SAGE
Southern Alberta Group for the Environment

"Everything has its beauty, but not everyone sees it."

Confucius

May 2012

No SAGE meeting in May.

SAGE Annual General Meeting at 7 p.m., June 7th at the Fish & Game Hut.
(Don't forget to renew your membership)

The **South Saskatchewan Regional Plan** Consultation has been extended. Voice your concerns for the region.

OWC Nominations sought for Member-at-Large.

SACPA Presentation on the Castle

Marie-Pierre Rogeau, Lorne Fitch and Sarah Elmeligi presented to a full house at the Public Library on the topic of the Castle.

Marie-Pierre is an expert in fire regime study: history, ecology, and threat assessment. She shared data on lightning strike density, and fire history along the eastern slopes. A significant point in the presentation was that fire has been an important component of forest history and health. When too much fuel accumulates in the forest, due to long intervals of suppression, the fires may become much more intense and may burn from the foothills further into the headwaters. She argues that forest management practices require fuel breaks due to the higher risk of ignition. This may require strategic logging, or through thinning and prescribed burns.

Lorne Fitch opened with the statement that 'our ability to extract wealth from our forests, exceeds our understanding of them.' Native fish, he argues, are the metric of the health of watersheds - if the fish are going, something is wrong with our forest management. Lorne then shows how these native fish populate only a small portion of their historic range. Despite the scientific evidence, we remain unable to connect the dots on what is becoming manifestly evident. Research suggests that a good indicator of impact is 0.6 km of road per km² - roads and trails mean sediment accumulation to streams that persists for long periods of time, creating an enduring legacy of issues. Lorne advocates for ecosystem planning and monitoring using non-economic measures of success. 'An intact forest is a symbol of progress … We can do better; we need to do better.'

Sarah gave an impassioned presentation on the social and cultural component of the landscape. She noted the disconnect between the Eastern Slopes Policy, the C5 Forest Management Plan, and government management. These policies have drifted from watershed management as the highest priority, to one that prioritizes a continuous flow of timber extraction. Sarah calls for public engagement in the process to protect the headwaters.

SACPA has the audio for these most interesting presentations.

Perry Farms Produce Renewable Energy

Perry Farms, near Chin, has initiated the detailed engineering to install an anaerobic digester facility in an ongoing effort to reduce the carbon footprint of their family operation.

The facility will use organic byproducts from their potato process, as well as waste from other farms including livestock manure and aquatic weed from irrigation canals. The organic materials will be digested by bacteria in the absence of air to produce methane (natural gas). The 'lean' methane can then be burned in a generator to produce heat and electricity.

At the anticipated scale of the project, 65,000 tonnes of organic waste will be processed each day to operate a 630 kW generator. The electricity will be used to power the farming operations, and excess power will be directed to the grid.

The solid byproduct from the process will be inert matter suitable as a soil amendment for the farm. The $6 million project may be operating by next fall.

Responsible Resource Development

As part of the Economic Action Plan, the Government of Canada has streamlined the review process for major economic projects. The Responsible Resource Development plan promises to reduce the risk to investors for delays to large-scale projects, while 'maintaining the *highest possible* standards for protecting the environment.'

The government notes the potential economic growth and job creation that may be realized by better encouraging the $500 billion of projects currently being proposed.

Being proposed is a 'one project, one review' process with strict time limitations for hearings and assessments, as well as for permitting under the *Fisheries Act*, Species *at Risk Act*, and the *Canadian Environmental Protection Act*. The number of organizations responsible for these processes will be winnowed from 40 to 3.

Hasty, less-informed decision-making seems to be the operative definition of 'responsible' for a government fixated on producing and exporting 'ethical' oil.

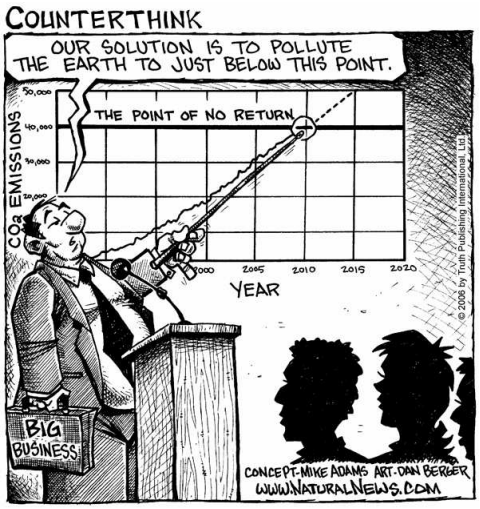
Water Lost to Hydraulic Fracturing

It has been estimated by the U.S. Environmental Protection Agency that 8 to 25 million litres of water is used to hydraulically fracture an oil or gas well. Of this amount, 40 to 85% does not return to the surface. The water that does return to the surface with the oil and gas may be treated and recycled, but it is most commonly disposed of in underground reservoirs. All of this valuable fresh water is permanently lost to the hydrologic cycle.

It is estimated by the EPA that over a half a trillion litres of water will be used in the United States to fracture 35,000 wells. A similar story may be told in Canada, where Talisman Energy Inc. has been awarded a 20-year water license to pump 10 million litres each day from the W.A.C Bennett Dam reservoir. This fresh water travels 26 kilometers through a $35 million dollar pipeline to its Farrell Creek shale gas play in British Columbia.

The ERCB recognizes that water use is a critical issue in further oil & gas development, particularly in the south of the province which is challenged by water availability. The basin is closed to new water licenses, which begs the question where this water will come from.

The oil & gas industry promises to use more water recycling technologies, as well as new technologies that employ propane gas rather than water to fracture the formation. At current natural gas prices, however, this is not likely in the short term.



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Subsidies for Oil and Gas Exploitation

During the recent provincial election, there were a number of discussions around the wealth created from oil & gas exploitation, and how this wealth might be redirected to future energy technologies, and away from current subsidies for business-as-usual investments.

What was not discussed was just how much in subsidies the oil & gas industry receives from provincial and federal governments each year. Using the definition of 'subsidy' provided by the World Trade Organization, the International Institute for Sustainable Development calculates that federal and provincial governments provide over $2 billion in subsidies to corporations in Alberta.

Most of these subsidies promote activities that focus on reducing the costs of exploration, drilling and development through a mix of tax breaks and royalty reductions.

The Stern Review estimates that worldwide subsidies for oil & gas are 20 times greater than subsidies to renewable energy technologies. This despite the clear environmental necessity to develop alternatives, and the benefits of a green economy, as suggested by a recent report from the Pembina Institute.

Imagine the positive impact if these subsidies were directed to energy efficiency, conservation, and renewable energy technologies.

Interesting Links:

Watch for a Bio-Home Alberta project at 322 Mt. Sunburst Way West - see their presentation to City Council

Water Quality Trends and Long-Term Trends in Alberta Lakes http://environment.gov.ab.ca/info/library/8544.pdf
Fossil Fuels: At What Cost? http://www.iisd.org/gsi/sites/default/files/ffs_awc_3canprovinces.pdf
Pumped Up: How Canada subsidizes fossil fuels at the expense of green alternatives. http://www.tarsandswatch.org/files/PumpedUpInsides3.pdf
Reducing Pollution, Creating Jobs http://www.pembina.org/pub/2178

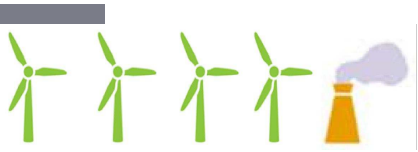
Southern Alberta Group for the Environment (SAGE)

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



Our Choice: A plan to solve the planet crisis. (2009)

In 2006, you saw An Inconvenient Truth. Al Gore has followed this up with a series of books on climate change and governance - the latest being *Our Choice: A plan to solve the planet crisis*. As 'the messenger', Gore has become the concerted focus of vilification. Like David Suzuki, however, he has weathered the personal attacks and remains dedicated to the science. And Al Gore, interestingly, adds the dimension of his political insight.

The title suggests a plan to solve the climate crisis. Well, that may have been an overshoot, but he does cover multiple dimensions of the issue: energy production and use; political barriers; human behaviour; concerns around air, water and soil; and information technologies. What makes Gore's book effective is his ability to access the most up-to-date information from scientists and industrial leaders.

Gore begins with a clear presentation of the science of global warming and its manifestation in climate change, and he outlines the contributors to greenhouse gas emissions including carbon dioxide, methane, black carbon, nitrogen oxides, and synthetic chemicals. He then focuses on the main sources of energy and how they are used to do work- as fuels and when converted to electricity. Alternative energy technologies are explored, including wind, solar, biofuels, nuclear, and removing carbon dioxide using carbon sequestration. The book is dense with illustrations and photos of the technologies, making it a useful source for understanding each of the processes.

By and large, the potential and limitations of each of the alternative technologies is well explored, with admissions of failures such as the corn-based ethanol program he helped initiate as Vice President. One significant gap in the presentation, however, is the abyss separating potential for using renewable energy and the manufacturing capacity to create alternative technologies that will meet our growing energy appetite. There seems to be an underlying confidence that meeting the demand is simply a matter of will, unrestrained by economic and material realities. In other words, 'we can increase the manufacturing capacity when the crisis comes, like we did in WWII …'

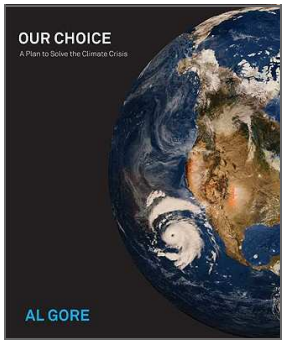
Gore does, however, comment on some of the barriers to increasing manufacturing capacity. He notes the effects of unpredictable government policies and perverse industry subsidies on fostering renewable energy industries: "This unfortunate history illustrates on challenge that wind energy has in common with solar energy: it requires innovative and consistent policies that can make up for the artificial advantage that subsidies and distorted cost-accounting currently give to oil and coal" (p.88). He also notes the impact of wild fluctuations of oil prices that promote investment in renewables when the energy price is high, and bankrupts the manufacturers when they drop again: "the roller coaster of world oil prices, which is always mirrored in the prices for energy of all kinds, has weakened national stamina and frustrated the sustained effort necessary to introduce pervasive efficiency improvements throughout the national and global economy" (p.270).

As we clearcut the Castle, it is interesting that a 2009 report by the International Union of Forest Research Organizations (IUFRO) concluded "that a temperature increase of 4.5°F (2.5°C) could cause many forests throughout the world to lose their role as net absorbers of CO2. They might then instead become net contributors of CO2 to the atmosphere" for example, in the Northern Rockies where fire risks "are strongly associated with increased spring and summer temperatures and an earlier spring snowmelt" (p.188).
Gore also explores the opportunities of increased efficiency, quoting Ayres, "in 1900 the U.S. energy system converted 3 percent of the potential into useful work. After more than a century of technical progress, the United States converts only 13 percent of the potential work in the fuel we burn into useful work, thus still wasting 87 percent of that potential" (p.244).

Most of this can be found in myriad books on the subject. What makes this book more interesting is Gore's comments on political will, brain research that suggests that we are hardwired to discount future impacts for immediate rewards (hyperbolic discounting), and that our prefrontal cortex, which is the centre of the brain for sustaining value-based initiatives, is disabled by stress and information overload.

The most obvious blind spot in the book is Gore's unquestioned allegiance to the market as the best tool to address climate change (modifying expectations, promoting efficiency, and reducing consumption and waste). The plan is, quite simply, pricing carbon and trading it between industries, with the belief that the market is best capable of efficiently allocating resources. A more critical perspective might see this as asking the fox to guard the hen-house, as they say. Gore can, I think, be forgiven for believing he can change the system while working within the system, as he has been a leader of the system. Gore also puts a lot of emphasis on information technologies to collect and present scientific information that will affect change.

Gore, on the other hand, suggests that "Simply laying out the facts won't work, they say. The barrage of negative even terrifying, information can trigger denial or paralysis or, at the very least, procrastination" (p.314). This may well be true, but where does providing reassurance that technologies and carbon-pricing will precipitate systemic change lead us? Gore provides a lot of reasons (technological, economic, political, and behavioural) why we should be terrified - so, let's be terrified and do something about it.



This book was worth the read - four turbines.

A leading voice for a healthy and environmentally sustainable community

Box 383 Lethbridge AB T1J 3E9

May 1, 2012

To: Jim Hillyer, M.P.

From: Braum Barber, Southern Alberta Group for the Environment

Re: Fisheries Act

The Southern Alberta Group for the Environment (SAGE) is concerned about the changes being considered for the Fisheries Act. The Fisheries Act now states (Section 35) that 'no person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat.' An early draft leaked to the media proposed the following: 'no person shall carry on any work, undertaking or activity, other than fishing, that results in an adverse effect on a fish of economic, cultural or ecological value.' The burden of proof in this draft has now been shifted onto the 'value' of fish to be protected, rather than the habitat upon which all fish rely for their health. In essence, habitat provisions have been removed from the proposed changes to the Fisheries Act.

We are concerned that these proposed changes are motivated more for expediting large projects than for the health of the ecosystem. This, if true, suggests that somehow long-term ecosystem health is disconnected from long-term economic resilience – nothing could be further from the truth.

We acknowledge the recent statements from Minister Ashfield supporting habitat protection, however, we request that you, in your capacity as our representative in the House of Commons, caution for a balanced and scientifically-supported approach to addressing changes to the Fisheries Act. Any changes to the Act should continue to emphasize habitat protection as an intrinsic value and as a basis for our collective prosperity.

We look forward to your thoughtful consideration of our concerns.

Sincerely,

Braum Barber
SAGE