



**BRBC**

# Preserving Our Lifeline

working together to nurture, renew and protect  
the waters of the bow river basin

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## BRBC Board Retreat 2022

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After a successful forum at the TransAlta auditorium, Board members and staff headed for the hills and the Ghost Crossing facility for the Board of Directors annual retreat. The Board has several challenging projects to consider to meet the goals and strategic outcomes of the organization. As the BRBC transitions from an exclusively virtual approach to a hybrid model of online and in-person activities, there are a number of objectives to consider.

Currently the State of the Watershed project is in the early days of development. A strategic approach to work on each sub-basin with our Watershed Stewardship Group partners intends to build on and incorporate local knowledge and expertise. In large part, the online tool will rely on member contributions for content and the development of reporting standards that are easily updatable in future years. A technical team is currently being



Board members and staff at the 2022 retreat. From left to right: Brooke Kapeller, Sarah Hamza, Pablo Pina, Mark Bennett, Medini Prasai, Rob Wolfe, Scott Taylor, Mike Murray, Chris Manderson, Jason Mogilefsky, Richard Phillips, Harpreet Sandhu, and Jason Schneider. Photo: Mike Murray.

established for the water quality component. Another outcome of this project is the formation of a GIS community of practice to support ongoing work and help develop expertise in the watershed community.

Fund development was also part of the Board's discussions. The isolation and communication challenges associated with COVID-19 have created some challenges. The BRBC will be pursuing an outreach strategy

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to re-acquaint the organization with our partners and strengthen communications across the basin. An opportunity to continue coordination efforts has been the idea of creating a Watershed Stewardship Coordinator position within the BRBC to support stewardship activities across the basin. This position will be implemented as soon as supporting funds are obtained. This role will also help to manage the high workloads experienced by staff which have only increased over time.

This year saw our long-standing Treasurer, Zennon Zalusky, step

down from the position. Mark Bennett has stepped into the role and will be working with the Board on fund development strategies to further strengthen this necessary component of our work.

The Water for Life Strategy (W4L) is coming up to 20 years since its release and work is currently underway with all the W4L partners in Alberta to refresh the strategy and develop actions to build upon the successes already completed. As part of this work, the WPACs and the Government of Alberta have been developing a Mandate and Roles document that clearly outlines each party's expectations.

At the retreat, the document was refined and both Alberta Environment and Parks (now Alberta Environment and Protected Areas) and the BRBC have agreed to and signed the document and will continue to work as partners towards our shared outcomes.

These strategic projects are high priorities in the work we do, as well as our continuing efforts to work with post-secondary institutions, develop understanding through forums and workshops for our members and partners, and ensure that collaborative and diverse perspectives are included in watershed management.

## Listen to Its Song – The Sheep River

Lorne Fitch, P. Biol.  
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In the beginning there was ice and the earth had no visible form. With snowfall the glacier grew and gravity bore the ice mass downslope. This was not pristine ice suitable for a highball. Instead, it was permeated with bits of mountain the glacier had ground up. Like a great kitchen grater, the glacier gouged out the valley that in the fullness of time the Sheep River would flow through, delivering the melted remnants of that ice mass.

The Blackfoot and Stoney First Nations named the river after bighorn sheep, still found in the headwaters and canyon walls. Peter Fidler, from the Hudson's Bay Company, on his 1792/93 trek

made reference to the Sheep River in his journals. The river has a rich history.

From the headwaters to its confluence with the Highwood River, as the crow flies, is about 107 km. But the river twists back and forth, in torturous turns not unlike the response of a garden hose when the tap is cranked full on, so the distance is an underestimate.

The Sheep River has its origins in the protected landscapes of Kananaskis Country, Bluerock Wildland Park and Sheep River Provincial Park. Avalanche slopes roar with melt waters coursing down drainages more vertical than

horizontal. Headwater streams have a constant rumble as rocks are propelled downstream with the racing flow. It is as if a colossal, elemental cement mixer is at work endlessly agitating and grinding the edges from frost-shattered rocks, making them rounder and more easily moved. This process of turning big rocks into little ones becomes especially relevant to downstream water storage in alluvial gravels, shaded by a luxuriant riparian forest.

Downstream of Gibraltar Mountain the river starts to incise, forming a steep-sided canyon

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often over a hundred metres deep that persists until just upstream of Turner Valley. As it carves its way downwards, there are places where the backbone of the mountains will not break. This includes Sheep Falls and Triple Falls, but there are numerous other bedrock infringements on a river's rights. The river has patience on its side, sandpapering and polishing the bedrock. Resistance is futile but the bedrock budes minimally, over the kind of time we cannot fathom.

It is here the river is loudest, complaining of the hoops it has

to jump through to deliver water downstream. A colleague, who worked at the nearby Gorge Creek biological station, recalled hearing the grinding and clashing of large boulders driven downstream by the turbulent spring flows.

The Sheep River canyon holds some unique memories for me. I worked one spring with colleagues to electrofish the canyon, in search of mountain whitefish thought to overwinter in deep pools. Entering the dark canyon, only minimally lit by the spring sun, seemed like a trip into the bowels of the earth. We caught a handful of mountain

whitefish, dispelling the theory the canyon was their overwintering lair.

In addition to mountain whitefish, the native fish complement included bull trout, Westslope cutthroat trout, longnose suckers and white suckers. Early sportsmen with European roots lobbied for trout stocking, mostly of non-native rainbow trout to shore up what they believed were population declines. The unique genetic adaptation of native cutthroats was overwhelmed with

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The Sheep River at the Town of Okotoks. Photo: Lorne Fitch.

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Fishing remains a popular sport along the banks of the Sheep River. Photo: Mike Murray.

rainbow trout genes. The “Johnny Appleseed” mentality prevailed and, from 1928 through to the early 1970s, rainbow trout, brown trout, brook trout, and non-native cutthroat trout were stocked in the watershed.

Ironically, it was in Gorge Creek, where Dr. R.B. Miller, an early fisheries researcher, investigated the madness of stocking hatchery trout in streams already home to native populations. Miller found hatchery trout, not used to the rigors of a stream environment, mostly died, often within days

of stocking. Still, the idea that streams needed hatchery help took a while to die.

Bull trout populations, elsewhere doing poorly, seem to be rallying in the Sheep River. Jay Jones, an avid angler, has noted an expansion of the area where they spawn, signalling a population increase. Bow River rainbow trout migrate into the Sheep to spawn in a reach through Okotoks. But Jim Stelfox, a retired provincial fisheries biologist, points out that excessive water withdrawals create low flows. Coupled with increased water

temperatures and treated sewage releases, this leads to periodic and chronic fish kills. A failing grade is given for trout kills.

What trout need to survive are stream habitats that are cold, clean, connected, and contain complex elements. The presence and abundance of trout populations is a metric of watershed health and a report card on the way we manage land uses in a watershed.

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In a prior administrative life, the Sheep River headwaters were part of the original great sweep of Forest Reserves of the Eastern Slopes. Although set aside for watershed protection, there was logging and coal mining, but at relatively minor scales.

Selective logging with a minimal footprint was the order of the day, using axes, crosscut saws, man and horsepower. Contrast that with today's industrial scale operations (on tributaries like Wolf and Coal creeks) where timber is mown down like wheat in a field, leaving great expanses of the forest denuded and subject to erosion.

No environmental regulations were in place during the discovery and development of oil and gas resources from 1914 through to 1946. One can only speculate on the materials flushed into the river; petrochemical contamination may be an enduring legacy of the boom period.

The breezes no longer stink with the smell of unrestrained exploitation and only ruffle the leaves of cottonwoods in the wider valley of the Sheep starting near Turner Valley. The river becomes braided, with multiple channels and a riparian fringe of treed summer greenery. Here the river

murmurs over gravels, the former boulders and rocks from the mountains ground down to size. The valley of the Sheep has a deep, wide bed of gravel and the river flows on the surface, beside the channel and beneath it. No wonder the water-loving cottonwoods, willows, red-osier dogwoods and saskatoons across the floodplain prosper. Coincidentally, amid the traffic noise is a cacophony of summer bird song, for those inclined to listen.

Unsurprisingly, humans have always gravitated to the places where wood, water and shelter made survival possible. Once



The Turner Valley Gas Plant played a significant role in Alberta's development and of Canada's natural resources history. Photo: Mike Murray.

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there, as Okotoks resident Chris Mills observes: “We have chaffed at the warnings and restrictions imposed by the river.” In flood, the river roars with a voice not to be ignored and sweeps away our puny attempts to constrain it. In drought years, the supply of water does not slake our thirsty wishes. It would be better if we recognized limits and learned to bend with the river.

Trying to bend the river to our wants is costly, it sacrifices much of the amenity and ecological values of the valley and, in the final analysis, is futile. Big rock (Okotoks) is a fine name for a town, but piled on the river banks—hardly! A mountain of boulder and concrete rip rap now covers almost seven kilometres of river bank from Turner Valley to the mouth. An observant colleague points out that there are two types of bank armouring—the type that has failed and the type that will.

Straightening and straightjacketing the channel and covering the floodplain with roads, buildings and parking lots compound problems of flooding. Intact floodplains absorb and store floodwater, dissipate energy, reduce erosion and add to groundwater storage, invaluable for future thirsty times.

Fitting communities to the river, especially for flood protection, suggests the best way to protect people from floods is to protect floodplains from people. Rivers know a secret—pay no attention to boundaries. In every flood the



Healthy banks along the Sheep River. Photo: Mike Murray.

river delivers the same, time-worn message: stay out of my way. The question becomes, is anyone listening?

On this, Mike Murray from the Bow River Basin Council provides a valuable perspective: “Watershed stewardship groups coalesce around the thought a community of interests can help direct a course for a shared landscape, providing vision, support and cooperation.” With such engaged individuals, rivers and their watersheds attract friends and develop a voice.

John Scott Black, an early southern Alberta media broadcaster (and avid angler), once told me that what is ignored and overlooked is something doomed. With the announcement of the construction of a dam that would drown three rivers (the Castle, Crowsnest and Oldman), he bemoaned the fact these rivers lacked enough friends to thwart their eventual demise. In a similar way, if the Sheep River lacks friends, visible champions, visionary bureaucrats, and local

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and provincial politicians, it is in a dangerous position.

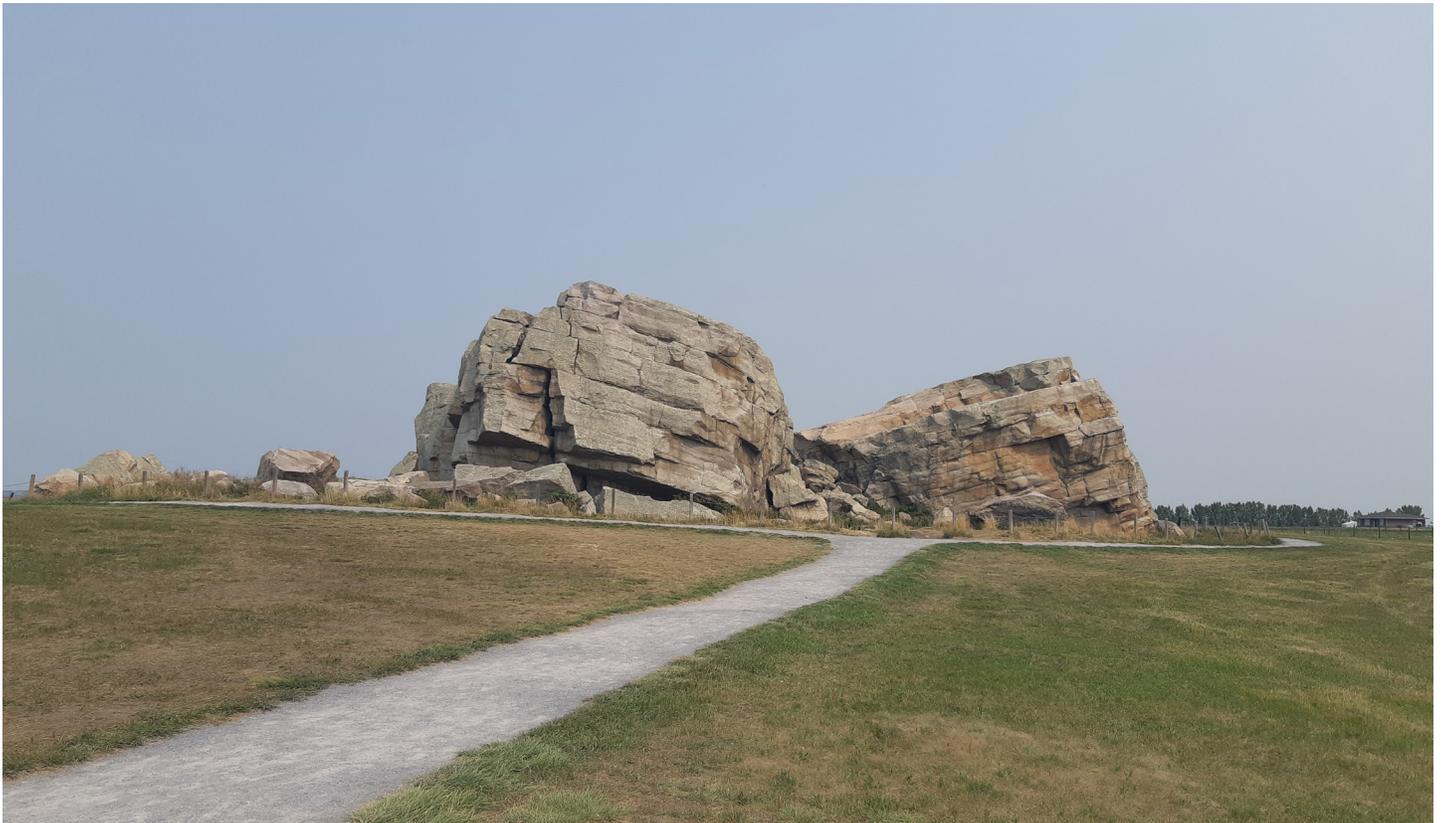
Canadian folk artist Connie Kaldor sings of going up the Sheep to climb a mountain, cooling her feet in its flow and breathe the Rocky Mountain air. The song is a poignant memory of the Sheep River because, as she croons, "I'll be there if only in my dreams." Dreams can be evocative bookmarks but alone do not guarantee the persistence of the reality that created them. The Sheep River as it once was, and maybe still is, may slip away unless there is awareness, knowledge and

the will to ensure it continues to inspire and provide its other gifts to us.

The Sheep River has a song rich with layers of meaning and expression. If you listen, and take the time to hear, the song has a complex message. The message is both eons old and as new as today. It says a river is a unified, integrated system, upstream to downstream, channel to riparian edge, visible water to subsurface flow; it cannot be divided into parts and expected to function.

The river sings to us, about us. It speaks to what changes and what stays the same. What we need and what we don't. What is precious, what is lost, and what is gained. How we can be washed away in ignorance, hubris and greed. Mostly, the song reminds us why we should care for a river that provides so much and requires some respect in return.

*Lorne Fitch is a Professional Biologist, a retired Fish and Wildlife Biologist and a former Adjunct Professor with the University of Calgary.*



Visible from considerable distance across the relatively flat terrain of the prairie landscape, 'Big Rock' is an enormous glacial erratic. The 16,500 tonne boulder was transported far from its mountainous place of origin by a rockslide, and then (between 10,000 to 30,000 years ago) carried by a glacial sheet of ice to its present-day location just west of the Town of Okotoks in the Sheep River Sub-basin (learn more at [this link](#)).

Photo: Andrea Czarnecki.

## Volunteer Request

# BRBC Fundraising Casino Event

January 21<sup>st</sup> and 22<sup>nd</sup>  
2023

Elbow River Casino  
Calgary

Calling on all BRBC members!

We need 40 volunteers to work in 4 shifts to successfully complete this important event. As in previous years, we count on and appreciate your support!

[CLICK HERE](#) to sign up for the shift and position you would like to volunteer for.

Please note that you do not need prior experience for any position; casino advisors will provide help and guidance.

Thank you!

## BRBC Quarterly Educational and Networking Forum

Foothills Centennial Centre  
204 Community Way #4  
Okotoks

December 14<sup>th</sup>, 8:30 am – 3:00 pm

### FORUM SPEAKERS

**Chad Willms and Clayton Weiss**, Government of Alberta: Springbank Off-Stream Reservoir (SR1) Project

**Rosemarie Ferjuc**, Red Deer River Watershed Alliance, **Mary Ellen Shain**, North Saskatchewan Watershed Alliance: Riparian Web Portal Demonstration

**Flora Giesbrecht**, Elbow River Watershed Partnership: Stories of the Elbow Podcast

**Sandi Riemersma**, Palliser Environmental: Jumpingpound Creek Watershed Partnership Update; Nose Creek Watershed Partnership Update

**Dylan Barnes and Emma Stroud**, Friends of Fish Creek Stewardship Work Update

**David Swann**, Upper Fish Creek Watershed Association Update

**Jinny Toffelmire and Sheri Young**, Town of Okotoks Watershed Stewardship

**Shirley Pickering**: Highwood Management Plan Project Work Update

To register, please visit [this link](#).

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The opinions expressed in the articles in this newsletter are those of the author/s and do not necessarily reflect the views of the BRBC.



The next BRBC newsletter will be released in March

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