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AWA

WILD LANDS ADVOCATE

THE ALBERTA WILDERNESS ASSOCIATION JOURNAL

Crowsnest Pass, Montane Natural Subregion PHOTO: D. MCINTYRE

Contents

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Features

Wilderness Watch

Departments

COVER PHOTO

Following Barbara Sherrington's death on December 27, 2008, writer and photographer David McIntyre sent this photo, taken in the Crowsnest Pass, to Barbara's husband, Peter, accompanied by these poignant words: "After racing through darkness over tortured topography, a river of snow comes to rest." These ocean-waves of white, frozen-in-place magic will melt to nourish the rare and endangered limber pine/whitebark pine forest that captured them. The Livingstone Range keeps watch in the distance.

FEATURED ARTIST

Born and raised in Saskatoon, self-taught artist Shelley McMillan has recently embarked on her painting career. Shelley's early enthusiasm for drawing led to a career in commercial and graphic art. After leaving graphics to raise two boys, she began experimenting with acrylic paints and large murals, which led to painting on canvases. An outdoor enthusiast and frequent explorer of the western provinces, she finally had an outlet for the inspiring vistas she loves. Shelley enjoys working with oils to capture the feelings evoked by evening colours and snowy shadows. She exhibits her work at The Collector's Gallery in Calgary, where she lives and works.

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Alberta Wilderness Association is a charitable non-government organization dedicated to the completion of a protected areas network and the conservation of wilderness throughout the province. To support our work with a tax-deductible donation, call (403) 283-2025 or contribute online at AlbertaWilderness.ca.

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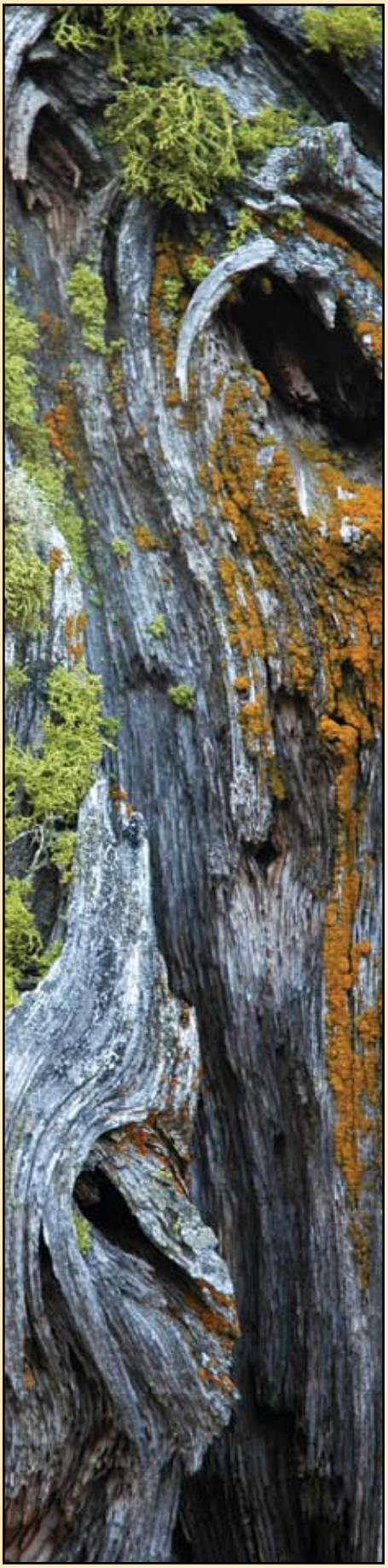


PHOTO: C. WEARMOUTH

Dollars and Sense

Why is it that, when poll after poll shows that Albertans care about protecting wilderness, we do not hold our politicians more accountable to our expressed desires? One reason may be a deeply entrenched belief that for an economy to be healthy, development must trump wilderness protection. In times like these, it's easier than ever to be convinced that extracting the earth's natural resources as quickly as possible, expanding our towns and cities, and endlessly buying and selling is needed to maintain our quality of life.

To borrow a phrase imported from Newfoundland, for many years I'd rather have eaten a bowl of sand than talk about money. But the impression often given by the media that the economy is a thing separate from human invention, a humanoid species with a life of its own, finally irritated me enough to admit the importance of money-talk. Even my rudimentary understanding told me that economies are human creations that are based on our values, needs, and desires. And as several writers in these pages point out, economies are wholly dependent on the finite planet we inhabit.

So this issue of the *Wild Lands Advocate* focuses on the relationship between the economy and the environment. AWA conservation specialist and water economist Carolyn Campbell eases us into the discussion with an overview of ecological economics and the implications for wilderness conservation. My thanks go to Carolyn for her expert guidance in gathering and editing all of the additional feature articles – WARNING: Don't attempt this at home without an economist holding you up!

With this issue, I end my tenure as editor of the *Wild Lands Advocate*. It has been a challenging, fascinating, enjoyable, and at times terrifying ride with many skilled and knowledgeable companions. "Thank you" seems a paltry response to the many writers, photographers, and advisors along the way whose answers to my requests for their volunteer time were invariably a cheerful and generous "yes!" To my AWA colleagues, past and present, thanks is not enough for your ongoing commitment to Wild Alberta, for your hard work writing timely and informative articles while responding to the overwhelming challenges facing Alberta's wilderness, and for enduring my rants about such minutiae as en-dashes, apostrophes, and verb tense forms.

Anyone involved in wilderness conservation in this province knows that the vision for adequate protection of our wild spaces must be long term: the battles are many and the victories few. Those who have persisted with the challenge over the years can only be applauded and admired. It has been a privilege for me to be part of the efforts of the outstanding AWA team.

I take comfort in knowing that I cannot save the world by myself – none of us can. Stopping and reversing climate change, species extinctions, and the shrinking of wild spaces will only come about through innumerable individual and community efforts. The words of Archbishop Oscar Romero, killed in 1980 in San Salvador because of his stand for justice, have inspired me for many years in my tiny part in the work for social and environmental justice. I leave them with you, hoping they will encourage you to continue your much-needed support of AWA and other individuals and organizations working toward change.

> *"This is what we are about: We plant seeds that one day will grow. We water seeds already planted, knowing that they hold future promise. We lay foundations that will need further development. We provide yeast that produces effects far beyond our capability.*
>
> *"We cannot do everything, and there is a sense of liberation in realizing that. This enables us to do something, and to do it very well. It may be incomplete, but it is a beginning, a step along the way….*
>
> *"We may never see the end results, but that is the difference between the master builder and the worker. We are workers, not master builders; ministers, not messiahs. We are prophets of a future not our own."*

– Joyce Hildebrand, Editor

Economics Meets Ecology – Lessons for Alberta Wilderness

By Carolyn Campbell, AWA Conservation Specialist

Wetlands such as this one north of Fort McMurray provide important carbon storage and water regulation services that have been under-valued in land-use decisions.
PHOTO: J. HILDEBRAND

Extract, alter, and trade. Our lives are filled with traded goods extracted from the earth. For countless generations, humanity has modified and traded materials in pursuit of sustenance and fulfilment. Few of us willingly stop once we've secured our physical necessities. In prosperous societies, we are able to and usually do accumulate and consume for personal development, enjoyment, and status for ourselves and our families. Many Albertans show off their big houses and vehicles, and many others aspire to do so.

As a young Albertan, I was concerned with how wealth was distributed, so I majored in economics at university. Economics is the study of how scarce resources are used to produce and distribute goods and services for the satisfaction of human wants. Like the discipline of economics itself, in the early 1980s I was somewhat but not overly concerned with environmental problems. As a social science, economics' central focus is human behaviour and institutions. (According to some prominent ecological economists, classical economics before the 1900s was fairly closely integrated with other natural sciences but later developed in isolation from them.)

As we all know, economic policies and measurements exert much influence over decision makers, in both households and governments. In the mainstream neoclassical economics I studied, the goods and services that counted were ones with prices. Unpriced offerings of nature, like plentiful clean air, were not a focus until they became scarce. Scarcity of resources is central to economics, but in a human-centred way: the supply of land, natural resources, labour, and capital is less than the human demand would be for them if they were free, resulting in prices on those assets. Traditionally, market-based prices are assumed to capture enough important information about the goods and services, and markets are assumed to function well enough, to permit a relatively efficient allocation of resources.

Traditional economics recognizes areas of market failure: so-called externalities exist when market prices do not sufficiently capture costs or benefits of a good or service, so its producers or consumers do not take its full effect into account. Societies have become aware of harmful externalities, such as some lethal chemical pollutants in air, land, or water, and have responded to these with regulations to reduce or end them. Economists have made recommendations to use taxes or subsidies, or in some cases to privatize public goods, to internalize the social costs or benefits of externalities into market-based prices. Nonetheless, even as the human economy was greatly expanding in relation to its supporting ecological systems, the study of economics by the early 1980s still treated market failures as exceptional rather than central. There was a dominant belief that price signals and technical change would resolve the shortages arising in market-based economies.

Sustainability and Economics

With the landmark 1987 Brundtland Commission report came a much wider awareness of the concept of sustainability. Sustainable development, in this report's classic definition, is development that meets the needs of current generations – with special emphasis on the importance of meeting the basic needs of the world's poorest people – without compromising the ability of future generations to meet their own needs. The first United Nations Earth Summit convened in 1992, further increasing awareness of the unsustainable demands being placed upon the earth's biosphere due to human commerce.

Meanwhile, ecological economics was emerging as a recognized international discipline in the late 1980s. Building on 1960s pollution awareness and 1970s concerns about population growth and limited food and energy resources, economists concerned about environmental issues focused on resource exhaustion and ways to price nature's benefits and human pollution. To this was added the ecological understanding of the earth's life support systems that

enable all human activity to occur. Herman Daly, a founder of ecological economics, encapsulated its perspective with his famous phrase: "The economy is a wholly owned subsidiary of the environment, not the reverse."

The influence of environmental thinking within economics continues to widen. In Alberta and Canada, and around the world, there are more analyses and efforts than ever before to attempt to integrate ecological and economic concerns. What are some of these integration efforts, and what do they mean for Alberta wilderness?

Some Ecological Economics Terms

Natural Capital: " Natural resources, such as water and oil, the land which provides space on which to live and work, and the ecosystems that maintain clean water, air and a stable climate. Unlike produced capital such as buildings and machinery, a significant portion of natural capital such as oil and species is irreplaceable. Natural capital is essential to sustaining all forms of life including human life. However, human activities are often responsible for the depletion of the stock and quality of natural capital." (Government of Canada website, "Economic Concepts – Natural Capital")

Ecosystem Goods and Services (EGS): "The conditions and processes through which natural ecosystems, and the species that compose them, sustain and fulfill human life." (Western Watersheds Research Collaborative, *Climate Change in the Bow Valley: Continuing the Dialogue*, 2008)

Implementing Ecological Economics

Let's start by recrafting the opening story of "extract, alter, and trade." Plants harness and alter energy from the sun to form sugars. Other life forms in turn rely on these plant sugars. Plants and animals die and decompose into soil, sustaining more plants and animals. These and other energy cycles, such as the water cycle, sustain life. These complex relationships of animate and inanimate energy exchanges are now being altered by humanity. Accumulating atmospheric and oceanic greenhouse gases, a thinning ozone layer, clearing of native vegetation, and species extinctions are all examples of global-scale impacts. Human commerce must recognize and account for the real common wealth of the biosphere to guide its activities.

Consumer Choices

One way all of us can incorporate environmental information into the economy is quite familiar – we can seek out and act upon information about ecologically sustainable practices in our commercial decisions. In economic terms, this leads to a better allocation of resources because it incorporates more complete information about product "quality" into market decisions. Labeling standards that bring reliable information right to the product make these consumer choices easier. As surely as certain car brands command a price premium because of their perceived superior reliability or performance, foods labeled "organic" command a price premium because of their perceived benefits to soil and water, to food growers' health, to animal welfare, and to consumer health.

One ecological labeling effort affecting Alberta's northern wilderness is the Forest Stewardship Council (FSC) certification process. The Forest Stewardship Council was created after the 1992 Earth Summit to define credible international standards for well-managed forests. By setting high standards and conducting regular audits of both environmental and human rights management practices, FSC would certify forests that would be recognized as acceptable sources of timber and other forest products. For a consumer item such as a book (or the *Wild Lands Advocate*) to carry the FSC label, its forest products must have been FSC-certified through all phases of extraction, manufacture, and distribution.

The FSC standard applying to Alberta's boreal forests, referred to as Canada's National Boreal Standard, was developed in August 2004. In September 2005, Alberta Pacific Forest Industries (Al-Pac) received the largest FSC forest management certification in the world for 5.5 million ha of its Forest Management Agreement (FMA) lands in northeast Alberta. Al-Pac is still the only certified FSC forest in Alberta. Its lease is enormous, roughly 9 percent of Alberta's total area; it extends from the Cold Lake Air Weapons Range at the Saskatchewan border west to Lesser Slave Lake and north to the Birch Mountains. More than 80 percent of the FMA is in the central mixedwood subregion of the boreal forest. At the time of certification, approximately 134,800 ha of provincial parks and wildlands were protected within Al-Pac's FMA.

How has FSC certification advanced wilderness conservation in Alberta? Criterion 6.4 of Canada's National Boreal Standard states: "Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources." Unfortunately, not a single new hectare of protected area has been established because of Al-Pac's FSC certification. In 2005, Al-Pac agreed to defer logging on roughly 4 percent of its certified lands and committed to work with other parties to achieve permanent protection and document its progress in doing so. To date there has been some progress in reaching agreement on logging deferrals with other forest companies holding overlapping tenures, and in expanding the areas on which Al-Pac itself will defer logging. However, given the intensity of energy industry, recreation, and other habitat-fragmenting activities over much of this landscape, its future remains precarious without permanent protection supported by the provincial government.

FSC is still widely viewed as the best forestry standard among the various certification processes used in North America. AWA and other environmental groups are still working within FSC audit processes to advocate for protected areas. But the FSC label alone, while signaling some useful information to consumers in the forest products marketplace, is no replacement for continued pressure on government and industry for permanent protection of significant wilderness areas.

What's Nature Worth?

Another major endeavour to integrate ecosystem knowledge into economic decisions involves promoting the concepts of "natural capital" and "ecosystem goods and services" (EGS) and assigning monetary values to

Because of the drastic effects of tar sands surface mining, at Al-Pac's request an area of approximately 292,000 ha in the mineable oil sands region was excluded from its Forest Stewardship Council certified area. PHOTO: C. WEARMOUTH

them (see sidebar, p. 5). None of the economists working on these valuations would claim that we are close to measuring the totality of sustenance and fulfilment provided to us by nature. However, within the bounds of economic trade-off decisions, this work informs us of what has been disregarded in land use decisions: the economic aspects of ecosystems (such as wetlands), their processes (such as wetland water filtration) and outcomes (such as clean water). Three recent examples of ecosystem services valuation illustrate the variety of approaches to increase awareness of that aspect of wilderness values.

In September 2008 a pioneering study of B.C.'s spotted owl habitat value was released (*The Economics of Protecting Old Growth Forest*, by Duncan Knowler and Kristin Dust, published by David Suzuki Foundation, Ecojustice, and Western Canada Wilderness Committee). The only spotted owl habitat in Canada is in old-growth forest in a relatively small area of southwestern B.C. The goal of this research was to compare the net economic values of this habitat under three land-use scenarios: 1) limited logging of suitable spotted owl habitat, as permitted in the current species management plan (under which the spotted owl population has continued to decline); 2) conservation – that is, no logging – of all current suitable spotted owl habitat; and 3) conservation of all current suitable habitat plus all adjacent logged land that could regenerate in time to suitable habitat.

To compare these scenarios, an annual monetary value was estimated for a few key ecosystem services provided by this forest: carbon sequestration and storage, non-timber forest products such as mushrooms, and recreational value. Because of uncertainty of their values, services such as water flow regulation, water quality, and biodiversity-related services were not estimated. Then the authors used three different timber price and carbon price assumptions. They found that for almost all scenarios except rising timber prices (at 0.2 percent annually above inflation) and the lowest carbon prices ($25 a tonne), increased forest conservation would yield a higher economic value than status quo logging. In economic trade-off terms, this wilderness habitat is more valuable to society if protected than if logged.

Another notable 2008 study is a comprehensive approach to valuing ecosystem services provided by Ontario's Green Belt (*Ontario's Wealth, Canada's Future: Appreciating the Value of the Greenbelt's Eco-Services*, by Sara Wilson, published by Friends of the Green Belt Foundation and David Suzuki Foundation). The Green Belt, established by Ontario legislation in 2005, is 1.8 million acres of environmentally sensitive and agricultural lands protected from urban development. It forms a horseshoe shape around metropolitan Toronto and extends northwest up the Bruce Peninsula.

The study values a range of ecosystem services including carbon sequestration and storage, rare species habitat, water runoff control, pollination, and recreation. The estimated average ecosystem-service values of Green Belt lands are $3,487 per hectare. By land type, the per-hectare estimated values are $5,414 for forests, $14,153 for wetlands, $1,618 for grasslands, and $477 for cropland. Unlike in the spotted owl habitat study, the author did not look at economic tradeoffs for alternative land uses of these protected areas. Rather, the value estimates are expected to help assess incremental costs and benefits of policy and investment decisions to enhance Green Belt ecosystem services.

To value water filtration services provided by wetlands and forests, the author used results of an American study of 27 U.S. water suppliers (reprinted in *The Economic Benefits of Land Conservation*, by The Trust for Public Land, 2007). This research found that for every 10 percent increase in forest cover in the suppliers' source water area (up to about 65 percent cover), treatment and chemical costs decrease by about 20 percent. It would be fascinating to see a similarly comprehensive study of water regulation values and other ecosystem goods and services provided by Alberta's Eastern Slopes to the Athabasca, North Saskatchewan and South Saskatchewan watersheds.

A third major effort has been the collaboration of independent ecological economists Mark Anielski and Sara Wilson in valuing Canada's boreal ecosystem services. Their approach is to estimate annual ecosystem service values and then compare them to conventionally calculated Gross Domestic Product (GDP) values. Their 2007 study of the Mackenzie watershed (which includes Alberta's Athabasca watershed) estimated an "ecosystem services product" at $450 billion per year, about 10 times greater than the region's GDP (*The Real Wealth of the Mackenzie Region*, published by the Canadian Boreal Initiative). Their revised 2008 estimates for Canada's entire boreal region are $703 billion of ecosystem services per year, or

13.8 times greater than the GDP of the watershed. The highest ecosystem service values are for carbon storage by forests and wetlands ($582 billion per year) and flood control and water filtering by peatlands ($77 billion per year).

I discussed the goal of this work with Mark Anielski. "Ecological service valuation can optimize our policy and resource development choices," he said. "It's about finding the 'sweet spot' of balance between getting GDP for sustained economic well-being of human communities, yet ensuring healthy ecosystems with a full spectrum of ecological functions." I asked whether tar sands mining projects would always out-value the ecological services in that region. "That all depends on whether there are 'diamonds' of EGS values that could be as important as the next barrel of oil," replied Anielski. "We would have to demonstrate that these ecosystem function values exist and may be at risk with resource development. Effectively, the surface mining area represents the complete loss of all ecosystem functions in the medium term; reclamation may bring some functions back. The social cost of carbon values, while high, are still eclipsed by the market value of oil, at least when oil is above $75 per barrel. The specific effects on water values for other people would have to be factored in too."

"Angel Glacier" 16x20 inches, oil on canvas © S. MCMILLAN

Anielski and land-use modeler Brad Stelfox are working on indicators that Anielski says will inform the Alberta government's Land-Use Framework regional planning. They can create polygons of ecological value by mapping subsurface values and land-cover types, and then overlaying these with ecological service values. I thought of the ecological "diamond" of the McClelland wetland complex in the mineable oil sands region. Can its unique topographical features and rich biodiversity be adequately valued so as to forego strip mining in its watershed?

Biodiversity, an important attribute of wild lands, is a challenging issue for ecosystem valuation. The 2008 boreal figures show $5.4 billion calculated for "pest control by birds," and while this is the fourth-highest estimated value in the study, it seems a limited and unsatisfactory appraisal of biodiversity. According to Anielski, the trick to ecosystem-service valuation is to demonstrate a direct linkage to human well-being and then to ascertain a money replacement value for that service. We spend money on nature-related activities and on pest control, so these can be valued. Right now, there is no rigorous way to assign a monetary value to the existence of diverse species *per se*.

However, ecosystem valuation can reinforce the importance of biodiversity and intact habitat. An ecosystem must have integrity – that is, it must have intact functions, processes, and natural array of interacting organisms – in order to provide ecological services. Anielski points out that there is considerable work being done in Alberta by Brad Stelfox, the University of Alberta's Stan Boutin, and others to understand and develop indicators of cumulative land-use impacts on ecosystem functions and integrity. According to Anielski, "The 'holy grail' of this analysis will be to demonstrate the relationship between incremental loss of ecological integrity and the direct impacts to economic, social, health, and ecological values that we can measure with some certainty."

Even so, Anielski is clear about the limitations of ecological services valuation. "Money is simply a human creation useful for exchange and making trade-off decisions. Ecosystem valuation is helpful in making economic trade-off decisions. Beyond that, we are in the realm of ethical decisions. It may be inherently wiser to forgo a development with net economic benefits because of the immeasurable, irreplaceable assets of a natural ecosystem."

Redefining Progress

Excerpted from "Return Trip: At Home and Away in Wilderness," AWA's 2008 Annual Lecture. *For more, see page 24.*

In order to engage citizens as advocates for the wise use of land, we need to be completely honest when we speak to the public or the media. Do we really think the dominating, domineering stance of the current global economic system can be rectified by fine-tuning? Or is wide-ranging, radical change necessary? If yes, we should say so. We've tried tinkering and it doesn't work. Surely reasonable people cannot continue to put their faith in the dangerous absurdity of a "sustainable, environmentally friendly, industrial growth economy."

Wendell Berry, the American poet, farmer, and very fine essayist, contends that conservation will always be bogged down "unless answered positively by an economy that rewards and enforces good use." Our present economy, he says, does not account for value: "it is simply a description of the career of money as it preys upon both nature and human society." I think we should be willing to voice our resistance.

Another way of veering toward an inescapable and long overdue confrontation is to compile, carefully articulate, and begin to shout aloud our own definition of progress because I know it is fundamentally different from the one foisted on us by those in power. If we don't accept that trying to achieve endless growth in a finite world is progress, if we refuse to agree that ever-increasing material consumption is the highest good and a useful measure of progress, we should say so. And we should offer our own ideas in rebuttal. We may need to tackle small issues one at a time, but we dare not ignore the overriding assumptions and the collective greed, fear, and selfishness that create them.

– Mike McIvor

Challenging the Concept of Economic Growth

Another distinct approach to integrating economic and environmental thinking is taken by individuals and groups who advocate for ecologically mindful living without conventional economic growth. They share some fundamental perspectives of ecological economics: that humans are a part of the ecosphere; that the world economy should not (and in the long run cannot) be bigger than the earth's ecological limits; and that we must devise institutions to better measure and educate about our impacts, and to manage decisions to bring our economy within these limits. However, in the global North, to get ourselves down to our fair and sustainable share of the earth's resources will require a profound change in our thinking and living. Advocates of these changes fundamentally question the expansion of goods and service production as a social goal, and material accumulation as a sign of individual well-being.

One such group, inspired by the Quaker tradition of seeking right relationships, has formed under the banner of the Quaker Institute for the Future's Moral Economy Project. Two Montreal-based members of this project, environmental lawyer Geoffrey Garver and McGill environment professor and tree farmer Peter G. Brown, have just published a book outlining these ideas, called *Right Relationship: Building a Whole Earth Economy*.

Garver and Brown start from a moral foundation: they declare "a reverence for life" in the humanitarian tradition of Albert Schweitzer, and they have recast conservation biologist Aldo Leopold's 1940s land ethic as "A thing is right when it tends to preserve the integrity, resilience and beauty of the commonwealth of life, which includes human communities." Moving from these first principles, they assert that the economy's role is for respecting and preserving life, not for getting rich.

I discussed with Geoff Garver some of the ideas of "right relationship" between our economic choices and the earth. "It's the golden rule extended to the earth," he said. "A key to changing our overall culture is a person's understanding of 'what's my fair share,' and then deciding to live that way." A greater awareness of our ecological footprint can really help with that. As well, wilderness areas can play a significant role by reminding us what the integrity, beauty, and resilience of the commonwealth of life truly means.

Old-growth forest in Lakeland Provincial Park. The economic value to society of unlogged forests such as this may well exceed their logged value. PHOTO: J. HILDEBRAND

Garver doubts whether the enormous effort required to systematically value ecosystem services and put "the right" price signals into the market place is really a solution, if we still rely on a growth paradigm. What about people's fear that foregoing economic growth will reduce jobs and harm their livelihood? "People focus more on that than our looming ecological crisis because we don't perceive long-term threats as easily as short-term ones," Garver replies. "But our current path is much more harmful to economic security and jobs. Besides, we can all focus on the abundant opportunities for individuals and our governments to invest in 'green paths' for society. There are lots of inspiring examples of people living more within a community's environmental and social bounds, and the fulfilment that comes with all those local connections." He cites as examples local vacations, community-supported agriculture, and innovative high-density communities such as Victoria's Dockside Green.

Douglas McCauley of Stanford University's biological science department wrote a far-sighted commentary in 2006 on the meeting place of ecology and economics ("Selling Out on Nature," *Nature*, September 7). He warns environmental scientists against placing much emphasis on economic or market-based mechanisms for conservation. He points out that while the biosphere provides us with many benevolent services, some aspects of nature conflict with human interests, and some parts neither help nor harm us directly, yet are worthy of protection. Moreover, future technological innovation may indeed lessen the cost of human-engineered alternatives to some ecosystem services, so that conservation plans must not be reliant on a cost-benefit analysis for public approval. Instead, McCauley urges conservationists to focus on instilling a love for nature in more people and on the moral imperative of preserving nature for nature's sake.

Integration of economics and environmental thinking can help us make better-informed land-use decisions. But it's still unlikely that approximations of monetary values will wholly encapsulate the values of wildlife and wild spaces. As wilderness advocates have known all along, we protect what we know and love, not just what we measure with money.

The GPI – An Alternative Measure of Progress

By Mike Kennedy

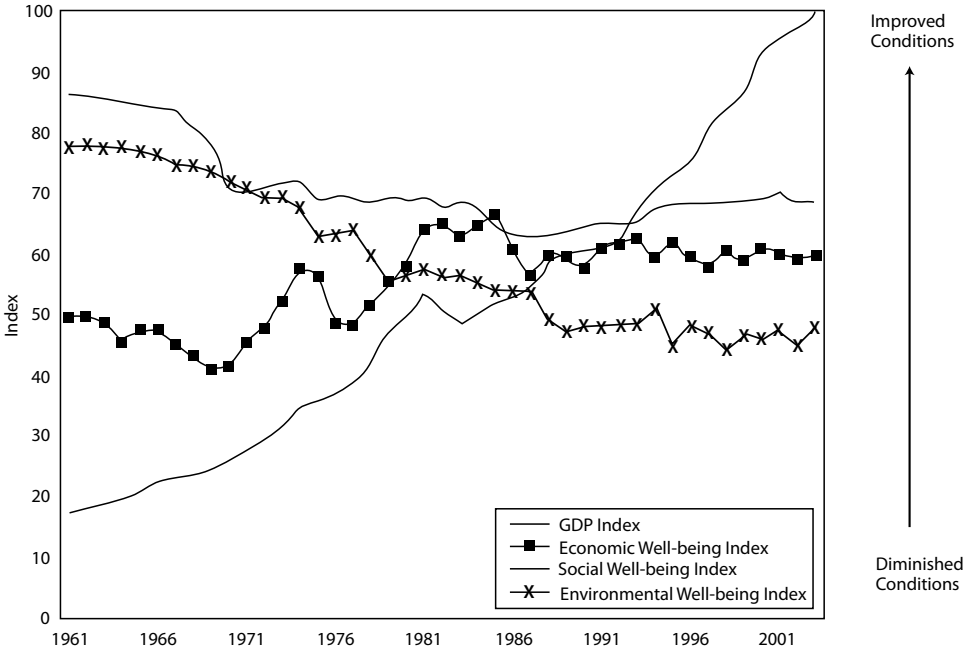
"In countries that are already very rich, we especially need to figure out if there are feasible alternatives to our hidebound commitments to economic growth, because it's increasingly clear that endless material growth is incompatible with the long-term viability of Earth's environment." – Thomas Homer Dixon, The Upside of Down *(2006)*

Economic progress as measured by captains of industry, senior government bureaucrats, and bank executives is commonly understood to equal growth in gross domestic product (GDP), the sum of the country's profits at every level of production for a particular period of time. It has become our compass that guides monetary policy, industrial planning policy, and, increasingly, environmental policy. The concern with this myopic focus on growth in GDP is that we treat every dollar produced as a contribution to our goals of an equitable, clean, and prosperous society.

Furthermore, the "gross" of GDP denotes that this measure of growth does not account for the depreciation of Canada's stock of natural resources and ecological services that results from irresponsible industrial development. What we now measure as our capital stocks, as currently defined by the Canadian System of National Economic Accounts, captures many key economic measures but falls short on measuring environmental and social well-being. In a natural resource-based and export-driven economy like those of Canada and Alberta, profits generally derive from the ecological system, causing environmental degradation that undermines the ability of future generations to arrange their economy to suit their needs and desires.

Global warming, an aging population, increasing immigration, ecological deterioration, global poverty and unrest: these challenges highlight the need for a measure of progress that is linked to a more holistic measure of quality of life. While our current system has improved global society's welfare, we are now stuck in the progress trap, defined by Ronald Wright as follows: "In pursuing progress, human ingenuity inadvertently introduces problems that the society does not have the resources to solve, preventing further progress. Social collapse is often the result" (*A Short History of Progress,* 2004).

As gloomy as this all sounds, we can recognize these times as an opportunity to redefine how we measure progress. A more advanced economy would incorporate true costs that take into account all forms of debit and credit. Our current measurement of progress (GDP) includes such debits as crime, accidents, obesity, and environmental degradation, all of which detract from our quality of life. These debits seem to equate to "progress," since they stimulate economic activity. For example, the cost of clean-up, transport, and treatment after 500 ducks landed in the Syncrude tailings pond in Fort McMurray in May 2008 added to the country's GDP.



Genuine Progress Indicator in Alberta, 1961 to 2003 (from "Genuine Progress? Alberta GPI," Pembina Institute, 2005)

Over the past 20 years, a number of alternatives to GDP have emerged, including the Human Development Index, the Happy Planet Index and the Index of Sustainable Human Welfare. The first alternative system applied to Alberta is the Genuine Progress Indicator (GPI). It was pioneered in Alberta in 2000 under the direction of Mark Anielski. In 2005 the Pembina Institute, led by Amy Taylor, conducted a Centennial Update of Alberta's GPI. While the GDP has five main accounts (consumption, investment, government spending, imports, and exports), the GPI has 51, each represented by an indicator. Indicators are grouped into three classes: economic, social, and environmental. The GPI's aggregate value is represented by an index that is formulated by balancing the accounts to compensate for positive and negative contributions to well-being.

The GPI work highlights some of the contradictions in Alberta's current progress trajectory. While GDP increased from 1961 to 2003, environmental and social well-being declined (see graph). As well, a broader definition of economic

"Hole in the Snow" 36x48 inches, oil on canvas © S. MCMILLAN

well-being – presenting incomes, economic diversity, and trade balance – showed much less positive progress than GDP denotes.

What is clear from this work is that for many Albertans, income levels have reached a point where additional satisfaction cannot be derived from further increases in monetary wealth. This is demonstrated by the fact that the GPI index – measured by aggregating the social, environmental and economic indices – declined from a rating of 76 in 1961 to a rating of 61 in 2003.

Eighteen of the 51 indicators used to measure the GPI index focus on the environment. Environmental indicators include such things as loss of wetland, reserve life of oil and gas resources, greenhouse gas emissions, hazardous waste disposal costs, and species at risk in the province. Alberta has not performed well on many of these indicators: the GPI analysis shows negative trends in petroleum reserves, energy use, greenhouse gas emissions, hazardous waste production, forest fragmentation, keystone species populations (caribou), area of wetlands and peatlands, and ecological footprint.

Some detractors of GPI and similar measures argue that in fact these systems, as alternative measures of wealth, do not go far enough in providing an adequate and effective measure of progress. According to Ian Miles, professor of technological innovation and social change at the University of Manchester, "The problem with all of these approaches is that the new summary statistic [e.g., an aggregate GPI measure] remains in important ways very opaque" (Paul Ekins, ed., *Real Life Economics: Understanding Wealth Creation*, 1992). He lists the following reasons:

- the user must refer to supporting materials to determine what discrete measures are being combined;
- a change in the summary statistic may be due to a change in one or more of the contributing indicators, or to some combination of them;
- the way in which indicators have been combined necessarily assigns relative importance to them, yet this is liable to be lost within the final result; and
- the wide-ranging types of stocks and inequalities are so dissimilar that it does not make sense to attempt to collapse them into a single scale.

Many opponents of GPI conclude that it would be preferable to move completely away from GDP to emphasize qualitative measures of progress. While this would surely enable society to better capture social trends, the transition away from GDP will take time and will likely be incremental rather than abrupt.

To summarize, it is very plausible that we assign great importance to economic progress in part because of our current measurement tool – economic growth is what GDP measures. Were we to use a more holistic measure of progress such as GPI, we might value social and environmental progress more than we do at present. If slowing development on agriculture lands or reducing childhood obesity would positively affect a region's holistic balance sheet, its policy makers might be more inclined to support such initiatives.

Alberta's economy and environment are currently in conflict with respect to progress measures. This will continue until we adopt a new form of decision-making based on a broader definition of progress and reflected in a broader measure of progress.

Mike Kennedy is a senior resource economist with the Pembina Institute's Green Economics and Policy program. He holds a Masters of Science from the University of New Brunswick with a concentration in natural resource and environmental economics.

Ecological Debt

The fossil fuel industry and its supporters attempt to shape the economic argument for the tar sands as the need to "balance the environment and the economy." A new public relations offensive launched by the Canadian Association of Petroleum Producers in the summer of 2008 admits that there are ecological detriments in tar sands development but coyly poses the question: "Can we balance the environment and the economy?" Of course, their own answer is yes, but there is an assumption embedded in the question that must be challenged – namely that the environment and the economy exist separately from each another. In fact, our ecosystems are the source of all economies and the paramount question then becomes, can any economic activity be carried out in a way that does not compromise the long-term sustainability of the ecosystems on which it relies? Or to use language that people in the global South have introduced, what kind of ecological debt is being incurred, and who will have to pay it?

Excerpted from "Christian Faith and the Canadian Tar Sands," September 2008, KAIROS: Canadian Ecumenical Justice Initiatives

Buying and Selling Alberta's Water – To Whom, For What, and How Much?

By Danielle Droitsch and Meghan Beveridge, Water Matters

During 2006 and 2007, the public battle over the $15 million sale of water rights to support the building of a mega-mall in Balzac raised the profile of Alberta's emerging water market. More importantly, it spurred a debate over how to protect the public interest – including the interest in healthy rivers – as water rights are sold to the highest bidder. The discussion heated up when, in late 2007, the Eastern Irrigation District (EID) asked for the right to distribute water for uses other than irrigation agriculture. The request raised public debate over who should control water in an increasingly water-scarce region. If the government had approved this request, the EID would have set a dangerous precedent by circumventing the existing water rights trading system, which has government oversight, opportunities for public input, and possibilities for restoring river flows.

Controversies like these indicate that Alberta has not yet settled on the most effective system for water allocation. Demand for water coupled with declining river flows induced by climate change is exacerbating water scarcity in southern Alberta. While demand is on the rise, irrigation districts still hold the majority of rights to water (over 76 percent of allocated water) in the South Saskatchewan River Basin.

There is little certainty, based on population projections and current water-use rates, that southern Alberta communities will have enough water in coming years. The Calgary Regional Partnership (CRP) predicts that High River, Okotoks, and Strathmore will exceed their water licences by 2012, Turner Valley by 2016, and Black Diamond, Canmore, Cochrane, and Nanton by 2028 or sooner. Based on the CRP study, most shortfalls could be addressed by a 30 percent reduction in water use by 2030; however, even with such a reduction, Okotoks, Strathmore, and Cochrane will maximize their water licences by 2012, 2015, and 2031, respectively.

This irrigation canal is part of the Western Irrigation District's infrastructure to deliver water from the Bow River to more than 400 farms, 96,000 acres of land, and more than 12,000 people in four different communities.
PHOTO: WATER MATTERS

In 2001, a dry year, the Bow River held less water than had been allocated to water users. Even during the wet year of 2005, "approximately 46 percent of the average annual natural flows of the Bow River were either diverted or consumed, and many of the existing licenses were being underused. At the lowest reaches of the river, 68 percent of the average flows had been allocated for withdrawals. During low flow years, these allocations can be as high as 80 percent" (CRP, *Summary Report,* 2007). Climate change predictions anticipate warmer temperatures and melting glaciers leading to reduced stream flow and less water availability overall – for humans and rivers.

The closure of the South Saskatchewan River Basin (SSRB) to any new surface water licences in 2006 ushered in a new era of water management: new demand must be met either with groundwater, which is inadequately understood, or by reallocation of surface-water rights.

The1996 *Water Act* enables water rights holders to transfer all or a portion of their water licence to another user. Since this transfer system was introduced to southern Alberta, 26 water rights transfers have occurred. Issues related to the effective implementation of a water market (i.e., water transfer system) include protection of river flows, adequate availability of water to current and future populations, effective government oversight, public access to information, and planning for climate changes and future occurrences of drought. In short, any future water market must effectively address these issues.

In September 2008, the Government of Alberta announced that it would review the entire water allocation system. This review might not only alter the system for re-allocating water through water rights transfers but also change the entire water allocation system. This review could challenge the more than century-old allocation principle, "first in time, first in right" (FITFIR; see sidebar, p. 12), and change how we allocate water in the province.

Currently, Alberta's water rights trading system addresses some social and environmental interest for water by requiring the following:

- Public review of permanent transfers
- Consideration of hydrological impacts

Water Right: The right of a user to divert a specific amount of water from a source (e.g., a river, stream, lake, or groundwater). Water rights in Alberta are authorized by a water licence, a legal document issued by Alberta Environment under the *Water Act*. Each licence states the terms and conditions of the user's water right including the purpose of use; the volume, rate, and timing of diversion; and the source of water, as well the licence's priority during water-short periods.

- Consideration of impacts to third parties
- Conservation holdback to keep up to 10 percent instream (although discretionary)

In our view, however, Alberta's trading and overall allocation system fails in a number of ways. Ecosystem flows remain relatively unprotected in the central and northern basins and are already compromised in southern basins. Water rights trading will lead to currently underused licences being more fully used and thereby leave less water in the rivers. And the FITFIR priority system continues to favour heavily old irrigation licences to the detriment of small and rural municipalities, new economic users, and the environment.

We can learn from other jurisdictions to help define what will be most appropriate in Alberta. In Australia, water rights are now generally based on shares of available water, rather than volumes. As water availability varies year to year, users share the burden of scarcity and benefits of abundance. To prevent environmental harm, Australian states set aside water for environmental needs. In the U.S., Oregon has a water rights trading system very similar to Alberta but has the added component of the Oregon Water Trust, which facilitates buying or leasing water rights for environmental instream purposes.

Alberta's challenge is more than just grabbing a smattering of advanced water policy from around the world. We need to find tools that specifically address the context of the province's water flow and water use. As the government considers how to revise the current allocation system, including the trading system, the examples and comparison to Alberta point to a number of possible improvements. Any system of allocation or trading should be able to adapt in times of drought as well as predicted climate change impacts by, for example, changing licenced volumetric amounts to shares of what water is available each year or season. All water allocation decisions should be transparent, accessible, open to public input, and subject to periodic review, while minimizing transaction costs as much as possible. Ultimately, any future water sharing will need to take the river's needs into account.

It is critical that Alberta's system offer more than a good process. Hard choices need to be made to determine priority uses and a priority scale for approving transactions (e.g., secure water for environmental and basic human needs first, followed by allocations to other users). Basic human water needs should be guaranteed at reasonable cost to current and future Albertans and the water allocation system must respect First Nations' water rights. Allocation decisions should prioritize purposes of water use. Environmental flows in central and northern basins should be afforded legal protections – through environmental allocations and water trusts, for example – while new strategies to restore flows to southern basins should be identified and pursued.

How we choose to share water will not only determine the health of our rivers for future generations; the choices will shape the resources and choices available to society in the future. This is true for southern Alberta, already challenged by scarcity. But central and northern Alberta are also anticipating serious water demand challenges. The Edmonton region's population growth and burgeoning industrial heartland will challenge the abundance of the North Saskatchewan River. Expanding requirements for water withdrawals from the lower Athabasca River for oil sands extraction, particularly during winter low flows, mean that hard decisions in this region are just around the corner. It is vital that Alberta begin to address these challenges in thorough open, public dialogue. How Alberta shares water among new and current users while protecting basic human and environmental needs for water will determine the future health of this province.

Bassano Dam is where the Eastern Irrigation District withdraws water from the Bow River. These withdrawals cause extremely low flows in late summer. On this day, August 9, 2006, the flow below Bassano Dam was 9 m^3/sec; the flow in Calgary (above all irrigation diversions) on that day was 82 m^3/sec. PHOTO: WATER MATTERS

Danielle Droitsch is executive director of Water Matters, a non-profit organization concerned with protecting Alberta's watersheds. A former director of the Alberta Water Council, Danielle holds a law degree and a Bachelor of Science.

Meghan Beveridge, a policy associate with Water Matters, researches water policy issues in Alberta. Her Masters of Environmental Studies focused on water policy, ethics, and Alberta's Water for Life strategy.

FITFIR: The principle of "first in time, first in right," on which Alberta's water allocation system is based. This principle ensures that the earliest granted licensee (the "senior" rights holder) is entitled to receive the entire amount stipulated in the licence before the next "junior" licensee can receive any water. In times of water shortage, a junior licence holder could be unable to access water unless they can find an existing senior licence holder willing to transfer all or a portion of their licence temporarily as an assignment or permanently as a water rights transfer.

The Economics of Suffield

By Dr. Thomas Power

Dr. Power is a research professor in the Economics Department at the University of Montana in Missoula and was one of the Suffield Coalition's expert witnesses at the hearing for EnCana's Shallow Gas Infill Development Project in the Suffield National Wildlife Area. Following is an abridged version of Dr. Power's October 15, 2008 submission to the Joint Review Panel at the hearing.

The Suffield National Wildlife Area was set aside in 2003 to protect rare native prairie habitat for more than 1,100 known species of plants and animals. PHOTO: A. TEUCHER

One of the oldest insights of economics is the principle of diminishing returns. The general idea is that as we pursue a particular type of production or consumption activity to the exclusion of other things, after a point the value to us of additional units of that production or consumption declines and the value of those things we have been ignoring rises. This principle has important economic implications for evaluating EnCana's proposal for infill drilling in the Suffield National Wildlife Area (NWA).

That proposal is just a small part of very extensive natural gas developments that cover the prairie lands across southern Alberta and southwestern Saskatchewan. As a result of those developments and other human activities, intact natural prairie lands have become increasingly threatened and rare while natural gas wells have become increasingly prevalent and common. In that setting one would expect the value of unique prairie ecosystems, such as the NWA was intended to protect, to rise relative to the value of the small increment of additional natural gas that could be obtained by further drilling in that NWA.

We have lots of one thing, natural gas, and ever-shrinking amounts of another, intact prairie ecosystems and the natural services they provide. At some point, as more and more land is committed to natural gas production and other commercial economic activities, the natural area values associated with the increasingly scarce native prairie lands will exceed the incremental value of the natural gas that could be extracted. At that point it would be economically rational to protect the remnant prairie lands by choosing not to further occupy and develop those lands for natural gas.

The concept of opportunity cost seeks to measure what it is we will actually go without when we choose one course of action over another. It is relevant in this case because central to a decision on infill drilling is the question of what we would gain or lose if the infill drilling does or does not proceed.

That opportunity cost can be measured by asking how producers and consumers coordinated by markets would adjust if the infill drilling in the NWA is not approved. In response, EnCana and other natural gas producers are likely to invest in developing a natural gas resource somewhere else that might not be *quite* as attractive an investment. The price of natural gas might go up slightly, encouraging natural gas consumers to consider using natural gas more efficiently or shifting to another source of heat or energy.

One thing we can be certain of, however – we will *not* simply go without the energy services that the infill drilling might have provided. We will adapt and meet our needs in another way. The opportunity cost is the *difference* in the cost of obtaining an increment of natural gas from the Suffield NWA and the cost of satisfying our demand for energy services by other means. It is that difference in the cost of these alternative sources of energy services that we lose or gain.

Given that the alternative might simply be an infill investment in some other southeastern Alberta natural gas field, the difference in cost, the opportunity cost of not proceeding with the Suffield infill proposal, is likely to be quite small. It could actually be negative. Cost-effective improvements in the efficiency with which we use a smaller amount of natural gas may cost less than the gas itself, improving overall well-being while also reducing the risk to the NWA.

There is something economically disorienting about proposals to "conserve" natural gas through infill drilling in a natural area of national significance while doing almost nothing to use the gas so produced as efficiently as possible. In that economic setting, there is no opportunity cost to leaving the gas in place and pursuing energy services by investing in those energy efficiency measures instead. In fact, there is an economic loss associated with pursuing the gas because that is the higher-cost

PHOTO: A. TEUCHER

alternative. When the environmental risks and costs associated with still more natural gas development in the NWA are also included, the loss is likely to be even greater.

Natural gas is a commercial commodity that is not desired directly but serves as an *input* in consumption and production processes that serve our needs and desires. There is not just one way to keep our homes comfortable or our businesses energized. There is a broad and constantly expanding range of alternatives to, or substitutes for, the small increment of natural gas that might come from infill drilling in the NWA. In the short term, EnCana and/or other energy companies will simply produce more natural gas somewhere else. In the intermediate term, investments will be made to increase the energy services obtained from every unit of natural gas and other energy used. We will learn how to serve our need for energy services at a lower and lower environmental cost.

While there are readily available low-cost substitutes for the energy services that would otherwise come from infill drilling in the Suffield NWA, the same is not true of the NWA itself. EnCana recognizes the uniqueness of this natural area at the national level. It was that uniqueness that led it to be included in the NWA system to begin with. Business firms cannot "manufacture" several or even one new Suffield NWA. Basically, the NWA is irreplaceable. That means that the cost associated with its damage or loss is the full value of that natural area, not just the difference between its value and some close substitute. There is no close substitute.

Looking forward, the gap between these two values, the natural gas commodity value and the environmental values, will grow. While technology and manufacturing will allow us to continue to develop alternative ways of obtaining energy services with as little environmental impact as possible, technology and manufacturing will *not* provide us with any more unique natural areas. In fact, past trends that have steadily reduced the number of intact natural areas will continue to shrink that supply.

Because of the ways in which technology can be brought to bear to extend our access to energy services at relatively low cost but cannot be brought to bear to replace the loss of unique natural systems, over time the economic value of places like the Suffield NWA will increase relative to the energy resources that might be further extracted from it. That steady rise in the future economic value of a preserved NWA must be kept in mind when decisions are made today about pursuing every last bit of natural gas that might be extracted from that unique natural area.

To threaten the Suffield NWA in the pursuit of a small amount of additional natural gas is to risk irreversible damage to a unique irreplaceable gift of nature in the pursuit of what today remains a relatively common and cheap commodity that is quickly consumed and for which there are many substitutes. *Sacrificing the unique and valuable for that which is common and plentiful can only be described as economically irrational.*

At this point, EnCana intends to leave 57 percent of the original gas in place because it is not profitable to extract it. Most mineral resources in the earth are left in place because the cost of extracting and processing them exceeds their value. Leaving in place a small amount of natural gas that would be financially profitable for EnCana to extract is not an economic waste if doing so protects the unique values associated with the Suffield NWA. Just as EnCana weighs the private costs and benefits, and concludes that it is not a "waste" to leave 57 percent of the gas in place, it also would not be a "waste" if, after considering the values associated with the Suffield NWA, it were concluded that the high public costs associated with damaging those values justified not proceeding with the proposed infill development.

The decision by the Saskatchewan government to put the most environmentally sensitive parts of the Great Sand Hills off-limits to on-site natural gas development in order to protect their natural area values is an example of a government judgment that the environmental costs of natural gas development can be so high that it is not worth pursuing the natural gas resource. It should be kept in mind that the Great Sand Hills are not part of the Canadian NWA system.

The employment opportunities, payroll, and provincial revenues that the proposed infill drilling would produce are, as EnCana points out, negligible or insignificant from a regional and provincial point of view. Jobs, income, and government revenues provide no economic justification for threatening the ecological integrity of the Suffield NWA.

The economically rational decision for the Joint Review Panel to make is to reject EnCana's proposal to drill many more natural gas wells in the Suffield NWA. The NWA is a unique, irreplaceable natural asset whose value is high and growing because of the ongoing cumulative development activity on Canada's prairie lands. On the other hand, the small increment of energy services that additional drilling in the NWA could produce are easily and cheaply replaced by investments in energy efficiency or other common substitutes. When the costs of mineral development exceed the value of the mineral, it is economically rational to leave the mineral in the ground. It makes no economic sense to damage the Suffield NWA once again.

See page 15 for an update on the Suffield Joint Review Panel hearing.

LUF Door Slammed on Environmental Groups

The final version of the government's Land-Use Framework was released in early December. The province will now be divided into seven planning regions, not six: the huge Southern region has been split in two.

Regional Advisory Councils (RACs) for each of the seven regions will produce regional plans, and the Alberta Environmental Network, of which AWA is a member, was asked to submit nominations for the first two (Lower Athabasca and South Saskatchewan). The environmental community was bitterly disappointed when the membership of the Lower Athabasca RAC was announced in December with no environmental representative. The RAC includes two representatives from the forestry sector and three from the oil and gas industry.

– Nigel Douglas

Suffield in the Balance

The Suffield Joint Review Panel released its report and recommendations regarding EnCana's proposed drilling project in the Suffield National Wildlife Area (NWA) on January 27. The Suffield Coalition is pleased with the Panel's confirmation of the NWA's primary role – to protect wildlife. The final ruling from the federal government will determine whether this irreplaceable remnant of native prairie is truly protected.

The Panel's report concludes that if the project proceeds, certain requirements must be met first, including Environment Canada's identification of critical habitat for five species at risk. This would place approximately 95 percent of the NWA off-limits for industrial activity. Under the *Species at Risk Act*, such activity can only take place within critical habitat areas if a permit is issued by Environment Canada. Should EnCana be successful in receiving such a permit, the company would then have to apply for facility approval from the Base commander.

EnCana challenged the commander's authority during the hearing. The Panel report addresses this issue directly: "[T]he Base commander has the authority to effectively deny an application for a well, pipeline or related facilities, if he is of the view that its construction or operation would interfere with the conservation of wildlife. In the Panel's view, such a decision would be final and determinative."

AWA believes that the only appropriate decision is to prohibit any further oil and gas development in the NWA. We urge Canadians to write to the federal Defence and Environment Ministers, and to the Prime Minister, asking for a denial of EnCana's application with no possibility to reapply.

– Joyce Hildebrand

Petro-Canada Sullivan Hearing Extended

Kananaskis Country will have to wait another few months to find out whether Petro-Canada will receive the go-ahead to drill 11 new sour gas wells and construct 37 km of new pipeline. The Energy Resources Conservation Board (ERCB) hearing into the company's proposal, which began November 12 in High River, was initially scheduled to run for 10 days, finishing up on December 1. Wrong!

Another eight days were scheduled, but even this was not enough. Clearly the issues surrounding the project – including implications for grizzlies and wolves (see pp. 22 and 23), cutthroat trout, and water quality – turned out to be more complicated than expected. And so the hearing recommenced in late January 2009. It is encouraging that the ERCB is taking its time to hear all the arguments in favour of, and against, the proposals.

One of the lasting impressions of the hearings to date is the strength of feeling aroused by speakers such as Royal Adderson of the AD Ranch. Adderson talked about his historic ranch, and in particular about the clean spring that is the sole supply of water for the ranch and its lands. Petro-Canada's central facility – including compressor, fans, and flare – is planned immediately adjacent to the spring. It can only be hoped that the force of the submissions made by Adderson and others will not dissipate as the weeks and months pass by until the ERCB makes its final decision.

Check the RSS Feed page of AWA's website, albertawilderness.ca/RSS/e-News.rss, for daily hearing updates.

– Nigel Douglas

The Peace be Dammed

Just days before Christmas, the joint federal-provincial panel charged with deciding the future of the Peace River near the town of Fairview in northwest Alberta recommended that Glacier Power Ltd.'s 100-megawatt run-of-river hydroelectric project be approved.

The dam is to be built across the entire width of the Peace River two kilometres upstream of Dunvegan Provincial Park. It will be 11.4 metres high and house 40 turbines, ramp fishways, and a boat lock. The dam will raise water levels immediately behind it 6.6 metres, creating a headpond running back 26 km upstream.

AWA, along with Canadian Parks and Wilderness Society Northern Alberta, Peace Parkland Naturalists, and the South Peace Environmental Association opposed the project, fully participating in the project's hearing. Concerns included the project's impacts on fish and other wildlife, and the loss of its wilderness character. Fish expert Dave Mayhood and fluvial geomorphologist Dr. Michael Church presented evidence on behalf of the coalition.

Despite our valiant efforts, the Joint Review Panel, comprising representatives from the Canadian Environmental Assessment Agency, the Natural Resources Conservation Board, and the Alberta Utilities Commission, determined that the project was in the public interest, noting that the net benefit to the region outweighs any potential negative effects. The panel's report goes to the federal Minister of Environment and the Government of Alberta, both of which are responsible for the necessary approvals before the project can go ahead. The report's executive summary is available online at www.ceaa.gc.ca.

– Chris Wearmouth

Wind Farm Threatens Cypress Hills

Concerned Albertans will have another chance to voice their opposition to the proposed Wild Rose Wind Farm

in the Cypress Hills Interprovincial Park Fringe Area 45 km southeast of Medicine Hat in Cypress County. On September 23, 2007, Naturener Energy Canada Inc. purchased 100 percent of the shares of Alberta-based West WindEau Inc., the original project proponent. Naturener subsequently withdrew the project application because the turbines will be louder than the manufacturer had originally stated.

Naturener has re-applied, using the same documentation as for the previous application. The Environmental Impact Statement for Wild Rose 1 Project was approved in May 2008, and a public open house is planned for 2009. The plan includes 82 turbines, each 80 m tall with 38-m blades.

Although AWA supports alternative energy development, such development is not always as "green" as it may appear. Since the leased land base for the wind farm proposal has not changed, AWA has the same concerns as with the original application. Because the Cypress Hills are an ecological island in the midst of an ocean of grassland, the species that live here are particularly vulnerable, and a protected buffer zone is critical to their continued protection.

This development would seriously degrade the area's natural features. New roadways required for construction and maintenance of the turbines would introduce non-native species, and bird mortality from the turbines could lead to the elimination from the area of species such as the endangered burrowing owl. The ecological values of this significant, largely intact area of native prairie should not be compromised for an industrial development that could be placed in more appropriate locations on land that is already disturbed. Such locations have equal or greater potential for economically viable wind farms.

– Joyce Hildebrand

AWA Seeks Records on Caw Ridge Inquiry

As part of AWA's ongoing request of the provincial government to hold a public inquiry into coal development on Caw Ridge, we have applied under the *Freedom of Information and Protection of Privacy Act* (*FOIP*) for access to records regarding a similar process begun almost a decade ago. In December 1999, the Energy Resources Conservation Board, then the Energy and Utilities Board, initiated a public inquiry after recognizing "concerns expressed by several parties with respect to development of Caw Ridge." Caw Ridge is prime habitat for the largest mountain goat herd in Alberta and transects the migration route of the Redrock-Prairie Creek herd of Alberta's threatened woodland caribou.

The past inquiry process was adjourned in early 2000 because the coal leaseholder at the time, Smoky River Coal Ltd., went into receivership. Since a new operator, Grande Cache Coal Corporation, is now mining in the vicinity of Caw Ridge, AWA has asked the Premier to reactivate and complete the public inquiry. As part of our FOIP request, AWA has asked that all fees be waived, as the records in question serve the public interest. In November, Sustainable Resource Development granted a partial reduction of fees. Upon AWA's request, the FOIP commissioner is reviewing the decision and will respond by mid-March. AWA believes it is important to obtain a complete fee waiver, as it will set a precedent for future similar requests.

– Chris Wearmouth

Plan for Parks

Last fall we alerted you to the Alberta Parks Department planning process and our concerns with the resulting Plan for Parks because of a lack of vision and focus on protected areas. The recent *Survey of Albertan's* [sic] *Priorities for Provincial Parks* (September 25, 2008) commissioned by Alberta Parks, Recreation and Tourism clearly emphasizes Albertans' wishes for increased protection of wild areas and less spending on facilities for motorized recreation. The department's plan, however, does not reflect these priorities.

AWA believes it is vital to designate more areas representative of our natural regions for protection in an undisturbed state. The primary purpose must be protection of the natural environment from harm and degradation so that we will have healthy ecosystems characterized by the dominance of natural processes, the presence of a full complement of plant and animal communities characteristic of the region, and the absence of human constraints on nature – *wilderness*. AWA will continue to work with the Parks Department toward a vision that will complete the system of protected areas in Alberta.

– Christyann Olson

ERCB Denies Pipeline Applications

The Energy Resources Conservation Board (ERCB) has denied permission to two companies seeking to build gas pipelines in Alberta. In October, OMERS Energy Inc. (OMERS) was denied permission to construct a 1.6-km sweet gas pipeline, which would have crossed Highway 16 east of Edmonton. Local landowners argued successfully that other alternative pipeline routes had not been adequately investigated; other, shorter route options would have involved considerably less surface disturbance. The Board ruled that, although OMERS would have had to address some regulatory issues before it could have tied in to the existing pipeline, "sufficient information was not provided by OMERS to demonstrate that other feasible alternatives were adequately pursued" (Decision 2008-092).

In December, ERCB's predecessor, the Energy Utilities Board (EUB), issued its decision (2008-127) denying Shell Canada permission to drill a sour gas well and construct two pipelines and a central facility close to the town of Beaver Mines in the Castle area of southwestern Alberta. Shortly after the initial EUB hearing into Shell's proposals ended in October 2007, a nearby Shell pipeline ruptured, causing a sour gas leak that forced the evacuation of 10 homes, with other residents ordered to stay in their homes. Subsequently, the Board delayed its decision on the Shell application until investigation of the pipeline leak was complete; the final report on the leak was published in October 2008.

In its decision on the Shell applications, the EUB ruled that "sufficient details have not been provided on how Shell will operate and monitor the proposed pipelines to ensure their integrity over the long term." Interveners, including the Castle Crown Wilderness Coalition, argued that the ERCB should convene a public inquiry into the whole Shell Waterton gathering system.

According to *Oil Week Magazine* (January 30, 2008), a staggering 895 pipeline leaks were recorded in Alberta in 2006, up from 875 the previous year.

– Nigel Douglas

"Dirty Gas" in Rumsey Natural Area

By Nigel Douglas, AWA Conservation Specialist

Q: When is a protected area not a protected area?
A: When it is in Alberta and it sits on top of gas reserves.

Although many protected areas in Alberta allow activities that one would not usually associate with protection, few have experienced the industrial deprivations that Rumsey Natural Area has suffered – and continues to suffer. If Alberta's oil sands have become the poster child definition of "dirty oil," then maybe Rumsey is the perfect example of "dirty gas."

It is difficult to over-emphasize Rumsey's international importance. It is the largest area of aspen parkland in the world and one of only two sizeable representatives of the Parkland Natural Region in Alberta's protected areas network. The fact that less than 1 percent of the Parkland Region is protected in Alberta only increases its significance, and this makes Rumsey's brutal treatment in recent years doubly puzzling.

Latest in a long line of abuses of this protected area is a two-km pipeline quietly constructed by Paramount Resources in November 2008. Alberta Wilderness Association (AWA) and Alberta Native Plant Council (ANPC) have had an established interest in Rumsey for many years. At a June 3 meeting with Paramount and Alberta Sustainable Resource Development (ASRD), both organizations requested an opportunity to review the environmental assessment for the future pipeline project and to be kept informed of future project planning. Nevertheless, neither was informed of the construction of the pipeline until after the event.

After the pipeline construction was completed, AWA and ANPC were provided with copies of Paramount's short and perfunctory environmental assessment (EA). In a professional review of the EA, the two organizations concluded: "The environmental assessment struggles to meet minimal requirements and guidelines. It fails many of the tests for acceptable practice, especially for a protected area."

The Rumsey area is a mosaic of aspen woodland, grassland, and wetland habitats – a hummocky, knob-and-kettle landscape that is nearly extinct. PHOTO: L. FITCH

The review pointed out a number of deficiencies in the environmental assessment, including the following:

- No breeding bird surveys were carried out.
- Despite there being no survey for amphibians, the EA concluded: "Its proximity to wetlands in the vicinity of this proposed project should not affect potential amphibian habitat." No explanation or evidence was given for this conclusion.
- Despite stating that wetland surveys were carried out "to insure compliance with ASRD guidelines requiring a 100 m setback from ephemeral and permanent wetlands," the project violated those guidelines by being constructed within four ephemeral wetlands.
- Rare plant surveys were carried out only in July, thus increasing the possibility of missing early-flowering rare plants.
- The potential for invasion of non-native species into native plant communities as a result of the project was not considered.
- No cumulative effects assessment was carried out.

The cumulative effects of so many developments would be of concern in any area, but in one of the province's flagship protected areas, it is a disgrace.

Perhaps the most significant aspect of Rumsey's management – or mismanagement – is that nobody within the Alberta government is willing to stand up for this protected area. The decision to allow this development with such a minimal environmental assessment and without consulting with other interested parties shows a distressing lack of commitment to the area. As the EA review points out, "The environmental assessment fails in most aspects as a credible framework to guide development in a sensitive way, in a sensitive area, with sensitive species. It is troubling that government managers accepted this EA as satisfying the condition for pipeline construction."

AWA and ANPC want a new management plan for the Rumsey area, one that truly honours the previous commitment to "ongoing and meaningful public involvement."

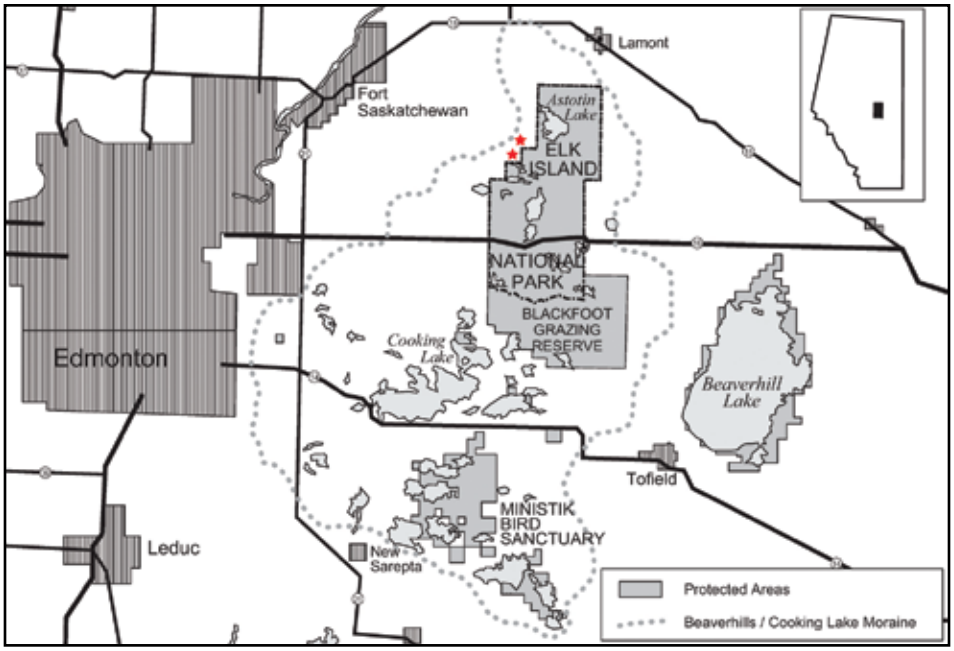
Energy Development Squeezes Elk Island National Park

By Joyce Hildebrand, AWA Conservation Specialist

More than a century ago, Ellsworth Simmons watched the wolf, bear, and cougar disappear from the Beaver Hills, east of Edmonton. Even with Alberta's sparse human population of 73,000, intense hunting, trapping, and development pressure was devastating wildlife habitat and threatening to extirpate elk from the province.

When Simmons could no longer stand by and watch the destruction of this place he knew so well, he took action. Together with four other local men, he petitioned the federal government to create a fenced wildlife sanctuary for elk in the Beaver Hills. The five men invested personal resources, posting a $5,000 cash bond as a guarantee that within 10 days of the fence being built, it would contain at least 20 elk. The government acted on the petition, establishing Elk Park in 1906. Ellsworth Simmons served as the first supervisor of this 42-km Dominion Wildlife Reserve, which began with a herd of 24 elk, a few moose, and 35 mule deer. The house built for Simmons in the park still stands as the oldest superintendent house in Canada's national park system.

Avrum Wright and Cole Shirvell inherited their Great Uncle Ellsworth's love for the park, redesignated in 1930 as Elk Island National Park. Today they echo their ancestor's alarm as oil wells are drilled, pipelines dug, and roads constructed just a few hundred metres from the park boundary. "My grandfather homesteaded here," says Wright, who was born in the 1950s and raised on a farm near the park. "The Simmons family, my mother's side, was here before Alberta was a province." The family still owns land next to the park, and many family members have been park employees over the decades.



The two red stars mark the approximate locations of two oil wells recently drilled within several hundred metres of the park boundary. (Adapted from Figure 1, Elk Island National Park Management Plan, 2005)

The Beaver Hills Moraine

Elk Island National Park (EINP) sits entirely within the Beaver Hills Moraine, a geomorphological feature that covers 1,572 km^2. Its extensive forests, uplands, wetlands, and knob-and-kettle hummocky terrain stand in contrast to its surroundings and provide habitat to diverse plants and animals, including several rare species. "The shared resources this area offers – clean and abundant drinking water, clean air and biological diversity – are valued components of a currently viable ecosystem," says an ecological primer prepared by the Beaver Hills Initiative, a multi-stakeholder group focused on enhancing collaborative decision-making about the use of this environmentally significant area.

The portion of the moraine contiguous with the park is not protected. Studies have shown that the effects of an "edge" created by human activity can penetrate a natural ecosystem for a considerable distance. For that reason, it is widely recognized by today's ecologists that for an area such as Elk Island to maintain its ecological value, it needs to be surrounded by a "buffer zone," a filter to minimize direct human impact on the protected area. Human activities in these surrounding zones must be managed in such a way as to protect ecological functions within the protected area. Buffering can help to maximize the long-term viability of native species and natural systems within the protected area. While the official boundary of EINP may remain the same, its ecologically intact area shrinks as human activity comes closer to its edge.

Unfortunately, despite a Parks Canada attempt in the mid-1980s to discuss landscape issues outside the park with the intention of establishing a buffer zone, such a zone has never been formally declared. Until now, the park's surrounding area has remained relatively intact. "This strip between the park and the agricultural land in the County of Strathcona is pretty much unaltered from its natural state," says Cole Shirvell. "There are now some residences there, but because it's marginal land, it wasn't cleared. It's still very much the way it was."

Elk Island National Park. "A national park has ecological integrity when … people use the park and its surroundings in a way that respects the needs of [its] plants and animals and allows for natural processes." (EINP Management Plan, 2005) PHOTO: J. GEARY

But with Iteration Energy Ltd.'s recent drilling and pipeline approvals, this has already begun to change. Two of the company's new wellsites and accompanying access roads are within several hundred metres of the park boundary (7-7-54-20-W4 and 1-17-54-20-W4). A pipeline and a battery facility have been approved for the 1-17 wellsite, and a pipeline application submitted for 7-7. (An objection to the latter has delayed the approval process.)

In order to determine the current status of these developments, AWA attempted to contact Iteration. After numerous phone and email messages over several weeks, Iteration's VP of Corporate Affairs finally responded by email: "Iteration has no comments at this time about any of their existing or planned wells for the area around EINP. What I can tell you is that Iteration has entered into a Memorandum of Agreement [2008] with EINP and the County of Strathcona in regards to how operations are handled in this area." She then referred AWA to those organizations for further details.

Strathcona County confirmed that the wells have been drilled and access roads built; the access route to the 7-7 well expanded the landowner's existing access. New and expanded routes open the area to non-industry motorized traffic and subsequent damage, including habitat fragmentation and the spread of invasive species. According to EINP biologist Ross Chapman, "Exotic very aggressive weeds … infiltrate the park on a regular basis. Tracking them and eliminating them before they spread in the park is a top priority for us" (email communication, 2002). This is exactly what buffer zones help to prevent.

Shirvell is concerned about increasing motorized access to the area. Until now the area has remained largely undisturbed because of its relative inaccessibility, but Iteration's access routes will change that. "We've had problems in there before," he says, referring to off-highway vehicle users. "The road will make the problem even more difficult. It will allow people to penetrate more deeply into the zone around the park." He emphasizes that a large healthy population of wildlife exists outside the park. "We have all of the species except for bison," he says, adding that some people accessing this area on off-highway vehicles are armed, and that poaching has been a problem for some time.

Deirdre Griffiths is a former chief park naturalist with EINP. Now an ecological consultant with wide experience, Griffiths opposes Iteration's development. After examining topographical maps of the area, she concluded that there may be drainage toward the park from the land where Iteration is drilling. "That means that there is potential for contamination by surface or subsurface drainage into a series of wetlands and small lakes that go directly to the southwest corner of Astotin Lake in the park," she says. "It's also one of the more remote sections of the park, so it is valuable habitat and the activity will constitute a disturbance in what seems to be a previously undisturbed area. This is part of a big block of important habitat that extends beyond the boundary of the park."

Elk Island Policy

Excerpts from the 2005 Elk Island National Park Management Plan clearly articulate the importance of keeping the area surrounding the park from being developed:

- "Ecosystems extend beyond park boundaries. Activities on neighbouring lands affect the park's wildlife, water, and vegetation."
- "Land use around the park increases fragmentation and decreases habitat connectivity."
- "In spite of its fence, Elk Island National Park is not a closed ecosystem. It is neither self-sustaining, nor immune to influences from beyond its boundary."
- One of the listed "issues of greatest concern" is "landscape fragmentation and loss of habitat connectivity as a result of development and human use in the park and surrounding area."

The park's 1999 Ecosystem Conservation Plan also stresses the importance of maintaining the integrity of the area outside park boundaries. In a review of the plan, the park's Science Advisory Committee noted, "The impact of external stressors on the ecological integrity of the park became increasingly evident at the beginning of this decade when the park became peripherally involved with an oil and gas development issue outside the park boundary."

But the park's management plan also states that "people are a fundamental part of the ecosystem" and that human needs, both social and economic, cannot be ignored. To attend to those needs, Parks Canada "will encourage sustainable development" outside the park. It appears, however, that encouragement from Parks Canada is easy to ignore when an oil and gas company has an Energy and Resources Conservation Board approval in hand. An email from EINP's Ross Chapman lists some "concerns" that EINP communicated to Iteration Energy in June 2008 about their activities, including the following: "Oil/gas companies are encouraged to locate their wells/batteries at least one kilometre

"Reeds II" 36x48 inches, oil on canvas © S. MCMILLAN

from the park boundary." The two wells and associated infrastructure in question are only a few hundred metres from the park boundary.

Who has Authority?

The fence that surrounds EINP marks the boundary between federal and provincial land. "Parks Canada does not have legal or policy jurisdiction outside park boundaries," says EINP Superintendent Marilyn Peckett. "However, we work with our partners in the Beaver Hills area to enhance the sustainability of our park and maintain key connecting ecological corridors identified through the Beaver Hills Initiative Land Management Framework." Indeed, "regional cooperation" is one of the pillars of the EINP Management Plan. One of the key actions toward the objective of creating an integrated network of protected areas is to "participate in environmental assessments or provincial/regional environmental reviews of projects outside the park that are likely to affect the park's environment."

"Our concerns with any applications for development near the park," says Peckett, "are directly related to potential impacts to the park such as habitat fragmentation, invasive weed management, watercourse diversions or disruption." EINP's response to that concern is to work with oil and gas companies to mitigate the inevitable damage (see "Mitigation – Cosmetics or Compensation," *WLA* June 2008 for a critical look at mitigation in Alberta). "In many cases," adds Peckett, "if we are able to work with developers in the early stages of planning, these impacts can be mitigated."

Strathcona County encompasses the area where Iteration's controversial activity is occurring. County councillor Alan Dunn has no doubt about the power of the petroleum industry in this province: "Oil is king around here. Nothing else matters." Although the county's 2007 *Municipal Development Plan* acknowledges that the Beaver Hills Moraine "supports a variety of significant and sensitive environmental features" and that there is a "desire to protect this important natural area," the county has very little control over energy development.

"Under the *Municipal Government Act*, oil and gas is exempt from the county's authority," says Lori Mills, Energy Exploration Liaison for Strathcona County. "As a county, we have to allow access to property. We can't deny access to a granted use." A county development permit is not required for battery construction or well drilling. "We can guide location, design, safety," says Mills. So although Strathcona County's *Municipal Development Plan* zones the region near the park as non-industrial, when it comes to oil and gas development, that zoning is largely irrelevant unless something large, such as an upgrader, is proposed.

The county is dealing with increasing energy development pressure by stressing the importance of cooperation, mitigation, and "balancing the environment with the social and economic needs of the community" (*Municipal Development Plan*). In an attempt to achieve that elusive balance, the county has established an Energy Exploration Committee and developed an Energy Protocol in 2004. When Iteration notified the county about their development plans, as all energy companies are required to do, the county called a meeting that included a county biologist, an Elk Island National Park biologist, and an Iteration land man. "From there, we worked out some measures and best practices to mitigate the activity," says Mills, who stresses the importance of education of landowners and industry. "If Iteration goes to a new landowner, they will hand out information from Elk Island regarding the importance of maintaining the ecological integrity of the area. The more information, the more educated people become." But education, while important, is a slow process, and a few colourful brochures aren't much of a match for King Oil.

In the end, county policy, however progressive, is not enforceable. "We can only ask that everybody cooperate," Mills says, adding that monitoring is part of the plan. "We will be touring the sites with Iteration on a regular basis. Elk Island works with some of the landowners in that area and will be watching. We have agreements in place to do some soil and water tests, and we have reporting procedures."

But the consequences of industry breaking agreements or refusing to cooperate are unclear. Councillor Alan Dunn remains skeptical. "If ever there is a dispute between an energy development company and anybody else," he says, "energy wins." With respect to the county's Energy Protocol, "larger companies follow it to some extent. Smaller companies very often say, 'Stick it in your ear.' We run the gamut between those extremes of attitudes." He points out that the protocol has no legal teeth whatsoever. "We try to encourage the energy companies to cooperate."

In 2000, increased awareness that the important Beaver Hills ecosystem was disappearing led to the Beaver Hills Initiative (BHI). Its initial purpose

was to increase awareness of the ecological uniqueness of the Beaver Hills area and to build collaboration among stakeholders in the area. BHI comprises representatives from three levels of government (including EINP), academia, industry, and non-government organizations. According to the project's vision statement, the BHI "values the region for its natural beauty, quality of life, and supports co-operative efforts to sustain quality of water, land, air, natural resources and community development."

But there is a glaring gap in the declaration on the BHI website that "the resulting new land management practices and policies will create balance between recreation, agriculture, industry and residential subdivision." How does "ecological integrity" fit in? Although words like "ecological uniqueness," "sustainable communities," and "conservation" are liberally sprinkled throughout the BHI literature, there appear to be no strong objectives about environmental protection. The BHI Protected Areas Working Group has as its main objective "to encourage a higher level of collaboration between all agencies dealing with conservation lands in the Beaver Hills." And Alberta Energy is glaringly absent from the five provincial departments that are BHI partners.

Landowner Perspectives

The promise of mitigation and best practices is no comfort to Avrum Wright. "This pipeline-well issue ... is an incursion on the sanctity of the area," he says, recalling the days when he had to negotiate his way around the moose on the front lawn in order to catch the bus to school. And Iteration has not been particularly forthcoming in providing him with information about its activities on the park boundary. "They're being tight-lipped, as is standard with industry."

Not all landowners on the edge of the park have the same viewpoint as Wright and Shirvell. Shirvell acknowledges that many are aging and are anxious to take advantage of the economic opportunities offered by oil and gas development on their land, so rather than voice objections, they negotiate with industry. He recognizes as well that most landowners don't own the energy resources and so can do little to stop development on their land. "This is a serious grievance for landowners in Alberta," he says. "In some cases where these wells and roads are being built, landowners can't stop it." After receiving its development approval, an energy company must strike a deal with the landowner as to compensation for surface access. If a private agreement cannot be reached, the Government of Alberta decides on an appropriate compensation and development proceeds.

Shirvell has unsuccessfully fought energy development on his own land near the park, but he continues to manage his land with a high priority on ecological integrity. "I have similar objectives to the national park, except that I don't have the mandate for recreation." He is distressed about the perception that the land surrounding the park is "wasted" unless its mineral resources are extracted. "It is producing a benefit to the people of Alberta, and to the national park," he says. "It is being used. I don't like the land being characterized as wasted."

The connection that Wright and Shirvell have to the history of the area is part of what fuels their passion about preserving the park's integrity. "The residents of the surrounding area paid for the park, built the park, ran the park," says Shirvell. "It's so different from any of the other national parks in Canada, which were created by decree from Ottawa." Shirvell grew up listening to his mother's stories about regular visits to the park as a young girl. Members of his family were there in 1907 when the first bison were unloaded from the boxcars that had carried them from Montana. And he makes no attempt to hide the family skeletons: "One of my ancestors was the first poacher who was successfully prosecuted for hunting inside the park."

The buzzwords of today – collaboration, mitigation, reclamation, sustainability, partnership, balance – will do little to protect the unique ecosystem of the Beaver Hills Moraine from the damage that industrial development will inevitably bring, no matter how assiduously it is mitigated and reclaimed. Only if we, the people of Alberta, recognize that the value of this diverse landscape is much greater than the "natural resources" that underlie it will Elk Island National Park be spared from the nibbling away of its edges. And even recognition won't do it unless it is accompanied by a determined, vocal defence of the park and its surrounding lands.

Elk Island National Park provides an opportunity for wildlife viewing and other recreational pursuits to a large surrounding population, including residents of Edmonton, only 45 minutes away. PHOTO: J. GEARY

Wolves on the Range

By Chris Wearmouth, AWA Conservation Specialist

One of the many dangers that Alberta's wolves face is death by collision. This wolf, the leading female of the Bow Valley wolf pack, was killed on the Trans-Canada Highway in August 2008. PHOTO: PETER A. DETTLING/WWW.TERRAMAGICA.CA

The wolves of Willow Creek, after a century of persecution, are enjoying a wary co-existence with the area's ranchers. But it's one that might be short-lived should human presence increase in the southeast corner of Kananaskis Country. "We've been trying to preserve the wolves and have the cattle too," says Barbara Gardner from her home in southwestern Alberta.

Gardner and her husband, Harvey, operate Bluebird Valley Ranch at the north end of Chain Lakes. She says that having carnivores such as wolves, cougars, and grizzly bears on the landscape can help ranchers control the elk and deer that compete with cattle for grazing. But although area ranchers want to keep wolves on the landscape, they also suffer wolf predation on their cattle.

Ranchers have been in conflict with wolves in southwestern Alberta since the time of settlement. From the beginning of the last century to the 1950s, wolves in Alberta were shot and poisoned, with a bounty on their heads. Their numbers dwindled and they remained scarce until the 1970s, when the widespread use of poison declined. Today, livestock losses to wolves occur mainly where agricultural land meets forest reserve, including the Willow Creek and Pekisko Creek drainages.

In recent years, a pack established itself in these drainages. Although in 2004 Alberta Fish and Wildlife officers killed six members of this pack following recommendations of a local stakeholder group after significant losses to cattle, recent years have also seen an effort to limit predation on cattle through non-lethal means so as to maintain the pack on the landscape.

In 2003 ranchers, including Gardner's husband, Harvey, gathered with conservationists, professional associations, and government personnel to form the Oldman Basin Carnivore Advisory Group. This multi-stakeholder group was created to provide input and advice to Alberta Sustainable Resource Development on managing large carnivores, initially focusing on wolves. During the next few years, ranchers and researchers tried several non-lethal tactics to discourage wolves from preying on cattle. Using telemetry from radio-collared wolves, Willow Creek ranchers were able to determine wolf locations and adapt their management accordingly.

Gardner believes that the group's efforts have been successful; although individual wolves have been culled, they were repeat predators on cattle and were removed in hopes that the rest of the pack would not adopt the behaviour that would necessitate further culls. For now, ranchers in the Willow Creek area seem to be coexisting with their wild canid neighbours.

But this tenuous respite for the Willow Creek wolves could be jeopardized if their home territory is subjugated to increased human presence. Gardner says there is a big problem with motorized recreation displacing wildlife, pushing prey species and therefore wolves closer to the ranches. "With this everybody-can-have-their-recreation-everywhere policy, I don't think there is any hope," she says. "We're going to lose the wolves because if you're a rancher and wolves are killing your cows and no one is doing anything about it, they're going to get shot."

Another current threat to wolves in the area is Petro-Canada's proposed Sullivan Field development (see p. 15). The Sullivan proposal includes a 51-km trunk pipeline (37 km of which are new) to be built through the territory of the Willow Creek pack, including near the wolves' traditional den site and play areas for pups. In a report prepared for the hearing, wolf researchers Charles Mamo and Timmothy Kaminski state that the wolves will likely abandon these areas and move closer to private land with livestock present, increasing wolf-cattle conflicts.

It could be issues such as these that tip the scales out of favour for the Willow Creek wolves. Gardner recognizes the problems that she and other area ranchers, not to mention the wolves, face should there be an increase in human presence in the pack's territory: "We're going to have way more encounters and it's the wildlife that will end up dead."

Kananaskis Grizzlies – When Enough is Enough

By Nigel Douglas, AWA Conservation Specialist

Although the desperate plight of Alberta's grizzly population is well known on a provincial scale, it was put into a more localized context at the recent Energy Resources Conservation Board (ERCB) Sullivan hearing in High River. The hearing into Petro-Canada's plans to drill 11 new sour gas wells and build 51 km of pipeline in southern Kananaskis began in November 2008 and has continued on into February 2009.

Grizzly bears took centre stage at the hearing on Day 15, when wildlife biologist Grant MacHutchon presented to the panel. MacHutchon, working for the Foothills Research Institute, was field coordinator for the Alberta government's grizzly bear population studies between 2005 and 2007. He began his submission by confirming the perilous state of the province's grizzly bear population: "It's likely that when the whole area that grizzly bears occupy is surveyed, the actual population in Alberta will be less than 500 bears, whereas back in 2000 it was thought to be a thousand bears." The 2006 study estimated that the area between Highways 1 and 3 (which includes the Petro-Canada project area) held "about 90" bears.

Although Petro-Canada's environmental assessment (EA) found that "effects on grizzly bear mortality risk are predicted to be high in magnitude, regional in extent and long-term in duration," it went on to conclude that this would be of "moderate environmental consequence." MacHutchon disagreed with this conclusion.

Given a regional grizzly population of 90 bears, said MacHutchon, current mortality rates – 3.5 to 4 bears per year since the spring hunt suspension – are at the very limit of what grizzly bear populations can sustain, if not above that limit; any additional mortality risk "is potentially not sustainable." MacHutchon stated that Petro-Canada's EA represents "an understatement … of what the potential mortality risks are on grizzly bears," adding that the cumulative effects "would add up to more mortality than the population can really sustain long term. "Extra mortality risk could come partly from unauthorized motorized access, he explained, even with a gated pipeline route. MacHutchon commented on the ineffectiveness of access controls: "No matter how good a job you do at it, there's going to be increased human access and, therefore, increased risk to grizzly bears in the area."

"Bears and humans can coexist on the same landscape if there is a willingness to conduct human activities in ways that are conducive to grizzly bear conservation." (Alberta Grizzly Bear Recovery Plan 2008-2013)

PHOTO: R. SINCLAIR/RODSINCLAIR.SMUGMUG.COM

But increased access of any sort would likely have an impact on grizzlies: "It's not just motorized use we're talking about here.… Any time there's more people coming into what was otherwise secure grizzly bear habitat, bears tend to die." Increased foot access for hunters, which would increase the likelihood of encounters between bears and armed humans, is one of the most significant sources of bear mortality. As MacHutchon pointed out, the risk is "increasing the quality of habitat to the point it brings a bear in, but then it's therefore potentially more likely to die at human hands."

MacHutchon also alluded to the fact that it would be inappropriate to consider in isolation this one individual project while ignoring the cumulative effects of other activities that have an impact on the same landscape, a suggestion supported by landscape ecologist Dr. Brad Stelfox when he presented to the hearing four days later. Stelfox pointed out that all land uses in the region have a "growth mandate," but the Sullivan proposal only represents "one company and one of its projects at one particular time." He suggested that it makes more sense to allow the province's Land-Use Framework process to unfold first, before we limit future choices. "There is a role for regional planning," he said, "but it shouldn't come at the end; it should come at the beginning."

At the end of his submission, MacHutchon concluded that, if approved, Petro-Canada's project would lead to a "significant adverse impact on the sustainability of the Livingstone grizzly bear population." Stelfox took things a stage further. Referring to the conclusions of his 2005 Southern Foothills Study, which looked at the long-term cumulative effects of numerous different activities on the landscape, he confirmed the dire predictions for grizzly bears: "If something doesn't change, this species will be lost from this regional landscape."

Return Trip – At Home and Away in Wilderness

By Mike McIvor

The following is an excerpt from AWA's 2008 Martha Kostuch Wilderness and Wildlife Annual Lecture, November 14, 2008. To hear Mike McIvor's entire lecture, go to the AWA podcasts at www.albertawilderness.ca/AWRC/Podcasts.htm.

Mike McIvor's entire presentation, generously sprinkled with his characteristic humour, can be heard at albertawilderness.ca/AWRC/Podcasts.htm. PHOTO: C. WEARMOUTH

Last day of our trip. The trail angles downward. I'm not sure what Diane is thinking but I've banished all trivial thoughts and am plodding along wrestling with a profound question: what do I want most from life: a thick chocolate milkshake or a tall mug of cold beer? We're completing a circuit that probed the eastern edges of the Continental Divide. The scenery was spectacular. We saw stark cliffs, rugged mountains, shimmering glaciers, sparkling streams, larch-fringed meadows, and a mountain goat or two. A few days ago, we were anxious to get started, eager to leave behind the hustle and bustle of everyday life. Now, as we sense the end of the trail, we know we have been away in the wilderness.

A few years ago, it occurred to me that the arguments in favour of protecting wilderness had undergone a significant shift. In the days when Diane and I first became involved almost 40 years ago, wilderness, from the point of view of its protagonists, was primarily a place you went backpacking. With debates over future land use in Alberta heating up, AWA became the most articulate and ardent champion of Wildland Recreation Areas, both as a concept and as specific, proposed sites. Yes, we catalogued various components of the ecosystem, but in many respects the landscape was background, scenic backdrop.

One of AWA's great early publications, "Wildlands for Recreation," begins almost poetically with an attempt to invoke the feelings engendered by wilderness: the deep connections, the welcoming solitude, the sense of timelessness, the liberating sensuality. Have these feelings changed for you? I doubt it. I know they haven't for me. Now imagine a similar publication, written today. What would we highlight? Threats to ecological integrity, endangered species, barriers to ecological connectivity or its global converse – invasions by non-native species.

Out of sheer necessity, we have shifted emphasis to the crucial role of wilderness in preserving functioning ecosystems and ecological diversity. I fear, however, that we may have forgotten something valuable in the meantime. These days when I attend presentations about wilderness – and I mean serious presentations, not depictions of self-indulgent adventuring – I encounter a broader flow of information than in the past: more relevant facts and figures about ecological conditions, status of wildlife, land-use trends in surrounding areas; more graphs and tables; more insightful assessments of current political realities. But often something is missing. Driven by a keen determination to convey the seriousness of the situation, wilderness advocates seem less able or less willing to convey a sense of our own excitement about these places.

Perhaps we are deliberately downplaying our self-interest to contrast with the aggressive self-interest displayed by exploiters. Or perhaps we have been persuaded that reason prevails and reason alone must underlie every position. But don't complete human beings come replete with emotions? Why shouldn't we be celebrating the land as well as protesting pending abuse?

Edward Hoagland wrote that "the jubilation of discovery" is the defining characteristic of wilderness experience. (I might add that it would be a pretty good defining characteristic of our lives.) We should be expressing more of it in our advocacy because the people we hope to motivate will be touched by different things. For some, warnings about the future may be sufficient to provoke engagement; for others, the catalyst may be a response to the nature of the place in question. Sanctuaries are essential for wildlife but they are essential for people too. And the best sanctuaries are wild.

Now let's move to my second area of concern: the constituency for protection of nature in general and wilderness in particular. I think it is fair to say that all of us in the conservation community are frustrated by our inability to mobilize with sufficient force to accomplish our objectives. Too often, lone, heroic voices are heard when a chorus in necessary. I want to poke away at one piece of this puzzle. I am convinced the single biggest obstacle to meaningful change in the direction of more appropriate relationships between humans and the rest of the world is the growing degree to which more and more people are disconnected from that world. An increasingly urbanized – and wired – populace is losing touch with their

origins, their sustenance, their place in the universe.

As more and more of once-natural landscapes are paved over, built on, or, in tiny slivers, converted to homogenous "green space," the most sensitive observers will undergo what Robert Michael Pyle calls "the extinction of experience" while the newest and youngest among us will fall victim to a silent affliction identified by David Wilcove in *The Condor's Shadow* as "generational amnesia." You can't remember what you didn't know, and without knowing or remembering, there can be little caring. If we want more caring we must work on the knowing.

In *Earth Alive*, published in 2006, two years after his death, Dr. Stan Rowe insisted that human ecology, the search for a healthy people-planet relationship, should be at the core of education. For him, "the basic goal of a liberating education [is] understanding what it means to be human in a living world." Being human in a living world demands we overcome the drag of ecological, or nature, illiteracy. It means finding a cure for Nature Deficit Disorder, a malaise pinpointed by Richard Louv in *Last Child in the Woods*. Scientists studying ecosystems often refer to indicator species. Louv offers his own version of "an endangered indicator species: the child in nature." I believe if we want support for natural landscapes to grow in the future, we need more children in nature now. And adults. Parents and children together, expanding their worlds and feeling connected in visceral ways. I am certain that without exposure to nature, without even tentative connections, there will be no embrace of life other than the self or the purely human.

If we accept that the kind of connecting we hope to see can come only from genuine, intimate contact with nature, we need to think carefully about where. Nature is not generic; it is intensely specific and firmly attached to place: prairie, boreal forest, mountain, stream-side, ridgetop. Human connections must be grounded in the local from the beginning, or context will fade. Will there be as many tears for the tiny remnant herd of mountain caribou in Banff National Park if they disappear as were shed for the baby elephant that died in the Zoo?

Hiker on Loaf Mountain in the Castle, southwest Alberta. AWA has been working for more than 40 years for better protection in this spectacular region. PHOTO: N. DOUGLAS

As we have been dashing from one crisis to another, we have become better at saying where we don't want people than where we do want them. With our full attention on what we have determined to be the most ecologically valuable, sensitive, and vulnerable landscapes, we have little time to identify areas that might be capable of handling more intensive use – and I am not talking about industry or motorized recreation. If we want others to care more, and to offer their support, they need the opportunity to experience wild, or at least semi-wild, places. Should we be spending some proportion of the time we devote to areas we don't want trampled to finding areas that could handle, with appropriate management, a certain amount of trampling, a degree of intensive use that will enable more people to contact nature and begin to develop those vital connections? We won't be able to save the big wild if we don't have smaller, less wild places that many people can touch. Can we accomplish this without feeling we are creating sacrifice areas, compromising too much? It's worth a try. But it will require us to define some parameters because any opportunity for contact is wasted if all that is expected is entertainment. So, no toys, no artificial distractions. Just encouragement for preliminary explorations of the fullness and complexity of the natural world.

But the process simply cannot stop here. We need more politically engaged citizens, more staunch advocates for the wise use of land. We can help by making it abundantly clear that becoming engaged as citizens is a right and a responsibility, and when it involves acting as defenders of the things we love, it can be a joy. The world may be changing in ways we despise, but much that we care about remains. So let's do battle with smiles on our faces, angry inside perhaps, hurting perhaps, but keeping in mind that wilderness is more enriching, more fulfilling, more lively and beautiful than anything money can buy, and proving that hope is stronger, and way more fun, than despair.

Years later. Same place. Last day of our trip. The trail angles downward. Visions of beer and milkshakes plague me. The scenery has been spectacular. And alive. We've seen stark cliffs, rugged mountains, smaller but still shimmering glaciers, sparkling streams, larch-fringed meadows, a mountain goat or two. And we saw butterflies. Dragonflies and damselflies darting around the lower elevation wetlands. Mushrooms of every size, shape, and colour. We heard winter wrens near the canyons and fox sparrows at timberline. Pikas greeting us from scree slopes and hoary marmots whistling their alarms from boulder fields. A few days ago, we were anxious to get started, eager to enter the high mountain valleys. Now, as we sense the end of the trail, we know we have been at home in the wilderness.

Landowners Defend Beauty and Wildlife

The following letter was submitted to the WLA *in hopes that it would draw attention to yet another situation in which landowners have little or no say regarding petroleum exploration on their land. The project referred to is ERCB Application No. 1576494, Bonus Energy Ltd.'s proposal to drill a directional natural gas well. An ERCB public hearing for the project is scheduled to begin on February 17 at 9:00 a.m. at the Barrhead Neighbourhood Inn in Barrhead, Alberta.*

We are four families living along the Athabasca River near Fort Assiniboine in a beautiful little valley. It boasts grizzly, black bear, moose, elk, deer (white tail and mule), cougar, garter snakes, lynx, wolves, wolverine, martin, coyotes, bald and golden eagles, and red-tailed hawks, to name a few of the local wildlife species. We strongly believe that we have been good stewards of this environmentally rich valley and have, over the years, made numerous farming-practice changes to maintain the integrity of the area. Visitors from all over the world have been in awe. We have not had to defend its beauty, until now.

We are not unreasonable people. Energy resource development is located on various other properties of ours with no problems. However, after much thought and consideration, we are opposing this application with what we feel are just causes.

Our main concern is that the access route through three miles of what is mostly our private lane and driveway paralleling the river winds through two yards. The house of an elderly couple in one of the yards is less than 30 feet from the lane. We feel that the utmost respect and regard should be given to this couple's welfare and safety. In the other yard, the lane intersects a calving/livestock operation.

We have found it ironic and disturbing that most public government agencies appear to go out of their way and work very hard for the resource company to help them attain their application. For example, places on this access route are definitely on a flood plain because we have witnessed the flooding at different times or the creek that washes out the lane at least two days every year does not appear on the application map. Sustainable Resource Development staff in our area has done a very poor job of relaying any actual obstacles concerning this application. Our land appears to have no value in this application, which of course it does, both monetarily and environmentally, being riverfront property on a major Alberta waterway.

The lack of respect and regard by government and the knowledge that the ERCB approves a huge majority of oil and gas applications is an insult to the ordinary person. This ordeal is not something that we have wanted to deal with. When something is fundamentally wrong and the government has lost sound decision-making practices, people like us have to do what they can to bring common sense to the forefront. The rules that govern the ERCB's decision to sell leases sight-unseen need to be reviewed and updated to accommodate the rapidly changing Alberta landscape. We are third-generation Alberta landowners. and frankly, we deserve this consideration.

A favourable outcome to this application would see the ERCB, through the hearing process, deny the application and give back incurred costs to the oil company.

We would be pleased to hear from others who are in a similar situation.

– Brad and Michele Schmidt
Walter and Emi Schmidt
Wilbert and Margaret Meunier
Kevin and Maureen Meunier
Barrhead, Alberta

"Window of Light" 48x72 inches, oil on canvas © S. MCMILLAN

Managing subsurface and surface activities within our province

Conflicts between subsurface and surface activities are increasing as activities intensify on the land. The policies that address surface and subsurface values are not well integrated. The Government of Alberta will … review the current process for identifying major surface concerns prior to public offering of Crown mineral rights.

From Alberta's Land-Use Framework, *December 2008*

Alberta's Tar Sands: Guilty as Charged

Reviewed by Dale Hildebrand

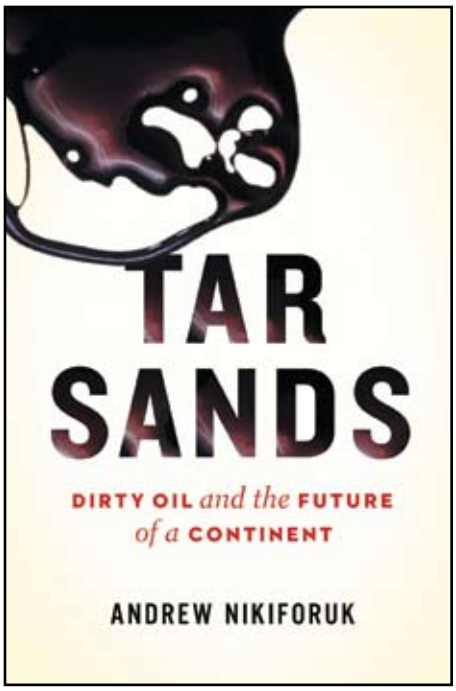
If the Alberta tar sands were on trial and Andrew Nikiforuk were the prosecuting attorney, the guilty verdict would not be long in coming. *Tar Sands: Dirty Oil and the Future of a Continent* offers a methodical and devastating indictment of the world's largest industrial project.

By now nearly every Canadian knows that northern Alberta is oil country and that the oil comes mixed with sand. But few know what is involved in extracting the bitumen from the ground and the devastating impact on everything from our water to families in Newfoundland. Nikiforuk has gathered a vast array of facts and figures to explain the magnitude of what is happening in Canada's North.

Prime Minister Harper once boasted that tar sands developments rival the immensity of historical endeavours such as the building of the Egyptian pyramids and the Great Wall of China. Nikiforuk turns this comparison on its head by painting a picture of ecological devastation so massive, the mind is left reeling with images of entire boreal forests stripped and one of Canada's mightiest rivers filled with toxins.

While the book might have been strengthened with photos – celebrated Canadian photographer Edward Burtynsky's tar sands photos come to mind – Nikiforuk's popular writing style conjures up enough images to impress upon the reader that we're not dealing with a small hole in the ground here. He employs a host of metaphors and examples to help us comprehend the sheer immensity of the oil industry's insanity in the wilderness.

On every count, the development of the tar sands just doesn't make sense. Each barrel of oil uses up three times as much water in its processing. If current growth trends continue, it is estimated that by 2015 the tar sands could be consuming 12 percent of the Athabasca River's flow. And of course, the toxic slurry that is produced has



to be put somewhere. The so-called tailings "ponds" will cover 85 square miles within a decade. Tar sands operators optimistically predicted that the sediments, which contain well-known toxins such as arsenic, would quickly settle and that the clean water on top could be drained back into the Athabasca within a few years. More realistic projections of the settling process are now closer to a thousand years.

The tar sands are the largest single impediment to Canada reaching even its modest climate change targets under the Kyoto Protocol. By 2020, they will account for 16 percent of Canada's carbon emissions. Industry, with provincial and federal government tax breaks, is placing its hope in burying the carbon underground, but Nikiforuk unmasks carbon capture and storage (CCS) as more pipedream than solution.

While almost any single chapter in *Tar Sands* would offer enough evidence to indict the tar sands as a criminal act, taken as a whole, the book left me with one question as I made my way through the astounding economic, ecological, and social consequences of run-away tar sands development: how could a democratic country such as Canada allow something like this to happen?

The answer comes in one of the last chapters, entitled "The First Law of Petropolitics." The author demonstrates how oil has historically subverted democracy around the world. The dictatorship–oil correlation makes sense in places like Saudi Arabia and Nigeria, but in Alberta? Then again, I've often wondered how one province could be ruled by the same political party for 38 years. Nikiforuk points out that like most Middle East oil oligarchies, Alberta has no sales tax. When people pay less taxes, they are less likely to ask questions about how their governments are spending their money.

This, combined with government operations that are conducted mainly in secret, has resulted in a mini petro-state that has surprising similarities to some of the world's most odious regimes. Throw in a federal government enamoured with oil exports and close ties to the petro-patch, and one begins to understand how an ecological disaster was sanctioned by our political leaders.

While much of the oil extracted from the tar sands is piped south to slake the thirst of Americans, Nikiforuk turns the spotlight inward toward the end of the book, where he examines his family's own carbon footprint. As part of the solution, he notes, we are all going to have to learn to consume a lot less energy. But as George Monbiot, the British journalist and climate change activist maintains, in the end we will have to solve this crisis not as consumers but as citizens. Nikiforuk agrees and ends his book with a concise 12-point Alcoholics Anonymous-style program to stop the drunken madness he has so forcefully described in the preceding 180 pages.

Much damage has been done, but following Nikiforuk's prescription for change will avert a whole lot more.

Dale Hildebrand is the team leader for Energy Justice at KAIROS: Canadian Ecumenical Justice Initiatives, a social justice initiative of 11 Canadian churches and church organizations. A delegation of church leaders will visit the tar sands this coming May.

Recall of the Wild

This is the first of a new Wild Lands Advocate *series featuring interviews with Albertans who had the unique opportunity of living and working in Alberta's backcountry when it was still largely wilderness. Writers will interview those who have known and loved wild Alberta for many decades, bringing you singular perspectives and stories from their colourful lives.*

Ray Hill – Life as a Backcountry Ranger

By Vivian Pharis, AWA Board Member

It was not easy being accepted into the ranks of the Alberta Forest Service when Ray Hill decided on his career. In addition to a substantial drop in pay to $160 a month, he had to supply his own gun, saddle, and two horses. It was 1955.

Ray began life in Ontario, but during a 1945 summer vacation to a relative's ranch west of Turner Valley, he fell under the charm of rolling, timbered hills and tall blue peaks. After a few years as a ranch hand, he broadened his education with construction and heavy equipment operation, all of which would prove practical for a backcountry ranger who needed plenty of jack-of-all-trades skills.

Ray also needed a practical partner, and he found one in Margaret Hemus, a Turner Valley ranch girl who became his wife and the mother of their two sons as well as a teacher, secretary, records keeper, radio operator, and much more. Ranger stations were small cabins heated by wood, sometimes without electricity or running water. Margaret, hardy and adaptive, was up to the task. Later, Ray named a lovely lake in the headwaters area of the Waiparous River after her.

Ray and Margaret were posted in 1955 to the Sheep River Station, known then as Bighorn Station. Ray was assistant ranger, but he also commuted for months at a time, over four years, to the Forestry Training Centre at Kananaskis and Hinton to receive his forestry schooling. The rustic Red Deer Ranger Station east of Mountain Aire Lodge was their next posting, and in 1960 he became chief ranger at the Ghost River Station.

For 16 years the Hills made the then-remote Ghost Station their home. They settled in with a milk cow, two beef cattle, and saddle horses. Margaret schooled the boys until they were old enough to catch the school bus at the Bar C Ranch and make the long, bumpy, and dusty or snowy journey to Cochrane each day. Many travelers of the challenging new "Trunk Road" stopped at the Hills' home for a rest and a visit.

Ray Hill in the mid-1980s during his days as an Alberta Forest Service at the Canmore Ranger Station PHOTO: M. HILL

Early days in the Ghost were full and hard, but never tedious. Regular duties ranged from monitoring rain gauges and submitting daily radio reports (Margaret's responsibilities) to supervising land use and rehabilitation work, cutting trails, inspecting pasture conditions and cattle grazing under permit, minding campers, constructing campsites and lookout roads, and finding lost hunters. In later years, administering the growing oil and gas and timber sectors became a major part of the work load.

During Ray Hill's term in the Ghost District, his work crew often consisted of minimum security prisoners. Up to 20 were housed in the original Aura-Cache Ranger Station throughout the year, serving their sentences through useful contributions.

The vast Ghost District stretches east-west between the National Park and Forest Reserve boundaries, and north-south between the Red Deer River and the Stoney Indian Reserve. Horses were the early means of transport and even when four-wheel drive vehicles began to take over, they remained a necessity. Toward the end of the Hills' tenure at the Ghost, helicopters joined the transport force.

Until about 1970, Alberta Forest Service rangers performed double duty as peace officers with authority to carry a gun and enforce regulations. Especially as off-roading became popular, enforcement began to consume more time, spelling the end of the idyllic side of life at the no-longer-remote Ghost Ranger Station.

By 1970 about 400 km of seismic lines had been cut through the district; although 50 percent were reclaimed, there was no legislation to close roads. Conditions were ripe for an explosion in the sport of off-roading. Although Ray spent cooperative time with early Jeep clubs, numbers increased and destructive monster trucks joined the mix. In the 1970s Ray's superintendent asked him to develop a recreation plan for the Ghost.

His plan, which included a rotating use system that would take pressure off sensitive areas and allow others to rehabilitate, was never implemented, and as the wild qualities of the Ghost diminished, Ray and Margaret decided it was time to leave. In 1976 he took up new ranger duties in the brand new district of Kananaskis Country.

Retired now to a lovely property overlooking the mountains near Cochrane, Ray Hill fondly recalls the Ghost District. But a recent trip back to the Ghost left him disheartened. He encountered trucks and motorbikes coming out of the protected Ghost Wilderness Area. He saw that new pine beetle-control logging at the top end of the TransAlta road included the more coveted spruce. He said with a sad shrug, "There's no need to cut the spruce to get the beetle. There's no enforcement happening here. The most precious watershed in Canada has no protection. It makes no sense."

TUESDAY TALKS

Join us for engaging evenings filled with images, discussion, refreshments, and friends new and old. For more information about all of our talks, go to www.AlbertaWilderness.ca.

Time: 7:00 to 8:30 p.m.
Place: AWA office,
455 – 12 St. NW, Calgary
Admission: $5 adults; $1 children

Pre-registration is advised for all talks.
Phone: (403) 283-2025
Toll-free: 1-866-313-0713
Online: www.AlbertaWilderness.ca

Tuesday, February 17
Willmore Wilderness Park – Visits with an Old Friend
With Ray Rasmussen

Tuesday, March 10
Gone with the Wind? Wind Energy and Bat Mortality
With Erin Baerwald

Tuesday, March 31
Shorebirds and Heavy Metals – Field Notes from Nunavut
With Anna Hargreaves

Tuesday, April 21
Healing Environmental Despair – Finding Hope and Empowerment in Protecting Wilderness
With Dr. Mishka Lysack

The Lure of Whitehorse

On January 16 we bid Chris Wearmouth our very best as he left his position as conservation specialist with AWA to pursue the lifestyle that Whitehorse will offer. We will miss him. Well known for his passion for wilderness and wildlife, he has become an important part of our team. Despite the miles that will separate us, Chris will always be part of AWA and we wish him many exciting adventures, the opportunity to realize his dreams, and restful nights under the starry skies of the Yukon.

Step Up to the Climb and Run for Wilderness

On April 18, 2009 more than 1,000 people will be involved in our 17th annual Earth Day event, the Climb and Run for Wilderness. From an early morning race to countless ascents of the Calgary Tower, the day will be filled with entertainment, prizes, and opportunities to learn about wilderness and wildlife in Alberta. Plan to challenge yourself this year and to be part of the *Best Earth Day Event in the West*.

Check out ClimbforWilderness.ca and register or sponsor someone who is climbing. If you are interested in volunteering for this event, please send us a completed volunteer form, available at ClimbforWilderness.ca.

In Memoriam

Barbara Mary Sherrington
July 29, 1947 – December 27, 2008

Barbara Sherrington died of cancer in the Southwood Hospice in Calgary, with Peter, her husband of 40 years, holding her hand. Her family and many friends fondly remember her for her infectious love of life and the earth: its people, animals, trees, rocks, and sunsets. This was strongly reflected in her career as an early childhood educator; in her music, poetry, painting, and cooking; in her environmental social and peace activism; and in her roles as mother, grandmother, friend, and colleague. We give our thanks for her wonderful life and smile.

Barbara's family has chosen to make donations in memory of Barbara to AWA, and we are truly honoured to be part of her memorial. Her husband, Peter, is a past-president of AWA, and Barbara was an important part of the AWA team. We have many fond memories, and she will be missed. In her memory, AWA will create a new award at our annual Earth Day event, the Climb and Run for Wilderness. The Barbara Sherrington prize for the best display in the Earth Day Wild Alberta Expo will honour Barbara's interests in education and wilderness.

AFGA Celebrating Hundredth Anniversary

AWA staff and Board of Directors would like to congratulate the Alberta Fish and Game Association (AFGA) as they celebrate 100 years as a society. AFGA is a not-for-profit organization with a province-wide membership of 19,000 individuals keen on maintaining Alberta's natural heritage. Some of AWA's founding members were part of AFGA, as are some of our members today.

AFGA is celebrating its anniversary with the story of its first century, *Conservation Pride and Passion – The Alberta Fish and Game Association 1908-2008*. The book brings to life 100 years of hunting and fishing adventures in Alberta, revealing the perseverance of the many individuals and organizations who have struggled to keep Alberta's rich fish and wildlife legacy legacy alive.

Written by Duane Radford and Don Meredith, *Pride and Passion* was creatively designed by Annabelle Wright, an award-winning graphic artist with the *Edmonton Journal*. Copies can be ordered through AFGA either by phone (780-437-2342) or online at www.afga.org.

Protecting Wild Alberta 2008

Throughout the year, AWA participates in countless activities that help to protect and promote our province's wild spaces. Whether we are celebrating a victory, educating the public, engaging a politician, interacting with industry, or researching a potential problem, we are steadfast in our dedication to the beautiful and diverse wilderness Albertans have inherited. These photos are a testament to the hard work of staff and volunteers supporting stewardship of the land so that future generations may also enjoy and appreciate the wonder of wilderness.

Calgary-Varsity candidate Sean Maw speaks for the Green Party on water issues at the Conservation Voters of Alberta's Water Forum prior to the 2008 provincial election. Joining Maw were New Democrat candidate John Chan for Calgary-North Hill and Liberal incumbent David Swann for Calgary-Mountain View. CBC Radio's Donna McElligott (far right) moderated the forum. PHOTO: C. WEARMOUTH

Conservation Specialist Carolyn Campbell presents a small gift to (left to right) Henderson Rengifo, Manuel Tampet, and Carlos Mukuin, all members of the Achuar people, an indigenous tribe from Peru. AWA hosted a meeting between the Achuar and local environmental and social justice groups regarding problems the Achuar face with petroleum development in the rainforests they call home. They were in Calgary to meet with Talisman Energy to ask that the company not develop leases within Achuar territory. PHOTO: C. WEARMOUTH

Conservation Specialist Chris Wearmouth collects water samples along the Panther River in the Bighorn. AWA has initiated a water-quality study on the Panther due to concern with the level of development along the river. The issues include the possible impacts on aquatic habitat and the security of a clean water source. PHOTO: V. PHARIS

AWA's Dunvegan team: From left, Richard Secord, Dr. Michael Church, Dave Mayhood, and Chris Wearmouth. AWA presented at the hearing for Glacier Power's run-of-river hydroelectric dam to be built on the Peace River two kilometres upstream from Dunvegan Provincial Park. Despite our valiant efforts, the joint federal-provincial panel recommended that the project be approved (see page 15). PHOTO: C. OLSON

Protecting Wild Alberta 2008

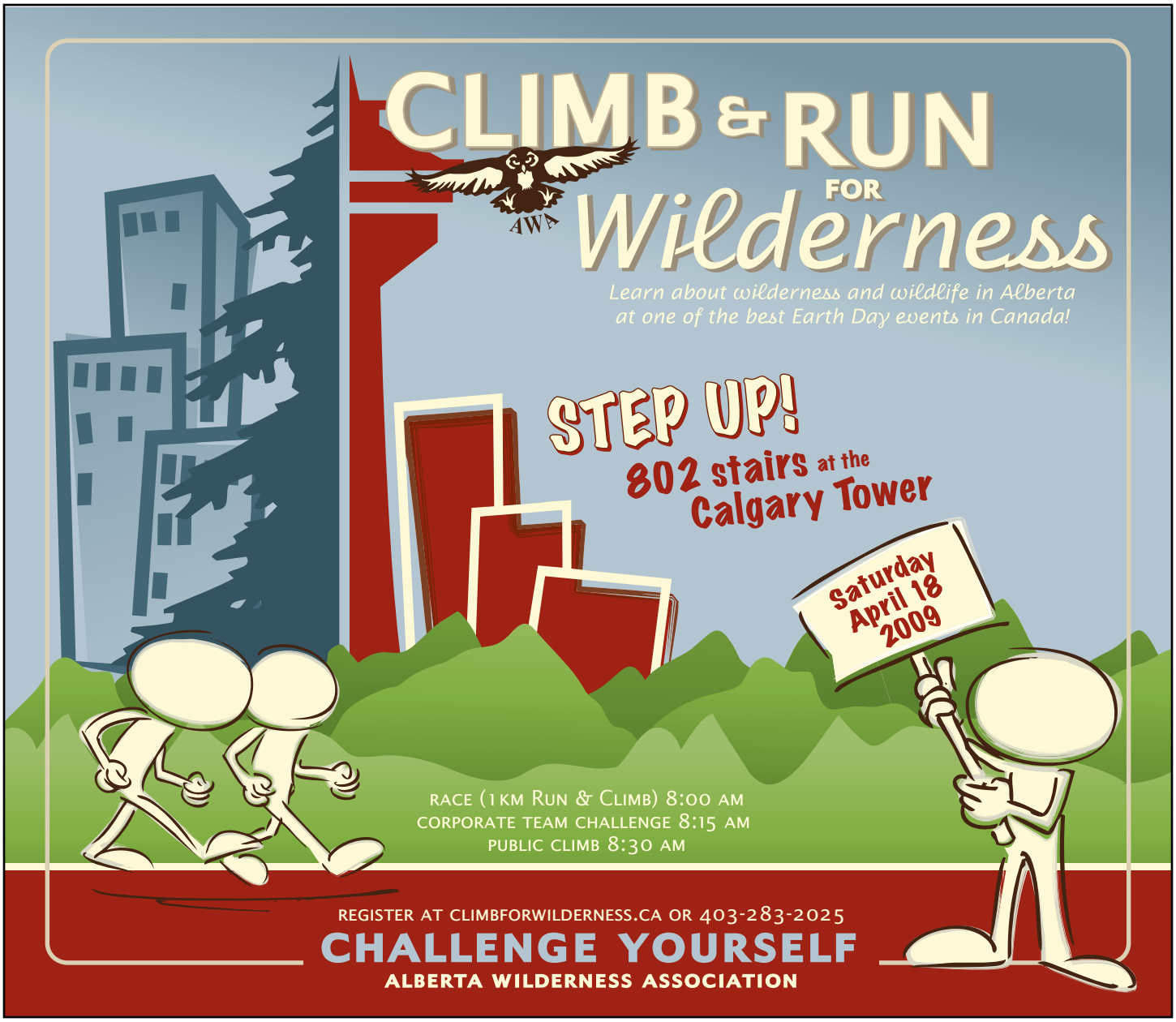
Children jump with joy at AWA's Calgary office to the songs of entertainer "Peter Puffin." He was joined by children's author Joe Pavelka, who read from his new book, Ned: The Story of Bear Six Nine Three. *The combination of storytelling, song, and dance made this event a smash hit for kids and adults alike.* PHOTO: L. GRANDINETTI

Martha Kostuch holds the hand of Lorne Fitch as he speaks at an evening in celebration of her work and life. Kostuch, whose skill and tenacity over many years has helped protect Alberta's wilderness, died in April 2008 after a long illness. PHOTO: C. WEARMOUTH

AWA's Chris Wearmouth listens to a Suncor employee explain the pipe used for drilling during a rig tour in the Panther River area. Shell and Suncor spent the day with AWA informing us about their operations in the area. PHOTO: C. OLSON

Long-time AWA members Dick and Vivian Pharis present Dave Sheppard with a 2008 Alberta Wilderness Defenders Award. The award recognizes Sheppard's unrelenting work toward the protection of the Castle region in southwest Alberta. Diane and Mike McIvor also received an award this year for their continued efforts in the Bow Valley, and Mike gave the AWA Annual Lecture after the award ceremony (see page 24). PHOTO: C. WEARMOUTH

AWA Executive Director Christyann Olson gets a bird's-eye view of the Bighorn from a helicopter window. Weyerhaeuser invited AWA to join a flight over their Drayton Valley operations and the northern part of the Bighorn to better understand the company's logging practices and the area's wildlife issues. PHOTO: C. WEARMOUTH



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