



“Absolute certainty is a privilege of uneducated minds and fanatics.”

C.J. Keyser

December 2013

SAGE meeting December 2nd at 6:00 p.m. at the **Saigonese restaurant** (Mayor Magrath)

Earth Matters **Environmental Education Conference** April 24 - 26, 2014 in Canmore.

No Drilling in Lethbridge is organizing a community engagement event in response to the proposed drilling in Lethbridge. December 4th from 5pm to 9pm. <https://www.facebook.com/events/607193726008929/>

Have a ‘Green’ Christmas: http://eartheasy.com/give_sustainchristmas.htm

Headwaters Action Plan

The Oldman Watershed Council (OWC) has completed its *Headwaters Action Plan* available at oldmanbasin.org. (An online feedback for is available).

The document introduces indicators that will assist in measuring and monitoring the health of the Oldman River headwaters. Important indicators include: Presence, absence and abundance of native fish (a surrogate indicator for water quality); the density of linear features which relates to access by off-road vehicles and correlates to land erosion into the river; and the presence of aquatic invasive species.

The health of native species of fish, including the Bull Trout and

(Cont’d on page 3)

Bill 31 Passes 3rd Reading in Legislature

Bill 31, *Protecting Alberta’s Environment Act*, recently passed third reading in the provincial legislature. The act creates an ‘arm’s-length’ agency (AEMERA) to oversee environmental monitoring in Alberta.

The bill requires this information to be public and would centralize current monitoring activities by government, industry and communities in the areas of air, water, land and biodiversity.

Diana McQueen, Minister of Environment and Sustainable Resource Development, has [said](#): “We’re building a monitoring system to understand environmental impacts and

help us manage responsible development. The new arm’s-length agency will ensure this work remains open, transparent and underpinned by science and facts.”

[Critics](#) of the Bill suggest that it “does not create the conditions necessary to ensure [agency] independence. Instead, it includes checkpoints with government that could easily allow for political interference.” Similarly, the [opposition](#) argues that Bill 31 “does not require that the supporting raw data leading to a report or finding be released to the public. Without access to the raw data, peer reviews will be compromised or impossible to undertake.”

Designated Material Recycling Regulation

The Government of Alberta is beginning a consultation on proposed changes to the province’s regulatory framework on recycling.

The workbook states that Alberta has the worst provincial waste creation (at 1050 kg/person compared to a Canadian average of 729 kg/person), and the worst recycling rate (at 192 kg/person compared to a Canadian average of 239 kg/person).

In 2009, Alberta committed to implementing an ‘extended producer responsibility’ policy. The principle of EPR is to make the producer of a product

responsible for reuse/recycling/disposal. Products would, in effect, be returned to the producer at the end of the life cycle. The costs of managing the waste would be part of the price of the original good. The motivation would be to use non-toxic and recyclable materials in production, and to extend the expected life of the product - both being positive for reducing our collective impact on the Earth.

An EPR program would include household hazardous waste, packaging and printed materials, electronics, and other products.

The proposed changes would also include a consolidation of existing regulations; an elimination of environmental fees (the costs having been transferred back to the producer); and expanding programs for recycling electronics and used oil materials.

The main goals of the program are to reduce and recycle materials used in manufacturing, to reduce the growth of landfills and associated greenhouse gases in Alberta, and to protect human health.

One of the key issues that has

plagued EPR programs of all types and in all sectors is the problem of [free-riding](#): “Free-riding occurs when one firm (or individual) benefits from the actions and efforts of another without paying or sharing the costs.” Other risks include the volatility of commodity prices which have to be managed in producer pricing. A [recent study](#) in BC, however, has shown positive job and economic impacts of product stewardship, recycling, and enhanced waste diversion.

ESRD is looking for online feedback by December 13th https://surveys3.praxis.ca/goa_recycling_2013

**How Many Grizzly Bears Can Dance on the Head of a Pin?
Thoughts on Imperiled Species and Spaces
(Courtesy of Lorne Fitch, P. Biol., written 2008)**

Try to imagine the spirited debates the theologians of old had about how many angels could dance on the head of a pin. Angels no longer dominate today's debates; it is now how many grizzly bears (or sage grouse, westslope cutthroat trout, caribou, and so on) can, or do exist on the pinhead of landscape left. Consider the past regulatory hearing to determine the fate of one of those pinheads, the headwaters of Pekisko and Willow creeks where PetroCanada proposed construction of a sour gas pipeline.

Our bright academic minds provide a dismal prognosis for the future of healthy landscapes and wildlife. Biologists are worried because populations of grizzlies, caribou, sage grouse and others dip to the point of questionable viability for the future. Westslope cutthroat trout, once so numerous

that two anglers, in 1903, caught 400 from Fish Creek in a single day; Fish Creek, which flows through Calgary, now barely merits its name as do so many streams that once held a cornucopia of native trout. And, on it goes.

Alternatively, you could sit through some of the many regulatory hearings that address the parceling out of Alberta's landscape and resources. The environmental assessments will have a maddening similarity. "Yes, there will be impacts but all can be mitigated. Any residual effect will be so insignificant that the project most assuredly is in the public interest and has to proceed. Trust us, we'll monitor the situation and rectify any concerns."

You might be inclined to ask, at the end of these, if the projects are as benign as advertised, the miti-

gation so effective and the monitoring so conclusive why aren't we up to our armpits in grizzlies, caribou, sage grouse or cutthroat trout? We aren't of course and it shows the debates, like those of the ancient theologians involving angels, have had little impact on outcomes for imperiled species and spaces.

You can see a grizzly in a zoo. A little snippet of the DNA of a westslope cutthroat trout could be held on ice, against a day we might recreate it. But, without place, without the surroundings, without the earth and the wind and the water and the context, we will effectively lose these creatures, and others. We are losing them because we don't grasp the context of species maintenance. The context is space, big space, appropriate space and unadulterated space; space without most of the

Interesting Links:

Roundtable on the Crown of the Continent—Summary Report <http://www.crownroundtable.org/4thconference2013.html>

PSAC Hydraulic Fracturing Code of Conduct <http://www.psac.ca/working-energy-commitment/>

Too Good To Waste: Making conservation a priority (Alberta) <http://environment.gov.ab.ca/info/library/7822.pdf>

OWC Headwaters Action Plan (Full Report) <http://origin.library.constantcontact.com/download/get/file/1103565212340-1109/Headwaters+Action+Plan+Full+Report.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:

sage-communications@sage-environment.org

footprint of us. David Brower eloquently described the California condor, a significantly imperiled species, as five percent flesh, blood, bone and feather; the rest he said is place. I would add place without space is no place at all.

There are not many places on this earth where the wild is still as close at hand as it is in Alberta. Within an easy day drive of Calgary are the headwaters of Pekisko and Willow creeks, home to grizzly bears, wolves, cutthroat trout and enough other wildlife to make visitors to our country green with envy. Part of the reason for this expression of biological diversity is the area is unroaded and unfragmented. This is one of two areas in all of our southern foothills where the human footprint is almost non-existent.

What is sad is the qualities of these landscape jewels, for wildlife and watershed can slip through our fingers in a heartbeat, with one pipeline. It's like the Cheshire cat in Alice's Wonderland that "vanished quite slowly, ending with the grin, which remained some time after the rest of it had gone". Many spaces and species are just smiles now, remnants of their former glory. That loss started with a trail, a road, a cutblock or a pipeline and more human traffic.

If something worse could be imagined than losing something, it must be to forget that something was lost. We are perilously close to that point with Alberta's imperiled species and their spaces. We

are there because we have lost, or misplaced our navigational aids to chart changes. We think the landscape and resources of today is the "full pie". It's part of our combined arrogance and ignorance. The reality is today's pie is a mere slice of yesterday's pie. And so it goes; without an appreciation of the progressive thinning of the remaining slice, it can, and does, eventually wink out of existence.

We need the same spaces as grizzlies, caribou, and cutthroat trout need. It's not because we live there but because these spaces contribute to where we live. Watershed values, storing carbon, preserving possibilities, forming benchmarks and, retaining places rich in biodiversity where we can find joy, surprise and humility are of greater importance, arguably, than some of our current resource extraction endeavors. Others have learned the lesson; let's not be blind to the possibilities of change while the options stare us in the face. A seemingly altruistic act of saving imperiled spaces and species now may be viewed shortly as a perfectly reasonable, selfish act to save ourselves. You see, it's also us up there, dancing the Macarena on that pinhead.

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

Headwaters Action Plan Cont'd

West Slope Cutthroat Trout are good indicators of the integrity of the watershed as they have adapted over millennia to the conditions of region (and even each locality). Sediment from erosion, water temperature, and pollutants will negatively effect the health of remaining populations which can be monitored.

The action plan also includes "Adopt a Watershed" programs, introducing Mountain Whitefish to the list of native fish, and restoring watershed areas already unable to support native fish. Re-introducing beaver populations will help store water in the headwaters over the summer, and maintain cool water temperatures suitable for aquatic health.

With respect to linear features, a fine scale analysis is required to identify the roads/trails/cutlines that are most damaging to the headwaters. These linear features may be properly reclaimed once their use is no longer required. Some actions are to establish a no-net-increase in linear features and to establish acceptable use and designated areas for recreational activities. A concerted effort to protect 'the last of the best' from development is also an important component of the plan.

The Oldman headwaters are the source of 90% of the water in the Oldman River. The health of the region is very important for surface water quality and quantity, biodiversity, and the integrity of the landscape. The *Headwaters Action Plan* supports Alberta's *Water for Life Strategy*, and the *Source to Tap* document created by Water Matters and the OWC.

This document helps put realizable actions towards the *South Saskatchewan Regional Plan (SSRP)* which is currently receiving feedback from stakeholders. The timelines currently being explored in the SSRP can be significantly reduced by introducing the OWC's Headwaters Action plan in the short term. The Oldman Watershed Council is looking for your feedback.

The Energy of Slaves (2012)

Andrew Nikiforuk is a journalist notable for a wide variety of non-fiction books and for his journalism with the online blog, The Tyee. He has taken a special interest in the oil & gas industry, following the treatment of Jessica Ernst whose water was allegedly contaminated by fracking in central Alberta, and through his books on Wiebo Ludwig, the tar sands of Alberta, and most recently, *The Energy of Slaves*.

Nikiforuk introduces *The Energy of Slaves* with a brief history of slavery. Slavery, he posits, provides the surplus energy that was used by past empires to expand. It wasn't until the advent of fossil fuels (coal, oil and natural gas) that harnessing human energy could be (more or less) replaced by technology. Slavery, he cautions, has undermined the foundations of past empires, found in the attributes of "self-reliance, endurance, resilience, strength, and honor" as listed by Seneca. Harnessing energy-slaves may result in the same loss of self-reliance and resilience.

So, how exactly is energy enslaved? Nikiforuk quotes Canadian geologist and energy analyst, David Hughes, who calculated "that one barrel of oil contains approximately 6 gigajoules (6 billion joules), or about 1,700 kilowatts [*sic*, kWh], of energy. A healthy individual on a bicycle or treadmill can pump out enough juice to light a 100-watt bulb, about 360,000 joules per hour. ... a barrel of oil would be equivalent of 3.8 years of human labor. Given that the average North American now consumes 23.6 barrels of oil a year, every citizen employs about 89 virtual slaves." David Hughes is renowned for his outspoken concern for our reliance on exhaustible (non-

renewable) fossil energy sources like oil and natural gas, as production begins to fall short of the demand of an expanding economy.

Harnessing fossil energy underpins industrial and post-industrial civilization and most everything that we think as being normal. Nikiforuk says: "In insisting that labor, markets, and technology make the world go round, neoclassical economists have ignored the primary source of all wealth: energy. They have disregarded several thermodynamic laws and abused much math. They have also mistaken the creation and exchange of money for the production of real wealth. Oil has powered an unprecedented set of illusions: that exponential growth is normal; that self-interest is always rational; and that capital is disconnected from material resources" (p.131).

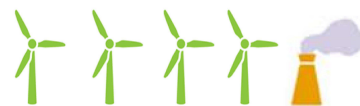
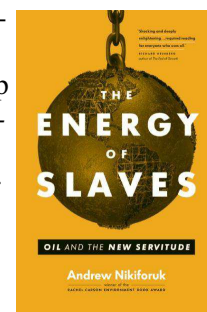
And this is the main point of *The Energy of Slaves*. We have become so accustomed to fossil energy (with each one of us relying on 89 virtual slaves to do our work), that we are vulnerable to its growing scarcity. Our consumer society premised on obsolescence and waste may represent the "greatest oil spill the world has ever seen" (p.166).

The standard repudiation of decreasing fossil fuel production is that more people means more innovation: technology will save us. Nikiforuk challenges this assumption through the work of Jonathan Huebner, who examined 7,200 innovations since the Dark Ages, relative to population. Contrary to economic claims that more people equals more brainy ideas, Huebner did not find an accelerating curve as global population increased. In fact, major technological

advances per billion people peaked in 1873 and then declined. The number fell with higher rates of economic growth. It even fell "with higher levels of education, major advances in science and the invention of the computer" (p.170). In a nutshell, innovation is not keeping up with our demand for energy and our mounting environmental problems.

Not only is technology not a solution, Nikiforuk argues with Terry Lynn Karl that our dependence on fossil fuels leads to petro-state-governments. Taxation without representation leads to a growing reliance on petroleum corporations, while decision-making favours servicing these same corporations (eg., \$700 billion in incentives worldwide each year). "Everywhere Karl probed, she found that oil reduces economic diversity, fostered inequality, and sponsored autocratic government. ... all petrostates display similar traits. Oil booms engender not only spending mania but poor statecraft, ineffectual tax regimes, political extremism, and long periods of authoritarian rule" (p.172). Sound familiar?

The Energy of Slaves is well-researched and well-written. It is a clear reminder that the quality of our lives is premised on an empire of energy-slavery which is coming to an end. The unanswered question is: what will we do while this becomes more obvious (environmentally, socially and economically)? And where will the required leadership come from? *The Energy of Slaves* suggests that we don't hold our breath for a miracle.





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A leading voice for a healthy and environmentally sustainable community

November 20, 2013

To: The Praxis Group
242, 2451 Dieppe Avenue S.W.
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From: Braum Barber
Director, Southern Alberta Group for the Environment (SAGE)

RE: Designated Materials Recycling Regulation Proposal

The Southern Alberta Group for the Environment supports the essence of the proposed *Designated Materials Recycling Regulation (2013)*. The *Canada-Wide Action Plan for Extended Producer Responsibility* developed by the Canadian Council of Ministers of the Environment in 2009 has established some important goals that have the potential to encourage better decisions regarding the design, materials selection, manufacture, and packaging of consumer products.

As we understand the principles of Extended Producer Responsibility (EPR), the regulation would internalize the environmental costs that are currently externalized in economic valuation. EPR employs market-based incentives to encourage producers and distributors of consumer products to be responsible for the full life-cycle of their goods, including the disposal/reuse/recycling of the product at the end of the useful life. This motivates the design of more durable goods, the design for disassembly for recycling and reuse, and a better choice of recyclable, non-toxic materials. EPR, when mandated, supports the environmental outcomes of cleaner air, cleaner water, and a reduction of solid waste to the landfill, from which we all benefit.

A British Columbia evaluation of current research on EPR, titled *Overview of Stewardship and Extended Producer Responsibility Job and Economic Impact Study (2012)*, states that “all the studies agreed with each other regarding the positive job and economic impacts associated with product stewardship, recycling and enhanced waste diversion.” They highlighted three major findings, including: “1) Landfill disposal is not job intensive and generates a small number of jobs compared to waste recycling and waste diversion. 2) Recycling and the use of secondary materials create significantly higher net value added and jobs at higher income levels than waste disposal. 3) Recycling businesses create jobs closer to home and have a smaller environmental footprint than businesses that rely on raw material extraction and manufacture.” The key point, here, is to encourage local opportunities for managing these products at the end of their life-cycle, creating businesses and jobs while shortening the supply chain for recycled materials.

We believe that the regulatory requirements of the stewardship program are comprehensive, as they include collection details, performance targets and measures, dispute resolution processes, material management plans and, most importantly, education and awareness strategies. We understand the importance of the “consideration of free market competition in the recycling marketplace”, but hope that the success of this regulation does not depend on private industry to absorb the diverted waste. In other words, the Government of Alberta may still have to participate substantially in properly managing waste and creating incentives for utilizing diverted waste.

Regarding ‘Service Packaging’, the definition relates “packaging that is filled or applied at the point of sale to enable or facilitate the delivery of goods by a retail seller or a food service industry or other service industry outlet.” We believe that this definition could be expanded to include packaging applied at the point of sale for delivery of goods by *the consumer*. This would include single-use plastic bags and other packaging that consumers use once and dispose of.

As we understand the proposal, if EPR is vigorously implemented then Environmental Fees would be eliminated. We strongly support the principles of EPR, however, there is a significant potential for free-rider behaviours, depending on the industry and the products being included. There are also pricing risks due to the volatility of commodity prices that have to be considered by individuals and cooperatives managing the waste. Furthermore, there will be requirements for government oversight over the process, auditing, and dispute management, as required. We suggest that Environmental Fees would help offset uncertainty costs to industry and to the public (as environmental fees would likely be included in the costs of the products for the consumer). The Environmental Fees could also be directed to local industries as incentives for processing recycled materials, or for education and awareness efforts. Most municipalities have environmental councils that could play a significant role in monitoring local programs and providing community services that support the successful implementation of the regulation.

Environmental Fees should not only consider the costs of managing the regulation, but it should include an environmental cost accounting for human health, environmental services provided by natural areas lost to industrial growth, and intergenerational costs for wasting non-renewable resources. The final policy details will make all the difference, but it is important that municipal governments be encouraged to embrace best practices in waste reduction and management, and that regional recovery facilities (MRF) be developed with incentives to encourage closing the materials loop in the province through industrial ecology. Environmental Fees could be cost-neutral and be used to the benefit of all Albertans.

We look forward to the results of this consultation.

cc. Greg Weadick, MLA Lethbridge-West
Bridget Pastoor, MLA Lethbridge-East