



PROTECTION PARANOIA: THE STORY OF THE BIGHORN

By Vivian Pharis, AWA Board Member

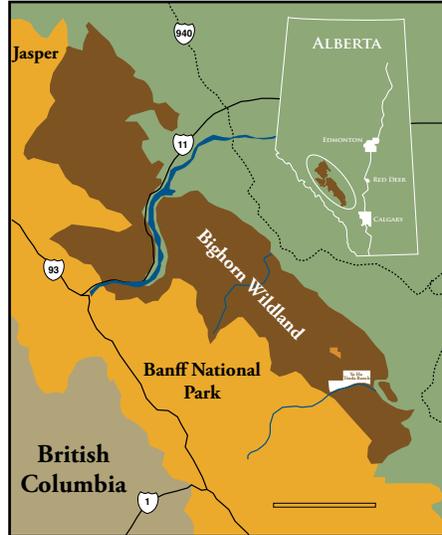
When there is every advantage to protection and no advantage to none, why can we not get the splendid Bighorn protected?

When I began my love affair with the Bighorn, I had only recently moved to Calgary to attend the University of Alberta. Just as there was no University of Calgary back then, there was no place called the Bighorn. In fact, back then the Bighorn was just part of the Clearwater Forest Reserve. Wait a minute... it's now 45 years later and it's still just part of the Forest Reserve!

How can this be? The Bighorn has every quality that would make it worthy of park status anywhere. It's all public land with no human residents. Its beauty is sublime, it contains the headwaters for major rivers, and it's home to lots of wildlife. It also has almost no resource conflicts – a major Alberta consideration. Why don't we Albertans cherish such a place? Studies keep showing us that protecting areas gives local communities increased status and a big economic boost. Why don't these things mean something in Alberta? The Bighorn has, in fact, been proposed for protection for over 30 years, but today it's just Forest Reserve, with its edges being chipped away by loggers, gas drillers, and off-roaders.

The Protection Puzzle

Conservationists muse endlessly about why it is so very hard in Alberta to get land gems like the Bighorn and other key wildlife habitats protected. We have had no sizable increases to our protected areas roster since our national parks were declared! This is not the case next door in B.C., where large new Class A (off-limits to industry and off-highway vehicles) parks are frequently added. New Zealand, comparable to Alberta in size, population, and diversity of landscapes



Bighorn at a Glance

- Covers 5,000 km² in central Alberta's Rockies, adjacent to the eastern boundaries of Banff and Jasper National Parks
- Contains headwaters of South and North Saskatchewan rivers
- Comprises unprotected Forest Reserve land under Forest Land Use Zoning that regulates recreational use
- Lies about 100 km west of Rocky Mountain House (pop. 6,874 in 2006)

– but without Alberta's wealth – is now more than 30 percent protected, and more is being added to the conservation areas and parks register every year.

AWA's Cliff Wallis, who has given this question much thought, is convinced that "there is a paranoia around protected areas in Alberta that defies comprehension." His observation is that politicians and land managers look at protection as "sterilizing economic activity" rather than as providing options for the future. Despite public opinion that is on the conservation side and economic data

showing that protected areas compete very well on a revenue-per-hectare basis, politicians have not shifted their stance in decades. "Dinosaurs are not extinct – they continue to rule Alberta's diminishing animal kingdom," Wallis says with a characteristic sigh of exasperation. "That won't change unless people let their elected officials know how frustrated they are."

Alberta's philosopher-writer Andrew Nikiforuk would seem to disagree with Wallis. He reasons that in Alberta, where oil and gas revenues are so high that the government is no longer funded primarily by taxpayers, politicians do not have to listen to citizens. In a recent *Globe and Mail* article, Nikiforuk asserts, "Politicians serve those first who deliver the most revenue." Therefore, as the thinking goes, if the oil and gas industry does not support land protection, there will be none. Until this industry dwindles, like conventional oil and gas are doing now, protection has little hope. But surely, once the oil and gas industry has fully shifted operations, wealth, and attention to the northeast corner of the province, there will be a few pickings left for what Wallis might wryly call "ecological sterilization."

Gary Bracken is a retired Bighorn outfitter who farms in the Sundre area and spends many hours on his tractor thinking about the deterioration of his favourite West Country areas and what should be done. He told me that this past long weekend in May was "devastating for the West Country.... The Eastern Slopes are being ripped up by 4X4s everywhere except in the FLUZ, and monster trucks are causing god-awful damage." Bracken sees even worse damage in his area now that the Waiparous region has been put under regulation. I asked him what he sees as the main roadblock to proper management. "In one word," he replies, "money. Too little for enforcement and too much in the hands of weekend

cowboys who can buy more and more massive machines, and kids who can afford liquor by the case-full.”

Bracken sees the need for a heavier and broader penalty mechanism for those who would wreak havoc on the landscape, and for more enforcement personnel on the ground: “One thousand dollars should be a minimum fine and these should require court appearances, not just be mailed in.” Thinking more broadly, Bracken reasons that enforcement agencies also need a wider basis for fining and that watershed and wildlife habitat damage are appropriate triggers.

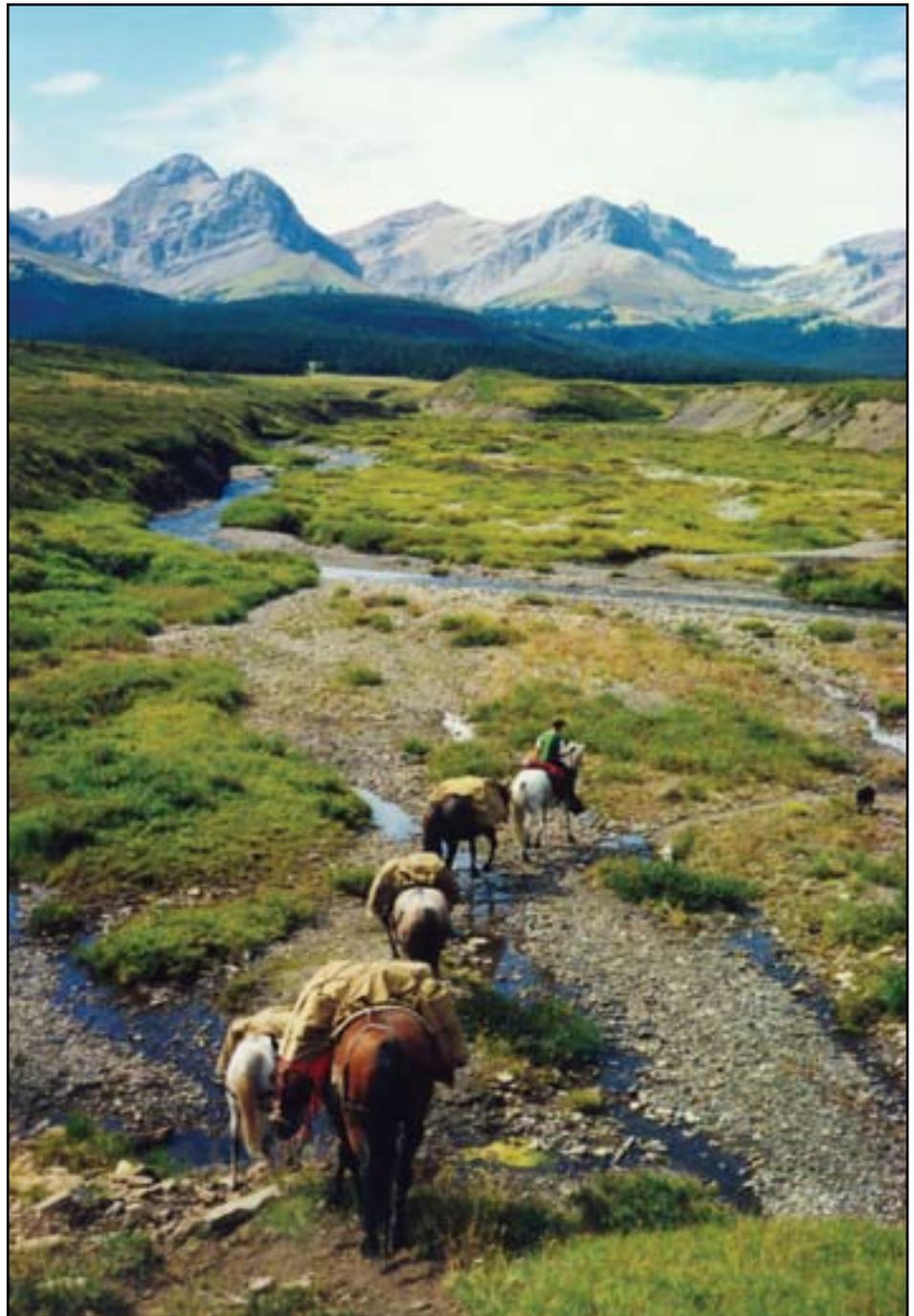
I, too, am of the opinion that water is the key to good land management and even protection. If watershed protection, which is still the priority guideline for managing the Eastern Slopes, becomes a stronger focus for citizens, land managers, and enforcement agencies, then better management will follow, including in the Bighorn. There is little doubt that despite the power of “petrodollars,” towns and cities will form alliances with conservationists to demand and implement greater protection of watersheds. As cities like New York, Seattle, Austin, San Antonio, and Vancouver are realizing, once they gain control over and protect their watersheds from damaging activities like logging, road-building, and off-highway vehicles (OHVs), multiple benefits follow: clean water that doesn’t cost billions to treat and filter, greater biodiversity, and areas for healthy, nature-based recreation are among the most important ones.

Abundant clean water, as we all know, will soon be more valued than oil and gas. Even our “petropoliticians” and elected Albertosaurs will have to shift positions. I’m convinced of the possibility for protecting major water-generating areas like the Bighorn in the foreseeable future.

This is a tale about Bighorn’s rise and fall, and its hoped-for resurrection. Some of the trails I’m about to lead you along are literal, some are political, and some are just dead ends.

Bighorn Beauty

After four decades of traveling the Bighorn by foot and horse, I know this is my kind of country. I’m attracted to

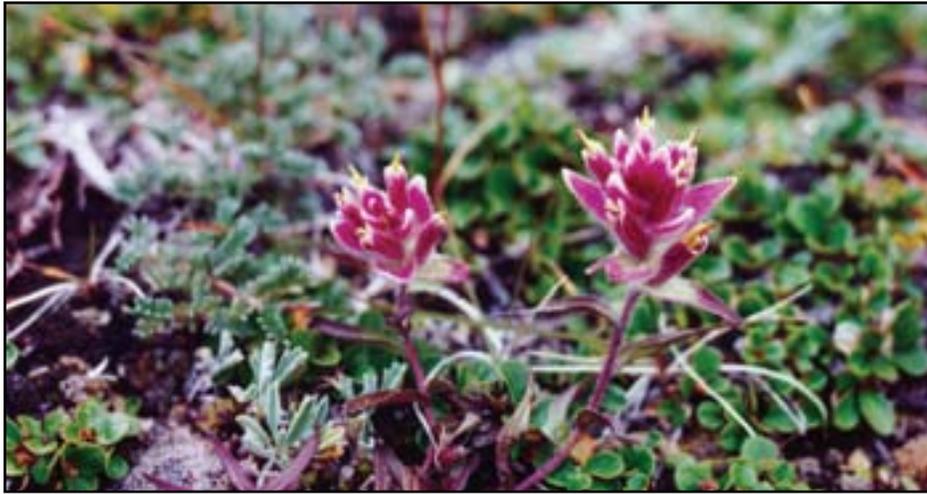


Traveling west up Wapiabi River toward Grave Flats.

wild country – big, remote wild country with lots of scenery, like where I grew up at the top end of the Peace River. I crave country where I can travel by foot, horse, canoe, or even camel for weeks with little chance of meeting other people. When I get away, I like to experience the land as it was, before so many of our kind began invading with more and more mechanization. Bighorn is still one of my choicest escapes.

Out there, I don’t need a soft bed, flush toilet, daily shower, or fancy meals. But I do like a certain ease of travel and don’t want to meet

unpleasant surprises around each bend. I don’t want to be caught in a war zone or in a hot jungle full of deadly diseases. Extreme remoteness, like Earth’s poles, does not appeal. What does appeal is the big, the wild, and the relative safety of Australia’s outback, New Zealand’s southern Alps, much of Mongolia, and Alberta’s Willmore, Kakwa, and especially the Bighorn. From my home in southern Alberta, the Bighorn is also the easiest of these places to get to. Willmore and Kakwa take a full day each way, and Mongolia or Australia, well...



R.P. Pharis

Hybrid Indian paintbrush.

When I first ventured in the 1960s into what is now officially called “Bighorn Backcountry,” I was a greenhorn mountaineer and probably didn’t even realize I was outside Banff National Park. With my university pals, I often trudged with a heavy pack into Pinto Lake, Mt. McDonald, and even Job Lake, going in over Sunset or Cataract Passes from the Banff-Jasper Highway.

Later, in the 1970s, with my husband and a few hardy fellow backpackers, we explored the mosaic of the Bighorn’s landscapes for many summers, pushing our way up rushing streams and through tall green valleys, and then on, over snow-covered ridges. Rarely did we follow trails, using topographical maps instead. We ventured into remote tributaries and were mesmerized by hidden waterfalls, rock pools smooth as varnish, turquoise tarns, and herds of bighorn sheep that would emerge out of nowhere. Cradled by two national parks, threaded with powerful rivers, and bristling with sharp peaks at the pinnacle of their geological life, the Bighorn is as exhilarating as it is challenging.

Even in the 1970s, we marveled that landscapes so exquisite were unprotected and open to the shenanigans of those who would mar such places with mines and wellsites. In the 1960s heyday of super-subsidized resource exploration, many of the Bighorn’s valleys and ridges were scarred with roads and seismic lines, some right up to the invisible demarcation of Banff and Jasper National Parks. The Bighorn is every bit as spectacular as the best that Banff

or Jasper has to offer. In fact, much of the Bighorn was once part of these parks. We wondered then, and continue to wonder, why the Bighorn has such little official regard.

Fighting for the Bighorn

Fortunately for the Bighorn, it had three pieces of luck earlier on, one by nature and two by man. Very early on, nature positioned much of the Bighorn west of the McConnell Fault. This is significant to many Albertans who happen to be petroleum geologists. It should also be important to those of us who love wilderness. West of this massive crack in the rock along which our Rocky Mountains slid during their uprising, geological formations were

generally so crumpled and broken that their petroleum escaped. Thus, most of the Bighorn is happily petroleum-free. If it weren’t, we’d see gas wells lined up today along the eastern borders of Banff and Jasper.

Unfortunately, coal does not escape through fractures and fissures, and the Bighorn holds developable deposits. However, far-sighted policymakers in the 1970s placed the Bighorn off-limits to coal development under the 1976 Coal Policy, and some old exploration was even reclaimed, making good use of the Heritage Trust Fund. In another stroke of luck, wise policymakers went even further, placing most of the Bighorn off-limits to all industry and damaging motorized recreation. Under the Eastern Slopes Policy of 1979, most of the Bighorn was placed within the Prime Protection Zone in order to preserve sensitive terrain and valuable aesthetics. The only exception was the Wapiabi-Blackstone area that lies east of the McConnell Fault and therefore might contain natural gas reserves. To this day, the Wapiabi-Blackstone remains under petroleum lease, but a combination of early, expensive dry holes and AWA’s persistence has kept new drilling out of this region. It is also under recreation-use legislation that prohibits OHVs.

It was during preparation for



R.P. Pharis

Nodding arnica, an unusual alpine species, at the headwaters of Vimy Creek.

the 1973 Eastern Slopes hearings that fledgling AWA became forever entangled with the Bighorn. Early members came to us around 1970 with tales of the splendour, the abundant sparkling water, and particularly the productive habitat for the gamut of Rocky Mountain wildlife species that could all be found around the headwaters of rivers, including the Panther, Red Deer, Clearwater, Ram, Wapiabi, Blackstone, and Chungo. AWA included these headwater areas in a book called *Nine Wildlands for Recreation*, which constituted our written presentation to the Eastern Slopes hearing board in 1973.

These areas, all within the upper reaches of the South and North Saskatchewan rivers, were subsequently zoned off-limits to industry and motorized recreation by the 1979 Eastern Slopes Policy. AWA's first major involvement in government land-planning followed the policy, as the association was one of two public interest groups appointed to the integrated resource planning process. Our mission was to implement the Eastern Slopes Policy. This was a huge undertaking for the young, almost totally volunteer organization. But with the talent and dedication of the membership, AWA was able to muster a full team to work on plans up and down the Eastern Slopes, between Waterton Lakes National Park and Drayton Valley. I cut my own volunteer teeth as AWA's representative on the two plans covering the Bighorn.

Of course, the Bighorn was not yet called by this name. That came later, in 1986, following intense pressure from AWA and with internal government support for protecting the area. Following the Eastern Slopes Policy, the Alberta government pledged that one large wilderness area would be protected in each of the main watersheds along the slopes. The Bighorn was the logical area to protect in the headwater region of the North and South Saskatchewan rivers. But during the tussles with industry and government over the implementation plans, AWA began to realize that headwaters protection was not going to be automatic as had been promised in the legislature.

Recent History

- 1973 – AWA proposes area for protection at the Eastern Slopes Hearings.
- 1975 – Government of Alberta declares there will be one large wilderness area in the headwaters of each of Alberta's major Eastern Slopes rivers.
- 1977 – Eastern Slopes Policy designates most of the Bighorn as Prime Protection Zone, off-limits to industry and motorized recreation.
- 1986 – Integrated Resource Management Plan reinforces Eastern Slopes Policy.
- 1986 – Government formally announces “Bighorn Wildland Recreation Area” and publishes glossy brochure and map.
- 1993 – Provincial committee for Special Places 2000 recommends Bighorn Wildland be formally protected.
- 1990s – Government sells subsurface gas leases within Bighorn Wildland.
- 2000 – Special Places 2000 fails to designate Bighorn Wildland.
- 1986-2001 – Bighorn managed as a Wildland and named on government publications and road maps.
- 2001 – Government declares Bighorn Wildland not protected, erases it from maps and publications, and changes its name to Bighorn Backcountry.
- 2002 – Government creates six new Forest Land Use Zones and legalizes motorized recreation in parts of Bighorn.
- 2003 – AWA publishes 162-page, full-colour book called *Bighorn Wildland*.
- 2003-2007 – AWA measures and monitors recreational use and impacts in most impacted part of Bighorn, in headwater drainages of Ram River.
- 2007 – AWA releases report, including recommendations, on Bighorn Wildland Recreational Trail Monitoring Project; the research indicates increasing impacts and violations.
- 2007 – AWA conducts survey of summer users.
- 2007 – Draft R11 Fire Management Plan recommends extensive controlled burning of Bighorn's forests and two portions for commercial logging.

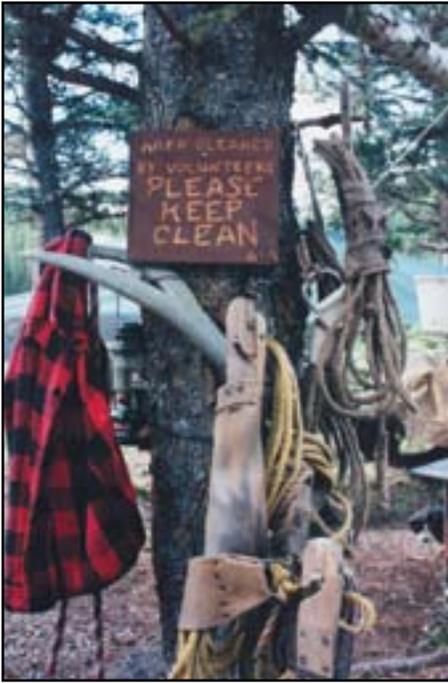
Tough negotiations began for protecting the watersheds of the Castle, Oldman, and North and South Saskatchewan rivers. AWA made



Pileated woodpecker in Ya Ha Tinda.

reasonable progress with then-Forests Minister Don Sparrow and his fair but firm-minded deputy, Fred McDougall. In the mid-1980s, AWA met with them frequently, and Mr. Sparrow told us that he considered us “part of his constituency.” He asked AWA for its “Top 10” wish list. He said he'd work to get our areas protected, starting at the top. Our number one choice was the North and South Saskatchewan headwaters.

Mr. Sparrow went to work, and it was his people who gave the area the name “Bighorn Wildland” and who announced its dedication in 1986, complete with a glossy map and brochure. But he and his team were unable to achieve necessary legislated protection before he was moved to another portfolio and before his untimely death on an Alberta road. Under Don Sparrow, the Bighorn did become partly off-limits to OHVs



R.P. Pharris

Stewardship has been part of AWA's Bighorn agenda since 1972 when Pinto Lake was first cleaned.

through Forest Land Use Zoning (FLUZ), a legal means to control recreational use of Forest Reserve lands. The four original Bighorn FLUZs covered roughly a third of the Bighorn. The rest of it remained off-limits to motorized use by policy, something respected by industry but increasingly violated by OHV recreationists.

No minister of public lands or forests since Don Sparrow has been interested in land protection. None has seen land conservation or conservation groups as part of his constituency.

Bighorn's Luck Fades

Following its 1986 brush with protection, official regard for the Bighorn gradually slipped away. OHV users initiated new incursions, the Eastern Slopes Policy began to fade from memory, and five-year updates to the integrated resource plans were ignored. Only the FLUZ regulations were upheld, if someone was there to witness infractions. The fines for violations, though, were under \$60, so the regulations had almost no clout with an increasingly affluent OHV set. (Even today, fines are too low to effect changes in behaviour of those who would abuse public lands.)

Over the next 20 years, AWA dangled as many logical arguments

as we could muster in front of elected representatives, trying to entice them to protect the Bighorn, if not for contemporary Albertans, then for future generations. But the rush for resource wealth was intensifying and there was no time for aesthetic considerations. Water was no longer considered an important resource as it had been through the first half of the twentieth century. King Oil had command now. Bighorn's luck was running low.

Special Places, a program designed to choose and dedicate new protected areas, was announced in 1993, and new hope emerged for the Bighorn. In fact, while setting up the Special Places Advisory Committee, government recommended to the committee that areas like the Bighorn Wildland, which were essentially being managed as wildlands, be formally designated as protected.

However, as the program's Year 2000 deadline approached, it became clear that any place designated as "Special" would be small and would be chosen to avoid conflict with the petroleum industry rather than to save or connect key wildlife habitats. There was also an unwritten rule that a Special Places Nominee had to be supported by the local community (and its MLA). The largest local community near the Bighorn is Rocky Mountain House, and by 2000 it was an oilfield service town with many residents dedicated to off-roading. This group had the ear and sympathy of the local MLA, the notoriously

anti-environmental Ty Lund. Although nominated, the Bighorn would not become a Special Place.

There was more luck to be lost. A lovely area smack in the heart of the Bighorn was, by 2000, becoming unrecoverably damaged by a combination of uncontrolled OHV use and concentrated horse use due to two horse concessions and many private equestrians drawn to the area to day-ride. The local Forest Service out of Rocky Mountain House decided to create an access management plan for the entire Bighorn. AWA participated in the Bighorn Access Management Advisory Group for two agonizing years. Tamaini Snaithe represented us and was taunted for rigorously defending the Eastern Slopes Policy and for trying to bring science to the table. Although small in stature, Tamaini was an advocacy tiger with a formidable intellect. She helped keep the group informed and focused, and in the end, their recommendations were reasonable.

They weren't, however, all accepted by government. In an act of defiance and demotion, the government renamed the area in 2001, calling it "Bighorn Backcountry" and erasing "Bighorn Wildland" from government publications and Alberta road maps, where it had been for 14 years. It legalized motorized access into areas of the Bighorn where policy had explicitly prohibited it, and even into areas previously off-limits under 1986 FLUZ regulation.



R.P. Pharris

Highlands above Ranger Creek.



R.P. Pharis

Ridge at top of Coral Creek between Coral Creek and Job Creek.

Snaith, now completing her PhD at McGill University, can still feel her hackles rise remembering what happened in 2001: “Five years later, I am still angry about the government’s lack of accountability, transparency and honesty during this [Access Management] process.” She remembers that “the OHV crowd claimed to be responsible and said that their activities did not and would not harm the area. This has clearly turned out to be untrue, as 20 percent of motorized users have been shown [by AWA] to violate the regulations. This is especially discouraging because it is the end-result of government backsliding that we fought so hard to prevent during the Bighorn Access Management process. Even during this advisory process, it was clear that Sustainable Resource Development was not really interested in advice and had already decided

to allow industrial development and motorized recreation.”

Soured by our experience on this Bighorn Committee, AWA decided against participating in the Bighorn Backcountry Access Management Plan Monitoring Standing Committee. Instead, we put our resources into scientifically measuring and monitoring the effects of recreational use in the core damaged area, including Onion Creek, Hummingbird, Canary, and part of the South Ram drainages. AWA met in June of 2007 to present the new forestry staff in Rocky Mountain House with the results of this four-year undertaking. (See the accompanying articles by Adam Ford and Heinz Unger about the experience and results of the monitoring project.)

I wish I could end this story happily and conclusively, but that’s not possible. Luck continues to leak

away for the Bighorn. A new plan was initiated for the area in 2005, this one designed to burn it up and log portions of it in order to save them from fire and pine beetle pestilence. The Bighorn is caught up now in Alberta’s frenzy to save forests from natural cycles, ostensibly to return them to natural cycles.

AWA is not against controlled burning and has supported it in the past in parts of the Bighorn. However, we are very dubious about the draft R11 Fire Management Plan, which seems designed more for the protection of adjacent commercial logging operations and the distant town of Nordegg than for the watersheds and wildlife of the Bighorn. The draft plan also recommends two parts of the Bighorn for commercial logging. Why? Apparently because they are considered especially dangerous. And since they have good timber, why not take it? Curiously, those of us who have been around the Bighorn for a long time remember that commercial interests wanted entrance into these very areas years ago. In our written response to the R11 plan, AWA has countered that if the Sunkay-Shankland area is to be logged, it must be done by helicopter so as to curtail new roads – no new access is something the R11 plan calls for.

Despite the political lassitude, the annoying whine of motorbikes and quads here and there, and the possibility of timber company chainsaws gnawing at the edges, the great interior of the Bighorn is still whole and beckoning. I’ll be out there again this summer, along with husband, friends, and a string of pack ponies, exploring new routes and revisiting old ones in the ever fresh, ever lasting mosaic of Bighorn’s varied vistas. I also see hope in the growing concern in Alberta about water, Bighorn’s potential salvation.

35 Years of Stewardship

Well before the name “Bighorn” covered the lands east of Banff and Jasper National Parks between the Panther and Brazeau rivers, AWA was active as a steward of the area.

As early as 1972, I found myself bagging garbage in what should have been calendar-perfect places like Pinto Lake. With a bunch of kids from

Crossfield's lacrosse team – coached and accompanied by young Steven Stiles, who would later become the area's MLA – AWA walked into Pinto Lake so long ago, armed with burlap sacks. In a weekend, the gang bagged about two tonnes of fishermen's abandoned debris, and Banff National Park provided a helicopter to haul it to the Banff-Jasper Highway. From there, Parks trucks hauled it to a dump. Several years later AWA cleaned this same lake, gathering almost as much garbage again. In those days it was the norm for fishermen to haul in large pieces of plastic for shelter, wire, nails, heavy food in cans, and lots of tongue lubrication in glass bottles for evenings around the campfire. Heavy oven grills were also in vogue for open-fire cooking. Of course, these were all considered disposable and left on site, as was the practice then. Heavy fish replaced heavy gear for the trip out.

Fortunately, today's backcountry users treat campsites with much more respect and generally abide by the "pack in-pack out" rule. But when AWA took it upon ourselves to clean old outfitter and seismic camps throughout the Bighorn, we were making the same kinds of hauls each year as from Pinto Lake, except over a much bigger area.

I led the annual Bighorn cleanups between 1984 and 1994, my pack and saddle ponies carrying greenhorn



R.P. Pharris

Herd of bighorn rams between Clearwater River and Lost Guide Lake.

volunteers, camp gear, food, hand-made signs, and hundreds of large plastic insulation bags for garbage. The horses toted and pulled the heavy garbage to nearby open areas that served as helicopter pickup points. Old seismic camps were often littered with well-rusted barrels, bedsprings, refrigerators, propane tanks, and stoves. Burnt-out wood stoves and chimneys enlarged the garbage heaps in horse outfitter camps as well. Outfitters tended to leave behind their food cans and whisky bottles, sometimes up to a tonne in a single camp. For 10 years, we cleaned a different set of valleys each year, bagging about two tonnes of

garbage annually for the Alberta Forest Service to helicopter out.

Just as I thought I'd completed my stewardship mission in the Bighorn and was ready to hang up my garbage-gathering gloves, the Forest Service approached AWA to take over the maintenance of one of the major horse trails. After some thought, I decided my ponies and I still had a bit of spark, so we took on the historic Bighorn Trail, which is about 100 km long within the Bighorn's Wapiabi, Sunkay, and Blackstone drainages. We signed up in 1994 and have maintained it ever

What You Can Do

- Visit the area and learn about it.
- Visit AWA's website for more information (AlbertaWilderness.ca, Issues and Areas/Bighorn).
- Buy AWA's *Bighorn Wildland* book for stunning images and comprehensive information.
- Fill in AWA's summer 2007 survey for Bighorn users (AlbertaWilderness.ca, Issues and Areas/Bighorn/Archive).
- Attend an illustrated talk on the Bighorn on October 23, 7-9 pm, AWA, 455 - 12 St. NW, Calgary.
- Write letters and call your MLA, stressing the many economic benefits of protecting watersheds, including those of the Bighorn.



R.P. Pharris

Headwaters of Job Creek well above trail over Job Pass.

since. Dogs have changed, horses have changed, volunteers have changed, but I'm still there. At least one of the original ponies is too, although she turns 27 this year. Oh, and now my husband comes along to help cut out trails. He shunned the garbage trips but enjoys cutting deadfall. One volunteer from Caroline has joined us with his two horses for 10 consecutive years. Obviously the Bighorn Trail is never boring, no matter how many times we travel it or clear it.

We headed out to the trail again this year for a week in mid-July. Last year was a light year with fewer than 100 trees across the trail, leaving us several days to explore the high country. But you never know until you get there what spring storms have brought down. Will it be all work this year, or will we get to explore a route to the top of the Bighorn Range from the north end? Won't know 'til we get there.

Over the years, we've surveyed the Bighorn's users; met endlessly with government and industry about the area; written about it, including a 162-page full-colour book called *Bighorn Wildland*, released in 2003;

and taken members on treks through it. In our recent stewardship and research initiative, mentioned earlier, we measured and monitored an area of about 200 km² in the heart of the 5,000-km² Bighorn, heavily damaged by ongoing recreation use. Begun in 2003, the Bighorn Wildland Recreational Trail Monitoring Project will continue for at least one more year.

The Bighorn is one of Alberta's last large, essentially intact and natural wild places. AWA has fought for its protection since 1973 and will continue to do so until this area of key watersheds, wildlife habitats, and aesthetically superb landscapes is fully protected.

Vivian Pharis was the AWA president (1984-1991) when the Bighorn had its closest brush with protection.

AWA'S VISION FOR THE BIGHORN



AWA is seeking Wildland Park protection within the boundaries delineated in 1986 by Minister Don Sparrow. Surface access for industrial development and motorized recreation must be prohibited within the Wildland to allow for habitat and watershed protection, and low-impact recreation.

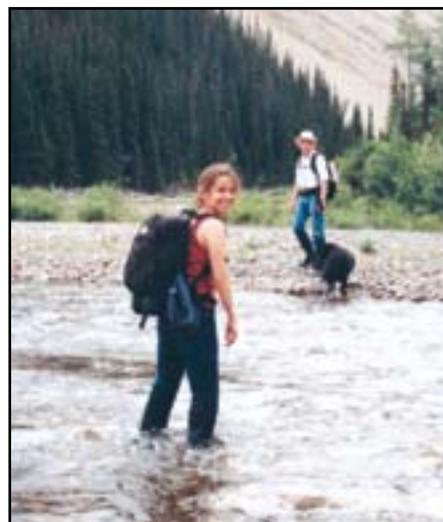


N. Douglas

BIGHORN TOO SPECIAL TO LOSE

Five years after her involvement in the Bighorn Access Management process, Tamaini Snaith reflects on the results of AWA's trail monitoring study.

The OHV crowd claimed that they were responsible and that their activities did not and would not harm the area. This has clearly turned out to be untrue, as 20 percent of motorized users have been shown to violate the regulations. This is especially discouraging because it is the end result of the government backsliding that we fought so hard to prevent during the Access Management process. Even then, it was clear that SRD was not really interested in advice and had already decided to allow industrial development and motorized recreation. Five years later, I am still angry about the government's lack of accountability, transparency, and honesty during this process.



C. Olson

Tamaini Snaith crossing the Wapiabi River.

All users need to use the backcountry carefully. AWA's Trail Monitoring report makes it clear that it isn't only motorized use that can cause damage. The report also shows that appropriate signs and barriers can be effective, and that certain types of trails are less vulnerable to damage than others. I hope that AWA's report, and SRD's own monitoring project, will lead to positive change in access management. This area is too special to lose, and without better monitoring and enforcement of regulations (and possibly some changes in trail designations) the ecological and wilderness values of the area will be lost.



BIGHORN RAMBLES

By Heinz Unger, AWA Board Member

This summer marks the fourth and last season of the Bighorn Wildland Recreational Trail Monitoring Project. As a frequent volunteer throughout this project, I have found working in this tarnished but beautiful area both worthwhile and exhilarating. While Adam Ford provides a summary of the methodology and results of the project in this issue of the *Advocate*, I offer here some personal observations and experiences of our monitoring trips in the Bighorn.

AWA's research area comprises about 200 km² of valley bottom and mountainous terrain in the heart of the 5,000 km² area that the government refers to as Bighorn Backcountry – AWA continues to call it by its original name, Bighorn Wildland. The monitoring area, located in the headwaters of the Ram River, is within the Prime Protection Zone, but off-highway vehicles (OHVs) began heavy, unregulated use of it in the 1990s. The area was already getting intense horse use because of a popular staging area and a large day riding facility at Hummingbird Creek. In 2001 the Alberta government formally closed some trails to OHVs, leaving others open. AWA wanted to find out if erosion would be curtailed or increased, and if area users would abide by the new trail rules.

In 2003 we started with a team of five, plus a dog with its own backpack of food – but no schnapps for human revival. Since then, both the luxury and the team size have been reduced, but the unknown has become the known: we are now expertly efficient at what we do.

A big change since 2003 is the gender balance. Back then, teams were mostly women, with me tagging along as the apparent token male. Now, it's "men only." While the gender rebalancing did not diminish

D. Samson



Heinz Unger measuring the depth of an Erosion Event along Ranger Creek Trail.

the scientific rigour of the work, the standards of camp cuisine have definitely slipped. Over the four years, we have moved from cooked breakfasts, hot beverage choices, and freshly prepared gourmet meals (including vegetarian) over the campfire at night to foil pouches, revitalized with boiling water. And although we no longer have a dog on the team, we now take schnapps as a chaser.

Apart from the hiking dog, our early work was sometimes aided by horses, owned and operated by an AWA volunteer. The horses packed in heavy gear like the electronic traffic counters and their batteries, and provided evening entertainment as they grazed or unexpectedly hopped out of sight in their chain hobbles. Possibly because of his distinct hat, the horses' owner became known simply as Cowboy. Cowboy and his steeds were greatly appreciated, as we conducted our work almost entirely on foot. One exception was a long trail into Onion Lake – an old road – which could sometimes be ridden by mountain bike. The 20-km

return trip and monitoring takes a long day on foot. The Bighorn is definitely horse country – and now, sadly, also OHV country. In four years, I never met another person traveling on foot like the AWA crews did!

Because we tend to monitor during the week, we rarely meet OHV users, but encounters with horse riders and outfitters are frequent. Some riders and their horses are surprised to see us measuring parts of the trail – some horses are even spooked by stretched measuring tapes and our equipment beside the trail. Ranger Creek, now closed to OHVs, is increasingly popular for riders. The intense horse use has caused increased trail erosion, especially during wet weather.

Despite our presence in the study area over a long period of time, we rarely encountered SRD staff. The amount of OHV damage and the use of illegal trails indicate that more enforcement is needed. We are concerned that there is not enough SRD presence to monitor OHV use and ensure compliance. Wildlife sightings are also rare, but the tracks, scat, and

other signs we have seen on the trail indicate the presence of grizzly sows with cubs, moose, deer, elk, wolves, and coyotes.

Although the pleasures of being in this beautiful wilderness area are many, monitoring trips have not been without their challenges. The weather was not always cooperative. Sometimes entire monitoring trips are soaked in rain or snow. Night-time temperatures at close to 2,000 metres elevation can slip below freezing, even in mid-summer. Once my contact lenses froze in their case!

Frequent stream crossings are also a challenge when on foot or mountain bike. Streams can be fast, thigh-deep, and just above freezing. In October our river shoes occasionally froze solid as we walked between crossings, making the next stream feel almost

warm. On one trip, my colleague forgot her river shoes and we had to toss one pair back and forth. My aim was not always the best, resulting in several desperate barefoot retrievals. Our worst experience with streams was when the early morning low crossing of Hummingbird Creek had become a dangerously high crossing by the end of the day. The only way we could get our shortest crew member back to camp side was to form a human chain across the rushing water.

To relieve the boredom of traveling the same designated OHV trails, I sometimes took an inviting side drainage, or after the day's work, climbed a trail to some new and interesting ridge or alpine meadow. Once, inspired by a camp of geologists examining fossil deposits on Cripple Creek, I decided to hike up to see

their find. The high meadows were surrounded by white-capped peaks, glowing in the evening light, and I stayed, pondering the wonders for a bit too long. Having neglected to inform my companions of my plans, I arrived back at the camp to find the crew ready to call out a search party. My colleagues were not happy with me, but I soon found sympathy, some camp coffee, and entertainment with stories of people who had gotten lost. It may have helped that I volunteered to do dishes that night.

Even though access to this area of the Bighorn can be tedious on the old industry roads, some of which are now designated OHV trails, seeing the less-touched spectacular reaches of the backcountry is always worthwhile and exhilarating.

BIGHORN WILDLAND RECREATIONAL TRAIL MONITORING PROJECT

By Adam Ford

AWA monitored the impacts of recreational use in the Bighorn Backcountry from 2003 through 2007. Our goal was to assess the efficacy of management in the area with respect to the objectives of Forest Land Use Zone (FLUZ) planning, which includes the protection of areas "containing sensitive resources such as fish and wildlife and their habitats, vegetation, soils and watershed" (SRD).^{*} We evaluated three main criteria that will provide an indication of management efficacy in the FLUZ: 1) willingness of backcountry users to abide by FLUZ regulations, 2) extent of landscape damage present, and 3) trends in motorized vehicle activity. Our study focused on a 76-km network of motorized and non-motorized trails in the Upper Clearwater-Ram FLUZ.

Methods

To measure trends in motorized vehicle use in non-designated times or places, we recorded motorized vehicle traffic year-round, using eight traffic counters (supplied by TRAFx Research Ltd., Canmore, AB). These counters sense disturbances to the



A water crossing on Back Trail North. The bridge was placed on the main trail, but users continue to drive OHVs through the creek on the left side of the photo.

electromagnetic field caused by a large passing metal object and record the timing, direction of travel, and frequency of passes of motorized vehicles within a 2-m range of the

counter. Passes by equestrian and other non-motorized users, including mountain bikes, are not detected by these counters. We placed these traffic counters adjacent to trails throughout

D. Samson

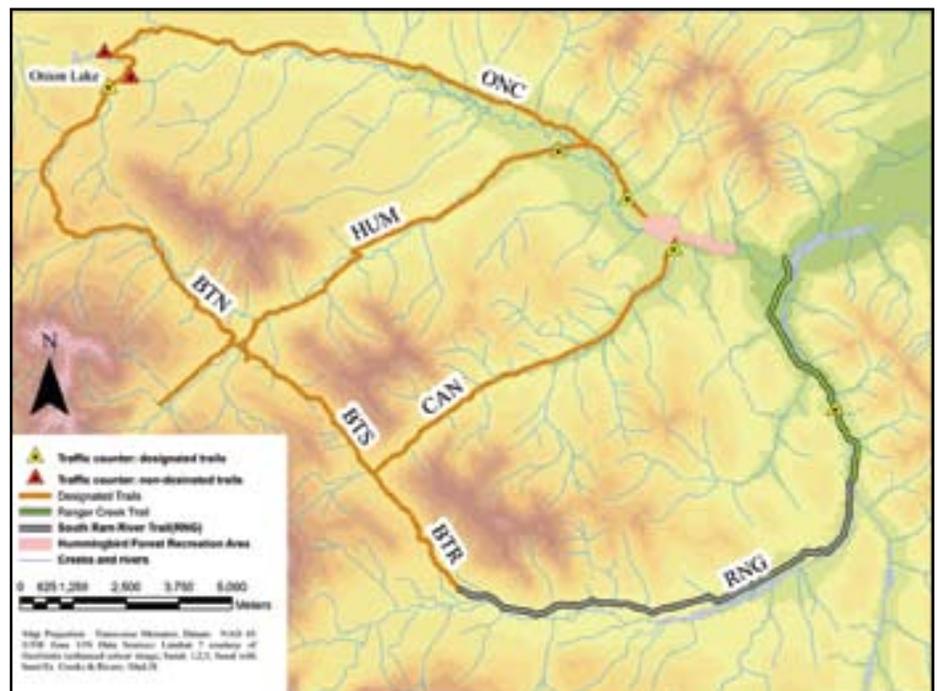
the network to capture both legal and illegal (out-of-season and off-trail) motorized vehicle use.

In order to determine if our second prediction was correct – that trail degradation throughout the system is common, severe, and associated with certain vulnerable sites and with specific user groups – we surveyed the trail network for four types of recreational activity impact: 1) damage sites, 2) water crossings, 3) campsites, and 4) non-designated trails. Damage sites were defined as part of a designated trail where the rutted depth exceeds 0.05 m and where vegetation damage exceeds a width of 3 m. We chose this depth as it signifies enough soil loss or compaction to affect plant regeneration (Godefroid et al. 2003). The 3-m width we chose is similar to trail design guidelines in British Columbia (2.2 m), Newfoundland (4 m); and Ontario (2.5 m), and it is also reflected in SRD's definition of a designated trail (3 m). Once a damage site was identified, we 1) geo-referenced the site with a handheld GPS unit (10 m± accuracy; Garmin or Magellan), 2) photographed the area, 3) measured the depth of the rut at the deepest point, and 4) measured the length and width of the site. When measuring the depth of ruts, we noted when a site was deeper than 25 cm for a distance of 3 m, which qualifies the site as an Erosion Event (EE). The EE designation is based on SRD standards for trail integrity and, under current management objectives, the number of EEs per kilometre of trail is expected to stay the same or decrease over time (SRD 2003). We also classified each damage site and EE by the types of tracks present: motorized, equestrian, or mixed.

For our third prediction, that the overall amount of traffic in the area is increasing, we analyzed data from the digital traffic counters placed on designated trails. We compared the number of passes at each counter during a replicable window over a two- or three-year period, depending on the availability of data. One window was established for summer use (approximately July 1 to September 30) and one for winter use (December 1 to January 31). We used replicable recording windows specific to each

Trail	Length (km)	Damage sites per km	Total length of damage sites (m)	Percent of trail damage
BTN	11.04	1.54	826	7
BTR	3.77	8.50	2,421	64
BTS	5.12	4.69	1,188	23
CAN	9.68	2.17	2,983	31
HUM	13.15	1.06	1,684	13
ONC	15.34	3.78	5,882	38
RNG	18.10	3.43	6,565	36

Damage site summary by trail. See accompanying map.



BTN=Back Trail North, BTR=Back Trail Ranger, BTS=Back Trail South, CAN=Canary Creek Trail, HUM=Hummingbird Creek Trail, ONC=Onion Lake Trail, RNG=Ranger Creek/South Ram River Trail.

traffic counter, rather than complete years, because of different operating periods among individual devices.

Results

1) Willingness of backcountry users to abide by FLUZ regulations

The total number of illegal passes by motorized vehicles during non-designated periods increased from 0.37 Passes Per Day (PPD) in 2004 to 0.63 PPD in 2006. The proportion of illegal

passes relative to the total number of passes recorded increased by 7% from 2004 to 2006.

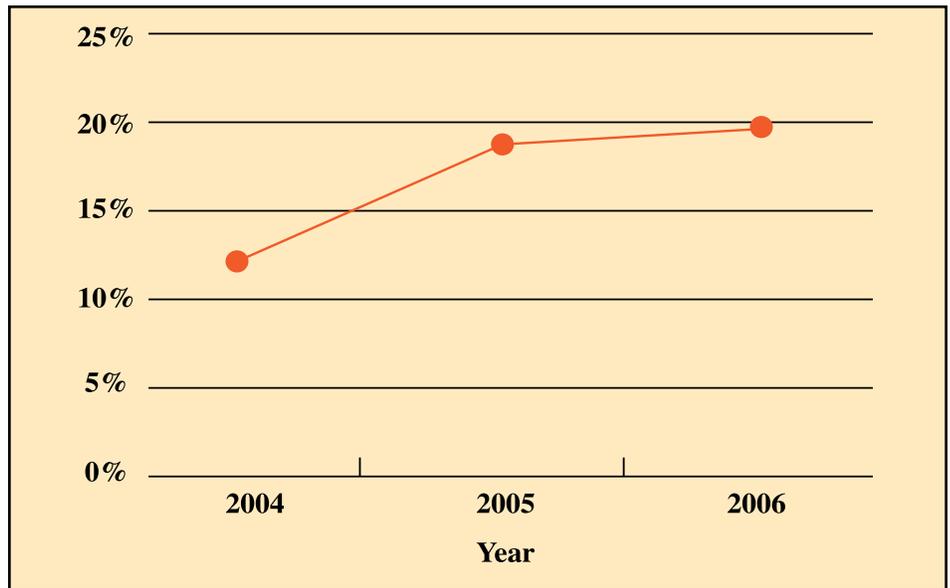
2) Extent of damage present

The amount of area damaged along all trails is approximately 20% of the total length of all trails. These damaged areas include 244 instances of trail braiding or widening. Trail damage was most common along trail sections farthest from the

Hummingbird Provincial Recreation Area. The number of Erosion Events (EEs) was as high as 5.58 per kilometre on some trails. The number of EEs associated with OHV use was proportionally higher than the number of EEs associated with equestrian use on six of seven trails. The combined footprint from random backcountry campsites in the study area was 50,574 m². This area is roughly equivalent to 32 NHL ice surfaces. Garbage was found and removed by AWA at 54% of campsites. We found more than one non-designated trail junction for every kilometre of designated trail in the trail network. We documented 89 trail water crossings throughout the network. Only 7% of these water crossings had formal crossing structures present, and 72% of the 89 water crossings went through a permanent water body.

3) Trends in motorized vehicle activity

There was 68% more motorized traffic recorded in 2006 than in 2004. On four trails with summer traffic counts, we found a 39% to 227% increase in vehicle passes over three years. Winter traffic counts increased on two trails by 46% and 163%



Percentage of illegal Passes Per Day per year out of the total number of passes. Data from designated trails only.

respectively, and declined on another trail by 95% over two winter seasons.

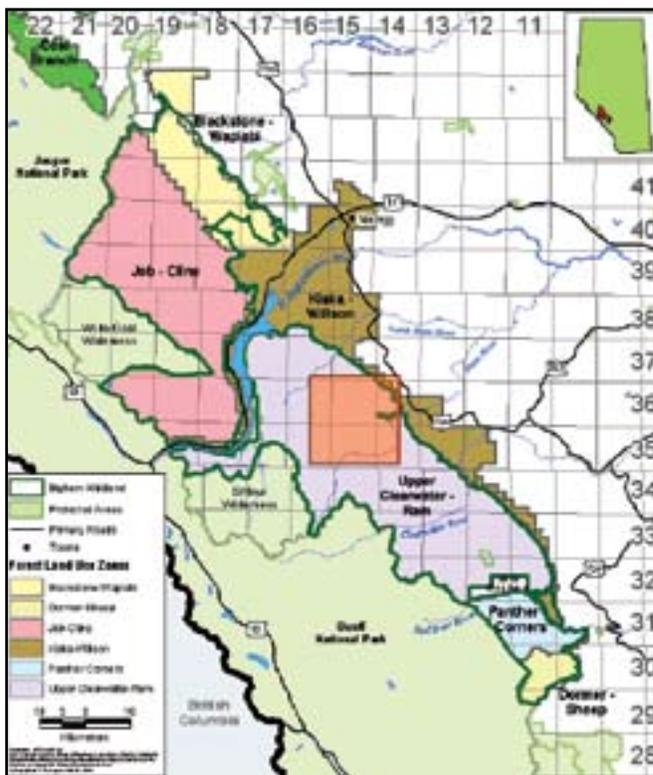
Discussion and Conclusion

Three lines of evidence strongly suggest that current management in the Bighorn Backcountry will not protect the environment from degradation caused by recreational impacts: 1) neither regulated use nor voluntary

compliance is reducing the amount of illegal use, 2) current levels of recreational activity are causing severe environmental degradation, and 3) there is a trend toward increasing user density. Given these lines of evidence, current management efforts in the Bighorn Backcountry are failing to meet the goal of the FLUZ regulations to protect “areas containing sensitive resources such as fish and wildlife and their habitats, vegetation, soils and watershed” (SRD). The extent and intensity of impacts reported here jeopardize the very possibility of a quality backcountry recreation experience in the future for all users and are inconsistent with wildlife habitat and watershed protection objectives in the FLUZ.

**For reference information, see the full report on our website: AlbertaWilderness.ca, Issues and Areas/Bighorn.*

Adam Ford is currently working as a wildlife research associate with the Banff Wildlife Crossings Project in Banff National Park, AB. Adam worked on the Bighorn project for AWA as a field researcher in 2004 and assisted with the analysis and writing of the final report.



General location of study area. The specific study area is indicated by the coloured square near the centre of the map. Legal land survey coordinates are shown along the right and top margins of the map.