



“When we try to pick out anything by itself, we find it hitched to everything else in the Universe. .”

John Muir

September 2015

Six Mile Coulee Path Expansion

SAGE Meeting every third Thursday - September 17th at 7 p.m. Lethbridge Public Library

OWC Lunch & Learn, Wednesday, September 30 11:30 am - 1:30 pm Country Kitchen Catering (former Ericksen's Restaurant, under the Keg)

SACPA presents **Andrew Nikiforuk** on Toxic Water and Fracking, September 17th at Noon, Country Kitchen Catering.

Avaaz organization organizing a **climate mobilization** event for November 29th. Visit greensense.ca for more.

"Under the Big Top" 2015 Conference organized by Canadian Stewardship & Recycling Council of Alberta Waste Reduction Conference. September 30 to October 2, 2015 in Banff. conference.recycle.ab.ca/

The City of Lethbridge is presently constructing a path through Six Mile Coulee to create access for the installation of equipment being researched by Lethbridge College.

SAGE has advocated in the past that Six Mile Coulee be given greater protection as a productive riparian ecosystem supporting native plants unique to the region.

The natural path was expanded a few years ago for the Summer Games, but the current expansion is clearly more disruptive, with deep cuts in the steep coulee and disturbed soil adjacent to the path. As can be observed in other trails in the river bottom, these disturbances invite

the establishment of invasive species and accelerated erosion. The path will also invite more and different uses in the natural park.

SAGE has suggested to the City that it implement a strategy to minimize disturbances and restore impacted natural areas in Lethbridge, similar to

the strategy employed in industry sectors.

SAGE has also suggested that the City partner with Lethbridge College in a research project to monitor the impact of this path, and perhaps develop and apply a restoration strategy for future projects.



4th Annual Reuse Rendezvous in Lethbridge

Environment Lethbridge, in partnership with the City of Lethbridge, is organizing the 4th Annual Reuse Rendezvous.

program is to reduce useful things from being sent to the landfill. More information can be found at environmentlethbridge.ca

On the weekend of September 11, 12 and 13, people are encouraged to place things that they no longer use out on the curb. Others, who may be able to use these items, are free to pick them up. Anything left over remains the responsibility of the owner.

The goal of the



Lethbridge's 4th ...

Reuse Rendezvous

September 11, 12, 13 - 2015

- On **Friday evening**, set usable, but unwanted 'give-away items' in the front of your home
- Place stickers or signs with the word 'free' on the items you are giving away
- On **Sunday evening**, take all uncollected items back to your home * there will NOT be a collection of leftover items

Enjoy a weekend perusing through the neighborhoods in search of new-to-you treasures!

environmentlethbridge.ca
 Join Environment Lethbridge's Reuse Rendezvous Facebook event page!
 #lethreuse
 info@environmentlethbridge.org
 403-329-7367 (City recycling line)

France All In for Green Roofs

France has recently passed a law that all new commercial buildings in the country must be partially covered in either plants or photovoltaic panels (for electricity generation).

Green roofs are relatively inexpensive and provide a number of benefits, including:

- Reduced diversion of roofing materials to the landfill as the life of waterproof membranes is extended with lower operating temperature and natural cover.

- Lower air conditioning requirements due to the natural cooling effects of vegetation.

- Reduce the impacts of stormwater runoff by storing rain water, and reducing the stress of peak flows on infrastructure and the river system (because it delays the flow to

the stormwater system).

- Natural plants help filter urban air pollution.

- They add natural beauty and provide habitat for insects and birds.

- And they can provide opportunities for community gardens and recreational space. For example, The Park Place Mall has urban gardens on the roof.

- A variation is the 'green wall' that may be installed indoors or out. www.greenovergrey.com/

The potential for photovoltaic panels on the roofs of commercial buildings in Lethbridge is also great. Ten square meters of PV panels will produce about 1500 kWh of electricity over a year, and has a current economic pay-back within the expected useful life of the system.

Applefest in the Galt Gardens

Applefest was held in Galt Gardens on September 29th - it was a huge success with music, craft, an informative environmental booth, and many dozens of bags of apples pressed into delicious apple juice.

Applefest is organized by the Lethbridge Sustainable Living Association, that 'exists to help create sustainable alternatives to Lethbridge and area. In an age of climate change, fossil fuel depletion, political and economic uncertainty we aim to help our city transition to a safer and more sustainable future.' (from their website:

www.lethbridgesustainableliving.org/)



Interesting Links:

The New Environmentalists - From Chicago to The Karoo - PBS Version- 2014 Emmy Award Recipient
<https://vimeo.com/69587098> 26 minutes

No Escaping the Blue Marble

<https://theconversation.com/no-escaping-the-blue-marble-46454>

Water is Life, Life is Water, THE RIVER: A film about the Athabasca River

<http://www.therivermovie.com>



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

The New Normal: The Canadian Prairies in a Changing Climate (2010)



The New Normal: The Canadian Prairies in a Changing Climate is a group of essays by researchers studying various aspects of climate change in the prairies.

Byrne, Kiezle, & Sauchyn offer a succinct summary of water trends in the region: "Further trend analysis work on the historical streamflow record concluded that winter flow (especially March) were increasing slightly, spring run-off and peak flows are occurring earlier in the year, and summer and early autumn flows (July-October) were considerably reduced. This trend is indicative of the expected shift of the hydrological balance under climate warming scenarios. The increase in the March streamflow may be attributed to an increase in spring precipitation as rain, combined with an earlier snowmelt.

All scenarios of future hydroclimate and water supplies consistently project an earlier onset of the spring snowmelt, a tendency towards a more rainfall-dominated hydrograph, and reductions in the annual and spring flow volumes in the 2050s and 2080s. [...] The median scenario for the South Saskatchewan River at Medicine Hat is a reduction of 8.5% in mean annual flow by mid-21st century. Lapp et al. (2005) modeled historical and future snowpack for the Oldman Basin in southern Alberta, predicting shorter winters and declining snow accumulations in the low-

and mid-mountain elevations. Their results suggested an average decline in spring snow runoff of around 40% by the period 2020-2050" (p.68).

Later, Sauchyn, Diaz & Kulshreshtha summarize these trends: "A shift to warmer, wetter winters is almost certain. Model projections of summer precipitation are much less certain; however, the common scenario is less summer precipitation, falling in fewer and more intense storms, resulting in drier, possibly much drier, conditions in the mid-to-later stages of the longer warmer summers" (p.354).

Probably the most interesting and most disquieting, aspects of the book are the perspectives of adaptation offered. Henderson & Thorpe are direct in their analysis: "However, this research has not led to a resolution of the central challenge that climate, and, therefore, fauna, hydrology, and soils will not be static over this century, and a conservation strategy based on trying to maintain the ecological status quo by protecting selected landscapes from human impacts other than climate change will not succeed. ... It simply becomes too difficult to repress or counteract every disturbance, whether gradual or catastrophic, that acts to shift the landscape towards a new equilibrium more closely attuned to the changing climate" (p.96).

If conservation (or 'wilderness vi-

sion') will not succeed, the authors suggest two alternatives. The first is a 'maximum diversity vision' in which new species are introduced to prairie regions, and evolving ecosystems are supported - essentially accelerating natural evolution. The second is a 'garden vision' which is driven by personal and societal preferences for particular species and ecosystems that can flourish in a new climate regime. Sauchyn, Kiaz & Kulshreshtha conclude: "The new climate-driven reality is that biodiversity managers need to think of themselves not as practitioners of preservation, but as "creation ecologists," since antecedent landscapes can no longer be effectively targeted. Passivity in the face of impacts may shrink our ecosystem options, particularly in prairie forests" (p.361).

More generally, they suggest that "Adaption to climate change will involve not only the development of appropriate technologies and a more efficient use of existing resources, but also the need for new institutional arrangements in civil society, an area where social capital could be central for the development of a well-organized adaptive capacity" (p.358).

A well-researched collection of essays from prairie-region researchers.



Election 2015: The Environmental Platforms

The Conservatives - [no platform available conservative.ca]:

Approved the Enbridge Northern Gateway oilsands pipeline that would run from Alberta to the coast of Kitimat, B.C.; support the proposed TransCanada Energy East project, a west-to-east oil pipeline from Alberta to New Brunswick; support proposed TransCanada Keystone XL oil-sands pipeline from Alberta to U.S. Gulf Coast.

Committed to supporting provinces to reduce Canada's emissions by 30 per cent below 2005 levels by 2030.

Agreed with other G7 nations to move to a low-carbon economy by 2050 and eliminate use of fossil fuels by the end of the century.

Partnering with the Pacific Salmon Foundation to restore estuaries critical to the survival of salmon and preserve the Harrison's River salmon ecosystem.

The Conservatives - Actions Speak Louder than Platforms (from Crimes Against Ecology by Laura McDonald):

Eliminating advisory boards

and destroying scientific records:

In January 2008, the Office of the National Science Adviser was phased out. ... The 25-year-old National Roundtable on the Environment and the Economy was shut down in March 2013 because the government didn't agree with its reports. The NRTEE was prohibited from publishing its final report online and from transferring historical materials to another organization. ... After seven out of nine Department of Fisheries and Oceans libraries were closed in 2013, decades of public research documents the government claimed would be digitized were dumped in the garbage, sent straight to landfills or even burned, according to numerous reports from government scientists. Affected institutions include the Freshwater Institute library in Winnipeg; the Northwest Atlantic Fisheries Centre in St. John's, Newfoundland and the St. Andrews Biological Station (SABS) in New Brunswick, where Rachel Carson conducted research for *Silent Spring*. The destroyed documents included critical baseline data from up to 100 years ago. ... Environment Canada is accused

of attempting to halt further investigations after the Commission of Environmental Co-operation, a part of NAFTA, was called to action to find out whether tailings ponds in Alberta are leaking into nearby water sources, thus breaking Canada's Federal Fisheries Act.

Muzzing scientists:

Restrictive new protocols were implemented at Environment Canada in 2007 and Natural Resources Canada in 2010 requiring scientists to obtain government permission before speaking to the media. Meanwhile, the Department of Fisheries and Oceans has restricted scientists from publishing research prior to screening for "concerns/impacts to DFO policy." ... Natural Resources Canada prohibited geologist Scott Dallimore from speaking to reporters regarding his Nature paper about a flood that occurred about 13,000 years ago without his answers being vetted in advance – despite it having nothing to do with NRC's identified "hot topics," such as minerals, energy or anthropogenic climate change. ... The National Research Council Press was privat-

Election 2015: The Environmental Platforms (continued)

ized in September 2010, revoking free access to 17 journals. ... From January to August 2011, DFO researcher Kristi Miller was not allowed to give interviews about her 2011 paper on a virus suspected of killing wild sockeye salmon in B.C. ... Environment Canada denied water researcher Marley Waiser permission to speak about two papers disclosing the presence of chemicals and pharmaceuticals in Saskatchewan's Wascana Creek ... In October 2011, federal scientist David Tarasick was prohibited from discussing the discovery of one of the largest ozone holes above the Arctic until after media interest waned. ... Libraries at the Pacific Forestry Centre in Victoria and the Northern Forestry Centre in Edmonton were closed to the public in October 2012. ... In November 2012, the Canadian Food Inspection Agency successfully lobbied to have the research lab at the Atlantic Veterinary College-University of PEI stripped of its international credentials for revealing evidence of infectious salmon anemia in BC salmon, thereby threatening exports. ... In April 2013, the DFO required scientists working on a joint Canada-US Arctic research project to sign an exhaustive confidentiality

agreement. (Some of the US scientists, including University of Delaware oceanographer Andreas Muenchow, refused.) ... The new Library and Archives Canada code of conduct, released in March 2013, prohibits employees from participating in professional conferences, teaching and other "personal activities" without permission and adherence to strict criteria, including that the subject matter not be "related to the mandate or activities of LAC." The mandate of the LAC is "to facilitate co-operation among communities involved in the acquisition, preservation and diffusion of knowledge." In other words, the LAC is not allowed to fulfill its own mandate. ... A June 2013 survey by the Professional Institute of the Public Service of Canada found that 90 per cent of federal scientists "feel they are not allowed to speak freely to the media" about their work – and one-third have been actively prevented from doing so.

Systematically dismantling decades of environmental protection legislation:

Canada withdrew from the Kyoto Protocol in December 2011, sidestepping an estimated \$14-billion in penalties for noncompliance with reducing emissions targets below

1990 levels. A much easier federal target of 17 per cent below 2005 levels by 2020 was announced. ... With omnibus Bill C-38, key portions of the Fisheries Act were repealed in June 2012, endangering habitats and removing triggers for impact assessments. Bill C-38 also replaced the Canadian Environmental Assessment Act with a much weaker version that restricts public participation in assessment hearings, and neutered the Species at Risk Act, including removing time limits on permits. ... In December 2012, environmental oversight was reduced by changes proposed by the pipeline industry to the Navigable Waters Protection Act. ... Canada became the only country to withdraw from the UN anti-drought convention in March 2013. ... In April 2013, legislation proposed by the oil and gas industry amended the list of industrial projects requiring environmental reviews, removing provincially regulated pipelines and tar sands processing facilities. ... And, finally, [eliminating science libraries](#) without adequate conservation of research publications and data. The Lethbridge Research Station has been so targeted.

Election 2015: The Environmental Platforms (continued)

The Liberals - [Real Change: A New Plan for Canada's Environment and Economy](#), from [liberal.ca](#)

Canada's share of the 'clean technology market' has declined 71% under Harper. The Liberals propose more support for the sectors of clean energy, energy efficiency, and clean water.

The Liberals will establish national emission targets and support provinces in achieving emission targets through carbon pricing. They promise to end fossil fuel subsidies, redirecting the savings to new and clean energy technologies.

The Liberals oppose proposed Northern Gateway pipeline; support Energy East and Keystone XL pipelines.

Restore an environmental review process that ensures decisions are based on science and serve the public interest.

Better protect national parks, freshwater systems, and oceans. Increase marine and coastal protected areas by 10% before 2020.

Hold First Ministers' meeting

with premiers within 90 days of the Paris UN climate change conference this December to establish a framework for reducing Canada's carbon footprint.

Develop a North American (Canada, U.S. and Mexico) clean energy and environmental agreement.

The NDP - No exclusive environmental platform www.ndp.ca/issues

"Tom Mulcair has a concrete plan to protect the environment for future generations while growing the economy and creating good jobs.

As Prime Minister, Tom will work to kickstart renewable energy production and drive down climate-changing emissions.

He'll make big polluters pay to clean up their mess. And he'll strengthen laws to protect Canada's lakes and rivers."

The NDP opposes the Northern Gateway pipeline; it initially supported concept of west-east pipeline, but says Energy East can't be approved without more stringent

environmental review process; opposes Keystone XL pipeline.

The NDP promises to create a cap-and-trade system using revenue to invest in a greener energy sector in the regions where the funds were generated.

The NDP plans to support provinces to retrofit homes and office buildings to save energy and money.

The NDP plans to redirect \$1 billion a year from fossil fuel subsidies to investment in the clean energy sector, including wind, hydro, solar and geothermal technologies.

The Greens - [Preserving and Restoring the Environment](#), from [greenparty.ca](#)

"The lack of federal regulation, monitoring, and action has made Canada one of the world's biggest and most tragic offenders against the environment. We rank amongst the world's worst for wasteful use of natural resources. Our soil, air, and waters are dumping grounds for toxic chemi-

Election 2015: The Environmental Platforms (continued)

icals. Through inadequate environmental protection we risk leaving our children the deplorable legacy of a debilitated and degraded environment."

"The Green Party believes that the federal government must show leadership in developing an adaptation strategy in collaboration with the provincial/territorial governments, municipalities, and First Nations governments that aims to mitigate and reduce the impacts of climate change. Even with significant global GHG reductions to stabilize the climate, it will take decades, perhaps centuries, to arrest climate change."

"Sustainable communities and sustainable livelihoods need healthy watersheds. The Green Party is committed to responsible water stewardship. That includes protecting watersheds from industrial and urban activities and restoring those that have been damaged by such activities. We advocate a renewed federal government role in water management, focused on strong regulations and programs created in collaboration with provincial and municipal governments. When it comes to our vision for freshwater, the

Green message is clear: Keep it. Conserve it. Protect it."

"The Green goal is 'zero waste.' This means shifting from thinking of waste as a problem to considering waste as a resource. Canada's failure to manage waste properly represents a huge loss of resources and revenue. Reusing and recycling wastes have been shown to generate 10 to 15 times more jobs than incineration or landfilling. We oppose any incineration technology that shifts landfill problems to air pollution and toxic contaminant dispersal in the atmosphere. We believe that strong incentives must be in place for industry and consumers to reduce waste to zero. Setting a goal of zero waste will provide direction and inspiration."

The Green Party promises to accelerate construction of green infrastructure, and support provinces to ensure no new coal-fired electrical generation plants are built in Canada.

Lethbridge Forums

From Lethbridge Accountability
www.lethbridgeaccountability.ca/federal-election-forums

Community Organizations
Wednesday September 2
Lethbridge Public Library
- Downtown
7:00 pm

YWCA
Forum on Gender Equality
Thursday October 1
CASA
7:00 p.m.

SACPA
Wednesday September 22
Lethbridge Public Library
- Downtown
7:00 pm

Lethbridge Chamber of Commerce
Thursday October 6
Location TBA
7:00 p.m.

These are **all-candidate** forums





**A leading voice for a healthy and
environmentally sustainable community.**

Box 383 Lethbridge AB T1J 3E9

August 13, 2015

To: Environment Committee
c/o Councillor Hyggen, City of Lethbridge

From: Braum Barber
Southern Alberta Group for the Environment

Re: Six Mile Coulee Trail Development.

The Southern Alberta Group for the Environment (SAGE) is concerned about the development of a trail through six-mile coulee.

Six Mile Coulee is a unique parkland area within the City that contains many species of native plants, and provides a variety of habitats for wildlife, including a productive riparian ecosystem. It is said that Helen Schuler conducted much of her coulee research in this area because of the variety of plant species in an unspoiled state. It has been accessed by respectful hikers and bikers for the past number of decades, and it has been used carefully by College programs in environmental science and engineering. The park provides many useful ecosystem services, educational services, and is enjoyed by the community in its current state.

In the past, SAGE has advocated to the City that it is in our long term interest as a 'sustainable community' to consider a protected-area-designation for Six Mile Coulee, and to pay more attention to managing current and future use in or adjacent to the coulee to preserve its significant natural features, its ecological integrity, and its value as a natural resource for low-impact recreational and educational activities.

As the construction of a trail through Six Mile Coulee progresses, it becomes apparent that little consideration was given for the ecological integrity of the park. In past projects, most recently the extension of Scenic Drive north, the City developed an environmental plan for reducing the impact of stormwater runoff into the coulees (eg. erosion control, slope stability, etc.) and the spread of invasive species in the coulees by reestablishing native plants in disturbed areas. Was there a similar plan made for this project? Was the Environment Committee of Council consulted on this project?

We look forward to your response.

Sincerely,

A handwritten signature in black ink, appearing to read "B. Barber", written in a cursive style.

Braum Barber
SAGE



**A leading voice for a healthy and
environmentally sustainable community.**

Box 383 Lethbridge AB T1J 3E9

August 26, 2015

To: Environment Committee
c/o Councillor Hyggen, City of Lethbridge

From: Nicola Miller
Southern Alberta Group for the Environment

Re: Six Mile Coulee Trail Development.

With respect to the August 13 letter sent concerning the development of a trail through Six-Mile Coulee, we would like to offer some suggestions.

At the second workshop of the River Valley Parks Plan, SAGE provided a suggestion that the City use methods required of industry to minimize disturbance and encourage restoration of native prairie vegetation as documented in the *"Recovery Strategies for Industrial Development in Native Prairie for the Mixedgrass Natural Subregion"*. (The document may be accessed at <http://www.foothillsrestorationforum.ca/recovery-strategies-for-mixedgrass>. Lethbridge is in the Mixedgrass Natural Subregion.) We would encourage the Environment Committee of Council to advance a restoration policy within City operations at least as stringent as industry sectors.

The MDP/ICSP expresses a clear vision that Lethbridge become a leader in environmental stewardship. Section 6.5.1 states: 'The intent of these policies is to conserve and enhance the unique character of the Oldman River valley' and as a policy, to 'Strive to conserve, enhance and where possible restore the biological diversity of the river valley and riparian areas within'.

Since this path is ostensibly being developed for the access of equipment to support a research initiative at Lethbridge College, it may be appropriate to partner with the College to expand the project to include an assessment of impact of the disturbance on natural park land – invasive species vectors, accelerated erosion, impacts to fish in the creek below the path, increased use, etc. It would also be an opportunity to develop and apply a strategy to minimize disturbance and restore vegetation in natural areas. We believe that the Environmental Science program at Lethbridge College has developed an inventory of species in Six-Mile Coulee, spanning many years of student engagement. Such a research partnership would furthermore help avoid incongruous efforts in the future (like the negative environmental disturbance of this path being developed for positive environmental research of new technologies).

Again, we look forward to your response.

Sincerely,

A handwritten signature in blue ink that reads "Nicola Miller".

Nicola Miller
SAGE

cc. Sandy Vanderburgh, Dean, Applied Arts and Science, Lethbridge College