



January 2017

Top 10 (Happy) Environmental Issues of 2016

SAGE Meeting, January 25th, 2017 at the Lethbridge Public Library.

SAGE Memberships gratefully accepted (anytime). \$25 by mail or online at sage_environment.org

Prairie Conservation Forum, January 19th. For more information: www.albertapcf.org/

Lethbridge Chamber presents the **State of the City 2017** with Mayor Spearman on the progress and challenges for Lethbridge. January 17th, 7:30 to 9:00 a.m. at the Coast Hotel.

Happy New Year - "Learn from yesterday, live for today, hope for tomorrow."
Albert Einstein

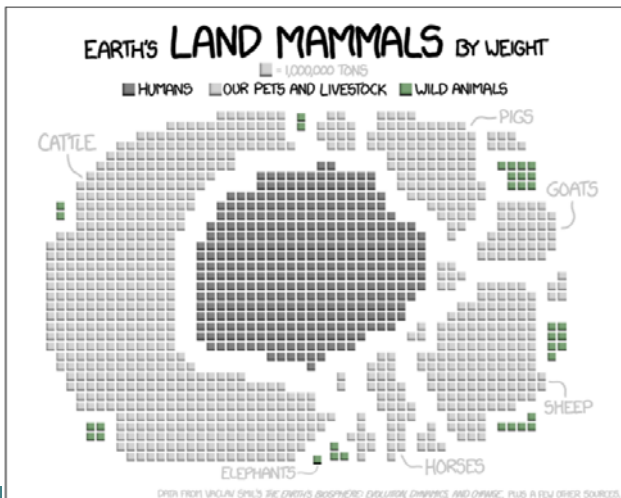
In the era of 'fake news' and 'post truth' it has become difficult to differentiate good environmental news from bad. As we begin a new year, we should accentuate the positive, eliminate the negative, latch on to the affirmative, and don't mess with Mister In-Between. Here we go!

1. Secret satellites that directly monitor births and deaths on the planet indicate that the human population is exactly 7,474,403,620 people. This is good, because now there are more people to share with. We and our domesticated animal friends outweigh wild species by a lot!
2. Most scientists studying climate change believe we have passed the tipping point where we can

reverse the warming trend and avoid further environmental damage. The good news, made apparent in mainstream media, is that the impacts of climate change will not affect conservative white men.

3. The accelerating loss of biodiversity has been called 'the sixth extinction,' weakening the chain of life that we depend upon for food, clean air and clean water. On a positive note, we have The Frozen Ark project which will preserve animal DNA until we once again have habitat that we can share with endangered species. We hope they will preserve humans, too.
4. As Mark Twain said: *'Whiskey is for drinking; water is for fighting over.'* And this is precisely what is happening as a third of the human population has inadequate access to clean, fresh water (increasing to an estimated 2/3 of the human population by 2050). The good news is that we still have whiskey to drink.

5. If you think the carbon cycle is out of whack, the nitrogen cycle may even be more distorted, as we convert over 120 million tonnes of atmospheric nitrogen into reactive nitrates. As fertilizers, nitrates run off into rivers, lakes and oceans creating vast dead zones of oxygen-starved water where only bottom-dwelling beer bottles survive. The good news is that nitrate pollution has got nothing on ocean acidification which has increased by 30% in the industrial era due to fossil carbon emissions. The massive loss of marine life will make swimming much safer, and the acid exfoliation will be great for your skin.
6. Since 1990 over half of the world's rain forests have been destroyed. Extant forests are dying at alarming rates as they cope with warming, extreme weather events, and insect and fungal attack. The good news is that we really don't have four more happy environmental issues to share this year.



Aquatic Species at Risk Map

Fisheries and Oceans Canada has publicly launched National Aquatic Species at Risk Maps. Each map shows amalgamated distribution and Critical Habitats for aquatic species listed under the Species at Risk Act across Canada.

The purpose of the aquatic species at risk maps is to facilitate project assessments under the *Fisheries Act* and the *Species at Risk Act*; however, they can also be utilized by Canadians who wish to easily determine whether species at risk or their critical habitat are found in a given area.

The Aquatic Species at Risk Map may be accessed at: <http://www.dfo-mpo.gc.ca/species-especes/fpp-ppp/index-eng.htm>

For example, a map for the Castle region (shown here) indicates the Westslope Cutthroat Trout which are considered 'Threatened' on this side of the Rockies.

Lethbridge 100k Kitchen Conversation

Kitchen Table Conversations is a fun and easy way for organizations, businesses, and residents to host their own mini community participation workshop where they can engage in directed conversations with their colleagues, families and friends about how they view the future of their street, neighbourhood, and city. Anyone can host a Kitchen Table Conversation.

You may find the conversation SAGE held at the November meeting at <http://www.lethbridge.ca/City-Government/Get%20Involved/Pages/100K+.aspx>

For more information checkout the Kitchen Table Conversations Toolkit online. If interested please contact the Project Team at ssrp@lethbridge.ca.

Interesting Links:

Re-assessment of net energy production and greenhouse gas emissions avoidance after 40 years of photovoltaics development.

<http://www.nature.com/articles/ncomms13728>

A brief history of the 5-cent bag tax (You Tube)

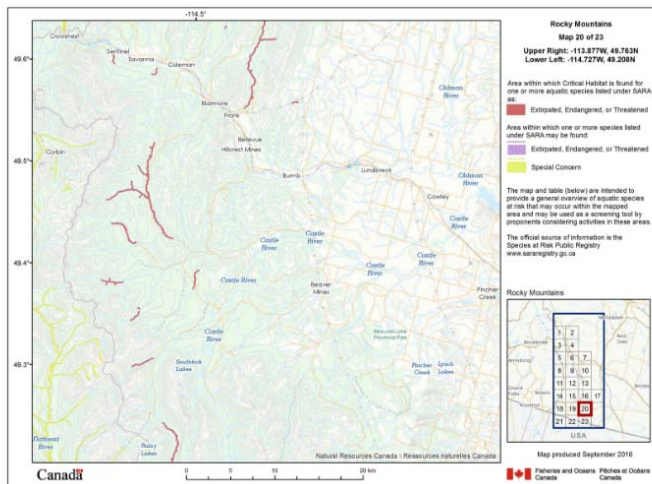
<https://www.youtube.com/watch?v=gpxEstCqUfY>

A planet's worth of human-made things has been weighed

<http://www.cbc.ca/news/technology/>

Mermaids Swim In A 10,000 Plastic Bottle Ocean To Show How Much Average Person Pollutes Earth

<http://www.boredpanda.com/mermaids-hate-plastic-pollution-benjamin-von-wong/>



Aquatic Species at Risk Found Within Mapped Area

| Common Name* | Population | Scientific Name | Taxon | Species at Risk Status |
|---|------------------|------------------------------------|--------|------------------------|
| Westslope Cutthroat Trout | Alberta | <i>Oncorhynchus clarkii lewisi</i> | Fishes | Threatened |
| Westslope Cutthroat Trout | British Columbia | <i>Oncorhynchus clarkii lewisi</i> | Fishes | Special Concern |



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

Facing the Anthropocene: Fossil capitalism and the crisis of the earth system



A decade ago, the Nobel Prize-winning atmospheric chemist coined the term 'Anthropocene' to describe a new geological epoch in which humans had altered the planet. The criteria for a new geological epoch requires a definitive indicator in the geological record that there was a change in earth systems. The Anthropocene may be identified by the use of fossil fuels, industrial warfare, the nuclear age, ocean acidification and massive coral loss, and the increased rate of species extinctions, among others. For many, like Ian Angus, Canadian ecosocialist activist, the Anthropocene may be the last geological epoch that is given a name.

In many ways, there is nothing remarkably different in *Facing the Anthropocene* compared to the many books being published on the topic. It is, however, a fine synthesis of the science and a clear analysis of causes and effects.

For example, Angus discusses the heavy environmental impact of industrial war. He quotes Patricia Hynes: "By 1990, researchers estimated that the world's military accounted for 5-10 percent of global air pollution, including carbon dioxide, ozone-depletion, smog, and acid-forming chemicals. The Research Institute for Peace Policy in Starnberg, Germany, calculated that 20 percent of all global environmental degradation was due to military and related activities" (p.162). Edwin Starr may have had it right after all - "War! What is it good for? ..."

Angus dissects the consumer society with some interesting stats on the container-shipping of goods from Asia to North American consumers: "The

bunker fuel used by large cargo ships is the cheapest and dirtiest fuel available: it's as thick as asphalt, made from the waste that's left over after all other fuels have been refined from crude oil. CO₂ emissions from ships burning bunker have grown 3.7 percent a year since 1990. A large container ship burns 350 tons of fuel a day and emits more CO₂ each year than many coal-fired stations" (p.166).

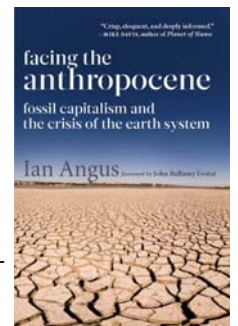
And I can't resist the discussion on plastics: "The industry uses about six percent of global oil production, more than aviation, and that figure will increase to 20 percent by mid-century if business as usual continues. The largest use of plastic, 26 percent of all production, is for packaging – products designed to be thrown away made from materials that never die. Despite industry hype, only 14 percent of plastic packaging is collected for recycling, and only a third of that, 5 percent of all production, is actually recycled. Fourteen percent is burned, 40 percent goes to landfills, and an appalling 32 percent enters the environment as pollution. The Davos report estimates that there are over 150 million tonnes of plastic in the oceans today, and that by 2050 plastics in the oceans will outweigh all the fish" (p.168). Packaging! What is it good for? ...

Facing the Anthropocene focusses mainly on fossil fuel consumption and the linkages to consumer goods, food, transportation, and the economy in general. He argues that it will be extremely difficult to transition to renewable energy technologies, mainly due to the barriers of replacing \$15 to \$20 trillion in energy infrastructure. He quotes Harman in *Zombie Capitalism*: "High levels of carbon-based energy are central to virtually every productive

and reproductive process within the system – not just to manufacturing industry, but to food production and distribution, the heating and functioning of office blocks, getting labor power to and from workplaces, providing it with what it needs to replenish itself and reproduce. ..." (p.173). In other words, a transition to renewable energy will not occur within the current economic system.

Angus argues that environmental and social impacts caused by the world's wealthy will unjustly affect the poor: "In reality, a handful of Spaceship Earth's passengers travel first class, in plush air-conditioned cabins with every safety feature, including reserved seats in the very best lifeboats. The majority are on wooden benches in third-class, exposed to the elements, with no lifeboats at all" (p.175).

Ian Angus' *Facing the Anthropocene* embodies Antonio Gramsci's aphorism: "Pessimism of the intellect, optimism of the will". He articulates the principles of the Belém Ecosocialist Declaration (2008): If there is a future, it will "be socialist, committed to democracy, to radical egalitarianism, and to social justice. It will be based on collective ownership of the means of production, and it will work actively to eliminate exploitation, profit, and accumulation as the driving forces of our economy. It will be based on the best ecological principles, giving top priority to stopping anti-environmental practices, to restoring damaged ecosystems, and to establishing agriculture and industry on ecologically sound principles" (202).



This is to advise you of a potential new Group Country Residential development in Cardston County.

The property is located in the agricultural community of Boundary Creek, southwest of Cardston. It involves three quarter sections of agricultural land, with Lee Creek running through two of the quarters. The area is a natural wildlife corridor with abundant wildlife habitat. Bull Trout, Mountain Whitefish, and Cutthroat / Rainbow Trout hybrids inhabit the creek; pure strain Cutthroat Trout and Rocky Mountain Sculpin may also be present.

The legal land descriptions of these three parcels are SE 9-1-27-W4, SW 9-1-27-W4, and NW 9-1-27-W4. Access to this land is by crossing Lee Creek at the Dugway crossing (GPS location: 49.018093, -113.540296).

The developers have recently applied to Cardston County to have the property rezoned from Agriculture to Group Country Residential, for the purpose of subdividing the property into 35 country residential parcels ranging in size from 3 acres to 25.7 acres. Copies of their Area Structure Plan (ASP) and maps are available from Jackie Morris (contact information below).

Throughout the past several months, the developers have been busy building a network of internal roads. Large equipment and machinery has regularly been driven, or hauled, across Lee Creek. One of the new roads is very steep and in close proximity to Lee Creek, with a subsequent concern for siltation into the creek. A substantial increased load of heavy equipment and traffic will be continuous through the creek with the development of the many parcels of land.

We have made our concerns, related to the developers' activities, known to both Alberta Environment and Parks and Cardston County.

Contrary to what the ASP says ("The crossing has a very stable bottom and banks therefore it is not intended to make any improvements."), both Alberta Environment and Parks and Cardston County have indicated that the crossing will need to be 'upgraded'. We are assuming that this will be a bridge, as a simple culvert would not seem adequate to handle the traffic, or the flooding that can occur at this crossing site in the spring.

Our concerns, relating to this proposed development, include but are not limited to:

- Repeated, frequent crossings of Lee Creek with subsequent negative impacts on fish habitat and downstream water quality
- Probability that no upgrade to the creek crossing will be effected unless the developer is mandated to respond to this requirement
- Wildlife habitat loss
- Potential for erosion with subsequent impacts on terrain, watershed and creek
- Density – at an estimated 3-4 people per parcel of land, this development would have a density similar to that of Mountain View, with all of the associated infrastructure issues
- Increased road maintenance costs to the current Cardston County rate payers
- Precedence for similar future developments in the Boundary Creek area

A Public Hearing, regarding the rezoning application from Agriculture to Group Country Residential, has been scheduled for Monday, January 16, 2017 in Cardston.

We are requesting that your organization consider submitting a letter to Cardston County, or making a verbal presentation at the Public Hearing, expressing your concerns regarding this development proposal.

Submission guidelines and deadline (January 13, 2017) are outlined in the Notice, attached.

Thank you, in advance, for considering our request.

Please feel free to forward this e-mail onto any other organization or individual you feel may have concerns about this development.

Jackie Morris for Boundary Creek Landowners Group
403-653-2916

NOTICE OF PUBLIC HEARING

CARDSTON COUNTY
IN THE PROVINCE OF ALBERTA

PROPOSED BYLAW NO. 688.2016

5:00 p.m., January 16, 2017
Cardston Tanner Center

PURSUANT to sections 230, 606, and 692 of the Municipal Government Act, Revised Statutes of Alberta 2000, Chapter M-26, the Council of Cardston County in the Province of Alberta hereby gives notice of its intention to consider proposed Bylaw No. 688.2016, being a bylaw to amend Bylaw No. 443/98 being the municipal Land Use Bylaw.

THE PURPOSE of proposed Bylaw No. 688.2016 is to redesignate lands legally described as the

**THE SOUTH HALF AND THE NORTHWEST QUARTER SECTION 9, TOWNSHIP 1, RANGE
27 WEST OF THE 4TH MERIDIAN**

from "Agricultural – AG" to "Group Country Residential - GCR" to accommodate future subdivision

The lands that are the subject of this redesignation are shown on the map in Schedule 'A' attached hereto.

THEREFORE, TAKE NOTICE THAT a public hearing to contemplate the proposed Bylaw No. 688.2016 will be held in the Cardston Tanner Center at 5:00 p.m. on the 16th day of January, 2017.

AND FURTHER TAKE NOTICE that anyone wishing to make a presentation regarding the proposed bylaw should contact the County Administrator no later than 4:00 p.m. on the 13th day of January, 2017. Both written and/or verbal presentations may be given at the public hearing.

A copy of the proposed bylaw may be inspected at the Cardston County office during normal business hours.

DATED at the Town of Cardston in the Province of Alberta this 12th day of December, 2016.

Murray Millward
County Administrator
Cardston County
Box 580
Cardston, Alberta T0K 0K0