

## TEN

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**Cover Photo** "A swift fox vixen sits outside her den in the Canadian prairies. I was on a car camping trip in the summer of 2021 with the hopes of photographing prairie wildlife such as the American badger, pronghorn, and swift fox. One morning, I happened to spot some movement out in the grasslands. As I looked through my binoculars, I was amazed to see three swift fox pups playing together. As I watched the pups, this beautiful swift fox vixen appeared and greeted her young. After some time,

the youngsters retreated to their den while their mother kept watch outside. Shortly after, she headed off to hunt, disappearing into the distance." Photographed in July 2021 by Colleen Gara. Colleen is a Canadian wildlife and nature photographer based in Alberta, Canada, and is passionate about sharing images of wild animals in their natural surroundings." – Colleen Gara

www.colleengaraphotography.com

@colleengaraphoto

#### **Editorial Note**

The Spring 2022 issue of AWA's Wild Lands Advocate launches a new era. Ian Urquhart has resigned as our long standing Editor and we thank him for his years of service. In this issue we invited our colleagues from Nature Canada to offer a perspective on the Halt and Reverse Nature Loss initiative in an Op-Ed. As you begin reading you will be immersed in our Grasslands and Prairie from the striking cover photo to comprehensive accounts of projects that threaten native prairie and vital habitats to the untiring dreams of advocates and conservationists. The spring issue includes a number of authors who will help you learn more about wild Alberta, the people who defend it and why your support is making a AWA Board President difference in the work and passion they feel.



#### ALBERTA WILDERNESS ASSOCIATION

"Defending Wild Alberta through Awareness and Action"

Dedicated to the conservation of wilderness and the completion of a protected areas network, Alberta Wilderness Association is a voice for the environment. Since 1965, AWA has inspired communities to care for Alberta's wild spaces through awareness and action. With a provincial office and library in Calgary, AWA has active members, volunteers, and sponsors throughout Alberta and beyond. AWA is a non-profit, federally registered, charitable society. Donations and financial support are greatly appreciated.

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Alberta Wilderness Association

455-12 ST NW, Calgary, AB T2N 1Y9 403-283-2025 www.AlbertaWilderness.ca awa@abwild.ca

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# There's Good News on the Nature Front



#### By Graham Saul, Executive Director of Nature Canada

here's good news and bad news on the nature front. The bad news is fairly well-known: our world is facing a full scale crisis of species collapse that is being worsened by climate change. Nature is declining at rates unprecedented in human history - more than a million species are at risk globally.

In Canada, mammal populations have declined 43 percent since 1970, and grassland and shore birds numbers have fallen by half. Only aboaut one-quarter of Canadian marine fish and invertebrate stocks are currently considered healthy. And habitats such as wetlands, Prairie grasslands and old-growth forests continue to lose ground every year.

But there is some good news too. People - and their governments around the world are starting to recognize the existential scale of the biodiversity loss, and starting to take stronger action to prevent it.

Last year countries signed a number of international declarations focused on halting and reversing nature loss by 2030 and ensuring nature's full recovery by 2050, including the G7 Nature Compact, the G20 Rome Leaders' Declaration, and the Glasgow Leaders' Declaration on Forest and Land Use.

Here at home, the Canadian government has committed to protect 25 percent of land and ocean by 2025, and 30 per cent by 2030. And last year, our government made a major investment to put those targets within reach.

Yet hundreds of thousands of hectares of forests, grasslands, wetlands and coastal areas continue to be destroyed or degraded in Canada each year.

So the Liberal Government's incorporation of a commitment to halt and reverse nature loss by 2030 in its election platform and recent mandate letters is important, and welcome.

Now the government needs to develop an effective action plan to deliver on this goal.

We have a lot to do to get there.

Canada's current biodiversity strategy is 26 years old. Few of the targets set out in the 2020 Biodiversity Goals and Targets for Canada - approved by federal, provincial and territorial governments in 2015 - have been achieved. And, in 2018, Canada's Environment Commissioner reported that "the federal government had no plan for achieving Canada's biodiversity targets."

A comprehensive biodiversity strategy will require a whole of government approach that ensures a biodiversity lens on government decisions - all of them. It would include an action plan that sets strict new limits on land use and land use change. And clearly, given past policy failures, a core part of a new 10-year action plan to halt and reverse biodiversity must be enacting a legislative accountability framework for measuring progress – just as Canada has a framework for monitoring carbon emissions under the Canada Net-Zero Emissions Accountability Act.

Environmentalists and conservationists are leading the way in calling for a new strategy.

In November, 200 nature groups wrote to Prime Minister Trudeau urging him to set out in this Parliamentary term an action plan to deliver on his election promise to halt and reverse nature loss by 2030. In February, 75 nature groups from across the country met with dozens of parliamentarians to press for a halt and reverse action plan, as part of Nature on the Hill. In April, Nature Canada will be convening experts to spell out the key elements of an action plan.

The strategy to halt and reverse nature loss must be built with Indigenous Peoples and with full respect for their rights, title and knowledge systems. Provincial, territorial and municipal governments also have a critical role to play and must be engaged, incentivized and, where possible, directed by federal action.

The strategy must also be informed by an equitable and inclusive dialogue with voices from Black and other racialized communities, and across generations.

The strategy needs to tackle all aspects of biodiversity loss from the perspectives of interdisciplinary science, data collection and management. It will require legislation, regulation and policy, programs and funding, the involvement of different levels of government, and strong accountability and reporting.

2022 is the right year for a halt and reverse plan.

Canada co-chairs the negotiations for the Post-2020 Global Biodiversity Framework (GBF), expected to be signed in 2022 by the 197 countries that are parties to the Convention on Biological Diversity, creating a new ten-year legally binding framework. Canada and other signatory countries will be obliged under the proposed GBF to implement mechanisms for planning, monitoring, reporting and review including establishing national targets and action plans.

The loss of nature - combined with climate change - threatens our survival. But nature also offers a way out of this crisis. If given a chance, nature can recover - and help us recover balance too.

By launching a comprehensive and science-based action plan to halt and reverse species loss by 2030, Canada can help set nature on the road to full recovery and fulfill its role as an international leader, providing hope for a more equitable, climate neutral and nature positive world for all.

And this would be some welcome good news.

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## Planets Coming into Alignment:

The Central Grasslands Roadmap, International Year of Rangelands and Pastoralists and More ... By Cliff Wallis, AWA Director

liberta Wilderness Association has a long history of grassland work, serving on the Prairie Conservation Forum, the Northern Plains Conservation Network (now Great Plains Conservation Network) and the Transboundary Grassland Partnership for Saskatchewan, Alberta and Montana.

This is an exciting time for grassland

coming into alignment – especially with the Central Grasslands Roadmap and the expanding international context. Globally we now have recognition of biodiversity loss and the need for more protected areas – the 30X30 process or High Ambition Coalition is part of that. Canada and Mexico have signed on to that commitment to achieve 30 percent

conservation as it seems the planets are





protection by 2030. America's President Joe Biden signed an executive order which we hope will help the USA also meet this ambitious goal.

The world's rangelands cover over half of the planet's lands and support more than 2 billion livelihoods but grasslands have been at the bottom of the list for conservation and economic priorities. That is changing. Since the Hohhot Declaration in 2008, NGOs have been working on an International Year of Rangelands and Pastoralists to be held in 2026. It now has support from 75 countries, including Canada and Mexico, and three hundred organizations. At the time of writing, the final vote to approve is happening at the UN Environment Assembly in Nairobi. This will bring needed attention to the world's grasslands and hopefully new commitments and resources.

In 2020, World Wide Fund for Nature established the Global Grassland and Savannahs Dialogue Platform with monthly calls. WWF has been at the forefront of grassland conservation since the late 1980s with Prairie for Tomorrow in Canada, and globally since the early 2000s when they identified temperate grasslands, including the Northern Great Plains, as one of their global conservation priorities. Over the past two years, the Platform has been busy at international meetings, including The Global Landscape Forum, World Conservation Congress, UN Food System Summit, Convention on Biodiversity and UN Commission to Combat Desertification. There are working groups doing mapping and data collection and identifying globally significant grassland and savanna areas.

Alberta's Prairie Conservation Forum and Saskatchewan's Prairie Conservation Action Plan are collaborative networks that have been active since the late 1980s. They have increased the recognition and protection of native grasslands. More recently, those networks helped form the Transboundary Grassland Partnership, representing Indigenous peoples, governments, ranchers, and NGOs working on plains conservation in Alberta, Saskatchewan and Montana.

One of the most important recent changes for the northern plains has been the identification by Environment and Climate Change Canada of the southern part of the Canadian prairies as a priority landscape for species at risk recovery.

Exciting to me is the commitment to bison reintroduction. Indigenous Peoples started the Iinnii Initiative to put bison and cultural traditions back into their landscapes. In 2014, tribes and First Nations signed on to the Buffalo Treaty. It states: "we are part of the buffalo, culturally, materially and spiritually. Our ongoing relationship is so close and so embodied in us that buffalo is the essence of our holistic ecocultural life ways." As Amethyst First Rider of the Kainai says: "buffalo make us better human beings." It's an exciting time with bison reintroduction happening from the Kainai lands in Alberta south through Montana, the Dakotas, and Colorado to the grasslands of northern Mexico.

With this attention to grasslands, Joint Ventures representing the Great Plains from Canada to Mexico formed the JV8 where a lot of focus is now on grassland conservation in addition to their wetlands and bird work. There is also the Trilateral Committee between Canada, the US and Mexico which coordinates continental efforts on ecosystem conservation.

Where does the Central Grasslands Roadmap fit in? The easiest answer comes from the Central Grasslands Roadmap Executive Summary:

"The Central Grasslands Roadmap is a collaborative guide to increase support for conservation of North America's Central Grasslands, which span 500 million acres across Indigenous Lands, Canada, the United States and Mexico. By bringing together 8 diverse sectors and three countries, the Roadmap identifies common principles and shared priorities for the many people and organizations living and working on the Central Grasslands. The Roadmap will enable us to save what we have left, restore and improve what we can, and support biodiversity and resiliency across the landscape."

"Disparate efforts are not adding up, and measures of wildlife populations, grassland acres, human community health and sustainability are down, and continue to decline. We have to think, act and do differently, and that starts with us working together to get on the same map, agreeing to the directions we need to go that focus on what we need to do more of, what we need to know more about, and what new strategies are critical to saving our grasslands over the next ten years."

"This roadmap enables the collaboration of 8 sectors from Canada, the U.S., and Mexico to see how we can gain traction on unified initiatives for policy and funding, how more local strategies can be connected across the Biome, and how we can share and leverage best practices, research, and funding to make scaling great work more straightforward."

- "Indigenous Communities & First Nations
- Private Land Managers, Owners, Ranchers & Producers
- Federal Agencies
- Provincial & State Agencies
- Industry & Private Sector
- Academia including scientists, researchers, and universities
- Non-Governmental Organizations
- Foundations & Funders"

The Central Grasslands Roadmap outlines three main strategy areas:

STRATEGY AREA 1: CREATE AND ENRICH STRONG PARTNERSHIPS – priorities in this area include sharing knowledge and resources across cultures and broadening communications to establish a shared understanding of the importance of grasslands.

STRATEGY AREA 2: REFINE FUNDING AND POLICY INITIATIVES –

priorities include scaling up proven programs that support grassland conservation and influencing major legislation across all three countries, including the North American Grasslands Conservation Act.

STRATEGY AREA 3: FOCUS ON RESEARCH THAT IMPROVES CONSERVATION – priorities including integrating community-centred approaches and knowledge and refining core monitoring standards.

The intent of the Central Grasslands Roadmap is not to duplicate efforts but network the networks and individuals doing the on-the-ground work. AWA has expressed its support of the Roadmap, writing:

"As an organization that works to steward and conserve a portion of the Central Grasslands biome, the Alberta Wilderness Association is committed to the vision, priorities and guidance set forth in the Central Grasslands Roadmap as outlined in its Executive Summary. We are committed to the Roadmap collaboration to ensure that our way of life and one of the most important ecosystems on the planet, remains intact."

"The Central Grasslands are needed to support pollination, prevent erosion, and provide habitat for wildlife. Healthy grasslands also filter sediment, nutrients, and bacteria that otherwise end up in waterways, threatening fish and drinking water. Most importantly, the Central Grasslands ability to sequester carbon and help stabilize the climate is extensive, all while simultaneously producing critical food supplies and serving as the economic backbone of rural communities."

"Our fish and wildlife, water, climate, food supply, and way of life are dependent on the collective effort laid out in the Roadmap. By working together and committing to mutually beneficial actions we can conserve essential habitat for future generations with ranchers, producers, and Indigenous communities at the center of the solutions, and provide sustainable economic opportunities where those are needed most."

"Specifically, to help achieve the vision, we are focused on collaborating with other supporters to achieve legal protection for large tracts of native grassland in Canada while supporting the interests of the communities that depend upon them. We also continue to co-manage, with the local community, part of an extensive tract of protected native grassland in southeastern Alberta where we use prescribed grazing to achieve a variety of desired conservation outcomes while respecting local interests."

The Central Grasslands Roadmap will hold its first in-person summit at the end of May in Fort Collins, Colorado. In the lead up to this second summit (the first was virtual), this collaborative is seeking the support of individuals and organizations across the Great Plains.

Our grasslands are wonderful places and it's reassuring to think the planets are coming into alignment for what could be a big leap forward in grassland conservation. We are redoubling our efforts to achieve the big wins that may now be possible.

## A Prairie Oasis A Plan for Bighill Creek

#### By Vivian Pharis, Vice President of Bighill Creek Preservation Society

hen our little band of mostly retirees undertook a watershed plan for Bighill Creek in 2015, eager to be its proponents and advocates, we did not anticipate becoming its defenders. Our group of seven was thinking in positive terms, like "needed", "doable" and "challenging." Something worthwhile that we could sink our teeth into and enjoy doing. Far from our minds were the words "adversarial", "combative" and "controversial." We had retired from all of that and who wouldn't support a watershed plan? Especially so, when such plans had been identified as needed for all three creeks feeding the Bow River at Cochrane. By 2015, Jumping Pound Creek already had a citizen-developed plan and one was underway for Horse Creek. Only Bighill Creek lacked a group of proponents. But we had no idea how gravel and its politics

would come to dominate our efforts.

In 2015, we identified our mission for Bighill Creek as "to ensure the natural and historical values of Bighill Creek Watershed are preserved for this and future generations." Over the next six years, our society planned and diligently raised grant monies and donations to hire professionals to carry out assessments of water and sediment quality, riparian and stream health, fish habitat and suitability to reintroduce native trout. We were one of the first streams in Alberta to be assessed for e-DNA, or environmental DNA. We studied levels of phosphorous and E. coli. We studied benthic and terrestrial insects. Along with Trout Unlimited, we installed 12 temperature loggers to understand annual temperature variations throughout the creek. We undertook the stewardship of 40 acres of environmental reserve in the creek



The main spring at Big Hill Springs. Pure crystal clear water from an ancient aquifer inspires its defenders. Photo ©Tobi McLeod



bottom, maintained its trails and built a footbridge.

We identified areas for further study of the watershed's rich geology, archaeology and history, and began finding experts to help us. A whole different study was designed and ready to launch in 2020, before it was halted by Covid19. We hope to pick up this work once students are allowed back into the field.

We were busy, and paid only peripheral attention to growing gravel interests in Rocky View County, and how closely they were converging on Big Hill Springs Provincial Park, the tiny, 70+ acre park in the heart of Bighill's 174 km<sup>2</sup> water basin.

#### Aggravating aggreagates

Aggregates, mainly sand and gravel, underpin modern cities like Calgary. They are the stuff of roads, rail beds, interchanges, bridges, homes and our increasingly vertical living/working spaces. Like many cities, Calgary relies on constant growth for its success. This means needing a constant supply of sand and gravel (the cheaper, the better) to maintain physical growth. Luckily for Calgary, it sits between counties Rocky View and Foothills that are both underlain by huge deposits of glacial alluvium left behind when the Cordilleran and Laurentian ice sheets collided, halted and melted at the end of the last ice age. An Alberta Geological Survey in 1980, suggested more than 100 million m<sup>3</sup> of gravel lie within a short haul (or 30-90 km) of Calgary. Another Alberta Geological Survey noted in 2003, that there were 446 developable deposits in Foothills County alone. The price to the city in 2003 was under \$6.00/tonne. Rocky View County (RVC) currently operates about 20 pits



Dedicated volunteers share a vision of this prairie oasis and hope to make a difference in the conservation of this vital ecosystem. Photo ©V.Pharis

and with Royalty rates at \$0.45/tonne, this forms the county's second greatest source of income after taxes. But the total annual income contributed to RVC from gravel assets amounts to around \$1million, hardly enough to justify the horrendous toll gravel hauling takes on county roads alone.

Conflicts are increasing between gravel mines and residents in counties like Foothills and Rocky View and throughout many of Alberta's 69 municipal districts. Citizens are even taking their councils to court to gain control over gravel decisions that may be made with limited, or no public input. Decisions made showcase aggravatingly archaic protections for ground and surface waters in Alberta.

Gravel and sand, unlike oil/gas and timber, are the only public resources not directly administered by the province. Instead, primary decisions over mining these occur at the county level through land-use zoning changes. Most municipalities lack technical staff able to evaluate and advise councilors and the public on technical issues like hydrogeology and ground water, that are often impacted by gravel mines. Alberta's Environment and Parks Department (AEP) administers Alberta's Water Act and has the technical expertise to evaluate the impact of gravel mines on hydrogeology. But in Alberta, AEP is a secondary, restricted player in gravel decisions. AEP is only allowed to review applications after municipal approval, through AEP's Code of Practice for Pits.

Although the Code does include provisions under the Water Act, its strongest groundwater protective language is: "aquifer disturbance may require pit registration holders to take extra precautions." AEP is only required to examine a gravel mine proposal under the Water Act if the proponent states that it may/will disturb ground or surface water. Environmental impact assessments of gravel/sand mines are municipal and rare.

In fact, in 2016 an earlier RVC council began to develop a forward-thinking Aggregate Resource Plan that would have included environmental assessments. For no known reason, except for what seems to be expediency for gravel pit approvals, council scrapped the almost-completed plan in 2019.

#### Park vs gravel

Bighill Creek Preservation Society (BCPS) learned a lot about gravel on a fast-tracked basis, made necessary when gravel interests purchased eight quarter sections, or about 1300 acres, of land on the immediate north and west boundaries of Big Hill Springs Provincial Park. The first new mine, called Mountain Ash Limited Partnership's Summit Pit (MALP), had by 2020 already sought and won preliminary land zoning changes from RVC. A county hearing on a "Master Site Development Plan" was set for March 2, 2021, this being the only opportunity for public input into the mine.

Suddenly BCPS was forced to reduce

its focus from the broad watershed to the 70-acre park, along with its main spring and aquifer. Many in the Calgary-Airdrie-Cochrane area will know Big Hill Springs Provincial Park as it is one of their closest parks. It is also one of Alberta's oldest provincial parks, designated in 1957 after land was gifted from the estate of Senator Patrick Burns, once a major land holder in the Calgary region. The land was gifted either for a fish hatchery, predicated on the year-around flowing creek, or as park land to help protect the area that was already, in the 1950s, attracting large numbers of campers, fishermen, picnickers and partiers.

The original park did not include the main springs that supply 50 percent of the water to the creek and whose special attributes have allowed the buildup over 10,000 years, of the exceptional tufa rock formations that make the park such an attraction. The springs site was purchased in the late 1970s from the Boothby family that continues to be a main land holder in the region. AEP closed the park for over a year in 2020 in order to carry out new boundary fencing and renovations needed because of over-use. Before closure, the park was receiving 250,000 annual visitors and since re-opening, that number is likely to be well exceeded, showing the dire need for parks in the Calgary area.

Big Hill Springs Provincial Park is recognized not just for its nationally significant thermal spring and tufa formations, but as a prairie oasis where ecological regions meet and intermingle. Foothills with prairie, aspen parkland with foothills. Early management goals were to have the park become a special-interest interpretive site that explored and explained the diverse biotics and geological features. Ancient indigenous use is obvious with a buffalo jump dominating the eastern view. Alberta's first commercial creamery occupied the site for nearly 20 years, starting in 1891 and supplying Calgary, forestry and mining camps in the broader region. The remnants of an early 1950s fish hatchery are part of the park.

Park management plans from 1976 and 1998 were being constrained by the limited size of the park and with degradation due to heavy human use. The 1976 plan called for acquisition of the spring itself, which subsequently happened, but with the land owner refusing to allow the creek between the spring and the park to be included. Both plans cite the buffalo jump or cliff area to the east as a natural feature that should be within the park. The 1998 plan discusses the need for a much-expanded park and recommends including the decommissioned roadway and the valley between the park and Cochrane. More recently, RVC commissioned a major recreational plan, released in 2011, that again calls for park expansion and the roadway between Cochrane and the park to be opened as a foot trail. In 2022, the park faces a very uncertain future as gravel interests threaten to foreclose on its west and north flanks and with RVC and AEP showing no interest in park expansion.

### Hearing gives democracy the big boot

It soon came to light that MALP had already sought and been given preliminary approval in the form of a land-use zoning change from agricultural to industrial. This happened without public knowledge or input. BCPS was forced to refocus. Fortunately for us, two University of Calgary student projects examined the unusual aquifer supplying Bighill's main springs; one in 2004 on springs hydrology and the other in 2007 on the aquifer or recharge area. This means we had data on the parameters of the aquifer and how the springs function. We were able to superimpose the aquifer map with proposed gravel developments. This



**Bighill Creek Watershed** 

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gave us an easily-understood visual tool. Once word of the proposed new mine was out, a flourish of media stories appeared about the vulnerability of the park. Landowners near the park set up an organization, Friends of Big Hill Springs Provincial Park. Together with BCPS, the "Friends Group" established Facebook and GoFundMe pages and in 2021 a petition to protect the park drew over 10,000 signatures. Despite the petition and local opposition, area MLA Pete Guthrie chose to support gravel interests. Pit politics extended from municipal to provincial.

Approval of a Master Site Development Plan for MALP required a "public hearing", scheduled March 2, 2021 that was conducted "virtually" with only the proponent allowed interaction with RVC council members. BCPS and Friends of Big Hill Springs Provincial Park (BHSPP) had joined forces to commission Dr. Jon Fennell, one of Alberta's foremost hydrological engineers, and one with superior credentials to those of SNL Engineering's Vancouver Island-based engineering expert, to review MALP's application. Jon Fennell did a masterful job explaining how this gravel pit could alter the spring's chemistry when buried sediments are excavated and exposed, and made a number of pertinent recommendations that became the backbone of the two groups' submissions at the hearing. He contended that extracting 25 metres of gravel, leaving only a 1-metre buffer, would not protect the aquifer, groundwater and spring. His primary recommendation, to set gravel developments back 1 mile or 1.6 km from the park boundary, was essentially echoed by Alberta Parks and the mayor of Cochrane in letters to the RVC hearing.

How did these influence RVC's decision? Very little, it would seem. RVC essentially dismissed around 100 citizen submissions opposing MALP's application. They also dismissed Jon Fennell's report because, incredibly, it lacked the page with his professional credentials and was therefore apparently inadmissible. After the hearing, it came to light that it is standard practice for RVC staff to pull the signed page with credentials from professional reports, for security reasons. Also dismissed was the powerful letter from Alberta Parks, because it arrived the day of the hearing instead of



Bighill Creek Valley looking east across Big Hill Springs Provincial Park. Bighill Creek meanders through the valley blanketed by Buffalo Jump cliffs seen in the background. Photo ©Tobi McLeod

the day before. Over-ruled was eloquent testimony by our local councilor who made an impassioned plea to save the park.

March 2, 2021 proved to be a sad day for municipal democracy. RVC's council sealed the park's fate in a defiant 6:3 decision. Just the week before, Bearspaw residents had swamped a similar hearing and forced RVC to back down from approving another large gravel mine on the City's outskirts near Spy Hill. It seems Council gravel hawks were not going to lose another pit!

#### **MALP's Modus Operandi**

So, who is behind Mountain Ash Limited Partnership? MALP's owner is a Calgarybased oil and gas entrepreneur. Bruce Waterman is linked with the who's who of Calgary's oil and gas scene, including most recently being an independent director of Ovintiv. He's also a retired executive of Agrium, a large agriculture company.

In a virtual meeting with BCPS, Mr. Waterman told us that he had originally bought land near the park in order to build a country residence. In fact, in 2008, Mr. Waterman opposed a nearby gravel pit application. In a letter to Rocky View Planning Services, he stated he was "extremely OPPOSED" to a nearby pit because it would be incompatible with existing agriculture/ranching activities, would cause increased traffic and risk of road accidents, and disrupt the quiet enjoyment of his property. Why the sharp turnaround from country residential to gravel mine, who knows, but since his property lies just east of the operating Hillstone gravel pit, the constant noise and silica dust would be a deterrent. If you can't beat 'em, join 'em?

MALP hired SNL Engineering to develop its application for a gravel mine, which was adopted as approved following the RVC hearing in March 2021. But a prior hydrological report had gone to RVC that BCPS was able to obtain through a freedom of information application, indicating SNL had advised MALP that although its pit operation might "slightly increase discharge", it claimed this "would not alter" groundwater, therefore there was no need for AEP to examine the mine under the Water Act. This is despite the fact that Alberta's Water Act can be triggered by any "activity" that "disturbs or alters" water or a water body. MALP could not avoid triggering AEP's Code of Practice for Pits, since it must remove 13 of the 20+ wetlands on the property. Thus, a public

notification was triggered and a chance for a second round of public input, restricted to "wetland disturbance" and to comments from only those who could prove they would be "directly affected" by the proposal. In early January 2022, AEP allowed a seven-day window for submitting "Statements of Concern" regarding wetlands removal.

#### **BCPS's Modus Operandi**

The shocking March 2, 2021 RVC hearing; the jeopardy the park and spring are now in; the exposed weaknesses within AEP to defend groundwater from gravel mines - all of these taken together have pushed BCPS to continue seeking a more ecologically sound and democratic outcome.

We essentially hounded AEP throughout the past year since RVC's decision, in order to achieve a hearing for groundwater issues that could arise from mining the aquifer of one of Canada's "top four thermal springs", as ranked by Parks Canada in 1984.Finally, just before Christmas 2021, BCPS was told there would be a brief window of opportunity for those "directly affected", or those living within the right distance of the proposed mine, to submit Statements of Concern (SoC) regarding wetlands disturbance on the mine site. No submitter restricted themselves to wetlands as it is groundwater that needs critical attention. Submissions are now being assessed by AEP before they will be turned over to MALP for rebuttal. Apparently there will be no further opportunity for public input after this and before AEP makes its final decision. Once again, it seems the proponent gets the last word in this very unsatisfactory process.

Since BCPS had prior warning of the January SoC window, we used the Christmas period to research and assemble a considerable statement with appropriate appendages. We laid the groundwork for a next and harder step, if we are forced to go there. Local landowners as well as professional geologists and biologists developed so many statements that AEP extended its scrutiny period. The BCPS and other SoCs are available in full on the BCPS website.

This treasure, this park has many outraged defenders. All Albertans should be outraged by what's happening to this old provincial park that truly is a prairie oasis.

#### A dream, but not just ours...

Looking forward, BCPS dreams of our glacially carved valley with its multiple springs, its rich and varied biology and geology, long history of indigenous use, its more recent and colourful European use and with its gem of a park, protected forever.

We see the need for expansion of the park and for its ecosystems to be protected and interpreted in living laboratory fashion. As called for in earlier management plans, the cliffs to the east make an obvious potential extension. RVC's 2011 Parks and Open Space Master Plan suggests the valley bottom between Hwy 567 and the park could be protected and linked to Nature Conservancy lands north of the highway. At least one landowner expresses similar interest. A far more radical proposal would be to acquire the three quarter sections of land now owned by gravel operator Burnco, on the north and west park boundary, as parkland. These lands contain a small, picture-perfect abandoned ranch nestled into the valley, framed by the

expanse of the Rockies to the west. This is the stuff of park dreams. What a perfect place for contemplative trails and historical interpretation. And, all so close to the 1.5 million people in Airdrie, Cochrane and Calgary. What a boon this could be for Rocky View Country.

Both the more recent park master plan and the RVC Parks and Open Space plan, identify the need to open the decommissioned roadway between Cochrane and Big Hill Springs Park, to foot and bicycle traffic. This could provide a route through a picturesque valley, with the opportunity to continue trails to Glenbow Ranch Provincial Park, and even into the city through Symons Valley. What a boon to nature, human health and enjoyment.

But we were not the first to dream this way. Recent documents have come to light showing the Devonian Foundation sought park protection for the whole lower valley in the early 1970s. BCPS is aware that the Nature Conservancy of Canada continued those endeavours through the 1980s and 1990s. The need to protect park space in RVC is acute. RVC contains three provincial parks, BHSPP at 0.40 km<sup>2</sup>, Bragg Creek at 1.28 km<sup>2</sup> and the larger Glenbow Ranch at 13.48 km<sup>2</sup>, amounting to 15.16 km<sup>2</sup> in total, or only 0.4 percent of the county's land base. RVC is Alberta's most populous county and it actively seeks more residents by advertising a "country lifestyle", yet it provides few of those lifestyle attractions in terms of trails, parks and nature interpretation.

Tiny Big Hill Springs Provincial Park has the potential to expand and perhaps even merge with Glenbow Ranch Park. What a boon that would be for humans and wildlife if the two protected valleys could be interconnected forever through wildlife and human corridors!

Please note that I have used two spellings for Bighill throughout my article. This is deliberate. The park is called Big Hill, but when BCPS researched which spelling is most historically correct, we found that Bighill is the historical spelling, so we adopted it for our society and the creek.

Vivian Pharis is currently Vice President of Bighill Creek Preservation Society and has lived on the creek's escarpment for the past 50 years.



Historic Parker Ranch nestled here invites reflection and time to learn from the rich natural resources of Bighill Springs. Photo ©Tobi McLeod

## Conservation and Grazing Management in the Prairie Provinces

#### By Ruiping Luo, AWA Conservation Specialist

razing is used in many of Canada's parks and protected areas to support conservation. Alberta's remaining grasslands, also known as prairies or rangelands, frequently sustain livestock grazing, and the historic management of grazing pastures has contributed positively to the health of many areas. Moderate grazing promotes grassland health when it increases biodiversity and improves ecosystem services. The continuing destruction of native grassland habitats in the Grassland Natural Region is a serious concern and is one of the reasons why temperate grasslands have been identified as a global priority for conservation and protection as one of the World Wildlife Fund's Global 200 ecoregions. With this in mind, it is time to re-examine the role of Alberta's grazing pastures in grasslands conservation, and to reorient grassland management practices in order to strengthen these ecological benefits of grazing.

#### Alberta

Sustainable management is essential to maintaining long-term grazing operations, and frequently supports conservation of prairie landscapes. Grazing operations on Alberta's public land use Ecologically Sustainable Stocking Rates (ESSRs), which restrict the amount of forage consumed so that plant vigour is preserved, soil is protected, and wildlife habitat is retained. In Alberta, clear guidelines for grazing management are outlined in the Operating Standards for Alberta's Public Land Grazing Dispositions and the Grazing Lease Stewardship Code of Practice. These guidelines outline the principles of range management as:

 Balance forage supply and demand;
Avoid grazing during vulnerable periods; 3) Distribute livestock evenly; and 4) Provide effective rest. Land managers are expected to administer land based on the established guidelines. When followed, the stewardship outcomes in these documents help to ensure ecological integrity and function is maintained.

Alberta Environment and Parks is responsible for monitoring grazing activities on Alberta's public land. Agrologists set forage allocation, approve any infrastructure development, and assess stewardship outcomes by determining the health and function of grasslands through range health assessments. Alberta uses separate range health assessments for tame and native grasslands. Both assessments consider site stability, amount of litter and the presence of noxious weeds, though the native grassland assessment focuses on comparing plants to a reference community, while the tame pasture assessment addresses the relative growth of forage plants. Woody encroachment, evaluated as the growth of trees and shrubs, is only determined for tame pasture. This monitoring helps to confirm that stewardship objectives are met and grazing operations are sustainable. When stewardship objectives are not met, agrologists suggest management changes to address issues and causes of land degradation. By applying Alberta's guidelines for grazing management and monitoring land use, pastures may be managed to maintain sustainable forage production, protect sections of native prairie, and sustain ecological function.

Additional actions for conservation are mainly voluntary. For instance,



MULTISAR, a program of the Alberta Conservation Association focused on multi-species conservation in the Grasslands Natural Region, works with landowners on a voluntary basis to maintain habitat and protect species-atrisk. In addition to grazing management tools, these efforts include artificial habitat structures, such as nesting platforms for ferruginous hawks, fencing alterations to reduce wildlife mortality, planting of shrubs and protection of trees and riparian areas. From 2004 to 2020, 535,254 acres of both public and private land in Alberta were surveyed for conservation objectives. Yet, compared to over 6 million acres of grazing dispositions on public land alone, these projects constitute only a small portion of Alberta's grasslands.

#### Manitoba

Similar grazing practices are used in Manitoba's Community Pastures to conserve ecological integrity. Until 2014, these pastures were administered by Agriculture and Agri-Food Canada (AAFC) through the Community Pastures Program, with the aim of reclaiming degraded soils while providing pastures for livestock grazing. The management strategies used by the program were successful in stabilizing soils and encouraging sustainable grazing, while improving native habitat for many species-at-risk. Currently, the Association of Manitoba Community Pastures (AMCP), in its own words a "financially self-sustaining, not-forprofit organization," manages 19 pastures containing over 141,000 hectares of land on some of Manitoba's largest and most diverse blocks of remaining native prairie.

AMCP applies the same 4 range

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management practices as Alberta to encourage sustainable forage production. In addition, AMCP applies a fifth principle: minimize repetitive defoliation of plants. Range health assessments are conducted following the Manitoba methodology for native grasslands and the Alberta methodology for tame pastures. Like Alberta, Manitoba's range health assessment for native grasslands considers the plant composition relative to a reference community, soil stability, litter amounts and invasive weeds. Manitoba's assessment also includes woody encroachment, which is only considered in tame pastures in Alberta. As well as monitoring, lands are generally not cultivated or fertilized, and motorized vehicle use is minimized by conducting most work on horseback. The provincial government conducts wildlife surveys on the pastures, and wildlife and species-at-risk recovery is incorporated into land management plans based on survey results. Work for burrowing owl recovery was conducted in 2017 by installing eight artificial burrows on one pasture. Through these practices, Manitoba's Community Pastures have helped to protect intact native grasslands and to support species-at-risk recovery while maintaining their primary objective of a providing a strong forage supply.

#### Saskatchewan

In Saskatchewan's Grasslands National Park, by contrast, livestock grazing is allowed though there is a greater focus on conservation. Grasslands National Park is a 73,000-hectare area in Saskatchewan, and the only national park in Canada containing the mixed-grass prairie ecosystem. According to Parks Canada, the organization responsible for the park's management, Grasslands National Park was established in 1981 "to conserve, protect and present a portion of the Prairie Grasslands." Much of the land acquired for the park was once used for ranching and the lands contain a mix of native and tame grasses. Along with a diversity of landscapes and wildlife, including over 20 species-at-risk, the area contains thousands of archeological sites and impressive fossils.

For a couple of decades after park establishment, cattle grazing was phased out. In 2006, Plains bison were reintroduced to the park. More recently, cooperation with neighbouring ranchers has reincorporated cattle grazing into the park. This reintroduction of grazing was done with the intent of restoring the necessary grazing disturbance that supports a wider range of grassland biodiversity. Plains bison reintroduction has also aided the recovery of grassland ecosystem function.

Unlike most pastures for livestock grazing, the highest priority in Grasslands National Park is maintaining and restoring ecological integrity. Grazing management strategies used in the park are not overly different from in other pastures, although grazing is implemented as a necessary disturbance and forage is shared with bison herds. According to research conducted in the park, diversity in landscapes is important for high biodiversity, and can be created by varying the extent of grazing. As a result, some sections in Grasslands National Park are heavily grazed while others are not grazed. One strategy used by park management is intense, short-duration grazing, which complements the moderate, longer-duration grazing common on pastures outside the park, increasing overall landscape diversity. Rest periods have also been shown to improve both habitat diversity and ecosystem health, with songbird populations, such as Baird's and Savannah Sparrow, recovering after one to two years. Grazing in Grasslands National Park also considers the needs of species-at-risk, and can be used to achieve targeted results. For example, beginning in 2018, livestock grazing was applied on roughly 40,000 acres of land in and around Grasslands National Park to create or improve habitat for three species-at-risk: greater sage-grouse, Sprague's pipit, and chestnut-collared longspur. In this way, grazing can be a tool to support conservation goals.

Along with grazing, several other conservation projects have been undertaken in Grasslands National Park. To increase habitat for many grassland species, 1,133 hectares of previously cultivated land in Grasslands National Park were reseeded to native grasses. Native prairie is crucial to the survival

of many grassland species and native grasses improve many ecosystem services, including carbon storage and water filtration. Additionally, active efforts to protect and restore species at risk have been taken. For example, planting of sagebrush was undertaken to enhance greater sage-grouse habitat. Approximately 140 km of fences, which can contribute to sage-grouse mortality, were removed or marked to increase visibility and prevent collisions. Eastern yellow-bellied racer snakes were monitored for locations of road crossings and the speed limit was reduced at these sites. Finally, an extirpated species, swift fox, was reintroduced to the area.

Comparatively, the Prairie Pastures Conservation Area in Saskatchewan, although also prioritizing conservation, has a much greater focus on livestock grazing. Like Manitoba's Community Pastures, these lands were formerly administered under the federal Community Pastures program. The current state of the 80,093-hectare area, which retains over 95 percent of the native prairie, is a testament to the achievements of the program. The area currently provides habitat for at least 12 species-at-risk, and has been recognized as a High Priority Conservation Area. Since 2020, these lands have been managed by Environment and Climate Change Canada's (ECCC) Canadian Wildlife Service (CWS) for grassland ecosystem and species-at-risk conservation. A management strategy is being developed through consultation with stakeholders, including local landowners and ranchers, Indigenous Peoples, and conservation groups.

Livestock grazing remains a significant land use in the Prairie Pastures Conservation Area. To ensure conservation objectives are met, grazing standards and range health assessments are applied and grazing limits are adjusted according to the soil, climate and seasonal conditions. As with Alberta, the range health assessments compare the plant composition to reference communities and assess soil erosion, litter amount and invasive weeds. Saskatchewan, in addition to the grazing principles set in Alberta, defines additional goals of range and pasture management: maintain healthy watersheds and soil; meet the physiological needs of the animals; optimize livestock gain per acre; and be economically sound, practical to implement, simple to operate and flexible. Despite the recent emphasis on conservation in the Prairie Pastures Conservation Area, there has not been a need for grazing to be reduced. Additional restoration activities are being considered, including improving soil health, reclaiming barren or disturbed sections, and conducting assessments for speciesat-risk. The management of the Prairie Pastures Conservation Area suggests these additional conservation activities can be undertaken with little or no compromise to grazing.

#### **Alberta - Conclusion**

Alberta's grazing management principles are acknowledged to help promote healthy grasslands, applying standards and range health assessments common to

the prairies. However, while these standards prevent degradation, they are aimed at maintaining sustainable forage systems. To combat the rapid loss of native prairie and the decline in species reliant on these systems, current approaches to grazing management alone may not be enough. One possibility to encourage conservation values is to expand grazing principles to include consideration for watersheds and wildlife, as in Saskatchewan, or encourage monitoring of defoliation, like Manitoba.

Some federally listed species at risk, like Mountain Plovers and Thick-billed Longspurs, favour areas of heavy grazing or recently burned grasslands, especially in the Dry Mixedgrass Natural Subregion. Others species at risk like Sprague's Pipits and Baird's Sparrows prefer lightly grazed or ungrazed areas. Therefore, it is important to maintain suitably-sized patches of various grazing regimes on the landscape so all species can thrive.

Implementing strategies to increase landscape diversity, including

species-at-risk assessments in land management plans, or more widely applying recovery plans could help halt the decline of endangered populations, while reseeding cultivated or degraded sections to native grasses could increase and improve grassland habitat. As the management of pastures in other provinces suggests, these changes can be made with minimal impacts to grazing. Although grazing pastures are already valuable for retaining native prairie, complementing existing grazing management with conservation actions using new approaches to grazing management may be necessary to prevent further loss of grasslands and the species reliant on these habitats.

Cattle grazing on healthy, abundant grasslands in southern Alberta. Photo ©C. Campbell



### Are Prairie Rivers at Risk? Irrigation and the Future of Southern Alberta's Rivers

#### By Lorne Fitch, P. Biol.

### he pathway to degraded rivers

The heat dome and severe low flows of 2021 had me reflecting on the recent scheme by southern Alberta's irrigation sector to massively expand irrigated acreage. In response, I thought of the old hymn, "Shall we gather at the river". Some of you with church experiences might remember the refrain: "Yes, we'll gather at the river/The beautiful, the beautiful river..."

The details of this irrigation expansion, spun as a "modernization" project, are vague. Ten of the 13 Irrigation Districts with funding support from the Province of Alberta and the Canada Infrastructure Bank propose to "modernize" 86 components of irrigation infrastructure and construct (or expand) four off-stream reservoirs. Through increases in irrigation efficiency and water storage, the goal is to save sufficient water to increase the acreage under irrigation by 230,000 acres (+15 percent). This will be the single largest irrigation expansion in Alberta's history.

Irrigation Districts now hold licenses to withdraw roughly half of the average natural annual flow from the Bow and Oldman rivers and their major tributaries. This doesn't leave much room for providing water for uses outside of Irrigation Districts since half of the average natural flow in the South Saskatchewan River basin must be passed on to Saskatchewan according to a 1969 intergovernmental agreement. On average Irrigation Districts withdraw two thirds of their allocation each year. But in dry years essentially all the licenced amount is removed. Summer is the most critical period since demand for other uses of our rivers peaks then.

Evidence from government reports shows that southern Alberta rivers below major irrigation dams and diversions are stressed. Some are significantly degraded and the prognosis is for a continual decline in river health. That is the inescapable reality.

The proposed irrigation expansion, in the context of this reality, begs investigation. What are the implications of these irrigation ambitions?

### Historical context—Why increase irrigation acreage?

We need historical context to see how the past influences the future. Irrigation Districts (or their precursors) have been diverting water from southern Alberta's rivers for well over a century. They have erected an extensive network of dams, diversions, reservoirs and irrigation canals. By now they divert, store and deliver water on demand to more than half a million hectares in a semi-arid landscape. Taxpayers largely paid for this marvel of engineering.

The history of water allocations to irrigation illustrates a rigid adherence to tradition and captured regulators. Water diversions started under the Northwest Irrigation Act of 1894. As David Percy noted in 1977, this federal law "was designed with irrigation in mind." When it came to allocating water, this Act established a system of seniority for water users that still exists in Alberta's Water Act. Known as "first in time, first in right" (FITFIR) it means that those with the oldest allocation licences are first in line for receiving water. Under FITFIR, water licences to Irrigation Districts are among those with the highest seniority and the largest volume.

The irrigation focus was encouraged by the fact that key officials in the new department of Alberta Environment came from Agriculture.

They saw their water stewardship role through an irrigation-favourable lens. Alberta Agriculture was an accessory, rubber stamping the irrigation sector's expansion demands for decades. Whenever Irrigation Districts exceeded their allocation, instead of being held to account, they were allocated more water. When other interests, especially those concerned about fish, questioned the wisdom of increasing diversions, these concerns were ignored and additional allocations were passed out.

Despite evidence from the 1970s that southern Alberta rivers were already in peril, additional licenses were issued in the early 1990s to accommodate the Irrigation Districts' expansion limits established by the South Saskatchewan Basin Water Allocation Regulation of 1991. Amendments to the Irrigation Districts Act in 2002 allowed each Irrigation District to establish its own new expansion limit, beyond the 1991 allocation regulation, provided the total water demand does not exceed their licenced amount.

It wasn't until 2006 that the Alberta Government finally closed the Bow, Oldman and South Saskatchewan sub-basins to further allocation. Many believe that this action was "too little, too late."

#### Instream Flow Needs How much water does a river need?

Summer flows (May–August) in the Bow and Oldman rivers below impoundments and large-scale water diversions are now 40 to 60 percent below historical values. This is also when there is peak demand for irrigation withdrawals. Demands for ample flow in rivers are also greatest at this time as fish, cottonwoods, canoeists, swimmers and gardeners need the water too.





Irrigation demands in summer create extremely low river flows, below ecological limits, risking aquatic life, fish and riparian habitats. Photo © L.Fitch

Dr. Stewart Rood, Emeritus Professor at University of Lethbridge observed that, "Water budgeting that we based the allocation on was in the beginning of the 1900s which was naturally a very wet interval." All evidence suggests the future will not reflect the past, even though the past was used to allocate the water of tomorrow.

One way of managing the issues associated with intensifying irrigation withdrawals combined with declining river flows is to establish limits, real ecological limits, not arbitrary ones that can be stepped over when they impede expansion plans. An instream flow need (IFN) is a rigorous, science-based recommendation for the amount of water that should flow at any particular time to meet the objectives of river health.

Allan Locke, retired Provincial IFN Specialist, points out IFN recommendations are based on the natural variability in flow, since native biodiversity and ecological functions of rivers in southern Alberta have evolved under seasonal flow patterns. As an example, spring floods are essential to reset the ecological clock, providing new sediment bars for the seeds of cottonwood trees to establish themselves. Substrates of gravel are cleansed of sediment and new pools are created which are mandatory for aquatic life. Robust summer flows are required to buffer against higher water temperatures and maintain dissolved oxygen levels.

Unfortunately for southern Alberta rivers, when considering actual river flows under current allocations and commitments, there isn't enough water left to meet ecologically -derived IFN values. Healthy rivers should have been the goal in the first place, but while many waited for the answer from proper IFN research, water managers in the government of Alberta were busy giving away the water that would have assured a measure of ecological integrity.

Our rivers, especially those in southern Alberta show the strain of over a century of careless development. Fisheries biologists had been pointing this out for decades but water managers seemed oblivious until a massive fish kill occurred on the Highwood River in 1977, caused by high water temperatures and exacerbated by excessive diversions. This incident (and others) should be putting irrigation diversions and inadequate instream flows into the broader public consciousness.

Still, there was very little action to limit irrigation diversions over the next 30 years. As an example of the foot-dragging, a retired fisheries biologist recalls bureaucrats not wanting the term "over-allocation" to be used in reports and presentations. Work on IFN evaluations was not greeted with much enthusiasm by provincial water managers since it would not only provide a sense of limits, it would expose the fact that limits had already been exceeded.

The government of Alberta finally acknowledged in a 2006 report that the lower reaches of the Bow, Oldman and South Saskatchewan rivers were at least moderately impacted, some heavily impacted and a few degraded by water diversions (*Approved Water Management Plan for the South Saskatchewan River Basin [Alberta]*). All rivers impacted by irrigation withdrawals have aquatic environments believed to be in "a state of long-term declining health."

This 2006 plan recommended a water conservation objective (WCO) to protect river health of approximately 45 percent of natural flow. This was not based on IFN science but was all that might reasonably be achieved given high levels of water allocation. Recent analysis using historical flow records shows this inadequate target is seldom met 100 percent of the time in any given year for reaches below major irrigation dams and diversions and less than 70 percent of the time in drier than average years.

More disturbing is that 45 years of river flow records from the South Saskatchewan River at Medicine Hat show the WCO is met only 40 percent to 70 percent of the time in the summer months (May to September). Because of liberal allocations of water to irrigation, actual flows are well below natural flows and the WCOs are rarely achieved.

When you've exceeded ecological limits with reckless water allocations and can't meet an IFN amount, all that's left are some administrative band-aids like water conservation objectives and instream objectives (IO) to give the impression our rivers are being managed to avoid ecosystem failure. These WCOs and IOs will not restore health to degraded rivers. In stark terms southern Alberta rivers are on life support, without enough water to guarantee a healthy, functioning ecosystem.

As a headwaters province Alberta also has responsibilities and legal agreements to allow enough water to pass our eastern border to Saskatchewan. This can provide an administrative ceiling on allocations within Alberta but as these become red-lined and exceeded for the Bow and Oldman watersheds, there is an increased reliance on the Red Deer River to make up the difference. This exacerbates river health issues on the Bow and Oldman systems.

Governments, both federal and provincial have failed in their stewardship responsibilities to manage the quantity and quality of waters under their jurisdictions for both current and future generations. Fundamental to that responsibility is ensuring sufficient water is retained in rivers, for all seasons, to sustain fish populations, riparian areas and overall riverine health and function.

### Climate change – Are we paying attention?

Climate change scenarios suggest declines in natural annual flow will continue due to decreased snow accumulation, increased air temperatures and greater evaporation and evapotranspiration. This will lead to a decline in the glaciers that feed the headwaters of the Bow River. According to Dr. John Pomeroy, Canada Research Chair in Water Resources and Climate Change at the University of Saskatchewan, about 80 percent of flow in the Saskatchewan River basin comes from the Eastern Slopes, mostly from snowpack, making southern Alberta's rivers "very vulnerable to climate change." Pomeroy reflects it is "important to look at the whole thing before expanding irrigation in one part or managing it differently in another part, and we're going to have to do that always with an eye to the mountains." Lessons from south of the border backstop this and need to be heeded. Over-allocation of water, coupled with drought in the Colorado River basin has led US governments to severely curtail water use by irrigators.

Recent modelling, using historical drought scenarios for water volume in the Oldman River at Lethbridge, suggests water needs would exceed supply. Water deficits for more than two years could not be mitigated by water stored in reservoirs, and provision of environmental instream flows would be further challenged. This demonstrates that building more reservoirs is, at best, a questionable adaptive strategy. Every bit of plumbing promises us we are ever closer to re-engineering our world into something it is not, and never will be—a place of abundant water. We kid ourselves if we think we can outwit nature instead of adapting to its realities.

Climate change, with greater frequency and duration of droughts cannot be mitigated with irrigation reservoir storage. Photo ©L. Fitch



### In whose interest is irrigation expansion?

Irrigation Districts, with support from government, boldly assert that modernization of irrigation infrastructure does not require impact assessment and that decisions about expansion of irrigated acres are solely their purview. Construction of new and expanded storage reservoirs may or may not require impact assessment based on decisions of provincial and federal regulators. This massive irrigation expansion could proceed without a determination of whether or not it is in the public interest.

Initiatives with a proposed investment of public money that involve public resources (water) and have the potential to significantly impact the public interest in broader matters of ecosystem health should require greater scrutiny. What could be more in the public interest in semi-arid southern Alberta than maintaining adequate instream flows and the health of our rivers?

An independent review of this massive irrigation expansion has the potential to clarify the staggering lack of information on public interest matters such as: the history of irrigation development, especially allocations that ignored river health; a compliant, if not captured regulator that let allocations spin out of control; disturbing details on serious declines in river health, including water quality and biodiversity; how much the Alberta taxpayer has contributed to irrigation infrastructure and efficiency goals, with such little payback in river flows; a government that refuses to act proactively to remedy the situation; and corporate bodies (Irrigation Districts) that seem to be answerable to no one but themselves.

In this 'hydro-illogical' cycle, every proposed technological fix, including dams, reservoirs, spillways and efficiency gains through converting canals to pipelines, drop-tube pivots and water scheduling, is touted as solving the problem of water scarcity, until they are actually built. Then the cry begins again for more public investment to solve the problem of not addressing limits. Each time, ad infinitum and ad nauseum, politicians are swayed by the promise of more jobs, higher agricultural production and greater commodity exports from these fixes. We would be well advised to step out of this cycle.

Irrigation expansion simply maintains the



Although increased irrigation efficiency, through use of pivots, reduces water requirements, increased irrigation acreage continues to threaten the health of southern Alberta rivers. Photo ©L. Fitch

cycle. The project is proposed to meet the immediate desire of the irrigation sector for growth, not the needs of future generations living with reduced river flows and the economic albatross of maintaining the accumulated infrastructure.

Irrigation interests might think they are adapting to climate change with the modernization and off-stream storage aspects of this expansion scheme. The reality is that without ensuring some of the water "saved" is left in rivers, it is just more of the same thinking that has left us with depleted rivers and risk of shortage to meet current allocations.

An environmental impact assessment (EIA) might allow those not benefitting directly from this scheme to see how other attributes important to a broader public might be affected.

A review could focus on the many questions related to this expansion initiative. No details are forthcoming on what the anticipated diversion rates might be, how much more of the licensed allocations of water will be diverted, when the water will be diverted, what changes will occur on return flows, how much more water will be lost from increased surface evaporation from reservoirs and, most troubling, potential impacts on southern Alberta rivers and on river flows downstream to the Saskatchewan River Delta in Manitoba. Also unclear are what lands are proposed for irrigation expansion and whether any of those lands will involve cultivation of native grassland, similarly imperilled as are rivers.

Lastly, the question of ecosystem limits needs to be addressed, perhaps with a simple question about irrigation expansion – how much is enough, and have we already exceeded reasonable limits? Could some of the water saved through efficiency improvements be used to augment instream flows? This is not an unreasonable suggestion given the high level of taxpayer investment.

### Where next for irrigation in Alberta?

If this scheme is a race to exercise irrigation "rights", to use up all the allocation, who eventually wins the race? It won't be southern Alberta's rivers and those who cherish them.

Under the current conditions of irrigation allocations, our rivers are suffering and are significantly degraded and the prognosis is for a continual decline in river health. That is the situation where irrigation interests are already using, on average, two thirds of their licensed allocations. Taking more will simply exacerbate an already chronic state of poor river health.

Some might find perfection in row upon row of potatoes. Fair enough. But to push the vision of endless irrigated fields towards the ultimate death of our rivers will not find universal support from Albertans who are already alarmed about potential water impacts from coal mining. Taxpayers, underwriting much of the cost will ask—who benefits and who pays?

Irrigation efficiency has improved tremendously, putting more water on crops and less lost to evaporation. Low head nozzles on irrigation pivots and buried, pressurized water pipelines have solved much of the wastage of water and is a laudable goal. One might think that this means less water has to be diverted from our rivers, improving aquatic habitat.

But irrigators have developed a Lord of the Rings, Gollum-like response of keening, "My precious, my precious" whenever there are discussions of saved water remaining in the river. After all, water is the "ring" that controls them all. This is despite the Alberta taxpayer footing 75 cents of every dollar of efficiency expenditure. Irrigation interests want to expand irrigation acreage with the water that is saved, a mercenary approach towards a limited resource, as opposed to thinking about long term stewardship.

It should not be too much to ask for irrigators to live with a little less water, so our rivers could have a little more. However, many of those who can foresee the upcoming crisis seem unwilling to accept any of the responsibility for creating it. There are few options for replenishing flow without the active involvement of the irrigation sector.

As Cheryl Bradley, an independent biologist who has followed this for years observes: "There is a palpable reluctance to release water under their [irrigation] licences, perhaps because it would mean relinquishing control over a valuable commodity in short supply." In reality, giving up some of "their" water to let rivers live will not diminish irrigation agriculture.

The irrigation lobby reminds one of Oliver Twist, in the Charles Dickens novel of the same name. There, the small boy comes forward, bowl in hand and begs Mr. Bumble for gruel with the famous request, "Please sir, I want some more." Except, the irrigation version of Oliver Twist already has a bowl full and still wants more. It is as if in a family one sibling ends up with most of the water. He prospers while those that like to fish and canoe and sit in a cool cottonwood grove see those attributes turn to dust. Unwilling to share, or even acknowledge the concerns of others he wants to use it all, for his own purposes.



Without change in policy and direction, irrigation demands coupled with drought will create dying and dead rivers. Photo ©L. Fitch

Irrigators may view water rights as absolute and irrevocable but as William Kittredge points out in *Owning it All*, "...we don't own anything absolutely or forever. As our society grows more and more complex and interwoven, our entitlement becomes less and less absolute, more and more likely to be legally diminished. Our rights to property will never take precedence over the needs of society. Ownership of property has always been a privilege granted by society, and revokable."

We need a new conversation about irrigation, one that takes place outside of partisan politics and the irrigation silo. Dying rivers are a problem that was created by successive provincial governments, aided and abetted by the irrigation sector. Both need to take some responsibility for their past actions and recognize that the current status of southern Alberta's rivers is not in the greater public interest, even without the proposed expansion. A great first step would be to reduce some of the licensed amounts of water diversion, a decision that is well within the power of the Alberta government.

If we are to successfully adapt to changing conditions – and adapt we must – what does this future look like for irrigation agriculture in our province? Continuing with the status quo will only serve to doom our rivers, with agriculture soon to follow, or at least agriculture as it's currently practiced.

Henry David Thoreau, the 19th century naturalist noted that, "Life in us is like water in a river." Holding onto those words for a moment, what would it mean to our lives if we continue to take so much water out of southern Alberta rivers?

Sadly, these rivers are shadows of what they once were, we know they are degrading, we know what they are degrading from and we can look forward to greater issues. Natural justice and a sense of equity need to be injected into plans for irrigation expansion, while there is still a chance to salvage a better future for our rivers.

Otherwise the response to "Shall we gather at the river?" might be "Will there be a living river left where we can gather?"

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

## CFB Suffield Conservation and Reconciliation Opportunity

#### By Ruiping Luo

wo very important issues facing Canada today are biodiversity loss and reconciliation. An action toward resolving both may lie with Canadian Forces Base (CFB) Suffield.

In November, news reports circulated of the British Army downgrading their presence at Suffield, with Medicine Hat's CHAT news reporting a potential 50 percent reduction in troops, as estimated by the base commander. The partial withdrawal of British troops presents the opportunity to use these lands for a conservation and reconciliation effort, two topics specifically mentioned in the Government of Canada's 2021 federal budget. This is an opportunity of global importance that we have never before seen in Canada's prairies.

CFB Suffield contains one of the largest tracts of uncultivated grassland remaining in Canada. Grasslands provide habitat for the highest concentration of Canada's species at risk, and are acknowledged by the International Union for Conservation of Nature (IUCN) and the World Wildlife Fund (WWF) as the most threatened ecoregion worldwide. Only 25 percent of Canada's native grasslands remain, with a mere 1 percent of this land protected. The value of the ecosystem at Suffield has long been recognized, and a National Wildlife Area (NWA) has already been established on the eastern portion of the base. Canada has committed to protecting 30 percent of land and water by 2030 (commonly known as the 30 by 30 initiative). The expansion of the NWA within CFB Suffield would contribute to this goal by sheltering endangered grasslands.

In addition, the lands at Suffield hold tremendous cultural value for Indigenous Peoples. They have lived on grasslands for thousands of years, yet there are no large landscapes of Indigenous-managed lands in the Canadian prairies. The importance of the Suffield region to First Nations is evident in the tipi rings, medicine wheels, and other examples of Niitsitapi culture found on the base. Lands managed by Indigenous Peoples would not only provide an opportunity for Indigenous communities to reconnect to the land, a connection essential to their Indigenous culture, but they could play an important role in the healing of these lands.

Lands managed by Indigenous Peoples are often healthier and support greater biodiversity. In prioritizing conservation, there may be further economic opportunities for both the Niitsitapi and the nearby city of Medicine Hat in restoring damaged areas at Suffield, and in occasions for tourism. Establishing something like an Indigenous Protected and Conserved Area (IPCA) or other form of co-management in Suffield could also move Canada further towards reconciliation, and would show Canada's commitment to both reconciliation and conservation.

Canada's 2021 Speech from the Throne called for "Action on reconciliation" and

"Action on climate change." Expanding the NWA and establishing an IPCA at CFB Suffield contributes to both. The 2700-km<sup>2</sup> base is large enough to consider bison reintroduction, a species predominant in the cultures of plains Indigenous Peoples and critical for maintaining Great Plains biodiversity. As CFB Suffield is on federal land, a clear opportunity is presented to fulfil the promises our federal government made towards reconciliation and conservation.

AWA has written to Minister of Defence Anand and Minister of Environment and Climate Change Guilbeault. We see a visionary opportunity at Suffield Military Reserve near Medicine Hat to fulfil the promises our federal government made towards reconciliation and conservation. Canada's support is needed as we move towards addressing climate change and advancing reconciliation to heal both land and plains Indigenous cultures.

Suffield National Wildlife Area includes three nationally significant areas and these extensive sand dunes and hills provide habitat for endangered species like Ord's kangaroo rat. Photo ©C.Olson



## Destruction of McClelland Lake Wetland Complex Flies in the Face of our Climate Change Commitments

By Phillip Meintzer, AWA Conservation Specialist



fter spending much of the summer of 2021 under a blanket of wildfire smoke and witnessing the extreme fall floods in our neighbouring province of BC, the impacts of climate change are more tangible than ever before. To ensure we minimize the worst effects of the climate crisis, humanity (more specifically - corporations and governments) needs to work to ensure that we stay below 1.5°C of global warming. The pathway to do so has been laid out. It requires meeting the strict emissions targets set by the Intergovernmental Panel on Climate Change (IPCC). These targets include a 45 percent reduction in emissions from 2010 levels by 2030 and reaching net zero emissions globally by 2050. Meeting these targets doesn't mean we will avoid any and all severe impacts from climate change. But it means that future generations should hopefully have a more habitable planet than if we continue with business as usual.

As we are already three months into 2022, this means we only have less than eight years to cut our emissions by nearly half to ensure that we stay on track for preventing the worst possible climate change scenarios: drought, famine, coastal flooding, biodiversity loss, climate refugees and/or resource wars. Given this scenario, society needs to focus our efforts on decarbonization across all activities and industries as soon as possible and as rapidly as possible. If we delay much longer, it will only mean that our transition will need to be much more sudden and severe. This will likely have much more harmful effects on our daily life, our jobs, and all our other societal processes because we will not have adequately prepared ourselves for such

rapid changes.

Given this looming existential threat, we shouldn't be considering adding new fossil fuel infrastructure. In 2021, Alberta set a new annual record for tar sands production (3.1 million bbl/day); record oil sands production pushed Alberta to a new annual oil production record (3.61 million bbl/day). Future expansions likely will only make it more difficult to reduce our greenhouse gas emissions.

This is exactly what is happening in northern Alberta right now with a planned oil sands mine set to begin construction in 2025 that is intended to operate until 2060. How can we commit to reducing our carbon footprint as a province or nation while creating new infrastructure that actively works against those goals? In light of these emissions targets, how can we willingly accept that an oil sands mine can be allowed to operate for ten years past the deadline for transitioning to a net-zero society? Canada has a greater responsibility than the majority of countries across the world because of our substantial per-capita carbon footprint relative to other nations.

Fort Hills Energy Corporation is a subsidiary of Suncor Energy, and the Fort Hills Oil Sands Project (FHOSP) is an oil sands mine that started up in 2018 and is proposed to expand mining preparations (i.e. ditching and draining) in 2025. The creation and expansion of another new oil sands mine is troubling enough on its own. But we also need to consider the area intended for mining and its extreme ecological importance to Alberta in the fight against climate change. The FHOSP proposes to destroy roughly half of the incredibly beautiful and unique wetland ecosystem known as the McClelland Lake Wetland Complex (MLWC).

The MLWC includes several environmentally significant features including McClelland Lake, a large patterned fen, and sinkhole lakes. The MLWC is important both for its unique aesthetic qualities, as well as its diverse biophysical features and ecological functions it provides. The watershed supports rare plants and provides an important stop-over point and breeding ground for many migratory bird species from across North America. The patterned fen features long rows of peat ridges (strings) separated by shallow pools of water (flarks). Its patterns give it a spectacular beauty. In addition to its biophysical properties, the MLWC and surrounding watershed has socio-cultural importance for Indigenous communities in the region. They have relied on the MLWC as a source of drinking water, an area to harvest traditional foods and medicines, and as a place to practise and maintain their beliefs, customs, history, and languages. It's easy to see why Richard Thomas, the author of the definitive study of Alberta's Boreal Natural Region, called the McClelland fen "a potential World Heritage site."

In 1994, AWA participated in a fouryear sub-regional planning process that resulted in the protection of the MLWC from oil sands development. However, in 2002, the sub-regional planning rules suddenly changed at the request of True North Energy (a subsidiary of Koch Industries), which somehow acquired leases for the area in 1998 despite the existing protections for the area. The 2002 decision allowed for mining in half of the wetland complex so long as the

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ecological integrity and functionality of the unmined portion is maintained. Maintaining the sustainability of the unmined portion of the MLWC is unlikely as the mining will destroy the topography and the soils that are needed to sustain groundwater flows to and from the rest of the watershed. It will very likely destroy the character of the unmined portion of the MLWC including the lake.

In addition to destroying a pristine and rare wetland ecosystem, Fort Hills threatens one of Alberta's and Canada's largest deposits of sphagnum (or peat) mosses. Peatlands have been described as critical for preventing and mitigating the effects of climate change as they represent the largest natural terrestrial storage for carbon on the planet. Peat mosses store more carbon than all other types of terrestrial vegetation in the world combined. To destroy them is to release carbon back into the atmosphere as well as to hinder our ability to capture more of it as we target a net zero future. The International Union for Conservation of Nature (IUCN) recommends that countries should include peatland conservation and restoration in their commitments to international agreements because of their unique role in fighting climate change.

So why is this mine going ahead? The answer here is the same as for all resource extraction that occurs at the expense of wilderness - profits. Suncor knows they can still make money from the extraction of oil from this proposed tar sands project and they will be proceeding as planned in the absence of any meaningful intervention.

As part of Fort Hills' Water Act and Oil Sands Conservation Act approvals, it was required to submit an Operational Plan for maintaining the sustainability of the unmined portion of the MLWC two years prior to beginning any ditching or draining within the MLWC watershed. On December 15, 2021 Suncor – on behalf of Fort Hills, submitted this Operational Plan to the Alberta Energy Regulator (AER). In light of this anticipated submission, AWA reviewed many of the foundation documents created to guide the development of this oil sands project including (but not limited to):

- The 2002 Energy and Utilities Board Decision Report,
- The December 2015 Alberta government's Water Act Approval No. 00151636-01-00 issued to Fort Hills Energy Corporation,
- Suncor's 2018 Conceptual Operational Plan – also known as the proposal to develop an Operational Plan for the sustainability of the non-mined portion of the MLWC.

Our reading of these key documents has allowed us to recognize four key commitments – among many others – which AER should ensure are satisfied before authorizing Suncor's proposed MLWC Operational Plan. These four commitments are listed below, along with which document(s) they were found within:

- The proposed mitigation plan and associated design features will protect the unmined portion of the MLWC (EUB Decision Report, Water Act Approval, 2018 Proposal);
- 2. In defining the functionality of the MLWC – develop a list of indicators, including those which recognize Indigenous traditional socio-cultural needs and values through extensive consultation with local Indigenous communities (EUB Decision Report, Water Act Approval, 2018 Proposal);
- 3. Agreement by all members of the MLWC Sustainability Committee on the proposed list of indicators and the FHOSP mitigation plan (EUB Decision Report);
- 4. MLWC Sustainability Committee recommendations should be considered

and implemented in the development of the submitted Operational Plan (EUB Decision Report).

It is AER's responsibility to ensure that Suncor fulfills all FHOSP requirements and commitments, especially the four key commitments highlighted within AWA's letter to AER. The protection of the unmined portion of the MLWC is our primary concern. Suncor's Operational Plan must outline – with a very high degree of certainty – that their mitigation plan and design features will protect this outstanding wetland ecosystem. If any one of these commitments is not adequately addressed, the MLWC Operational Plan must not be authorized until the proponent can provide sufficient evidence to the contrary.

The MLWC and surrounding watershed sustains some of Alberta's deepest soil carbon layers and vital natural water bodies including McClelland Lake and patterned fens. It supports rare plant communities and provides an important stopover point and breeding grounds for many migratory bird species along one of North America's major migratory flyways. Given the unique importance of this wetland ecosystem, Suncor must conclusively demonstrate that their Operational Plan will guarantee the protection of the unmined portion of the complex.

On January 28, AWA was provided with a copy of Suncor's submitted Operational Plan for us to review. We look forward to the reviewing the Operational Plan to ensure that these commitments have been met.

– Phillip Meintzer



## Wilderness Watch

#### Sustainable Forestry: Are Forest Certifications Doing their Job?



As consumers become more and more aware of environmental concerns such as the loss of intact forests, or climate change, a market for "green" products is born. Many consumers want to make choices that won't be detrimental to the environment, understanding that sustainable practices are the only way to maintain the quality of life that many of us enjoy, including shelter, warmth, clean air and drinking water, and improve the quality of life for those whose needs still are not met. This evolving market for green products has at times pushed industries towards making positive changes in their operating practices to support sustainability. However, if companies in an industry such as forestry can appear sustainable to consumers, while doing little towards prioritizing environmental sustainability, they potentially make more profits.

This is greenwashing.

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The costs of unsustainable forestry include emissions of greenhouse gases contributing to climate change, the loss of important ecosystem services like water filtration and flood mitigation, and the loss of valued ecosystem components like biodiversity and species-at-risk.

The preamble to Alberta's Forests Act states that "Alberta is a world leader in environmentally sustainable forest policies and practices that are grounded in science and based on the principles and practices of sustainable forest management." Decreasing populations of forest-dwelling species like the woodland caribou, old-forest birds, and native fish sheds considerable doubt about these assertions of sustainability, especially when coupled with the extensive footprint from oil and gas exploration and development.

Alberta's very timber-centric management practices, which do not fully account for the many important values that forests provide, hardly constitute world-leading environmental sustainability. Instead, Alberta's forestry industry equates sustainability with sustainable yield - the maintenance of the same volume of standing timber on the landscape over time. Because this definition of sustainability is far from enough to ensure the protection of our forests, forest certification programs can be a way to indicate to consumers that forestry companies are conscious of their environmental impacts. Not all forest certification programs are created equal, however.

The largest forest certification program worldwide is the industry-run Sustainable Forestry Initiative (SFI), which certifies 124 million hectares in Canada. Largely due to SFI certification, Canada is home to 36 percent of all certified forests in the world. This is a major basis of claims by industry and government that Alberta's forestry practices are sustainable. It is important to take a hard look at forest certification standards and assess their value to determine whether these certifications have merit.

A more rigorous certification program is the Forest Stewardship Certification (FSC), which certifies just one forestry company in Alberta, Alberta Pacific Forest Industries Inc. (Al-Pac), with a large tenure of 6.4 million hectares in northeast Alberta. By contrast, at least nine forestry companies that operate in Alberta are SFI Forest Management Standard certified.

When compared to SFI, FSC's standards are considered much more stringent "the gold standard" by many environmental organisations in a number of key areas, including species at risk, indigenous rights, protection of high conservation value forests and intact forest landscapes, and prohibitions on forest conversion, as well as the use of hazardous chemicals and genetically modified organisms.

SFI's Forest Management Standard (hereafter the Standard) nominally aims to protect water quality, biodiversity, wildlife habitat, species at risk and Forests with Exceptional Conservation Value. However, the Standard falls short on multiple accounts. You may have heard AWA and other Alberta conservation groups recently raise the alarm about some proposed logging in Moon Creek (adjacent to Willmore Wilderness Park). West Fraser Mills Ltd. was planning to log an extensive area in endangered A La Peche caribou range in the fall of 2021. This area is also home to endangered Athabasca rainbow trout, whose habitat can be severely impacted by the loss of forest cover. These logging plans would have gone through if not for opposition from concerned trappers, the Mountain Metis community, conservation groups and concerned citizens that put pressure on the Government of Alberta to protect this important undisturbed habitat. Ultimately, the Government of Alberta reversed the direction of these logging plans following these complaints, and West Fraser paused logging in the area until the caribou range plans are finalised.

It may surprise you to learn that West Fraser, is SFI Forest Management Standard certified. Although the planned logging would have impacted habitat of more than one endangered species, this company still qualifies for SFI certification. Similarly, the controversial logging of old-growth forests in Fairy Creek, British Columbia occurs in an area that is also SFI certified. These examples reveal that SFI is not adequately preventing the loss of valued ecosystems and species-at-risk.

An effective forest certification standard needs to set clear, objective, performance -based metrics by which to assess sustainability. The language used in the SFI Standard to address many sustainability objectives fails to do so by allowing multiple outcomes and loopholes, setting discretionary indicators, and failing to be transparent about what an SFI label on a product means. SFI's Forest Management Standard is broken down into 13 Principles, 17 Objectives, 41 Performance Measures and 141 Indicators. The indicators are assessed by third-party auditors to determine whether forestry companies meet the standards for certification.

Many of the indicators in the Standard include creating a "program" to conserve ecosystem values, but don't specify what this program must entail or what the outcome must be. For example, Performance Measure 3.2 on page 20 has the following three indicators:

- Program addressing management and protection of water quality of rivers, streams, lakes, wetlands, other water bodies and riparian areas during all phases of management.
- Program to protect water quantity during all phases of management.
- Programs that address wet-weather events in order to maintain water quality such as: forest inventory systems, identification of wet-weather tracts and definitions of acceptable operating conditions.

There is no direction on what these programs must entail, just that they have to exist. This type of indicator is seen throughout the SFI 2022 Forest Management Standard. In fact, the word "program" appears 46 times in the 19-page document; more than the word "sustainable", which appears 40 times. These programs are not performance-based, and therefore don't guarantee any actual protection of valued ecosystem components.

Some blatant gaps in SFI's Forest Management Standard include the lack of protection for old growth and primary forests, and the lack of regulations against converting forests to other land uses. In the fight against climate change, it is critical to preserve old forests and primary (untouched) forests, which are sinks for carbon. Additionally, deforestation contributes significantly to the release of greenhouse gases that warm the climate. SFI's Forest Management Standard offers little to no actual protection against the loss of old and primary forests and deforestation. Rather than require that certified organisations protect old growth forests within their tenure, a vague indicator requires that the organisation support and participate in programs for the conservation of old-growth forests. Additionally, the Standard allows the conversion of forests to other land uses.

Many of the indicators in the Standard ultimately come down to following the law, with no additional protection added. For example, the Standard requires little or no harvest retention above what is required in Alberta under the Forests Act and its regulations, which are largely regarded as inadequate for retaining biodiversity. Retention refers to individual or patches of merchantable trees that are left unharvested. Structure retention provides an important life boat for organisms to persist in a harvested ecosystem and recolonize the forest as it regrows over the subsequent decades. Harvesting with structure retention also better emulates natural disturbance by fires, which often skip large areas of forest, leaving patches untouched. Structure retention can be as low as 1 percent at the landscape level according to the operating ground rules in certain Forest Management Agreements, including West Fraser Mills' Hinton Wood Products (Hinton Wood Products FMA Timber Harvest Planning and Operating Ground Rules).

Performance Measure 3.1 states that "Certified Organizations shall meet or exceed all applicable federal, provincial, state and local water quality laws and meet or exceed best management practices." Shouldn't these organizations already be following the law, and applicable best management practices? If laws and best management practices were enough on their own, there would be no need for forest certification programs.

There is also an issue with transparency in that the majority of products bearing the SFI label are not sourced from Forest Management Certified forests. Instead, these products may bear the SFI label due to other certifications, such as Fiber Sourcing and Certified Sourcing standards. It is reasonable for consumers to assume that products bearing the SFI label are sourced from certified forests, however this is often not the case. The lack of transparency to consumers around SFI labelling is greenwashing, leading consumers to believe that they are making environmentally responsible choices when they really aren't. The responsibility should not be entirely on the consumer to read through the standards and determine whether they have merit. We should be able

to trust that the largest forest certification standard in the world has stringent and measurable indicators that will protect our forests that provide for us in so many ways.

Sustainability is often falsely viewed as a trade-off between the economy and the environment. When viewed this way, many discussions revolve around how to balance the economy and the environment. This suggests that for us to maintain our current quality of life, sacrifices must be made to the environment. However, these discussions often don't consider the real economic contributions that we receive from forests aside from timber supply. These include ecosystem services like water filtration, flood mitigation, recreation and tourism, carbon storage and climate change mitigation. What value can be placed on the connection with nature that people experience when exploring wild spaces, and the spiritual connection that many people including Indigenous peoples have with these forests and the species that reside within them? We would do well to broaden our view of how we are connected to the environment, even if just by looking at all the economic benefits that our ecosystems provide to us. Long-term economic costs of poorly managed forests often go unconsidered - like the costs associated with ecosystem collapse, loss of biodiversity, water quality and quantity issues, and climate change, in favour of immediate economic gain from harvesting timber. These are among the challenges that we are facing in Alberta if we fail to improve our forest management.

Ultimately, the Sustainable Forest Initiative seems to fall short of its claims of supporting long-term sustainability of forests. The environmental benefits of SFI certification are not what they appear to be. The Alberta Government and the Forestry industry should not be using SFI certification as a basis to indicate that Alberta is a world leader in sustainable forestry.

Note: AWA has been a member of FSC since the early 2000s. Cliff Wallis, one of AWA's long-standing directors, serves as the current Chair of FSC Canada's Board of Directors.

- Devon Earl, AWA Conservation Specialist

#### Helium Exploration Threatens Sage-Grouse Habitat

Helium, a commonly used non-renewable resource, has recently seen massive increases in value. With the increase in value has come increased investment, and Alberta is eager to be part of the rush. While helium could provide an economic boost to the province's economy, the rapid scramble for helium may cause irrevocable damage to sensitive habitats.

#### Background

Helium, despite being the second most abundant element in the universe, is very rare on earth. The inertness and the low boiling point of the element mean that it is very safe to handle and can be cooled to extremely low temperatures without freezing, properties important for many manufacturing and operating procedures. Helium is used in everything from production of computer chips and fibre-optic cables to shielding for welding technology to MRI scans and asthma treatments. Demand for helium has only increased as science and technology continue to advance.

The majority of helium on earth comes from radioactive decay, which means helium creation takes place over millions of years. As a lighter gas, most free helium in the atmosphere will rise and be lost into space. The small amount of helium that remains, roughly 5.2 ppm or 0.0005 percent of Earth's atmosphere, would be too expensive to extract feasibly. As a result, the commercially available helium is belowground, trapped under layers of rock.

Until recently, the United States was the biggest supplier of helium worldwide. The sale of their vast reserves, originally stockpiled for war, kept helium prices low relative to the supply. As these reserves were depleted, helium prices rose, and with them, interest in helium reserves elsewhere.

Historically, helium has been produced as a by-product of the natural gas industry, with some deposits of helium ignored as concentrations were too low to be worth extracting. However, the recent increase in helium prices has changed perspectives. The target has shifted to helium-rich deposits, and Alberta, with the province's abundant and mostly untapped reserves, has drawn prospectors' attention.

#### **Helium exploration in Alberta**

In May 2020, the Government of Alberta introduced a new helium-specific royalty rate, effective retroactive to April 1, 2020. It was set at 5 percent minus a 0.75 percent helium adjustment factor for an effective rate of 4.25 percent. This rate is comparable to Saskatchewan, currently leading the provinces in helium extraction, and was aimed at making Alberta more competitive on the helium market. With the new royalty rate, Alberta announced the intention to attract investment in the helium rush.

Investors are indeed expressing interest, particularly in the southeast of the province, where deposits of high concentration helium have been found. As the province itself recently stated in a news release, "Several small producers have expressed an interest in exploring the helium potential in southeast Alberta, with some production already underway." Unfortunately, these large deposits of helium coincide with some of Alberta's best remaining intact native grasslands, and overlap with prime sage-grouse territory.

### Implications for greater sage-grouse

Greater sage-grouse are found only in the grasslands of Alberta, Saskatchewan, and the United States. These large birds are known for their elaborate courtship rituals, called leks, and males will strut and dance on these communal breeding grounds. They are highly reliant on silver sagebrush, which forms the main diet of adults, and have specific habitat needs for mating, breeding and wintering. This habitat is rapidly disappearing along with the loss of native prairie.

The species is listed as "Endangered" under the Species at Risk Act (SARA). The sage-grouse population in Canada has been greatly reduced over the last century, and is suggested to have experienced a 90 percent reduction in range. In 2013, an emergency protection order was issued by the Government of Canada as the threat of extirpation became clear, aimed at protecting critical sage-grouse habitat. While population decline has slowed and shown signs of recovery in recent years, the species remains at risk with fewer than 250 wild individuals estimated to remain in Canada. Alberta's 2020 spring count yielded a stable count of only 24 males and the entire Alberta population estimate is 72.

Greater sage-grouse are highly sensitive to habitat disturbance. Only an estimated 4000 km<sup>2</sup> of sage-grouse habitat remains in Alberta, and oil and gas development have already encroached on this range. Even at a distance of 3 km, sage-grouse are still affected by oil and gas developments, and prospecting for helium is expected to have similar results. Industrial development, conversion of sagebrush habitat and other human disturbances are the greatest contributors to sage-grouse decline, which makes protection of the remaining habitat so vital.

The discovery of helium deposits in southeast Alberta threatens further destruction on grasslands already heavily impacted by industrial activity. Helium, like natural gas, must be extracted from belowground, and this process involves high disturbance on the nearby landscape. Helium extraction in southeast Alberta could destroy the rare untouched prairie that remains, and even the reopening of previous roads and wells could damage recovering grasslands. These disturbances would further fragment sage-grouse habitats, imperilling the small remnant population of these incredible birds.

To protect sage-grouse and other vanishing prairie species, helium extraction must not be allowed to occur on critical habitat. New disturbances should avoid native prairie, and must limit damage to the landscape. In addition, Alberta needs a transparent process for reviewing helium licences, with a clear direction for the protection of critical habitat. The potential economic benefit to helium extraction cannot overshadow the damage left behind. Otherwise, considering the current rate of native prairie loss, greater sage-grouse and many other iconic prairie species will soon be lost.

- Ruiping Luo

#### Restoring WSCT in Banff National Park

Parks Canada have successfully reintroduced a small population of at-risk westslope cutthroat trout (WSCT) into Hidden Lake in Banff National Park. The Saving Threatened Trout Project is a Parks Canada led initiative. It hopes to conserve and restore the populations of at-risk species of native trout through active management within Banff National Park. This project targets five headwater systems within the Park including Hidden Lake, Little Herbert Lake, Helen Lake, Katherine Lake, and Margaret Lake. At a January presentation to Bow Valley Naturalists, Brad Stitt, Project Manager in the Resource Conservation branch at Parks Canada presented the interim results of this project. Then he emphasized their success at Hidden Lake (and Hidden Creek) to date.

The project's intent is to reintroduce WSCT back into three of these five headwater systems which are part of their historical range of distribution. Two systems are historically fishless. In these systems, various species of sport fish such as brook trout have outcompeted WSCT. Parks Canada intentionally stocked these sport fish for recreational purposes until as recently as the 1980s. The reintroduction is achieved through a process requiring the complete removal of non-native trout from these lakes and streams followed by the translocation of genetically pure strain WSCT into these systems. A significant level of monitoring is required at all stages to ensure success.

So far, non-native fish removals have occurred at four of the five locations and these removals require the application of a toxicant known as Rotenone. The use of toxicants on a natural system may rightly instill fear in some readers, especially when considering any potential unintended negative consequences that may occur through its application. However, Rotenone is a toxicant that is naturally occurring in the environment - it is derived from the roots of a legume plant and specifically targets gill breathing organisms by disrupting their ability to process dissolved oxygen from water. Indigenous communities used this toxicant for sustenance fishing and Rotenone's use in these kinds of applications had been studied extensively for decades. Rotenone is applied in specific concentrations dictated by the volume and flow characteristics

of a given waterbody and its application is followed up by a neutralizing agent – potassium permanganate.

Across two consecutive field seasons in 2018 and 2019, the Parks Canada project team applied Rotenone to Hidden Lake and Hidden Creek to incapacitate and remove all brook trout from that area. The project team conducted two types of monitoring to ensure that all brook trout had been removed; physical monitoring (i.e. gillnetting, angling, electrofishing etc.) and environmental DNA (eDNA) analysis. Parks Canada conducted the monitoring on the waterbodies following treatments in 2018 and 2019, and again in 2020, a year after the last Rotenone treatment. Following the final treatment in 2019, no brook trout was found through physical monitoring, but trace evidence of brook trout eDNA was found - although inconclusive. One year later, the project team conducted another sweep of the area using both physical and eDNA monitoring methods. No brook trout were detected - meaning that Parks Canada could begin planning for WSCT reintroduction.

For reintroduction to be successful, Parks Canada needed to ensure that the populations of benthic macroinvertebrates (i.e. larval stage insects, snails, or worms) in Hidden Lake had recovered following the application of Rotenone. This was done by comparing Hidden Lake to pristine conditions at various reference locations. Macroinvertebrates were studied annually from 2017 and, despite an observed population decrease in 2019 following toxicant application, the population successfully rebounded to pristine reference conditions in 2020. This gave the project team the green light to proceed with the reintroduction of WSCT at Hidden Lake.

Genetic analysis and pathogen testing was

required to ensure potential donor populations of WSCT were genetically pure strain and disease free. The WSCT population at Big Fish Lake was selected for translocation. The method used for restocking is known as remote (or streamside) incubation. This involves collecting gametes from the donor waterbody, incubating eggs on location at the receiving waterbody, and then releasing successfully hatched fry. The Hidden Creek reintroduction efforts started with collection at Big Fish Lake in June 2021 during the heat dome event. This meant that environmental conditions were suboptimal for collection and fertilization. Coolers full of ice had to be flown into the remote location in order to cool the 4,000 eggs that were collected. Of these 4,000 collected eggs, only 471 survived to the incubation stage. A total of 311 fry were successfully reintroduced into Hidden Creek despite the challenging environmental conditions.

This is a hugely successfully result and offers a ray of hope for the recovery of this Threatened species. The distribution of WSCT and their habitat has shrunk and fragmented due to numerous threats: invasive species, habitat destruction, overfishing, pollution, climate change, and the cumulative, combined effects of these various threats. If successful, the Saving Threatened Trout Project should hopefully re-establish WSCT populations in waterbodies within the historical range of this species and provide a protected refuge for their recovery within National Park boundaries. We applaud Parks Canada's initiative on this project, and look forward to reviewing the results for the other two waterbodies where this project intends to reintroduce WSCT.

– Phillip Meintzer

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Westslope cutthroat trout are listed as threatened under the Alberta Wildlife Act and by COSEWIC - the national Committee on the Status of Endangered Wildlife in Canada. Photo ©R. Blanchard

#### Kitaskino-Nuwenëné Wildland Provincial Park Expansion

AWA welcomes the large expansion of the Kitaskino Nuwenëné Wildland Provincial Park, approved by the Alberta government in late January 2022. Led by Mikisew Cree First Nation (MCFN), the governments of Canada and Alberta, Indigenous communities and three oil sands companies were involved in a significant collaborative effort that achieved this expansion,

Kitaskino Nuwenëné Wildland Provincial Park (KN WPP) is directly south of Wood Buffalo National Park, adjacent to Birch River and Richardson Wildland Provincial Parks. The expansion area covers 1520 km<sup>2</sup> (see map) or about 16 townships, which roughly doubles the total Kitaskino Nuwenëné area to 3150 km<sup>2</sup>.

The expansion area consists of boreal highlands and almost entirely overlaps with the range of the threatened Red Earth woodland caribou population. It greatly enlarges the protected lands that are directly connected to Birch River

Wildland Provincial Park to the west. This northern boreal landscape includes areas that are very sensitive to mechanised disturbance, including extensive peat wetlands that are important for watershed connectivity and carbon storage. From a watershed perspective, it will protect more lands south of Wood Buffalo National Park whose waters flow into the Peace Athabasca Delta. The Delta is one of the world's largest freshwater deltas, supporting globally significant wildlife populations.

AWA supports the management intent prioritising ecological conservation and the exercise of Indigenous treaty rights and traditional land-use activities. AWA has urged that only minimal roads and trails be considered, and that restoration of legacy linear disturbance be included in management plans and funding. Reclamation of these areas, once they are disturbed, is expensive and requires long timelines with uncertain success. AWA believes the intent of 'creating backcountry' recreation opportunities for Albertans' can be compatible but must be the third

priority after ecological conservation and the exercise of Indigenous treaty rights and traditional land-use activities. For non-indigenous tourism and recreation, we support low impact, sustainable wilderness-oriented recreation. To date, public access is fly-in only, authorized on a case-by-case basis by Alberta Parks. Permitted recreation activities in KN WPP now include backcountry hiking, random backcountry camping, hunting, fishing and snowmobiling.

Notably, MCFN announced that its collaborative discussions have entered another phase. It is now focused on the protection of additional bison habitat and increasing the connectivity of the parts of the park on each side of the Athabasca River. The creation of KN WPP in March 2019 was a result of Mikisew Cree First Nation initiating collaborative discussions with other Indigenous communities, industry and government. In Phase 2, which Alberta has just approved, Athabasca Oil Corporation, Cenovus and most recently Burgess Canadian Resources surrendered Crown mineral agreements



to enable the expansion.

"It is great to see this expansion become a reality," said MCFN Chief Peter Powder in MCFN's news release. "Expanding this protected area is part of our vision for Peace Athabasca Delta, North America's largest inland river delta, and important resources such as the woodland caribou and wood bison. We respectfully acknowledge our elders for the wisdom they shared in helping us identify these watersheds for protection and we are proud future generations will benefit from their foresight."

AWA strongly encourages the Alberta government to move forward on establishing meaningful cooperative management of Kitaskino Nuwenëné with Indigenous communities. That should include, but not be limited to, a co-governance arrangement, as well as planning and funding to support the training and retention of Indigenous guardians and parks staff. The proposed expansion of this 'buffer zone' Wildland Provincial Park is an important step in addressing one of the shortcomings in federal-provincial management of the Peace-Athabasca Delta, as identified in 2017 by UNESCO investigators. More issues remain to adequately manage cumulative impacts and risks from oil sands and hydroelectric industries to the Peace-Athabasca Delta.

> – Carolyn Campbell, AWA Conservation Director

#### Alberta Prairie Conservation Forum (PCF)



The Alberta Prairie Conservation Forum (PCF) is a non-profit organization that has been working collaboratively for over 30 years towards the conservation of Alberta's prairie and parkland landscapes and species habitats. For the past 15 years I've been working with my colleague Katheryn Taylor as a Coordinator for the PCF. Together we help with the day-today administrative work of the PCF and have the chance to meet great people throughout the prairie provinces and United States who are interested in and work on prairie conservation.

The actions of the PCF are guided by Prairie Conservation Action Plans (PCAP) over a five-year period. Currently, we are operating under the 2021-2025 Alberta Prairie Conservation Action Plan and with the help of our dedicated members and committees, great progress was made in 2021 at tackling many of the actions listed in the PCAP.

A key outcome listed in the PCAP is to conserve connecting corridors for biodiversity. To help guide decisions, planning and management so that connectivity is maintained, work was started on a mapping tool and centralized location for geospatial information, and is set to be completed by April 2022. The envisioned tool will help guide users, including land use planners, to recognize high value connectivity areas that should be avoided or show where appropriate mitigative measures can be used in development considerations.

Another PCAP key outcome is to protect isolated native habitats. Isolated habitats are small pockets of refuge for migrating wildlife, and the PCF is working on setting a clear definition for the term by conducting a literature review. Once defined, the PCF will seek to identify locations of isolated native prairie habitats.

PCF's State of the Prairie initiative. a collaborative effort to communicate the state and importance of Alberta's grassland and parkland has made significant progress in the past few years. Understanding the current extent and change in native cover on Alberta's prairie is critical to determining where to focus conservation efforts. Detailed information for this initiative can be found in a technical report published in 2019 or on the summary document, and a great visual of the research is displayed in an interactive map. In January 2022, a short video was released to aid in communicating the importance of Alberta's native prairie to a broader audience. Online workshops were held in February 2022 targeting municipal governments to explain the results of the State of the Prairie report, introduce and explain how to use the

interactive map, communicate approaches to managing and maintaining native prairie landscapes and provide opportunities to build awareness and relationships with other municipalities.

PCF also collaboratively delivers an annual Range Stewardship Course for ranchers and land stewards that is provincial in focus and local in delivery. For the past two years this course has been delivered online in partnership with the Southern Alberta Grazing School for Women. The course contains key range management principles and information that includes presentations and discussion around regional and local issues. The field portion of the course is the most favoured among participants, where first-hand knowledge from experts is imparted to participants through range and riparian health assessments, plant identification and sharing of best management practices. The organising committee is looking forward to bringing this course back to the field in 2022, with planning already underway for an in-person field day.

Next year, Alberta will be hosting the 2023 Prairie Conservation and Endangered Species Conference at the Calgary Zoo/Wilder Institute. This is an important conference that brings together conservation minded individuals to collaborate and share strategies directed at prairie and endangered pecies conservation. The PCF is taking the lead for the conference and planning is currently underway.

Collaboration and partnerships are the most important tools that PCF has relied

on for more than 30 years. These partnerships are now reaching across international borders through the work of our Transboundary Grasslands Partnership. Work of the Transboundary Grasslands Partnership started in 2016 and has been focused on working collaboratively to sustain healthy transboundary native biodiversity and supporting grasslands ecosystems and communities ever since. The biggest strength of the partnership is continued communication across jurisdictions and with all partners including all levels of government in Alberta, Saskatchewan and Montana, as well as non-government organisations, landowners, Tribes and First Nations and academia.

– Sasha Harriot

#### Transboundary Grasslands Partnership

The Transboundary Grasslands Partnership (TGP) is an initiative whose greatest strength lies in maintaining communication across the borders of Alberta, Saskatchewan and Montana. This area of the northwest glaciated plains, whose species and habitats do not pay attention to the arbitrary borders that are in place, is the focus area of the TGP.

The TGP was initiated by the Alberta Prairie Conservation Forum in 2016 and has been working collaboratively to sustain healthy transboundary native biodiversity and the supporting ecosystems and communities ever since. This voluntary collaboration seeks to:

- Enhance the health and function of native grasslands, by building on successes and challenges and awareness amongst the partners,
- Create working towards collaborative actions that address gaps in transboundary native grassland conservation, and
- Connect acknowledging and improving transboundary communications, relationship building, education, cooperation and messaging between partners, Tribes and First Nations and interested organizations and individuals.

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Information sharing, collaboration and networking is achieved by hosting an annual workshop that rotates between the jurisdictions of Alberta, Saskatchewan and Montana. In 2021 the workshop was hosted online. The theme of Global Vision: Local Action set the tone of three mornings filled with case studies from each jurisdiction, sharing of success stories from grassroots organisations and engaging presentations and knowledge sharing from Tribes and First Nations. The TGP workshop will be hosted by Alberta in 2022.

The TGP is aware and continues to look for opportunities for collaboration with larger transboundary grassland conservation initiatives including the Central Grasslands Roadmap and the Great Plains Conservation Network.

AWA is a long -standing member of PCF and TGP with staff and volunteers serving on the Board of Directors and a number of committees.

– Sasha Harriott

Sasha Harriott is one of two part-time Coordinators who conduct the day-to-day business of the PCF, focus members on the PCAP and take a lead role in ensuring that the goals of the PCF are met.

#### Great Plains Conservation Network

Nearly four months ago, I first had the opportunity to listen in on a virtual meeting of the Great Plains Conservation Network (GPCN) as a new Conservation Specialist with Alberta Wilderness Association. There, I had the pleasure of meeting a group of people strongly dedicated to the conservation of native prairie and our grasslands. It was inspiring and challenging, especially as I learned about all the involvement (and acronyms) of different people, projects and groups across the Great Plains.

GPCN is a collaboration of more than 25 non-profit and tribal organizations and dedicated individuals working together to conserve the Great Plains of North America. Restoring and maintaining native grassland species, habitats and function is the mission of this dynamic collaborative.

GPCN's Bison Working Group supports bison restoration, and is actively engaged with tribes, parks and other partners working towards reintroduction of Iinnii, the name for bison in Blackfoot culture. Looking at barriers to prairie dog conservation, particularly where plague commonly decimates populations, the Prairie Dog Working Group creates better awareness of the importance of prairie dogs to prairie ecosystems. Concentrating on mapping and modelling the Mapping Working Group identifies significant landscapes for conservation that will form the basis for a conservation planning tool for black-tailed prairie dogs and grassland ecosystems.

Since GPCN's inception, AWA has been a strong supporter. Lindsey Wallis, on staff with AWA, serves as a Coordinator for GPCN. AWA contributes to monthly GPCN Steering Committee meetings, and helped organise the AGM held in February 25, 2022. With more than 70 people from across three countries (Canada, the United States, and Mexico) attending, the network is growing and gives hope the GPCN conservation goals can be achieved.

- Ruiping Luo

#### ECCC Proposed Coal Mining Effluent Release Regulations

Environment and Climate Change Canada (ECCC) are preparing to allow coal mine operators to release coal mining effluent into aquatic ecosystems under newly proposed regulations. The proposed regulations are being developed under the Fisheries Act, scheduled for implementation in 2023, and would allow mine operators to release specified deposits of coal mining effluent which has been prohibited up until now. The coal effluent that will be authorised for release is required to meet specific thresholds for the concentrations of deleterious substances such as selenium, nitrate, and suspended solids. ECCC released a discussion document

outlining their Proposed Approach for Coal Mining Effluent Regulations in January for public engagement until March 1st. After reviewing the discussion document as well as participating in the February 16th info Session hosted by ECCC, AWA has significant concerns with the regulations being proposed for implementation - especially the decision to increase the limit for allowable concentrations of selenium and suspended solids. The discussion document states that these limits were made less stringent after consultation with industry, which we believe is unacceptable.

Our recommendations are summarized below and outlined in greater detail within our letter to ECCC available on our website.

- ECCC should continue to prohibit the deposit of coal mining effluent indefinitely until Industry can ensure water quality is equal to or greater than in the receiving watershed;
- 2. Limits and thresholds need to be science-based and ensure the protection of water quality and ecosystem health – not based on what is practical or feasible for Industry;
- 3. Revised limits and thresholds need to apply to all mines, including those currently operating or currently under development; and
- 4. ECCC needs to consider both the downstream and cumulative effects of these Proposed Regulations as opposed to solely focusing on end-of-pipe concentrations of deleterious substances as currently proposed.

In our letter, we noted that the submission of our comment letter should not be considered as support of any new or expanded coal mines for which these regulations might apply. We hope to see our concerns addressed in the next set of revisions for the Proposed Regulations scheduled for publication in the Canada Gazette at a future date in 2022.

– Phillip Meintzer

#### Alberta Coal Policy Committee

On March 4 2022, the government of Alberta released the Coal Policy Committee's (CPC) two reports, and announced a ministerial order to halt coal activity on the Eastern Slopes for the time being. The Coal Policy Committee process was aimed at leading a comprehensive public engagement and providing recommendations to the government on the future of coal development in the province.

The process kicked-off following the rescission of the 1976 Coal Policy, which sparked justifiable outrage in Albertans and demands to end coal exploration and mining on the Eastern Slopes. The decision to rescind the policy led to the opening up of lands to coal mining that had previously been protected, and Albertans made their voices heard in opposition to the destruction of our valued Eastern Slopes. By Feb 8, 2021 the 1976 Coal Policy was reinstated and a CPC was formed the following month.

The CPC's report provided eight recommendations for the Alberta government based on the opinions of Albertans. Among these was the recommendation to halt new coal activities on Category 3 and 4 lands (as defined in the 1976 Coal Policy) until specific regional and subregional plans under the Alberta Land Stewardship Act are completed. This recommendation has been realised by the ministerial order that was announced on March 4. Land-use plans can be an effective tool to manage multiple activities on the landscape, and should be based on thorough cumulative effects assessments and set clear. science- based thresholds for how much of certain activities are appropriate to achieve environmental sustainability. It seems clear that any assessment of cumulative effects will favour a total ban on coal mining on the Eastern Slopes particularly because of the effects on water quality and quantity, and speciesat-risk such as westslope cutthroat trout, bull trout, grizzly bear, and woodland caribou.

We are hopeful that actual science

-based bans on coal activity on the Eastern Slopes will be enshrined into legislation through these land-use plans. It is positive that new coal activity will at least be halted until the land-use planning process, which is years behind schedule, is completed. However, there are still environmental concerns related to existing projects and advanced project applications, which will continue, and inactive coal mines that remain poorly reclaimed or unreclaimed.

We also hope to see legislation in the coming months that addresses the other recommendations in the CPC report. One of these recommendations involves strengthening Indigenous involvement in land-use planning – the 1976 Coal Policy was formed entirely without the involvement of Indigenous peoples. The inherent and Treaty rights of Indigenous peoples must be respected in land-use planning and decisions on the future of coal in the province. Another recommendation pushes for a review of the Mine Financial Security Program, which currently lacks firm deadlines for reclamation, and lacks transparency about elements of companies' self-reported liabilities and what provision they've made for long-term monitoring and contingency plans. Following the disastrous rescission of the 1976 Coal Policy, meaningfully implementing the CPC's recommendations will help build trust in the government by showing Albertans that their views are respected. – Devon Earl



With thanks to Nissa Petterson for designing the Stop Coal poster and Nick Pink for the photo.

## IN MEMORIAM Patricio "Pat" Cabezas



With Pat Cabezas' passing on the day after Christmas, Albertans lost a long-time supporter of Indigenous Peoples and their rights for a healthy environment.

Pat's journey didn't start in Canada. He was raised in Santiago, Chile and suffered through the Pinochet years. As a youngster amid the turmoil, he made the decision to strike out on his own and head north through the western side of South America and Central America and over to Cuba before finally landing in Toronto. With the intent to stay in Canada only for a short while, he ended up staying for a lifetime. He first enrolled in English classes and went on to study chemistry. He went to Seneca College, University of Toronto, and University of Waterloo.

Upon graduation, he came west to work for Proctor & Gamble in Grande Prairie. Pat was in his element in the forests and wetlands of northern Alberta. For a brief time, he went to the Peruvian Amazon, again working with Indigenous Peoples and striving to protect the environment. Although he was a consultant for the oil and gas industry, environment and Indigenous Peoples were always top of mind. In any process, he wanted to make sure that the "neighbours" concerns were fairly dealt with and that they were involved and supportive.

I first had the pleasure of Pat's company and insights in the mid 1990s when I was asked to map the boundaries of the Hay-Zama Lakes complex. I stayed at Pat's place in Rainbow Lake. He later told me that he didn't know what to make of me, as an ardent advocate for the environment in the company of an employee of Mobil Oil. Still, we hit it off and we knew what we had to do. Pat re-invigorated the Hay Zama Committee, an eclectic mix of Dene Tha' leadership and representatives of the oil and gas industry, government, and conservation organizations, including Alberta Wilderness Association.

Little did we know what was to come but there were many "firsts" for Alberta. After some tough negotiations, and a bit of cajoling Alberta Energy into compliance by Pat and Chief Ahnassay with the assistance of the Hay Zama Committee, we developed guidance to ultimately end new oil and gas activity in this sensitive area, dedicated under the



Chief James Ahnassay (Dene Tha), Wuliji (Dalai Lake National Nature Reserve), Pat Cabezas during the study tour on the occasion of the twinning of the Hay-Zama Lakes Wildland Park with Dalai Lake National Nature Reserve.

Ramsar Convention as an internationally significant wetland.

For the first time in Alberta history, time and area limits were placed on exploration and development. Some areas were immediately shut down and reclaimed. In the end, with Pat's persistence and guidance along with the strong support of the Dene Tha', a Wildland Park was created and oil and gas exited ahead of schedule. The land still needs lots of healing but things are heading in the right direction. For his effort, Pat was recognized with one of Alberta's prestigious Emerald Awards, joining the ranks of individuals like Martha Kostuch, whose memory is honored in AWA's annual lecture. Ever humble and gracious, Pat always said his Emerald Award was for all of us on the Hay-Zama Committee.

Pat was also an ardent supporter of AWA's call to twin the Hay-Zama Lakes Wildland Park with Dalai Lake National Nature Reserve in Inner Mongolia, another Ramsar site. He graciously bowed out of a field tour to Dalai Lake, in order to allow Chief Ahnassay and others to attend.

At the height of the caribou controversy, Pat coordinated Alberta's Boreal Caribou Committee before going to work directly for the Dene Tha' First Nation's NDeh Corporation.

Pat stood up for what he believed in and made a big difference in northwestern Alberta for both Indigenous Peoples and for the Hay-Zama Wildland. He is already sorely missed. I often reflect on morning coffees and sushi nights with Pat and our banter on global and environmental matters. Rest in peace my good friend. – Cliff Wallis

## Adventures for Wilderness

It's our third year and it is with pleasure I invite you to join the fun!

#### By Jamie Jack

Adventures for Wilderness (A4W) is AWA's outreach, education, and engagement program for wilderness conservation. An Adventure can be anything from education through storytelling, epic challenges, field trips, walks in the wilderness, painting in the wilds, building bee nesting boxes or planting native orchids. AWA's program promises to give you an introduction, a strong appreciation, a sense of why AWA strives for conservation of wild places and wild things. I thought you would enjoy reading these snippets from some of last year's Adventures.

#### **Ghost Wildfire Exploration**

The tour was 100 percent first class, I'm sure I speak for all the attendees, we learned a ton – and it was fun! Kudos to the AWA for highlighting this issue via the Ghost Watershed Tour. – Wendell Koning

#### Cochrane Ranche Adventure

What could be better than time spent with a bunch of lovely kids hiking in a gorgeous valley, through the tall conifers with their gnarled roots, up along the ridges overlooking the valley, and spending time at a museum of western heritage (The Stockmen's) that allows kids to touch everything, and even to try on cowboy hats, boots, and chaps? – Margaret O'Regan

#### Jumpingpound and Hounds Hike

Along forest-shaded trails covered with rocks and tree roots, conversations connected friends old and new to each other's lives and to a shared love of wild places. As the group emerged on the summit meadows, conversation fell away as the group paused individually and collectively to take in the beauty of the wildflowers, the majesty of the Rockies rising to the west, and the seemingly infinite sprawl of the prairies to the east. – Kate Van Pernis

#### Plateau Mountain Bike and Hike

Plateau Mountain is truly a gem in Alberta's wild spaces inventory. There is a band of bighorn sheep that one can almost always count on seeing and almost always at this time of year, a bounty of alpine flowers in bloom. – Chris Saunders

#### Dinosaurs and Badlands (take 2!)

On the evening of July 16 Dr. François Therrien, Curator of Dinosaur Paleoecology at the Royal Tyrrell Museum, delivered an excellent presentation via Zoom on Alberta's wealth of dinosaur fossils with emphasis on the Albertosaurus bonebed in Dry Island Buffalo Jump Provincial Park. The next day on our hike to the bonebed we were able to locate the exact spot shown in the historic photos we had seen the evening before. What a thrill as we walked along and our youngest adventurer Raymond, imagining the dinosaurs of long ago, filled the valley with his dinosaur roars.

– Rob and Tjarda Barratt

#### The Rundle Ridge

Consistent with our team motto – "Don't Let the Old Man In" – and a pervasive sense of madness we had waited until it was a day with a blistering high temperature of 37 degrees. – Jim Campbell

#### 40 / 40 / 40

In the end, I cycled 44 km and climbed 42 pitches of 5th class in 36 hours. I even got 4-5 hours of "sleep"! – Lindsey Wallis

#### Mount Hoffman Hike

I think those who hadn't traveled the road west of Turner Valley were moved by its beauty and will want to see more of this special area. – Julie Docken

#### X-Country Ski the Mount Shark Loop

What a special day to be in the incomparable Alberta wilderness. – Sky England

#### The Great Alberta Parks Bike-a-thon

ADVENTURES FOR WILDERNESS

> The idea for this trip began, as all big ideas must, with a spark of inspiration... Doing the research I came across wave after wave of truly hidden gems, tantalizingly peeking out at me from every corner of the province. – Sean Nichols

> Please visit our website or social media platforms to learn more about becoming involved. One of the things I like most about these Adventures is that not only do they bring together friends, supporters, and donors, but they also introduce us to you and broaden our reach across the province.

> Thank you to so many, for your participation, coordination, sponsorship, or all three. You have been an important part of wilderness conservation in Alberta. Not only does A4W build community amongst adventure enthusiasts but is a vital fundraiser that helps AWA focus on conservation concerns and achieve a vision of protection and wise management of wild spaces throughout Alberta.

Reconnecting with nature allows us to reset emotions and refresh perspectives. AWA is an effective, credible, and independent advocate for Alberta wildlands, wild water, and wildlife. Since inception, we have understood that what wilderness we have now, is all we shall ever have. By participating in these Adventures and encouraging others you are helping AWA carry on its mandate to conserve Alberta's wild places and wildlife.

I'm looking forward to meeting you on an upcoming adventure.

Jamie Jack is a member of the AWA Board of Directors and A4W Steering Committee Chair.

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Return Undeliverable Canadian Addresses to:

AWP Alberta Wilderness Association 455-12 ST NW Calgary, Alberta T2N 1Y9 awa@abwild.ca PM 40065626

