



A WILDLANDS ADVOCATE

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COVER PHOTO

Cliff Wallis captured the intricate tapestry of Alberta's boreal forest in his photo of kettle ponds in the vicinity of Woodman Lake in the Canadian Shield Natural Region in northeastern Alberta. PHOTO: © C. WALLIS

FEATURED ARTIST

Having settled in Jasper since 1980 Leona Amann has developed her craft and spent her life exploring the outdoors physically and artistically. Before coming to, and being inspired by, the mountains Leona grew up in the beautiful scenery of Vancouver Island so the influence of nature has been strong throughout her life. On the west coast Leona combined her love of the outdoors and art by completing a diploma in recreation studies on Vancouver Island. After moving to Jasper and taking a trip to Europe Leona wanted to take more specialized studies. She enrolled in the Fine Arts Program at the University of Alberta and graduated in 1988. She then returned to Jasper to resume life and art in the mountains. The study of art never ends and the development of her craft continues, inspired by the mountains.

Leona's work is available in Jasper through the artist (www.leonaamann.com) and the Jasper Artist Guild at Brushfire Gallery. In Kelowna she is represented by Hambleton Galleries. Collected by the many people visiting Jasper her work has found its way into homes around the globe.

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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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DO MORE WITH LESS

This phrase usually haunts me. I study Alberta politics and this phrase conjures up the worst excesses of ideological politics in my mind. During the “Klein Revolution” it was a mantra uttered before attacking government programs, public servants, and “special interests.” The latter two constituencies, unproductive and greedy, were accused of living large off the hard-earned savings of average taxpayers. Compromise and consensus, hallmarks of healthy politics, were seen instead as marks of moral decay, signposts on a road to ruin.

The feature articles in this issue of *Wild Lands Advocate* may be therapeutic for me; they may show that “do more with less” is possible in a fashion that respects compromise and consensus. Our features focus on water – arguably the most precious and most underappreciated resource in Alberta today. Our authors explore different dimensions or aspects of the water issue and leave me with some cause for hope.

Michelle Morris offers a comparative examination of water policy change in B.C. and Alberta. She underlines that B.C. has been significantly more welcoming to public participation than Alberta has. The hope I take in Michelle’s

message is that her comparison shows that ideology is not, by definition, an obstacle to opening the doors to more meaningful public participation.

The subsequent features by Cheryl Bradley, Madeline Wilson, Brian Meagher, and Matt Dow show that we may be inching towards more participation, compromise, and consensus. Cheryl examines the conservation, efficiency, and productivity (CEP) plans of the urban, petroleum, and irrigation sectors and notes their commitment to efficiency and productivity targets.

Madeline discusses the important contributions that regional and local bodies, Watershed Planning Advisory Councils (WPACs) and Water Stewardship Groups (WSGs), can make in furthering the water conservation agenda. Brian Meagher, from Trout Unlimited, offers you an in-depth look at what one WPAC, the Bow River Basin Council, has accomplished when it comes to water supply and allocation issues in the Bow basin.

Matt Dow invites you to look to northeastern Alberta and consider the future of the Athabasca, Alberta’s longest undammed river. Has the extensive, often

scathing, criticism of government policies and industrial practices produced any signs that those policies and practices may change?

All of the features above offer some grounds for optimism. But our authors are not Pollyannas. They realize that if we are to do more than inch towards a positive version of “do more with less” with respect to water fundamental ecological needs must have greater voice and representation in our deliberations. To adapt a question that the United States Supreme Court considered in the early 1970s: “Should water-related ecological needs have standing? Should our policies accommodate them?” Our answer must be yes. If, as Cheryl Bradley alludes to, sectors jealously regard any savings or efficiencies they realize as “theirs,” to be spent on further growth in their sector then our ecological future will be bleak. Our rivers, our lakes, our groundwater supplies will all lose unless we are prepared to make compromises that send benefits their way. So too then will our ambitions for a bright sustainable future.

- Ian Urquhart,
Editor

Public Involvement in Water Law Reform: B.C. and Alberta Compared



By Michelle Morris

Given the secrecy that too often characterizes government decision-making I think it's necessary to underline why public involvement is so important. There are a number of reasons why the public should be involved in water law and policy reform. One of the most important reasons is that water is a public resource and decisions about water inherently affect the public interest. Water law, policies, and allocations can help to determine patterns of industry, settlement, and ecology. In addition, climate change impacts will likely alter water distribution throughout the world; this means that how water is used today may not be appropriate in years to come. This sort of pressure necessitates some engagement of the polity, of citizens, in deciding how societies will respond and adapt to these challenges. Finally, involving the public in public policy reform is consistent with principles of democracy. Let's not forget that democracy, in its most fundamental or purest form, involves citizens having a say on issues impacting them.

Despite the public's interest in water law and policy reform, governments undertake widely different approaches to engaging the public in decisions about water law and policy reform. Strategies can range from genuine attempts to garner public sentiments to symbolic gestures aimed at gaining consensus on a decision already made. The governments of Alberta and British Columbia are both currently reviewing their respective water laws; this offers us an opportunity to compare how these neighbouring provinces differ in their approaches to involving the public in the vital public policy matter of water. Both provinces began water law and policy reform in 2008. That was the year Alberta Environment Minister Rob Renner announced a review of Alberta's water allocation management system and B.C. began the process of modernizing the entire *Water Act*.



Miette from the Slough
24" x 24" acrylic on canvas
© L. AMANN

Information Flows: One-Way or Reciprocal, Inclusive or Exclusive?

Perhaps one of the easiest ways to analyze and compare government approaches to public involvement is to ascertain the direction of information flow used in the process – do governments merely present information to the public, hear from the public on a specific matter, or is there a two-way dialogue between members of the public and the government in which information and ideas are exchanged? A two-way dialogue is the most appropriate in the context of broad water law and policy reforms as it allows for learning within the process. The quality of information provided to the public about reforms and reform options can also greatly impact the quality of public deliberation. It is likely, and understandable, that not every interested citizen is a water law and policy expert. Providing clear, concise

information and resources with which to learn further is essential to empowering members of the public to have an impact on policy.

Another crucial consideration is the types of opportunities available to be involved in public policy reform – are participation exercises restricted to surveys, multiple choice questionnaires, public meetings, written submissions, or some combination of methods? Ideally, a variety of means will be employed so that involvement opportunities are not monopolized by those who are, for example, able to take an unpaid afternoon or day off of work to participate in a public meeting. Finally, the timing of engagement exercises can indicate the importance the government places on the public's ideas and opinions. If

participation exercises take place later on in a reform process, efforts may be more prone to symbolic politics undertaken by a government aiming to gain consensus and legitimacy rather than a genuine desire to hear from the public.

According to these indicators, the B.C. government has provided the public with much better opportunities for public engagement in the *Water Act* modernization than the Alberta government has during the water allocation management system review.

The British Columbia Experience

B.C.'s *Water Act* modernization process included outlining when public engagement opportunities would occur and providing a timeline for when different stages of the process would occur. All of this information is available on its website www.livingwatersmart.ca. Notably, public engagement occurred early on in the process after a review of possible policy options was published in early 2010. The B.C. government published a *Discussion Paper* on proposed reform options for the modernized *Water Act* which was supplemented by a technical background document that provided more detailed information about current policy, why reforms were desirable, and approaches to achieving policy goals. Importantly, these early documents presented a suite of options for each of four policy goals for the public to consider. After these documents were published, a series of 10 public meetings, and three meetings with First Nations, took place in spring 2010. An online blog was established during this time on which interested individuals could post questions, comments, and suggestions for future reform options. Those inclined to send email or regular mail submissions were also encouraged to do so.

B.C.'s process involved a two-way dialogue between the public and government. In fact, this two-way dialogue has occurred twice during the *Water Act* modernization process. After the first round of engagement was completed in early 2010, submissions were analyzed by government officials and reported to the public in a *Report on Engagement* which was published in September 2010. After the *Report on Engagement* was published, a draft *Water Sustainability Act* was released



A future leader appreciating the majesty before her at Dune Point on the Red Deer River. How meaningful is the participation her parents have in affecting the future of this and other rivers in Alberta?

PHOTO: © C. WALLIS

in December 2010. This draft outlined policy proposals for B.C.'s future water law. Interested individuals were given about a three month window to comment upon this draft.

The fact that the B.C. government provided a variety of mechanisms by which the public could advance their views was also a positive aspect of their engagement strategy. Public meetings, blogs, and traditional methods of receiving email and regular mail were utilized. This meant that individuals who could not attend the public meetings still had a way to have their voices heard. A combination of factors, including the quality and variety of reform options presented to the public, a two-way dialogue between government and citizens, the variety of means by which the public could participate, and the timing of the engagement all contributed to an approach which indicates a high degree of investment in the public's genuine participation in the *Water Act* modernization.

The Alberta Experience

When compared to B.C.'s process, the Alberta government's approach is quite disappointing. Indeed, the current approach is very disappointing considering the emphasis put on public involvement in the mid-1990s *Water Act* reform and the development of Alberta's *Water for Life* policies. Although Rob Renner announced the water allocation management system review in the fall of

2008, and promised public involvement in the process would occur within 18 months, the public has yet to be involved in the process. Almost three years have passed. In the same time period, the B.C. government managed to involve the public twice in the *Water Act* modernization process. Within the first year of Alberta's announced water allocation management system review, three reports separately written by the Minister's Advisory Group (MAG), the Alberta Water Council (AWC), and the Alberta Water Research Institute (AWRI) were released. All reports are highlighted on a section of Alberta Environment's website and have been since the fall of 2009. The reports, despite slight differences, all recommend expanding water allocation transfers while retaining prior allocation water law (also known as "first in time, first in right", FIT-FIR) throughout the province. Only one reform option has been presented to the public. This seriously inhibits the facilitation of a dialogue on potential reform options.

Notably, the committees did not seriously engage with whether prior allocation, Alberta's current mechanism to license water, is appropriate as we face pressures related to climate change, population growth, and industry development. Certainly this is not the fault of the AWC which was not given the mandate to analyse prior allocation licensing. The MAG and AWRI reports do touch on prior allocation licensing briefly and state we may need to look at



Waterfall, Junction Creek, Kananaskis Country.

PHOTO: © C. WEARMOUTH

moving away from this type of licensing in the future. That said, it's difficult to believe how genuine this reform process is if "FIT-FIR" is off of the table for discussion or mentioned as something to decide on later; it is, in fact, the basis by which our water allocation system is managed. Currently water allocation transfers can only occur in the South Saskatchewan River Basin which is the only river basin that has the required cabinet-approved Water Management Plan for water allocation transfers to occur. Importantly, when Alberta's *Water Act* was reformed in the mid-1990s to allow for water

allocation transfers, proposals to do so were the most controversial and commented upon by members of the public. This level of concern indicates the interest Albertans have in how their water resources are managed. Despite this demonstrated interest, the Alberta government has yet to provide any formal opportunities for the public to have their say on Alberta's future water allocation management system. The fact that engagement opportunities will occur after the three reports made recommendations to the government also makes public engagement activities more prone to symbolic politics or to efforts by government to legitimize a decision that effectively was made long before the public was involved. Considering the combination of the paucity of information on available options to reform water allocation management, the lack of opportunities for the public to participate in the process, and the timing at which engagement activities will occur, it is difficult to believe that our provincial government is really interested in providing Albertans with genuine opportunities to become involved in the water allocation management system review.

The Need for Improvement

Compared to B.C.'s process, then, it becomes apparent that the province of Alberta has considerable room to improve opportunities for the public to participate in the water allocation management system review. Certainly, B.C.'s process was not without problems. For example, the *Report on Engagement* stated that most British Columbians favoured in-stream flow standards to be set in the modernized *Water Act* but the draft *Water Sustainability Act* forwarded using in-stream flow guidelines. The distinction between standards and guidelines is critical; standards require decision makers to consider in-stream flows, or the amount of water required to preserve ecological integrity, in all decisions with no exceptions. Guidelines, on the other hand, may be deviated from.

This example illustrates the important fact that involvement in reform processes does not necessarily result in having an impact on policy outcomes, a fact with which many individuals who have become involved with Alberta's past public consultations are well acquainted.

Despite this situation, which we might expect in a pluralistic society in which people hold diverse views and opinions, providing the public opportunities to participate in public policy reform is at least consistent with principles of democracy. Alberta is not even going through the motions at this point in time. That B.C. provided a record of what was heard from the public during its engagement sessions is another boon to the province; information provided in the *Report on Engagement* may be used to hold the government accountable if the final modernized *Water Act* is found to diverge significantly from what the public said it wanted.

While it's true that the Alberta government involved the public in developing the *Water for Life* water strategy in the early 2000s, this policy strategy does not explicitly relate to water allocation management, the issue currently under review. And, although the public was consulted in the mid-1990s water law reform process where the *Water Resources Act* became the *Water Act*, a complication of factors, including the more than 15 years that have passed since that review and new knowledge regarding climate change impacts, demand that there be new public involvement opportunities. It's true that the 40-year presiding Progressive Conservatives are currently in the midst of a leadership contest and that a provincial election is pending and this might provide justification for putting public consultations on halt. That said, it is still very disappointing that the general public has not yet had the opportunity to participate in discussing this essential public policy issue. An approach that is more transparent, involves the public through a variety of means, provides better information about exactly why a policy approach is being advocated and what viable alternatives might be would increase the legitimacy of the process. This is desperately needed as the Alberta government looks to reforming how water is allocated in the province. The B.C. example proves that it can be done. 🌊

Michelle Morris received her Master's degree in Political Science from the University of Alberta. She starts her PhD program in Social and Ecological Sustainability at the University of Waterloo this September.

Linking Water Conservation to River Health in Alberta

By Cheryl Bradley



Ships Prow

40" x 48" acrylic on canvas

© L. AMANN

Like many southern Albertans, I am committed to conserving water. I take short showers, turn the tap off while brushing my teeth and only do laundry when I can make a full load. Within the last few years my husband and I have transformed our yard from green lawn that needed to be watered and mowed regularly to a pleasing mix of flagstone walkways, native grass patches and mulched beds of shrubs and perennial forbs that require little if any watering. I conserve out of concern for water scarcity in this semi-arid prairie environment.

A landmark in Alberta's water allocation history occurred in 2002. Then Alberta Environment stopped accepting applications for new water allocations in the entire Oldman, Bow and South Saskatchewan River sub-basins. This decision marked a societal recognition that ecological limits had been reached or exceeded. This major step acknowledged that, in low flow years, new allocations

would create an unacceptable risk to fulfilling water licences within the basin and meeting water sharing agreements with Saskatchewan and Montana. In addition, no longer could a blind eye be turned to expert assessments that concluded that high withdrawals degraded reaches of the Bow River and the Oldman River and its southern tributaries (Waterton, Belly, and St. Mary rivers) below major dams and diversions.

As an ecologist, I believe healthy rivers contribute to a healthy and sustainable society and vice versa. History provides many examples of civilizations that declined or collapsed because human activities polluted water, accelerated erosion, caused soil salinization or drew too heavily from water sources that could not accommodate demand during prolonged drought. I act out of hope that the water I save and the stewardship

steps I take, however small, benefit my community and my southern Alberta watershed.

Of much greater potential benefit than my personal actions is the commitment to conservation planning in Alberta's *Water for Life* strategy (2003). All water-using sectors are to prepare conservation, efficiency, and productivity (CEP) plans with a target of 30 percent improvement in overall water efficiency and productivity from 2005 levels by 2015. The CEP plans are to contribute to the three *Water for Life* goals: clean drinking water, healthy aquatic ecosystems, and reliable, quality water supplies for a sustainable economy.

As of this summer, three sectors have completed the first phase of CEP plans – Irrigation, the Urban Municipalities, and Oil and Gas and Oilsands Mining. The completed plans have been presented to the Alberta Water Council, a 25-member partnership tasked with monitoring and stewarding implementation of Alberta's *Water for Life* strategy. The completed sector CEP plans can be found on the Alberta Water Council's website along with documents that provide guidance for CEP.

A review of the three completed plans reveals opportunities and intentions to increase water use efficiency (accomplishing a particular purpose with less water) and productivity (producing a unit of good or service with less water). There appears to be, however, a fundamental and dangerous assumption that the water saved will be used for the sector's future growth. So far the CEP plans are notably silent on defining meaningful opportunities for using conserved water to achieve healthy aquatic ecosystems.

Oil and Gas and Oilsands Mining Sector CEP Plan

The upstream oil and gas sector expects growth in oil sands mining and *in situ* production, increased total water demand, and increased non-saline water use productivity. The CEP plan, *Water Conservation, Efficiency and Productivity Plan – Upstream Oil and Gas Sector*, developed by the Canadian Association of Petroleum Producers and Oil Sands Developers Group, maintains that significant improvements in water use have already been achieved and



River valley of the South Saskatchewan River.

PHOTO: © D. OLSON

are expected to continue by increasing recycling rates and replacing non-saline water use with saline groundwater. Productivity is expected to improve by 15 percent for conventional oil, approximately 30 percent for oil sands mining and 47 percent for oil sands *in situ*.

By 2015 two-thirds of the sector's non-saline water use will be withdrawn from the Athabasca River. Northern rivers most affected by oil sands development, such as the Athabasca River, are anticipated to experience less ecological decline than they would without conservation measures. Opportunities to benefit rivers in southern Alberta remain to be identified by producers. The Upstream Oil and Gas Sector accounts for less than 5 percent of total water allocation and less than 2 percent of actual use (2006) in the closed sub-basins of the South Saskatchewan River Basin

Urban Municipalities Sector CEP Plan

The urban municipality sector plan, *AUMA Water Conservation Efficiency and Productivity Plan* developed by the Alberta Urban Municipalities Association, is a "plan to do plans." It aims to build capacity of individual municipalities to develop and implement their own CEP plans. The sector plan sets short-term targets regarding the

proportion of municipalities that will measure and report water use, develop CEP plans, reduce leaks from infrastructure, and increase uptake of water efficient technologies. Public resources (educational, technical and financial) from Alberta Environment and Alberta Transportation are identified as necessary to meet the targets.

Opportunities to benefit source waters have yet to be identified by individual municipalities in CEP plans. Predicted

"Opportunities to benefit aquatic ecosystems stressed by high water withdrawals will be irretrievably lost if clearer direction is not provided on using conserved water to benefit the environment as part of CEP planning."

urban population growth at a rate of one to three percent is expected to counteract water savings and result in increased overall municipal water use. In the closed sub-basins of the South Saskatchewan River Basin, urban municipalities account for less than 15 percent of total water allocation and less than 5 percent of actual use (2006). Approximately 70 to 80 percent of the surface water withdrawn for municipal purposes is returned, following treatment, to the river a short distance downstream from the withdrawal point.

Irrigation Sector CEP Plan

The irrigation sector expects a 15 percent increase in productivity by 2015 and a 15 percent efficiency gain. The CEP plan, *Irrigation Sector Conservation, Efficiency, Productivity Plan 2005-2015* developed by the Alberta Irrigation Projects Association (AIPA), identifies three engineering measures for saving water. The first is to line large canals and to replace smaller canals and ditches with pipelines. The second is to automate water flow control and measurement in combination with more balancing ponds. The third, an on-farm measure, is to switch to high efficiency low-pressure drop tube centre pivots from flood irrigation, side roll wheel moves and high pressure pivots.

The first two engineering measures dealing with district delivery systems have and continue to be implemented under the provincial Irrigation Rehabilitation Program begun in 1969. This is a cost-shared program between Alberta Agriculture and Rural Development and Alberta's 13 irrigation districts. Since 1969 funding levels have varied dramatically between \$600,000 and \$33,400,000 per year. The provincial/irrigation district cost-share ratio has varied starting at 86 percent province/14 percent irrigation district in 1969 and changing to 75 percent /25 percent in 1995. In addition Alberta Agriculture has already instituted a program to advance water CEP on farms.

In the closed sub-basins of the South Saskatchewan River Basin, the irrigation sector is the 800 pound gorilla in the water allocation arena. It accounts for about 80 percent of total water allocation and 85 percent of actual use (2006). A one percent efficiency gain in this sector saves about 23 million m³ of water annually. This volume equates to a flow of 0.73 m³ per second for a year. A 15 percent efficiency gain by the Irrigation Sector would conserve a volume of water similar to the mean annual flow of the Elbow River.

Unlike CEP plans for the upstream oil and gas and municipal sectors, the AIPA notes that the irrigation sector CEP plan presents "tremendous potential to free-up the available water supply for environmental purposes, industry, municipal use and irrigation growth in the South Saskatchewan River Basin."



Waterfall along Yarrow Creek in the Castle.

PHOTO: © N. DOUGLAS

Conserved water is already being used for growth in irrigation districts, amounting to a 12 percent increase in district expansion limits over the last decade. Like CEP plans for the upstream oil and gas and municipal sectors, the irrigation sector CEP plan has an enormous blind spot; it does not specify opportunities for contributing to the *Water for Life* goal of healthy aquatic ecosystems.

Improving CEP Planning to Benefit the Environment

Although overall sector plans are completed, individual municipalities, irrigation districts and oil and gas companies have yet to develop CEP plans. Other major water use sectors in the province, including power generation, forestry, chemical and petrochemical sectors, are currently developing CEP plans. Opportunities to benefit aquatic ecosystems stressed by high water withdrawals will be irretrievably lost if clearer direction is not provided on using conserved water to benefit the environment as part of CEP planning.

Carolyn Campbell and I prepared

a review of CEP plans from the environmental benefits perspective for the environmental organizations participating in the Water Caucus of the Alberta Environmental Network. These organizations have asked for the following improvements in CEP planning. Specific suggestions that are consistent with guidance developed by the Alberta Water Council include requiring CEP planning to:

- identify aquatic ecosystems under stress in the watersheds where the sector, or an individual company, municipality, or irrigation district operates;
- define specific and meaningful opportunities for applying some conserved water to improve aquatic ecosystem health;
- involve Watershed Protection Advisory Councils in the review of draft CEP plans to determine if the healthy aquatic ecosystem goals of watershed management plans are being addressed; and,
- target a specific “conservation

for the environment” amount and commit to applying it to identified environmental opportunities.

As I water the plants in our garden from the rain barrel, I contemplate why my husband and I go to the extra effort and investment to conserve water. My thoughts flow from this small act of water conservation to the rivers that provide the lifeblood for my prairie home. Water conservation, efficiency and productivity planning by major water using sectors provides a window of opportunity for Albertans, at home and at work, to make this link between water conservation and river health. If done well, CEP plans will help us a great deal in our quest to achieve clean drinking water, healthy aquatic ecosystems, and reliable, quality water supplies for a sustainable economy. Much work still needs to be done. 🌿

Cheryl Bradley, a past recipient of AWA's Wilderness Defenders Award, is a professional ecologist whose home is Lethbridge Alberta.

Water, Water, Everywhere... Nor Any Drop to Drink

By Madeline Wilson, AWA Conservation Specialist



Red Deer River from Dry Island Buffalo Jump.

PHOTO: © C. WEARMOUTH

We begin to realize the intrinsic value of our fresh water resources when we stop to consider the staggering ways in which water impacts every aspect of our lives. It is still early in the day and already I can make a lengthy list of the ways access to ample freshwater has benefited me. After considering how essential clean water is to cook my oatmeal, percolate my coffee, and brush my teeth, water's not-so-obvious functions come to mind. How much water was used to produce these oats and coffee beans? My list could go on and on.

The fact that, in Alberta, we are able to access large amounts of fresh water is a rare, often undervalued, reality. This is a privilege a very small percentage of the world enjoys, and with this benefit comes responsibility. We have the responsibility to use these resources sustainably to enable current and future generations to have continued access to fresh water. We have the responsibility to learn about

the limits of our water resource and the ways in which we can mitigate both our residential and industrial use of water. We also have the responsibility to advocate for the water requirements of other species and ecosystems – those who are unable to speak for themselves.

In 2003, it seemed the Government of Alberta was also recognizing the inherent value of water as both a resource, and a life source. In response to concerns about the future of water management in Alberta, *Water for Life: Alberta's Strategy for Sustainability*, was developed. The *Water for Life* (WFL) strategy focussed on achieving three basic outcomes:

1. Safe, secure drinking water;
2. Healthy aquatic ecosystems; and
3. Reliable, quality water supplies for a sustainable economy.

According to the original document, “the Water for Life strategy outlines the Government of Alberta’s commitment to manage and safeguard Alberta’s water resources, now and in the future.” In order to achieve these outcomes three basic partnerships were proposed to facilitate action and stakeholder engagement at varying levels:

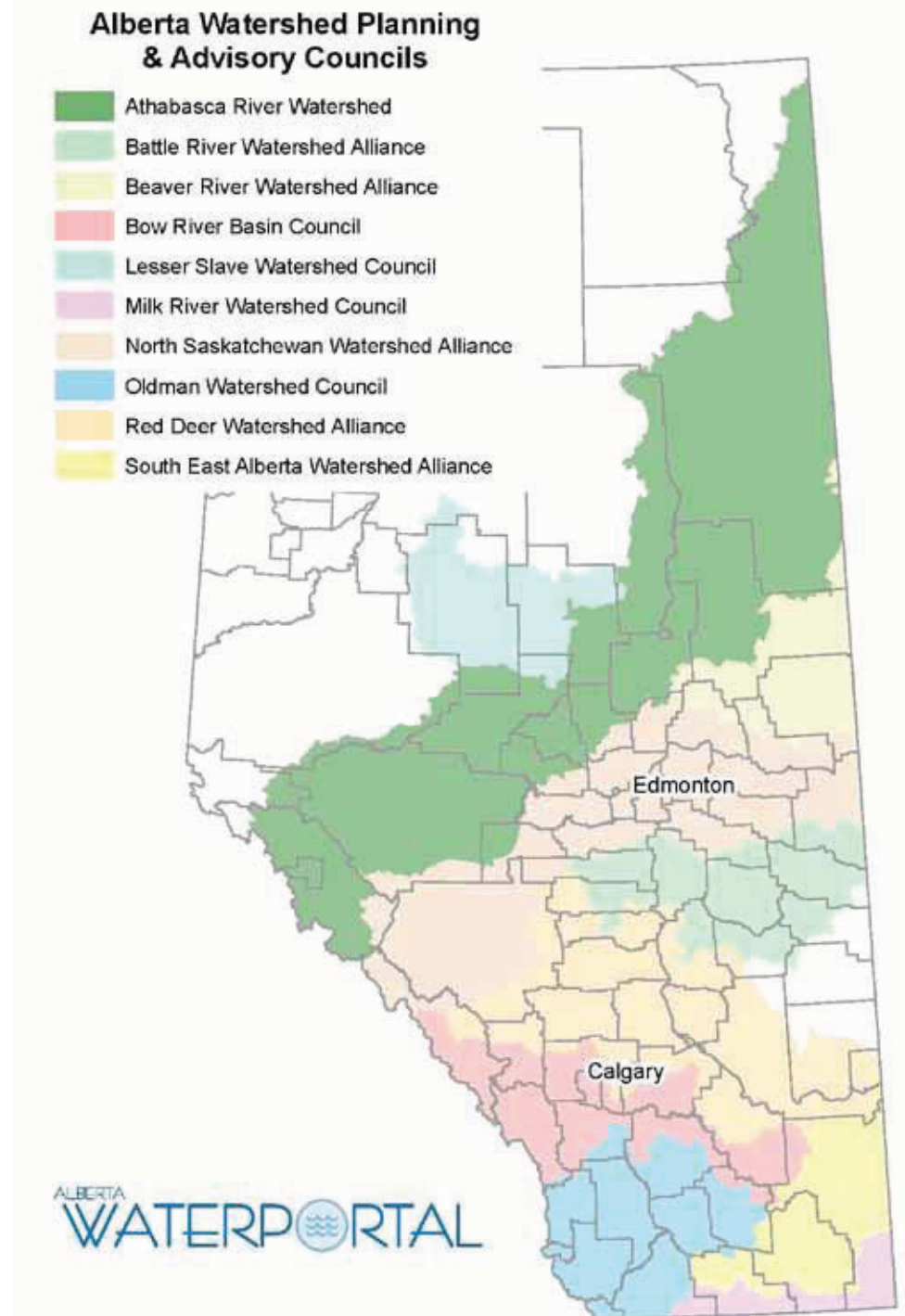
1. Provincial level partnership - expressed through the Alberta Water Council (AWC);
2. Regional level partnership - expressed through Watershed Planning Advisory Councils (WPACs);
3. Local level partnership - expressed through Watershed Stewardship Groups (WSGs).

“The significant burden of work currently being undertaken by province-wide WPACs and WSGs, while simultaneously educating and engaging stakeholders in water management, is an encouraging step in the direction of water conservation.”

The AWC was established to act as an advisory group to government regarding water-related issues as well as to monitor progress on the implementation of the WFL strategy. It is a multi-stakeholder group made up of representatives from government, environmental groups, and industry. The AWC is mandated to provide leadership, accountability, and consultation to assist the province in achieving the three outcomes of the WFL strategy.

Alberta's commitment to the WFL strategy was reiterated in 2008 and a renewed action plan was developed. The renewed strategy incorporated comments and reflections from the AWC regarding the effectiveness of the original strategy and whether or not sufficient progress had been made in safeguarding Alberta's water resources. According to the report, the renewed strategy reflected the government's realization that, when it comes to surfacewater and groundwater and the health and status of our watersheds, there is much to learn. For example, the renewed action plan noted that significant data gaps must be filled through sound scientific monitoring. This information should be used to inform a management approach to monitoring and regulation that accounts for the cumulative effects of current and past human activities upon the landscape. Strategies that promote watershed management and establish water conservation objectives on all major basins were developed and articulated through the action plan.

The goals, strategies, and values described in the WFL strategy project a beautiful vision of future water management in Alberta: all stakeholders are stewards and all sectors are able to access the resources they "need" upon demand. A similar vision appears in many such documents, reports, and strategies in which it seems everyone will continue to have what they feel they are entitled to. No one needs to compromise; no one needs to sacrifice. But, when considering the *Water for Life* strategy, significant work, stewardship, and progress has been made by the regional and local level partnerships. The significant burden of work currently being undertaken by province-wide WPACs and WSGs, while simultaneously educating and engaging stakeholders in water management, is an encouraging step in the direction of water conservation.



Watershed Planning Advisory Councils: Sweeping Mandates, Sufficient Resources?

WPACs are essentially multi-stakeholder, non-profit organizations that involve communities in watershed management through an adaptive planning process based on extensive consultation and collaboration. Their diverse membership includes representatives from municipalities; Aboriginal and Métis communities;

industry; environment and conservation, agriculture, recreation, culture, tourism, education/research groups; individual citizens; and government. According to the Red Deer River Watershed Alliance, WPAC actions include collaborating with land managers, providing advice and support to the local WSGs, presenting issues to the provincial AWC, raising awareness about the state of the watershed, building long-term

WPAC	Status
Battle River Watershed Alliance	- nearing completion of State of the Watershed report - preparing to begin the next phase: Watershed Management Planning
Beaver River Watershed Alliance	- will complete State of the Watershed report by 2011 - hope to complete IWMP by 2013
Bow River Basin Council	- completed State of the Basin report - completed Bow Basin Watershed Management Plan Phase I - currently working on Bow Basin Watershed Management Plan Phase II
Lesser Slave Watershed Council	- completed State of the Watershed report - currently working on IWMP Phase I
Milk River Watershed Council Canada	- completed State of the Watershed report - plan to complete Draft IWMP in 2011
North Saskatchewan Watershed Alliance	- completed State of the Watershed report - completed IWMP Discussion Paper - plan to complete Draft IWMP summer 2011
Oldman Watershed Council	- completed State of the Watershed report - completed Phase I of IWMP – “A Vision for IWMP” - currently working on Phase II of IWMP
Red Deer River Watershed Alliance	- completed State of the Watershed report - currently working on IWMP
South East Alberta Watershed Alliance	- completed State of the Watershed Summary report - working to produce final State of the Watershed report
Athabasca Watershed Council	- completed State of the Watershed- Phase I report. - plan to complete Phase 2 Report by end of 2012
Mighty Peace Watershed Alliance	- designated as the WPAC for the Peace River Basin and Slave River sub-basin on March 30, 2011. - hope to complete a watershed management plan by 2019 (as required in WFL strategy).

partnerships that examine watershed issues, and making recommendations to water/land-use decision-making authorities. Currently eleven watershed councils throughout the province have been designated as WPACs. Each of these WPACs represents a different region of Alberta and will encounter changing land uses, varying degrees of human impact upon the watershed, and unique challenges and solutions. Each WPAC has a government mandate to prepare a state of the basin report; this is essentially a watershed assessment report that characterizes a watershed’s ecological functioning. These reports contain significant data regarding watershed health and status and issues that must be addressed. They require extensive research, resources, and on-the-ground

monitoring. WPACs are also required to prepare an Integrated Watershed Management Plan (IWMP) based on the findings of the state of the basin report which should provide tangible management strategies to address specific watershed issues. The IWMP should provide the government with information regarding specific stakeholder concern and work towards fulfilling the three goals of the WFL strategy. Each WPAC is currently at different stages in this process; some watershed councils have existed for over a decade while others only received official designation as a regional WPAC this past year.

The extensive work undertaken and performed by each WPAC has contributed greatly to our provincial knowledge network surrounding surface

and groundwater in Alberta. It has also illuminated significant data gaps and watershed issues that require immediate and intentional action. It seems the more we discover about our water resources the more questions we face moving forward. This important work has not come without challenges the WPACs face. In order to obtain meaningful water quality data rigorous monitoring is required. This often exhausts the resources available to WPACs. In order to obtain the high quality information required by decision-makers each WPAC must retain experienced staff and sufficient project funding capacity. Though most WPACs receive funding from a variety of sources most are financially dependent upon the Province for funding. The long-term stability of this funding remains largely



Fall on the Peace River.

PHOTO: © C. WEARMOUTH

unknown and, although the WFL renewal assures that all partnerships will be sufficiently resourced, this complicates long-term project planning and ensuring organizational sustainability. As a result, WPACs are reliant upon alternative revenue sources such as industry funding. The collaborative approach of WPACs and inclusion of all interested stakeholders in project planning is necessary to ensure diverse participation, funding, and “buy-in” to management plans.

Another challenge faced by WPACs is that the implementation of management recommendations relies primarily upon voluntary action. Completed draft IWMPs must be submitted to the director appointed under the *Water Act*. Final approval of a water management plan rests with the Minister of Environment. Currently no statutory framework exists to ensure recommended water management strategies are applied through legislation.

Watershed Stewardship Groups: Volunteerism at Work

The third partnership outlined in the WFL strategy is maintained at the local level by Watershed Stewardship Groups (WSGs). WSGs are essentially

volunteer-based groups that act as stewards to protect local water sources – the creeks, streams, rivers, and lakes that flow through our landscapes. There are currently over 140 stewardship groups in Alberta performing these essential on-the-ground community-based activities. WSGs are eligible to apply for some financial support from the Alberta government through the Alberta Stewardship Network’s Watershed Stewardship Grant Program; also a great deal of their work is community supported. In 2009, according to the final report on the Watershed Stewardship Grant Program, approximately \$250,000 was disbursed to 24 different WSGs. It was estimated that the programs and activities undertaken by the grant recipients resulted in on-the-ground community-based stewardship activities valued at nearly \$1.1 million. The work of the WSGs is an extremely important part of the WFL strategy. Their dedicated stewardship efforts are essential given the Scrooge-like nature of the provincial government when it comes to environmental protection.

The work of both WPACs and WSGs is integral in achieving the goals of the WFL strategy. They may well be Albertan examples of what Paul Hawken described

in the following quote: “When asked if I am pessimistic about the future, my answer is always the same; if you look at the science of what is happening to the earth and aren’t pessimistic, you don’t understand the data. But if you meet the people who are working to restore this earth and the lives of the poor, and you aren’t optimistic, you haven’t got a pulse. What I see everywhere in the world are ordinary people willing to confront despair, power and incredible odds in order to restore some semblance of grace, justice and beauty to the world.”

The essential work of the dedicated individuals who give their time to these bodies needs to be supported and recognized by Albertans, funded more generously by the Alberta government, and implemented by the Province. Their work offers a meaningful avenue to foster local community participation and engagement in safe-guarding and restoring local watersheds. It allows watershed health to be considered in a holistic manner where both quantitative and qualitative data are incorporated. By allowing the stories of Alberta’s watersheds to be told by our water keepers we may finally deepen our appreciation of this precious lifeblood. 🌊

The Bow River Project

By Brian Meagher



How do you value the water in your watershed? I suspect that each individual uses a slightly different metric to evaluate the worth of our water resources. There are numerous criteria used to complete one's personal assessment including personal, cultural, economic or intrinsic values. Values are often shaped by economics, growth, development or even recreational benefits. The intriguing part is that each piece of the puzzle is always evolving in the constant ebb and flow between demands on water use and water supply in a growing province and changing economy. To ensure each group gets the water they value we first have to reach a common ground as a starting point for discussion.

As rain falls on the ground and snow melts it is collected by rivers and flows across the province. Each water user along these rivers has an opportunity to utilize this resource according to their water licence. Some water is used, treated, and returned directly to the river; some water users use a portion of their allocation while others use their entire allocation. We have reached (or in some cases exceeded) limits for allocations in the Bow, Oldman, and South Saskatchewan River sub-basins (*South Saskatchewan Watershed Management*

Plan). As Cheryl Bradley notes elsewhere in this issue of the *Advocate* this led the government to close the basin to “new” allocations.

This fundamental change in water management also has led to a change in how many people value this critical resource. Currently there is limited coordination among water users in the basin. New creative strategies need to be identified to address continued growth and therefore increasing demand for water throughout the basin. One such innovative strategy, the Bow River Project, was recently undertaken to coordinate various current users in the basin, optimizing flow regimes to benefit all users, as well as to provide opportunities to protect the associated ecosystems. This project was carried out essentially to help drive conservation efforts in the river by coordinating timing of water withdrawals by downstream users so that they are in-sync with releases in the headwater regions. These water users each place a unique value on the resource depending on the specific criteria that drive their growth and development into the future. As communities plan for growth or industrial opportunities are developed or agricultural demands change in a closed basin, users are forced to develop

innovative water conservation strategies to ensure they can survive and thrive within their allocations.

Representatives from many different user groups including water licence holders, environmental groups, and regulators came together last fall to discuss potential benefits and changes that could result from potential re-management of flows from headwaters to confluence in the Bow River watershed. Meetings were held to identify a consortium that could be brought together to share knowledge, data, and experience to drive a modeling process. The project was driven by and funding was secured by the Bow River Basin Council. The Council received assistance from a variety of partners; the partners included Alberta Innovates, Water Smart, the City of Calgary, partners from various irrigation districts (Bow River, Eastern, and the Western Irrigation Districts), Rocky View County, County of Newell, Alberta Environment, Alberta Sustainable Resource Development, Ducks Unlimited Canada, Calgary Regional Partnership, Trout Unlimited Canada and others. The modeling was conducted by Hydrologics, a company specializing in water resource management.

Data were provided to Hydrologics who took the information and used it to



These two photos illustrate how dramatically water levels in Lower Kananaskis Lake fluctuate. The first “empty” photo was taken in May; the second “full” photo was taken in September.

PHOTO: © J. STELFOX

“The Bow River Project was recently undertaken to coordinate various current users in the basin, optimizing flow regimes to benefit all users, as well as to provide opportunities to protect the associated ecosystems.”

develop and feed a unique model to run through different scenarios. The model was developed and tested; it focused on four different scenarios for future management decisions to support the three goals of the province’s *Water for Life* strategy:

1. A safe, secure drinking water supply for Albertans;
2. Healthy aquatic ecosystems; and
3. Reliable, quality water supplies for a sustainable economy.

The modeling exercise tested different scenarios focusing on altering the timing of water use and implementing innovative storage options. What steps or management changes could members of the consortium implement to benefit their local aquatic ecosystems? More than 65 Performance Measures, including “Flow Frequency,” “Consecutive Days of Fish Spawning,” and “Irrigation Return Flows” were identified and used to complete the model (for a complete list of performance measures see www.albertawater.com. While all scenarios were not always beneficial to all users it was understood that there would need to be some give and take throughout the process to reach the desired outcomes. Groups were able to reach a consensus and this demonstrated that core values were similar for all when it came to their level of protection for the resource; this knowledge drove the process forward.

The next phase of the Bow River Project had the team come back together to perform stress testing sessions on the model. This allowed the consortium to run different scenarios and to provide comments and feedback to improve the model. Scenarios included:

- Scenario 1: Stabilized Lower Kananaskis Lake and flows in the Kananaskis River – currently the Upper and Lower Lakes levels fluctuate each year dramatically; as a result, the littoral zone (or the productive food producing region of the lake) is often dry and exposed to the elements severely limiting the ability of this region to produce food for the species

residing in the lake.

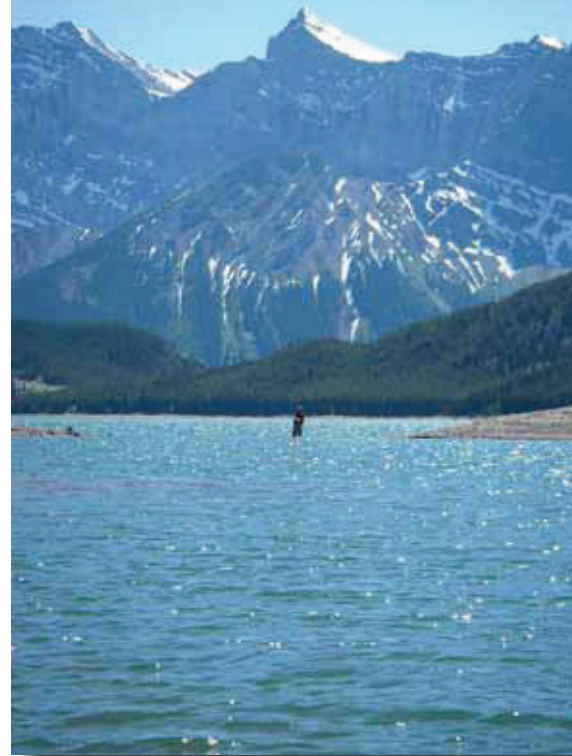
- Scenario 2: Stabilized Lower Kananaskis Lake and Kananaskis River plus a Water Bank of 49,339 dam³ (40,000 acre feet) – the term “Water Bank” refers to the use of reservoirs to achieve substantial overall storage benefit for the Bow River (different Water Bank volumes observed in different scenarios based on modeling a single or multiple storage reservoirs for that scenario).
- Scenario 3: Stabilized Lower Kananaskis Lake and Kananaskis River plus a Water Bank of 74,000 dam³ (60,000 acre feet)
- Scenario 4: Stabilized Lower Kananaskis Lake and Kananaskis River plus a Water Bank of 74,000 dam³ (60,000 acre feet) plus a restored Spray Reservoir at 75,200 dam³ (61,000 acre feet) (the Integrated Scenario)

These scenarios were tested repeatedly with 5 five opportunities identified:

1. Manage the Bow River System in an integrated, adaptive, end-to-end manner, considering all users, interests and values;
2. Pursue and support discussions between the Government of Alberta and TransAlta;
3. Identify and consolidate the functions required to enable integrated, adaptive management of the Bow River System;
4. Encourage and enable transparency and open data;
5. Continue working toward an improved and integrated Bow River Management System.

So what does this all mean?

The reality of it is that users along the Bow River would benefit from a change in how flow is managed in the system. The City of Calgary is expected to grow substantially and must do so under their current licence allocation; the irrigation districts and the farming communities they serve require large amounts of water from the river to produce food locally; utility companies (like TransAlta) harness



Fishing in Lower Kananaskis Lake.

PHOTO: © B. MEAGHER

the power of the river to generate power for growing communities. To me, the most important part of this process is that a plan to manage flows in the Bow River to some extent would ensure that all partners are coordinating efforts to ensure sufficient water remains in the Bow River to sustain the aquatic ecosystem and maintain riparian habitat. Maintaining flows is valued by communities that depend on the dilution for waste assimilation as part of the water treatment process; maintaining flows is critical to ensure water users in the far east of the province receive their allocation; and maintaining flows keeps those lights on that depend on the hydro-power being generated upstream, something we all value. All the while the plants, insects, and fish residing in the river need adequate flows, cool water temperatures, and high levels of dissolved oxygen in order to survive.

Another benefit of this project is that it may serve as a demonstration project if it’s applied to other basins. This tested model has the potential to be used in other already heavily-managed basins to have the same potential positives for all users. The reality is that growing communities place a larger strain on these critical resources. In the future it will become essential to conserve and re-use water and the way individuals value water will change.

It is probably hard for some to value



The Highwood River at the mouth of Woman's Coulee Irrigation Diversion looking upstream.

PHOTO: © B. MEAGHER

water when it is conveniently delivered to their homes each day but I remember back to the many camping trips I went on as youth where I was in charge of collecting water. I hated walking back and forth to fill that little jug over and over again. It got to the point where I had to make decisions in my head on how much water I could drink with dinner and then not have to go back to the pump again. I guess the easy answer would have been to get a larger jug for carrying more water and do fewer trips and maybe that logic applies to how many view their water use today; as long as the tap provides, there are no worries. When we value aquatic ecosystems, of which we are a part, we then must also value the flows that are the lifeblood of our communities.

For those living in parts of Manitoba this year it may be hard to be convinced that there are benefits from flooding, but for cottonwood forests along the Bow River, small-scale floods are a necessity for survival and propagation. These forests are unique in nature; they take advantage of natural flood events in order to regenerate. Cottonwood forests, like those lining the banks of the Bow River, provide habitat and cover for fish, homes for insects and birds, shade for deer and most importantly they stabilize river banks. However, a variety of activities have reduced the number of cottonwoods along the Bow River and, because much of the river ecosystem is managed these days, there are relatively few small-scale floods to perform their regenerative


magic on these valuable trees. The Bow River Flow Project has the potential to incorporate small-scale pulses of flow downstream in coordination with the downstream partners, to simulate small-scale floods (to be clear - a very small sustained pulse where cottonwoods are benefitted but communities are not placed at risk) at the right time of the year (associated with spring run-off) to stimulate regrowth. Since it could be incorporated into the management regime, this type of activity would have no cost associated with its adoption but the benefits to the ecosystem would be great. The cost of riparian regeneration through tree planting is far more expensive and time consuming.

To conclude I believe the Bow River Project offers a very promising model for addressing many of the issues crucial to insuring the sustainability of this most precious resource.

Benefits of integrated management of the Bow River from its headwaters to confluence cited in the Project's Final Report were:

- Releases from upstream storage reservoirs can significantly improve flows downstream without negatively affecting water quality. Water quality below the Bassano Dam can be expected to improve.
- Changes in management of the Kananaskis River have potential to greatly improve aquatic ecology and the existing fishery.
- Stabilizing water levels in Lower

Kananaskis Lake will greatly improve the fishery and create new and enhanced recreational and tourism experiences.

- Long-term water demand forecasts for the City of Calgary, the Siksika First Nation, the Calgary Regional Partnership, Rocky View County and other surrounding municipalities can be accommodated.
- Minimum flows through Calgary will continue to be met and may improve dissolved oxygen levels at critical times of the year.
- Modest irrigation expansion is expected to result from improvements in conservation and efficiency with no impact on the river.
- Previous studies have shown that, with sufficient capital investment, the Spray Lakes Reservoir can be restored to its original design capacity. This would restore about 75,200 dam³ (61,000 acre feet) of storage, significantly enhancing total storage on the system and enabling most of the other benefits to be achieved. More immediately, there is an opportunity to create a Water Bank, which would utilize all the reservoirs in combination to achieve substantial overall benefits from the Bow System. (*Bow River Project, Final Report*, p. 2) 

Brian Meagher is a provincial biologist with Trout Unlimited Canada.

The Strains of Development: The Athabasca and the Oil Sands



By Matt Dow

With the exception of a few well-oiled ducks, the Athabasca River is one of the most notable and symbolic features of the continuous debate surrounding the development of Alberta's oil sands and its impact on the environment.

The headwaters of the scenic Athabasca melt from the Athabasca Glacier in Jasper National Park flowing north and eastward towards Fort McMurray. From the Fort McMurray area the river continues its journey northward and finally empties into Lake Athabasca roughly three hundred kilometres from Fort McMurray. Lake Athabasca empties into the Great Slave Lake via the Slave River, which then empties into the mighty Mackenzie River and out to the Beaufort Sea and Arctic Ocean.

While the Athabasca is known for its beauty and power, the relatively small 70-kilometre stretch downstream of Fort McMurray has attracted significant provincial, national, and international attention in the past decade. While the oil sands have proven to be the economic powerhouse of Alberta, if not Canada, the ecological sacrifice for this distinction increasingly is being recognized and the Athabasca River has not escaped the scars left by the oil sands footprint.

Quality: What's in the Water?

The quality of water in the Athabasca River has been a hotly contested issue for the last decade. Environmentalists and Aboriginal communities downstream from oil sands operations, including the now famous Fort Chipewyan, have attempted to raise the alarm about contaminants from the bitumen-soaked sands. The Alberta Government and oil sands producers, until August 2010, consistently denied that there was any noticeable impact on the health of the Athabasca from production; they maintained that any contamination in the river was naturally occurring as the river eroded its banks to allow raw bitumen to seep into its waters.

Contaminants in the Athabasca could result from a variety of different sources in the production process. First, airborne emissions from processing may fall to the ground and weave their way through the land into groundwater and tributaries that make their way into the river. Second, the infamous tailings lakes that are lined with sand and clay have been known to leak into groundwater or almost directly into the river, as was the case with Suncor's Pond One that sat on a hill less than 400 metres from the Athabasca before it was "reclaimed" in the fall of 2010. A third and less likely method of contamination could be from direct discharge back into the river as producers return water from the production process (this water should be free of toxins).

The Regional Aquatics Monitoring Program "is not producing world-class scientific output in a transparent, peer-reviewed format and it is not adequately communicating its results to the scientific community or the public." - Federal Oilsands Advisory Panel, December 2010

Following the research of Dr. David Schindler from the University of Alberta, it appears that the tide of this debate has shifted; government and industry now acknowledge that people are introducing contaminants into the Athabasca. Controlling for natural contamination, Schindler's research studied water, snow and ice samples near industry and found that thirteen of what the United States Environmental Protection Agency describe as "priority pollutants" were exposed to the Athabasca. These pollutants included mercury and lead. Seven of the "priority pollutants" exceeded Canada and Alberta guidelines for the protection of aquatic life. The research also found that Polycyclic Aromatic Hydrocarbons (PAH), well-known carcinogens, are being released into the atmosphere and eco-systems at a much higher rate than previously thought.

Dr. Schindler's research was also

highly critical of the government and industry funded Regional Aquatics Monitoring Program (RAMP) that was delegated responsibility for monitoring the health of the river. Despite multiple peer-reviewed studies in the last seven years (2004 and 2007) that determined that RAMP did not have the capacity to monitor the impact of development on the Athabasca, government and industry continued to use RAMP to support the following claims: the Athabasca was subject to a "world class monitoring system" and non-natural contamination from oil sands did not exist. The federally appointed Oilsands Advisory Panel put in charge of determining whether the "world class" title was worthy, concluded once again that RAMP did not have the capacity to test or recognize impacts from development on the Athabasca River.

The panel's December 2010 report to the federal Minister of Environment is quite scathing in its assessment of RAMP. RAMP "is not producing world-class scientific output in a transparent, peer-reviewed format and it is not adequately communicating its results to the scientific community or the public."

Given RAMP's glaring deficiencies, the federal and Alberta governments, in collaboration with academics in the scientific community have been developing a new monitoring system that hopefully deserves the "world class" label. Environment Canada released Phase One of the Lower Athabasca Water Quality Plan in March of this year. This phase focused solely on the surface water quality of the Athabasca and its major tributaries downstream of Fort McMurray to Wood Buffalo National Park. It is, as its authors pointed out, "a first step towards a comprehensive, integrated monitoring program for the oil sands region." Environmental actors including the Pembina Institute greeted this report warmly calling it a "good step toward providing a credible foundation for the monitoring of the Athabasca River downstream from the oil sands." It also is encouraging that the plan's authors



Drying northern pike at Fort Chipewyan.

PHOTO: © C. CAMPBELL

Sunset on Lake Athabasca at Fort Chipewyan.

PHOTO: © C. CAMPBELL

see that their approach may be improved by incorporating aboriginal traditional knowledge into the plan.

Early summer saw two more potentially significant developments. First, on June 30th, the Alberta Environmental Monitoring Panel (appointed in January 2011 by Environment Minister Rob Renner) released its report on environmental monitoring in the oil sands. While proposing a new monitoring program the panel also re-affirmed what other reports had concluded in that “monitoring organizations suffer from inadequate funding, weak scientific direction and a general lack of resources to take on the enormous challenge of monitoring.” The report also acknowledged that “the overall state of the environment is not well known.” Environment Minister Renner commented on the report saying that Albertans should not expect to see this report left on the shelf; but he also has not committed to a timeline for implementing the report’s findings - an omission he has been criticized for.

On July 21st, the federal government unveiled phase two of its monitoring design. This phase expands the water monitoring component and adds air quality and biodiversity monitoring components. This initiative was welcomed by the organization Environmental Defence. But the group pointed out that additional regulations should accompany these changes to the monitoring regime.

While strong movement on water monitoring should be acknowledged and applauded, it is quite possible that

these gestures are too late as any hope of attaining a true baseline study of the Athabasca has been lost in the previous forty years of oil sands development along its shores.

Quantity: Is There Enough Water?

Water allocation from the oil sands region of the Athabasca continues to be another concern among environmentalists and Aboriginal groups. The intensive nature of oil sands extraction requires large quantities of water to separate the useable petroleum products from the earth that surrounds them.

The concerns expressed by environmentalists and Aboriginal groups relate to the amount of water that is withdrawn from the river. How much water can be removed from the river before fundamental and potentially irreversible changes to the ecosystem take place? This minimum amount of water flow needed to maintain the functioning of that ecosystem is called the Ecological Base Flow (EBF). A policy developed with an EBF would halt water withdrawals if they fell below a pre-determined level.

The Alberta government and industry have consistently denied that oil sands production constitutes a significant risk to the Athabasca’s EBF but critics argue that that this denial is misguided because it focuses on annual flows instead of seasonal flows. The eight major oil sands operations including Total’s recently approved Joslyn Mine hold the rights to divert 16 m³/sec from the Athabasca. During high flows, this allocation represents less than two percent of the

flow (average 859 m³/sec). However, during low flow periods between November and April the allocation can reach nine percent of the river’s flow (average 177 m³/sec).

During these low periods the level of oxygen in the river is a significant concern as the majority of the river is covered in snow and ice. A report by Debra Davidson and Adele Hurley concluded that intensive water diversion in low flows could be detrimental to the eggs and fry of fall spawning species; it also could hinder the ability of “fall spawning fish to reach spawning sites or to allow fry to occupy key nursery sites in the river during winter.” The expected impact on the surrounding organisms is troubling as declining aquatic populations impact both humans and wildlife that rely on the fish and the river for nutrients and sustenance.

There may also be concern during high-flow periods since these periods and the flooding they produce are vital to the survival of many unique habitats in the Peace-Athabasca Delta. If withdrawal amounts are too high the water table may be too low to create these habitats; this would have obvious impacts on wildlife in the region. While this may not currently be a threat this consideration should remain on the radar of decision makers in the future.

The impacts of water withdrawals will be exacerbated by the expected decrease in overall flow in the Athabasca due to the effects of climate change. A report on the implications of a two-degree celsius rise in average temperature on Canada’s water resources concluded that such an

increase would decrease the overall flow of the Athabasca in the Fort McMurray area by 30 percent by the middle of the 21st century. The disruption would result from decreased snow pack and precipitation as well as the increased evaporation of surface water and longer summers.

The current government regulations that govern water diversions in the Athabasca are found in phase one of the *Athabasca Water Management Framework*. This was developed as a temporary framework in 2008 and does not establish EBF and this has been a significant concern for environmental and Aboriginal groups. Phase two of the framework is in the development possess currently and while the scientific evidence, including that from the federal Department of Fisheries and Oceans, supports recognizing and enforcing EBF, it is uncertain whether or not EBF will find a place in the new water management framework.

What of the Lower Athabasca Regional Plan and the Future of the Athabasca?

In addition to phase two of the *Athabasca Water Management Framework* and the new environmental monitoring program, there are other policy changes that will affect the Athabasca. Alberta's *Land-Use Framework*, released in 2008, was the Alberta government's recognition that the way decisions were made with regards to Alberta's air, land, and water were increasingly out of date. The framework established a commitment to social and environmental sustainability while managing growth and development. Implementation of the framework requires the development of seven separate regional plans to be constructed in the next several years and the *Lower Athabasca Regional Plan* (LARP), which involves the majority of Alberta's oil sands, was the first of the regional plans to be developed. It is currently

in a late draft phase awaiting final public input.

The Land-Use Framework and the subsequent LARP may have much for environmentalists, conservationists and First Nations to look forward to such as a commitment to increased monitoring, cumulative effects management, and a greater recognition of the ecological goods and services that provide value in our economy. But there are still many concerns about the plan.

Among these concerns is that LARP does not establish regional land disturbance limits, establish EBF, or identify limits of pollution in the Athabasca. An additional concern is that with the exception of a small number of oil sands leases, the area set aside for conservation in the plan appears to do little for ecologically sensitive areas; choices seem to have more to do with where the oil is available for extraction. Environmental and aboriginal groups have demanded an independent review of

the current draft of the plan.

Overall, the projected growth in oil sands development is not restricted by the LARP and the Alberta government's desire to extract up to four million barrels of oil per day from northern Alberta seems unchanged. This desire for continued growth will remain the greatest threat to the health of the Athabasca River in the foreseeable future.

Technological developments in the industry that have reduced the amount of water required to produce a barrel of oil from the oil sands would assist in reducing water intake and tailings if the pace of production was maintained at current levels. However, the overall expansion of development eclipses these improvements and will only put greater strains on the Athabasca and the ecosystems that rely on the river for survival. ▲

Matt Dow is a Master's student in the Political Science program at the University of Alberta



Kerkeslin winter's evening
24" x 30" acrylic on canvas

© L. AMANN

Draft Land-use Plan in Lower Athabasca Weak on Land Outcomes

By Carolyn Campbell, AWA Conservation Specialist



White Sand Point on Lake Athabasca.

PHOTO: © C. WALLIS

In April 2011, the Government of Alberta released for public consultation a draft integrated regional plan for the Lower Athabasca region in northeast Alberta. This is the first of seven regions to have a draft plan developed for cumulative effects management under the Land-use Framework (LUF), so it is the first big test of how effective that Framework might be. AWA has been closely involved in the LUF process since its inception in 2006 and supports the stated goal of cumulative effects management of all developments on landscapes across Alberta. Unfortunately, it appears that this process has become largely industry driven; the draft plan falls far short of responsible cumulative effects management that would sustain the area's biodiversity. Other significant land and water cumulative effects management issues remain unresolved in the draft plan.

No Biodiversity Framework/Land Disturbance Commitments

Perhaps the single biggest concern in this draft plan is that it does not include regional targets and management actions for protecting biodiversity, as promised in the Government of Alberta's 2009 *Responsible Actions* oil sands strategy. The claim made at Lower Athabasca public information sessions in May 2011 to explain the omission is that there are insufficient science-based targets. Yet in 2008, a multi-stakeholder subgroup of the Cumulative Environmental Management Association (CEMA) extensively modeled various oil sands and forestry development scenarios in the Regional Municipality of Wood Buffalo which covers most of the Lower Athabasca region. They concluded that, even to hold key species and biodiversity indicators at 10 percent below their range of natural variation, active bitumen mining and *in situ* extraction should be

limited to 5 to 14 percent of the land base. Protected areas where industry is excluded should be expanded to 20 to 40 percent of the area, and only ecosystem-based forestry and other natural disturbance based activities should prevail on the remaining 46 to 75 percent of that area.

Instead, this draft regional plan proposes a much weaker approach:

- it defers any bitumen extraction area limit for two more years, which creates uncertainty and will be highly susceptible to further delay pressures from industry;
- it proposes to set aside just an additional 14 percent of the land base to bring to only 20 percent the area that will eventually exclude industry once conventional oil and gas leases expire;
- it recommends 2 percent of the land base for ecosystem-based commercial forestry inside new

- Conservation Areas; and
- it proposes an indeterminate-sized zone of intensive commercial forestry, including wetland drainage, commercial thinning, fertilization and tree “improvement,” further reducing biodiversity.

AWA has recommended instead in its consultation input that, to maintain biodiversity and viable woodland caribou populations as per longstanding commitments, the provincial government should limit active bitumen extraction to a 5 percent area threshold, expand industry-free protected areas to at least 50 percent, and implement ecosystem-based commercial forestry in the remaining area. A promised wetland conservation policy is also urgently required on this landscape. Energy and forestry industries’ development plans need to be informed sooner rather than later by Alberta’s biodiversity and species at risk international commitments.

Strengthen Conservation Areas

Another frustrating aspect of this draft plan is the approach to protected areas. Instead of representative areas protected from industry representing ecosystems across the region, the government proposes Conservation Areas (CAs) only where there are no proven oil sands reserves. This is hardly a principle for balanced oil sands development. Instead, significantly larger areas of woodland caribou ranges, such as the Algar Lakes area, urgently need protection. At a minimum, the Richardson herd range, which has little overlap with oil sands reserves, should be immediately protected. More southern representative ecosystems need protection; the Lakeland North and South CAs proposed in 2010 by the Regional Advisory Council should be re-instated as they are contiguous to relatively intact habitat on the Cold Lake Air Weapons Range and in Lakeland Provincial Park and Provincial Recreation Area.

Moreover, the proposed CAs are not protected from industry. They will exclude bitumen extraction and other mining but existing conventional oil and gas leases will proceed. This could detract significantly from conservation values for decades to come. In caribou habitat or ecologically sensitive areas, these leases should be extinguished with

compensation. The remainder should be managed with reduced footprints and accelerated, strictly defined production schedules similar to the effective multi-stakeholder arrangement in place in Hay-Zama Lakes Wildland Park. Ecosystem-based commercial forestry should be implemented as the expectation outside, but not inside, new Conservation Areas.

There should also be a strategy to protect Environmentally Significant Areas that contain unusual land forms, rare vegetation communities or important migratory bird habitat. McClelland Lake wetland complex and sinkhole lakes and other ESAs should be protected on these grounds.

Strengthen Water Management

AWA supports the draft plan’s establishment of indicators, thresholds and trigger components to manage cumulative effects of development on water and air at a regional level. Some missing components that should be added to the surface water quality management framework are: adding more monitoring stations aside from the one at Old Fort, including on the Beaver River watershed; including aquatic ecosystem outcomes; and adding thresholds and triggers for heavy metals and polycyclic aromatic

hydrocarbons (PAHs) once long-overdue baseline estimates of natural bitumen loadings are established. For surface water quantity, the Phase II Athabasca River framework should include an ecosystem base flow cut-off level below which no industry withdrawals would be permitted.

For groundwater management, it is important that more of our groundwater resources be quantified. In addition, brackish groundwater that can still be easily treated (total dissolved solids less than 10,000 mg/l) should be monitored and managed with thresholds and targets in the Lower Athabasca and other regions. For the credibility of the surface water and groundwater objectives in this regional plan it is important for independent scientists to evaluate the indicators, and draft threshold and trigger points.

The public consultation period for this plan ended in early June and the government pledged to release the plan as early as late June 2011. We are still waiting. So far this plan does not appear to deliver on the Land-use Framework’s guiding principle to “ensure this land - and all the activities it sustains - is managed responsibly for those who come after us.”



What will the Lower Athabasca Regional Plan mean, in the final analysis, for impressive tracts of intact boreal forest such as these?

PHOTO: © S. BRAY

ERCB OKs Another Sour Gas Well in the Castle... Sort of

By Nigel Douglas, AWA Conservation Specialist



Mike Judd vs. Shell Canada, Chapter 1, Prairie Mountain 1987.

PHOTO: AWA FILES

It was like a return to the good old days of the late 1980s. Environmentalists standing in the path of bulldozers; Shell Canada operators trying to push ahead to begin work on another sour gas well, standing behind one more approval decision issued by the province's Energy Resources Conservation Board (ERCB). The scene west of Beaver Mines in southwest Alberta's Castle area in late May 2011 was reminiscent of the Prairie Mountain blockades of 1987 that ushered in an age of conflict between industry and environmentalists. Then AWA called for boycotts of Shell and Shell secured a court injunction to have protesters removed from public land.

The present conflict goes back to 2007 when Shell first applied to drill an exploratory well near Mount Backus in an area designated by the Alberta government as *Critical Wildlife Habitat*. If the well were successful, then up to five producing wells would be required. In March 2011, the ERCB gave the green light to Shell Canada to drill their critical sour gas well (32% H₂S). But, curiously, while the ERCB approved the test well it denied permission to construct the pipeline which would be required to remove any gas produced during the

drilling.

In its decision ERCB noted a long and complex history of pipeline-related issues in the region including:

- A December 1995 pipeline leakage caused by internal corrosion (the pipeline had been in operation for just 3 months)
- An August 1997 pipeline failure which led to a sour gas leakage which killed a cow and calf.
- The decision continued: "The Carbondale and Castle River systems operated without further corrosion-related releases until November 2007, at which time a rupture occurred..." This pipeline failure occurred shortly after ERCB's predecessor, the Energy Utilities Board, had held its first hearing into Shell's application to drill the Mount Backus well (see *WLA*, February 2009). Permission was denied after this first hearing.

After ERCB's approval decision was released in March 2011, the development has been stalled on a number of fronts. While approving the well, the ERCB decision recognized that Shell's rare plant survey of the potential well site was fundamentally flawed: it failed to

find nine rare plant species which were discovered in later independent surveys. Even with ERCB approval construction still requires approval by Alberta Sustainable Resource Development (SRD) in the form of a Mineral Surface Lease (MSL).

This latter approval was apparently withdrawn by SRD when, in an April 6th article in the *Lethbridge Herald*, an SRD spokesman announced that approval of the well development had been "suspended" until a plan is produced to "mitigate" impacts on rare plants. The SRD spokesman, Dave Ealey, commented: "We require them to come up with some sort of mitigation approach that ensures that what kind of impact they might have would be minimized, where it can be avoided it is, and if there is some impact it's done in a way that affects as few specimens as possible... We need to say that construction wouldn't begin on the site until we're satisfied the issue's been resolved."

Unfortunately, news of this "suspension" did not seem to have reached Shell Canada who continued to make plans to begin work on the well.

Further complicating the issue was a legal appeal of ERCB's approval of the application. In April 2011 legal counsel

for Mike Judd, a Pincher Creek-based landowner and outfitter, filed a Leave to Appeal application with the Alberta Court of Appeal in Calgary. The appeal application maintained that the ERCB “erred in law by not properly considering the potential impacts of Shell’s project on endangered grizzly bear populations and by refusing to allow evidence about the presence of a known and documented grizzly bear den to be admitted at the public hearing.” Shaun Fluker, with the University of Calgary’s Faculty of Law, later blogged that, in his opinion, “the Board erred in law with this finding by: (1) failing to reference or give effect to the legal status of the grizzly bear as an endangered species under the Wildlife Act; (2) accepting any loss of important habitat for a listed endangered species as a reasonable and acceptable outcome; (3) failing to have adequate regard for the objectives and guidelines of the SRD

Grizzly Bear Recovery Plan.”

Despite this legal challenge and SRD’s apparent “suspension” of their approval Shell operators showed up on the site on May 19th, equipped with bobcat and feller-buncher, ready to begin work. The workers withdrew after a brief standoff with Mike Judd and other activists. Eventually Shell agreed not to begin work until the judicial review issue had been resolved.

In June the Alberta Court of Appeal rejected Mr. Judd’s appeal application. SRD has kept a very low profile and did not return calls asking for clarification of their position on the “suspension” of the application. Options for opponents of Shell’s sour gas well finally ran out. Local residents planned a “wake/celebration” at the site “to mourn the loss of the site, but also to celebrate all the time, effort, and passion that went into trying to protect it.” 🌲



Kerkeslin view
10” x 10” acrylic on canvas
© L. AMANN

ASSOCIATION NEWS

AWA is inspired by the ongoing generosity and passion Alberta’s young people have for wilderness and wildlife!

Happy Birthday Ethan!

AWA received an unexpected – wonderful – gift from Ethan Craig who celebrated his seventh birthday in early June. Ethan decided he would give AWA one-half of his birthday money (\$165) to help our campaign to save grizzly bears in Alberta. Ethan’s familiarity with the plight of grizzlies and AWA’s work on this issue comes from his grandfather and from climbing the Calgary Tower at AWA’s annual Earth Day event. Joining Ethan in the photo are his mother Leanna and his brother Sam. Ethan’s generosity and passion for grizzlies is a lesson for young and old alike!



Thousands of Thank You’s to Ranchlands Elementary’s Grade Sixers!

The grade six students studying forests in Cathie Gould’s class at Ranchlands Elementary School in Calgary invited Carolyn Campbell, AWA Conservation Specialist, to speak to the class about Alberta’s forests in the fall of 2010. The students then decided to do some fundraising for AWA to help keep our forests healthy. The enthusiastic

students participated in the Climb for Wilderness Wild Alberta Expo and held a number of fundraising activities throughout the school year. In June they presented Carolyn with the fruits of their dedication – coins and bills that added up to an amazing, make that staggering, \$2,343.75! AWA is honoured and privileged to have these young students help us create an awareness of the importance of our forests. 🌲

Peregrine Falcon: A Species Recovery Success Story

In a time when recovery plans are abjectly failing many Alberta species, including caribou, grizzlies and sage-grouse, it is good to reflect on one species recovery success story. The peregrine falcon is one of our most charismatic bird species, a prodigious hunter than can reach speeds of more than 200 mph as it swoops to catch its prey in mid-flight. I once had to drive an injured peregrine 60 km to the nearest veterinarian: by the time I arrived, the cardboard box containing the bird was in shreds, and the falcon was shrieking in indignation with one taloned foot sticking out of the bottom of the box raking at anything that came within reach. This is clearly a bird with attitude!

The peregrine is also a bird that we came perilously close to losing in Alberta. In a recent article in Alberta Conservation Association’s excellent *Conservation Magazine*, Gordon Court describes how, in the late 1960s, Alberta’s peregrine falcon population was hanging by a thread: by 1970 only three pairs remained.

The finger of blame pointed squarely at the use of the pesticide DDT, which was eventually banned in Canada in 1970 and in the U.S. in 1972 (though perversely for many more years companies were still allowed to produce the chemical and export it where it decimated bird populations in other parts of the world). The Canadian Wildlife Service then joined forces with concerned falconers to develop techniques to captive breed peregrines to be released into the wild. As residual pesticide levels dropped year by year the breeding success of captive-bred peregrines became more and more successful. Today peregrines have returned to two-thirds of their historic nesting sites in Alberta and a number of new nesting sites have been colonized including sites in Calgary and Edmonton. Their future finally seems assured.

In a strange way it feels that endangered species recovery was simpler back in the 1970s! The peregrine population crashed catastrophically but the reason for the decline was simple and well-known – the enthusiastic use of DDT. Halting the decline was also

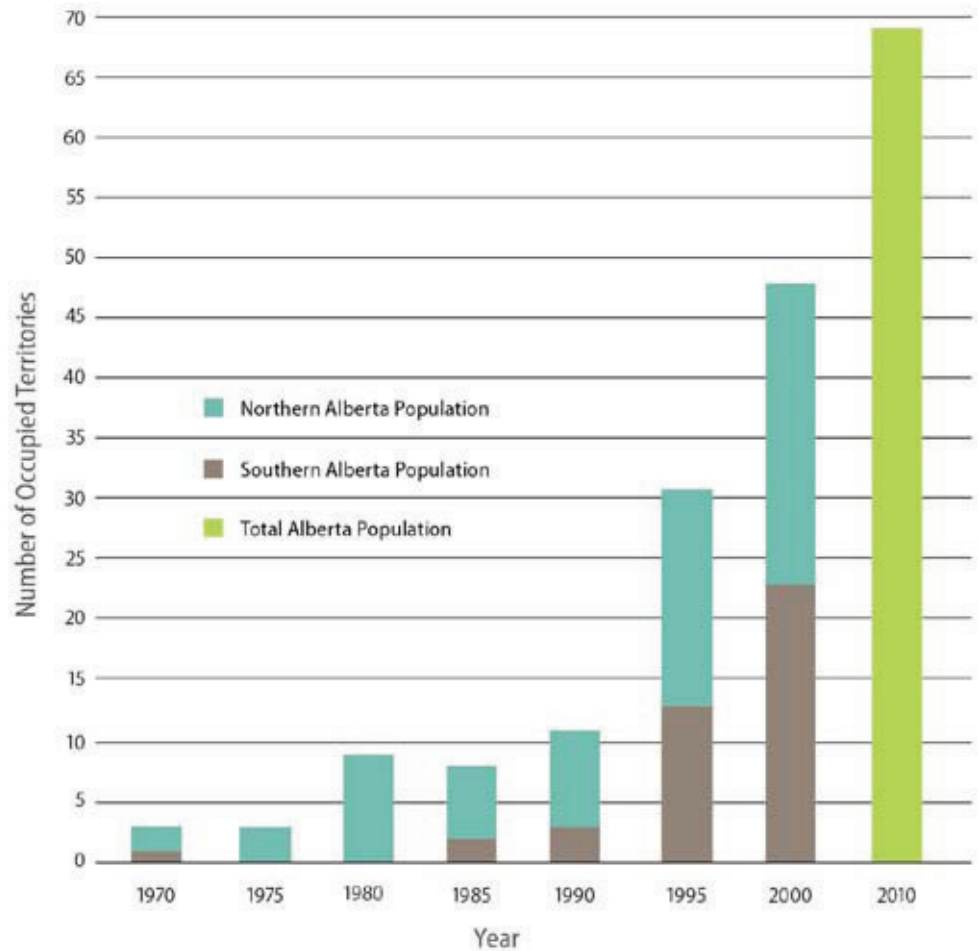


Figure 1. The number of occupied peregrine falcon territories in Alberta since 1970. The first release of captive-raised peregrine falcons in Canada occurred at the O.S. Longman Laboratory Building on the University of Alberta Farm in June of 1976. The first documented success of such releases came with the establishment of peregrine pairs in downtown Edmonton in 1980, and Calgary in 1982. The first captive-raised peregrine to return and breed in the wild anywhere in the world was identified north of Fort Chipewyan in 1977. (*Conservation Magazine* V16, the official publication of the Alberta Conservation Association.)

CREDIT: DR. GORDON COURT

simple: ban the use of DDT. Of course the ongoing recovery has been slow – nearly forty years so far – but at least there has been continuous progress.

So how does this compare to the utter failure to recover other endangered species – woodland caribou or sage-grouse? In these cases, the population crashes have been just as well-studied and just as well-understood as the case of the peregrine falcon: numbers have crashed because of badly managed industrial access. But what has been missing is any concerted effort to do anything about it. It is hard to imagine

that the companies who manufactured DDT in the late 1960s and 1970s did not lobby hard against any ban in the use of their product. Maybe they cited scientific uncertainty that their product was really responsible. But the governments of the day opted in favour of the precautionary principle and decided on prompt action: something that no Alberta government has had the courage to do for many years. Maybe, if Alberta did, in forty years’ time we would be celebrating more endangered species success stories.

- Nigel Douglas

UN Rio+20 Earth Summit, 2012

Alberta's only workshop in support of the next UN Earth Summit, to be held 20 years after the initial summit in Rio, was hosted by the Alberta Environment Network on June 4th. I attended and participated on behalf of both AWA and the Population Institute of Canada. Ten Canadian provinces will provide feedback to the Canadian Environmental Network (CEN) as Canada's ENGOs develop recommendations to the Department of Foreign Affairs and International Trade as it develops Canada's position.

Alberta's program began with a Real News video "Roundtable on Sustainable Development" examining why people have become so complacent instead of alarmed over the declining state of the world's environment and economy. Why is an intelligent species not responding appropriately to data showing growth is destroying the planet, while failing to produce positive gains in either population health indicators or perceived well-being?

Around 30 workshop participants from across Alberta seriously and diligently discussed their way through a dozen key questions set out in a workbook that will become Alberta's presentation to the CEN. Questions included how to address the growth juggernaut that has so captured us, what sorts of governance and finances would be needed to allow us to move quickly towards sustainable living, and how we move governments and businesses towards a green economy.

I welcomed the opportunity to participate in this program as I am convinced that growth in our numbers and rising rates of consumption are already pushing the natural world towards catastrophic instability – climate change being a primary example. What concerns me greatly is that it will be the Harper Government with its already black environmental reputation regarding climate change, that so obviously supports more and faster growth and has cut Canada's contributions to planned-parenthood programs, who will prepare and present Canada's position at Earth Summit 2012.

- Vivian Pharis



Orange Fang

12" x 12" acrylic mixed media on board

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Caribou Update 1: AWA in Court to Defend Alberta's Woodland Caribou

Desperate times call for desperate measures. There is little doubt that times are indeed desperate for Alberta's beleaguered woodland caribou. So on June 22, 2011, AWA and our environmental and First Nations colleagues were in federal court in Edmonton in an attempt to force the federal Minister of the Environment, Peter Kent, to bring in emergency measures to protect the habitat of woodland caribou in north-eastern Alberta. Ecojustice represented AWA and Pembina Institute in the hearing; Woodward & Company represented three First Nations – the Athabasca Chipewyan First Nation, Beaver Lake Cree Nation and Enoch Cree Nation.

Under the federal *Species at Risk Act* (SARA), when a province has failed to protect an endangered species (which Alberta has clearly done with its woodland caribou), then there are provisions for the federal Environment

Minister to force action. Although *SARA* has been in place since 2002 these provisions have never yet been used so this court case could set an important precedent.

Twenty-four years after the Alberta government first listed woodland caribou as an *endangered* species the plight of this boreal forest icon is worse than it has ever been. And the federal government's failure to protect woodland caribou has been almost as abject as Alberta's. The federal recovery strategy, expected to be released this summer, is more than four years overdue. Once released, it will still take years to be implemented, leaving the caribou herds' future in limbo. Some caribou herds have declined by more than 70 percent during the past 15 years.

Abundant scientific evidence indicates that oil sands operations contribute to caribou population declines. Yet, as of July 2010, there were 34 current or approved oilsands projects and 12 additional proposed projects within the herds' ranges.

The draft Regional Plan for the Lower Athabasca region represents one more

lost opportunity for Alberta to show some commitment to its endangered species (see Carolyn Campbell's article earlier in this issue of *WLA*). Currently just 3 percent of caribou habitat in the Lower Athabasca region is protected. Despite pointlessly lofty promises that "Land disturbance impacts to biodiversity should be avoided or mitigated" in the Lower Athabasca region, under the draft plan, a mere 4 percent more caribou would be protected; a mere drop in the ocean compared to what would be required to begin to halt the decline.

Both provincial and federal governments have a long history of utterly failing Alberta's woodland caribou. Let's hope that the federal courts might have more success.

- Nigel Douglas

Caribou Update 2: New Report Urges Alberta Government to Protect Caribou Habitat...Now

"To conserve woodland caribou means dispensing with business as usual, which has demonstrably and repeatedly failed to meet caribou conservation needs." This is the finding from a major new science and policy briefing note issued by the International Boreal Conservation Science Panel: *Keeping woodland caribou in the boreal forest: Big challenge, immense opportunity.*

The report emphasizes that recovery is achievable: "Although the challenge of conserving caribou may look daunting, science indicates that both caribou conservation and resource exploitation are possible—if society makes room for

caribou in the boreal forest in its plans and desires for the future."

But the challenges are substantial. They include:

- "The consequences of today's actions, or inaction, will reverberate for at least a half-century."
- "Caribou need old forests, typically more than 50 years old, and they range over large areas, often thousands of square kilometres. Managing the boreal forest must occur at commensurate scales in time and space. Planning must consider the long term, in accordance with the long-term consequences of present-day human activities in the boreal forest."
- "The viability of a caribou population declines in the midst of disturbances to habitat, whether natural or human-caused. Such disturbances need to be considered cumulatively. Current understanding suggests that disturbed areas must not encompass more than about one-third of a population's range if the population is to persist period."
- "Ensuring a future for woodland caribou populations must include a margin for error, in recognition of many uncertainties and the need to keep management options open. Protected areas provide insurance against unfavourable outcomes as well as a template for evaluating the effectiveness of management prescriptions beyond protected areas' boundaries."

In an accompanying letter to the Alberta government, the panel writes: "Now more than ever, urgent action is required by the Alberta government to sustain caribou populations throughout the province. We appreciate that the Land Use Framework provides new tools for establishing new thresholds for development and opportunities for conservation. We therefore recommend that your government act now to protect key habitats and implement a comprehensive caribou protection plan to ensure that this iconic species is sustained for future generations." AWA could not agree more!

- Nigel Douglas



PHOTO: © C. OLSON

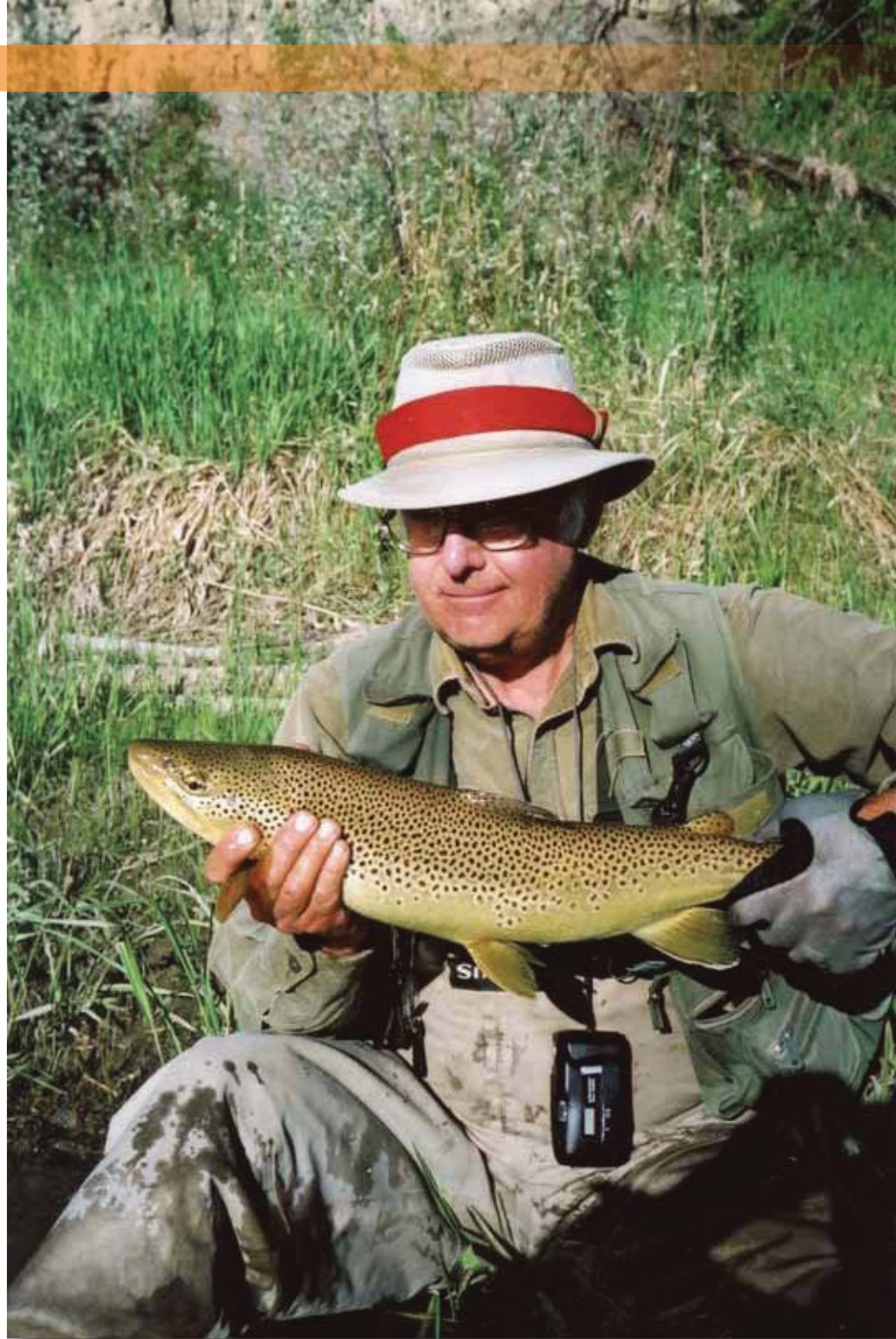
**Bob Scammell –
Several Lives Well-lived**

By Vivian Pharis, AWA Director

I had the honour this June to visit with and hear stories from a truly remarkable Albertan – a man who in the years since his birth has managed to live at least two normal-length lives; one mainly indoors, one mainly outdoors. Many of you will know Bob Scammell from his 45 years of writing a weekly outdoors column carried at one time or another by most of Alberta’s main newspapers and continuously by the *Red Deer Advocate* since 1966. In one of his full lives Bob practised law in Alberta. He started this career at the age of 24, was awarded a Queen’s Council in 1980, and retired in 1999. He graduated from Dalhousie Law School in 1962. In the summers between semesters he made the money needed to pay for his tuition by working Alberta’s pipelines and marking English exams for engineers. In his other full life he has been a writer since his undergraduate days at the University of Alberta, where he edited *The Gateway* - the student newspaper. Between the U of A and Dalhousie he worked one summer as a reporter for the *Calgary Herald*.

Squeezed into these two lives has been a distinguished career of volunteerism. Bob has served with, for example, the Alberta Fish and Game Association, Red Deer Public Library Board, Canadian Wildlife Federation, Alberta Conservation Association, the Legal Aid Society of Alberta as well as serving for ten years as an elected Bencher of the Law Society of Alberta.

From early on Bob was torn over careers – he felt he needed a solid one that would permit the luxuries of reasonable recompense and free time, yet his heart pulled him in the more tenuous direction of wandering the outdoors and writing of his experiences. While head arguably won over heart his head also enabled heart; Bob was not far into his career as a Red Deer litigation lawyer before his firm recommended he join a local club or society in order to meet new clients. Bob chose the vigorous Fish and Game Association which remains his favoured organization. Also, an early diagnosis of Type 1 diabetes and a recommendation from his doctor to get plenty of sunshine, fresh air, and exercise



Bob Scammell and one of Alberta’s magnificent brown trout.

meant Bob’s law career had to be balanced with the outdoors and writing about it. As litigation evolved into family and matrimonial law, Bob’s outdoors columns evolved from describing animal/hunter/fisherman interactions into studies on the art and ethics of fly fishing and hunting where he still used the observational eyes and skills of a scientist.

The weekly column that has been carried so long by the *Red Deer Advocate* and *Brooks Bulletin*, and that used to be carried by the *Calgary Herald* and *Edmonton Journal* amongst others, is far from the extent of his regular writing. *Western Sportsman*, *Outdoor Edge* and *Alberta Outdoorsman* also have featured regular Scammell columns; many other sporting magazines in North America



have carried his freelance articles over the past 45 years. The columns and various freelance articles have won excellence in craft awards from the Outdoors Writers of Canada and the Outdoor Writers Association of America. Two of his three books have won Outdoors Book of the Year awards; this includes his most humorous publication *Good Old Guys, Alibis and Outright Lies* which is also a Canadian bestseller.

Perhaps surprisingly, Bob's readership has a solid female following. Bob attributes this to his focus on human behaviour in the outdoors – the good and the bad – and to mincing no words in his loving or loathing of one or the other. His columns frequently address issues of ethical outdoor recreation, of “fair chase” in hunting and fishing, and he uses his writing platform to berate stupidities in Alberta's increasingly complicated annual hunting and fishing regulations.

He is also Alberta's premier writer on the ethical use of land, especially public land, which he defends with the vigour of a mother grizzly guarding her cubs. His female audience appreciates an occasional foray into such topics as Alberta's fiddleheads – where to find them and how to prepare them – or how

to stalk the wily morel mushroom and do it culinary justice. Although now retired from the legal profession, Bob's readers won't let him retire from his columns, some of which are being picked up on the internet, resulting in fan (e) mail from well beyond Alberta. Incredibly, the Scammell outdoors columns are some of the only such writings in the world!

Enabling many a good man to exceed beyond the norm is often an equally good (or better) woman. This is the case with Bob. He has “Herself,” as he refers to his journalist/librarian wife Barbara, a woman who has obviously “held the fort” over the past 49 years during her husband's continuous excursions. Bob claims he used to spend as much as 150 full or partial days in the outdoors each year. Barbara is, of course, mother to their son and daughter and was probably their chief rearer. Credit for setting examples for not shunning hard work, for public service and for a deep love and concern for the outdoors goes to Bob's parents who raised their son in the freedom of the Brooks countryside. They showed him how to hunt, fish, grow a garden, find and pick berries and mushrooms and they allowed him to roam widely. They knew how to

cultivate adventure, along with discipline, confidence and down-home skills that sustain Bob to this day.

My husband Dick and I first became aware of Bob's formidable political savvy and speaking prowess when we encountered him in the early 1970s; at the time he was most active on the executive of the provincial Alberta Fish and Game Association (AF&GA) and the Canadian Wildlife Federation. Through the 1970s and 1980s the AF&GA was AWA's primary ally in conservation work and the two groups fought many good battles to keep the Willmore Wilderness Park free of tourism development, to try to halt the madness of domesticating wildlife on game farms, and to stop the sale of public lands. The two groups began working cooperatively to prepare for and present at the Eastern Slopes Hearings in 1973. This continued in subsequent years as they became public interest consultants to the process of implementing the policy.

Bob was AF&GA president during the crucial years of 1973 to 1975. These were early days of the new Conservative Government under Premier Peter Lougheed when so much progress could be achieved through genuine public participation. Bob reminded me of times when Ministers of the Crown were bright sparks with great senses of responsibility to their appointments and would meet regularly with public interest group representatives. They even paid attention to us.

In those giddy days, Bob can be proud of such achievements as the choice of the restoration of the North Raven River as Alberta's first *Buck for Wildlife* project, a North American success story, and the institution of Alberta's Hunter Training and Conservation Course that became a requirement of all new hunters. He also played an important role in getting Alberta's *Buck for Wildlife* program established whereby a dollar from the purchase of each hunting or fishing license went into a Wildlife Habitat Fund earmarked for habitat maintenance, improvement, and acquisition.

One of the stories Bob best likes telling about his work with the AF&GA is how he used his knowledge of the law to help save this fund. *Buck for Wildlife* grew rapidly despite withdrawals for projects and soon had collected \$12 million. Covetous government eyes began seeing other uses for this pool of

money and were threatening to transfer it to general revenues. When then AF&GA president Vern MacIntosh called Bob about this impending fund coup, Bob smacked down his gavel. He told Vern to let government legal advisors know that touching the legislatively created and protected fund would be a “breach of trust” that was legally indefensible. Within two years the fund was converted into the Alberta Conservation Association where it continues to build and distribute monies for conservation and habitat work. Bob served as an ACA director from 1988 to 2002.

Struck recently by a debilitating disease causing atrophy of his leg muscles, Bob is now unable to fly fish and his hunting is restricted to hunting from blinds. He is mad as hell about his condition for which there is no medicated relief or hope for cure. He is still able to walk and drive a car and AWA is looking forward to his address in November at the Martha Kostuch Annual Wilderness and Wildlife Lecture. Bob will receive a Wilderness Defenders Award to add to his growing collection of awards for conservation work and writing.

Bob’s address in November will be on public lands and there is no one in the province more qualified to speak on this subject. On the day I visited Bob, he told me the greatest fallacy about public lands is that people don’t care about them. Through his years of writing and speaking on the subject, he knows that people care passionately for their public land legacy and will fight tenaciously to maintain it. In his opinion, the greatest challenge is to mobilize that public interest so that governments can’t ignore the extent of the outcry. Bob would like to see high value and standards applied to public lands – “so that, when the oil and gas are gone, the land will still be there to sustain us with its broad range of sustainable and renewable values.”

To paraphrase Bob’s words, another huge challenge for organizations like AWA and AF&GA is to convince Alberta’s Auditor General to look into the surface rights “rip-off” of public resources through allowing the holders of grazing leases to milk hundreds of millions of dollars from oil and gas interests operating on public land grazing leases. This money is rightfully public

money, but everything about it is a carefully guarded secret by a government that has no idea how much public money it has frittered away to lease holders and hides behind privacy concerns. “Excuse me,” Bob scoffs, “how much money has been wasted from the earnings of land the public owns is a private matter? This is plain wrong.”

Fittingly, in the last year Bob won three national writing awards: first in the National Fishing Week Awards, second in the Brock McRitchie Awards for “writing depicting children being taught or enjoying the outdoors,” and a Shimano National Communication Award for one of his articles on “Potatogate” – the attempt last year by the Alberta government to sell yet another significant piece of native prairie public land. That Potatogate was thwarted is in no small way attributable to the efforts of both AWA and Bob Scammell working together once again on behalf of the public good.

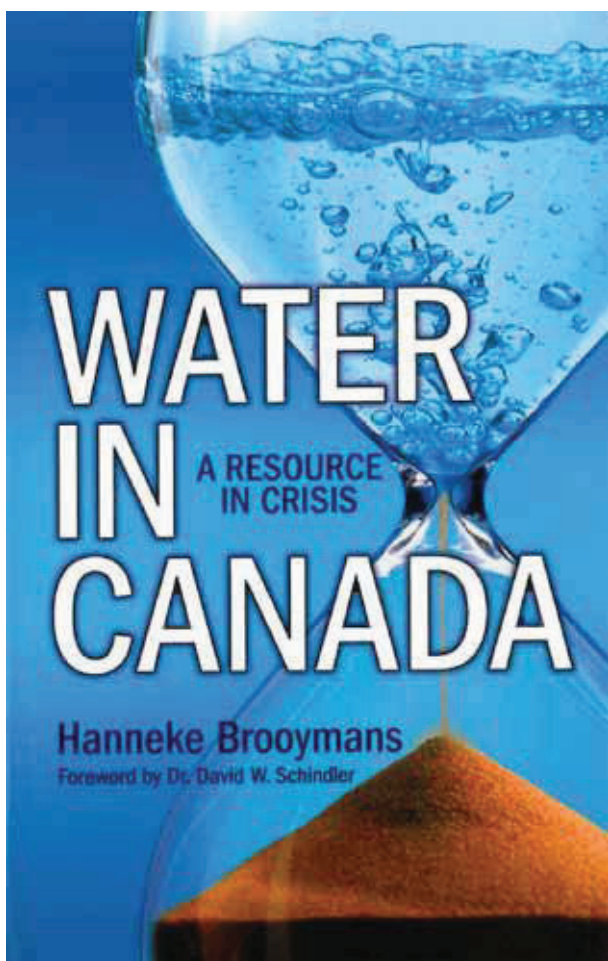
Please plan on attending Bob’s lecture this November. We can all learn a great deal from this powerful advocate for nature’s blessings. 🍌



Red Rock Diptych

Acrylic on Canvas Two panels x 24”x24” Total size 48”x24”

© L. AMANN



Hanneke Brooymans, *Water in Canada: A Resource in Crisis*, (Edmonton: Lone Pine Publishing, 2011)

Reviewed by Carolyn Campbell

Did you know Canadians use an average of 320 litres of water per person per day for household use while an international expert calculated that about 50 litres a day is the basic daily needs requirement? So, what can we learn from Winnipeg's Kevin Freedman who managed to use just 25 litres a day for a month and stay healthy and clean?

Did you know that the world's largest dam (by construction material volume) is one of Syncrude's tar sands tailings dams in northern Alberta? Or that southern Alberta is considered "ground zero" for dealing with Canadian water scarcity challenges?

These and many other fascinating dimensions of Canada's water resources

are explored in Hanneke Brooymans' book *Water in Canada: A Resource in Crisis*. Brooymans, a respected environmental journalist at the Edmonton Journal from 2000 until earlier this year, knows how to craft clear engaging language as she describes our overly indifferent relationship with our water resources: "Why would we hurry to measure something we think we'll never run out of, right?" Reading her book is an enjoyable way for any Canadian to become much, much smarter about the big and interesting water issues facing our country.

Brooymans presents a brief and remarkably clear overview of Canada's water quantity. This includes a discussion of what groundwater is and why we need to focus on

"renewable" surface water rather than the far larger amounts of water contained in our lakes left over from the last glacial age. She ably succeeds in convincing the reader that we are not a land with a super-abundance of water; rather, we should be carefully managing and conserving a scarce resource.

I really appreciated her approach to presenting key water quality concerns. She offers her readers a clear re-telling of the big stories of recent years: of Lake Winnipeg and its algae blooms, of Walkerton/North Battleford and pathogen-laden drinking water, and of effluent pollution in the Great Lakes (and later, of water export concerns from those Lakes). She recounts the cancer concerns of the people of Fort Chipewyan, downriver and downwind of many oil sands projects, and the drinking water quality problems facing many First Nations communities. There is also an interesting overview about emerging knowledge of effects of water-borne chemicals from pharmaceuticals and

personal care products on ecosystems and people.

The later sections on federal and provincial water management and climate change are all important pieces, but not as well organized as I would have liked. For example, there are several widely separated treatments of the seniority water license system that Alberta and other western provinces have. This approach results in a fragmented description of the important challenge we face in moving from historic allocations – which in southern Alberta heavily favour irrigation districts and the City of Calgary – to water allocation that meets future needs (including the needs of ecosystems). There is also too little attention in these sections to regional watershed planning: I would have liked to see a few stories from across the country to illustrate the great promise as well as obstacles for this approach to managing regional water resources. But, these quibbles aside, given the wide range of topics she has chosen, Brooymans succeeds admirably overall in distilling them to their interesting essentials.

Brooymans describes some promising pioneering efforts for water conservation and quality improvement. Grey water, the runoff from showers and baths, is being re-used to flush toilets in a City of Guelph residential pilot project. This reduces water diversion, treatment and pumping. An Alberta feedlot operator group was (at the time of the book's writing) in the late stages of constructing a facility to use manure to provide both power and feedstock to produce ethanol, fertilizer and water. Reduced pathogen runoff risks are among the anticipated environmental benefits. Brooymans should also be commended for including a section on practical ways we can reduce our personal water use and impacts.

Hanneke Brooymans' book will enjoyably educate readers on a host of interesting water topics that are sure to become more urgent in Alberta and across Canada. It will help convince and inspire you to join other voices in pointing out the need to reduce our water contamination practices and better use this scarce and valuable resource. 🍌

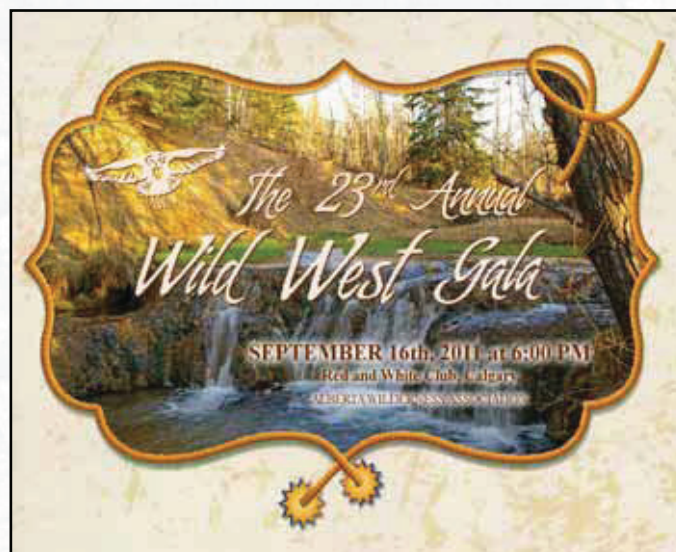
23RD ANNUAL WILD WEST GALA

Friday, September 16, 2011

Time: 6 p.m.**Location:** Red and White Club
(North end of McMahon Stadium)
Calgary

There will be plenty of great food, entertainment, fun at the bid sheets, balloon popping, bucket brigades and so much more. We look forward to this event each year as a way of celebrating with folks like you and we hope this year will be the best party yet! We've kept the price low, the fun is better than ever, and we are sure it will be a sold out crowd, so get your tickets early and avoid disappointment. It's just a click away, the tickets are on sale at www.AlbertaWilderness.ca

*Looking forward to seeing you September 16, 2011
at the Red and White Club!*

**SAVE THE LAST DANCE FOR TOMORROW**

As part of an Emergency Sage-Grouse Summit AWA is organizing for September, we will have an evening presentation open to the general public. All proceeds will go towards Sage-Grouse conservation.

Thursday, September 8, 2011

Time: 7:00 p.m.**Location:** 455 - 12th Street NW, Calgary**Tickets:** \$25.00 (including a \$20.00 tax-receiptable donation towards Sage-Grouse conservation)**Registration:** 1-866-313-0713 or 403-283-2025**Online:** www.AlbertaWilderness.ca**MARTHA KOSTUCH ANNUAL WILDERNESS AND WILDLIFE LECTURE****AND THE ANNUAL WILDERNESS DEFENDERS AWARDS**

Friday, November 18, 2011

455 - 12th Street NW, Calgary

Reception: 6:00 p.m.**Wilderness Defenders Awards:** 7:00 p.m.**Lecture:** 7:30 p.m.**Cost:** \$30.00**Registration:** 1-866-313-0713 or 403-283-2025**Online:** www.AlbertaWilderness.ca**Guest Lecturer: Bob Scammell**

Many of you will know Bob Scammell from his 45 years of writing a weekly outdoors column carried at one time or another by most of Alberta's main newspapers and continuously by the Red Deer Advocate since 1966.

Two Alberta Wilderness Defenders Awards and one Great Gray Owl Award will be presented at this evening of celebration.

**ALBERTA WILDERNESS ASSOCIATION ANNUAL GENERAL MEETING**

Saturday, November 19, 2011

Time: 11:00 a.m.**Location:** 455 - 12th Street NW, Calgary**Registration:** 1-866-313-0713 or 403-283-2025**MUSIC FOR THE WILD**

Saturday, December 10, 2011

The Tragically Hick

Back by popular demand! The Tragically Hick's brand of bluegrass pickin' was so popular two years ago, we're putting them back up on the AWA stage. Putting their bluegrass twist on everything from the Nitty Gritty Dirt Band to the Beatles to Texas swing, the outcome is music that's enjoyable, delightful and crowd pleasing.

Doors open: 7:00 p.m.**Music starts:** 7:30 p.m.**Tickets:** \$15.00**Pre-registration is required:**

403-283-2025

We are also hard at work lining up other great acts for the 2010-2011 Music For the Wild season. Keep checking the AWA website at www.AlbertaWilderness.ca for updates!

CORRECTION

In the June 2011 *Wild Lands Advocate*, the Whaleback photos on pages 4 and 5 were incorrectly credited to B. Blaxley. They should have been credited to D. Samson. Our apologies to David and Bob for this mixup

— Ian Urquhart

**SAGE-GROUSE HAVE BEEN ENDANGERED FOR MANY YEARS
BUT GOVERNMENTS HAVE DONE VERY LITTLE TO ELIMINATE
HUMAN DISTURBANCES IN CRITICAL SAGE-GROUSE HABITAT.**

ONLY 13 MALES LEFT

WWW.ALBERTAWILDERNESS.CA

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