Wild Lands Advocate

BY ALBERTA WILDERNESS ASSOCIATION

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Cover Photo On May 21, 2023, I was driving on Highway 1 eastbound along with Calgary Oval Speedskaters from a road bike camp and this beyond-beautiful scenery was effectively penetrating every motorist with a blissfulness. We forgot everything else in the world and were lost in this magical view. I safely crossed to the median to capture the fields and the depth of the beauty integrated into the scenery. I failed, as none of the photos taken have the ability to adequately express the moment. We were left with a joy and fear, thinking: how long will we humans be able to enjoy the mystic beauties of our mother nature? I feel satisfied that at least I am supporting an organisation that is fighting to preserve our nature and ask you to support Alberta Wilderness Association. *Photo © Bimal Grewal*

Bimal Grewal

Editorial Note Hello readers! Some of you might be familiar with me from AWA's biweekly newsletters. I'm so pleased to now take on the role of editor for *Wild Lands Advocate.* In this edition, you'll find articles with underlying themes of hope, or at least suggestions for a better way forward. Article topics touch on protections for sage-grouse and when those aren't enough; questions around Suncor's trustworthiness; how to hold onto joy in conservation (inspired by a *This American Life* podcast episode); the beautiful Horse Lake area and what puts it at risk; a personal essay from an individual from the Piikani First Nation, and much more. While hope is something Alberta Wilderness Association staff always try to maintain in messaging, amid the doom and gloom that tends to circulate around environmental issues, this edition will attempt to amplify that message even more, and highlight how it is not too late to keep the wilderness wild, it's not too late to play your part, and that coming together to speak out against weak government policies or imposing industrial activity is and will continue to be more important than ever. Thank you all for your interest in our work.

Amy Tucker, AWA Outreach and Communications Specialist and Wild Lands Advocate Editor

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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Reconsidering Growth

By Phillip Meintzer

Note from the author: *In planning the Autumn 2023 issue of AWA's Wild Lands Advocate magazine, AWA staff were asked to consider what a utopian, sustainable Alberta might look like in the future if we (and the rest of Canada, or the world at large) were successful in meeting our climate and biodiversity targets. As part of this challenge, I wanted my own piece of writing to examine how we might get there in the first place, and what barriers must be overcome to ensure a sustainable human relationship with the natural world.*

To resolve our environmental crises, we must reconsider growth.

Countries around the world have signed onto numerous multi-national treaties, frameworks, and agreements intended to help humanity address intersecting global crises such as (but not limited to) climate change, biodiversity loss, and ocean acidification that have been brought on by the crossing of numerous Earth system boundaries or tipping points. These are boundaries that have been relatively stable for millennia throughout the Holocene (our current geological epoch) prior to the onset of industrialization, and their stability allowed for the development of contemporary human societies as we know them today. A consistent climate, year over year, is necessary for reliable agriculture, for example.

With respect to climate change, some of these commitments include ensuring that greenhouse gas (GHG) emissions peak by 2025 at the latest, are cut by 43 to 50 percent by 2030, and that we reach net-zero emissions by 2050. These are targets informed by science and are intended to ensure that the global average temperature does not increase by more than 1.5°C by the year 2100 to limit the most harmful impacts of future climate changes that are likely to occur if we exceed 1.5°C.

In the case of biodiversity, the recently signed Kunming-Montreal Global Biodiversity Framework states that signatories hope to recover and conserve 30 percent of all land and waters (both marine and freshwater) by 2030 (frequently referred to as "30 by 30"), to enhance the integrity, connectivity, and resilience of all ecosystems by 2050, and to halt and reverse the extinction rate of all known-threatened species tenfold by 2050.

While these are noble goals in their intentions, they are meaningless without any associated real-world actions that begin to shift the needle towards a more sustainable human relationship with the environment. Yes, these goals are attainable in theory, but if we are going to repair our ecological rifts it is going to require more than just electing the right government, enacting the perfect slate of policies or regulations, and developing unproven tech. It will necessitate a massive shift in how human society orients itself within the Earth ecosystem that we are a part of, and that we rely on for our own survival.

The interaction between human society and Earth's natural ecosystem (of which we are a part) is mediated by our productive activities (also known as our labour). Through human labour, we interact with the natural environment to meet our needs. This means that human beings and our communities use the products and services of nature to acquire necessities such as food, clothing, and shelter. We meet our needs as a human society by engaging in production — by interacting with nature — which includes activities such as harvesting medicines, hunting for food, engaging in agriculture, and building shelter.

These are activities that humanity has always had to pursue because without them we wouldn't survive. However, the way that we coordinate these activities can look very different depending on the historical moment and the dominant socio-economic paradigm under which we live. Our productive activities have looked different throughout human history, from primitive hunter-gatherers to early forms of communal egalitarianism, through feudalism, to imperialism, slavery, mercantilism, and even today under capitalism. The ways in which we have organized our activities and societies at large have not been static and are always open to debate and change alongside changing circumstances.

These modes of production play a pivotal role in shaping how our society looks and functions at any given point in our history, and they dictate how we meet our needs. Unfortunately, under our current economic paradigm of neo-liberal monopoly capitalism (also known as "shareholder capitalism"), meeting genuine human needs and maintaining a sustainable relation to the Earth's natural ecosystems are of secondary importance to the singular priority of contemporary human existence — the pursuit of profit growth, regardless of its impacts to

We are increasingly seeing and feeling the impacts of climate change on our daily lives. As natural disasters, such as wildfires (pictured) become more frequent and severe, we should be questioning if the unwavering pursuit of economic growth is compatible with a sustainable future.
Photo © P. Meintzer

ecosystems.

Profit growth is the primary organizing principle by which contemporary human societies operate under capitalism. And the pursuit of wealth accumulation creates the conditions by which a forest is seen more for its monetary value as timber, rather than as an ecosystem of living organisms that sustains us. If we are going to even attempt to rein in our extractive and exploitative relationship with the natural world, we will first need to rethink the reason why we are pursuing resource extraction in the first place. We will need to reorient our thinking from exchange-value (i.e., is something profitable?) to use-value (i.e., is something useful?).

For example, are we cutting down trees in a sustainable way to meet genuine human needs (e.g., to build affordable housing), or are we clearcutting old-growth forests to increase shareholder dividends for a multinational logging company? If the boundless growth of profits is society's primary goal, then there will be no end to the continued robbery of the Earth's natural resources. The flawed assumption that infinite growth is possible in a world of finite resources is one of the foundational contradictions inherent to the capitalist economy. Even the way we think and talk about Earth's ecosystems as "resources" seems to reflect a backward notion that these things exist solely for our trade and consumption. To achieve our climate and biodiversity goals, we must first begin by questioning the assumptions that unlimited growth is possible and is inherently good.

Even Canada's own political leaders fail to understand the contradiction between growth and environmental sustainability. Speaking at a presentation on June 5 regarding the wildfires raging across the country, Prime Minister Justin Trudeau said "There are some politicians that still think you can have a plan for great jobs and growing the economy without having a plan to fight climate change … But Canadians know that fighting climate change is necessary both to create those great jobs and opportunities but also to prevent the catastrophic and expensive losses that Canadians are facing increasingly over the years." The disconnect is made evident here by Trudeau's insistence on the need for a growing economy, without recognizing how growth is part of the problem we should be trying to resolve. Wildfires are becoming worse and more frequent because of hotter, drier conditions, a product of climate change driven by rising GHG emissions — the direct result of a profitable fossil fuel industry.

According to data presented in Canada's Ministry of Natural Resources (NRCan) 2022-23 *Energy Factbook*, between 2000 and 2020, GHG emissions from oil and gas production increased by 15 percent, largely driven by increased production in the oilsands. During this period, the emissions from oilsands production more than tripled. Research published in *Environmental Research Letters* by

Kristina Dahl, et al., in May 2023, found that heat-trapping pollution, produced by 88 fossil fuel producers and cement manufacturers, was responsible for historical increases in global temperatures, which in turn, has been responsible for wildfires that have burned nearly 20 million acres across Canada and the United States since 1986. This study directly links the emissions produced by the fossil fuel and cement industries to the destruction of forests by wildfires.

Kevin Anderson, one of the leading British climate scientists and the deputy director of the Tyndall Institute for Climate Research has stated that an analysis [conducted by the Tyndall Institute] suggests that to remain below 2°C of global warming, it will require a 10 percent reduction per year in GHG emissions by the world's wealthiest (and largest emitting) nations — including Canada — and that a reduction of this scale is incompatible with economic growth. Evidence shows that a decrease in GHG emissions by more than one percent per year is typically associated with economic recessions, which reinforces the difficulty of achieving climate goals in a world that's dedicated to growth. Meanwhile, oilsands companies in Canada reported a combined $34.7 billion in profits in 2022 alone, more than double what they earned the previous year, while still pursuing new and/or expanded mines, such as Suncor's planned expansion into the McClelland Lake Wetland Complex.

There are many who would argue that we need profitable companies to ensure that there are more jobs available for workers (and therefore thriving communities), but available data suggests otherwise. Despite the recent profits cited above, Alberta witnessed a loss of roughly 10,000 jobs in the oil and gas sector in March 2023 alone. And, as of January 2023, Statistics Canada reported that nearly 50,000 Alberta oil and gas jobs had been lost since 2014. Again, during the midst of a profitable energy boom in the wake of Russia's invasion of Ukraine, new Suncor CEO Rich Kruger recently announced plans to cut 1,500 jobs at Suncor under the guise of "efficiency," having recorded $1.8 billion in profits in the first quarter of 2023 alone. Profitability is not a guarantee of sustainable and dependable employment.

Ignorance towards Earth's tipping points and the ecological limits to growth has led to the development of technological, market-based "solutions" to the climate and biodiversity crises, such as carbon capture and storage (CCUS), eco-labelling, mono-crop tree planting, and the recently debunked carbon offset industry — collectively referred to here as the greenwashing industry. These are capitalist "Band-Aids" that create entirely new industries designed to profit off the environmental rift created by profiteering in the first place. These proposed solutions only exist to enable business-as-usual growth scenarios, without ever questioning the system of production and accumulation itself. The greenwashing industry has no interest in seeking to resolve the root cause of these intersecting crises in the first place — unfettered growth — and the associated production of waste and environmental degradation driven by the pursuit of endless profits.

Failing to recognize the role of growth has led many people to criticize or condemn corporations and their CEOs for their greed when they have a fiduciary duty to return profits to their shareholders. When we expect a return on our own personal investments, that only reinforces the continued demand for growth. Regardless of my opinion of those who have made their fortune at the expense of the environment, I do feel that when billionaires are criticized as if their personal greed or lack of morals is the sole reason for environmental issues, that misdirects our collective outrage away from the system of wealth accumulation that enables the creation of billionaires in the first place.

To achieve any real success with respect to our targets, we need to challenge the hegemonic supremacy of capital accumulation and unlimited economic growth, and we need to accept the existence of natural limits to Earth system processes (and/or ecosystems) as informed by the best available western science and Indigenous traditional knowledge developed over generations of living in harmony with the land.

To paraphrase the late Dr. Betty Bastien, a Blackfoot woman from the Piikani First Nation, University of Calgary professor, and author of *Blackfoot Ways of Knowing*: Indigenous ways of knowing are the processes that align Niitsitapi (people) with their relationships to the natural world. All knowledge is generated for the purpose of maintaining our relationships, not just for humanity's sake but for balance and sustainability in all our relations. Niitsitapi ways of knowing are part of a holistic practice of balancing ourselves within our environment. Although this is only the perspective of a single Indigenous culture, it represents a perspective by which a particular human society sought to live in balance with the world around them, in stark contrast to the way we live today. Indigenous worldviews such as those of the Blackfoot, if considered, could provide us with a framework for a sustainable future, where balance, not growth, becomes our shared goal as a species.

Once we have reconsidered our relationship to growth, only then will we be enabled to reorient our economy — and our society at large — towards achieving alternative goals such as meeting our climate and biodiversity targets and addressing broader human social needs (e.g., housing, education, cost of living, etc.) in a more just and equitable manner. When profit is no longer the driving force of our daily existence, then we are free to use our existing capital (e.g., wealth, knowledge, skills, technology, or infrastructure) and redirect it towards meeting alternative goals. This effort will require a collaborative and planned approach to human activities, which may frighten laissez-faire devotees. But given the imminent threat that these crises pose to the future habitability of our planet, it's imperative that we act with the urgency required of our time, in ways that are similar to how we reoriented our economies during wartime. It is going to take an all-hands-on-deck approach if we are to reach these targets by 2030 and 2050.

Sandhills, Sawmills, and the Forests Surrounding Horse Lake

By Sharlene Fritz and Devon Earl

With imminent logging in the Ghost Watershed, this article pairs the local knowledge of Sharlene Fritz (Part 1) with the assessment of the Alberta forestry model by Devon Earl (Part 2). The two writers hiked together to Horse Lake this summer.

Part 1 – The Journey by Sharlene Fritz

The mayfly lands on my shirt sleeve, delicately balancing on a crease. Today is the day it must mate and then die. Completing their life cycle on land, these white-laced winged creatures have spent the last several years underwater, growing and morphing in their nymph stage. These intricate insects swarm in a cloud above the beaver pond, itself a delicate balance of mud, willow, and will. We are on our way to Horse Lake, a small lake tucked into a pocket of foothills that drains into Aura Creek, a tributary to Waiparous Creek, and critical habitat for westslope cutthroat trout and bull trout. Industrial scale logging began in this sub-basin in 2013 and more is planned for the fall 2023-2024 season.

Let me take you there.

Meeting in Cochrane, we travel west along the 1A Highway and turn north onto the Forestry Trunk Road, or Highway 40. Completed in 1952, this road connects the Bow River valley with the Red Deer River valley. The name hints at the roots of its creation. The Forestry Trunk Road was largely built through the Rocky Mountains Forest Reserve established by the Dominion of Canada in 1910 to achieve "the reserving of timber supplies ... and the preserving of the water level in streams by conserving the timber on the upper watersheds." The Eastern Rockies Forest Conservation Board (ERFCB), a partnership between federal and provincial officials lasting between 1947 and 1972, initiated the road construction to allow for better management of these "water towers for the prairies," including for fire detection and suppression.

Driving the shoulder-less road, we pass by the intersection to Stoney IR 142B, multiple ranching operations, a handful of small settlements, two retreat centres, a Water Survey of Canada hydrometric station below the bridge over Waiparous Creek, and a paintball company. The pavement ends at the cattle guard, a boundary for both the road surface and the jurisdiction. Here we enter Crown land, the Forest Reserve, its boundary now announced by a sign signalling a shift in emphasis, the Ghost Public Land Use Zone (PLUZ). Staging areas, off-highway vehicle (OHV) trails and vehicles unloading riding machines inhabit the landscape. We cross the Waiparous Creek again just north of the Waiparous Creek Campground, one of several Public

The serenity and calmness of Horse Lake. Photo © D. Earl

A resident of the wetlands surrounding Horse Lake, this wood frog let us approach for a photograph. Photo © D. Earl

Recreation Areas (PRAs) in the Ghost PLUZ. A sharp hairpin turn leads us onto Camp Road, named by a local ranching family for the summer camp they set up when their cattle grazed these valleys. We drive over a large, bottomless culvert, a recent installation completed by Trout Unlimited Canada to replace five hanging culverts in another westslope cutthroat trout-bearing stream.

Skirting another OHV staging area and turning south, we are now driving on a historic road, the Eau Claire tote road. Commercial logging began in the Ghost with the arrival of the Eau Claire and Bow River Lumber Company, first conceived of by an Ottawa lawyer and then executed by a company out of Eau Claire, Wisconsin. The owners obtained timber berths in the upper Bow, Spray and Kananaskis valleys in the late 1800s. In 1906, they received a timber berth in the northern part of the Ghost Watershed. To supply and staff their logging camps, they built the Eau Claire tote road, a transportation artery with several branches. But the logs took a different route. Felled in the winter, the harvested trees were piled up on or beside the frozen Waiparous Creek at one of three dams. In the spring, nature's force or human muscle burst the dams, releasing the logs down to the current of the Ghost River, further on to the Bow River and finally floating to their destination at the Eau Claire sawmill in Calgary. Remnants of their camps, dams and most noticeably, the tote road can be found in the Ghost Watershed. Until the building of the hydroelectric dam that created the Ghost Reservoir in 1929, this log drive was uninhibited. Mainly horse and human-powered, these logging operations removed timber but not at the industrial scale and pace observed today.

We park at the fork to the Whispering Pines bible camp, settle into our packs, and begin hiking the Eau Claire tote road, which is now a designated OHV trail.

We quickly encounter a 2013 cut block and note the lack of regrowth. Trees in the minimal stand retention patch dwarf the tiny and sparse pine seedlings. Aspens spread out in the open sunshine-filled space. Following the track, we cross an unnamed tributary to Waiparous Creek on a bridge that few people seem to use. Wider OHVs ford the creek just upstream of the bridge. Leaving the designated trail, we hike up a seismic line through more of the 2013 timber harvest. We steadily ascend to the ridge, taking the "chicken trail" to avoid the steep climb. Gaining views of the Rocky Mountains, we catch our breath and talk about the reclaimed haul roads, still visible 10 years on. Tracing the spine of the sandstone ridge, we revel in the cool shade of the conifers that give relief from the hot, exposed cut block opening. Like ribs protecting lungs, the fire-origin stands of spruce and pine on parallel ridges guard the wetlands beneath. Flagging tape appears downslope, a precursor to the upcoming 2023 SLS harvest. The northeast facing slope to our left nurtures large mature spruce sheathed in lichen. Their wide bases, tall tips, and 100+ growth rings make them the old sentinels of this area. They are marked for harvest. The ridge walk ends in an open, scoured bowl, known as the Sand Hills or Sand Ridge by the locals. Stripped of vegetation by relentless dirt bike tracks, this soft white sand sits exposed. These surficial sand deposits are aeolian, or wind borne, and make a fragile substrate. Despite being officially closed to OHV use, this area has been churned into an open sandpit by the wheels of dirt bikes.

We follow the rutted sand track to an undercut bank draped with juniper and kinnikinnick. Two gaping holes invite investigation, known to be former wolf dens. Wildlife camera footage revealed nighttime forays of the alpha male and female. Today, evidence of this canine

Trees were seen bearing flag tape, marking where logging activity is set to take place. Photo © A. Tucker

presence appears as scat piles and clearly distinguishable tracks. Anecdotes from locals describe the once-abundant presence of moose in this valley.

Descending the last of the sandy slope, we come across another piece of flagging on the lone spruce encircled by dirt bike tracks. We're now heading through a forest filled with moss, lichen, game trails and flagging for the proposed haul road. A short distance along, we hit another historic trail, the old ranger route that connected the original Aura Ranger Station to the one at Harold Creek. Another unnamed spring-fed trickle flows into Aura Creek, a Waiparous Creek tributary, and designated critical habitat for westslope cutthroat trout and bull trout. Pure-strain westslope cutthroat populations have been confirmed in this curving, willow-lined aquatic ribbon. Today, the way is spongey, wet from recent rains and seepage from the ground. Winding our way along the old ranger trail, we hear the cries of a red-tailed hawk before we see it circling above, warning the willow-birch wetland of our arrival. Muskrat tracks in the mud parallel our own. We are flanked by 2014 cutblocks on our right where regeneration falters. In the distance, we see part of the 2020 clear-cut openings, the full extent of the long NW-SE trending strips is hidden from view.

We know we are close to the lake but cannot quicken our pace. Frogs in multitudes bring the sedges alive with their gutsy leaps. Avoiding a submerged hiking boot, we ourselves hop from hummock to hummock, making our way to the lake's edge, an undefined boundary. Basking in the beautiful arrival, we make out shorebirds, waterfowl and the indescribable peace that comes from being in foothills wilderness.

Pressing further up the ranger trail, we catch a glimpse of the 2020 haul road through the pileated woodpecker cavity-nesting condo units. Goldenrod, yarrow, blue bell and fireweed colour the scene. Aspen groves give way to dwarf birch, in turn giving way to sedges, the upland transitioning to wetland. We're looking for the peat deposits and a way to extend the day. We find the peat layer as a dark mat, exposed by the incised stream. Reluctantly, we turn around. In a patch of forest slated for harvest in the fall of 2023, a spruce grouse mother scares up at the side of the trail, perches on a fallen aspen trunk and quietly coos a warning call to her young. Three in her clutch, they all heed the warning and move from one side of the trail to the other. Some confidently, others paralyzed with fear at first, all eventually making it to safety. A delicate balance.

Part 2 – The Forestry Model by Devon Earl

Concerns about excessive logging in the Ghost watershed are not baseless. Science has established that too much clearcutting can negatively impact biodiversity, hydrologic regime, and carbon sequestration; the functioning pillars that hold up ecological integrity. The area in question has been recognized for its outstanding ecological value through various avenues: *The Ghost River Integrated Resource Plan* (IRP, 1988) identifies it as a critical wildlife zone; a report commissioned by Spray Lake Sawmills (SLS) identifies it as a remnant high-conservation value forest; and researchers from the University of Waterloo found Horse Lake to contain the most rich and abundant array of songbird diversity of all their sampled sites along the Eastern

Slopes. Recently, a wildlife biologist identified 54 bird species on one early morning survey, six listed as sensitive. These Horse Lake bird counts show that the area has a wide range of ecological niches, or habitat opportunities, for critters of all walks of life.

The Aura Creek sub-basin encompasses about 1,035 hectares of forests, sandhills, and wetlands. Within that area, 270 hectares of forests have been logged since 2013, and the additional 65 hectares that are planned in 2023 will result in at least 30 percent of the area being disturbed by forestry. At this rate, it is very likely that logging practices will have a hydrologic impact. This upcoming harvest has the potential to affect the timing and volume of water flow. Clearcut areas do not reabsorb water as well as forests, and this may result in more runoff and creek flooding in the spring, poor groundwater recharge, and low water availability in the late summer and fall. Wetlands are particularly susceptible to evaporation when the forests that surround them have been logged. As climate change drives us towards increasingly worse wildfire seasons, the value of wetlands as a needed fire break is increasingly evident.

Changes to hydrologic regime are of particular importance to cold-water native trout. Despite Aura Creek being listed as critical habitat for bull trout and westslope cutthroat trout, Fisheries and Oceans Canada (DFO) has not stepped in to stop the probable habitat destruction that will result from logging more forests in the Aura Creek drainage. DFO is responsible for administering the *Fisheries Act, and the Species at Risk Act* when it comes to aquatic species at risk like endangered native trout. However, their questionable approach tends to allow habitat destruction if habitat is made up elsewhere. It remains unclear to us when permits are required by DFO for logging operations and when they are not, and why these logging plans would be permitted or exempt from requiring a permit. In either case, it is irresponsible to allow the destruction of native trout habitat, especially when these fish have endured a significant decline in their historic range largely due to forestry, oil and gas, and other intensive land use and industrial developments. Endangered native trout, like many other species at risk, have no room left to compromise their habitat and continue to survive.

The public has reasonable doubts about the sustainability of forest management in Alberta. Logging plans often seem to pop up in areas that are important for recreation or ecological values shortly before they are set to begin. Of course, these plans have often been in the making for many years, but because of a lack of transparency and public participation in the planning process, it is difficult or impossible for concerned parties to find out about plans until it is too late to oppose them. Public input is invited during the Forest Management Plan (FMP) stage, which happens once a decade, but concerns about specific cutblocks are dismissed as premature and better dealt with at the Annual Operating Plan (AOP) level. Making effort to provide meaningful, locally based knowledge into the AOP, the public is brushed off by officials who comment that concerns were addressed at the FMP stage. All the while, it is difficult for anyone to access relevant planning and monitoring documents like stewardship reports and regeneration data. Though forests are a public resource, they are treated as the property of the company holding the Forest Management Agreement (FMA). FMAs between the provincial government and forestry companies are locked in for 20 years to give companies security in their tenure, with likely renewal after the 20 years are up. This system was not designed to ensure security for other users of the forest, including wildlife.

Public trust is further fragmented by industry greenwashing. If you take industry's word for it, you would believe that forests past a certain age will simply decay and die, and therefore harvesting older forests does the ecosystem a favour. This is fiction that intends to paint the forestry industry green. In the absence of logging or natural disturbance, trees can grow to become very old. Even in a place like Alberta where fire is a natural disturbance that forest-dwelling species evolved to tolerate and even depend on, many stands and patches of trees are missed by fires leading to the presence of forests well above the average age throughout the landscape. This point is driven home by the fact that many species evolved to rely upon features of old-growth forests, like the pileated woodpecker and barred owl. Logging does not emulate natural disturbance by fire and should not be treated as a safe or necessary replacement.

Industry points to their operating ground rules (OGRs) as the environmental regulations that ensure sustainable practices, but OGRs are not based on science, and don't set strong enough environmental protections like large enough buffers around water bodies to protect fish or large enough patches of living trees to retain biodiversity. If they did, forestry wouldn't be one of the important causes of the decline of certain native trout species. Some forestry companies operating in Alberta point to their Sustainable Forestry Initiative (SFI) certification as proof of their sustainable practices; However, the SFI standard does not measure any outcomes of sustainability and is currently under review by the Competition Bureau of Canada for false and misleading claims; they cannot claim that products come from sustainably managed forests while not measuring any sustainability outcomes such as biodiversity or species at risk recovery.

Our visit to Horse Lake gave us an opportunity to take in the natural wilderness of this special area that won't be the same after logging takes place this fall. Although it is sad to know that we may not get a chance to see this place again the way it is now, I felt privileged to have stepped foot there. Spending the day spotting frogs in the wetlands as we trod carefully through them, listening to bird calls, and peeking into wolf dens, I felt hopeful. As more people are venturing into the natural wilderness, more people raise their voices to advocate for its protection and responsible management. I have seen anger, frustration, and sadness channelled into positive environmental change, and that is my hope for our forests. I see a future where all values of the forest are considered and weighed thoughtfully in the decisions about where and how to harvest timber. A true ecosystem-based management regime can offer jobs and timber as well as ecological integrity, a stable climate, and a healthy water supply.

When Protection Isn't Enough

By Ruiping Luo

When greater sage-grouse was proposed for listing under the United States *Endangered Species Act* (ESA), it spurred an unprecedented collaborative conservation effort to save the failing species. This was, to an extent, successful; while sage-grouse populations still struggle south of the border, they are doing significantly better than their relatives in Canada.

Sage-grouse is an iconic prairie bird found only in Canada and the United States. Like in Canada, the species has seen massive declines in the interior United States, with the United States Geological Survey reporting an 80 percent loss from 1965 to 2019. Sage-grouse are highly reliant on their sagebrush habitat, and their decline is mainly attributed to the destruction and fragmentation of this landscape, particularly through the development of oil and gas in critical habitat.

In Canada, despite current protections and recovery efforts, sage-grouse are still sliding towards extirpation. Mostly, this is because we are not doing enough to protect habitat: Canada's *Species at Risk Act* (SARA) applies almost exclusively to federal lands, excluding most terrestrial species on provincial or private lands. Provincial protections for endangered species, like Alberta's *Wildlife Act*, often fail to protect critical habitat at all.

Here we look at how North America is handling endangered sage-grouse, and where protections are not enough.

First, a look at how America is handling sage-grouse

In 2013, the US Fish and Wildlife Service (USFWS), after several delays, proposed greater sage-grouse for listing under the *Endangered Species Act* (ESA).

In response to the possible listing, conservationists, ranchers and landowners, states and industry all came together, working to restore the vulnerable species. Over the next five years, the Sage-Grouse Initiative (SGI), through voluntary partnership with local landowners, worked to conserve over 5.6 million acres of vital sagebrush habitat, and the 11 western states that hosted sage-grouse populations cooperated with federal agencies and conservationists to produce new recovery plans. Even the oil and gas industry became involved, funding research and habitat restoration, and altering some practices to minimize land disturbance. In September 2015, the Bureau of Land Management (BLM) and US Forest Service (USFS) announced the finalization of 98 land-use plans to conserve greater sage-grouse, placing protections on nearly 70 million acres, and 10 million acres of land across 6 states were withdrawn from development to protect valuable habitat.

In 2015, a survey of sage-grouse leks conducted by the Western Association of Fish and Wildlife Agencies (WAFWA) found that sage-grouse populations had grown by over 60 percent in the last two years, reaching over 80,000 males, a potential positive reaction to widespread conservation efforts. In October, USFWS declared that sage-grouse would not be listed under the ESA, as the "primary threats to greater sage-grouse have been ameliorated by conservation efforts implemented by Federal, State, and private landowners." While the decision was criticized by several conservation organizations as capitulating to industry, and later policy changes would test the implemented land-use plans, the actions leading up to the decision nevertheless indicate that extensive collaboration across sectors is possible and can help recover a vanishing species.

Had greater sage-grouse been listed under ESA, it would have been illegal to harm sage-grouse, including through habitat modification or destruction. Large-scale projects likely to threaten or harm the existence of sage-grouse would be regulated, and development would have been restricted for most of the interior United States. The threat of these sweeping protections provided a strong motivator for collaborative conservation and compromise to reduce the threat to sage-grouse.

Conservation under the *Species at Risk Act*

Meanwhile, in Canada, greater sage-grouse has been listed as 'Endangered' under the *Species at Risk Act* (SARA) since 2003, yet populations are still declining. Already extirpated from British Columbia, the species is found only in the shrinking sagebrush flats of Alberta and Saskatchewan. Canada's entire sage-grouse population is estimated at less than 250 individuals, with only 18 males counted in Alberta earlier this year. These populations have shown little to no signs of recovery over the past two decades.

Recovery measures and protection for

Sage-grouse is one of over 600 species at risk listed under Canada's Species at Risk Act. For many of these species, the federal legislation has not been enough to prevent their decline. Photo © C. Olson

greater sage-grouse in Canada have been piecemeal. In Grasslands National Park, on federal lands in Saskatchewan, extensive efforts have been completed to improve habitat, including marking, removing or replacing fences, planting 93.7 hectares of habitat with sagebrush and restoration of areas damaged by human activities. In 2021, Parks Canada reported the population had not declined or increased since 2016, suggesting population numbers are mostly stable.

In contrast, Alberta's sage-grouse population, which resides on provincial and private lands, suffered a decline of over 30 percent in the same time period, despite measures by the provincial government, non-government organizations and individual landowners to restore the population. Maybe this difference was because Alberta's efforts have been less ordered, with separate groups responsible for habitat improvement, captive breeding and relocation, and reclamation. More likely, Alberta's sage-grouse decline was caused by a failure to protect the bird's habitat.

Shaun Fluker, an Associate Professor in Law at the University of Calgary and the Executive Director of the Faculty's Public Interest Law Clinic, who has written extensively about the protection of endangered species in Alberta, notes that "The federal *Species at Risk Act* has very limited application on provincial lands and accordingly, even though the Act has regulatory measures to prohibit harm to endangered species, it is not very effective at protecting habitat for a terrestrial species like the sage-grouse." However, the sage-grouse is an exceptional case because the species' habitat is under an emergency protection order (EPO).

Under SARA, the responsible Minister must recommend an emergency order when "he or she is of the opinion that the species faces imminent threats to its survival or recovery." For sage-grouse, this was issued in 2013, after populations dropped to only 13 males in Alberta. The EPO prohibits damage to sage-grouse critical habitat identified in the Order, covering habitat on provincial lands.

Yet, Fluker cautions that emergency protection orders under SARA are not a panacea for the shortcomings in endangered species protections in Canada. For starters, only TWO such orders have ever been made under SARA despite the demise of hundreds of species in Canada without adequate legal protection. The decision-making process for making an EPO lacks transparency. It is often discretionary, and, based on previous decisions, there is a sense that the application of this power can be politically motivated. For instance, the EPO for sage-grouse was only issued after extensive petitioning and litigation from conservation groups including AWA. Additionally, the effectiveness of an EPO depends on the terms

Elk herd. Alberta's Wildlife Act was historically used as a hunting and fishing regulation, to manage wild game. Alberta does not have a separate Act for endangered species, and the Wildlife Act frequently fails to protect endangered species and their habitat. © A. Teucher

specified, and requires monitoring and enforcement for compliance. In Alberta, the EPO only covers a portion of the sage-grouse range, and development continues to encroach on sage-grouse habitat outside the protected range. SARA also allows for an order to extend SARA protections to provincial and private lands, known as a safety net provision, if the Minister "is of the opinion that the laws of the province do not effectively protect the species or the residences of its individuals." Yet, despite continued biodiversity loss in Canada, this provision has never been used.

How effective has SARA been at protecting Canada's endangered species?

For most at-risk species, SARA has been appallingly ineffective. While it's better to have a species listed than not at all, getting the listing involves a lengthy bureaucratic process which can delay or prevent many species from receiving federal protection. Even once a species is listed, there are many delays and obstacles to recovery.

Along with greater sage-grouse, over 600 species are formally listed as endangered, threatened, special concern or extirpated under SARA. Recommendations on which species to include are made by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), an independent panel that looks at scientific evidence and determines the risk of a species disappearing from Canada, and submitted to the Minister of the Environment, who considers them along with socioeconomic costs. According to SARA, the minister then has 90 days to decide whether to list a species, although decisions can be delayed for months or years, as the minister can extend the consultation period indefinitely. Listing the species is at the sole discretion of the Governor in Council. Through this process, 85 percent of recommendations made by COSEWIC have been added under SARA. However, likely because of socioeconomic costs, many economically important species, especially marine fishes, are not listed.

Once listed, there are further lags as recovery strategies and action plans are created. Recovery strategies are to be prepared within one to two years of listing, though they are often severely delayed. Action plans, describing projects or activities to meet the recovery strategy objectives, do not have a legislated

deadline, and are often even more delayed. For instance, while greater sage-grouse was listed as 'Endangered' in 2003, a recovery strategy was not produced until 2008. An amended recovery strategy was written in 2014, and although it promised a multi-species action plan "will be completed within one year of final posting of this Amended Recovery Strategy," the *South of the Divide Action Plan* was not completed until 2017, 14 years after the species was first listed. We are still waiting on promised action plans for other parts of the sage-grouse range.

There is also a reluctance to protect unoccupied habitat, Fluker noted. Most recovery strategies focus on identifying where the species is currently found, even though there is nothing in SARA that prevents including unoccupied habitat — it is simply how officials interpret and operationalize the Act. For species with low populations, unoccupied habitat may be crucial for population growth, and the lack of space for expansion could be preventing recovery.

From 1970 to 2016, populations of COSEWIC assessed at-risk species in Canada declined by an average 59 percent, according to the 2020 World Wildlife Fund (WWF) Living Planet Report. Of the species listed under SARA they were able to track, a 2023 audit report found less than half of populations were making progress towards recovery goals. In 2017, WWF's *Living Planet Report Canada* showed that endangered species declines continued after SARA was enacted and stated the Act "has faltered in its mission to protect Canada's most beleaguered wildlife." The report attributes this failure mainly to delays in listing and action, allowing socioeconomic factors (such as using the species for harvest or wanting to develop on species habitat) to interfere, and a lack of funding towards species recovery.

Alberta's *Wildlife Act*

In Canada, apart from migratory birds, aquatic species and species on federal lands, provinces have primary responsibility for wildlife species and their habitat. Alberta is one of the few provinces not to have a dedicated *Endangered Species Act*. Instead, Alberta relies on the provincial *Wildlife Act,* and on government policy, to protect species at risk.

Historically, the *Wildlife Act* was a regulation for hunting and fishing and mostly regards wildlife as a resource. In 1996, Alberta signed the *National Accord for the Protection of Species at Risk* and committed to designating species at risk, protecting their habitats, and developing recovery plans. To meet these requirements, Alberta amended the *Wildlife Act* to include a definition for endangered species as an animal, plant, or other species "prescribed as such."

This definition highlights one of the main weaknesses of the *Wildlife Act*: nearly all aspects of endangered species are at the discretion of the minister and are governed by policy. While the Act requires maintaining an Endangered Species Conservation Committee, which recommends species that should be listed as endangered and advises on recovery plans, the selection of committee members is also under the discretion of the minister, and, unlike with COSEWIC, there is no legal requirement for the members to have the necessary scientific background. There is also no legal obligation for listing a species, providing a recovery plan, or identifying critical habitat.

Protection of species at risk in Alberta is completely unpredictable and relies exclusively on terms and conditions. The strongest protection the *Wildlife Act* provides is making it illegal to "willfully molest, disturb or destroy a house, nest or den." Even this is hardly any protection, since actions can be allowed if specifically authorized or permitted by the minister, and accidental destruction cannot be prosecuted. In other words, if a developer wanted to destroy a habitat that might contain endangered species, they would only need to not verify species presence or get permission from the minister.

Recovery strategies have been written for some of Alberta's endangered species, although these rarely manage to protect habitat. *The Alberta Greater Sage-grouse Recovery Plan* was released in 2013 and included "protective notations" around the identified sage-grouse range that "restrict industrial surface access and development." However, Fluker confirmed that there is no legal basis for these protective notations, and their use is internal and non-transparent. Basically, protective notations may be considered when a project is under review and serve as an internal flag for government officials to consider the implications of a development project about the notation, but it does not necessarily place substantive limits on development. Many projects are approved regardless of any protective notations, allowing development to continue in the sage-grouse range.

Sage-grouse voluntary protection

Greater sage-grouse populations are still declining, and because of the gaps in legislated protection, endangered species often require voluntary protection, especially for species on provincial or private lands. Fortunately, the value of our native grasslands, forests, wetlands, and other ecosystems is getting more and more recognition. A 2022 survey by Canadian Parks and Wilderness Society (CPAWS) found that 59 percent of Albertans agreed that not enough land was being protected, and over three-quarters support setting aside more land for wildlife. Voluntary protection of lands by landowners, by placing conservation easements to limit development or altering landscapes to be more welcoming to wildlife, is also increasing.

Without legal protection, sage-grouse and many other species rely on the voluntary and collaborative effort of Canadians to prevent this species from being lost. If we want to continue seeing this beautiful species in Canada, we will need to work together to protect these lands and restore the fragmented habitat that they need to flourish.

Can we Trust Suncor to Keep its Promises? An Example from Colorado

By Phillip Meintzer

Suncor Energy, the Calgary-based oilsands company, has recently made news headlines south of the border for repeat incidents of toxic air and water pollution near their refinery in Commerce City, a municipality near Denver, Colorado, raising questions over its ability to meet its own commitments here in Alberta.

In March 2020, Colorado public health officials announced that Suncor would be charged $9 million USD as part of a settlement for multiple air pollution violations going back to July 2017. According to the Colorado Department of Public Health and Environment, these violations included exceeding emissions limits for volatile organic compounds, sulfur dioxide, hydrogen sulfide, hydrogen cyanide, nitrogen oxides, and carbon monoxide.

Following this settlement, the state of Colorado required that a portion of these funds be directed to fund local community projects. A local non-profit organization, Cultivando, which focuses on social justice issues and predominantly serves the Hispanic community in the region, was a recipient of the largest share of these funds.

Using this money, Cultivando partnered with Boulder A.I.R., a local air quality company, to establish a comprehensive community-led air monitoring program with more than 20 monitoring sites across Denver and Commerce City. The monitoring program measures a suite of toxic chemicals and shares the results online in real-time so that the public has access to important air quality data for the health and safety of their community.

In March 2023, Cultivando released the results of a single year of air quality monitoring, which suggested that the residents of Commerce City and Northeast Denver are breathing in substantially greater volumes of polluted air than those in other communities. That quadrant of Denver is predominantly Hispanic, confirming long-held beliefs by those in leadership at Cultivando that their community was being sacrificed by state regulators to the benefit of Suncor through a form of environmental racism. Not too dissimilar to the experience of many First Nations, Inuit, and Metis communities who experience disproportionate harm from industrial development projects here in Canada.

Air monitors set up near the Cultivando head office in Commerce City recorded elevated concentrations of PM2.5 particles (20 times smaller than the width of a human hair), as well as spikes in airborne benzene, a known carcinogen. Breathing in PM2.5 particles has been connected to heart and lung conditions, including asthma. Low levels of radioactive radon gas were also detected by the monitoring program.

For both PM2.5 particles and benzene, the Cultivando monitor recorded greater concentrations than those at other locations across the monitored area. Between March 2022 and March 2023, in a single year, PM2.5 particle levels surpassed the threshold for human health and safety nearly 12,300 times at the Cultivando monitor, while a similar station in Broomfield recorded only 380 exceedances.

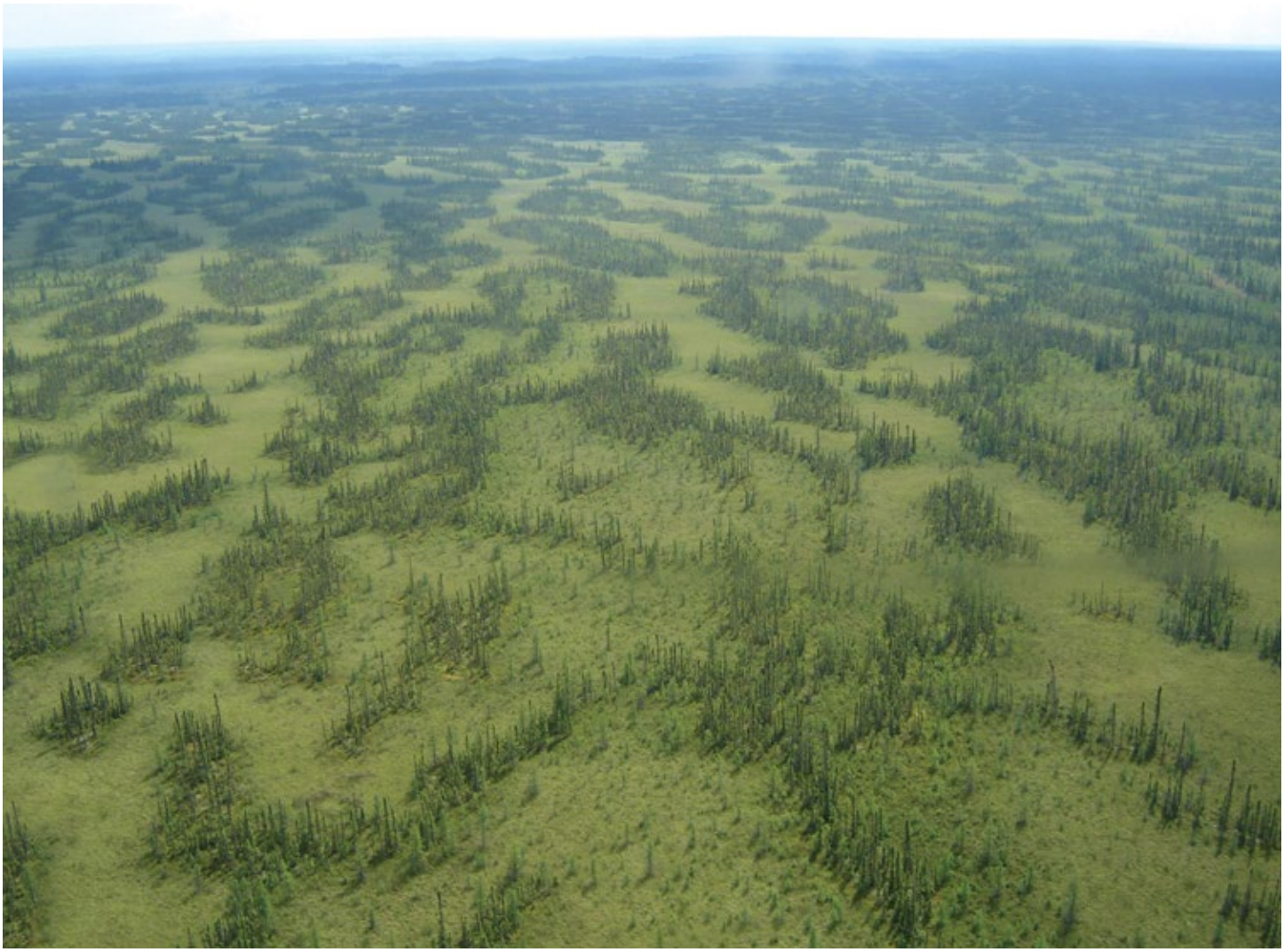
According to a news article published on March 17, 2023, in the Denver Gazette: "Cultivando said people living around the refinery have been suffering from maladies including nosebleeds, migraines, asthma, and other illnesses they blame on the refinery."

Then in June 2023, a new report released by the United States Environmental Protection Agency (EPA) stated that Suncor's refinery at Commerce City is having significantly more air pollution incidents than 11 other similar refineries elsewhere nationwide. This report acknowledged that these repeated incidents are likely due to inadequate preventative maintenance, testing, and inspection of control systems and other equipment.

In a statement about the report, an EPA Regional Administrator said that: "This analysis underscores the importance of our compliance assurance efforts at Suncor in protecting the surrounding community..."

And again, in July 2023, the Colorado Water Quality Control Division issued a warning to Suncor regarding potential fines of more than $60,000 per day for significant non-compliance after multiple incidents of benzene-tainted water found leaking into nearby Sand Creek. Some of these incidences saw releases up to 160 percent greater than what they are permitted to discharge from their facility.

Suncor is currently valued (as of July 11, 2023) at roughly $38.5 billion and posted $9.07 billion in record profits over 2022 alone. Canadian energy companies are experiencing a boom thanks to rising energy costs on the back of Russia's invasion of Ukraine, and it seems that Suncor is choosing to maximize its profits over the health and safety of local communities where at least some of that



The AER's approval of Suncor's Operational Plan gives them permission to mine half of the McClelland Lake Wetland Complex (pictured), so long as Suncor can guarantee the protection of the unmined half of the complex. Yet, evidence from Colorado with respect to environmental policy violations should make Albertans wary of Suncor's ability to meet its commitments. Photo © J. Hildebrand

money could be better spent.

Bringing this issue back to an Alberta context. We need to remember that Suncor was recently given permission to mine roughly half of the McClelland Lake Wetland Complex near Fort McMurray, as part of its Fort Hills mine expansion — scheduled to begin in 2025. Suncor's Operational Plan — approved by the Alberta Energy Regulator (AER) in September 2022 — was supposed to demonstrate how Suncor could guarantee the protection of the unmined half of the wetland complex from the impacts of mining. However, AWA's recent report identified multiple concerning oversights in Suncor's plan, which risks significant and irreversible damage to the ecological diversity and function of the unmined portion of the wetland complex.

Part of this Operational Plan includes mitigation measures, such as a nearly 14-kilometre-long wall (up to 80 metres deep in some places) that will split the wetland in half, along with the associated wells, pumps and pipelines required to ensure that the water balance is maintained on the unmined side. If water levels change by too large a margin, that could have dire consequences for the peatland ecosystems on the unmined side, which developed under a particular set of conditions over the past 8,000 to 10,000 years.

Suncor's negligence with respect to its operations at the Commerce City refinery and its inability to follow through on crucial maintenance, testing, and inspection doesn't provide much hope for the long-term functioning of this underground wall and the massive [high-risk] water management experiment Suncor plans to undertake at McClelland. The wall, wells, pumps, pipelines, and staff will have to work flawlessly for decades for Suncor's plan to be successful.

Our hope is that the AER will reconsider and ideally revoke its approval for Suncor's Operational Plan, as we don't want to see any of the McClelland Lake Wetland Complex destroyed. This struggle isn't solely about protecting just the unmined half of the complex. Remember, this plan needs to guarantee that the unmined portion is protected, but evidence from Colorado makes the claims of Suncor's Operational Plan seem less and less likely to work.

Turning Back the Clock for Sage-Grouse

By Lorne Fitch

The main street in Manyberries is deserted. The venerable Southern Ranchman's Inn is locked and shuttered, with kochia weed growing up in front of the doors. This is a town one short step away from the label of "ghost." The Manyberries oil boom has now gone bust. Traffic on the hamlet's main street now consists mostly of nighthawks, barn swallows (ironically a species at risk) and mourning doves (with a suitable lament for the town).

In recent memory, the street was packed with trucks, most with door decals from oil or oilfield service companies. Beer flowed in the bar, the café hummed, and the hotel offered the only beds within an hour's drive.

The oil field southeast of the town was a focus for drilling, development, and extraction for over 40 years. Yes, immense profits were made from oil, but an economic boom for some turned out to be an ecological bust for many native critters, greater sage-grouse especially. Some biologists felt the worst place to plunk an oil field was in the middle of prime sage-grouse habitat.

Concerned about the beginning stages of the boom, biologists with the Habitat Branch of Fish and Wildlife undertook a primitive cumulative effects assessment in the early 1980s. Even with the early footprint, the results were sobering.

Resource booms are unrelenting, unrepentant and concerns over wildlife are brushed off as insignificant. Regulatory approvals for well sites, pipelines, powerlines, batteries of oil tanks and roads proceeded, but with no overarching cumulative effects notion, or one of ecological thresholds.

Driving the lease roads up to the early 2000s, of which there were several hundred kilometres within a township and a half of land, meant paying attention to the heavy truck traffic, oil tankers, service rigs and pickups, all driven like they were stolen. With such a road density coupled with relentless, daily traffic there were no secure, quiet havens left for sage-grouse, let alone mule deer and antelope.

If human traffic wasn't enough, all the pumpjacks, power poles and other oilpatch structures became comfortable perches and nesting sites for ravens, crows, great horned owls and hawks, all with appetites for sage-grouse. These artificial features led to a predatory invasion against which a declining sage-grouse population had no defence.

Predictably, sage-grouse quickly succumbed to the speed and scale of development. Populations that used to be counted by the hundreds plummeted, virtually overnight, to dangerously low levels. And so here we are with sage-grouse listed as Endangered, a short step away from the other "E" word, extirpated. With every resource boom comes an inevitable economic and ecological bust.

Now that the easily (and cheaply) recoverable oil is gone, quiet now has come over the juniper badlands, the native grass uplands and the sage brush-covered valleys. Joel Nicholson, the senior wildlife biologist from Medicine Hat, kindly offered a tour of the area and I was keen to see how reclamation of the oil field footprint was proceeding. My generation of biologists was unable to stem the tide

The oil boom in Alberta was an ecological bust for many citters, including the greater sage-grouse. Photo © Lorne Fitch

Joel Nicholson pictured in the Manyberries area. Photo © Lorne Fitch

of development and wildlife losses — I was hoping to see something positive in a landscape that had taken on the appearance of an industrial Mordor.

What I saw can only be described as transformational. All the pump jacks were gone (with the exception of two well sites the Alberta Energy Regulator had inexplicably allowed to persist). Most of the power poles had been removed and smaller wellsite roads, now unused, had started to regain native species, like silver sage. Oil tanks at the battery site were gone and the site was under active remediation, as were several of the old wells.

The landscape is not back to 1962, when aerial photos showed no human incursions except the CPR rail line between Manyberries and Consul, Saskatchewan. But it is a far cry from a mapping exercise done in the late 1990s which showed an overwhelming industrial footprint, one that continued to grow in the early 2000s. Industrial incursions became so pervasive that the area was dropped from a list of candidate Special Places 2000 sites, meant to fill in gaps in Alberta's Natural Regions, remembers Cheryl Bradley, who worked on the program for southern Alberta. Progress is now being made on erasing the multiple decades of industrial exuberance.

Oil created the boom and, the ecological bust. The echo is reclamation of the oil field, of which the scope and scale of work is mind-boggling. There are challenges to reclamation because of the history of construction and crucially the aridity of the area. There are hundreds of wellsites, some with responsible owners, but many more abandoned ones under the auspices of the Orphan Well Association (OWA). Samantha Price, an environmental planning specialist with OWA, related the mandate was to quickly return those footprints to usable habitats, for sage-grouse and other wildlife species. What has been accomplished to date is nothing short of stunning.

It would be unfair to blame the oil patch for all the ills suffered by sage-grouse. Cultivation of grasslands has always been a large and contributing factor. In the mid-1950s a farmer, with a quarter section of private land in the centre of what would become the oil field, set his son to work breaking, cultivating and seeding a grain crop. From a wildlife perspective, a chisel plow applied to native grassland is a game-changer.

When Joel was first introduced to the area, in 2000, this 130 acres of cultivation struck him as an ecological affront and he vowed to see them restored. To his credit and with a liberal application of persistence and continuity, the course for these lands has been reversed.

This took getting to know the owner, the former kid with the chisel plow and quietly negotiating for the purchase of a droughty place with uncertain crops. Then, the Nature Conservancy of Canada (NCC) had to be convinced of the merits of buying cultivated land, not an easy sell. Bob Demulder, then the regional vice-president of the Alberta region, could see how this could fit into a larger recovery strategy for sage-grouse. He made the purchase happen with funds from Barbra Bell, a caring and generous donor.

Reversing 50 years of cultivation, even with appropriate native seed mixtures, has been a challenge, relates Megan Jensen, NCC's natural area manager for southeastern Alberta. "Drought and weeds made the task seem impossible," but Megan is cautiously optimistic for natural recovery. I observed some silver sage plants, a hub species for sage-grouse survival, amid a promising catch of native grasses. A translocated sage-grouse hen from Montana nested on the edge of this field a couple of years ago, providing a ray of hope that the old maxim of real estate — location, location, location — works for birds as well.

I'm under no illusions that sage-grouse will magically reappear tomorrow, in any semblance of earlier numbers, but turning back the clock on the landscape of the Manyberries oil field is a step in the right direction. Even if the wand of reclamation completely recreates landscape function and integrity there is no guarantee that many wildlife species will follow.

As Joel pointed out, "Sage-grouse are still on a razor's edge of survival, without a critical population mass to weather all the contingencies hurled at them." Reclamation of the Manyberries oil field is but one initiative on the path to species recovery. Sticking to the path means that other grassland species will benefit, as we saw as we turned off into the oil field and immediately saw a group of ground squirrels alert to a badger, all being watched by an audience of antelope.

Habitat restoration and eventual wildlife species recovery need spark plugs, people who can trigger action and are committed to getting the job done. All this requires adequate funding and political support. It also means we must learn from past mistakes and not repeat the resource gold rush mentality that led us to wildlife species nearly winking out of existence. That way we won't continually lose the things we should have never lost in the first place.

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

Delight at the End of the Tunnel

By Amy Tucker

When the Grassy Mountain coal project was rejected by the provincial regulator and federal government in 2021 after a long battle put up by various environmental groups and Indigenous communities, a champagne bottle was popped at the Hillhurst Cottage School in Calgary.

The building had long since been used as a school and now served as headquarters for Alberta Wilderness Association, the staff of which has seen several triumphs and celebrations over the years.

"It was such a massive win," said Devon Earl, one of four conservation specialists at AWA, of the Grassy Mountain project denial. "I could see in my colleagues just how relieved and happy and joyful they were about this decision."

"Seeing that joy and that hopefulness, and that celebration is really an example of just a big win in environmental work and something that happens so rarely."

It's true that disappointment in the organization's 60-plus years is part of the work too, and facing up to problems in Alberta and around the world, like habitat destruction, wildlife and biodiversity loss along with social injustices and the effects of climate change, can be a daunting task.

We know it touches everyone, not just those working in this career. In a study released in April 2023 by Unite for Change, three-quarters of Canadians said they felt climate change impacts their mental health due to anxieties about our rapidly warming climate. But here at AWA, even in the face of setbacks and in the short time I've been with the organization as the outreach and communication specialist, I've noticed consistently high energy and dedication from my colleagues. In fact, I've found their energy to be infectious, and it has helped me double down on my own resolve to do my part. But what specifically keeps them so hopeful, I wanted to know? Recently, I sat down with each of the AWA conservation specialists to ask them how they stay positive, in the hopes it may help someone out there feeling disheartened about the state of the environment right now.

For Devon, while seeing massive strides is encouraging, it's about the little wins along the way too.

"We hope to have more wins like [the Grassy Mountain project denial], but even the small wins are things that I think we need to really celebrate and hold on to."

Having the chance to learn every day about different ecosystems and how they've been functioning for all their evolutionary history is another motivating factor for Devon.

"And then going out and being able to explore these areas myself and being able to point out more things that are going on and understand how these ecosystems work, it's really interesting," she said.

"It makes being alive in this environment — in this natural world — so much more interesting when you start to understand the little intricacies and understand the different organisms and how they're connected together, and how everything sort of functions in this delicate balance to create the ecosystems as we know them."

Phillip Meintzer says it's helpful that he can use his role here to vent any feelings of anger and frustration.

"We have the opportunity to write about these issues. I can challenge people in these processes we participate in and I have the opportunity to speak up and speak on behalf of the wilderness, or at least voice my concerns," he said.

Phillip said it's also about being part of the bigger picture and feeling fulfilled knowing he's done his part.

"So whether it's on caribou task forces, and checking in with my Indigenous colleagues … if I can do anything to help others, that makes me feel better about the state of things," Phillip said.

"Even if it's not always making the biggest dent, I don't feel like I'm accomplishing nothing."

Kennedy Halvorson remembers sitting in university lectures and hearing the worst news on a regular basis about environmental degradation.

"You're almost bombarded with a lot of really devastating environmental news. And it can become really heavy," they said.

"And I think you can also pull a lot of people out of the field and pursuing it as a career because it's like, oh, god, how am I going to face this every single day?"

One way Kennedy overcomes this sentiment is by keeping in mind that caring about the environment and helping protect it doesn't land on one person, but involves everyone pulling their weight.

Getting caught up in "doomerism" is also unhelpful, Kennedy said (a sentiment shared by the rest of AWA staff), because it can make people think that what is happening is inevitable.

"It's just not productive — and it's not true," Kennedy said, pointing out previous international agreements that have made big impacts like closing gaps in the ozone layer.

People can also have positive impacts by helping at a local level, she added.

"If everybody helps at their local level, it makes change on a landscape level … it also provides me with a lot of hope to know that a small organization, like AWA, has helped facilitate major change in the province."

Meanwhile, though the work can be disappointing for Ruiping Luo at times, she works on not dwelling on those feelings.

"I don't want to pretend that this world is perfect. But I also don't want to have all of my thoughts just revolve around it," she said.

Ruiping also appreciates others in the field who are doing important work with little personal gain.

"It's great to see people who are not doing this just for a paycheck, and actually want to be in this kind of position and who are actually fighting for something they believe in," Ruiping said. "I think that's really inspiring."

And, Ruiping added, it seems long-held perspectives are starting to change for the better.

"Ideas that a few years ago wouldn't have been accepted — things like these grasslands are actually worth protecting instead of all plowing up for agriculture — those ideas are gaining traction. And that makes me hopeful that we'll see more meaningful change in the future as this goes on."

As for myself, the delight comes from everyday things, like my bike rides to and from the office. It's in the multiple stops I make on that ride, delighting over spotting a native plant I've just learned about. It's in knowing that even someone like me, with a limited background in conservation, can learn such a great deal just by getting involved. It's in the everyday joy of hanging out and sharing jokes with my colleagues, and admiring how, on a very small budget, they help make very big changes. And, of course, it's in knowing there are many other people out there who care, like *Wild Lands Advocate* readers.

Wilderness Watch

Where are the Castle Parks and Livingstone-Porcupine Hills management reports?

In 2018, the Government of Alberta established Castle Provincial Park and Castle Wildland Park along with their management plan, and also released two guiding documents for the Livingstone-Porcupine Hills Public Land Use Zone (PLUZ); the *Land Footprint Management Plan* (LFMP) and the (RMP). These measures represented a much-needed commitment to increase protections along the South Eastern Slopes and an opportunity to improve habitat connectivity throughout the Rocky Mountains. A large part of these plans was to reduce or phase out the off-highway vehicle (OHV) recreation that threatens sensitive ecosystems and species at risk within the regions, particularly grizzly bears and westslope cutthroat trout.

The management documents emphasized the necessity of robust monitoring, evaluation, and reporting to effectively execute the plans, stating "reports will provide evidence that progress is being made towards achieving the outcomes and will adequately communicate progress on metrics." Strong accountability, transparency, and communication were highlighted as essential to successful management.

It has been five years since we have heard anything from AEPA about their management of these areas. Regarding the Castle Parks, we are still awaiting a decision from the AEPA minister on whether the management plan and trail strategy will actually phase out OHV use as initially stated, as well as the tools and reports promised within the plan to be published and made public. That includes biodiversity targets, a vegetative management strategy, a historic resources impact assessment baseline study, a strategic partnership plan, and any periodic reports leading up to the 10-year formal plan review.

For the Livingstone-Porcupine Hill PLUZ, a one- to three-year operational transition was expected and allocated to develop multiple tools to evaluate progress of the plans, including spatial human footprint management thresholds (due within first year), a monitoring strategy (due within the first year), and a standard performance metric framework.

These tools have also not yet been published publicly. The only updates so far have come in the form of biannual PLUZ maps, released at the start of summer and winter each year. Comparing maps from 2018-2023 shows decisions are being made to add, remove, and redesignate motorized trails each year, but the process and reasoning for these decisions are notably absent.

Implementation progress of the plans is supposed to be tracked and reported annually, with a publicly available performance report due after five years; a review of the entire plan also must be completed within 10 years but can be triggered early depending on the outcomes of the five-year report. The LFMP report should assess performance metrics and discuss how achieving desired outcomes has progressed.

The RMP report is expected to include annual measurements of the system's sustainability and enforcement efficacy, and evaluations of the overall experience and education opportunities the plan and region provides.

AWA reached out to AEPA to get a better sense of the status of these plans and timelines on reporting and received no response. Regardless, having now just passed the five-year mark and many of the deadlines set by AEPA, these performance reports should be expected any day now. Be on the look out!

- Kennedy Halvorson

AWA conducted site visits to Apetowun Creek in 2020 and 2021 to get a firsthand look at restoration activities, including the capture of pure strain Athabasca rainbow trout by Hatfield biologists (pictured). Captured fish were eventually relocated in stream reaches above an artificially constructed weir to give them a better chance at recovery away from competition and/or hybridization with other species. Photo © P. Meintzer

The Road to Recovery: Year Two of Monitoring at Apetowun Creek

The second year of long-term monitoring has found encouraging signs of recovery at Apetowun Creek according to the latest report from Hatfield Consultants, published in March 2023.

More than four kilometres of Apetowun Creek, near Hinton, had to be reconstructed and remediated between 2018 and 2021, after a devastating tailings pond failure at the Obed Mountain Coal Mine, which destroyed a large portion of the creek in October 2013.

As part of the 2017 legal settlement against Prairie Mines and Royalty — the owner and operator of the mine at the time — AWA received funding to monitor the restoration efforts and ongoing recovery at Apetowun Creek, which we have documented on an annual basis over the past few years.

The restoration project includes the remediation of 4.4 kilometres of aquatic and riparian habitat within Apetowun Creek, the construction of an artificial weir to serve as a barrier to fish passage in the upper reaches of the creek, the relocation of genetically pure Athabasca rainbow trout above the weir, and 10 years of monitoring to assess the effectiveness of the remediation work.

Following the completion of reconstruction and remediation activities in 2021, 2022 represented the second year of the Long-term Monitoring Program (LTMP), which was established to monitor the effectiveness of the remediation works and the recovery of the Apetowun Creek ecosystem.

The aim of the program is to monitor the responses of the fish community and fish habitat to the stream remediation works, as well as assessments of water quality and the recovery of benthic invertebrates which are a primary food item for at-risk Athabasca rainbow trout.

The hope is that over time, we will see the population of pure-strain trout recover to self-sustaining levels in the upper reaches of Apetowun Creek above the fish passage barrier.

According to Hatfield's *2022 Apetowun Creek Annual Aquatics Summary Report*, there was little change in the distribution of fish habitat between the 2021 and 2022 surveys. This assessment is in line with Hatfield's expectations for habitat recovery based on the baseline conditions they

recorded in 2021. Hatfield is confident that suitable habitat will continue to develop over time as riparian vegetation recovers, and they state that the observed overwintering habitat was suitable for fish survival.

During the 2022 fish community survey, 176 fish were captured but only 80 fish were rainbow trout. However, none of those 80 fish were tagged in previous years, which means that it was impossible to determine the genetic purity of those fish (i.e., whether they are native Athabasca rainbow trout or hybridized rainbow trout). This makes it difficult to assess whether the population of pure-strain rainbow trout above the barrier is showing any signs of recovery.

The benthic invertebrate survey showed positive signs of recovery, as the density of invertebrates recorded in the remediated area was similar to the density found in their control area. This is important because benthic invertebrates are sensitive indicators of environmental change, ecosystem health, and therefore, habitat quality for Athabasca rainbow trout.

Stream temperatures within Apetowun Creek remained within the ideal range for Athabasca rainbow trout during the spring spawning season (May and June) and remained below lethal temperatures for both juveniles and adults throughout monitoring in 2022. But several water quality indicators were found to be exceeding guidelines — although only slightly — such as aluminum, iron, nitrite, and sulfide.

Overall, the Hatfield report concludes that the aquatic ecosystem within the impacted, reconstructed, and remediated portion of Apetowun Creek is showing positive signs of recovery. A better understanding of trends for all measured indicators should become evident with the collection of new monitoring data over subsequent years, and we will continue to follow the restoration efforts and hope for the eventual recovery of this local population of Alberta's at-risk Athabasca rainbow trout. *- By Phillip Meintzer*

Collisions with wind farms and other renewable energy infrastructure injures and kills many birds and bats each year. Placement of wind farms and mitigation measures, such as shutting of turbines during migration, helps to reduce collisions and the harmful impacts of renewable energy.
© C. Olson

Renewable Energy Transition Halted by AUC Moratorium

Alberta Wilderness Association has pushed for stronger and more consistent regulation of renewable energy projects, and supports a review of policy. However, the moratorium on renewable projects imposed on the Alberta Utilities Commission (AUC) threatens renewable energy investment and unfairly favours oil and gas development in the province.

Renewable energy is a viable environment-friendly alternative to fossil fuels. The most common sources of renewable energy in Alberta, wind and solar generators, produce far fewer carbon emissions and are over 15 times less lethal to wildlife than oil and gas. If Alberta hopes to meet net-zero carbon emissions targets, we need to transition to renewable energy production quickly and effectively.

Still, renewable energy development needs to be responsible. When sited and managed well, wind and solar power can enhance the landscape and benefit wildlife. In contrast, when sited in vulnerable habitats, renewable energy plants can displace wildlife, fragment, and degrade habitat, and injure or kill birds and bats that collide with infrastructure. Renewable energy projects should be sited away from sensitive landscapes and areas with high biodiversity, and policy needs to address siting, developing, and operating renewable energy projects in a way that minimizes harm to wildlife and to the environment. A policy review provides an opportunity to address these issues and reduce environmental harm from new developments.

Except, is a moratorium necessary for a policy review? Reviews for oil and gas policy have proceeded without suspending all oil and gas activity. The moratorium on approvals for renewable energy projects, announced in August and lasting until February 2024, has been called 'unprecedented' and with 'no warning'. This moratorium is expected to affect over a hundred renewable energy projects, discourage investment into renewable energy in Alberta, and slow the energy transition. If a moratorium is necessary for policy reviews, why is this not consistently applied across all industries?

Additionally, one of the main reasons given for the pause is to figure out "how we could deal with end-of-life reclamation." Renewable energy projects, unlike fossil fuels, lack a definite end-of-life. Although some generator parts, like solar panels and wind turbines, may only last a few decades, the installation can continue to produce electricity by replacing parts, without requiring new disturbances to the landscape. In comparison, the oil and

gas industry already has over 10,000 abandoned oil and gas wells, and the number is anticipated to grow, with an expected cost of over $1 billion to clean up. As of 2020, Alberta has reported over $30 billion in oilsands liabilities and less than one percent of securities required to cover reclamation costs if oil and gas infrastructure is abandoned. Mandatory security requirements to reclaim oil and gas infrastructure is sorely needed.

Alberta's renewable energy policy should be reviewed, and renewable energy projects must avoid damaging sensitive ecosystems. Yet, environmental damage caused by fossil fuels is magnitudes greater than renewable energy generation. Pausing renewable energy approvals while allowing oil and gas to continue with minimal oversight is not the solution.

- By Ruiping Luo

Critical Mineral Exploration in Alberta

di·ver·si·fy (verb): to find new methods of resource exploitation in Alberta.

Used in a sentence:

> "It's a really exciting future [for Alberta], one that will allow us to diversify our economy even further with carbon capture utilization and storage and hydrogen and geothermal and the development of critical minerals" – Premier Danielle Smith, May 2023.

Critical minerals are being touted as the latest and greatest opportunity for Alberta's economy as the government pursues the development and expansion of their mining in the province. The government's goal in expanding this type of mining is to be a leader and preferred producer of minerals to "support the global transformation to a low carbon economy" and reduce "the supply risk for a net-zero emission future." Twenty-eight elements and compounds have been identified by the government as critical, including lithium and helium. Of these, 27 occur in rocks and sediments, 11 can be found in industrial wastes, and five occur in deep wells like (and often alongside) oil and gas. The government has categorized them as either brine-hosted, where the minerals reside in underground saltwater reservoirs, or rock-hosted, when the mineral ore deposits are surrounded by host rocks.

Brine is already commonly pulled up as a bi-product in oil and gas operations, meaning brine-hosted mineral operations will likely look like wells already present on the landscape. Traditional mining or quarrying techniques are necessary to mine rock-hosted minerals, with the type (clay, salt, crystalline) and structure (self-supporting or not) of host rock influencing how the ore deposits can be mined. Rock-hosted mineral mines and their impacts will resemble that of other surface or underground mining operations.

The Alberta Energy Regulator (AER) hosted multiple information sessions seeking input on the Mineral Resource Development Act (MRDA) and related regulations, which the AWA attended and provided feedback. Our stance is summarized below:

- AWA is wary of yet another extractive industry in Alberta.
- The industry should prioritize using established linear disturbances and limit creating or expanding current footprints.
- Cumulative effects must be considered when evaluating projects.
- Robust baseline environmental data and a commitment to long-term science-based monitoring programs are an absolute must for this industry to proceed sustainably.
- Sufficient deposits must be secured, and reclamation enforced to ensure Albertans are not left with more environmental and financial liabilities on the landscape.

The MRDA came into effect alongside the Brine-Hosted Mineral Resource Development Rules in March of this year with the AER as the sole administrative agency, where previously multiple ministries held jurisdiction. This is cause for vigilance, as in a report published earlier this year, the Auditor General of Alberta outlined multiple areas in which the AER is currently not operating effectively or transparently. The report specifically mentions the AER's failure to collect "sufficient financial security" from companies or ensure the "timely closure of inactive sites," highlighting the generally inadequate state of the "suspension, abandonment, remediation, and reclamation regulatory processes" in the province.

In the auditor's own words, this matters because,

> "Inactive infrastructure that isn't properly closed can pose serious environmental, public health and economic risks to Albertans ... Failure to ensure that operators and industry conduct and pay for the safe shut down of their infrastructure increases the risk that extensive closure costs could be shifted to the public. Albertans need an effective liability management system in place to hold industry accountable for meeting their environmental obligations to the province and to ensure that industry's liability management risks are being properly managed."

In the summer, the AER began their next phase of public engagement on how to regulate rock-hosted minerals. AWA reiterated our concerns and also asked the AER how climate change would factor into their decision-making around projects; considering the minerals are being mined to help the transition to a low carbon economy, it makes little sense to allow projects to go forward that would negatively impact natural carbon storage solutions like forests, grasslands, peatlands, or wetlands. AER could not answer

but passed the question along to their colleagues at Environment and Protected Areas (EPA). EPA has provided the following written response:

> "EPA agrees with the importance of critical minerals to support efforts to make meaningful reductions in emissions. Regional plans and sub-regional plans provide regulatory details that the AER would take into consideration. The two approved sub-regional plans, which focus on land use, indicate that any future development of minerals or other land uses that are not currently existing on the landscape need to align with the desired outcomes of the plans. This would include disturbance targets, limits on road densities and wetland disturbance access, restoration requirements, etc. Although the approved sub-regional plans do not directly consider climate change, the linkage to the land features described as being important in the question (i.e., wetlands and boreal forests) are accounted for and the plans will result in improvements across the sub-regions over time as more lands are restored and less new footprint is added. EPA has also developed policy direction with respect to climate-related issues with its Emission Reduction and Energy Development Plan, which include actions and opportunities for land and nature-based solutions".

This answer reflects both a need to complete the remaining regional and sub-regional plans under the *Alberta Land Stewardship Act*, and the implication that projects should not proceed without these plans or equivalent baseline data available, to allow the AER to make a fully informed decision on future developments.

E3 Lithium's Clearwater Project is the first operation piloting brine-hosted lithium extraction in Alberta. It is located east of Olds and plans to redevelop the historic Leduc oil field, drawing brines up from underneath the site of Alberta's first oil boom. AWA will be monitoring the results of this pilot and future mineral mining developments in Alberta.

- By Kennedy Halvorson

Cardinal Divide Conservation Coalition Bioblitz

The Cardinal Divide Conservation Coalition (CDCC) hosted a BioBlitz in the Cardinal Divide this summer from July 14th to 16th. The CDCC consists of members from AWA, CPAWS Northern Alberta, Alberta Native Plant Council, Plant Watch Alberta and Whitehorse Wildland Provincial Park Stewards. The BioBlitz was an opportunity to bring together experts in species identification with nature enthusiasts and members of the public to generate useful information on species in the area while getting people involved in citizen science. The idea was to use an application called iNaturalist to upload photos of organisms we came across over the weekend and then identify as many as possible in and around Whitehorse Wildland Provincial Park. The event was generously supported by Alberta Conservation Association (ACA) and donations from our members.

South of Hinton, the Cardinal Divide was about a six-hour drive from Calgary avoiding road closures resulting from heavy rainfall in the weeks leading up to the event. This was my first trip to this area that I had heard so much about. One of the things that makes the Cardinal Divide so special is its particularly high biodiversity and alpine habitat which may have been excluded from the last ice age as a glacial refugia.

Patsy Cotterill looks closely at a piece of moss. Photo © A. Tucker

My excitement to explore the Cardinal Divide intensified when I started getting closer and had my first wildlife encounter of the weekend. Approaching Cadomin, I stopped along the gravel road to let at least 10 male bighorn sheep cross to join the rest of the herd on the hillside. I had never seen so many male bighorn sheep all at once — at least 30, maybe 40 individuals. This started the weekend off on a high note. I could already see with my own eyes how the area makes up important habitat for wildlife.

The CDCC met with invited experts and volunteers in Cadomin on Friday to make plans for where to explore for the weekend and to get to know each other. People set out on different routes on Saturday, and on Sunday the public

was invited to join in on the fun. Groups of no more than eight people went out on different trails with different focuses; vascular plants, birds, lichens, mosses etc. Eighteen volunteers, 15 experts, and a few staff from CPAWS NAB and AWA made up the BioBlitzing crew.

The highlight of my trip was heading up to the Cardinal Divide and identifying alpine butterflies. The Cardinal Divide is the dividing point between the North Saskatchewan and Athabasca River watersheds and is one of the only places in the Canadian Rockies where you can drive all the way into the alpine. We used nets and a catch-and-release protocol to get a good look at alpine butterflies and upload photos to iNaturalist. I was amazed at the beauty and diversity of butterflies that we saw. Among others, we identified Milbert's tortoiseshell, northern blue, and Arctic fritillary.

So far, our results indicate that the group made a total of 1,664 observations of 407 different species. Some interesting species include Porsild's Bryum moss, pika, and harlequin duck. A report summarizing our findings will be created by the CDCC.

On the return trip, I spotted the bighorn sheep again, shortly before passing a grizzly bear from the safety of my car. The area is so important for wildlife habitat and species at risk, and I'm glad to have seen it for myself and helped to gather useful information for future conservation initiatives. I would like to thank the experts and volunteers who came out to the BioBlitz, those who generously made donations, and ACA for supporting the event.

- By Devon Earl

The bioblitz saw a total of 1,664 observations of 407 species. Photo © A. Tucker

A herd of bighorn sheep was spotted near the highway. Photo © D. Earl

Elisabeth Beaubien, left, and Noel Gebre, right, consult a native plant species book while hiking in the Cardinal Divide. Photo © A. Tucker

Posilyd's bryum moss, spotted along a rocky wall. Photo © D. Earl

Departments

Personal Essays

This is a new section where we invite folks from all backgrounds to write personal essays about how their own lives are intertwined with the environment and conservation. The opinions reflected in this section do not necessarily reflect the views of Alberta Wilderness Association.

Do you have a personal experience you'd like to share? Send an email with your pitch or just to discuss ideas to outreach@abwild.ca.

We are the Land

By Spirit River Striped Wolf

When I was a child on the reserve, I remember wondering why my reserve was so messy. As a people who pride ourselves on being the original stewards of the land, I often wondered how things could have gotten so bad. Like all Canadians, I began to learn the reasons for many questions like this as the Truth and Reconciliation Commission of Canada (TRC) began its work and unleashed waves of uncomfortable truths into my consciousness unlike ever before. My family began to talk about the string of trauma that connected all of us, and what the impacts of colonial genocide were like for them.

I'm from the Piikani First Nation of Treaty 7 territory, and I am a second-generation survivor of the sixties scoop, the residential schools, and the day schools. My father and many of my aunts and uncles were shifted from foster home to foster home in the sixties. All of my grandparents attended residential schools, and unfortunately, just two grandparents survived, my maternal grandmother and grandfather, whom I lived with primarily through middle school and high school. My mother attended day school in Piikani, and that's where I attended middle school and high school, but at that point, it was no longer run by the Catholic church. I fortunately missed the horrors that my parents and grandparents experienced, stories that are not mine to share but have affected me deeply.

By the time I was in high school, it was 2010 and the days of it being run by the Catholic church had long passed. I had the privilege of being taught Blackfoot courses and Aboriginal Studies courses, and to this day I have the ability to read and pronounce Blackfoot words, but most important of all, I also learned that Canada was coming to grips with something very serious: its past and current relationship with Indigenous peoples.

I find that sometimes I get frustrated, demanding that changes happen immediately — in fact, that's what I did when I was given the opportunity to interview Prime Minister Justin Trudeau on CBC's Face-to-Face on Sept. 30, 2019 (a day after I had turned 26). I pressed him on the tragedies occurring on reserves to First Nations' youth. The suicides and overdoses have been something I've been very concerned with. Seeing friends lose themselves to addictions and seeing my family struggle with the death of loved ones.

The wisdom I've learned since my face-to-face with the Prime Minister is that we are in living history right now. I began realizing this when I noticed how much things have changed in such a short amount of time since 2010. I learned that the knowledge of residential schools and the effects of colonization on Indigenous peoples was not something wholly known by Canadians, and indeed, it has been

Plains bision were introduced to Banff, Alberta in 2018. Photo © C. Olson

a painful process of learning for all Canadians.

In 2022 I graduated with a bachelor's degree in policy studies, and one area that we were taught about is the importance of learning in the process of evaluation. We're taught that decision-makers can't make effective change if they don't have a foundational understanding of the subject matter at hand. This, to me, is the experience of Canada right now. I've done workshops on Indigenous trauma for about five years now, and the companies and non-profits and groups I've spoken to have shown me that there is an eagerness to learn.

Indigenous people, like myself, have also been learning about this history as well. There was so much critical culture that was surgically removed by the residential school system. My workshop, based on an award-winning paper I wrote in 2018, focuses on traditional parental disciplinary styles as one critical cultural component that produced responsible and fearless warriors of the prairies, and how that was switched for a more shame-based approach which then had deadly consequences that led to ills like addictions and suicides. One connection that I never focused on in my research, but came to me intuitively based on the knowledge that I then held, was how this trauma connected to the land and had a greater lesson to share for all Canadians: the wellness of people connects to the wellness of the planet.

What my people have constantly tried to underline since the start of colonization is that we are the land. What that has meant to me has never been more obvious to me until now in this era of my life. When the people are sick, the land becomes sick. When the people are healthy, we see amazing bison roaming the prairies, working together in an intricate ecological homeostasis. We also see this in our own lives in a more individualistic perspective: when our wellness is poor, we may see our homes in disarray or some other facet of daily life in disarray. When we're on top of everything and feel good, we tend to have the capacity to fill the cups of others as well, or to our homes, or to leisure.

This explains how my nation, a once fierce warrior nation whose spiritual beliefs were rooted in finding congruence with the land, could then become disempowered by trauma and years upon years of colonial genocidal policies meant to deprive and subjugate us to a point of non-resistance. The battle was no longer fought in the prairies but within ourselves. Where there was once a sense of self, belonging, and community, it was replaced with an empty void that all of humanity has felt at one time or another. I recommend the book "*21 Things You May Not Know About the Indian Act*" by Bob Joseph, but the evidence is there and shows just how human Indigenous people are, and it also proves that all of humanity is rooted in the land.

Although the past 100 years of genocide have brought such disempowerment, our current living history is now about healing. As both Canadian and Indigenous peoples continue to heal, we see amazing things. We are seeing shifts in consciousness.

I was privileged to have attended an event in Banff on September 29, 2016, to be a supporter signatory for the Bison Treaty (as I write this, I only now realize how unique and significant events in my life seem to occur near or on my birthday — it explains why I feel that proper birthdays are few and far between). The Bison Treaty is a treaty signed by many First Nations that make up the Prairies, including my nation and the other nations in the Blackfoot Confederacy, but also the Assiniboine and Gros Ventre Tribes of Fort Belknap Indian Reservation, the Assiniboine and Sioux Tribes of Fort Peck Indian reservation, the Salish and Kootenai Tribes of the Confederated Salish and Kootenai Indian Reservation, [and the] Tsuut'ina Nation."

The first article of this treaty talks specifically about conservation. It says: "Recognizing BUFFALO as a practitioner of conservation, WE, collectively, agree to: perpetuate conservation by respecting the interrelationship between us and 'all our relations' including animals, plants, and Mother Earth; to perpetuate and continue our spiritual ceremonies, sacred societies, sacred languages, and sacred bundles to perpetuate and practice as a means to embody the thoughts and beliefs of ecological balance."

It goes on to make connections between the Bison and culture, economics, health, and education. This ecological balance is the basis for these Indigenous nations, which is why it is so challenging to try and understand that connection through colonial perspectives which have typically neglected balance in favour of growth and exploitation. Regardless, it again proves that when a people are healthy, the land thrives.

Indigenous people, very recently, were forcibly separated from this ecological balance, but I, in my short 30 years of life, have seen how powerful the call of the land has been to my people. I grew up participating in many clean-up initiatives on my reserve, and I have seen the reserve become cleaner. I have seen forgotten holy societies being brought back for our youth to learn about the land and culture. I have seen LGBTQIA+ Indigenous people reasserting themselves back into Blackfoot society and culture by rebuilding 2-Spirit ceremonies and practices that honour the land, which were traditionally specific to the roles of queer tribal members. I have seen how culture has cured people from their addictions and has given them meaning to continue on, including myself.

I'm not sure what all the lessons are in all of this, but I know that with all Canadians engaging in Truth and Reconciliation, by learning, by healing, we are seeing amazing things happen. I am seeing stigma and shame of Indigenous culture decrease, and that this ecological balance is slowly restoring itself. It would be presumptuous for me to assume what the end result will be, but I do know that we are on a good path now, and we must reinforce this path: to continue to learn, to continue to heal, and to continue to engage in Truth and Reconciliation. It's messy work, but it might just be what the land needs.

Spirit River L. Striped Wolf (He/They)
Makoyiomahka (Enduring Running Wolf)
Piikani First Nation
Co-Leader for Bridges Social Development

A Note from the Executive Director

Rummel Lake in 2022. © D. Donnelly

One Year On

After a long, hot drive from Whitehorse to Calgary last summer, I pulled up to this extraordinary building which is the home of AWA. As an archaeologist and environmentalist, I was pleased to see the small gardens surrounding this old schoolhouse, and walking up those well-grooved stairs to the offices brought a sense of history. You can almost hear the children who ran up and down those treads over the years.

It has been a challenging, yet exciting year. I went through a hiking 'trial by fire' on the hottest day of the year in White Rock Coulee a couple of weeks after I started and have also been fortunate to have trekked in Kananaskis, and in the Wainwright Dunes. A delightful walk through the Frank Lake Important Bird Area (IBA) saw us identifying 34 distinct bird species in a single day. These excursions were all part of our Adventures for Wilderness program. I hope to see more of you on some of these short expeditions soon.

Coming through post-Covid times, we have been building a strong team, including sharing our experiences through monthly 'Lunch 'n Learn' presentations. I have discovered so much from our incredible staff. They have patiently taught me about Alberta's geography, politics, and environmental issues. We have worked on a variety of files including logging, renewable and fossil fuel energy, species at risk, coal and gravel mining, urban sprawl, water issues, climate change and biodiversity loss.

There have been some software and hardware updates here at AWA. We updated our audio-visual equipment to better accommodate hybrid (in-person and online) events. We are also in the process of switching to a new, more efficient, and secure database to decrease our administrative time processing payments and receipts. This program will hopefully be a positive response to the frequent payment issues we are having on our website (thanks for your patience).

We hope everyone will be pleased with the option to receive immediate notifications and receipts for their donations to AWA.

We have had some really great events this past year, including a Volunteer BBQ, talks from a variety of experts, book launches, a provincial election forum, a trivia night, and a Historic Places Days open house. We have also supported some other local groups by attending their events, like the Justice Film Festival, the Calgary Search and Rescue 30th Anniversary event, and the Centre for Newcomers Winter Festival.

We have also dug up the front sidewalk land strip and planted a native plant pollinator garden, with funding from the Alberta Native Plant Council and the pro-bono work of Pop Landscaping. We can't wait for the plants to take hold and spread out. Thanks also to the many volunteers who helped with this project.

AWA saw the departure of two long-term staff members, Sean Nichols, who chose to return to B.C., and Carolyn Campbell who retired in June. We have hired some new staff including a new Conservation Specialist, Kennedy Halvorson, and a new Outreach and Communications Specialist, Amy Tucker. Our bookkeeper Randi Ducharme has moved on to work related to her coursework in Justice Studies, and we have welcomed a new bookkeeper, Maria Loreen Ayuda. It is always sad to see people leave, but we are pleased with the new additions to our team.

The best part of this year has been meeting all the amazing Albertans who have educated and welcomed me. Your warm regards have meant the world to me. I feel truly blessed to have the encouragement of so many of you as we continue this important work. I am particularly appreciative of the time and energy Carolyn Campbell spent teaching me about the history of AWA's work. I must also thank our Board of Directors who have been so supportive as I transitioned into this position.

- Debborah Donnelly

Our Newest Staff Members

Although I wish I could say the outdoors has been a lifelong passion of mine, I didn't really appreciate all the wild wonder Alberta had to offer until much later in life — my parents would very lovingly describe me as an "indoor kid." Inside does not have bugs or inclement weather, the two things I loathed about being outside the most. It took a BSc in biochemistry and a stint in a honey bee research lab to convince me my vocation could not be limited to work at a climate-controlled laboratory bench or office.

It turns out, insects are incredibly interesting, and proper hydration and appropriate clothing makes almost any weather comfortable (or at least bearable). Plus, you really can't beat the views.

Fast forward through a graduate degree in environmental studies focussed on native plant and pollinator conservation, I have since worked largely as a contracted researcher on projects such as Food Policy for Canada and Finding Flowers at York University.

More recently, I helped develop a nationwide bumble bee pathogen sampling protocol for Environment and Climate Change Canada. Pollinators, ecological education, environmental policy, and sustainable landscapes are focal areas I am most interested in, and I draw inspiration for my work from all the passionate, dedicated, and diverse individuals that make up the conservation community.

While I have called Vancouver and Toronto home throughout most of my adult life, you just can't beat the province where the mountains meet the prairie, and I am happy to say that it's here in Alberta I've become an outdoor adult.

- Kennedy Halvorson

I come from and grew up in the Philippines, a tropical country in Southeast Asia consisting of 7,107 islands and around 175 local dialects.

Among the many things I admired about the place is the vast wilderness. However, for a developing country, nature conservation is not a priority.

Having lived in Canada and visited some of its beautiful natural wonders, I felt amazed that nature is well protected. Such experience ignited a sense of passion to offer my share in protecting and preserving its beauty by joining AWA.

I have a bachelor's degree in accounting from the Philippines, a master's degree in public administration, and a diploma in business administration, majoring in accounting, in Canada. My background includes an extensive experience in accounting and budget management in the Philippine government's education sector. Eighteen years of my previous career was being a steward of public funds and was constantly accountable to public trust.

I believe that environmental protection is everyone's responsibility and that we should do our share of adding value to it, just like I am doing my part by being a staff at AWA.

- Loreen Ayuda

CUB REPORTER

Karina Eustace-Wallis climbs Heart Mountain in summer 2023 as part of her goal to raise funds for Alberta Wilderness Association. Photo © Lindsey Wallis

Keep Our Wilderness Wildernessy: Thoughts From an 8-Year-Old Adventure Girl

Hi, my name is Karina. I am eight years old and I like to climb, hike, and ski. I love wild places because they are sacred. Because they are ancient. They make me feel special. I like spending time in wild places because they are life. I want to protect them because they are extraordinary. They make me feel calm and settled. This year I climbed eight summits before my eighth birthday on September eighth! I was trying to raise $8,000 for Alberta Wilderness Association. [As of publication date Karina has raised $8,468]

For her 40th birthday, my mom did a 40/40/40 where she climbed 40 pitches of rock and biked 40 kilometres in 40 hours and that inspired me to do my 8-8-8 project. I thought it would be fun to climb summits because you get to see so many cool views, but one of the summits [Black Rock Mountain, her 8th summit] I saw barely any views because we were hiking in a CLOUD! We tested the theory that you can jump on clouds but turns out it's not true and they are just made of gas and are very WET.

The eight summits I climbed were Ha Ling, Sulphur Skyline, Mount Lipsett, Table Mountain, Windtower, Heart Mountain, Folding Mountain, and Black Rock Mountain. [The total elevation gained was almost 7,000 metres and the total distance she hiked was 80 kilometres].

Heart Mountain was special because I was rock climbing [21 pitches on the route Heartline] not hiking and I got to go with my mum's friend, who I call Auntie Shy. It was tiring but there were really cool parts like the runnels in the rock created by the water and a huge bunch of fossils. I was a little scared in a part of the climb where there was a harder section in a corner. It was blank on one side and had big, loose yucky rock on the other. I had to tell myself "farting rainbow unicorns," which was a code that my mom and I made up. To translate, it was like you have to keep going. Focus. And I got through it eventually. I told myself "I'm sorry brain, but this is what we're doing. Nothing's going to stop me, not even you, silly brain."

Karina Eustace-Wallis at Heart Mountain in summer 2023 leading up to her eighth birthday. Photo © L. Wallis

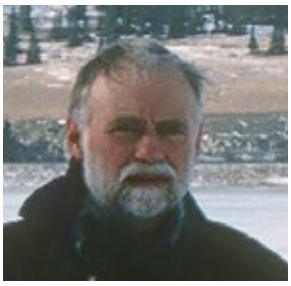
Mount Lipsett was special because I got to do it with my grandpa. At the top I had a really pretty view of a mountain that was scree almost all the way up [Mist Mountain]. Grandpa found us a dream bed and a princess chair near the glorious, view-filled top.

On my birthday, I was interviewed by Loren McGinnis on the CBC's Eyeopener morning radio show. It was a little bit scary because I'd never done it before, but the people were really nice and asked me easy questions that I could answer.

AWA helps keep the wilderness wildernessy. Nature is really special and beautiful and we wouldn't be able to survive without it. It makes me feel happy and I want to share that with others and I'm very happy that I could. I've only done a tiny part to keep the wilderness and there are so many other things that we can do and I hope that people can do more things to help the wilderness.

Naturalist Painter: Wolves and Wilderness

By Dick Dekker



Raised in Holland, one of the smallest and most densely populated countries in the western world, my decision to immigrate into Canada had much to do with a passionate quest for unspoilt nature. I saw the presence of wolves as the ultimate of virgin wilderness. Unfortunately, in 1960 they proved to be hard to find in the southern half of Alberta. I soon learned why. A few years earlier the province had launched the most devastating poison campaign ever. The stated reason was to halt the spread of rabies which had been reported in the north woods. After the blanket poisoning stopped, Alberta's wolves gradually made a big comeback.

From June 1965 onward I have observed wolves in Jasper National Park. A major finding was that the predators played a major role in the ecological recovery of the valley by reducing an overpopulation of elk and thereby lessening the herd's browsing pressure on aspen trees. I wrote about my discoveries in nature magazines and my 1985 book 'Wild Hunters.' These publications attracted the attention of two parties of American biologists, who came to Jasper to learn about wolves in anticipation of their reintroduction into Yellowstone Park. Subsequently, these scientists made similar discoveries about wolf-elk-aspen dynamics as I had reported from Jasper.

Dick Dekker is an independent wildlife ecologist with a PhD from a Dutch University. He has written many papers and articles in a wide range of print media and is the author of ten books. His 2021 Stories of Predation – Sixty Years of Watching Wildlife is available from Hancock House Publishers, Surrey, BC.

Wolves in Jasper Park with the Starlight Range in the background. (Oil on canvas board, 20x16 inches). Painting by D. Dekker.

Wolf and ravens on thawing Jasper Lake. (Oil on canvas board, 24x18 inches). Painting by D. Dekker.

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