Conservation Options for the Elk and Flathead Valleys

By:
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Prepared for:
Parks Canada Agency &
Environment and Climate Change Canada

July 2021

Cover photo:
Flathead River Valley in autumn, courtesy of Harvey Locke

About the Author:

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2015-2019 Member of Parliament for Kootenay Columbia.

- Vice-chair, House of Commons Standing Committee on the Environment and Sustainable Development
- NDP Critic (Shadow Cabinet) for National Parks

2011-2014 Mayor of Cranbrook and Director, Regional District of East Kootenay

2009-2011 Manager, East Kootenay Conservation Program [now Kootenay Conservation Program]

- Co-ordinating the purchase of private land for conservation

2002-2009 Regional Manager, Kootenays. Environmental Stewardship Division, BC Ministry of Environment.

- Responsible for Fish & Wildlife, Ecosystems and BC Parks

1990-2002 District Manager, BC Parks.

- Responsible for management of all provincial parks in Kootenay Region.

Executive Summary

The Flathead Valley is one of the most important natural areas for biodiversity in North America. It is a transboundary watershed shared with the United States, with much of the valley on the American side in federal protection and the Flathead River designated a National Wild and Scenic River in Montana. In Canada, the Flathead adjoins federal and provincial protected areas in Alberta. While extractive activities such as oil, gas and mining are not allowed in the Flathead, logging continues and some roads remain open to motorized access year round. It is not fully protected for conservation.

In the Elk Valley, conservation is at a tipping point. The Elk Valley is home to several communities, a major highway and railroad, the largest metallurgical coal mines in Canada. It has extensive private land holdings that are being clear-cut logged, as well as logging on provincial crown land. It is also home to important relatively intact, but unprotected, wild places, rare high elevation grasslands, and important populations of iconic species like grizzly bears, Rocky Mountain bighorn sheep and westslope cutthroat trout, along with dozens of plant and animal Species of Conservation Concern.

Both valleys have globally significant connectivity values with critical but vulnerable corridors, providing a genetic link for large mammal populations to the south in the USA with Banff National Park to the north. It has been called the most important wildlife corridor in all of North America and is a key component of the Yellowstone to Yukon initiative.

This report provides non-binding recommendations to the federal government, the BC government, and the Ktunaxa First Nation advising on the options for furthering conservation, including securing core habitat and connectivity corridors in the two valleys.

The recommended options include consideration of applying/implementing the following:

Ktunaxa Nation

- Indigenous Protected and Conserved Areas
- Applying Personhood Status to the Flathead River

Federal Government

- National Park Reserve
- National Wildlife Area
- Canadian Heritage River System
- *Species at Risk Act*
- Providing funding for purchase of private land for management by Land Trusts

Provincial Government

- Provincial Park expansions
- Wildlife Management Areas

- Ecological Reserves
- Wildlife Habitat Areas
- Highway 3 Overpasses and Underpasses
- Heritage River – BC
- *Environment and Land Use* Act
- New wildlife corridor regulation (under development)
- 2017 Canada - British Columbia Agreement on Species at Risk
- Encouraging the Regional District of East Kootenay (municipal government) to adopt BC's Riparian Area Regulation

The report includes a listing of known funding sources to help deliver the options for conservation.

As with many issues related to conservation, there is a real sense of urgency around making decisions – wildlife populations in particular are on the decline in Southeastern BC. Consideration should be given to placing selective short-term moratoriums on industrial activities in areas that are deemed by the federal and/or provincial governments and /or the Ktunaxa Nation to be critical to the future of conservation in the Elk and Flathead River drainages.

As is often said by Indigenous Elders, we owe a healthy environment to the next seven generations that are following us…

Preface

The purpose of this report is to ensure a healthy future for fish, wildlife and ecosystems in the Elk and Flathead River Valleys and to help support the important work being done by Canada, BC and the Ktunaxa related to conservation and the environment.

Implementing the options for conservation recommended in this report will contribute to the achievement of the objectives outlined for Canada, BC and the Ktunaxa.

Federal Government

The federal Government's approach to supporting conservation initiatives is clear from the remarks made by Canada's Minister of Environment and Climate Change and Minister responsible for Parks Canada, the Hon. Jonathon Wilkinson, at the Leader's Summit on Climate, April 23, 2021:

- A commitment to protect 25% of our land and oceans by 2025 and 30% by 2030.
- Nature is under threat due to climate change, but nature is also our very best ally in the fight against the crisis. Reaching our climate goals depend on us addressing the full carbon cycle and protecting nature. Protecting carbon-rich natural systems is the first, most effective and lowest-cost Nature-Based Solution.
- We must recognize the very central role of Indigenous-led conservation and Indigenous Guardians program to our progress.
- As part of the Biden-Trudeau Roadmap, we look forward to collaborating on a North American perspective.

Province of BC

The Province of BC's objectives supporting conservation can be found in the mandate letters provided to Ministers by Premier Horgan. While the Province of BC does not currently have an objective to increase the amount of protected land in BC, it has commitments around the environment, conservation, and Indigenous relations in its mandate letters to ministers.

Ministry of Forests, Lands, Natural Resources Operations and Regional Development

- Protect more old growth stands and implement the old growth strategy
- Better protect wildlife and habitat corridors and implement the Together for Wildlife Strategy

Ministry of Environment and Climate Change Strategy

- Protect species at risk and protect and enhance biodiversity
- Protect fish habitat through our biodiversity strategy and the new Watershed Security Strategy
- Protect clean water including through the creation of a Watershed Security Strategy and Fund

- Implement our CleanBC climate action plan – build a low carbon economy with new clean energy jobs and opportunities, protecting our air, land and water and supporting communities to prepare for climate impacts

Ministry of Indigenous Relations and Reconciliation

- Facilitate partnership with First Nations around key decisions on regional land and resource use allocation through evolving shared decision making
- Extend our support for cultural preservation and revitalization by funding key projects designed to preserve and respect Indigenous cultures, including the retention and revitalization of First Nations languages

Ktunaxa

The Ktunaxa issued their Statement of Intent to enter into treaty negotiations with Canada and BC on December 17, 1993. As of May 27, 2021 they are at Stage 5 - Negotiating to Finalize Treaty[1].

The following is excerpted from https://www.ktunaxa.org/who-we-are/:

"*Ktunaxa (pronounced 'k-too-nah-ha') people have occupied the lands adjacent to the Kootenay and Columbia Rivers and the Arrow Lakes of British Columbia, Canada for more than 10,000 years. The Traditional Territory of the Ktunaxa Nation covers approximately 70,000 km^2 within the Kootenay region of south-eastern British Columbia and historically included parts of Alberta, Montana, Washington and Idaho.*

"For thousands of years the Ktunaxa people enjoyed the natural bounty of the land, seasonally migrating throughout our Traditional Territory to follow vegetation and hunting cycles. We obtained all our food, medicine and material for shelter and clothing from nature – hunting, fishing and gathering throughout our Territory, across the Rocky Mountains and on the Great Plains of both Canada and the United States.

"European settlement in the late 1800s, followed by the establishment of Indian Reserves, led to the creation of the present Indian Bands.

"Ktunaxa citizenship is comprised of Nation members from six Bands located throughout historic traditional Ktunaxa territory. Five Bands are located in British Columbia, Canada and two are in the United States. Many Ktunaxa citizens also live in urban and rural areas 'off reserve'."

Ktunaxa world outlook is particularly relevant to this discussion. Ktunaxa Elder Sophie Pierre summarized Ktunaxa perspective during a talk given to the Cranbrook History Centre in May, 2021[2]:

[1] BC Treaty Commission: https://www.bctreaty.ca/ktunaxa-nation
[2] Available: https://www.youtube.com/watch?v=GALGEuvq3b8

"*We Ktunaxa have fundamental values that come from our ʔa·knumuɬti‡i‡, the natural law that was given to us by the Creator. We are directed by our natural law to respect ʔa·kxaṁʔis ɋapi qapsin, all living things. This leads to our responsibility as keepers of our lands and waters because all living things depend on our lands and waters. And our responsibilities extends to all future generations that they can have a good life from what we pass on. As an example of this, while some people talk about their "right" to access the back country Ktunaxa speak of our responsibility to protect the back country.*"

Participation in the development of this report by the Ktunaxa Nation and the Tobacco Plains Band, Yaɋit ʔa·knuq‡i'it, does not replace nor relieve the obligations of either Canada or BC to formally consult with them on the land stewardship recommendations.

Other Indigenous Peoples

While there is interest expressed in the Flathead and Elk River valleys from the Blackfoot Confederacy, located in Alberta and Montana, and the Stoney Nation, located in Alberta, for the purposes of this report meetings were held only with representatives of the Ktunaxa Nation Council and Yaɋit ʔa·knuq‡i'it, who are actively involved in treaty negotiations with Canada and BC related to SE British Columbia. The Ktunaxa have an interest in both provincial crown land and the Dominion Coal Blocks.

Acknowledgements

I would like to acknowledge that we are located on ʔamakʔis Ktunaxa, the traditional territory of the Ktunaxa people and extend my gratitude for the opportunity to live and learn in mutual respect and appreciation.

The people of southeast British Columbia truly care about the environment. This report reflects their passion for conservation and their desire for a secure future for the fish, wildlife and ecosystems of the Elk and Flathead River Valleys.

I would like to thank all of the people who contributed to this report - you can find them referenced throughout this document, in the Bibliography, and in Appendix 3 – Authorities Contacted. Thank-you to Harvey Locke for sharing his extensive knowledge of the Flathead River Valley and for the use of his photographs.

A special thank-you to my contract supervisor, Kevin Mcnamee, Director, Protected Areas Establishment, Parks Canada Agency for his guidance and support, which are very much appreciated!

Thank you also to my wife Audrey. Much of what we accomplish in life is a team effort and it is important to recognize the contributions of our partners!

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1. Conservation Values – Why Should We Care?

The world faces a biodiversity crisis with one million species at risk of extinction (Diaz et al. 2019). The process begins by thinning out once abundant populations through over-exploitation and habitat degradation (Ceballos et al. 2020).

In the early 1990s, British Columbia engaged in comprehensive land-use planning. The Commission on Resources and the Environment (CORE 1994:38) led by Stephen Owen described the East Kootenay region centred on the Flathead and Elk River systems:

"*The region supports the greatest diversity of wild ungulates (seven species) and large carnivores in North America. … No other area in the province has as many species of big game cohabiting common areas… The complement of other species, makes this ecosystem unique… Its large mammal predator prey systems and sizable grizzly bear population are of international significance.*"

For various reasons much of this region has remained unprotected with increasing risk to its conservation values. In 2020 the Flathead and Elk (Northern Continental Divide ecoregion) were described as a Crisis Ecoregion in Southern Canada (Kraus and Hebb 2020). In many ways the ongoing degradation of the biologically rich Flathead-Elk area exemplifies the global biodiversity crisis and calls out for urgent conservation action before these values are lost.

The Flathead Valley in particular has extraordinary freshwater and terrestrial biodiversity values and is a leading candidate for protecting 25% of Canada's lands and waters by 2025. The Flathead -Elk system is a critical ecological corridor essential to maintaining the ecological integrity of the world-renowned Yellowstone to Yukon Corridor. Protecting these values has become even more urgent due to global climate change.

It would be difficult to imagine a more important site for integrated nature protection and climate resilience than the Flathead-Elk system. This conclusion holds for regional, provincial, national and international scales.

For the full range of biodiversity values and climate resiliency, the Flathead- Elk system is a global conservation priority that is at serious risk in current management conditions.

1.1. International Context

The following is the statement made by the G7 Environment Ministers, including Canada's Minister of Environment and Climate Change and Minister responsible for Parks Canada, the Hon. Jonathon Wilkinson, at their meeting on May 21, 2021:

"*We commit to champion ambitious and effective global biodiversity targets, including conserving or protecting at least 30 percent of global land and at least 30 percent of the global*

ocean by 2030 to halt and reverse biodiversity loss by 2030 and address climate change, including through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures (OECMs) by 2030 (30by30), recognising that Indigenous Peoples, and local communities, are full partners in the implementation of this target. We will strive to ensure the effective and equitable management of protected areas and OECMs, and strive to improve their ecological connectivity, with a focus on areas that deliver the greatest benefits for global biodiversity, ecosystem services and climate protection."

and

"*We will help set the world on a nature positive and climate-resilient pathway to bend the curve of biodiversity loss by 2030 and to keep a limit of 1.5°C temperature rise within reach by making our 2030 ambitions consistent with the aim of achieving net zero emissions as soon as possible and by 2050 at the latest.*"

Implementing the conservation options recommended in this report would contribute to Canada's commitment to achieving the objectives as outlined.

1.2. The Flathead Valley

The Flathead Valley has extra-ordinary conservation values by international standards. These are present for two reasons: its bio-geographical setting and its unique history. Biophysically it is in a mixing zone for western North American species (Arctic/ boreal, Alpine, Pacific temperate and Eastern grasslands, see Figure 1) and it has a remarkably intact and productive gravel bed river system that has been widely studied and informed basic scientific knowledge of the functioning of such systems world-wide (Hauer et al. 2016). It has globally significant terrestrial and freshwater species diversity and abundance.

The Flathead has an unusual land-use history. The Ktunaxa are known to have used the area as transit route for buffalo hunting. Their name (anglicized) is found on the South, Middle and North Kootenay passes of the Flathead on the BC- Alberta border. Flathead is a term for Salish people who reside now in Montana. There are reports of Blackfoot and Stoney use also.

Post-contact use has been unusual. It is the only big valley in southern Canada that has no permanent dwellings, no highway and no railway and it abuts protected areas in Alberta and Montana (one of which is a World Heritage Site and the World's First International Peace Park). Since 2010 it has been off-limits to oil and gas and mining. However, it has been heavily logged with many logging roads and is open for regulated hunting and trapping and off-road vehicle use. These activities fragment habitat, reduce wildlife security and introduce invasive weeds. Because of the exceptional values, logging in the valley has raised international concerns from the US Geological Survey (Muhlfeld 2010).

Figure 1: The Flathead Valley (red arrow) is located in an ecological crossroads of North America where species from the west, south, north and east all meet. This creates exceptional biodiversity. Map source Waterton -Glacier International Peace Park brochure

The combination of location, intact gravel bed river system (Figure 2), and lack of human settlements make the Flathead a unique global conservation opportunity. No place with comparable values is unprotected anywhere else in North America. The Waterton-Glacier World Heritage Mission Report, (UNESCO 2010) described the international significance of the unprotected Flathead succinctly:

"*On the western flank of the property is the so-called transboundary Flathead watershed, its lower reaches partly contained within the World Heritage property in Montana, but its headwaters mostly unprotected in British Columbia. Remote, uninhabited and pristine, it is regarded as one of the last of America's remaining wild rivers and of global ecological significance. It provides critical habitat for 16 species of carnivores and has the highest concentration of grizzly bears in the interior of the North American continent. The watershed is also the last intact wildlife corridor for grizzly bear, wolf and Canadian lynx along the Canada/US border. The river, whose water is rated among the purest in the world*[5]*, providescritical habitat for many native salmonid species, of which the endangered bull trout and genetically pure westslope cutthroat trout are of great importance.*"

This UNESCO (2010) summary is well-supported by the evidence.

Dr. John Weaver (2001) found that a unique community of 16 different carnivore species resides in the transboundary Flathead region "that appear unmatched in North America for its variety, completeness, use of valley bottom lands and density of species which are rare elsewhere."

Further Weaver (2001) concluded:
"*Due to these unique characteristics and its strategic position as a linkage between National Parks in both countries, the transboundary Flathead may be the single most important basin for large carnivores in the North America*."

The Flathead River is also outstanding for aquatic species which migrate across the Canada-US border and spawn on the BC side (D'Angelo et al. 2013 in COSEWIC 2016; COSEWIC 2012). Dr. C. Muhlfeld of the US Geological Survey wrote that due to its pristine water quality supporting abundant and diverse aquatic life, the Flathead has long been recognized as one of the last remaining strongholds in North America for bull trout (*Salvelinus confluentus*), listed as a threatened species under the U.S. *Endangered Species Act*, and the westslope cutthroat trout (*Oncorhynchus clarkii lewisi*) (Muhlfeld 2010). Westslope cutthroat trout is a species of Special Concern under Canada's *Species at Risk Act*, as is Rocky Mountain sculpin (*Cottus* sp. 9), another fish occurring in the Flathead River and its tributaries.

Although Pacific populations of bull trout were found to be not at risk (COSEWIC 2012), the Flathead population was singled out as a population with the "greatest concern" among the Pacific population (COSEWIC 2012) and is considered "at risk" provincially (Hagen and Decker 2011).

The Canadian reaches of the Flathead River contain mostly pure strains of westslope cutthroat trout (i.e. little to no hybridizing with rainbow trout [*O. mykiss*]), a highly important trait for conservation (COSEWIC 2016).

The Flathead's tributaries also support important populations of Rocky Mountain tailed frog (*Aschapus montanus*), a species at risk (Threatened) in Canada. This includes an isolated population in Elder Creek, the only documented occurrence of Rocky Mountain tailed frog on the east side of the Flathead River drainage in Canada (Hobbs et al. 2020).

Figure 2: The rare hydrologically intact gravel riverbed and floodplain of the Flathead River has been very important to the global understanding of stream ecology and the role intact gravel-bed rivers play in maintaining the ecological integrity and function of the entire landscape. White arrow in this image spans the width of the Flathead River floodplain. Source: Hauer et al. (2016).

In addition to its widely known importance to large mammals and freshwater species, the Flathead is exceptional for a wide range of other species (Figure 3). Bio-blitzes of scientific experts that documented these values were held in 2012 and 2013. The Royal BC Museum's summary of the 2012 bio-blitz confirmed that "the Flathead River Valley is one of our province's most important natural treasures, hosting some of the highest levels of biodiversity and most magnificent landscapes in North America" (Royal BC Museum 2013). In terms of specifics, the scientists found the Flathead hosts more than 1200 hundred species of plants and animals: 685 species of vascular plants, 200 insect species, 71 spider species, 29 snail and clam species, and 29 other invertebrate species. In addition to the impressive numbers they noted their rarity:

"*Perhaps even more exciting was the number of spiders that represented either species new to science, first records in the province, or major range expansions. More than 30 of the plants recorded from the region are provincially red or blue- listed, and nine species of the 86 bird species reported during the Blitz are classified as rare regionally or provincially, or as 'declining' or 'rare' on the American Bird Conservancy watch list. These important findings are expected to assist conservation organizations and policy makers gain protection for this biologically rich region of our province.*"

A subsequent bird-focused bio-blitz in June, 2013 found an exceptional 115 bird species in ten days.[3]

The larger the protected area, the more secure are its conservation values. Because the areas adjacent to it in Alberta and Montana are already protected, conservation in the Flathead would achieve significant benefit for conservation in both Canada and the United States.

The east side of the Flathead includes 38 plant species of concern along with Gillette's checkerspot butterfly, Rocky Mountain sculpin, western bumble bee, western screech-owl and Rocky Mountain tailed frog, among others, which are also species of concern (BC Conservation Data Centre 2021*a*; see Appendix 1 for full details on species of Conservation Concern).

Figure 3: The Flathead Region has exceptional diversity and abundance of vascular plants and many other species.

[3] Bird list from 2013 Flathead bird bioblitz compiled by J. Rogers and H. Locke.

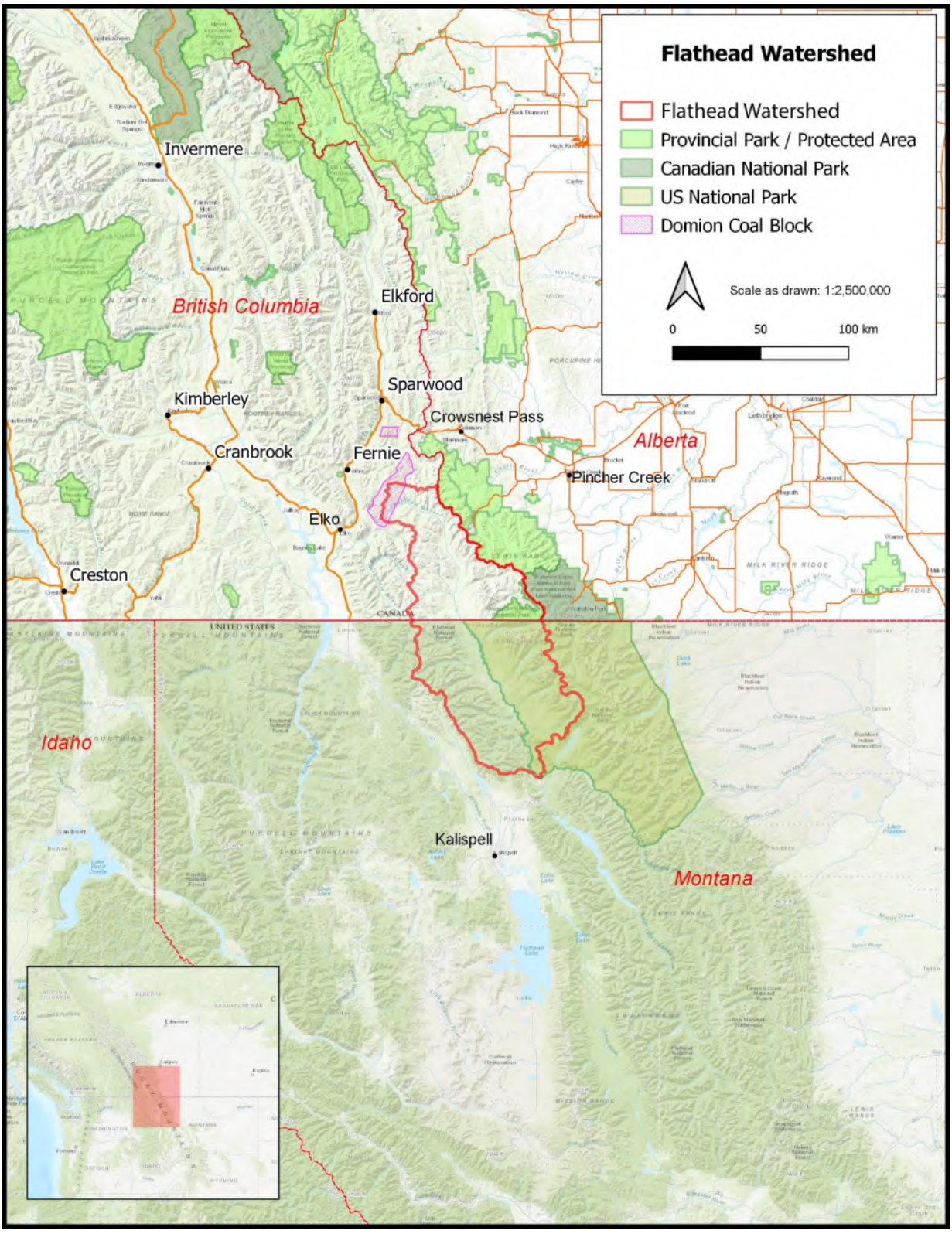

Figure 4: The transboundary Flathead Valley outlined in red and existing parks in various greens. On the Alberta side are the contiguous Waterton Lakes National Park, Castle and Castle Wildland Provincial Parks. On the south is Glacier National Park, Montana. In contrast, the BC portion is largely unprotected with the exception of the relatively small Akamina-Kishinena Provincial Park.

Yellowstone to Yukon Corridor

The Yellowstone to Yukon corridor (Y2Y) is one of the world's best known and most emulated large landscape conservation efforts (Hiss 2021). Its goal is an interconnected system of wildlands and waters stretching from Yellowstone to Yukon, harmonizing the needs of people with those of nature (Locke and Heuer 2015). One of the reasons for its creation in 1993 was the central role the Flathead plays in the larger landscape and the fact its exceptional values were at risk due its unprotected status (Locke 1994). Dr. Harvey Locke (2017), co-founder of Y2Y, wrote:

"*We analyzed the whole system for its wildlife values and located the most vulnerable links in the chain of the northern Rocky Mountains... We also recognized quickly the central importance of not breaking the most vulnerable and critical link of all- the one stretching north from Waterton-Glacier to Banff National Park, that peninsula of life that runs up the Rocky Mountains starting in the Flathead Valley.*"

International Controversy

Issues of potential coal mining development in the Flathead generated major tension between Canada and the United States resulting in a reference to the International Joint Commission under the Boundary Waters Treaty in the 1980s and a subsequent complaint to UNESCO that coal mining in the BC Flathead would endanger the outstanding universal values of Waterton-Glacier World Heritage Site. The coal-mining controversy stopped when the BC Government passed the *Flathead Watershed Conservation Act* in 2011 which precluded oil and gas and mining in the valley (Locke and McKinney 2013). It did not create a protected area, as logging and other uses continue and there is no special management framework for the valley (Carroll and Noss 2020).

In conclusion, the Flathead Valley is globally significant for its exceptional diversity and abundance of North American species. Its ecological productivity is critical to the entire Yellowstone to Yukon corridor and it directly affects Waterton-Glacier International Peace Park World Heritage Site. Those values are not protected. It is an unmatched biodiversity conservation opportunity in Canada.

Figure 5: The Elk - Flathead area (black oval), bisected by Highway 3 (in red) between Waterton- Glacier and Banff National Parks is the most critical link in the Yellowstone to Yukon Corridor. Source: Locke (2017).

1.3. The Elk Valley

The Elk Valley, like the Flathead, is a north-south gravel bed river system in the Rocky Mountains (Figure 6). However, unlike the Flathead, it has several permanent communities, a highway and a railway that run along much of it and the largest metallurgical coal mining operations in Canada (Figure 7A). It has the most private land of any region of the Canadian Rockies. Large blocks of private land are being heavily logged as is its public land. The Elk River's water quality has been compromised by selenium pollution from open-pit coal mines (Presser and Naftz 2020; Teck 2014*a*).

Yet the Elk retains two important sites of conservation value that are not yet protected. On the west side of the Elk Valley, once in the Elk Valley Game Reserve, remains largely intact and sometimes referred to as the Hornaday Wilderness (Figure 7B). On the east side of the upper Elk Valley, important values lie in high elevation grasslands in the intact tributary watershed of Weary-Aldridge immediately adjacent to protected areas in Alberta (Figure 9). These are both significant protected area opportunities as they are relatively intact.

The east side of the Elk valley is home to 750 - 850 Rocky Mountain bighorn sheep of provincial significance that winter on provincially red-listed high elevation grasslands (Poole et al. 2016). They share summer and winter habitats with a number of ungulate species including elk, mule deer, mountain goat, moose and white-tailed deer.

There are four important high-elevation grasslands located on the east side of the Elk River that are key winter ranges for bighorn sheep: Castle/Chauncey, Todhunter Ridge, Imperial Ridge and Ewin Ridge (Figure 8). Collectively, these are known as the Fording River Grasslands. Many of these winter ranges are currently covered by undeveloped mineral leases (Poole 2013). Ewin Ridge has the highest wintering population and is considered to be the most important sheep winter range in BC (Demarchi 1968 in Poole 2013).

There are 4 coal mines currently operating in this area, Fording, Greenhills, Line Creek and Elkview. Expansion of any of these mines, including Teck Coal's proposed Castle expansion of the Fording River Operations mine site, or the development of any new mines could negatively impact rare high elevation grasslands which are also home to at least 23 species and ecosystems of Conservation Concern and are critical bighorn sheep winter ranges (BC Conservation Data Centre 2021*b*).

The Elk Valley has globally significant connectivity values. It is the most critical and vulnerable corridor for large mammals in the Yellowstone to Yukon region because it connects the Flathead and adjacent protected areas to Banff National Park and other protected areas further north. Because this is vital to keeping large mammal populations in the western USA genetically connected to those further north in Canada it has been called the most important wildlife corridor in all of North America. In particular the Michel Creek-Alexander Creek part of the Elk Valley (Figure 10) stands out in significance (Apps et al. 2007).

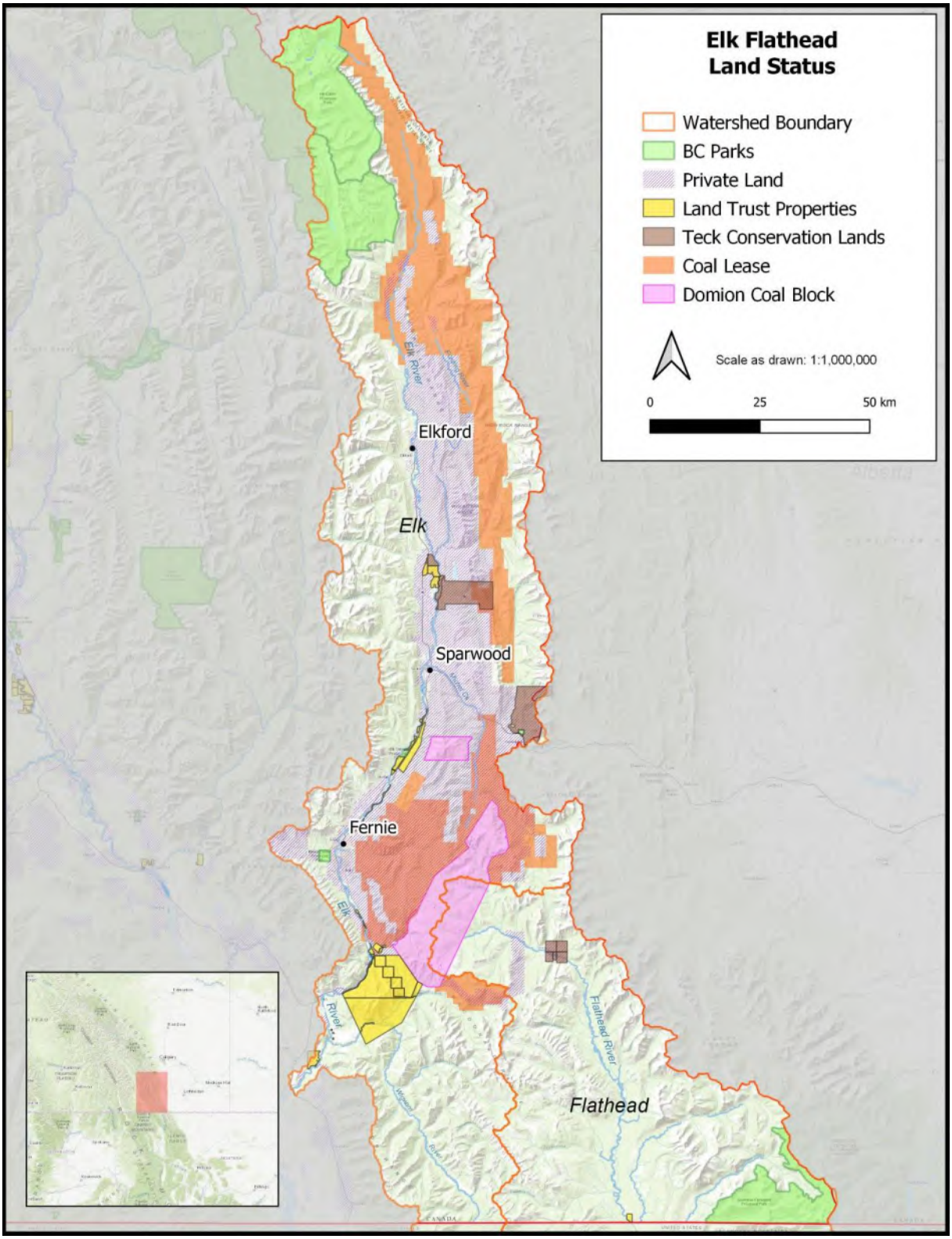

Figure 6: Map of land tenures in the Elk and Flathead Valleys. The Elk Valley has the most private land, estimated at 32%, of any area in the Canadian Rockies. There are some private lands in the Flathead watershed. The two purple-hatched parcels are federal Dominion Coal Blocks. Yellow areas are fee-simple lands owned by land trust organizations.

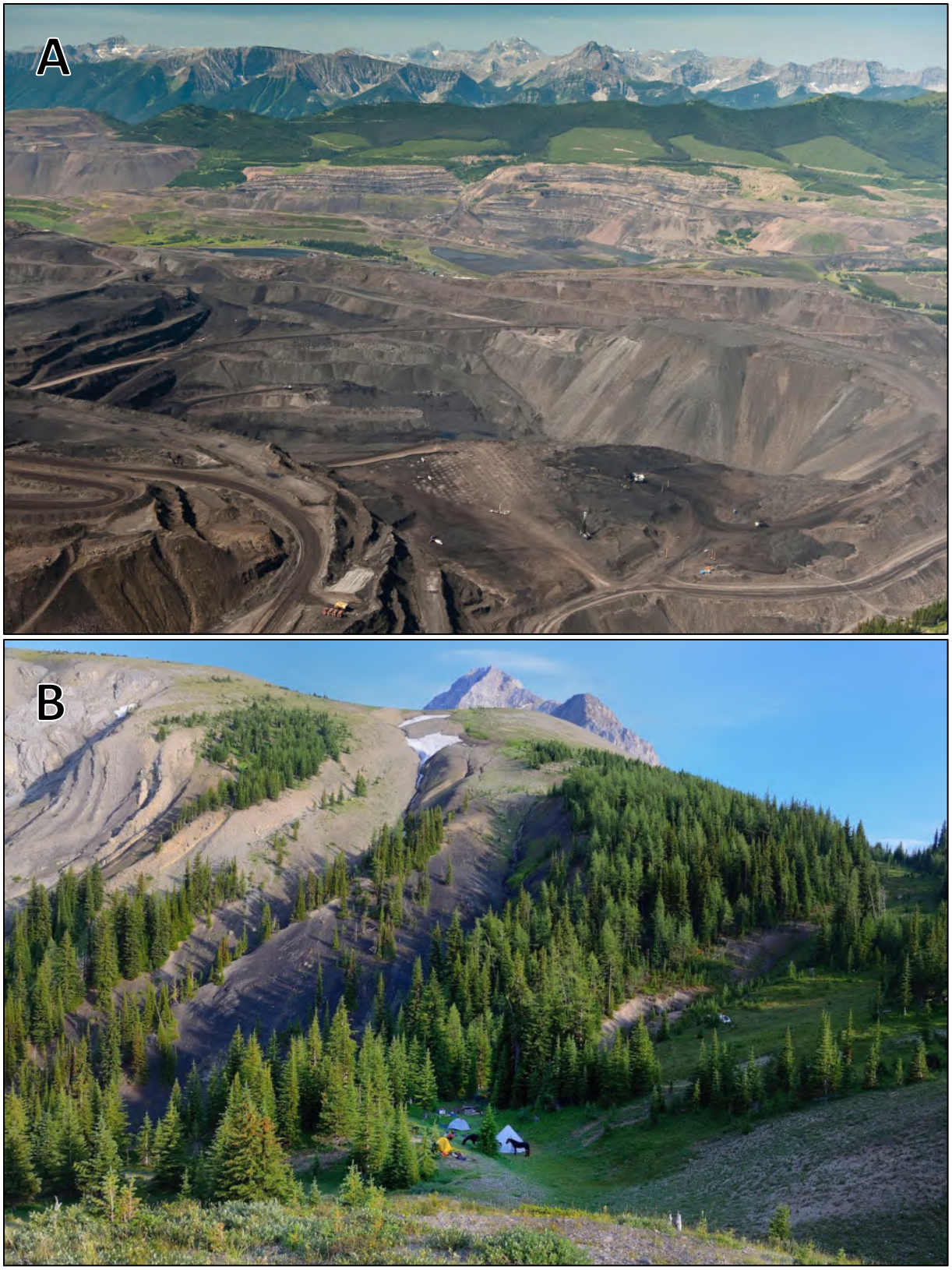

Figure 7: Visual comparison of the contrast between one of four active industrial coal mines east of the Elk River (A) and the relatively intact Hornaday wilderness on the west side of the Elk River (B).Photos: A by Garth Lenz; B by Harvey Locke.

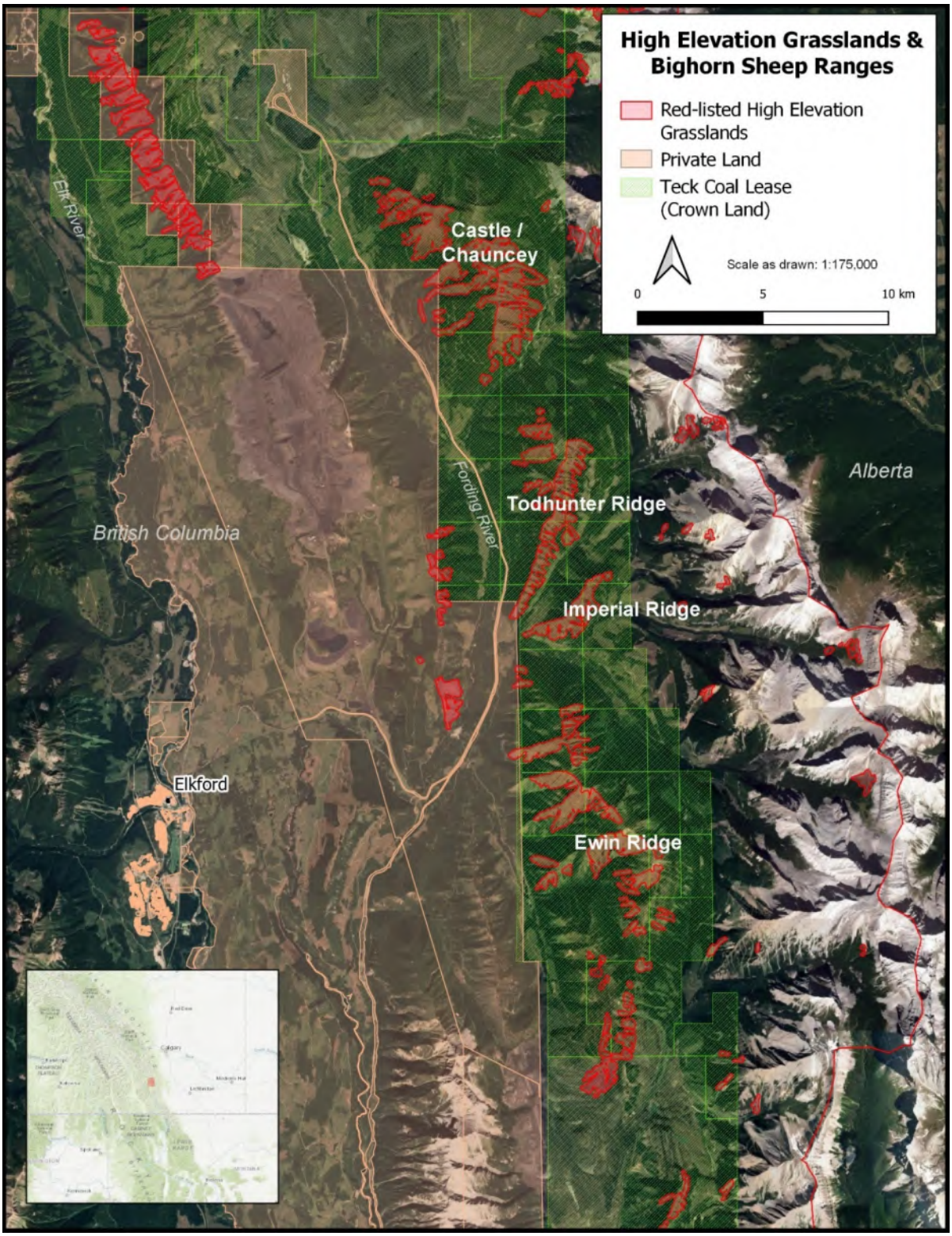

Figure 8: Red-listed high elevation grasslands include four bighorn sheep winter ranges of critical importance to the Elk Valley East Side bighorn sheep population (Poole 2013). Castle-Chauncey is currently undergoing provincial and federal environmental assessment review for proposed expansion of Teck Coal' Fording River Operations coal mine. Green hatched areas are lands under Coal Lease tenure to Teck Coal, Ltd. Coal Lease source: BC Data Catalogue, MTA - Mineral, Placer and Coal Tenure Spatial View.

Figure 9: The Weary-Aldridge drainage has high elevation grasslands and is the only largely intact area on the east side of the Elk Valley. It has good connectivity to Alberta. Photo courtesy of H. Locke.

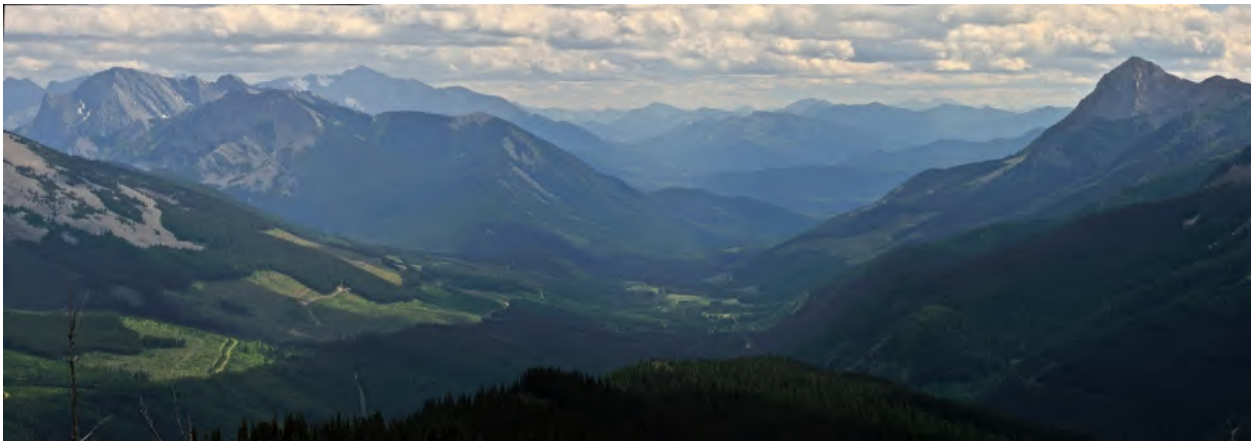

Figure 10: View south from Crown Mountain looking down Alexander Creek to the Elk River Valley and Beyond to Michel Creek and the Flathead Valley. This is the most critical wildlife corridor for large mammal connectivity in North America. The dark area in the foreground is the site of the prosed Crown Mountain open pit coal mine; the private lands in the sunny mid-distance land have been secured by Teck Resources for connectivity conservation purposes; the Michel Creek drainage is not secure. Photo courtesy of Steve Hilts.

Connectivity Values at Risk in the Elk Valley

The significance to North American wildlife of connectivity across the Elk Valley was marked as a major concern in 2000 by Dr. Chris Servheen, then head of Grizzly Bear Recovery for the US Fish and Wildlife Service. After recognizing that United States grizzly populations are dependent upon connections with Canadian populations to the north because they allow US populations to be larger, more resilient, and more likely to be viable in the long term, he wrote (Servheen 2000):

"*These populations are contiguous now, but if continued development along Highway 3 [Elk Valley] continues, we will have another island population of bears and other carnivores like wolverines with associated increases in extinction risk…*"

Similarly, Dr. Michael Soulé, founder of the Society for Conservation Biology noted (Soulé 2000):

"*The disintegrating, north-south land-bridge for wildlife across the Crown of the Continent region may be the most important transboundary conservation issue in North America…This is because the safe movement of keystone species like grizzly bears and wolves, species essential to the ecosystem integrity of forests in both our nations, is increasingly jeopardized in the vicinity of Highway 3 and the Waterton-Glacier areas threatening the ecological integrity of the entire Yellowstone to Yukon region.*"

Ten years later the globally significant connectivity values of the Flathead and Elk led the World Heritage Mission on the integrity of the Waterton-Glacier World Heritage site (UNESCO 2010) to recommend:

"*Steps should also be taken to minimise the barrier to wildlife connectivity due to mining, transportation and communication lines and associated developments in the Crowsnest Pass of B.C., and where such barriers exist, appropriate mitigation measures should be planned and implemented. In particular, there should be a long-term moratorium placed on any further mining developments in south eastern BritishColumbia, immediately west of the Alberta border, in the corridor of natural terrain that creates vital habitat connectivity and allows the unimpeded movement of carnivores and ungulates between the Waterton-Glacier property and Banff/Jasper NPs of the Rocky Mountains WH property in Alberta. Other measures should include minimising future infrastructure development and removal of unnecessary structures,maintenance of core natural areas and rehabilitation of degraded areas, and development of a pro-active plan for enhancing connectivity in the area.*"

No such integrated steps as recommended were implemented and the situation for connectivity and habitat security in the Elk Valley is deteriorating as is the water quality. The ongoing deterioration of the grizzly bear population on the Elk Valley led the BC Auditor General (Bellringer 2017) to state:

"*BC's southeast [Elk Valley] is one of the areas of highest risk to grizzly bears, due to its industrial activity, hunting interest, the CP railway, Highway 3 and associated settlements. It is also one of the more intensively inventoried areas and one of the few areas that has been targeted for population monitoring because of the risk of excessive human-caused mortality. However, even with this intense scrutiny, and even after reaching a high density of bears, the pollution declined by 40 to 50% (8% per year) between 2006 and 2013.*"

The BC Auditor General (Bellringer 2017) went on to recommend that this population will need wildlife corridors with safe transition areas through the valley bottoms to maintain connectivity but noted "Overall, there has been limited involvement by government staff and little funding for initiatives to address the lack of connectivity in BC." No actions to create such corridors with habitat security have been taken.

Highway 3 in the Elk Valley has no significant mitigations for wildlife despite its critical values to North American connectivity. The landscape is similar to Banff National Park which has world famous wildlife crossing structures designed to protect the same values. The need for, and potential location for, similar structures has already been documented for Hwy 3. British Columbia has been exploring the idea and are planning to invest in fencing and a highway overpass near the BC Alberta border in 2021. The new infrastructure funds announced in federal budget 2021 could be deployed here to great effect (Lee et al. 2019; Clevenger et al. 2010; Apps et al. 2007).

The ongoing deterioration of the Elk Valley for wildlife connectivity and the decline of wildlife in the area has become a cause for alarm. Warnings from 20 years have become a grim reality. It is now an urgent conservation problem. The situation is even more urgent when the effects of climate change are considered.

1.4. Species of Conservation Concern

At least 67 species of Conservation Concern have been identified in the Elk and Flathead watersheds. An additional 6 ecosystems are listed as at risk by the BC Conservation Data Centre (Table 1). See also Appendix 1 for a full listing of species and occurrence details.

While research is on-going, the presence of these species of Conservation Concern must be taken into consideration when looking at options for conservation in the Elk and Flathead Valleys. In particular, the High Elevation Grassland ecological communities are threatened by potential mining expansion and mining-related infrastructure.

Table 1: Number of species or ecosystems of Conservation Concern in Elk and Flathead River watersheds. Source: BC Conservation Data Centre (2021a) and local expert knowledge.

Element Type	Class	# of Species
Plants	Conifer	2
	Dicot (flowering plants)	29
	Monocot (grasses, sedges)	3
	Quillwort	1
	Non-vascular Plant (incl. mosses)	3
Invertebrates	Insect	3
	Gastropod	1
Vertebrates	Amphibian	2
	Mammal	5
	Bird	10
	Fish	2
Ecological Communities	Brushland ecosystem	1
	Grassland ecosystem	1
	High Elevation Grassland ecosystem	4
	Total	**67**

1.5. Climate Resiliency

In their recent paper, Stralberg et al. (2020) note the now inevitable challenges facing species and ecosystems in the face of climate change:

"*Even with swift and significant reductions in greenhouse gas emissions, climate change is poised to dramatically alter the distribution and survival of species and ecosystems. Large-scale shifts in the distribution of species pose challenges for conservation planning because species and their underlying ecosystems become moving targets. Meanwhile, naturally functioning ecosystems are critical for mitigating greenhouse gas emissions via carbon sequestration. Thus, substantial increases in the protection of natural ecosystems above Aichi Target levels can both mitigate emissions via carbon sequestration and respond to the combined effects of climate and land-use change.*"

Stralberg et al. (2020) then connect the impacts of climate change with the importance of ensuring safe corridors for wildlife movement:

"*Recognizing that many species and subspecies with restricted ranges will have to migrate large distances to keep pace with climate change, our fourth conservation objective was climate corridors: areas through which multiple species will need to migrate to reach future suitable climate space*"

Ecological connectivity supported by core protected areas is the cornerstone of effective climate adaptation and resiliency (Heller and Zavaleta 2009; Hodgson et al. 2009). In a 2011 article the editors of the influential scientific journal *Nature* (2011) wrote an editorial entitled "Think Big":

"*… conservation biologists, since at least the early 1990s, have called for parks to be connected to one another by unbroken corridors of nature, through which large species can move. For small mobile species, such as birds and insects, a stepping-stone scatter of protected areas close to one another has much the same effect. Climate change makes such connectivity even more important, as species challenged by the changing climate will need big gene pools to draw from and lots of different places to which they can move to. In particular, sites with microclimates to harbour species that can't take the heat need to be identified, protected and linked to existing protected areas.*"

The Yellowstone to Yukon corridor (Figure 5) has frequently been cited as an example of the scale and approach needed (Weaver 2013; Chester et al. 2012). North-south gravel-bed rivers are the most important feature in the Yellowstone to Yukon landscape for climate resiliency as they are cooler and more productive than any other part of the low-elevation landscape and provide linear corridors that go up latitude and up elevation (Hauer et al. 2016).

A 2020 study of the Yellowstone to Yukon region and climate resiliency (Carroll and Noss 2020 and references therein) found that range shifts are already occurring and that protecting climate refugia is a key strategy for climate resilience:

"*Shifts in species distributions due to climate change are already evident in the Y2Y region, as are ecosystem responses such as landcover change. Landscape-scale conservation, by protecting key areas such as climate refugia, can increasethe adaptive capacity or resilience of a landscape and its ability to retain native species and ecosystems.*"

The Flathead and Elk are identified as having important values for climate resiliency against seven of eight metrics, the exception being intactness.

The leading edge of species distribution is shifting northwards due to warming. Climate resiliency concerns make it vital to protect the ecological crossroads values of the Flathead as a climate refuge and to secure the connectivity values across and up the Elk Valley, including protecting its surviving wild areas as climate refuge stepping stones.

The Y2Y corridor is at existential risk due to the conditions on the Elk Valley and would be materially more resilient to adapt to climate change if the Flathead's extraordinary values, and the relatively undisturbed areas left in the Elk Valley were protected.

Equally important, the deteriorating state of fish and wildlife populations so important to the quality of life for people living in the Elk Valley must be addressed. The Elk Valley is at a "tipping point" where the balance between conservation and development is at risk. Once lost,

conservation values are very difficult and expensive to bring back, assuming that they can be brought back. It is important to act now while there is still time.

1.6. Wildlife Corridors

The Southern Canadian Rocky Mountains – between Banff National Park and Glacier National Park (USA) support a diversity of carnivores that is world class in its completeness – all of the predator-prey relationships are still functioning. The list of wildlife predators include: grizzly bears, black bears, cougars, bobcats, lynx, wolves, wolverines and badgers.

The importance of conserving connectivity through ecological networks and corridors is recognized around the world. New guidelines have been recently issued by the International Union for the Conservation of Nature (IUCN) (Hilty et al. 2020). A key message is that interconnected protected areas and other areas for biological diversity conservation are much more effective than disconnected areas in human-dominated systems, especially in the face of climate change. Ecological connectivity is critical to the conservation of biodiversity.

The Elk and Flathead Rivers serve as natural corridors in their own right, and providing additional protection for the rivers themselves and their riparian areas would enhance protection for both fish and wildlife.

The primary barriers to wildlife movement in the Elk River drainage are settlements, both urban and rural, Highway 3 – the Crowsnest Hwy, the Canadian Pacific Railway and the largest open-pit metallurgical coal mines in Canada. While mitigating some of these barriers is problematic, a number of studies have recommended the construction of overpasses and underpasses for Highway 3 (Lee et al. 2019; Proctor et al. 2015; Weaver 2013; Apps et al. 2007). There are ten prioritized crossing locations (Mitigation Emphasis Sites or MES) between the BC-Alberta border and just west of Elko, BC along Highway 3 (Figure 11).

The highest priority is the Alexander-Michel wildlife corridor, and the BC Ministry of Transportation is planning to make the underpass and associated fencing a priority for 2021. The Lizard Creek bridge completed in 2020 just west of Fernie has been widened to encourage wildlife passage underneath it.

Much work remains to be done to secure fish and wildlife corridors in the Elk and Flathead. As outlined in the Province of BC's mandate letters to Ministers, finding ways to better protect wildlife and habitat corridors is a priority. Using Wildlife Habitat Area designations under the *Forest and Range Practices Act* to better protect creeks and rivers in the Elk and Flathead Valleys is an important step forward.

Securing corridors is critical to the future survival of wildlife and fish in the Elk and Flathead River Valleys. The 2021/2022 federal budget includes funding for conservation related infrastructure that could potentially support safe highway crossings for wildlife.

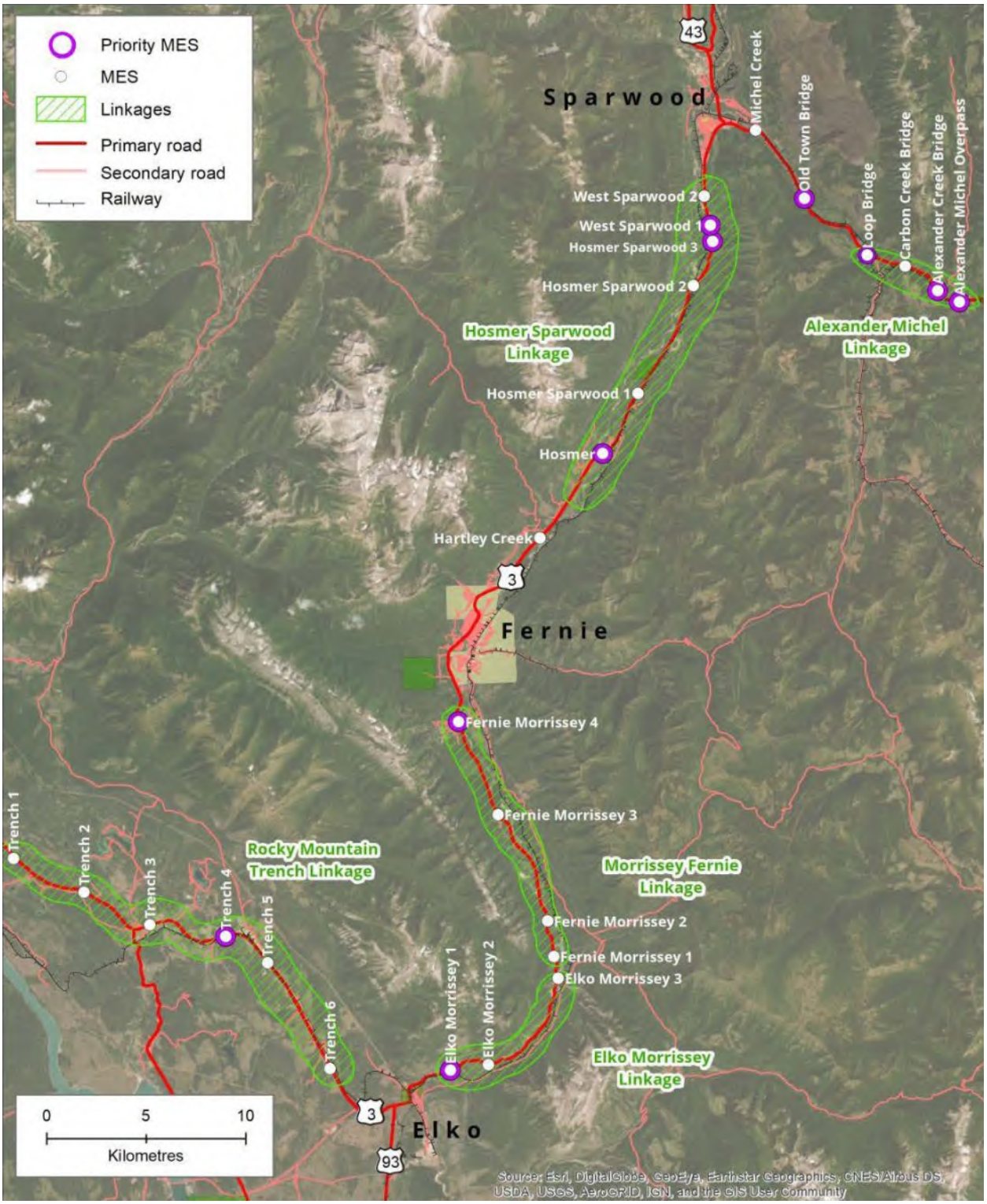

Figure 11: Priority Mitigation Emphasis Sites (MES, purple circles) in the Elk Valley. Source: Lee et al. (2019).

2. Current Land Status

The status of land ownership is quite different between the Elk and Flathead Valleys. While most of the land in the Flathead is BC provincial crown land, 32% of the land in the Elk Valley is privately owned. (Figure 6).

2.1. Federal Land

The **Dominion Coal Blocks** (DCB) are two parcels of **federal crown land** – known as Parcel 73 - Mount Taylor (2,000 ha), and Parcel 82 - the Flathead portion (18,000 ha), located in the Elk and Flathead drainages (see Figure 6). Canada acquired the land in 1905 from the Canadian Pacific Railway Company in exchange for $3.63 million subsidy to enable construction of a rail pass through the Crowsnest Pass that would link BC and Alberta. The Minister of Natural Resources is responsible for administration of the DCB.

Canada has owned these two blocks of land for 116 years. Divestiture of these blocks could serve as an opportunity to advance several policy objectives that may be of interest to the Government of Canada, including:

- Revenue through selling the land
- Economic development and local employment through mining the metallurgical coal
- Creating a conservation area. Many plant and animal species of Conservation Concern occur in the DCB, including Whitebark Pine, American Badger, Grizzly Bear and Olive-sided Flycatcher. The land is important habitat for other species including moose, elk and mule deer. Setting aside these lands could contribute to achieving Canada's goals with respect to protecting 25% by 2025.
- Indigenous Reconciliation. Divestiture of DCB offers an opportunity for Canada to enhance existing relationships, advance financial reconciliation, and contribute to the settlement of Section 35 (*Constitution Act*, 1982) aboriginal and treaty rights.
- Consider a land exchange between Canada and BC to secure the highest value land in the Flathead for conservation.

While the land is federally owned, BC is responsible for forestry management within the DCB as the Government of Canada transferred the responsibility to the province in 1978. Parcel 73 (Mount Taylor) is believed to have substantial metallurgical coal reserves while Parcel 82 (Flathead Portion) does not possess metallurgical coal reserves.

2.2. Provincial Land

Canadian Forest Products (**Canfor**) does not own land in the Elk or Flathead but holds the timber harvesting rights to much of it (Figure 12). In their entirely, these two drainages represent approximately 40% of the area associated with Canfor's Forest Licenses in the Cranbrook Timber Supply Area (TSA). If timber harvesting was prohibited here the viability of the Elko sawmill would be significantly compromised. The Elko mill directly employs 180 people and indirectly at least that many through logging, trucking, and forestry consulting jobs.

Canfor has sustainable forest management certification (Forest Stewardship Council, FSC) in the East Kootenay Region based in part on collaborative, multi-stakeholder, expert and First Nation identification of High Conservation Value Areas (over 200,000 ha alone in the Elk and Flathead). High Conservation Value Areas are areas of exceptional conservation, ecosystem service, or cultural value. Forest management strives to maintain or enhance the conservation values within these areas (see Appendix 2).

There are opportunities to more permanently protect important conservation on Canfor tenured land through negotiation and compensation.

Canfor respects that any future conservation activities should be led by the Ktunaxa Nation in partnership with the provincial government, but are very interested in participating in any future discussions related to conservation in this area (K. Stuart-Smith pers. comm.).

BC Timber Sales (BCTS) manages crown land forest resources for auction to regional forestry operators. BCTS has tenure over 20,000 ha of provincial crown land in the Flathead River Valley within the Flathead riparian corridor: the Kishinena drainage (east side) and the Couldrey Creek area (west side). These areas are critical to wildlife movement from the Flathead east to Waterton Lakes National Park, south to Montana and Glacier National Park, and west to critical winter range in the Wigwam drainage including Mount Broadwood and Wigwam Flats. It also contains Critical Habitat for Rocky Mountain tailed frog in the Couldrey and Burnham Creek areas.

BC Timber Sales, focuses on timber sales rather than on managing for conservation as well as timber harvesting. Areas in the east Flathead and adjacent to the Flathead riparian corridor should be considered for removal from the Timber Harvesting Landbase. Those areas that lie in wildlife movement corridors need to be managed with wildlife habitat and connectivity as a priority.

There are six **British Columbia Provincial Parks** entirely or partially included in the Elk Valley and one in the Flathead drainage (Table 2). They total 43,672 ha between the Elk and Flathead watersheds. Provincial parks prohibit logging, mining and industrial development while permitting hunting, guide outfitting, trapping, camping and outdoor recreation. They play an important role for meeting both outdoor recreation and conservation interests.

2.3. Private Land

CanWel Fibre Corp, a division of CanWel Buildings Group, Ltd. owns about 1/8 of the land in the Elk Valley (41,790 ha) and are actively clearcutting the land under BC's private land logging regime (Figure 12), leading to concern from Elk Valley residents (Parfitt 2019; McLachlan 2019). The Elk Valley Regional Land Trust, a volunteer-driven registered not-for-profit, is working to purchase 8,000 ha of CanWel land close to Fernie. While their primary purpose is to secure the land for recreational purposes (mountain biking, hiking, and winter sport activities), preventing clearcut logging on these lands will also benefit conservation.

Table 2: Provincial Parks and their area in the Elk and Flathead Valleys.

Drainage	Provincial Park	Area (ha)
Elk	Elk Lakes	17,245
	Height of the Rockies (in Elk R. drainage)[1]	15,117
	Elk Valley	78
	Crowsnest Pass	46
	Mt Fernie	259
	Morrissey	5
	Total:	32,750
Flathead	Akamina-Kishinena	10,922

[1] Total area of Height of the Rockies Provincial Park is 54,170 ha.

Collison (2021) recently summarized CanWel's logging activity on private land in this area:
"*In late 2014, about 55,000 hectares of forest land was acquired by CanWel Timber Ltd. and clearcuts have severely fragmented the landscape in the Elk Valley since then (Sander-Green 2019). The 2003* Private Managed Forest Land Act *has allowed this company to register the land as 'private managed forest,' subject to less strict forestry practice regulations than what is required on Crown land. Some of the associated impacts with clearcut logging are potential economic losses for the tourism industry, sedimentation in fish habitat, rising land surface and water temperatures, higher risks of soil instability and landslides, habitat loss for wildlife and species at risk, and a decreased climate change mitigation capacity, among others (Bowd et al. 2019).*
"*Timber harvest rates greatly increased on private forest land compared to Crown land. Within one year of forest acquisition by CanWel Timber Ltd. in 2014, logging on private land was over 3 times higher than the previous year.*"

Teck owns 49,151 ha of land in the Elk Valley. In 2013 Teck purchased 7,150 hectares of private land in the Elk Valley and Flathead River Valley to benefit wildlife and habitat conservation. (Teck 2014*b*). In January 2021 Teck Resources Ltd. signed a Joint Management Agreement with the Ktunaxa Nation to jointly manage the land for conservation purposes protecting significant fish and wildlife habitat[4].

Teck's "Net Positive Impact" corporate goal means "ecosystems and biodiversity are better off at the end of mining than when we found them." Teck "welcomes the opportunity to discuss partnering in additional conservation work in the region that is aligned with Ktunaxa Nation interests, supports federal and provincial government objectives, and furthers our net positive impact on biodiversity goal" (M. Smith pers. comm.).

[4] Ktunaxa Nation/Teck Coal Ltd News Release – January 7, 2021

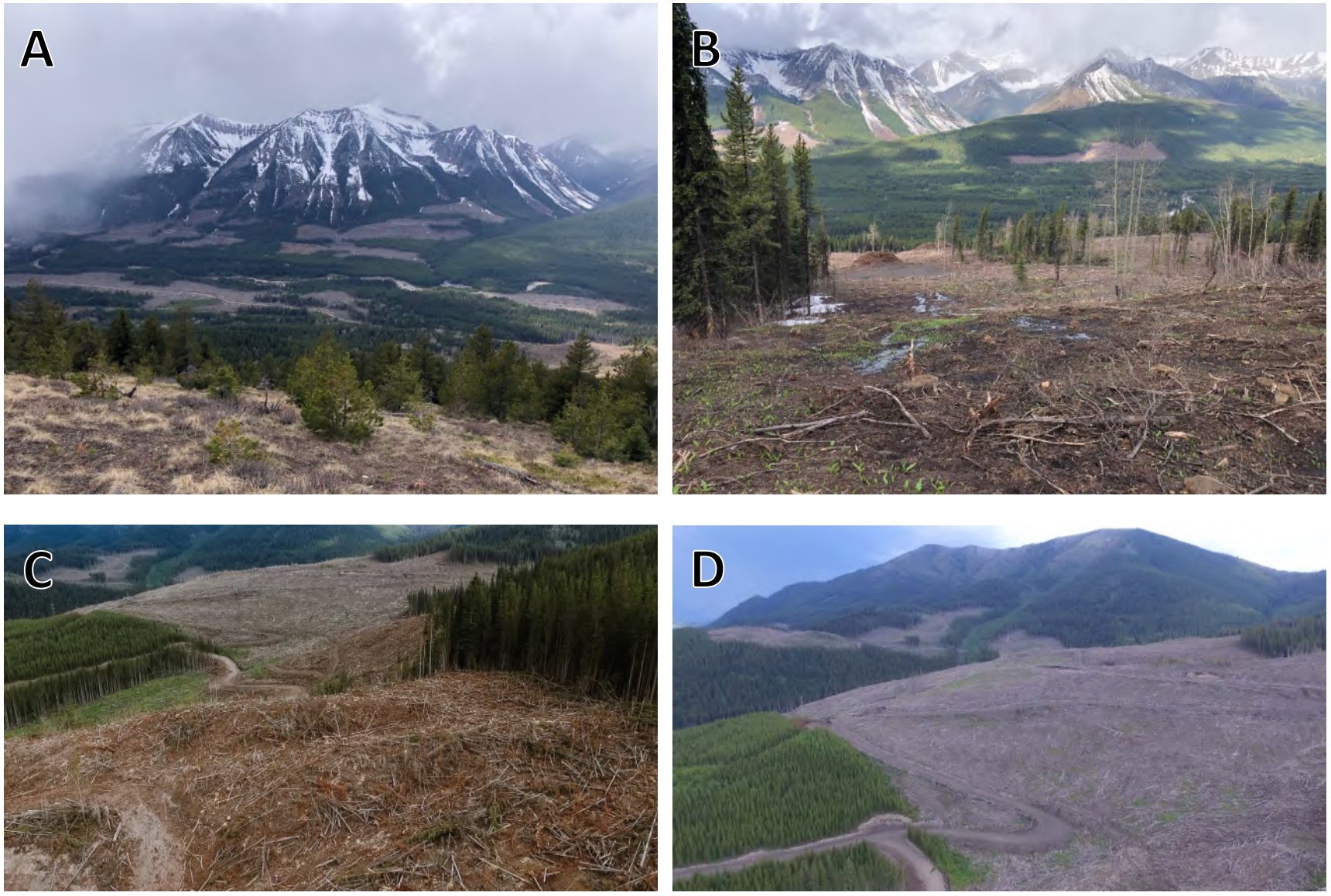

Figure 12: A and B: View of Canfor logging activity at Mt Bleasdell. Canfor continues actively logging in the Upper Elk Valley and throughout their tenured area in the Elk and Flathead Valleys; J. Bergenske, photos. C and D: CanWel logging in Leach Creek area east of Fernie, B. Repp, photos.

2.4. Land Conservancies

In the Elk, important conservation properties totalling 21,672 ha are held by **Nature Conservancy Canada** and **Nature Trust BC**. There are an additional 17 properties that are a high priority for protection totalling over 98,000 ha, with an estimated acquisition cost of $64-66 million. (J. Craig pers. comm.).

3. Land Designation Options / Categories

There are a number of land use designations and legislation that can be used to help secure land for conservation presented in summary format below. While this report will make recommendations the decisions to implement designations rests solely with Canada, BC and the Ktunaxa. A complete list is present here to illustrate the options that governments have to benefit conservation.

3.1. International

International Union for Conservation of Nature (IUCN).[5] In order for the IUCN to recognize protected areas, and for the designation to count towards Can'ada's protected and conserved area targets, they must meet the standards set out in these management types:

- Ia Strict Nature Reserve
- Ib Wilderness Area
- II National Park
- III Natural monument or feature
- IV Habitat/species management area
- V Protected landscape or seascape
- VI Protected areas with sustainable use of natural resources

Key Biodiversity Areas is an international program to identify areas "that have characteristics that make them important for sustaining wildlife and biodiversity."[6] The program combines Important Bird Areas, Prime Butterfly Areas and Alliance for Zero Extinction Sites.

3.2. Federal

Federal Land Designations

- National Parks and National Park Reserves
- National Wildlife Areas
- Migratory Bird Sanctuaries

Federal Legislation

- *Species at Risk Act*
- *Canadian Environmental Assessment Act*

[5] Included to highlight the range of designations that qualify as "protected" under international standards. See: https://www.iucn.org/theme/protected-areas/about/protected-area-categories

[6] Key Biodiversity Areas Canada: http://www.kbacanada.org/

- *Fisheries Act*
- *International Boundary Waters Treaty Act*

Other Options

- *Canadian Environmental Protection Act*
- Canadian Heritage Rivers System (not a legal designation but provides special status)
- Important Amphibian and Reptile Areas

3.3. Provincial

BC Land Designations

- Provincial Parks
- *Park Act* Conservancies
- Wildlife Management Areas (WMA)
- Critical Wildlife Areas (CWA)
- Wildlife Sanctuaries
- Ecological Reserves
- Wildlife Habitat Areas – Terrestrial and Aquatic
- Wildlife Habitat Features Order
- Land Act Reserves, Notations and Transfers
- *Environment and Land Use Act*

BC Legislation

- *Forest and Range Practices Act* (FRPA)
    - Private Managed Forest Land Act and Regulations
- *Wildlife Act*
    - Access Management Areas
    - Vehicle Access Hunting Closures
- *Fish Protection Act*
- *Land Act*
- *Land Title Act*
- *Park Act*
- Orders in Council for Protection of Crown Land
- BC's Watershed Security
- *Water Protection Act*
- *Riparian Areas Protection Act*

3.4. Municipal

- *Local Government Act* – Environmentally Sensitive Areas and Development Permit Areas
- Community Charter
- Official Community Plans + Bylaws
- Riparian Areas Regulation – note that RDEK has not enacted the RAR.

3.5. Indigenous

Context for Land Designations.

- United Nations Declaration on the Rights of Indigenous People (UNDRIP) – Both Canada and BC have committed to implementing UNDRIP. The Articles support the rights of Indigenous peoples to establish and govern Indigenous-led conservation areas. Consultation by Canada and BC is required.
- Section 35 of Canada's constitution: Recognition of Indigenous Protected and Conserved Areas may contribute to fulfilling the Crown's obligations.
- Some BC nations have chosen to designate Tribal Parks and Heritage Sites under their own laws.
- In Quebec, a river culturally important to the Innu of Ekuanitshit people, the Muteshekau-shipu (Magpie) River, has been granted legal personhood status, a first in Canada (Stuart-Ulin 2021). The designation means the river can be represented by guardians with the duty to act on behalf of the rights and interests of the river and ensure the protection of its fundamental rights. This is an interesting development that may have future implications for the Elk and Flathead Rivers.
- Indigenous Protected and Conserved Areas are a relatively new designation important to the future of conservation in Canada (Indigenous Circle of Experts 2018).

4. Historical Context

4.1. Elk and Flathead Valleys

For almost 100 years the Elk and Flathead River Valles have seen support for additional conservation come and go. Relatively recent initiatives covering both valleys include:

- 2001 – Southern Rocky Mountain Conservation Area is established by Order-in-Council. The area extended from the BC/Montana border north through the Flathead, Wigwam and portions of the Elk/Bull River watersheds to the southern boundary of Height of the Rockies Provincial Park. The primary purpose of the 279,843 ha was to maintain wildlife and habitat values while allowing for sustainable development of resources including forestry, mining, hunting and wilderness tourism. It complemented the work of the Flathead Basin Commission (USA), a co-operative initiative between BC and Montana governments to monitor and protect water quality in the state's most important watershed.

  The news release[7] recognized that this area has one of the highest diversities of large mammal species on the continent including rare and endangered species, eight species of large carnivores, and six species of ungulates.

- 2002 – A new government is elected and they rescind the OIC for the Conservation Area and replace it with the Southern Rocky Mountains Management Plan.

[7] https://archive.news.gov.bc.ca/releases/archive/pre2001/2001/april/nr145.asp

- 2003/Amended 2010 – Southern Rocky Mountain Management Plan (Province of British Columbia 2003). The plan's purpose was to balance the economic, social and environmental values for the long-term health of the economy, communities and ecosystems within the eastern portion of the Cranbrook Timber Supply Area. It includes Chapters related to First Nations (the Ktunaxa do not consider that they were adequately consulted in the creation of this plan), Sub-surface Resources, Forestry, Agriculture and Range, Trapping, Recreation, Tourism, Conservation, Water, Visual Landscapes, Heritage and Paleontological Resources and Communities, Settlement and Infrastructure.

  One of the important products from the plan was the creation of a Summer and Winter Motorized and Non-Motorized Recreation Access Map including *Wildlife Act* Regulations pertaining to Access Management Areas and Vehicular Hunting Closures, which is still actively used today.

4.2. Elk Valley

- 1922 – Elk River Game Reserve is created by Order in Council (O.I.C.) by the BC Government. The area, located between the Bull and Elk Rivers was set aside to recognize the habitat and abundance of every big game species native to BC's southern interior mountains including elk, mule deer, white-tailed deer, moose, mountain goat, bighorn sheep, grizzly bear, black bear, cougar and wolf.
- 1963 – Elk River Game Reserve Order in Council is rescinded by BC Government.
- 1992 – The Sparwood and District Fish and Wildlife Association make application under the Protected Area Strategy to Create a Class A Provincial Park between the Elk and Bull Rivers.
- 2001 – Southern Rocky Mountain Conservation Area is established by O.I.C. by the BC Government and includes the drainages between the Elk and the Bull Rivers. Covers 279,843 ha.
- 2002 – The Southern Rocky Mountain Conservation Area is disestablished and the Order repealed.
- 2007 – Southern Rocky Mountain Management Plan is implemented designating Brule/Boivin Creek as a non-motorized zone.
- Brule Creek is the last remaining unroaded drainage in the Elk Valley. On April 17, 2020, a Section 17, Conditional Withdrawal under the provincial *Land Act* was placed over the Hornaday Pass Trail (Brule Creek). The intent is to manage the trail for a semi-primitive, non-motorized recreational experience. Section 17 withdrawals are not permanent, they have a maximum term of up to 30 years with mandatory review every 10 years, if in place for 10 years or more.

On April 23, 1996 BC announced the first seven rivers recognized under a new BC Heritage Rivers System. An additional nine rivers were short-listed for consideration, including the Elk River. (BC Heritage Rivers Board 1996).

The proposal to designate the Elk as a Heritage River died due to intensive lobbying at the time by Teck Cominco and Fording Coal.

4.3. Flathead Valley

The Flathead River valley's international, national and local importance to conservation was documented earlier in this report. Over the decades, it has led to a number of recommendations for additional protection both for its inherent values and for its critical role in cross-border connectivity for fish and wildlife.

- 1980 – The Canadian Parks and Wilderness Society (CPAWS) began a campaign for the establishment of a large BC provincial park in the Flathead's southeast corner. In 1995, Akamina-Kishinena Provincial Park (10,921.5) ha was established as part of the East Kootenay Land Use Plan (BC Parks 1999).
- 1995 – UNESCO designated Waterton-Glacier International Peace Park a World Heritage Site but noted that the adjoining section of BC's Flathead Valley was a missing element and recommended that the site boundaries eventually be expanded to include it.
- 2001 – Canadian Parks and Wilderness Society (CPAWS) submitted a proposal to Parks Canada for the creation of a new 40,000 ha national park in the Flathead Basin. Dubbed "Peace Park Plus", forest company Tembec agreed to relinquish its logging rights in exchange for funding to upgrade its Elko mill. In 2002 Prime Minister Jean Chretien announced federal interest in the Park idea.
- 2002 – The BC government commissioned two studies on the park proposal.
  One report (MacDonald 2002) concluded that if the park proposal was "addressed strategically at the political level, it has a reasonable chance to do so."
  The second report (Scott-May 2002) recognized that the area of interest plays a key role in providing security and connectivity for Waterton Lakes and Glacier National Parks as well as Akamina-Kishinena Provincial Park.
  The proposal for a national park did not move forward in BC. One of the opponents to the park was the local MLA who was BC's Minister of Energy. He urged constituents to push the federal government to reject a call to turn part of the Flathead Valley into a national park[8].
  While the proposal did not move forward, the interest in a national park, or a national park reserve, has continued through the efforts of Flathead Wild, a coalition of six environmental groups and others. Parks Canada continues to reiterate its interest in a feasibility assessment to determine if, and under what terms and conditions, a national park reserve in the lower Flathead may be possible, but only with the support of the BC Government and Ktunaxa.
  2009 – Report of the Reactive Monitoring Mission (Dingwall and Rao 2009) identified threats to the future of the International Peace Park related to mining and energy development in the Flathead, barriers to wildlife migration and connectivity and climate change impacts. The international community is still watching.

[8] https://www.cbc.ca/news/canada/british-columbia/b-c-minister-s-email-refers-to-eco-fascists-1.881657

- 2011 – *Flathead Area Conservation Act* Chapter 20 Province of BC – The Act prohibited mining and oil and gas exploration and extraction in the Flathead Watershed Area. The Nature Conservancy of Canada and the US based The Nature Conservancy raised over $10 million to support the new legislation.
- 2021 – The Waterton-Glacier International Peace Park Association continue to have as one of their core themes: "We will work with organizations that have similar interests in conservation and support the expansion of Waterton Lakes National Park to encompass the Flathead River Valley in British Columbia (J. Vrolijk pers. comm.)

4.4. Public Opinion Polls on a National Park in the Flathead

Two public opinion polls have been undertaken in the East Kootenay to measure support for a national park in the Flathead.

- Kootenay East 2009 Opinion Research Poll – McAllister Opinion Research. In answer to the question "Would you favour or oppose protecting the southeastern one-third of BC's Flathead River Valley as a National Park Wilderness" 60% were in favour, 30% opposed, and 10% neutral.
- East Kootenay Telephone Opinion Poll – 2016 – McAllister Opinion Research. In answer to the question "Would you favour or oppose protecting the southeastern one-third of BC's Flathead River Valley as a National Park Wilderness with no development?" 63% were in favour and 27% opposed.

4.5. Economic Studies

- In 2005, a study called Waterton-Glacier International Peace Park: The Economic Implications of Expanding into the Flathead Region of BC concluded that "The economic benefits of extending Waterton Lakes National Park into the Flathead are significant to both the region and the province." This analysis was based on Tembec receiving $10,000,000 to upgrade its Elko mill in exchange for relinquishing its logging rights in the proposed national park area.
- Tourism Fernie (2017), in partnership with Destination BC, undertook a Value of Tourism Study in 2017. In 2014 – 2015 annual visitor spending in Fernie topped $100 million.

4.6. Values at Risk and Suggestions for Mitigation

There is considerable concern around the world class values at risk in the Elk and Flathead. Some examples include:

1. **Waterton-Glacier International Peace Park (Canada and USA)**
   Report of the Reactive Monitoring Mission (Dingwall and Rao 2009)

Threats to the future of the International Peace Park are:

- Mining and Energy Developments in the Flathead
- Barriers to wildlife migration and connectivity
- Climate change impacts

The recommendations to deal with the threats were:

- Prohibiting mining and energy development throughout the Flathead Watershed and giving priority to natural ecological values and wildlife conservation. Note the mining issue was resolved in 2011 with the passing of the *Flathead Watershed Conservation Act* prohibiting mining and oil and gas drilling in 161,874 ha.
- Place a long-term moratorium on any further mining developments in SE BC immediately west of the Alberta border, in the corridor of natural terrain that creates vital habitat connectivity and allows the unimpeded movement of carnivores and ungulates between the Waterton Glacier property and Banff/Jasper National Parks of the Rocky Mountain World Heritage Property in Alberta.
- The International Joint Commission can serve as a cross border resolution body for environmental disputes as was used in the mid 1980's to resolve the Cabin Creek mining proposal. In that case the IJC found a violation of the International Boundary Water Treaty (1909) pollution provisions and recommended against approving the mine proposal until potential transboundary impacts were determined to a level constituting an acceptable risk to both the USA and Canadian governments.

2. Safe Havens, Safe Passages For Vulnerable Fish and Wildlife – Critical Landscapes in the Southern Canadian Rockies, British Columbia and Montana (Weaver 2013)

The report identifies vulnerable fish and wildlife species including bull trout, westslope cutthroat trout, grizzly bear, wolverine, mountain goat and bighorn sheep. In order to protect these species, their habitat and associated corridors Weaver (2013) recommended a National Park or Provincial Wildland Park in the Flathead, a Wildlife Management Area stretching from the USA border in the Flathead to Elk Lakes Provincial Park, and protecting the Hornaday as a Wilderness Area or a Conservancy (Figure 13).

3. Lake Koocanusa/Elk River Basin Environmental Outcomes (Hauer 2013)

Mitigation to address mining in the East Kootenay should include:

- Create a National Park on the east side of the Flathead River to join Waterton-Glacier Peace Park
- Create a Wildlife Management Area on the west side of the Flathead River
- Create a Wildlife Management Area connecting the Flathead and Waterton Glacier to Banff/Jasper
- Construct wildlife corridors over and under Hwy 3

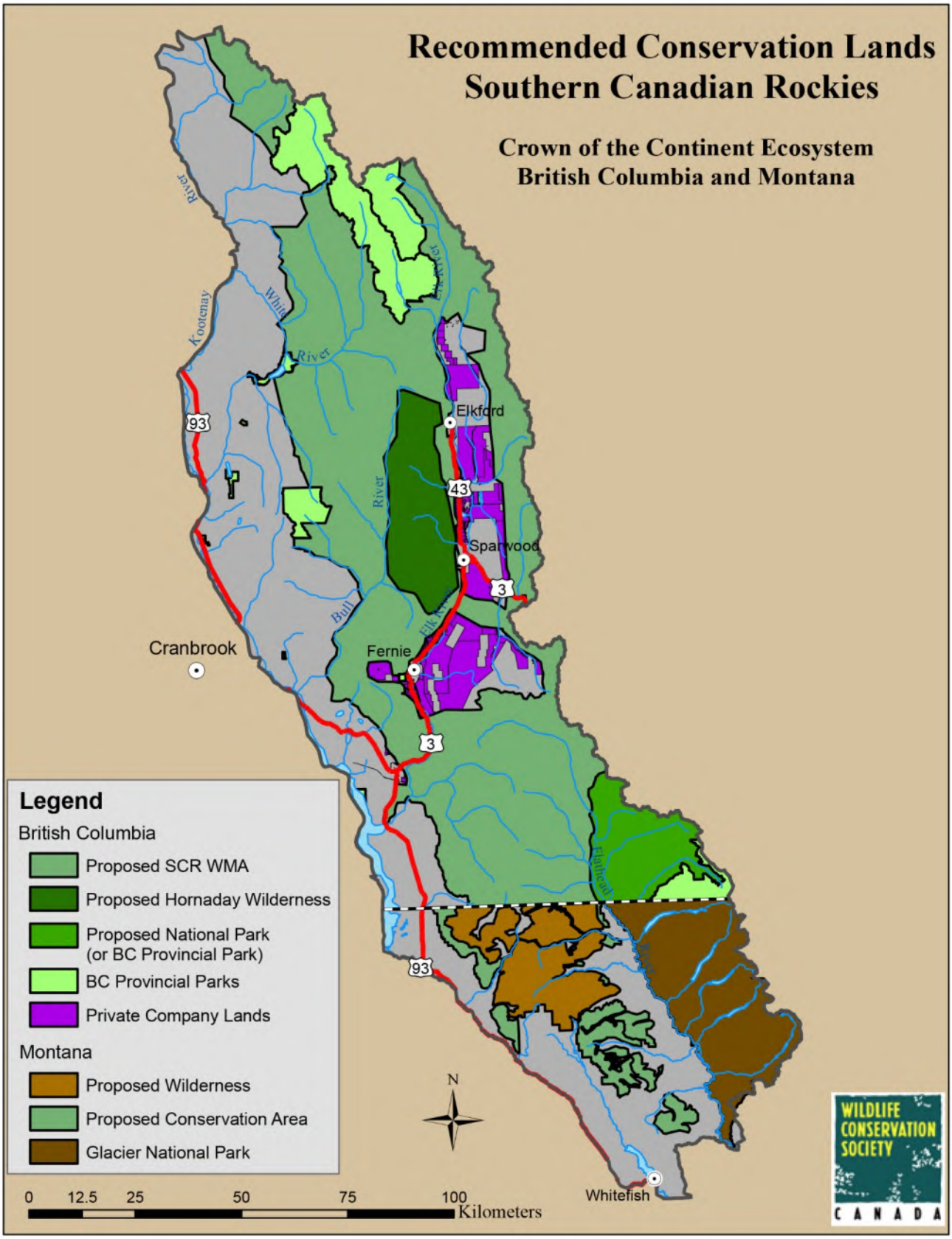

Figure 13: Conservation lands recommended by Weaver (2013) in British Columbia and Montana.

4. **Flathead – Keeping Wilderness connected in the Southern Rockies** – (Corey 2015)
    - "Outside of wilderness areas and protected areas there can be a lot stopping wildlife from getting from Point A to Point B, so they become more and more limited in where they can go to get food to find mates and to raise their young. Without protected or specially managed lands in between these areas, wildlife populations become isolated and will invariably start to decline. And this is the challenge we face in and around the Flathead."

5. **Elk Valley Cumulative Effects Management Framework Working Group 2018**

High Hazards exist for:

- Amount of old growth forests, particularly at lower elevations
- High value winter range for bighorn sheep, particularly on the east
- Westslope Cutthroat Trout and Riparian Areas with all of the Elk Valley at least moderate hazard
- Suitable grizzly bear habitat, particularly in lower elevations
- Historic losses of high elevation grasslands

The study also noted that:

- The Flathead is a source of grizzly bears for neighbouring units while the Elk Valley is a mortality sink
- The Elk provides seasonal range for 6 ungulate species and is the region's most productive sheep, goats and moose populations
- Species and ecosystems at risk include American badger, Gillette's checkerspot butterfly, whitebark pine and high elevation grasslands

6. **BC Wildlife Federation.** 2019 Wildlife and Habitat Engagement Response to the Province of BC[9]

    In the East Kootenays, we are experiencing record low mountain sheep, mountain goat and elk populations and harvest. BC hunters in the Kootenay Region harvested just over 1000 elk, a 40% decline over 10 years, which is also 40% below the long-term average.

7. **Elk Valley Conservation Action Forum – Summary Report**

The Forum identified Priority Actions to mitigate values at risk in the Elk Valley (KCP 2019):

- Take a landscape level approach to conservation
- Protect high quality habitats – purchase ecologically intact CanWel lands. Protect Old Growth Forests, red-listed grassland ecosystems, riparian wetland and floodplain habitats including cottonwoods
- Access management habitat restoration (land and water) – trails and roads
- Bighorn sheep habitat restoration
- Reducing human-wildlife conflict – transportation and towns. Identify local wildlife corridors and connectivity areas.

[9] https://bcwf.bc.ca/wp-content/uploads/2019/05/WildlifeHabitatResponse.pdf

- Restore and enhance quality spawning habitat for bull trout and westslope cutthroat trout and other fish species in the Elk River and tributaries.

8. **Southern Canada's crisis ecoregions: identifying the most significant and threatened places for biodiversity conservation** (Kraus and Hebb 2020)
    - Northern Continental Divide – BC, Alberta
      The most significant threat to this ecoregion is habitat fragmentation that is caused by roads, urban areas, and for some species, forestry.

9. **Coal Mine Development in the Elk Valley** (Cruickshank 2021).
    - Coal is BC's most valuable mined commodity: the provincial government forecast production to be worth $4 billion in 2020, of which 83% took place in the Elk Valley at Teck Resources four mines.
    - The mines are a persistent source of selenium pollution. Conservationists fear the problem could worsen if any of the four additional coal mines are built. Additional concerns relate to air quality, nitrate, nickel and calcite contamination of waterways, greenhouse gas emissions, impact on First Nations use of the land, and the loss of biodiversity.
    - In 2018, the Upper Fording River adult trout counts dropped 93% and juvenile counts dropped 74% from 2017 levels according to Teck (Linnitt 2020; Cope 2020).
    - The four proposals are:
        1. Castle Mountain just south of the existing Fording River Operation north of Elkford. By 2030, 10 million tonnes a year would come from the mine extending the life of the Fording River operations by several decades.
        2. Michel Coal 15 km southeast of Sparwood near the BC-Alberta border and north of existing Coal Mountain. Expected to produce 2.3 -4.0 million tonnes of raw coal over a 30 year mine life.
        3. Crown Mountain Coal located 12 km northeast of Sparwood. Expected to produce 3.7 million tonnes f coal per year over a 16 year mine life.
        4. Bingay Main located 21 km north of Elkford. Stalled in 2018 but if it proceeds it would mine 1 million tonnes of coal annually for 12 – 14 years.

10. **Logging**
    - In September 2012 an article in Fernie.com Everything Fernie spoke to concerns around logging in the Flathead after the area was closed to any future mining. Wildsight and the Sierra Club stated that in the absence of permanent protection, the Flathead is at risk from new logging and road building.
    - There are nearly 100,000 km of roads in the Kootenays. From grizzly bears to bull trout, researchers are identifying multiple threats associated with BC's resource road network (Petryshen 2020).
    - In August, 2021, Canfor plans to build a road in the Upper Elk River watershed bridging Cadorna Creek, just east of Elk Lakes Provincial Park boundary to undertake forest harvest. The area north of Cadorna Creek and west of the Elk River has never

been developed and is important for grizzly bear, westslope cutthroat trout, mountain goat, moose and elk (S. Medcalf pers. comm.). **A timely decision on whether or not to protect this area for conservation is required.**

11. Trans-Boundary Concerns

- What happens in Canada's Flathead has long been a concern south of the U.S. border in Montana (Backhouse 2008)
- The Flathead River flows just 50 kilometres within BC, from its origin about 20 km southeast of Fernie, to the international border. In Montana, where it is called the North Fork of the Flathead, it continues 75 km south, then empties into Flathead Lake. Marking the western boundary of Glacier National Park, the North Fork is designated as a Wild and Scenic River in the USA.
- In the late 1970's, Montanans steadfastly opposed an open pit mine proposed for a site 10 km north of the border. It was shelved after the International Joint Commission got involved.
- Logging the Flathead Valley has also been a long-time concern to Montana (Powers 2015). Of particular concern was the potential to impact Bull trout as Canada's Flathead is a critical spawning area for trans-boundary fish.
- In 2020 in response to the proposed Castle Mountain expansion (Fischer 2020). Shelly Fyant, Chairwoman of the Confederated Salish and Kootenai Tribes, stated "Selenium is poisoning our fish from these mines upstream, and that is not acceptable. My concerns are sustaining clean water for future generations. These natural resources are critical to cultural practices that have existed for millennia."
- In February of 2020 the US Environmental Protection Agency noted recent research found selenium contamination from BC rivers – at levels four times the legal maximum for drinking water – had flowed into US waterways.

4.7. Comments from Local Biologists/Scientists – Personal Communication

- **Clayton Lamb**, PhD – University of BC and Montana – March 21, 2021:
  "The Flathead and Elk Valleys currently safeguard one of the greatest assemblages of large mammal species in North America. Decades of research has highlighted the immense value of this landscape for transboundary wildlife populations and the potential challenges as the human impact intensifies. There is reason to be concerned that future developments could impact local and transboundary connectivity and habitat for fragmentation – sensitive species that depend on movement and interchange along the continental divide."
  Possible solutions: – Provincial Parks, Wildlife Habitat Areas, Indigenous Protected And Conserved Area, Designated Wildlife Corridors

- **Mark Hebblewhite**, PhD - University of Montana - July 22, 2021:
  "In a two year study that will be published in March of 2022 we focused on modelling connectivity using remote-camera based 'Occupancy' models of 5 focal species; cougars, wolves, grizzly bears, wolverine and lynx from Waterton to Jasper

using ~ 700 remote camera traps in 2 seasons (winter, summer). Occupancy-based connectivity models validated well with independent wolf and grizzly bear GPS radio-collar data. The implications are indeed that the main Elk and Flathead valleys are crucial for connectivity north and south through the Rockies, and the Flathead in particular lights up like a candle across species as important for connectivity."

- **Michael Proctor**, PhD – Grizzly Bear Biologist – March 15,2021
  "From my perspective, Connectivity across Hwy 3 is the big issue. It is the linear highways with their associated human settlement that fractures bear populations and other components of our natural system. We need to focus on broad Ecological corridors that encompass biodiversity Conservation, climate refugia and adaptation, Species at Risk and landscape Connectivity."

- **Harvey Locke**, PhD – Co-founder and Strategic Advisor, Yellowstone to Yukon Initiative May 9, 2021-
  "The extra-ordinary global values of the Flathead and Elk Valleys of British Columbia are at grave risk. They are ideal candidates for protection through the Middle Canada strategy for reaching the target of protecting 25% of Canada by 2025."

- **Sam Medcalf** – Elk Valley Bighorn Outfitters - March 19, 2021
  "In order to maintain water quality, habitat and wildlife into the future we are going to have to refocus on conservation and manage our land base to a higher standard to offset the intensive resource extraction of coal mining and forestry.
  Possible options include expanding Elk Lakes and Height of the Rockies Provincial Parks, preserving high elevation grasslands and winter range for bighorn sheep in a new Fording River Grassland Reserve, purchasing CanWel land, creating a provincial park around Sulphur Springs and potentially establish a Wildlife Management Area."

- **John Bergenske** – Conservation Director, Wildsight
  "The Flathead and Elk Valleys present one of the most important conservation challenges in North America. The ecosystem includes predator populations of grizzly bears, wolves, cougars, lynx and wolverine along with major ungulate species: elk, bighorn sheep, mountain goats, mule and whitetail deer. All of these are under immediate threat on a landscape being increasingly degraded by roads, logging, mining, and recreational development. Without timely action to protect the intact wilderness and maintain wildlife connectivity, the transboundary Rocky Mountain wildlife corridor will be severed. Society is faced with a choice, accept the decline of Rocky Mountain wildlife or make the Flathead and Elk Valleys into an international conservation success."

- **Matt Huryn** – President, Sparwood and District Fish and Wildlife Association
  "As residents of the Elk Valley, we are deeply concerned with the continual onslaught of industrial activity which we are exposed to. The private land logging

practices carried out by CanWel are absolutely lawless, Canfor's practices are somewhat more obedient but have plenty of room for improvement. The fact that greenfield coal mining projects are being considered in the Elk Valley is absurd. The ever- expanding Teck footprint is more than enough for our residents, and for our valuable ecosystems to contend with. These activities are having a negative impact on the things our organization values: wildlife, habitat and the ability to have a quality outdoor experience, whether that be hunting, fishing, trapping, photography, hiking or foraging.
"Recommendations include buying CanWel lands for wildlife and habitat, make the Sulfur Springs area into a provincial park or Wildlife Management Area, bring in a moratorium on mining from Elkford northward, protect the entire Brule Creek drainage from the Elk valley to the Bull River, and add a higher standard of timber management."

- **Bill Hanlon** – Chair, Hornaday Wilderness Society – May 7, 2021
  "The Elk valley is the most industrialized valley in BC with: four active coal mines, three new proposed mines and a mine expansion, three busy towns, Hwy 3 – the Southern Trans-Canada Highway through BC and Alberta - passing through it, increasing tourism and motorized and non-motorized recreation, and active logging on both crown and private land.
  "Contrasting this is the fact that the Elk Valley has world class but diminishing fish and wildlife resources, Elk Lakes and Height of the Rockies Provincial Parks, and the opportunity to protect high elevation grasslands and the last roadless drainage in the Elk Valley, Brule Creek located in the historical Hornaday Wilderness Area. The Elk Valley is at a tipping point…"

5. Moving Forward: Options for Increasing Conservation

In the Flathead Valley, conservation values are relatively stable but are unprotected other than from mining and oil and gas development. What Canada and BC do in the Flathead is critical to the incredible diversity of life that lives there but is also important to our American neighbours and to the international community that cares about the environment globally.

The Elk Valley is at a critical point in balancing conservation with development.

Movement is critical to wildlife both for the ability to secure food but also to ensure genetically healthy breeding populations. Safe passage across Highway 3 is essential, as are protected wildlife corridors through both valleys.

The Elk and Flathead Rivers and associated drainages are the reasons that these valleys exist and are such a great place to live for all living things. Without healthy water, there is no life. The associated riparian areas are important habitat and are key wildlife corridors.

The recommendations for increasing conservation (Figure 14) that follow are based on:

- The conservation values outlined in this report, including critical biodiversity.
- The principle that healthy fish and wildlife populations require a combination of secure core protected areas, combined with relatively safe movement corridors.
- The recognition that fish and wildlife populations and the biodiversity of the Elk and Flathead valleys are provincially, nationally and internationally significant.
- There is a need to take action now to further conservation in the Elk and Flathead valleys. Interim moratoriums may need to be placed over some of the areas proposed for further protection.
- The need for further consultation with Ktunaxa and recognition that they are in Stage 5 of their treaty negotiations with unresolved land claims.

The final boundaries for any of the proposed conservation designations (Figure 14) will need to be determined through further work by Canada, BC and the Ktunaxa once they have been agreed to in principle. There is also the possibility that there is agreement that further protection for conservation is required but a different legal designation is preferred from that proposed in this report. The options available to Canada, BC and the Ktunaxa are outlined in Section 3 of this report, Land Designation Options.

5.1. The Rivers

The Elk and Flathead Rivers are the life blood for the valleys as are the creeks that flow into the rivers. Without healthy watersheds there cannot be healthy rivers or sustainable aquatic and terrestrial ecosystems.

Finding ways to provide additional protection for the creeks and rivers and the land they flow through is essential.

5.1.1. Flathead River

In order to protect the river's pristine quality, the recommendations are:

- BC nominate the Flathead for Heritage River status under the Canadian Heritage Rivers Program. While not having legal status, it highlights a river's significance.
- BC designate the river and associated watersheds draining into the river as Wildlife Habitat Areas protecting both the water and the land. The Province is currently considering this option.
- The Ktunaxa consider applying "personhood" status to the river similar to the Magpie River designation in Quebec.
- Include a significant portion of the river within a new core area protected designation in Flathead East.

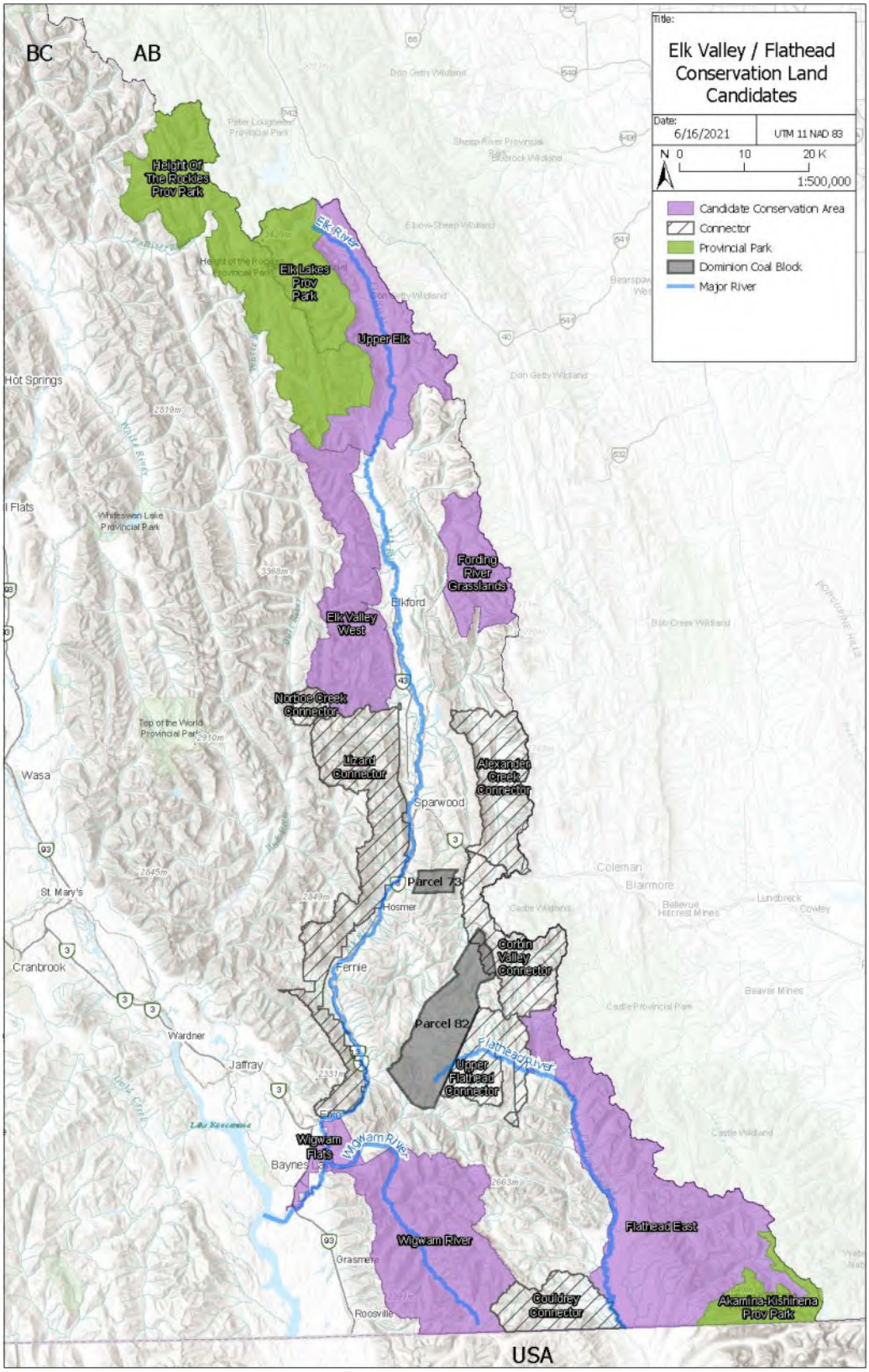

Figure 14: Candidate options for increased conservation in the Elk and Flathead watersheds. Each of these areas is discussed in detail in the following 5 sections.

5.1.2. Elk River

The Elk River is renowned for its beauty and its fishing opportunities. From an environmental perspective, the major concerns are related to selenium and other pollutants related to coal mining. These issues must, and are, being addressed[10], but are outside the scope of this report.

In order to better protect the Elk River, the recommendations are:

- Protect the river and associated watersheds by expanding the protected area land base on the west side of the Elk River from Elk Lakes Park to approximately halfway between Elkford and Sparwood.
- BC to apply Wildlife Habitat Area designations to watersheds draining into the Elk where feasible.
- The Elk River from its origin in Elk Lakes Provincial Park through to where it joins the Kootenay River (Koocanusa Reservoir) is an important wildlife corridor. The riparian area along its entire length should be considered for protection, where feasible.
- The health of the Elk River could be enhanced by adoption of Riparian Areas Regulations by the Regional District of East Kootenay.

5.2. Wildlife Corridors

While there is a need to protect wildlife corridors going east and west across valley bottoms and into Alberta, the focus of this report is ensuring safe passage for wildlife going north and south between the Canada – US border and Elk Lakes Provincial Parks. In order to achieve this the recommendations are:

- Recognizing the importance of the Flathead and Elk River corridors for wildlife movement and provide additional protection to the rivers as recommended in this report.
- Develop action plans and secure funding to build 10 wildlife overpasses/underpasses across Hwy 3 from just west of Elko to the BC – Alberta border.

5.3. Land Trusts

The Nature Conservancy of Canada and Nature Trust BC have identified 98,000 ha of private lands that are critical for conservation. Total cost estimate is up to $66 million. Negotiations on private land are confidential so the locations of these 17 parcels is not included in this report. In order to help secure these properties it is recommended that:

- Funding be made available to help purchase these lands from the $58 million dedicated to Environment and Climate Change Canada's (ECCC) Environmental Damages Fund from the 2021 fine to Teck.

The Elk Valley Regional Land Trust (EVRLT) is pursuing the purchase of up to 10,000 ha of CanWel's 41,790 ha private land holdings near Fernie, primarily for recreational purposes. They are looking to raise $20 million. The CanWel lands are important for conservation. Recommendations are:

[10] See Improving water quality in the Elk Valley with new treatment facilities Teck.com 2021.

- CanWel be contacted by the federal or provincial government to determine their interest in selling their land for conservation.
- In order of importance for purchase: Gas Plant covenant (1438 ha), Morrissey covenant (2014 ha), Sportsman Ridge (4010 ha), Morrissey block (17,228 ha), Coal Creek (7002 ha), Fording Mt. (8085 ha), Elkford (963 ha).
- CanWel's willingness to discuss selling up to 10,000 ha of their land to EVRLT should be supported in principle by BC.

5.4. Dominion Coal Blocks

The Dominion Coal Blocks have value for conservation including protecting rare and endangered species. The federal government should consider establishing the 18,000 ha Parcel 82 portion that includes Flathead River headwaters as a National Wildlife Area under the *Canada Wildlife Act*. These areas are established "to protect and maintain habitat vital for wildlife and to improve habitat when necessary for wildlife use." The Areas are established in consultation with Indigenous peoples. They prohibit activities that would compromise the conservation of wildlife. Activities that are consistent with conservation purposes, such as hunting and fishing, are authorized within many established areas.

The 2000 ha Mount Taylor block (Parcel 73) contains metallurgical coal. Teck may be interested in offsetting other lands they own with high conservation value in exchange for this parcel. Parcel 73 may also be of interest to the Ktunaxa for their own purposes.

5.5. The Valleys

It is important to have an overall perspective as to where conservation is at in the valleys (Figure 6) and what additional values should be protected (Figure 14) to identify the gaps and the opportunities. The challenge is to determine the best land use designations to meet conservation needs while sustaining economic and social values of the people who live in the area. The recommendations that follow are tied directly to the areas identified in the Elk Valley/Flathead Conservation Land Candidates, and are based on what is best for conservation. As part of implementing these potions discussions will need to take place with the Ktunaxa, industry, stakeholders and communities.

Wigwam Flats and Wigwam River

There are two options to consider:

- Province of BC Wildlife Management Area
  WMA's are designated under section 4(2) of the BC *Wildlife Act* for the benefit of regionally to internationally significant fish and wildlife species of their habitats. Conservation and management of fish wildlife and their habitats is the priority in managing WMA's; other uses need to be compatible with this priority. The Regional Manager may issue orders that prohibit or restrict activities that prohibit or restrict certain activities that may have impacts on wildlife or habitat.

- Indigenous Protected and Conserved Area
  IPCA's are lands, waters and ice where Indigenous leadership is a defining attribute in the decisions and actions that protect and conserve an area. Environment and Climate Change Canada is currently investing $100 million in nature conservation projects led by Indigenous communities across Canada. They are an important part of reconciliation with First Nations at both the provincial and federal levels.

Conservation values include:

- Very important bighorn sheep winter range
- Supports a significant number of over wintering elk, white tail deer and mule deer
- North-South connectivity
- Significant area of grassland and open forest habitat (very diverse)
- Unroaded tributary basin – Desolation Creek.
- High concentration of predators (wolf, cougar)
- Very significant bull trout fishery
- Connectivity – migration corridor
- 11 species of Conservation Concern (see Appendix 1)

Elk Valley West

Elk Valley West is part of what once was the Elk River Game Reserve and the proposed Hornaday Wilderness Area. It includes the last unroaded drainage in the Elk Valley.
This area would make an excellent addition to Height of the Rockies Provincial Park.

Conservation values include:

- Most significant de facto wilderness area in the Elk River watershed outside of provincial parks.
- Significant north south connector
- Grizzly bear, bighorn sheep, mountain goat
- Old growth forest habitat
- Diversified habitats-alpine, meadows, riparian and avalanche tracks
- 9 species of Conservation Concern (see Appendix 1)

Upper Elk

The Upper Elk Area is another candidate for becoming an Indigenous Protected and Conserved Area under Ktunaxa leadership.

Conservation values include:

- Very significant grizzly bear population.
- Moose, lynx, wolverine, bighorn sheep, elk and deer
- Significantly high density of mountain goat
- Provides support, depth and connectivity to adjacent BC and Alberta Provincial Parks
- Diversity of habitats – avalanche tracks, alpine, riparian, old growth forests
- Low industrial development

- Relatively intact
- Headwaters of Elk River watershed (water quality retention)
- Significant westslope cutthroat trout fishery
- Species of Conservation Concern include Gillette's checkerspot
- 10 species of Conservation Concern (see Appendix 1)

Fording River Grasslands

The Fording River Grasslands include rare grasslands that are extremely important for bighorn sheep and should be considered for Ecological Reserve status.

Ecological Reserves are established to preserve representative and special natural ecosystems, plant and animal species, features and phenomena. Scientific research and educational purposes are the principal uses of ecological reserves.

Conservation values include:

- 23 species of Conservation Concern (see Appendix 1)
- Critically important bighorn sheep winter range
- Winter range for elk and deer
- Grizzly bear
- Connectivity
- Whitebark pine community
- This is the largest area of rare high elevation grassland ecosystems including:
  - Idaho Fescue - Bluebunch Wheatgrass - Sulphur Buckwheat - Thread-leaved Sandwort
  - Idaho Fescue - Sulphur Buckwheat - Thread-leaved Sandwort
  - Rough fescue - Sulphur buckwheat - Thread-leaved sandwort
  - Timber oatgrass - Grouseberry - Thread-leaved sandwort - Compact selaginella
- Consideration should be given to the importance of these high elevation grasslands as they relate to the federal *Species at Risk Act* (Government of Canada 2002) and the related Canada - British Columbia Agreement on Species at Risk (Government of Canada 2017).

Flathead East

The Flathead East area was in past proposed to be a National Park as documented earlier in this report. There are a three options for consideration:

- *National Park Reserve*
  National Park reserves are designated in areas where land claims by Aboriginal people have been accepted for negotiation by Indigenous people. They are established under the *Canada National Parks Acts* and managed as national parks pending the resolution of land claims. The first step would be, subject to the agreement of the BC government and Ktunaxa, a feasibility assessment carried out by the three parties.
- *Provincial Park*

Expanding Akamina Kishinena Provincial Park is a viable option. Provincial Parks prohibit logging and mining but permits hunting, fishing, trapping and guide-outfitting.

- *Indigenous Protected and Conserved Area*. One option would be a co-designated area between the Ktunaxa and Canada similar to the Edéhzhíe Protected Area established with the Dehcho First Nations in 2018 or the Thaidene Nene National Park Reserve established in 2019.

Conservation values include:

- Mountain goat, elk, bighorn sheep, moose and white tail deer
- Grizzly bear, mountain lion, lynx, wolverine
- Contributes to the largest uninhabited major watershed in southern Canada
- Diverse habitats
- Large naturally functioning low elevation gravel bed river system
- Important bull trout fishery
- Isolated Rocky Mountain tailed frog population (Elder Creek; Hobbs et al. 2020)
- Provides support, depth and connectivity to adjacent to BC and Alberta Provincial Parks
- Completes the Waterton-Glacier International Peace Park protected area in BC (the missing piece)
- Critical north-south connector in Rocky Mountain continental wildlife corridor (Y2Y)
- 46 species of Conservation Concern (see Appendix 1). Note that more inventory work, particularly for plants, has occurred in the Flathead East area than other areas in this report. While this accounts, in part, for the greater number of species of Conservation Concern in this area, the Crown of the Continent ecosystem is known to support greater biodiversity than elsewhere in the region (see Figure 1).

It is important to note that in much of this area, mining and oil and gas exploration and development and motorized recreation is currently prohibited.

Lizard Connector, Norboe Creek Connector, Alexander Creek Connector, Corbin Valley Connector, Upper Flathead Connector, Couldrey Creek Connector

These areas are all critical wildlife connectivity corridors. The Connectors are required to complete the holistic approach to conservation in the Elk and Flathead Valleys. When combined with the core areas proposed for conservation, they provide wildlife with a significant opportunity to survive, to increase in numbers and to move as climate change impacts habitats. They also help prevent island populations which lead to extirpation and, in some cases, to at minimum local extinction. These areas also support multiple species of Conservation Concern (see Appendix 1).

Options for conservation fall to the BC government and include:

- Wildlife Habitat Areas
  WHAs designate critical habitats in which activities are managed to limit their Impact on Identified Wildlife.

- *Environment and Land Use Act* Designation
  The Act empowers a Land Use Committee of Cabinet to ensure all aspects of the preservation and maintenance of the natural environment are fully considered in the administration of land use and resource development.

- New BC Regulations/Approaches to Protecting Wildlife Corridors
  BC is undertaking a review on how to better protect wildlife corridors. The results of that review could provide new regulations that could be applied to the Connector corridors proposed for the Elk and Flathead Valleys.

  These connectors would all be strong candidates for recognition under the new IUCN guidelines set out in the 2020 report Guidelines for conserving connectivity through ecological networks and corridors (Hilty et al. 2020). This IUCN report could also be helpful in the development of BC's new approach to wildlife corridors.

5.6. Feasibility

This report provides the best way forward to ensure healthy fish and wildlife populations for future generations choosing to live in the Elk Valley and to visit the Flathead Valley. Before the recommendations are implemented there needs to be:

- Full consultation with the Ktunaxa and the recognition that land claims related to their treaty negotiations are currently unresolved.
- An understanding of the implications to industry and possible compensation
- An understanding of the potential impacts to communities, particularly related to motorized recreation.
- An agreement on how this report relates to, and helps to inform, current planning initiatives including:
  - BC's Modernized Land Stewardship Planning (Province of British Columbia 2021*a*),
  - Elk Valley Water Quality Plan (Teck 2014*a*),
  - Elk Valley Cumulative Effects Framework. (Province of British Columbia 2021*b*).

6. Funding

In order to achieve conservation objectives funding is required. The money is used to buy private land, purchase tenures generally related to mining or logging or other types of resource extraction and to support First Nations interested in establishing Indigenous Protected and Conserved Areas.

Here are some of the opportunities for funding related to implementing Conservation Options in the Elk and Flathead River Drainages:

5.1 Environment and Climate Change Canada

a. 2021/2022 Budget

Budget 2021 proposes to provide $2.3 billion over 5 years to ECC Canada, Parks Canada and the Department of Fisheries and Oceans to:

- Conserve up to 1 million square kilometres more land and inland waters to achieve Canada's 25% protected area by 2025 target, including through National Wildlife Areas and Indigenous Protected and Conserved Areas.
- Create thousands of jobs in nature conservation and management.
- Accelerate new provincial and territorial protected areas
- Support Indigenous Guardians
- Take action to prevent priority species at imminent risk of disappearing, including through partnerships with Indigenous peoples

Through a new National Infrastructure Fund, provide $200 million over 3 years to support natural and hybrid infrastructure projects

b. 2018 Canada Nature Fund

- Launched in 2018. Provides federal funding of $500 million over 5 years
- One component is the Natural Heritage Conservation Program – administered by NCC which includes a large area initiative y NCC and Ducks Unlimited to help secure tenure to facilitate larger gains in protected areas.
- Used to establish protected and conserved areas, secure private land and support terrestrial and aquatic species protection efforts by provinces, territories, Indigenous Peoples and Stakeholders
- Through partnerships goal was $1 billion for conservation action
- Natural legacy initiative – funding ecosystem, multi-species approach to Species at Risk - $200 million over 5 years

5.2 Target 1 Funding Collaborative

A group of 30+ US and Canadian Foundations interested in providing funding for land protection Canada's land by 2020across Canada initially to achieve Canada's goal of protecting 17% of Canada's land by 2020. Contacts are Peter Kendall at the Schad Foundation and Cathy Wilkinson at Boreal Canada. Many of these donors work in BC. Some will contribute to land acquisition, others provide grants to ENGOS, some to Indigenous communities. The collaborative could host a session to brief interested funders around opportunities in Elk/Flathead. Particularly interested in funding large scale conservation gains supported/advanced by provinces, territories involving Indigenous people

5.3 BC Wildlife Federation

The BCWF recommendations to the Province of BC for future fundraising opportunities for conservation include: dedicating all hunting licence revenues and fees towards wildlife and their habitat; requiring all those who benefit from our natural resources to give back to them; a

wildlife licence plate system similar to the BC Parks licence plate system; Ministry of Transportation funding for wildlife fencing and overpasses; taxes on outdoor goods.

Implementing these options would contribute to improving funding for conservation.

5.4 Fish & Wildlife Compensation Program – Columbia Region

Funding for land securement is a priority for ecosystems in the Columbia Region, including the Elk & Flathead. In addition, in 2021-2022 they are funding:

- Securing fish passage in the Elk River Watershed
- Supporting endangered whitebark pine
- Reducing wildlife habitat mortalities along Hwy 3

5.5 Columbia Basin Trust – Ecosystem Enhancement Program

CBT funds land acquisition through the Kootenay Conservation Program. In 2021 their Ecosystem Enhancement Program allocated $400,000 for wildlife enhancement work in the Nature Trust's Big Ranch Conservation Property in the Elk Valley.

5.6 Sitka Foundation and Ross Beaty

Focus is to be a catalyst in the protection of the environment and promotion of biodiversity. Two of their key granting programs have relevance to the Elk and Flathead:

a. Land, water and ocean conservation and
b. Innovative conservation efforts in Canadian communities at the local, provincial and federal levels.

5.7 Habitat Conservation Trust Foundation

Since its inception in 1981, HCTF has invested over $189 million in grant money to more than 2,980 conservation projects in BC. The HCTF grants most relevant to conservation in the Elk and Flathead are Habitat Acquisition Grants to acquire land to secure the value of these areas for conservation of fish and wildlife habitats and populations.

5.8 Teck Coal – Offset Property Deals

In 2014 Teck Coal purchased 7,150 ha of private lands in the Elk Valley and Flathead River Valley for conservation. In 2021, Teck and the Ktunaxa Nation signed a Joint Management Agreement to manage the land for conservation purposes protecting significant fish and wildlife habitat. They are interested to discuss partnering in additional conservation work.

5.9 Metcalf Foundation

Mission is to enhance the effectiveness of people and organizations working together to help Canadians imagine and build a just, healthy and creative society. Environmental grants support fighting climate change and loss of biodiversity.

5.10 Park People

Support and mobilize community park groups, community organizers, non-profits, park Professionals and funders who activate the power of parks. Primarily urban park oriented.

5.11 Ecological Gifts Program

Federal tax benefits to landowners who donate and of a partial interest in land to qualified recipient organizations. Provinces and territories also offer tax credits and deductions

5.12 *Canada Wildlife Act* – Indigenous Agreements/Wildlife Corridor Highway Crossings

Federal government may enter into an agreement with the provinces to provide for 5(a) the undertaking of wildlife research, conservation and interpretation programs and measures, the administration of lands for those purposes, or the construction, maintenance and operation of facilities and works related thereto; 7(1) Minister may enter into agreements with municipal authorities, other organizations and persons. These agreements can be used to support IPCAs, for example.

5.13 Kootenay Conservation Program (KCP)

The KCP coordinates the purchase of private land properties working closely with Nature Conservancy Canada and The Nature Trust to prioritize acquisitions. There are currently 17 candidate properties that are a high priority for conservation in the Elk and Flathead Valley Areas totalling over 98,000 ha. Estimated cost is $64 - $66 million.

5.14 BC Parks Foundation

The BC Parks Foundation is an independent, non-advocacy based charity with a mission to expand and enhance BC's world-class parks system so that it flourishes forever. In addition to serving as the official charitable partner of provincial parks, the Foundation works with other governments, including indigenous governing bodies, to advance a variety of conservation designations.

The Foundation has raised over $13.5 million in the past two years. It has garnered over 1 billion in media reach each year due to its high profile work and success. The Foundation is well suited to raising private and public funds for private land acquisitions, tenure buy-outs, or other public land arrangements involving governments, indigenous people, and industry. The Foundation's Board and staff are comprised of individuals with extensive experience negotiating and funding significant conservation projects in Canada, and can be very helpful in creating, facilitating, and closing deals.

5.15 Environmental Damages Fund – Environment and Climate Change Canada

On March 26, 2021 Teck Coal was fined $60 million under Section 36(3) of the *Fisheries Act* for violations that took place in the Elk Valley. $58 million will be directed to the Government of Canada's Environmental Damages Fund.

The purpose of any contribution to the EDF is to restore the environment and conserve wildlife and habitats. The fund currently has 4 categories in order of priority: restoration; environmental quality improvement; research and development; and education and awareness.

It would seem reasonable that the federal government would utilize all $58 million to benefit conservation in the Elk Valley and expand the purpose of the fund to establish new protected and/or conserved areas.

7. Conclusion

What do we know? We know that:

- We are blessed to live here in southeastern BC in the western shadow of the Rocky Mountains because of our diverse ecosystems and the richness of our fish and wildlife resources for viewing, hunting and fishing.
- The involvement and support of the Ktunaxa is critical to moving conservation forward.
- The Elk and Flathead River Valleys are recognized internationally for their significance for rare and endangered species and for having intact predator prey relationships. They are a critical corridor for north-south movement of wildlife from Montana in the USA to Banff National Park in Alberta.
- Our local fish and wildlife populations are on the decline, and a different future for conservation is required.
- Protected and conserved ecosystems are important in fighting climate change. We are once again experiencing unprecedented wildfires and record- breaking temperatures in the summer of 2021 as the climate heats up.
- There is funding available to help deliver conservation initiatives in the Elk and Flathead River drainages.

We have an opportunity to ensure that future generations living in and/or visiting the Elk and Flathead Valleys can experience the richness and diversity of life that we, and past generations, have been privileged to enjoy, but we must act now!

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Appendix 1: Species of Conservation Concern

Table A1-1: Species at risk listed by Province of BC, Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and federal Species at Risk Act *(SARA) known to occur in the Elk and Flathead River drainage, ordered by taxonomic class. Source: BC Conservation Data Centre 2021a. Additional species that are known by local wildlife biologists to occur in the area but do not have occurrences mapped by the BC-CDC are included and shaded in grey.*

Common Name	Scientific Name	S-Rank[1]	BC List[2]	COSEWIC[3]	SARA[4]
Conifers					
limber pine	*Pinus flexilis*	S2S3	Blue	Endangered	not listed
whitebark pine	*Pinus albicaulis*	S2S3	Blue	Endangered	1-E
Dicots (flowering plants)					
alpine springbeauty	*Claytonia megarhiza*	S3	Blue		
arctic Plantain	*Plantago canescens*	S2	Red		
arrow-leaved rattlesnake-root	*Prenanthes sagittata*	S2S3	Blue		
Austin's knotweed	*Polygonum austiniae*	S2	Red		
buff daisy	*Erigeron ochroleucus*	S2S3	Blue		
Cusick's paintbrush	*Castilleja cusickii*	SU	NR		
diverse-leaved cinquefoil	*Potentilla diversifolia*	S3?	Blue		
Drummond's milk-vetch	*Astragalus drummondii*	S1	Red		
dwarf poppy	*Papaver pygmaeum*	S2	Red		
elk thistle	*Cirsium scariosum*	S3	Blue		
Engelmann's knotweed	*Polygonum engelmannii*	S1	Red		
hairy-stemmed willowherb	*Epilobium mirabile*	S3S4	Yellow		
Lake Louise arnica	*Arnica louiseana*	S3	Blue		
large-flowered brickellia	*Brickellia grandiflora*	S1	Red	NAR	
large-headed groundsel	*Senecio megacephalus*	S3	Blue		
Lyall's phacelia	*Phacelia lyallii*	S2	Red		
Montana larkspur	*Delphinium bicolor*	S3	Blue		

Common Name	Scientific Name	S-Rank[1]	BC List[2]	COSEWIC[3]	SARA[4]
mountain bog gentian	*Gentiana calycosa*	S2S3	Blue		
Nuttall's sandwort	*Minuartia nuttallii*	S3S4	Yellow		
Parry's townsendia	*Townsendia parryi*	S2	Red		
Rocky Mountain willowherb	*Epilobium saximontanum*	S3	Blue		
scarlet gaura	*Oenothera suffrutescens*	S2	Red		
seep-spring arnica	*Arnica longifolia*	S3	Blue		
sheep cinquefoil	*Potentilla ovina*	S2S3	Red		
shining penstemon	*Penstemon nitidus*	S2?	Red		
sweet-marsh butterweed	*Senecio hydrophiloides*	S3	Blue		
western valerian	*Valeriana occidentalis*	S1S3	Red		
Wind River draba	*Draba ventosa*	S2S3	Blue		
Wyoming kitten-tails	*Synthyris wyomingensis*	S2	Red		
Monocots (grasses, sedges)					
abbreviated bluegrass	*Poa abbreviata*	S3	Blue		
Montana wildrye	*Elymus albicans*	S3S4	Yellow		
Wolf's trisetum	*Trisetum wolfii*	S3	Blue		
Quillworts					
Howell's quillwort	*Isoetes howellii*	S3S4	Yellow		
Non-vascular Plants					
(a moss)	*Synthyris wyomingensis*	S2	Red		
(a moss)	*Tortula leucostoma*	S3	Blue		
(a moss)	*Tortula systylia*	S1	Red		
Insects					
bronze copper	*Lycaena hyllus*	S3	Blue		
Gillette's checkerspot	*Euphydryas gillettii*	S2S3	Blue		

Common Name	Scientific Name	S-Rank[1]	BC List[2]	COSEWIC[3]	SARA[4]
western bumble bee	*Bombus occidentalis*	S2S4	Blue	Threatened	not listed
Gastropods					
magnum mantleslug	*Magnipelta mycophaga*	S2S3	Blue	Special Concern	1-SC
Amphibians					
Rocky Mountain tailed frog	*Ascaphus montanus*	S2S3	Blue	Threatened	1-T
western toad	*Anaxyrus boreas*	S4	Yellow	Special Concern	1-SC
Mammals					
American badger	*Taxidea taxus*	S2	Red	Endangered	1-E
grizzly bear	*Ursus arctos*	S3?	Blue	Special Concern	1-SC
little brown myotis	*Myotis lucifugus*	S4	Yellow	Endangered	1-E
red-tailed chipmunk, *ruficaudus* subspecies	*Neotamias ruficaudus ruficaudus*	S2	Red		
wolverine	*Gulo gulo*	S3	Blue	Special Concern	1-SC
Birds					
Bank Swallow	*Riparia riparia*	S4	Yellow	Threatened	1-T
Barn Swallow	*Hirundo rustica*	S3S4	Blue	Special Concern	1-T
Black Swift	*Cypseloides niger*	S2S3	Blue	Endangered	1-E
Common Nighthawk	*Chordeiles minor*	S4	Yellow	Special Concern	1-T
Evening Grosbeak	*Coccothraustes vespertinus*	S5	Yellow	Special Concern	1-SC
Great Blue Heron, *herodias* subspecies	*Ardea herodias herodias*	S3?	Blue		
Lewis's woodpecker	*Melanerpes lewis*	S2S3	Blue		
Olive-sided Flycatcher	*Contopus cooperi*	S3S4	Blue	Special Concern	1-T
Western Screech-owl, *macfarlanei* subspecies	*Megascops kennicottii macfarlanei*	S3	Blue	Threatened	1-T
Williamson's Sapsucker [5]	*Sphyrapicus thyroideus*	S3	Blue	Endangered	1-E

Common Name	Scientific Name	S-Rank[1]	BC List[2]	COSEWIC[3]	SARA[4]
Fish					
Rocky Mountain sculpin	*Cottus* sp. 9	S2	Red	Special Concern	1-SC
westslope cutthroat trout	*Oncorhynchus clarkii lewisi*	S2S3	Blue	Special Concern	1-SC
High Elevation Grassland Ecosystems					
Idaho Fescue - Bluebunch Wheatgrass - Sulphur Buckwheat - Thread-leaved Sandwort	*Festuca idahoensis - Pseudoroegneria spicata - Eriogonum umbellatum - Eremogone capillaris*	S2S3	Blue		
Idaho Fescue - Sulphur Buckwheat - Thread-leaved Sandwort	*Festuca idahoensis - Eriogonum umbellatum - Eremogone capillaris*	S1	Red		
Rough fescue - Sulphur buckwheat - Thread-leaved sandwort	*Festuca campestris - Eriogonum umbellatum - Eremogone capillaris*	S1	Red		
Timber oatgrass - Grouseberry - Thread-leaved sandwort - Compact selaginella	*Danthonia intermedia - Vaccinium scoparium - Eremogone capillaris - Selaginella densa*	S2	Red		
(other) Grassland Ecosystems					
Rough Fescue - (Bluebunch Wheatgrass) - Yarrow - Clad Lichens	*Festuca campestris - (Pseudoroegneria spicata) - Achillea borealis - Cladonia spp.*	S1S2	Red		
Brushland Ecosystems					
saskatoon - soopolallie - common juniper	*Amelanchier alnifolia - Shepherdia canadensis - Juniperus communis*	S3	Blue		

[1] The BC Conservation Data Centre (BC-CDC) assigns provincial Conservation Status Ranks that reflect how at risk species and ecological communities are of being lost in BC. S-Rank indicates "sub-national" (i.e. provincial) status as "S" followed by a number between 1 and 5 as follows: 1 - Critically imperiled; 2 - Imperiled; 3 - Special concern, vulnerable to extirpation or extinction; 4 - Apparently secure, with some cause for concern; 5 - Demonstrably widespread, abundant and secure; NA - Not applicable; NR - Not yet assessed; U – Unrankable; ? - indicates uncertainty. A range rank, e.g. S2S3, is used to indicate the range of uncertainty about conservation status.

[2] Rankings by BC-CDC. Categories: Red = equivalent to federal Endangered and Threatened listing. Blue = equivalent to federal Special Concern listing; Yellow = apparently secure.

[3] Federal rankings by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Categories: Endangered = A wildlife species facing imminent extirpation or extinction. Threatened = A wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction. Special Concern = A wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats. NAR = Not at Risk. Species with blank cells have not been assessed by COSEWIC.

[4] Inclusion on Schedule 1 of federal *Species at Risk Act* (SARA) as one of Endangered, Threatened or Special Concern.

[5] Williamson's Sapsucker is known historically from the lower Flathead Valley in British Columbia (Campbell et al. 1990). Recent surveys have not detected the species in the Flathead valley of British Columbia (Ohanjanian et al. 2007; see also COSEWIC 2017). Williamson's Sapsucker, however, is known from the Flathead valley in Montana within 10 km of the Canadian border (COSEWIC 2017) so it is included here.

*Table A1-2: Species at risk listed known to occur in each of the proposed candidate conservation option areas (see Figure 14). Source: BC Conservation Data Centre 2021*b. *Additional species that are known by local wildlife biologists to occur in the area but do not have occurrences mapped by the BC-CDC are included and shaded in grey. Note that extensive surveys for plant species have occurred in the* Flathead East *unit that have not necessarily occurred in other areas. As such, areas where a species is not does not necessarily mean that it does not occur there. Many rare species suffer from lack of survey effort.*

Common Name	Upper Elk	Elk Valley West	Norboe Creek Connector	Fording River Grasslands	Lizard Connector	Wigwam Flats	Wigwam River	Couldrey Ck Connector	Flathead East	Upper Flathead	Corbin Connector	Alexander Connector
Conifers												
limber pine									✓	✓	✓	✓
whitebark pine	✓	v		✓			✓	✓	✓	✓	✓	✓
Dicots												
alpine springbeauty				✓					✓			
arctic Plantain				✓		✓			✓			✓
arrow-leaved rattlesnake-root									✓			
Austin's knotweed									✓			

Common Name	Upper Elk	Elk Valley West	Norboe Creek Connector	Fording River Grasslands	Lizard Connector	Wigwam Flats	Wigwam River	Couldrey Ck Connector	Flathead East	Upper Flathead	Corbin Connector	Alexander Connector
buff daisy				✓					✓	✓		
Cusick's paintbrush												✓
diverse-leaved cinquefoil				✓					✓	✓		
Drummond's milk-vetch												✓
dwarf poppy									✓			
elk thistle									✓	✓		✓
Engelmann's knotweed									✓			
hairy-stemmed willowherb									✓			
Lake Louise arnica									✓			
large-flowered brickellia									✓			
large-headed groundsel									✓			
Lyall's phacelia									✓			
Montana larkspur									✓			
mountain bog gentian									✓			
Nuttall's sandwort									✓		✓	
Parry’s townsendia				✓								✓
Rocky Mountain willowherb				✓								
scarlet gaura					✓							
seep-spring arnica									✓	✓		
sheep cinquefoil				✓					✓	✓		
shining penstemon												✓
sweet-marsh butterweed									✓			
western valerian									✓			
Wind River draba				✓								

Common Name	Upper Elk	Elk Valley West	Norboe Creek Connector	Fording River Grasslands	Lizard Connector	Wigwam Flats	Wigwam River	Couldrey Ck Connector	Flathead East	Upper Flathead	Corbin Connector	Alexander Connector
Wyoming kitten-tails				✓								
Monocots												
abbreviated bluegrass				✓								
Montana wildrye									✓			
Wolf's trisetum									✓			
Quillworts												
Howell's quillwort									✓			
Non-vascular Plants												
Synthyris wyomingensis (a moss)				✓								
Tortula leucostoma (a moss)				✓								
Tortula systylia (a moss)				✓								
Insects												
bronze copper									✓	✓		
Gillette's checkerspot									✓	✓	✓	✓
western bumble bee									✓			✓
Gastropods												
magnum mantleslug					✓							
Amphibians												
Rocky Mountain tailed frog							✓	✓	✓			
western toad	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mammals												
American badger					✓	✓					✓	✓
grizzly bear	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
little brown myotis	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Common Name	Upper Elk	Elk Valley West	Norboe Creek Connector	Fording River Grasslands	Lizard Connector	Wigwam Flats	Wigwam River	Couldrey Ck Connector	Flathead East	Upper Flathead	Corbin Connector	Alexander Connector
red-tailed chipmunk, *ruficaudus* subspecies									✓			
wolverine	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
Birds												
Bank Swallow						✓			✓		✓	
Barn Swallow					✓		✓					
Black Swift					✓				✓			
Common Nighthawk						✓			✓	✓		
Evening Grosbeak	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓
Great Blue Heron, *herodias* subspecies					✓							
Lewis's woodpecker						✓						
Olive-sided Flycatcher					✓		✓		✓	✓	✓	✓
Western Screech-owl, *macfarlanei* subspecies							✓		✓			
Williamson's Sapsucker [1]									✓			
Fish												
Rocky Mountain sculpin									✓	✓		
westslope cutthroat trout	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(low elevation) Grassland Ecosystems												
Rough Fescue - (Bluebunch Wheatgrass) - Yarrow - Clad Lichens												
High Elevation Grassland Ecosystems												
Idaho Fescue - Bluebunch Wheatgrass - Sulphur Buckwheat - Thread-leaved Sandwort									✓		✓	
Idaho Fescue - Sulphur Buckwheat - Thread-leaved Sandwort	✓			✓					✓			
Rough fescue - Sulphur buckwheat - Thread-leaved sandwort	✓	✓		✓							✓	✓

Common Name	Upper Elk	Elk Valley West	Norboe Creek Connector	Fording River Grasslands	Lizard Connector	Wigwam Flats	Wigwam River	Couldrey Ck Connector	Flathead East	Upper Flathead	Corbin Connector	Alexander Connector
Timber oatgrass - Grouseberry - Thread-leaved sandwort - Compact selaginella				✓					✓			✓
Brushland Ecosystems												
saskatoon - soopolallie - common juniper	✓	✓		✓								
Total Species & Ecosystems	**10**	**9**	**6**	**23**	**13**	**10**	**11**	**8**	**46**	**18**	**15**	**20**

[1] Williamson's Sapsucker is known historically from the lower Flathead Valley in British Columbia (Campbell et al. 1990). Recent surveys have not detected the species in the Flathead valley of British Columbia (Ohanjanian et al. 2007; see also COSEWIC 2017). Williamson's Sapsucker, however, is known from the Flathead valley in Montana within 10 km of the Canadian border (COSEWIC 2017) so it should be considered as a species at risk with high potential to occur in the Flathead East area.

A1.2 Species of Conservation Concern Maps

Following four maps show Element Occurrences, from north to south, based on data from BC Conservation Data Centre (BC Conservation Data Centre 2021*c*), updated through June 3, 2021. Additional data on recent confirmed Rocky Mountain tailed frog occurrences (after Hobbs et al. 2020) are included in the Lower Elk / Flathead figure.

Occurrences are classified by Element Type: invertebrate animal, vertebrate animal, nonvascular plant (e.g. mosses), vascular plants, and ecological community. A key point is that areas where an element is *not* mapped does not imply it does not occur there, only that it has not been documented or mapped.

An "Element" is defined as: "*A species or ecological community. The term "species" is used to include all entities at the taxonomic level of species, including interspecific hybrids, as well as all subspecies and plant varieties. Ecological communities are based primarily on Ministry of Forests and Range vegetation classification and the International Classification of Ecological Communities*"(BC Conservation Data Centre 2021*d*).

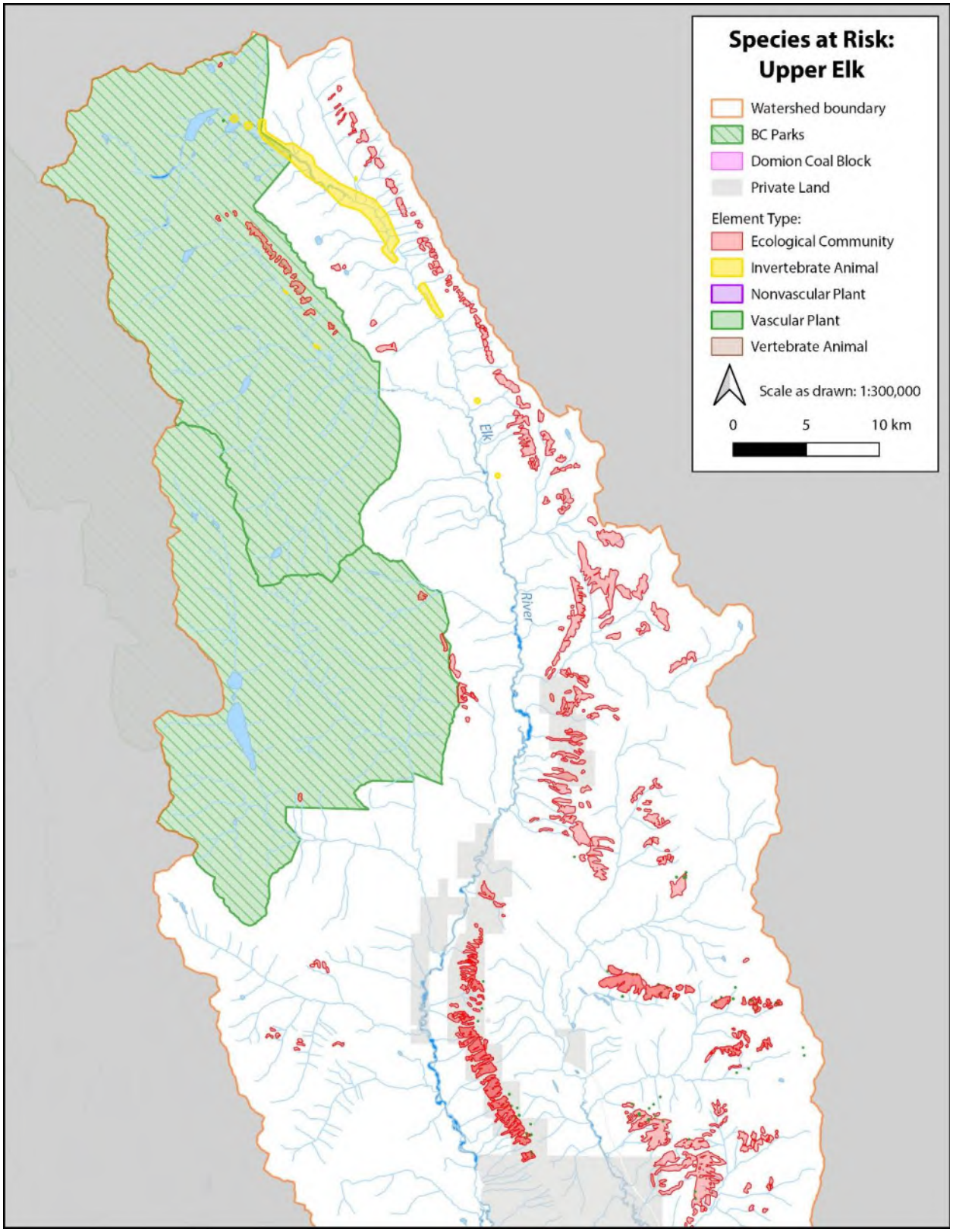
Following is excerpted from BC Conservation Data website explaining element occurrences:[11]

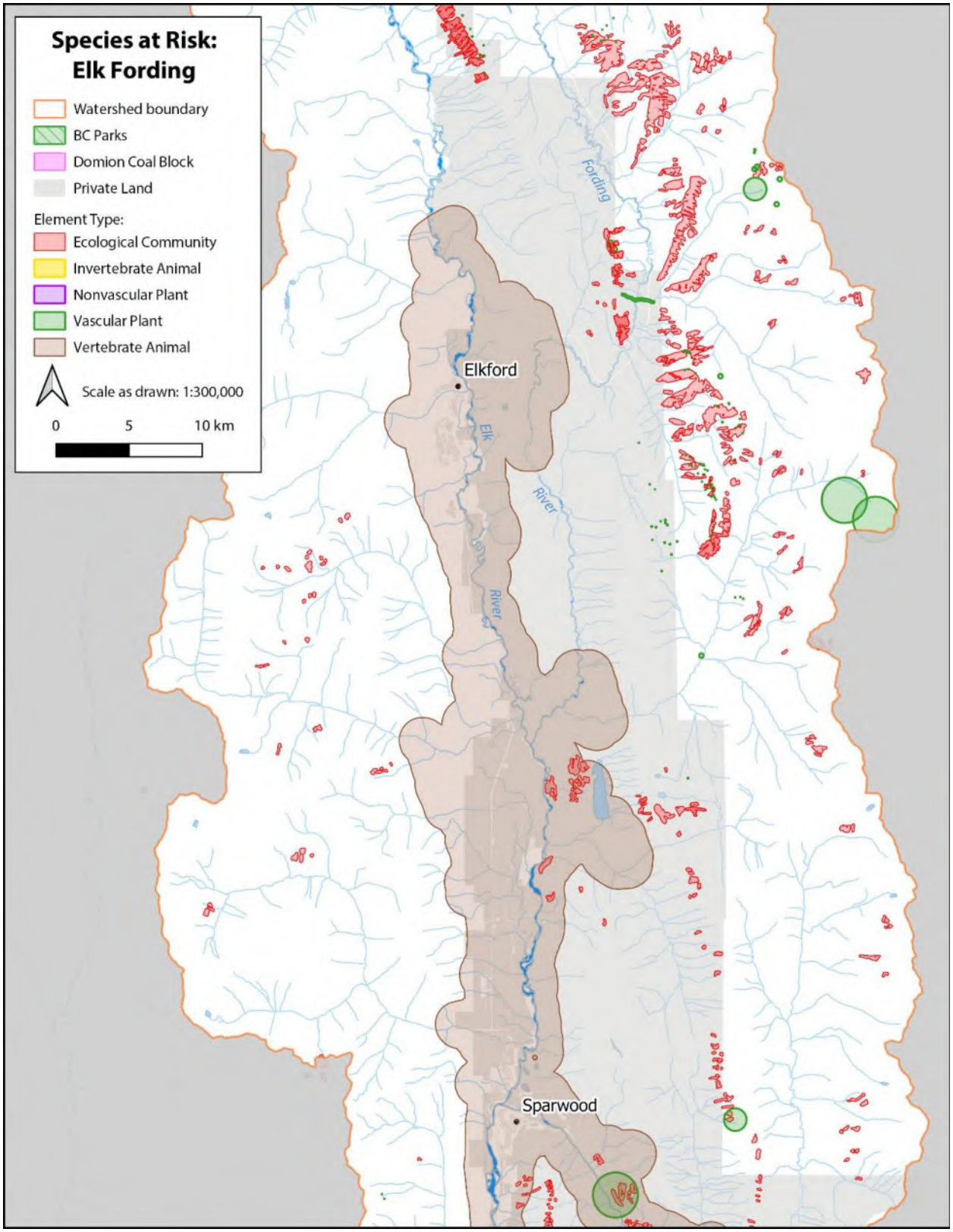
"*The B.C. Conservation Data Centre (CDC) maps known element occurrences (an area of land and/or water where a species or ecosystem is known to have been) of red- and blue-listed species and ecosystems. The CDC database includes the best available information and is updated on a regular basis.*

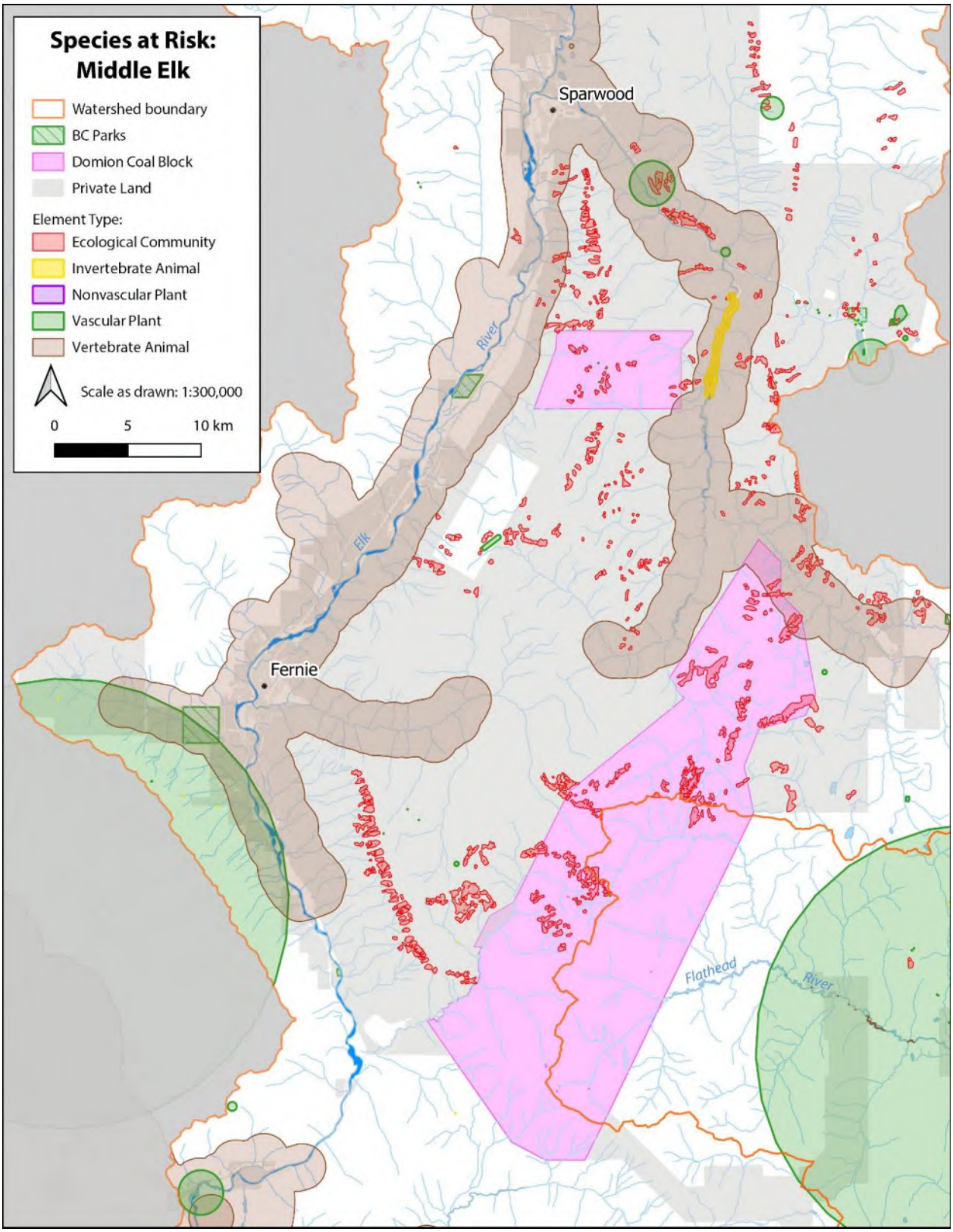
- *An element occurrence record (EO) can consist of one or more source features (i.e. observations). For species, an element occurrence is generally equivalent to a population.*
- *An element occurrence has conservation significance and is relevant in land management decisions.*
- *An element occurrence is not an observation. It is a value-added product that includes assessment of observations for conservation significance, and includes verification of the information source.*
- *All element occurrences are polygons: the size of the polygon usually reflects the locational uncertainty associated with the source data, represented with varying sized circles. Some polygons may be larger to reflect the actual area covered by the element occurrence*."

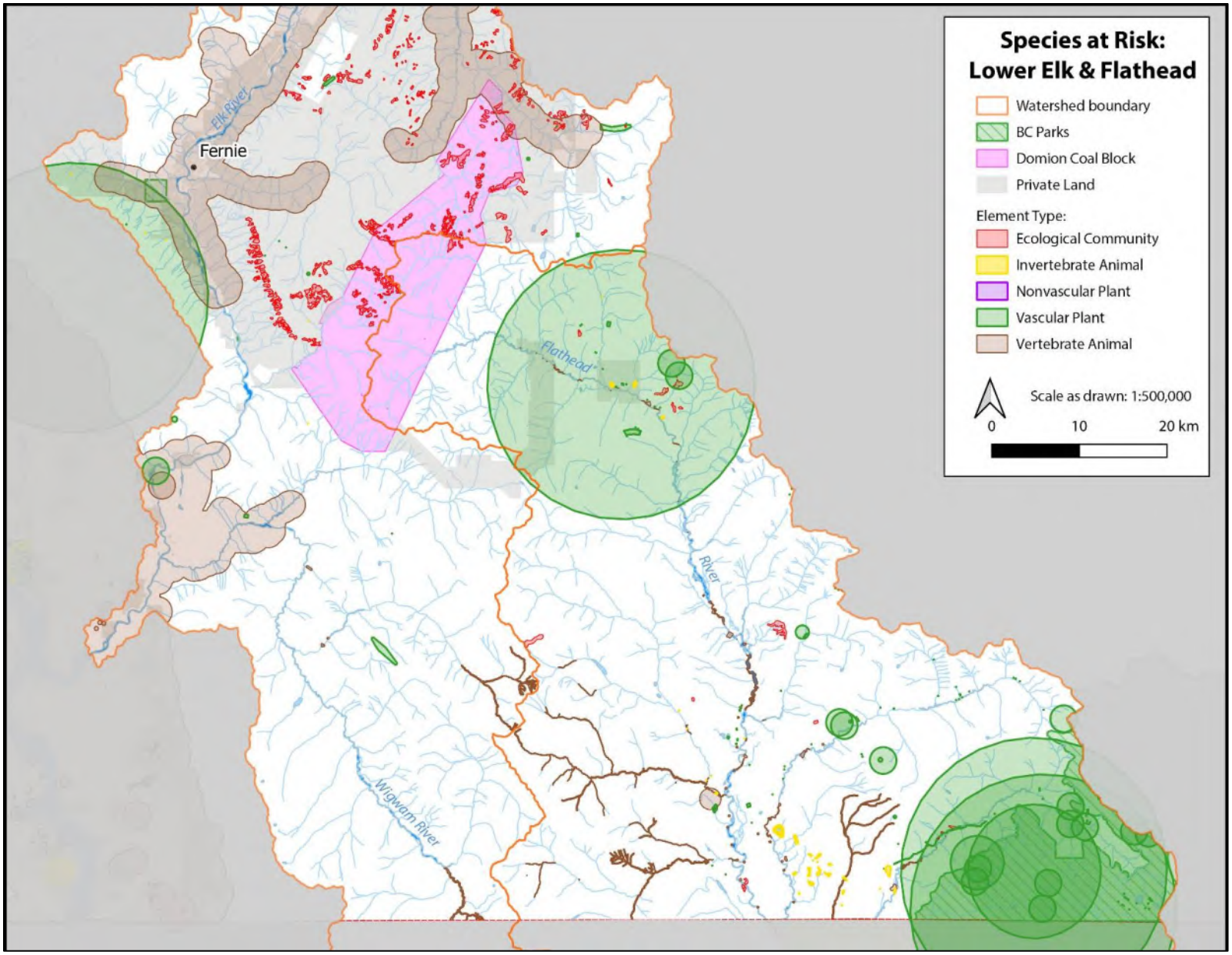
As per the last bullet above, the larger vascular plant circles indicate greater uncertainty / possibility of the species occurring within that area.

[11] https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/conservation-data-centre/explore-cdc-data/known-locations-of-species-and-ecosystems-at-risk/mapping-methods/cdc-element-occurrences


Species at Risk:
Upper Elk
Watershed boundary
BC Parks
Domion Coal Block
Private Land
Element Type:
Ecological Community
Invertebrate Animal
Nonvascular Plant
Vascular Plant
Vertebrate Animal
Scale as drawn: 1:300,000
0
5
10 km
Elk
River


Species at Risk:
Elk Fording
Watershed boundary
BC Parks
Domion Coal Block
Private Land
Element Type:
Ecological Community
Invertebrate Animal
Nonvascular Plant
Vascular Plant
Vertebrate Animal
Scale as drawn: 1:300,000
0
5
10 km
Elkford
Sparwood
Elk River
Fording


Species at Risk:
Middle Elk
Watershed boundary
BC Parks
Domion Coal Block
Private Land
Element Type:
Ecological Community
Invertebrate Animal
Nonvascular Plant
Vascular Plant
Vertebrate Animal
Scale as drawn: 1:300,000
0
5
10 km
Sparwood
Fernie
Elk River
Flathead River


Species at Risk:
Lower Elk & Flathead
Watershed boundary
BC Parks
Domion Coal Block
Private Land
Element Type:
Ecological Community
Invertebrate Animal
Nonvascular Plant
Vascular Plant
Vertebrate Animal
Scale as drawn: 1:500,000
0
10
20 km
Fernie
Elk River
Flathead
River
Wigwam River

Appendix 2: Canfor High Conservation Value Areas

Canadian Forest Products, Ltd. (Canfor) holds forest management tenure on a large proportion of provincial crown lands in the Elk and Flathead watersheds, within the Cranbrook Timber Supply Area (TSA). Canfor maintains Forest Stewardship Council (FSC) certification on these operations (see Stuart-Smith and Johnson 2019). Standards for this certification are "… based on FSC's International Principles & Criteria as well as national indicators which reflect the diverse legal, social, and environmental conditions of the forests in Canada" (FSC Canada 2021).

As part of this certification process areas within Canfor's tenure have been identified as High Conservation Value Areas (HCVA). These are defined by FSC as areas of exceptional conservation, ecosystem service, or cultural value. "Canfor used a rigorous process to identify HCVAs for conservation in the East Kootenay by bringing together a collaborative team with representation from the BC government, ENGOs, First Nations, and the forest industry" (K. Stuart-Smith pers. comm.). These areas represent some of the best ecological values in the Elk and Flathead watersheds. There are two categories of HCVA: general and Reserve (Table A2-1).

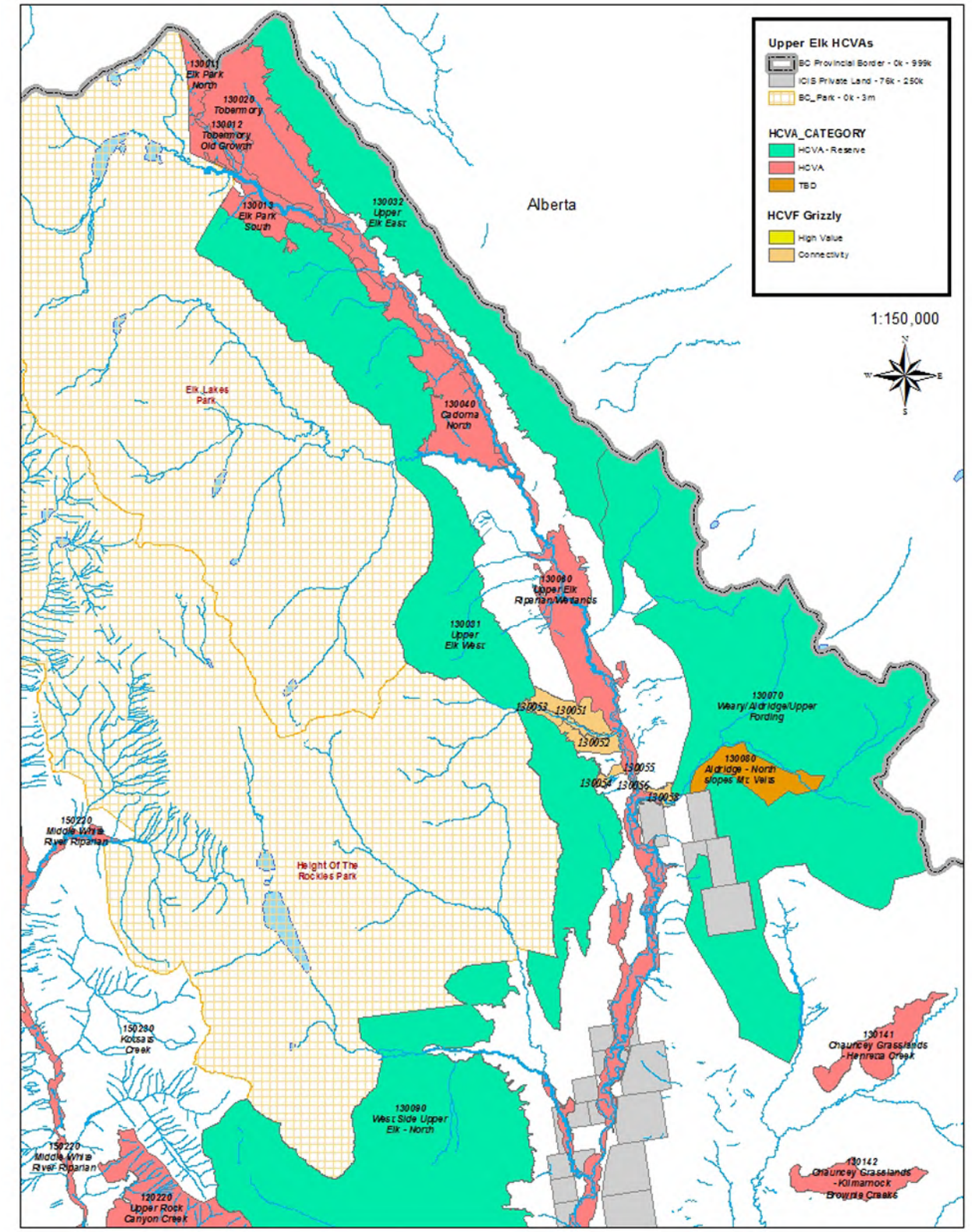
It is important to note that these HCVA's are not formal protected areas. Canfor can continue to log within them but are subject to annual performance audits by FSC. They are entirely voluntary on behalf of the company and may be withdrawn at Canfor's discretion at any time.

Following are maps, from north to south, of the HCVAs in the Elk and Flathead watersheds as of 2019, as provided by Canfor. They are classified as either HCVA or HCVA-R with a total area of close to 150,000 ha (Table A2-1).

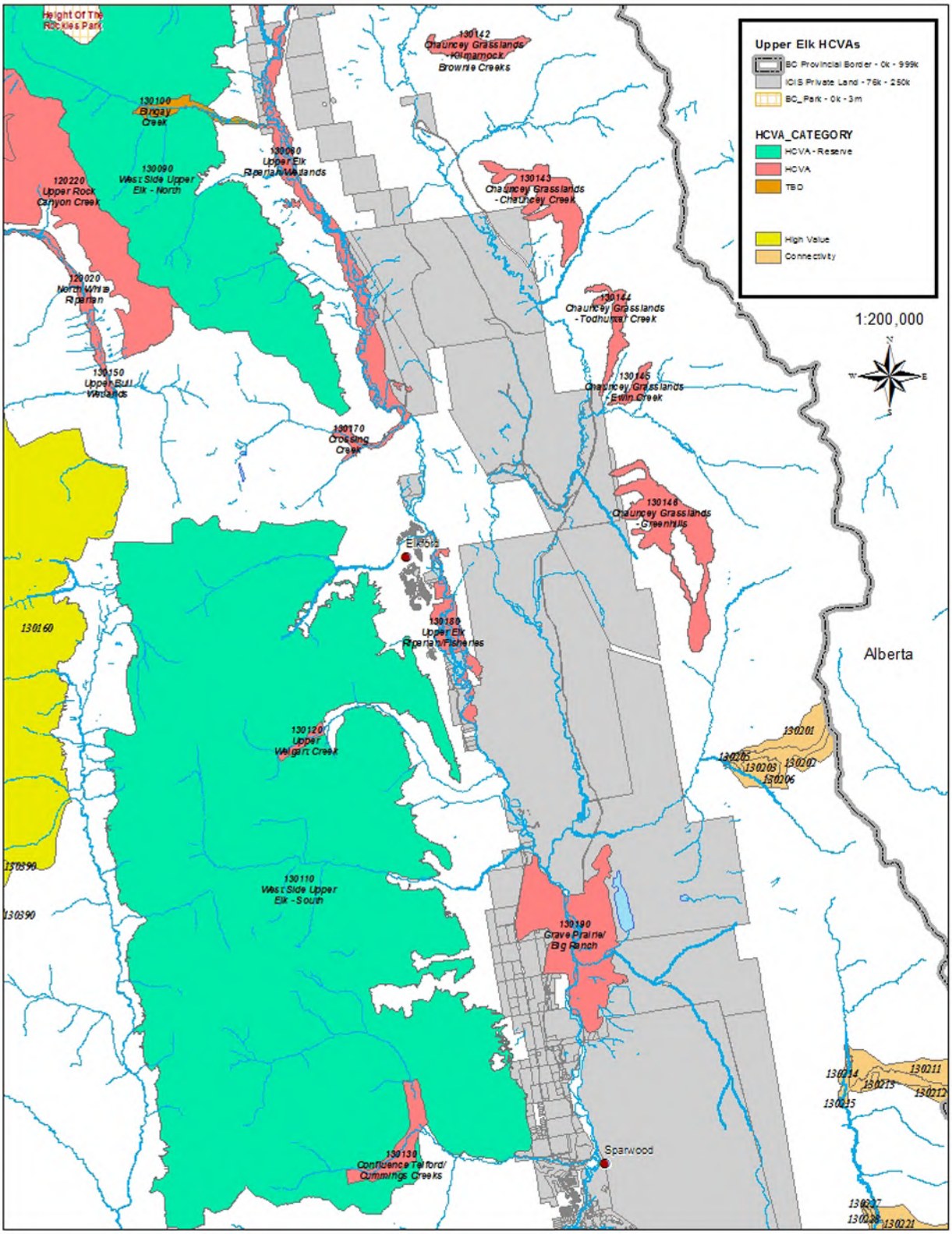
Table A2-1: Summary of High Conservation Value Area designation categories and area of each. Source: Canfor.

High Conservation Value Category	Definition	Area (ha)
HCVA	Management strategies to maintain or enhance the values	30,716
HCVA-R (Reserve)	The management strategies do not allow harvesting or road-building	85,977
HCVA-GB	Management strategies to maintain or enhance grizzly bear values	29,956
TBD	To be determined. Classification as HCVA or HCVA-R not yet complete	614
Total:		147,263

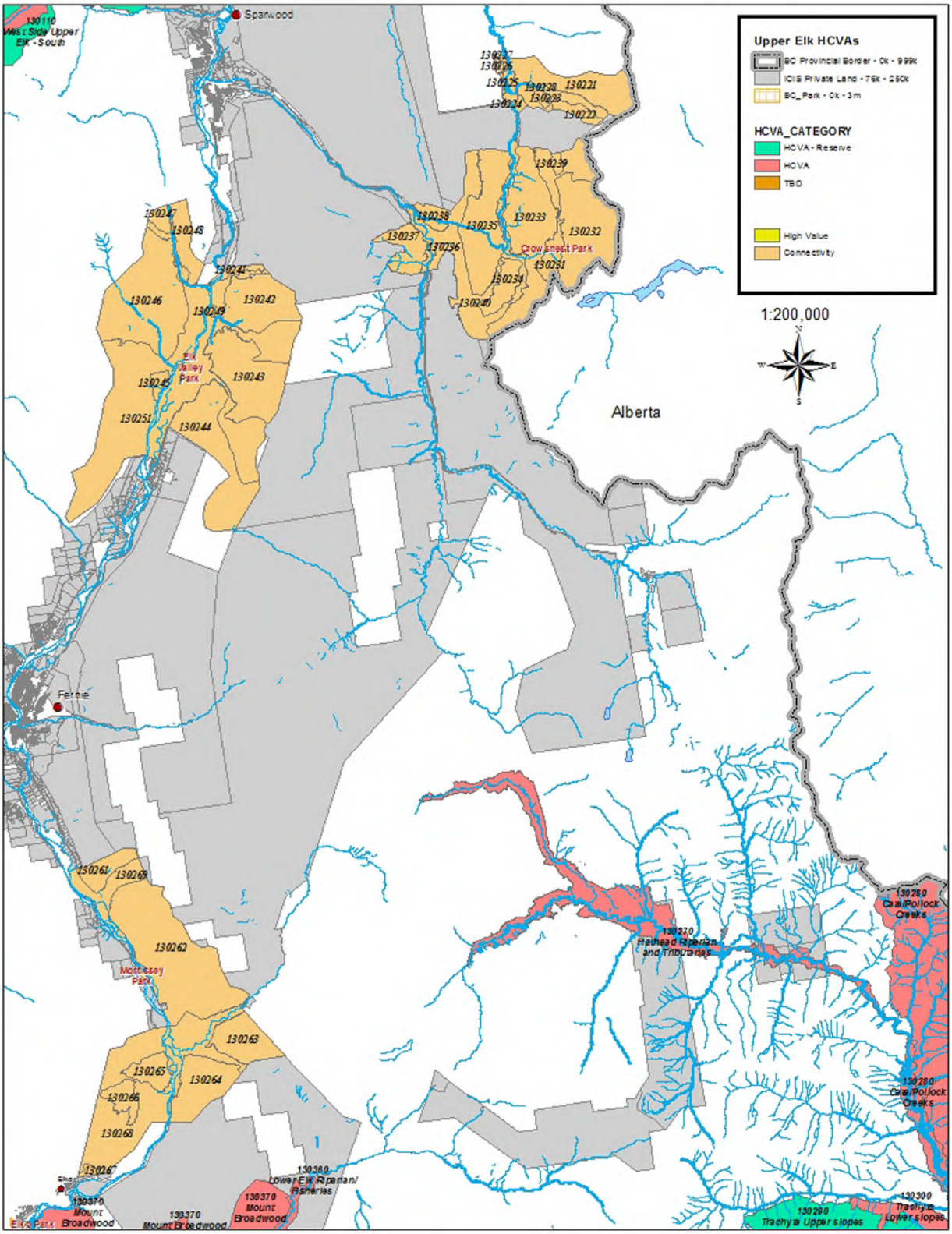
Upper Elk


Upper Elk HCVAs
BC Provincial Border - 0k - 999k
ICIS Private Land - 76k - 250k
BC_Park - 0k - 3m
HCVA_CATEGORY
HCVA - Reserve
HCVA
TBD
HCVF Grizzly
High Value
Connectivity
1:150,000
Alberta
130011 Elk Park North
130020 Tobermory
130012 Tobermory Old Growth
130013 Elk Park South
130032 Upper Elk East
130040 Cadorna North
Elk Lakes Park
130060 Upper Elk Riparian/Wetlands
130031 Upper Elk West
130053
130051
130052
130055
130054
130056
130058
130070 Weary/Aldridge/Upper Fording
130080 Aldridge - North slopes Mt Veits
150220 Middle White River Riparian
Height Of The Rockies Park
150280 Kotsais Creek
130090 West Side Upper Elk - North
130141 Chauncey Grasslands - Henrena Creek
130142 Chauncey Grasslands - Kilmarnock Browns Creek
120220 Upper Rock Canyon Creek

Middle Elk


Upper Elk HCVAs
BC Provincial Border - 0k - 999k
ICIS Private Land - 76k - 250k
BC_Park - 0k - 3m
HCVA_CATEGORY
HCVA - Reserve
HCVA
TBD
High Value
Connectivity
1:200,000
130142 Chauncey Grasslands - Kilmamock/ Brownie Creeks
130100 Bingay Creek
130090 West Side Upper Elk - North
130080 Upper Elk Riparian/Wetlands
120220 Upper Rock Canyon Creek
130143 Chauncey Grasslands - Chauncey Creek
120020 North White Riparian
130144 Chauncey Grasslands - Todhunter Creek
130150 Upper Bull Wetlands
130145 Chauncey Grasslands - Ewin Creek
130170 Crossing Creek
130146 Chauncey Grasslands - Greenhills
Elkford
130160
130180 Upper Elk Riparian/Fisheries
Alberta
130120 Upper Weigum Creek
130201
130205
130203
130202
130206
130110 West Side Upper Elk - South
130190 Grave Prairie/ Big Ranch
130214
130211
130215
130212
130225
Sparwood
130130 Confluence Telford/ Cummings Creeks
130221

Lower Elk


Upper Elk HCVAs
BC Provincial Border - 0k - 999k
ICIS Private Land - 76k - 250k
BC_Park - 0k - 3m
HCVA_CATEGORY
HCVA - Reserve
HCVA
TBD
High Value
Connectivity
1:200,000
N
W
E
S
Sparwood
Alberta
Fernie
Crowsnest Park
Elk Valley Park
Mottessey Park
130110
West Side Upper Elk - South
130360
Lower Elk Riparian/ Fisheries
130370
Mount Broadwood
130290
Trachyte Upper slopes
130300
Trachyte Lower slopes
130280
Cabin/Pollock Creeks
130270
Flathead Riparian and Tributaries

Wigwam / Flathead

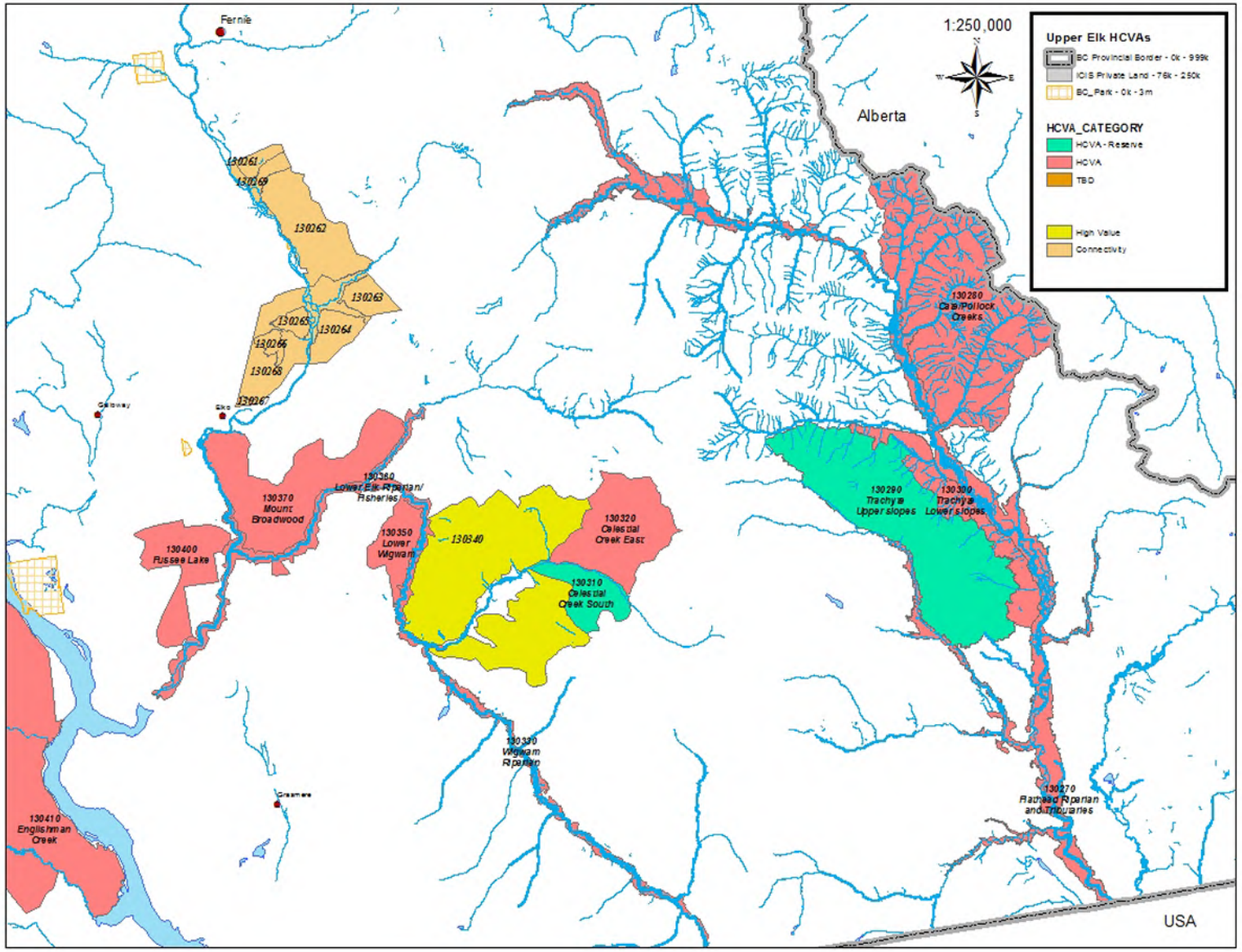


Table A2-2. HCVAs for Biodiversity values within the Elk and Flathead watersheds. The ID# corresponds to the maps above. Source: Canfor. See Canfor High Value Conservation Assessment Report for full details: https://www.canfor.com/docs/default-source/responsibility/canfor-hcva-report-2019.pdf?sfvrsn=e347ed91_2

ID#	HCVA Name	HCVA Category	High Conservation Values	Total Area (ha)
130011	Elk Park North	HCVA	Old and Mature Stands	151
130012	Tobermory Old Growth	HCVA	Old and Mature Stands	40
130013	Elk Park South	HCVA	Old and Mature Stands	195
130020	Tobermory	HCVA	Low Elevation Pass (N-S pass into AB) Old and Mature Stands	912
130031	Upper Elk West	HCVA-R	High Value Habitat (Grizzly Bear, Mnt. Goat, Elk) Intact Watersheds Avalanche Tracks	5,894
130032	Upper Elk East	HCVA-R	High Value Habitat (Grizzly Bear, Mnt. Goat, Elk) Intact Watersheds Avalanche Tracks	3,500
130040	Cadorna North	HCVA	High Value Habitat (Grizzly Bear, Bighorn Sheep) Wetlands Connectivity (N-S along Elk River to Elk Lakes Park)	828
130060	Upper Elk Riparian/ Wetlands	HCVA	High Value Habitat (Grizzly Bear, Moose Winter Range, Bull Trout spawning) Riparian, Wetlands Old and Mature Stands	3,838
130070	Weary/Aldridge/ Upper Fording	HCVA-R	High Elevation Grasslands (Weary Ridge), Intact Watersheds High Value Habitat (Bighorn Sheep, Elk, Grizzly Bear), Low Elevation Pass (two passes into Alberta and one into Upper Fording)	8,491
130080	Aldridge - North slopes Mt. Veits	TBD	High Elevation Grasslands (Weary Ridge), Intact Watershed (Class 1 and 2 Intact watersheds) High Value Habitat (Bighorn Sheep, Elk, and Grizzly Bear), Low Elevation Passes (two passes into Alberta and one into Upper Fording)	401

ID#	HCVA Name	HCVA Category	High Conservation Values	Total Area (ha)
130090	West Side Upper Elk - North	HCVA-R	High Value Habitat (Grizzly Bear,Mountain Goat, Bighorn Sheep, Mule Deer, Elk), Old and Mature Forest Intact Watershed Whitebark Pine, Riparian, Low Elevation Pass	13,090
130100	Bingay Creek	TBD	Intact Watershed (Level 3)	213
130110	West Side Upper Elk - South	HCVA-R	High Value Habitat (Grizzly Bear, Mtn. goat, Bighorn Sheep, Mule Deer and Elk), Old and Mature Forest Intact Watersheds Whitebark Pine, Riparian, Low Elevation Pass	39,169
130120	Upper Weigart Creek	HCVA	High Value Habitat (Grizzly Bear, Mtn. goat, Bighorn Sheep, Mule Deer and Elk), Old and Mature Forest Intact Watershed Whitebark Pine, Riparian	83
130130	Confluence Telford/ Cummings Creeks	HCVA	High Value Habitat (Grizzly Bear, Mtn. goat, Bighorn Sheep, Mule Deer and Elk), Old and Mature Forest Intact Watershed Whitebark Pine, Riparian	423
130141	Chauncey Grasslands - Henretta Creek	HCVA	High Value Habitat (Bighorn Sheep and Elk high elevation winter range) High Elevation Grasslands	414
130142	Chauncey Grasslands - Kilmarnock Brownie Creeks	HCVA	High Value Habitat (Bighorn Sheep and Elk high elevation winter range) High Elevation Grasslands	344
130143	Chauncey Grasslands - Chauncey Creek	HCVA	High Value Habitat (Bighorn Sheep and Elk high elevation winter range) High Elevation Grasslands	701
130144	Chauncey Grasslands - Todhunter Creek	HCVA	High Value Habitat (Bighorn Sheep and Elk high elevation winter range) High Elevation Grasslands	271
130145	Chauncey Grasslands - Ewin Creek	HCVA	High Value Habitat (Bighorn Sheep and Elk high elevation winter range) High Elevation Grasslands	115

ID#	HCVA Name	HCVA Category	High Conservation Values	Total Area (ha)
130146	Chauncey Grasslands - Greenhills	HCVA	High Value Habitat (Bighorn Sheep and Elk high elevation winter range) High Elevation Grasslands	1,094
130150	Upper Bull Wetlands	HCVA	Wetlands	32
130170	Crossing Creek	HCVA	Connectivity (main pass from White/Bull to Elk)	139
130180	Upper Elk Riparian/Fisheries	HCVA	High Value Habitat (Bull Trout spawning area, moose winter range)	485
130190	Grave Prairie/ Big Ranch	HCVA	High Value Habitat (Class 1 Elk and deer winter range in the Elk Valley) Broadleaf trees	1,981
130270	Flathead Riparian and Tributaries	HCVA	High Value Habitat (Moose winter range, Grizzly Bear spring habitat, Elk calving, western screech owl habitat, Bull Trout spawning) Riparian and wetlands Connectivity (along Flathead)	6,798
130280	Cate/Pollock Creeks	HCVA-R	High Value Habitat (Bighorn Sheep, Mountain Goats, Elk, Grizzly Bears) Intact Watersheds	8,022
130290	Trachyte Upper slopes	HCVA-R	High Value Habitat (Grizzly Bear denning and cubbing, Mountain Goat winter range), Intact Watershed	6,749
130300	Trachyte Lower slopes	HCVA	Huckleberries	1,710
130310	Celestial Creek South	HCVA-R	High Value Habitat (Grizzly Bear), Intact Watershed Riparian, Old and Mature Stands Connectivity (between Wigwam/ Flathead)	1,062
130320	Celestial Creek East	HCVA	High Value Habitat (Grizzly Bear), Intact Watershed Riparian, Old and Mature Stands Connectivity (between Wigwam/ Flathead)	2,567
130330	Wigwam Riparian	HCVA	High Value Habitat (Bull Trout Spawning)	1,279
130350	Lower Wigwam	HCVA	Old and Mature Stands (Old Growth Fd and Lw), Veteran trees	907
130360	Lower Elk Riparian/ Fisheries	HCVA	High Value Habitat (Bull Trout and Westslope Cutthroat spawning habitat, Class 1 and 2 Moose Winter Range), Broadleaf Trees Riparian	1,837

ID#	HCVA Name	HCVA Category	High Conservation Values	Total Area (ha)
130370	Mount Broadwood	HCVA	High Value Habitat (Class 1 and 2 Ungulate winter range, Grizzly Bear), Broadleaf Trees	3,572
130231-130240	Alexander	HCVA-GB	High Value Habitat (Grizzly Bears)	5432.7
130221-130228	Deadman Pass	HCVA-GB	High Value Habitat (Grizzly Bears)	1176.7
130340	Fenn Creek	HCVA-GB	High Value Habitat (Grizzly Bears)	7056.7
130241-130251	Hosmer	HCVA-GB	High Value Habitat (Grizzly Bears)	7952.3
130261-130269	Morrisey	HCVA-GB	High Value Habitat (Grizzly Bears)	5556.4
130211-130215	Race Horse Pass	HCVA-GB	High Value Habitat (Grizzly Bears)	818.1
130051-130058	Upper Elk	HCVA-GB	High Value Habitat (Grizzly Bears)	435.2
130380	Upper Goat Creek/ North Galbraith	HCVA-GB	High Value Habitat (Grizzly Bears)	1528.4

Appendix 3: Authorities Contacted

The following individuals/organizations were contacted during the preparation of the Options for Conservation Report.

Federal Government
Environment and Climate Change Canada
Parks Canada
Natural Resources Canada – Dominion Coal Blocks

Ktunaxa
Ktunaxa Nation Leadership and Staff
Tobacco Plains Band / Yaq̓it ʔa·knuqƛi'it Elders and Staff

BC Government Ministers/Ministerial Assistants (MA)
Energy, Mines and Low Carbon Initiatives – MA Andrew Cuddy, MA Eugene Tseng
Forests, Lands, Natural Resource Operations and Rural Development – Minister Conroy, MA Tim Renberg
Indigenous Relations and Reconciliation – Minister Rankin
Minister of State for Lands and Natural Resource Operations – Minister Cullen
Environment and Climate Change Strategy – MA Kelly Sather
Parliamentary Secretary for Fisheries and Aquaculture – Fin Donnelly

BC Government Assistant Deputy Minister's Committee
Jim Standen, Laurel Nash, Trish Balcaen, Paul Rasmussen, Peter Robb, Simon Coley, Mathew Leroy, James Mack, David Muter

BC Government Staff
Kathy Eichenberger – Energy and Mines
Kaaren Lewis - Environment
Brian Bawtinheimer – FLNRORD
Wayne Giles – FLNRORD
John Krebs and staff – FLNRORD
Grant Neville - FLNRORD
Rob MacDonald – BC Parks – Environment
Emily Cameron – Conservation Data Centre - Environment

Municipal Governments
Mayors of Fernie, Elkford, Sparwood
Regional District of East Kootenay – Area A and B Directors, Board Chair, CAO

Funders
Government
Organizations
Foundations

Industry
Teck Coal – Corporate and Local
Canfor – Corporate and Local

Land Trusts
Nature Conservancy of Canada – corporate and local
The Nature Trust British Columbia – corporate and local
Elk Valley Regional Land Trust – newly formed and looking to buy CanWel's private property

Conservation Groups
Kootenay Conservation Program
Wildsight
Yellowstone to Yukon Conservation Initiative
Elk River Alliance
Canadian Parks and Wilderness Society
Hornaday Wilderness Society

Hunting, Guide Outfitting
British Columbia Backcountry Hunters and Anglers Association
Elkford Rod and Gun Club
Sparwood and District Fish and Wildlife Association
Fernie Rod and Gun Club
Elk Valley Bighorn Outfitters – Elk River Valley
Packhorse Creek Outfitters – Flathead River Valley

Biologist Experts
Grizzly Bears – Clayton Lamb, Michael Proctor
Wildlife Highway Crossings – Tony Clevenger, Western Transportation Institute
Species at Risk – Ian Adams, Emily Cameron

Outdoor Recreation
Fernie Snowmobile Association
Elkford ATV Club
Elkford Trails alliance
Elkford Snowmobile Association

International Cross Border
Crown Managers Partnership
Flathead Basin Commission
Miistakis Institute

Political
Kootenay East MLA Tom Shypitka
Kootenay Columbia MP Rob Morrison