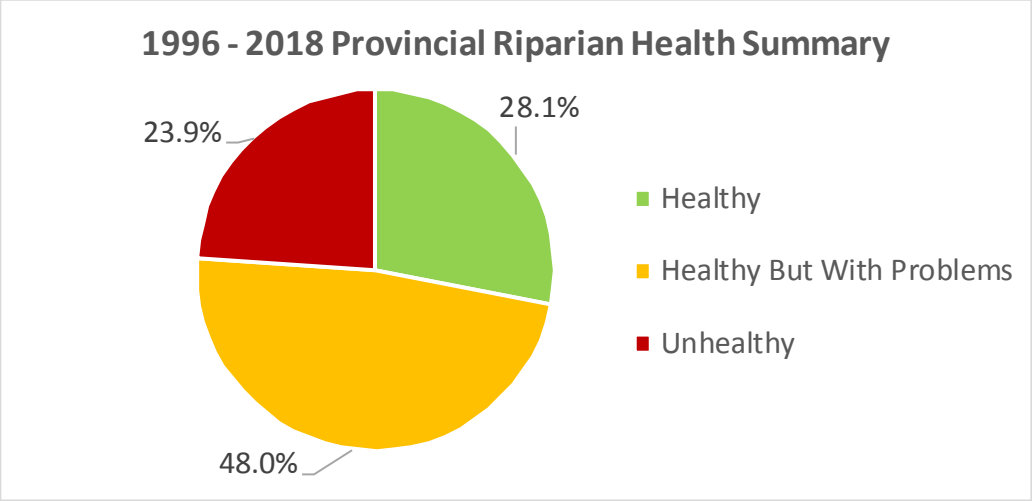
Watch for our new redesigned website, coming soon!

A Provincial Snapshot of Riparian Health

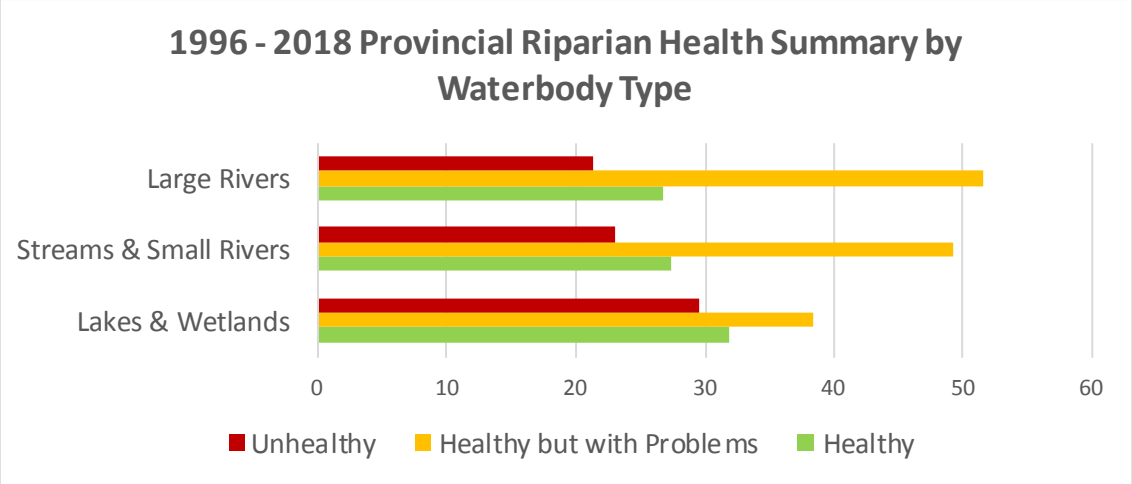
By Kelsey Spicer-Rawe , Riparian Specialist

If you were lucky enough to meet any of our Riparian Resource Analysts last summer, perhaps while they were out and about on your property eyeing up your wetland or stream, you might have learned the lengths that they go to measure riparian health. From Fort Vermilion to Milk River, our Riparian Resource Analyst staff trek to the far corners of the province between June and September each year assessing riparian areas, encountering wildlife, fording streams, scrutinizing plants and physical landscape features, in all types of weather, to help us understand and better manage these unique, vital and dynamic resources we call riparian areas. Each and every year we add to our knowledge and data stored in our database to profile the health of riparian areas in Alberta.

Provincially, the average riparian health score is holding steady (since 2014) at 70% based on 2,894 sites in Alberta and approximately 2,295 km of stream and shore assessed between 1996 and 2018. Just over one quarter (28%) of the sites assessed rating *healthy*, as shown in the chart below.



When comparing wetland types, specifically those categorized as *lakes and wetland* (538 sites), *streams and small rivers* (1,653 sites) and *large rivers* (688 sites) assessed between 1996 and 2018, the pattern is similar - most sites fall within the middle category, *healthy but with problems*.



Continued from page 6...A Provincial Snapshot of Riparian Health

Photo: Riparian health assessment

Photo: Assessing the stream bank for deep binding root mass

Another pattern developing relates to the number of riparian health sites that are re-visited or monitored to measure changes over time, which is growing annually. Of the 2,894 sites assessed between 1996 and 2018, 526 (18%) have been assessed at least twice. Returning to measure riparian health at a site helps us to understand if management changes implemented have resulted in improvements to riparian health, how wildlife interactions, like the work of beaver, play a role in riparian health, and if no management changes were made on the site, how natural factors, like climate and plant community succession might impact riparian areas over time.

Looking ahead to 2019, as our server upgrade is nearing completion to safely house and analyze the growing bulge of data our staff collect each year, we are once again excited to add to our snapshot of riparian health in Alberta. Projects like *Bringing Back Bull Trout* in the Tay River watershed, the *Watershed Restoration Landowner Action Project II* in Red Deer County, the *Riparian Monitoring Program* in the City of Calgary and the *Buffalo Trail Riparian Restoration Project* in the Battle River watershed will transport us to a variety of shorelines, streambanks, pastures, parks and places in Alberta.

Photo: Plant identification - what is growing and where?

Carbon Fact

Did you know that maintaining healthy riparian areas can play an important role in keeping carbon on your land?

Carbon is constantly being cycled in the environment, but it can be stored in the ground through the decomposition of plants, which helps to build your soil. Carbon is also stored above ground in plant leaves, stems, and trunks.

Healthy riparian areas with well maintained vegetative cover, and banks that are well armored with deep binding roots can reduce soil erosion, and therefore, carbon loss. Preventing soil erosion is an important way to keep carbon in your soils. Sufficient vegetation can also trap runoff, including sediments and nutrients, which aids in rebuilding of streambanks and floodplains. By maintaining, or increasing, the amount of vegetation, especially plants with deep binding roots such as willows and other native species along the streambanks, there is less opportunity for soil erosion and carbon loss.

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! Please check our website for how you can support us.

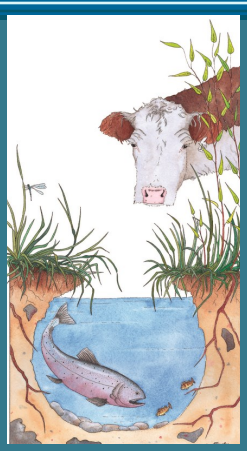
Donate Now

Please sign up for our newsletter if you have not already done so: 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:
http://cowsandfish.org/contact.html



Cows and Fish

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