



**"You cannot escape the responsibility of tomorrow by evading it today."**

**Abraham Lincoln**

## The Inequity of "Balance"

**June 2017**

**SAGE AGM, June 5th, Noon, Streetside Eatery. SAGE will be accepting membership fees for 2017 up to or at AGM.**

### **What is in Leaf Litter and Why Does it Matter to Us?**

Helen Schuler Nature Centre, June 13th 7 - 9 p.m. (See all Garden Workshops at [www.lethbridge.ca/Things-To-Do/Nature-Centre](http://www.lethbridge.ca/Things-To-Do/Nature-Centre))

June 4th is **Coulee Cleanup**, supported by Environment Lethbridge. For more information see [environmentlethbridge.ca](http://environmentlethbridge.ca)

**Nature Play Day** at Henderson Lake, June 10th, 12 to 4 p.m.

In Our Back Yard with Brian Keating, June 9th, 7 p.m. [www.livingstonelandowners.net/news/](http://www.livingstonelandowners.net/news/)

## City Approves Curbside Program

The City of Lethbridge has approved the 2018-2027 Capital Improvement Program budget which includes a city-wide curbside recycling program and a materials recycling facility that will sort and manage the diverted plastics, metals, glass, cardboard and paper.

From the City's website, the project description is as follows:

"This project will support the implementation of Lethbridge's curbside recycling program, approved by City Council in November of 2016. It includes the purchase of two additional garbage trucks, the extension of the Waste and Recycling Services vehicle storage building, and the purchase and delivery of new recycling carts for residents.

Recyclable materials will need to be processed in a Materials Recovery Facility (MRF - \$12 million). Waste and Recycling Services will undertake the sit-

ing, design and construction for the project in 2017 and 2018. The facility is expected to be operational in 2019."

There will be a nominal \$7/month additional charge on the utility bill to pay for the recycling service.

The City is also developing concept plans to manage toxic liquids that collect in the landfill (and are a potential source of groundwater contamination) and landfill gases (which contribute to air pollution and global warming).

As we enter the process of the next Municipal Election, it is important that the current council recognizes our support in the decision to implement a city-wide curbside recycling program: If you are interested, please sign the online petition ([petition link](#)).

My mother would give my older brother a chocolate bar, to be shared "equally" with me. He would break the bar in roughly half, then nibble off the extraneous edges so the halves were even. If too much was removed from one piece, the other one required attention, to achieve "balance". Eventually we would each get the same amount, although he had a head start on the share. This is where I first perceived the inequity of balance.

In discussions about development and the environment, those on the side of development always make the case we need a "balanced" approach, meaning the environment has to give so they can get their share. I have flashbacks to my brother dividing up scarce chocolate bars when I hear this dubious reasoning.

If the expression, balance, meant an equitable, or proportional sharing of resources, landscapes or chocolate, it would be easier to swallow.

(... continued on page 3)

## OWC Water Charter

SAGE has become a participating organization in the Oldman Watershed Council *Water Charter*. A signing ceremony is planned for June 15th at the OWC AGM.

The *Water Charter*, based on a resolution by the United Nations, "Recognizes the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights." As a human right, organ-

izations like the Council for Canadians argue that water must be protected from privatization, pollution and bulk exports.

Also quoted on the OWC Water Charter is the Government of Canada's Water Act: "Pollution of the water resources of Canada is a significant and rapidly increasing threat to the health, well-being and prosperity of the people of Canada and to the quality of the Canadian environment at large and as a result it has become a matter of urgent national concern that measures be taken to provide for water quality management in those areas of Canada most

critically affected."

The OWC *Water Charter* address the Water for Life Strategy in the Province of Alberta: "Water is not only a resource, it is a life source. We all share the responsibility to ensure a healthy, secure and sustainable water supply for our communities, environment and economy- our quality of life depends on it. The Government of Alberta's renewed Water for Life strategy has three main goals: Safe, secure drinking water; Healthy aquatic ecosystems; and Reliable, quality water supplies for a sustainable economy."

This is an important initiative to remind us all about the importance of water in the Oldman River Basin, including the protection of the headwaters from clearcut logging, mineral extraction, and unsuitable recreational activities; the impacts of rapid melting of the snowpack in the spring and diminishing water flowrates later in the summer caused by global warming; and the introduction of chemicals and toxic substances by industry, landfills, our streets and parkland, and agricultural runoff.

For more, visit [oldmanwatershed.ca/](http://oldmanwatershed.ca/)

### Interesting Links:

Why Don't Green Buildings Live Up to Hype on Energy Efficiency? (Yale Environmental)  
<http://e360.yale.edu/features/why-dont-green-buildings-live-up-to-hype-on-energy-efficiency>

Nature Needs Half  
<http://natureneedshalf.org/wp-content/uploads/2012/01/IJW-Dec-11-tragsa.pdf>

Beauty is Only Skin Deep  
<https://www.theglobeandmail.com/technology/science/toronto-artist-exposes-the-hidden-architecture-of-cells/article35150974/>

The Bucket (Field Lab—youtube video 1:50 minutes)  
<https://www.youtube.com/watch?v=WI09ROTi7a4>

What Was the Most Significant Catastrophe of All Time? (The Atlantic)  
<https://www.theatlantic.com/>

## Community Supported Agriculture

Synergy Permaculture is a "Lethbridge, Alberta based company that specializes in permaculture design, water management, green waste management, and urban farming" (from the website [synergypermaculture.ca](http://synergypermaculture.ca)).

Community Supported Agriculture (CSA) allows food growers and the local community to share the risks and benefits associated with food production. Community members invest in a share of the CSA and in return are given fresh, locally-grown produce through the growing season.

The benefits of CSA include the promotion of food security, in which a variety of food is grown locally resulting in less reliance on elaborate transportation systems from distant locations. Locally-produced food typically has a lighter carbon footprint when compared to food refrigerated and transported long distances, and it is said to be considerably healthier when the food is consumed fresh, soon after harvesting.

erated and transported long distances, and it is said to be considerably healthier when the food is consumed fresh, soon after harvesting.

Synergy Urban Farms offers different types of shared depending on the amount of fresh produce you want, and there are options for delivery and pick-up.

Other CSA farms in the region include Noble Gardens at [www.noblegardenscsa.com](http://www.noblegardenscsa.com) who have been operating for almost a decade. The Urban Grocer on 9th Avenue South also provides locally-grown food including meat and eggs.

You may also find more information at Lethbridge Sustainable Living at [www.lethbridgesustainableliving.org](http://www.lethbridgesustainableliving.org)



### 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](mailto:sage-communications@sage-environment.org)

The reality is most of our landscapes and a majority of our natural resources have already been developed, changed, or in some way lost. If we have already converted 80% of the natural world into some economic endeavor it seems a bit of a stretch to achieve balance as we carve up the remaining 20%. We are not weighing two equal things.

The word balance is a changeling, depending on who is using it. When the off-highway vehicle community use the word what they say is, "Yes, the environment is important, but we must find a balance." What they mean is, "we want to continue to drive off road with a minimum of restriction". Loggers say it's important to balance protection of old growth forest against forest renewal through clear-cutting. What they really mean is, "keep the annual allowable cut high for better economic return." The oil patch says we need a balanced approach on controls of greenhouse gas emissions because the proposed actions would cost too much. In other words, "action on climate change is aspirational and breathing is optional."

Without a starting point, a benchmark in time to measure from, trend analysis and a sense of thresholds and limits, balance is a meaningless term. Instead of giving us direction for resource management it sets the stage for continuing to divide up the spoils until the bits left are not worth fighting over. It avoids all that uncomfortable argument about resource depletion, loss of biodiversity and ecosystem failure and allows one to think the status quo can continue.

In planning we tend to ignore everything that happened prior to the plan and allocate resources based on what's left. Institutional amnesia magically erases the existing development footprint allowing further division to be made, as we continually add to the imbalance of future development against protection. And, as the imbalance grows, we are further separated from the environment that sustains and provides for us.

Balance sounds appropriate, as any smooth-sounding word does, but it is a disingenuous term with much room for manipulation and misunderstanding. Balance is a word much used in public relations spin. The hidden meaning of balance seems to be excessive, unequal division and use of resources, not an equitable sharing, proportional use or restraint. Balance has to convey something more than two wolves and a sheep voting on what to have for dinner.

When the word balance is used, look for imbalance instead. Instead of acts of self-restraint, "balancing" competing demands liberates us from the tough decisions of limits. Writer and conservationist Kevin van Tighem, obviously fed up with this word and how it is used has suggested a moratorium on its use.

Life balances itself on a precarious ledge; through our actions we can maintain it or propel it off the edge. In many cases, to restore ecosystem function and lost or declining biodiversity a drastic re-balance is necessary. That means rolling back the tide of development in a fine adjustment between giving and taking. Imagine the thorns and thistles of local resistance and business opposition to that idea of balance.

So, how much is enough? Ecologists, like the world-renowned E. O. Wilson, have long called for "Nature needs half". The rationale is we need to protect and maintain half of the landscape to maintain ecosystem functions, just to allow us to survive. Of course, much of the world's biodiversity would ride our coattails on this one.

To this I suggest we use the term balance as you might for your bank account. Too many withdrawals, too many expenses and not enough income means we are going broke. Cal-

culations from the WorldWatch Institute indicate the planet has available 1.9 hectares of biologically productive land per person to supply resources and absorb wastes. Yet, the average person on earth already uses 2.3 hectares worth. A report prepared by 1360 scientists for the World Bank warns that about two-thirds of the natural machinery that supports life on Earth is being degraded by human pressure. Dr. Bill Rees calculates we in the western world are using the equivalent of something like two and half earths to meet our demands.

One might think we have failed to balance our ecological cheque books. It is ironic that those most obsessed with the idea government needs to eliminate deficit spending in the economy continue to promote it in the environment.

Victor Hugo, the famous 19<sup>th</sup> century writer, remarked that, "*To put everything in balance is good, to put everything in harmony is better.*" Harmony implies restraint, stewardship and sustainability. To that end we have to decide between what we want and what we need; a gulf exists between these two points, in part due to the blind use of the word balance. We can fall into a deadly trap of thinking balance implies we need not concern ourselves with limits. The implication is we can carry on this ecological Ponzi scheme forever.

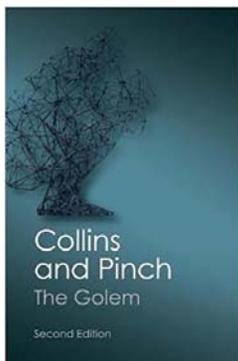
In the end it is the recognition we can't have it all, only a little. If we've taken too much, some needs to be given back. Balance that against the prevailing use of the term "balance".

Lorne Fitch is a Professional Biologist, a retired Fish and Wildlife Biologist and an Adjunct Professor with the University of Calgary.  
[lafitch@shaw.ca](mailto:lafitch@shaw.ca) ; 403 328 1245

## ***The Golem: What you should know about science (2nd Ed.) & Resilience Thinking***



The authors, Collins and Pinch, first published *The Golem* in 1993 with a second edition released in 1998 and republished in 2014. The continued interest in the book is fascinating, since it is without a doubt an odd book. In mediaeval tradition the golem is a creature of clay animated by having the Hebrew word 'EMETH' ('truth') inscribed on its forehead – it is truth that drives it on. The authors emphasize that this does not mean that the golem understands the truth, but only that it pursues it. Collins and Pinch show that a golem is not an evil creature (it is our creation) but it is a little daft and clumsy at times. Golem Science is a metaphor describing the scientific process as it is embedded in a society comprised of other processes and other truth-claims.



Pinch argue that this is not the conclusion to make from *The Golem*. The authors want to make the case that "scientists are neither Gods nor charlatans; they are merely experts, like every other expert on the political stage" (143). They argue that we need to see science 'as expertise rather than as certain knowledge'. They also caution that this does not mean that non-experts should have influence on scientific understanding - only that "Science is part of a culture that belongs to all of us" (152).

What the authors don't really explain is what pushes scientists to take the position that they provide certain knowledge. It may be caused by 'expertise-for-hire' that uses the foundation of the scientific method against science itself: the notion of 'certainty' being quite different in science than in other domains, like politics. Collins and Pinch say that scientists taking a 'fundamentalist' approach to science as being "revealed, hierarchical, exhaustive, exclusive, omnipotent and infallible" (152) in fact exposes scientists to damaging critique and causes public confusion.

*The Golem* shares a number of cases of science at the fringe of its ability to prove theories through experimentation. Examples include experiments of transferring memory from one animal to another; experiments to prove the theory of relativity; cold fusion; determining the origins of life; gravitational waves and others.

In each of these cases, the science used to prove the theory was found lacking. Either the data was selected to match theoretical results (as in the case of Eddington's measurements to prove Einstein's theory); the experiments were impossible to replicate by other scientists due to complexity or cost; or the reputation of the scientists and labs were used to settle conflicts in experimental results, rather than the data itself.

The reader might come to the conclusion that science is not credible (particularly with complex or difficult to measure problems). Collins and

Collins and Pinch use a metaphor of a rope for science: The separate strands of proof may in themselves be weak, but the rope assembled from these strands will be strong. There are clear lessons in this book for climate scientists overstepping their role as experts when implying certainty, as this has allowed critics to obfuscate the science in the political domain. Scientists (and the public) should accept that science can be clumsy and daft at times, but trust the process to continue to pursue the truth.

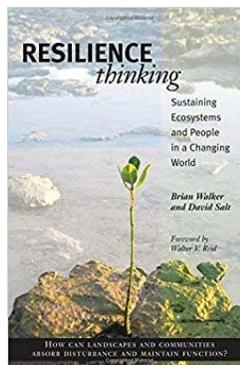
Another book of note is *Resilience*

*Thinking* by Walker & Salt. The principle theme of the book is describing how ecosystems and communities can be preserved or designed to absorb disturbances and maintain the system's function.

The first key point is that social-ecological systems (meaning the interdependency of society and the natural world) can exist in multiple stable states separated by thresholds. Beyond a threshold the system will change to a new equilibrium which may or may not be conducive to human flourishing. Resilience, then is to keep the system as far away as possible from thresholds.

The second key point is that all socio-ecological systems move through cycles moving forward with growth and conservation, and falling back through release and renewal. The back loop can be characterized by novelty and experimentation which allows for some systemic adaption to new socio-ecological conditions. The back loop in a system lacking resilience, however, may also dissipate chaotically.

*Resilience Thinking* shares five interesting case studies of regions that have been pushed beyond thresholds to a new (and usually diminished) stability. The studies document efforts to push the system back into its previous stable-state, but most have failed due to complexity of systems and formidable costs that the public are unwilling to support.



What makes this book different is its efforts to show the interrelationships between social and environmental systems - one cannot preserve environmental systems without addressing societal practices and expectations.

# Kainai Ecosystem Protection Association Summit 2017

## “Blackfoot Science”

June 8-10, 2017

Day One: Community Building Standoff, AB  
Day Two: University of Lethbridge, Lethbridge, AB

Alberta Environment & Parks Minister  
Shannon Phillips (invited)

Minister of Indigenous Relations, Alberta  
Richard Feehan (invited)

### Keynote Speaker

Charlie Crow Chief

*Blackfoot Science*

Greg Cajete, Author

*Native Science*

Leroy Little Bear

*linii Presentation*

Wes Olsen, Author

Cristina Eisenberg

*Earthwatch Institute Chief Scientist*

KEPA Name Transfer Ceremony

Honour Song Ceremony



### Day Three: Field Tours

Sundial Site

Blackfoot Bison Herd

Restoring Wolves, Fire  
& Bison to Waterton Park  
& Blood Tribe Timber Limit  
Blackfoot Significant Sites

Thunderbird Farms/

Head Smashed In Buffalo Jump

Blood Tribe Members (for all 3 days)	\$10	(ELDERS - OVER 60 FREE)
3 Day Registration (Non-member)	\$250	(Includes tour on 3rd day)
Single Day Registration (Non-member)	\$100	(Includes tour on 3rd day)
Group rate - Schools	\$200	(20 person max.)
Student	\$10	(3 days)

See website for Summit info, registration and updates: [bloodtribe.org](http://bloodtribe.org)

Please bring registration fee to the workshop (cash, debit or cheque made out to Blood Tribe Land Management). Registration includes presentations and field tours. Participants are responsible for their own travel and accommodations to attend the Summit. Transportation will be provided for the tours on day 3 for early registered participants (First 100 Registered. \*Number Subject to change)

**Notice:** By registering for this Summit the participant(s) give permission to have their photo and/or video taken. If you do not want to give permission, please notify the contact below.

Marsha Heavy Head  
Environment Technician  
ph: (403)-737-8154 fax: (403)-737-8183  
mheavyhead@btlands.com



For more info and to register contact KEPA @ BTLM 403-737-8151 Flag design by: Elder Charlie Crow Chief



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

Box 383 Lethbridge AB T1J 3E9

5 May 2017

Alberta Energy Regulator  
Authorizations Review & Coordination Team  
1000, 250 - 5 Street SW  
Calgary Alberta Canada T2P 0R4  
By Email: [SOC@aer.ca](mailto:SOC@aer.ca)

Dear Sir or Madam:

Re: Statement of Concern, Granite Oil Corp.  
AER Applications 1885444, 1885437 and 1885446  
Sec 8 Tp 3 Rg 18 W4 and Sec 17 Tp 3 Rg 18 W4

Southern Alberta Group for Environment (SAGE) is writing to express concern with applications 1885444, 1885437 and 1885446 by Granite Oil Corp. to drill oil wells on lands identified by the Government of Alberta for protection under the South Saskatchewan Regional Plan (2014-2024). We request that AER deny these applications and that there be a moratorium on surface access for exploration and development within the proposed addition to the Twin River Heritage Rangeland Natural Area on the Milk River Ridge.

SAGE, a non-profit society established in 1984, is a leading voice for a healthy and environmentally sustainable community through informing citizens, participating in public processes and supporting sound environmental initiatives and actions. Through consultations on the Special Places Program (1993-2000) and the South Saskatchewan Regional Plan (2010-2013) SAGE has advocated for expansion of conservation areas in grasslands, including on the Milk River Ridge, to meet provincial protected area network targets and to accomplish the objective of maintaining biodiversity. The lands on which drilling is proposed are included in one of only two grassland conservation areas outside of the foothills identified for protection in the South Saskatchewan Regional Plan.

We have previously expressed our concern about proposed drilling on these lands by DeeThree Exploration Ltd. (a precursor to Granite Oil Corp.) in letters addressed to Hon. Ken Hughes, Minister of Energy (Sep 13, 2013), to Hon. Jim Prentice, Premier of Alberta (Apr 9, 2015) and to the Alberta Energy Regulator, Stakeholder and Government Relations Division with cc to Martin Cheyne with DeeThree (Apr 9, 2015). In the latter correspondence we asked to be informed of any application that the Alberta Energy Regulator (AER) receives regarding drilling on public land in this parcel (Tp3-Rg18-W4). We learned about the current application, not through AER or the proponent, but through a conversation with a fellow conservationist.

SAGE has concerns about approval of any application for industrial development in this area because of potential adverse effects on significant natural features. Approving an application to drill would undermine government intent for protective designation of the area. We assume that this application is being treated as non-routine by AER.

There are few large blocks of native grassland left in Alberta, and what native grassland does remain is largely fragmented and insecure, and less than two percent lacks clear government protection. Native grassland constitutes only about five percent of the provincial land base, and yet supports approximately half of the rare ecological communities, 40% of rare vascular plant species and 70% of mammal, bird, reptile and amphibian species considered at risk or may be at risk. The native prairie ecosystem on the Milk River Ridge has intrinsic value and provides ecological services to Albertans such as water storage, carbon capture, sustainable ranching, and biodiversity conservation. These public lands are covered by a Protective Notation because of their importance for rough fescue communities, wetlands and wildlife and their sensitivity to disturbance. The high-value wetlands merit protection from threats under the Alberta Wetland Policy.

In addition, the shale oil play in southern Alberta has raised significant concerns. Horizontal drilling with intensive hydraulic fracturing has come under close international scrutiny since its development and application. Fugitive emissions from flow back water and problems with wellbore integrity pose risks to air quality, as well as surface water and groundwater. Water contamination is of particular concern for the area proposed for oil drilling on the Milk River Ridge as it contains headwaters for both the Milk and the South Saskatchewan River watersheds. Construction of well sites, access roads, and pipelines, as well as ongoing operations in the area, will have long term negative cumulative impacts for wildlife and native grasslands that we do not know how to restore.

We understand that Granite's leases are due to expire in just over a month (June 14, 2017). We believe the leases should not be renewed. It appears that Granite is seeking hasty approval prior to lease expiry without full consultation or hearing to understand and address issues raised by concerned parties.

We have communicated with members of the ranching community in the area and understand that they share our views. We request that AER respect the outstanding stewardship practiced by the grazing leaseholders in this area as well as the protection intent of the South Saskatchewan Regional Plan by denying Applications 1885444, 1885437 and 1885446.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Cheryl Bradley'.

Cheryl Bradley, Secretary  
Southern Alberta Group for Environment  
Phone: (403)328-1245  
Email: [cebradley@shaw.ca](mailto:cebradley@shaw.ca)

cc: Granite Oil Corp. Attention: Ryan Cheyne via email: [rcheyne@graniteoil.ca](mailto:rcheyne@graniteoil.ca)

3105 - 16<sup>th</sup> Avenue North  
Lethbridge, Alberta T1H 5E8

Phone: (403) 329-1344  
Toll-Free: 1-844-279-8760  
Fax: (403) 327-6847  
E-mail: [subdivision@orrsc.com](mailto:subdivision@orrsc.com)  
Website: [www.orrsc.com](http://www.orrsc.com)



*OLDMAN RIVER REGIONAL SERVICES COMMISSION*

## NOTICE OF APPLICATION FOR SUBDIVISION OF LAND

**DATE:** April 21, 2017

**Date of Receipt:** April 5, 2017

**TO: Landowner:** 1958612 Alberta Ltd.

**Agent or Surveyor:** Michael A. Thompson, A.L.S.

**Referral Agencies:** Cardston County, Jim Bester, Westwind School Division, TELUS, FortisAlberta, AltaLink, Chief Mountain Gas Co-op, AB Health Services, AB Agriculture, Historical Resources Administrator, AB Environment & Parks - K. Murphy, AB Environment & Parks - E. Evenson, AB Environment & Parks – C. Wojtowicz, AB Water Boundaries – D. Markarshyn, AER

**Adjacent Landowners:** 575593 Alberta Ltd., Harry L. Olson, Douglas C. Walsh, Fay & Guy W. Adams, Neil & Heather Mirau, James B. & Sharon L. Gillette, Carol J. Barr, Laura Leavitt, William R. & Deborah J. Dolan, William P. Sugars, Geoffrey Ronald Halma, William Jacob Halma, William Halma, Larry Van Orman, Tom W. & Nell Smith, Poll Haven Community Pasture, Morgan, Mark, Ken & Don Mackenzie, Rodney & Laura Jensen, Kim B. & Linda J. Jensen, Peter & Jaqueline Morris, Jason D. Wiggill, Don A. & Sheryl Carlson, Six Gough Holdings Ltd., Shona Powell, 1934809 Alberta Ltd., Richard D. Smith, Gerald L. & Marilyn K. Beazer, Daryl L. & Ruta Kiemelle

**Planning Advisor:** Mike Burda

A handwritten signature in blue ink, appearing to read 'MB', is written over the name 'Mike Burda'.

The Oldman River Regional Services Commission (ORRSC) is in receipt of the following subdivision application which is being processed on behalf of the Cardston County. In accordance with the Subdivision and Development Regulation, if you wish to make comments respecting the proposed subdivision, please submit them via email, fax or mail no later than **May 10, 2017**. (Please quote our File No. 2017-0-046 in any correspondence with this office).

**File No:** 2017-0-046

**Legal Description:** S1/2 9-1-27-W4M & NW1/4 9-1-27-W4M

**Municipality:** Cardston County

**Land Designation:** Direct Control - DC  
(Zoning)

**Existing Use:** Agriculture

**Proposed Use:** Direct Control Acreages

**# of Lots Created:** 36

**Certificate of Title:** 161 127 829, 161 127 829 +1, 161 127 829 +2

**Proposal:** To subdivide titled areas comprising of 463.0 acres to create 36 lots of various sizes for uses addressed within the Direct Control district.



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

Box 383 Lethbridge AB T1J 3E9

May 5, 2017

To: Mr. Mike Burla, Planning Advisor  
Oldman River Regional Services Commission

From: Braum Barber, Southern Alberta Group for the Environment

Re: File No. 2017-0-046

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Please accept this letter regarding the subdivision application for land located at S1/2 9-1-27-W4M and NW1/4 9-1-27-W4M.

The Southern Alberta Group for the Environment (SAGE) has concerns about the impacts of the 36-lot subdivision development being proposed in an area that is identified by the Alberta Government as having high environmental significance for biodiversity, ecological integrity and watershed values (*Environmentally Significant Areas in Alberta: 2014 Update*). SAGE shares the concerns expressed by the Boundary Creek Landowners Group regarding the subdivision of rural land that is far removed from existing towns and villages. Such intensification of human footprint and accompanying fragmentation by access roads and trails threatens the ecological goods and services the landscape provides.

The land under consideration for subdivision development is on two tributaries of Lee Creek, a source of water for downstream communities including the town of Cardston within the Oldman watershed. High-density residential subdivision and accompanying removal of native vegetation and 'hardening' of the land surface decreases the ability of the watershed to capture and filter water. Communities throughout North America have learned the hard way that significantly increasing land-use footprint in the headwaters of their water supply decreases the watershed's ability to capture precipitation and filter contaminants. Additional risks to water supply include water withdrawal and increased risk of water pollution from human waste and other contaminants that are produced in an 'urbanized' area (sediment, lawn pesticides, fertilizers, oil, hazardous waste). Remedying problems of water shortage, flooding and water quality resulting from headwaters mismanagement can be very costly; prevention through protecting headwaters is the best policy.

Besides impact on water quality and quantity, significantly increasing land use footprint, as this proposed subdivision project will do, has negative impacts on other ecological goods and services including biodiversity and livestock production on native range.

Besides the increased risk of human conflict with large carnivores such as grizzly bear and wolves, of particular concern regarding biodiversity is that Lee Creek is potential habitat for westslope cutthroat trout, a species with Alberta populations listed as Threatened nationally and provincially and protected in law. That this proposed 36-lot development straddles two tributaries of Lee Creek and their confluence is a problem, as there will undoubtedly be stream crossings and intensive use of riparian areas adjacent to the creek. Environmental assessment needs to include a survey of fish populations in Lee Creek by qualified fisheries biologists and any decision about development approval must ensure avoidance of harm to westslope cutthroat trout.

The *South Saskatchewan Regional Plan (SSRP)* speaks to “Maintaining an agricultural land base [that] recognizes the value of agricultural land for sustainable growth as well as providing an opportunity for expansion of agricultural production and value-added agribusinesses in the region” (p.44). The *SSRP* also recognizes the need to find a greater balance between economic, social and environmental aspects in decision making, with a greater emphasis on preserving biodiversity through conservation. The *SSRP* states that a provincial approach for the management of ecosystem services requires that “new methods and strategies must be explored and developed to encourage the provision of a broad suite of ecosystem services by private landowners” (p.66). The current stewardship practices of local landowners in the Lee Creek watershed largely support these provincial objectives. In contrast, it is difficult to see how a 36-lot rural subdivision accomplishes these worthy goals.

As the *SSRP* recognizes, consideration of cumulative effects is necessary to conserve the ecosystem services that are a foundation for a healthy society and robust regional economy. Such planning will require support from municipal governments in their land use planning and in decisions about specific project proposals. We assume an environmental assessment of the proposed project by qualified personnel will be undertaken to inform any decision about project approval. ,

Closer inspection reveals that approval of this project is unlikely to align with regional goals set out in the *SSRP*. Potential negative effects on headwaters integrity and biodiversity from this proposed development suggest to us that its approval would be inappropriate for adjacent landowners, for residents of the Town of Cardston and Cardston County, and for residents of the Oldman River basin in general.

Sincerely,

A handwritten signature in black ink, appearing to read 'B. Barber', with a stylized, cursive script.

Braum Barber  
SAGE