



“The problem with the Invisible Hand is that it never picks up the check.”

Naomi Oreskes

January 2015

Out with the Old, In with the Old

SAGE Meeting. January 15th, 7 p.m. Location TBA

Waterton Biosphere Reserve Association planning forum: 11:30 am to 3:00 pm on January 28, 2015 in Pincher Creek and January 29, 2015 in Cardston. Contact www.watertonbiospere.com

Canadian NGO, [Environmental Defence](#), notes that the past year was extremely active for environmental issues: “the proposed Northern Gateway, Keystone XL and Energy East pipelines, algal blooms affecting drinking water in Lake Erie, and increased evidence linking toxic chemicals in household products to serious health concerns.” Executive Director, Tim Gray says in 2015 environmental issues related to climate change, tar sands, and urban sprawl will become key public priorities.

From their Top 10 issues for 2015, Environmental Defence predicts greater emphasis on protecting urban water sources from extreme weather events; more emphasis on pesticide use in agriculture, such as the controversial neonicotinoids “as they are known to kill valuable in-

sects like bees while doing little to increase crop yields”; toxic chemicals in consumer products, such as triclosan, which was declared toxic to the environment in 2010, and microbeads “which will be the focus of concern by scientists and the public because of their ability to concentrate toxics and pollute our waters”; urban sprawl; managing aboriginal treaty rights in light of recent Supreme Court decisions “that make it clear that federal and provincial governments and companies must respect Aboriginal treaty rights, many of which are related to protection of the environment in a manner that ensures ongoing ability to hunt, fish and trap”; and, number one, climate - as they predict “proposed pipeline projects such as Energy East, Kinder Morgan, and Northern Gateway will face widespread and deep public opposition

while Keystone XL will not go ahead in the U.S. The eyes of the world will be on Paris from November 30-December 11 for the UN Climate Change Conference, which is considered to be the last chance for the world to negotiate a legally binding treaty to keep the planet cool enough to avoid widespread ecosystem and civilization destruction.”

Locally, we hope to see more municipal support for Environment Lethbridge in 2015; the implementation of curbside recycling and composting; and the addition of grasslands to the Twin River Heritage Range-land Natural Area on the Milk River Ridge. We also predict the invention of a new automobile engine powered solely on love. SAGE remains committed to being a leading voice for a healthy and environmentally sustainable community.

River Valley Master Plan

The City of Lethbridge has initiated a consultation process for a new River Valley Master Plan. Discussions include a range of interests including recreation; access; safety; and better managing its environmental integrity.

SAGE representation at these early consultations provided input related to monitoring use and ecosystem health (for adaptive management); controlling invasive non-native species; considering prescribed fire and grazing; ensuring parcels on the river valley edge currently zoned ‘Future Urban Development’ be rezoned to ‘Parks and Recreation’; connecting the trail system from north to

south (i.e. past/through the golf course and gravel operation); and considering expanding river valley parkland northward from Pavan Park to incorporate extensive riparian cottonwood forests on the floodplain currently at risk from gravel extraction.

If you are interested, please go to the City’s website (www.lethbridge.ca/rvpmp) and comment on how you currently use the river valley, what you enjoy about it, and what you would like to see improved. The input will be used in drafting a Master Plan that will be made available for public review and comment.



Open Source

Star Creek- Heads they log, tails they flip again

(Courtesy of Lorne Fitch, P. Biol., December 2014)

Research- who could be against it? The Alberta Forest Service and the University of Alberta have teamed up to "discover" how to log gently, with care and attention so the passage of feller bunchers through the forest will scarce be noticed. Or so they say.

This theater of the absurd is going to be playing out in a natural amphitheatre called Star Creek, a small watershed tributary to the Crowsnest River in the Crowsnest Pass.

After twice failing to find a willing Alberta logging accomplice the Forest Service has pursued and attracted a BC firm with an undisclosed offer. Should this raise questions in your mind? Probably it should since the costs of this logging and research are going to

be paid out of your pocket. Strange no Alberta logging outfit would touch this munificent offer.

The forests of Star Creek have been in the crosshairs for some time. The initial research proposal was touted as a way to harvest more water from a watershed by stripping it of its timber. This is the classic "doomsday" experiment where the proof becomes irrelevant because the subject is already destroyed. I suppose the next logical step would be to pave around the stumps to efficiently extract the last few water drops.

The timing of the proposal was unfortunate, coinciding with the flood of June, 2013. Apparently even the ivy shrouded academics at U of A understood the implications of promoting more runoff in

a flood year. But, they're back, now under a different guise, still bent on "making water".

It has escaped the attention of the purveyors of water that by cutting down the forest, speeding the flow out of it, the practice leaves behind less water for the rest of the year. It ignores the reality headwaters are natural reservoirs for water.

Star Creek is also one of a few streams containing the imperiled westslope cutthroat trout, once the most numerous trout in the headwaters. Now cutthroat trout are dead fish swimming, with populations driven to perilously low levels by unfortunate land uses like excessive logging. That's why they have been designated by the federal government as

Interesting Links:

How the World Can Fight Global Warming

blogs.scientificamerican.com

EcoTrust: Mapping What Matters

albertaecotruster.com

ESRD: Our Water, Our Future - A Plan for Action

esrd.alberta.ca



Southern Alberta Group for the Environment (SAGE)

A Leading Voice for a Healthy and Environmentally Sustainable Community.

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

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"threatened". The provincial government, not usually noted for a sterling environmental record, recognizes their imperiled state, has prepared a recovery plan and has a legal obligation to act.

One might think this affords the fish some protection and an opportunity to recover to more robust population levels. It might, but not in a place where the Alberta Forest Service marches to the beat of a fiber band.

The logging plan of the research proposal ignores the recovery strategy for cutthroat trout. Even more problematically this "scheme" of wringing more water out of the watershed also ignores the fundamentals of impact assessment. One of the first things any other industrial endeavor would have to undertake is an up to date inventory of fish populations- their distribution, abundance, key habitats, critical areas in the watershed (especially ground water sources) and cumulative effects assessments including existing road density. It would seem the researchers and the Forest Service are uninterested in these vital bits of knowledge and have taken few pains to collect the necessary data.

If the rules were followed Star Creek would have 100 meter buffers, separating the stream from logging and roading. All the smaller tributary streams would be treated the same. No stream crossings would be allowed and the wet spots, the key sources of upwelling ground water would be

buffered accordingly. Sadly, the Forest Service has "watered down" the requirements so protection of cutthroat trout and water quality is far from effective and mostly cosmetic.

Fish are indicators of the health of watersheds, including flows. Changing the delivery schedule of water by enhancing spring runoff will lead to lower flows later in the season, when remarkably, both we and the fish need the water. We have already significantly tinkered with the hydrology of most of the Oldman watershed; it is unclear why logging one more watershed will help us grasp this better.

It should be of no surprise why Alberta is assembling a lengthy list of species in trouble. It isn't that we don't know these creatures are imperiled or that we lack the understanding of what to do to pull them from the brink. What we lack is the will to do anything about it.

If logging proceeds in Star Creek it will be another dismal record of failure to manage our natural resources effectively. But to have it happen in the name of research is inexplicable if not deplorable.

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

Alberta Ecotrust: Mapping What Matters

Alberta Ecotrust has completed a study on mapping ENGOS in the province. The project was designed to 'understand the scope, scale and needs of Alberta's environmental community to determine how Alberta Ecotrust can best support the important environmental work ENGOS do as charities and nonprofits.'

The goals are to: 1) improve the quality and quantity of the relationships, mobilize leadership, and generate more actions that lead to breakthroughs; 2) open up new opportunities for more direct, two-way information and knowledge sharing in the future; and 3) locate resources and expertise, seed new communities of practice, and improve strategic decision-making and alliances.

The process has included 167 organizations in the province with a range of organizational goals, including general environmental/sustainability, biodiversity/wildlife, water, land use, climate, agricultural/food, energy production, transportation, and toxic substances. Of this group 31% were strictly volunteer organizations and another 55% have 5 or fewer full-time equivalent employees.

SAGE supports and will continue to participate in this inclusive process.

Environmental Videos (available online)

Choking Lake Winnipeg

http://scientiaproductions.com/clw/full_doc/

Jim Byrne
2010 Scientia Productions
25 minutes 40 seconds

"Choking Lake Winnipeg is a documentary which discusses the problem of eutrophication in the Lake Winnipeg watershed. World class scientists are used by the film producers to not only define the problem, but to provide many useful solutions"

The lake Winnipeg watershed encompasses almost a million square km, is the second largest in Canada and home to 5 million people. From Alberta to Ontario to the Dakotas, this massive watershed provides water to rural and urban areas in 4 provinces and 4 states. But it's what we and our industries are putting into the water wherein the real story lies. Blue Green algae blooms due to human introduced excessive nutrients toxic to animals is the primary focus. Flim makers: James Byrne, Ph.D. Professor and Chair of Geography at the University of Lethbridge & Leanne Little, educator and communication specialist.



If you are interested in their video work on climate change, visit:
<http://climatesolutionscenter.com/climate/>

Trophic Cascades: Two (roughly five minute) films introduce the concept.

How Wolves Change Rivers

<https://www.youtube.com/watch?v=y5a5OBhXz-Q>



Narrated by George Monbiot
13 February 2014

The featured trophic cascade is in Yellowstone National Park. The reintroduction of wolves initiates the ecological process which starts at top of food chain and tumbles down to the bottom.

How Whales Change Climate

<https://www.youtube.com/watch?v=M18HxXve3CM#>

Narrated by George Monbiot
30 November 2014

And if you can't access the video, there's a nicely written article in The Guardian explaining Why Whale Poo Matters. Really.

<http://www.theguardian.com/environment/georgemonbiot/2014/dec/12/how-whale-poo-is-connected-to-climate-and-our-lives>



Also see the WWF report:

Disturbed, Hungry and Lost—
Climate Change Impact on Whales

http://wwf.panda.org/about_our_earth/all_publications/?111480/Disturbed-hungry-and-lost-climate-change-impacts-on-whales

Energy Myths and Realities (2010)

Vaclav Smil is a scientist and policy analyst, and a Distinguished Professor Emeritus in the Faculty of Environment at the University of Manitoba. He has researched and written extensively in energy, environment, and agriculture.

Energy Myths and Realities is a clear analysis and critique of types of energy used to sustain and grow a global consumer society. The author focusses on coal, oil, natural gas, wind, and biofuels. There is a lot of wisdom in Smil's presentation of the scope of our energy addiction and the barriers to transitioning from fossil fuels. He takes a similar approach as Minoru Kyo in *Already Extinct* in that he delimits the ability of renewable alternatives to replace coal, oil and natural gas while maintaining a business-as-usual consumer economy. The barriers to an energy transition include the sheer magnitude of our current energy consumption, the low comparative cost and high energy potential of fossil fuels, and our inability to affect change through good governance and policy development.

Smil offers clear outlines of different energy technologies for transportation and electricity generation, including the scalability of emerging technologies to a global level and the myriad impacts on the environment. A fundamental flaw in the argument the author develops in *Energy Myths and Realities* is that he does not take seriously the potential threats

of climate change - particularly in his suggestions for the economic decision-making process and the direction of government policy. It Without clearly establishing the need (environmental and economic) to seriously and directly begin to reduce greenhouse-gas emissions, the argument for more renewable energy capacity becomes moot.

Smil also tends to mock the idea of peak oil, though his own data does not contradict it - it seems he is responding more to what he considers to be the 'catastrophism' proffered by some people (typically people categorized by the pejorative: 'environmentalist'). In the larger scope of things, it really doesn't matter if oil production peaks in five years, twenty years or the year before last. The reality is that civilization will have to address the replacement of liquid fuels or begin the transition to other energy-types for transportation. This gap in the argument leads to the complaint that Smil relies too heavily on a technophilic worldview - that solutions will come because humans are so clever and ingenious. This position is unsupported by the last fifty years of energy innovation.

And, finally, Smil disguises our current energy situation by positing that our 'energy intensity' is improving - that we use less fuel per \$GDP than in the past. He fails, however, to consider what makes up the GDP (of the United States, in Smil's argument) - cer-



tainly privatizing state-services and off-shoring energy intensive production to China and Korea might influence these numbers. A better approach might have been linking energy use and environmental impact with materials consumed in the economy, including imported products.

These criticisms of *Energy Myths and Realities* can be typically applied to most books in this genre: there is little context (eg. climate change, poverty, the energy needs of areas other than North America and Europe, 9 billion people on the planet by 2050 and, generally, political will); the potential for reducing consumption is overlooked as a solution, as are any possibilities for lifestyle change; intergenerational equity is ignored; and projections to the future are based on an untenable optimism for technological change and human ingenuity.

Energy is complex, and the imperative to reduce greenhouse gas emissions complicates the speed at which a global energy transition is required. Smil's book is both interesting and useful, but too limited in scope: it does not really address people in the solution; it is, rather, an exercise in engineering.

