SAGE
Southern Alberta Group for the Environment

"Our Canadian environmental laws don't matter if they are broken with impunity."

Neil Young

February 2014

SAGE meeting Thursday, February 9th at 6:00 p.m. at Cheryl Bradley's home. Potluck.

2014 Sustainable Communities and Trade Show, Charlottetown, PEI, February 11 to 13th.

Feedback for **South Saskatchewan Regional Plan** extended to February 28th.

Re-fresh: The Confluence of Ideas and Opportunities on Water Reuse, June 24 - 25, Calgary. See Alberta Water Council.

Environment Lethbridge is Launched

On Thursday, January 30th, Environment Lethbridge made the transition from a steering committee to a functioning organization.

Environment Lethbridge promises to become a hub of communication, information and expertise on the environment; an advisory board for developing public policy; an environmental educator; and a forum to advance environmental initiatives in Lethbridge.

The Launch had over 100 people in attendance, with Bridget Mearns acting as the Master of Ceremonies. The steering committee was acknowledged, including three SAGE directors (Cheryl Bradley, Deb Jarvie, and Braum Barber) and the new Executive Committee was introduced.

The Executive Committee is designed to include four representatives of Community Partners and four individual representatives. Included in the founding Community Partners on the Executive are the Chamber of Commerce, Industrial Association of Southern Alberta, McKillop Church's Mission and Social Action Committee, and SAGE (represented by Nicola Miller). Individuals include Patty Vadnais, Mike Spencer, and Jenna Easter who have been active on the steering committee.

There were three engaging presentations made at the Launch, with Chris Perry describing his farm's efforts to minimize inputs while increasing agricultural yields. This includes a biogas digester to make electricity and heat, a solar photovoltaic array, and advanced 'data-driven' agricultural methods. The Mayor of Medicine Hat spoke about HatSmart projects both small and big, including a solar thermal project unique to Canada. And Mike Spencer shared the real experiences of a small business making progress towards sustainability. They were all very positive and inspirational presentations.

Public volunteers are welcome to propose ideas and volunteer on projects. SAGE wishes Environment Lethbridge great success!

A Free Environment for Free Trade

After many years of secret negotiations, last October Canada agreed-in-principle to free trade with the European Union (CETA). And after 19 rounds of (also secret) negotiations, Canada is still working on the Trans-Pacific Partnership (TPP) free trade deal.

It seems that it is very difficult to come to an agreement on cheese and pharmaceutical patents. What is not difficult, however, is abandoning environmental responsibility.

A recent Wikileaks release included the TPP negotiated chapters on the environment. The Wikileaks media release noted: "When compared against other TPP chapters, the Environment Chapter is noteworthy for its absence of mandated clauses or meaningful enforcement measures … The dispute settlement mechanisms it creates are cooperative instead of binding; there are no required penalties and no proposed criminal sanctions. … the Chapter appears to function as a public relations exercise."

Canada continues to block meaningful (and enforceable) environmental responsibility in trade agreements, as the national economic plan is premised on resource exploitation. In the CETA negotiations, Canada blocked a European invitation to create a Sustainable Development Chapter as part of the agreement.

Even NAFTA has mechanisms for disputing environmental issues that challenge future profits of corporations. The TPP only encourages corporations to voluntarily enhance environmental responsibility. The Wikileaks analysis concludes: "Instead of a 21st century standard of protection, the leaked text shows that the obligations are weak and compliance with them is unenforceable. Contrast that to other chapters that subordinate the environment, natural resources and indigenous rights to commercial objectives and business interests. The corporate agenda wins both ways."

Interestingly, the TPP Environmental Chapters says it would not "apply to resource management laws that seek to balance a range of commercial, recreational and environmental interests." Does this jeopardize the South Saskatchewan Regional Plan?

Caring for Cutthroat

(Courtesy of Lorne Fitch, P. Biol., written 2011)

Westslope cutthroat trout now exist on the edges, fringes and margins of their former range. Populations are disconnected from one another and are small enough some are at significant risk of winking out of existence. A combination of things has led to this state: changes in habitat caused by various developments; stocking of non-native trout species, some of which hybridize with cutthroat trout, others that compete with them for space and resources; and, the additive feature of multiple, synergistic cumulative effects. Most of these impacts on cutthroat trout continue to influence the status of the Alberta population, plus climate change is an added concern.

Although cutthroat trout survived and thrived for about 10,000 years in what just became the province of Alberta the recent, rapid pace of change in as short a period as a human life span has been beyond their ability to cope and evolve. A recovery strategy is a life boat of sorts, in the face of these perils. It is a mechanism to delay the negative trajectory of the population and, over time, allow a modest recovery so the species is not so imperiled and in danger of disappearing from Alberta watersheds.

Why would we, why should we care about cutthroat trout?

Partly because governments, at various levels have committed and are mandated to ensure species do not slip through our fingers, between the cracks and sink beneath our collective consciousness. So legally we have to care.

Morally, to allow a species like cutthroat trout to disappear through apathy, ignorance, inaction or greed would be a blot on our record as stewards of shared resources. These resources have been entrusted to our care, not for our exclusive

Interesting Links:

An Old Story, but Useful Lesson (James Hansen) http://www.columbia.edu/

Get Used to Heat Waves: Extreme El Nino Events to Double http://www.sciencedaily.com/

Shale Gas: How Often Do Fracked Wells Leak? http://thetyee.ca/News/2013/01/09/Leaky-Fracked-Wells/

Weakened Tropical Circulation and Reduced Precipitation in Response to Geoengineering
http://iopscience.iop.org/1748-9326/9/1/014001/pdf/1748-9326_9_1_014001.pdf

Southern Alberta Group for the Environment (SAGE)

A Leading Voice for a Healthy and Environmentally Sustainable Community.

Visit us at: http://sage-environment.org/

If you are interesting in getting involved, contact us at:

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use and disposal but to pass on, unimpaired, for subsequent generations.

Functionally, protecting and restoring cutthroat populations transcends the fish. Cutthroat trout are a part, a feature of a watershed and an indicator of landscape health. The clarity of the medium cutthroat swim in should jog our sensibilities and remind us of the source of our drinking water. Having cutthroat occupy these watersheds is the gold seal of water quality. The ripples that extend outward from a pebble dropped in a stream containing cutthroat inevitably find us.

All of us, governments, industry, academia, conservationists and the public have a duty to ensure cutthroat trout are allowed to survive and recover. The debate isn't about whether they should be saved but rather how to save them and how quickly we need to act. Two essentials for these fish are place and space- cutthroats and their habitats are intertwined, interconnected and incapable of being separated.

If we can protect some places and spaces for the cutthroat and allow recovery of populations to more robust levels, the intended effects will benefit other species. It may well be that our own species will need these healthy watersheds with natural expressions of biodiversity and ecosystem services. It truly needs them now!

Touching, seeing or knowing a wild cutthroat trout exists exposes and sensitizes us directly and immediately to the very elements from which we evolved- earth, water, air and other living kin, large and small. A cutthroat trout can help us remember our place in the fabric that connects us and upon which our lives are mysteriously and inextricably linked.

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

Old Trees Rule

A January 15th letter published by *Science* provides some surprising results about the growth of trees: The biggest trees grow faster as they age.

The 38 scientists studied 403 types of trees (almost 675,000 individual trees) in tropical and temperate regions on 6 continents of the globe over 80 years. They found that 97% of them grew faster as they got older.

Apparently, the common belief that tree systems reach a maximum size at maturity (like humans), is an unsubstantiated myth. "Rather, rapid growth in giant trees is the global norm and can exceed 600 kg (1,300 pounds) per year in the largest individuals," the scientist observed.

The significance of these findings are far reaching. Many logging practices of old growth forests are premised on the assumption that young trees that replace them will grow faster and sequester more carbon from the atmosphere. This assumption is not supported by the evidence, in fact the opposite is likely - that old growth forests actually sequester *more* carbon from the atmosphere each year (while maintaining natural ecosystems for wildlife).

The study cautions, however: "While the finding applies to individual trees, it may not hold true for stands of trees. ... As they age, some trees in a stand will die, resulting in fewer individuals in a given area over time."

Trees are the Answer (2010, 10th Anniversary Edition)

Patrick Moore is known for his co-founding of Greenpeace and subsequent shift to become a consultant for a number of corporations and lobby groups. When first written, *Trees are the Answer* appeared to be a form of therapy - a long winded rant against anybody who didn't agree with his pro-forestry, pro-nuclear and climate change skeptic positions. He calls these opponents 'environmentalists', usually prefaced by a colourful adjective.

In the 10 years between editions, one would have thought that Dr. Moore would have improved the book - unfortunately, this is not the case. In fact he has only entrenched himself further into his choleric opinions.

There are some interesting arguments in *Trees are the Answer*. Moore offers a discussion on the hazards and benefits of different techniques of logging, essentially saying the right technique depends on the location. He also shares some conventional views on ecology: biological diversity, monoculture, and ecological change. His main argument is that wood can be sustainably extracted from forests while maintaining habitat and biological diversity, fertile soils and providing ecological services like clean air & water, and carbon capture. If this had been all he wrote, he may have been able to make some important points that would have advanced societal understanding of forest issues.

But this is not all that he wrote.

Suffocating the text is what could only be called a vendetta against 'environmentalists' - ranging from environmental organizations, to the Forest Stewardship Council, to the LEED building system - any group that has opposed him, it seems. In addition, many of the arguments, when not contradictory or completely wrong, are built on a number of rhetorical fallacies.

For example, he begins his revised anniversary edition with the statement: "More recently, the belief that climate change (global warming) is caused primarily by human emissions of greenhouse gases, has come into serious question." Really? Written at a time (2010) when there had never been more scientific consensus to the contrary. Nevertheless, Moore goes on to describe how effective forests are for carbon sequestration and a potential source of cellulosic biofuels. Apparently, he sees no contradiction. This is not dissimilar to his support of nuclear energy as a source of clean and safe power, unsupported by a good argument against much cheaper coal-fired electricity.

Moore laments the generalizations made against clearcut logging and goes on to advocate for good practices for different locations. But when he discusses green building he supports geothermal heat pumps for heating and cooling - he says "no other single technology makes as large a contribution to reducing fossil fuel use in buildings" and goes on to assert that the initial cost will be offset by savings in time. Well, the validity of this is as contextual as clearcutting. The effectiveness and cost savings of geothermal heat pumps is entirely dependent on the source of electricity to run the system. In Alberta, with predominately coal-fired electricity and cheap natural gas, this system neither reduces emissions, nor does it ever pay back.

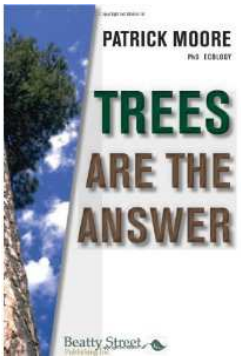
Now, about the rhetorical fallacies. Moore claims that there is no evidence that deforestation causes species loss. This fallacy is the misplaced burden of proof, where the lack of evidence from side A is taken as proof for side B. In other words, a lack of evidence of species extinction caused by forestry does not mean it is not a cause.

Moore uses many faulty premises based on invalid reasoning. He suggests that forests recovered from the last ice age, so they will recover from deforestation. He suggests that species dispersal is an absolute requirement of natural selection, so species will repopulate deforested areas in time (assuming they survive the dispersal, or have habitat to disperse to).

He also seems fond of red herrings: He says that forestry is not so bad, because agriculture is worse; LEED points for lumber in green building should be higher because bamboo is transported further; and Moore throws around numbers and statistics with no references (and no relevance, at times) - the same crime he accuses his detractors of.

The core of the book shares some potentially interesting perspectives, but they are sullied by his problematic arguments, and irrational and distracting diatribes.

Trees may be the answer, but Patrick Moore does not share with us the question.



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A leading voice for a healthy and environmentally sustainable community

January 9, 2014

To: Honourable Robin Campbell, Minister ERSD

cc: Bev Yee, Assistant Deputy Minister, ESRD
Greg Weadick, MLA Lethbridge-West
Bridget Pastoor, MLA Lethbridge-East

From: Braum Barber, Director, Southern Alberta Group for the Environment

Re: Draft South Saskatchewan Regional Plan (SSRP)

The Southern Alberta Group for the Environment (SAGE) has enthusiastically supported the process of developing the Draft SSRP. We believe that it is extremely important that the Government of Alberta take a leadership role in managing land-use for the long-term benefit of Albertans, and the SSRP is a promising effort in this direction. We encourage the government to continue to pursue regional planning; however, we believe the current Draft SSRP will require some adjustment to be effective.

General comments:

Before elaborating some specific concerns, it is important to first express some general objections about the tone of the document. Consider the following quote:

> "While cumulative effects are considered to be the combined effects of past, present and reasonably foreseeable land-use activities on the environment, it is not the intention of the biodiversity management framework to return Alberta to the levels of biodiversity found prior to European settlement. Today's Alberta includes working landscapes, and the Land-use Framework policy acknowledges the need to balance environmental, social and economic considerations. The focus of the framework is from today into the future ..." (p.38, 119).

Is there anyone who has seriously proposed that we restore the South Saskatchewan basin to a condition 'found prior to European settlement'? Is this rhetorical flourish meant to temper expectations for the 'need to balance environmental, social and economic consideration' in the following sentence? As we have already eliminated at least 60% of native vegetation and 64% of natural wetlands from the region and compromised much of

the natural ecosystems that remain, wouldn't a 'balance' suggest conserving what remains and that some serious restoration be considered? Or are the criteria for 'balance' based on current conditions, or the conditions in 2017, or 2024 when the government writes a new planning document? One might argue, with so much land already converted from its natural state, that what remains must be preserved. That a proper 'balance' would be a no-net-loss policy with concerted efforts towards restoration and expansion of conserved land.

Perhaps this seems pedantic, but how does the concept of 'balance' correlate with the concept of 'growth'? The tone of the document suggests that 'growth' is the *sine qua non* of Alberta's economic strategy - inevitable, indeed desirable - and that conservation efforts are not intended for long-term preservation, but simply a delay in exploitation until a time when areas critical for water purification, water retention, carbon sequestration and habitat have more economic value for other land uses, as guided by the omniscient invisible hand of valuation. Unfortunately, "if land-use decisions are based on market-priced goods alone, then a reduction in environmental regulations must always appear justified."[i] In other words, conservation must recognize both market and non-market goods and services, with difficult-to-monetized impacts managed by imposing sustainability constraints – the SSRP requires more sophistication in its approach to valuation. This document would be more effective with a clear admission of limits – limits to growth, and limits to converting what remains of our natural heritage for human uses.

In addition to the uncritical veneration of growth, there is a clear paucity of imagination in the Draft SSRP of what type of economic growth Alberta can expect over the next decades. Are forestry, oil & gas exploitation, and irrigation really our only vision for economic prosperity in the province? With limits on natural resources (both renewable and non-renewable), can perpetual growth of resource extraction be realized? Can further growth of land-based human activities be realized while 'balancing' the need for preserving natural areas?

It is our general concern that the current Draft SSRP is emasculated by its lack of clear vision for Alberta's future. Some definition of conservation, of balance, and of growth would make clear the goals for future decisions that will be made based on this planning document. As it stands, the actual goals of the document are ambiguous and the actions emerging from the SSRP are likely to be inconsistent, if not incompatible.

Structural comments:

The second concern about the Draft SSRP is the impetuous use of existing documents to support the regional plan. We can understand the desire to integrate other planning documents under this overarching regional plan. What is telling is the choice of planning documents: On page 61 of the Draft SSRP, the recent *Alberta's Irrigation: A Strategy for the Future 2013-2035* is referenced as the 'roadmap' for agriculture in the basin. On page 63, the *Alberta Forest Products Roadmap to 2020* is referenced – a document created by the forest industry in collaboration with the government and released in early 2013. On

page 73, implementation of the *Air Quality Management Framework for the South Saskatchewan Region* (released October 2013) was supported, and on page 81 the *South Saskatchewan Region Surface Water Quality Management Framework* (draft released October 2013) is invoked.

These documents are rather recent (published in the last year) and have not been examined adequately through open public processes or through practice. It would strengthen the SSRP if the relevant goals and 'roadmaps' for irrigation, forestry, and air & water quality management be transliterated into the document. As it stands, the omnibus approach allows for interpretation and expectations that may conflict with the overarching goals of the regional plan. In other words, if the SSRP is to be the lead document for Alberta's vision for the future of this region, it should be self-contained.

Content comments:

The Draft SSRP in Outcome 1 advocates for the growth and diversification of the economy. Current trajectories of land use for industrial growth clearly indicate unsustainable impacts and unacceptable cumulative effects. The document says, correctly: "Alberta's landscapes and the ecosystem services they provide are being strained from a combination of pressures such as population growth, climate change and industrial development which are impacting limited ecosystem resources" (p.44). As already noted, continual growth of the traditional sectors of our economy is not possible – we believe Albertans realize and accept the idea of limits, and are willing to live within them to maintain healthy and purposeful lives. Furthermore, the reliance on growth by exploiting marginal oil & gas plays in this region does not fully acknowledge ecological valuation in cost-benefit analyses, and ignores our collective responsibility to reduce greenhouse gas emissions. Emission goals and approaches to reducing them should be specifically stated – referring to Alberta's Climate Change Strategy is inadequate in this regard.

Regarding agriculture, there is no clear commitment to preserve native grasslands, reduce the impact on wetlands and riparian areas or reduce the adverse effects of high levels of water allocation for irrigation on aquatic ecosystems. In fact, as noted in Appendix H, there is an expectation for ongoing expansion of agricultural land under irrigation and on-stream storage to mitigate expected water scarcity in the future. Existing intact grasslands appear unprotected if 'irrigation potential exists'. What is 'irrigation potential'? The plan says that where public land is to be converted, an 'appropriate ratio' of private land may be exchanged. What is an 'appropriate ratio'? Will this require a similar (and similarly dysfunctional) scheme as the one outlined in the Wetlands policy?

The forestry plan also seems to advocate for a business-as-usual approach to logging, despite the ongoing criticism of the C5 plan, and the adverse impacts of current logging techniques including aesthetic losses for recreation and tourism, critical habitat loss, fragmentation of wildlife corridors, aquatic and riparian health, and downstream water quality. Best practices for forest management are required, current practices seem to defer solely to fiber management.

Sustaining biodiversity and ecosystem function should be paramount in this plan. There is a lack of clarity, however, on how lands will be conserved into the future. Sustaining biodiversity will require maintaining and restoring connectivity and river corridors – the SSRP is unclear on this. It is telling here that the recommendations of the South Saskatchewan Regional Advisory Council (RAC) regarding a conservation network were largely disregarded. Five grassland areas identified for conservation management by the RAC with valley and coulee connectors are ignored in the SSRP, except a vague commitment to maintain "intact native grassland and habitat as a high priority" (p.43) and a nod to species-at-risk protection without a clear plan to maintain and improve habitat. Establishment of the Pekisko Heritage Rangeland, the Castle Conservation Area and expansion of wildland parks in the Eastern Slopes is a step in the right direction, although inclusion of the most productive habitats and planning appropriate connectivity for wildlife is lacking.

More generally, timelines to monitor environmental conditions, evaluate data, and assign indicators are much too protracted, many initiatives stretching into 2017. We agree that monitoring, program evaluation and assigning indicators of environmental health are important, but much work already exists – notably the Oldman Watershed Council *Headwaters Action Plan 2013-2014*. Once clear goals are established by the SSRP, well-researched indicators like density of linear footprint, native fish populations and invasive species can be initiated immediately. Furthermore, it would also enhance the SSRP if a clear list of indicators be included in the document (Table 1), with a commitment to invest in scientific monitoring. Data gathered should be independently verified and made freely available to the public, rather than through the "release of reports on an annual basis that speak directly to the plan" (p.102). Open and transparent processes of communicating data will be important for the success of regional planning.

A strong regional plan must be clearer in stating limits, and providing direction for future decision making. More land must be protected, native grasslands must be protected, industrial activity and vehicular use must be curtailed in these areas, habitat connectivity must be established, the headwaters must be protected, and adequate instream flows must be maintained. Off-highway vehicle recreation must be restricted to designated trails, managed and enforced. The Draft SSRP does not say this clearly enough. And where are the municipalities in this plan? If, as the regional plan states, "municipal planning and development decisions will … have to be in alignment with the regional plan to achieve the regional outcomes established in the plan", shouldn't there be clearer direction given for municipal sustainability planning (including water quality conservation, transportation planning, waste reduction and management, industrial activity and emissions, etc.)? It is interesting to note the clear priority of extracting oil & gas, in which the municipalities are expected to "identify areas of existing and future extraction of energy resources, and determine appropriate land use in the vicinity of these resources" (p.95). What exactly is the priority here? Shouldn't municipalities be allowed to follow sustainable practices of development without being hampered by energy exploitation within its boundaries?

Balancing environment with a growing economy is the wrong metaphor. The economy is embedded and reliant on a healthy environment. Society is embedded and reliant on a healthy environment. There are thresholds to environmental degradation that cannot be passed without effecting our health and prosperity. SAGE respectfully requests that these imperatives become more evident in the final draft of the South Saskatchewan Regional Plan.

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[i] Bateman, et.al. (2013). Brining ecosystem services into economic decision-making: Land use in the United Kingdom. *Science*, 341(5). 45-50.