

BRIEF TO HON. HERB COX, SASKATCHEWAN MINISTER OF ENVIRONMENT FROM THE SASKATCHEWAN ENVIRONMENTAL SOCIETY

1. Introduction

This submission is intended to give you a sense of the non-profit work the Saskatchewan Environmental Society is doing, as well as some of the current policy issues facing our province that are of most concern to us.

In this brief we discuss recommendations for policy direction in five important areas:

- biodiversity protection and expansion of protected areas in Saskatchewan
- funding arrangements with Ottawa for remediation of the abandoned Gunnar uranium mine site on the north shore of Lake Athabasca
- role of the Ministry of Environment on matters related to fracking and pesticide regulation
- environmental impact assessment policy in Saskatchewan
- climate change policy and proposed greenhouse gas emission reduction initiatives.

2. Current Initiatives of the Saskatchewan Environmental Society

The Saskatchewan Environmental Society (SES) has been active in the affairs of our province for over 45 years and organizes a wide array of educational endeavors and environmental project initiatives. Some of our current involvements include:

Solar Power Co-op: We are working to develop a co-operatively owned solar power project in the Saskatoon area. The Co-op is now incorporated and is negotiating a site for its first installation.

Climate Friendly Zone: An SES awareness project to build public support for strong climate policies that will reduce greenhouse gas emissions.

Environmental Review on remediation of old uranium mine sites: We have been involved in offering advice on the remediation of both the Beaverlodge uranium mine site and the Gunnar uranium mine site.

Fortune Minerals: Research, education and advocacy regarding a proposed industrial development in the RM of Corman Park with serious pollution issues.

Prairie Pasture Protection: We work with other nature conservation groups to encourage protection of ecosystems on PFRA community pastures.

Forest Management Planning: Involvement in planning of standards for forest management.

Saskatchewan Environmental Code: Participation in development of the Code which will have increasingly important regulatory force in the province.

Destination Conservation Saskatchewan: An education and practical action program with schools around the province, focused on energy and water conservation.

Smarter Science, Better Buildings: An education program on energy efficiency in buildings, developed collaboratively with the Western Development Museums, which tours the province.

25 Acts of Energy Conservation: With SES guidance, schools develop presentations on their energy conservation projects.

Student Action for a Sustainable Future: SES provides expertise in 5 focus areas to classes in both Saskatoon school divisions.

Northern Water Monitoring: We work with 6 northern high schools to involve students in testing and caring for local water bodies.

Energy Conservation for Non-Profit Organizations: SES carries out energy assessments and recommends ways of improving energy efficiency in buildings.

Building Operator Training: An SES education program helps building managers improve the efficiency of lighting, heating and air conditioning in buildings.

Living Green Expo: Saskatchewan's first trade show featuring environmentally-friendly products and businesses, took place on May 1 and 2, 2015 at Prairieland Park in Saskatoon.

Sustainable Speaker Series: Monthly presentations at Saskatoon Public Library downtown.

News at Noon: We're on CTV's noon news every third week to talk about current issues.

Review of Environmental Impact Studies: We conduct reviews of key Environmental Impact Studies submitted to the Government of Saskatchewan. We conduct these reviews as a public service and as a free source of advice to government.

Environmental Resource Centre: We are regularly contacted by members of the public expressing concern about an environmental issue or seeking information on environmental resources and programs.

Research and Analysis On Sustainable Policy: The Saskatchewan Environmental Society is actively engaged in several environmental issues of concern to our membership and the general public. In this submission, we would like to draw your attention to suggested policy direction in five priority areas.

3. Biodiversity Protection and Expansion of Protected Areas

Saskatchewan's Representative Areas Network is an important provincial government policy initiative that helps protect and enhance biodiversity in this province. The Saskatchewan Environmental Society commends the Saskatchewan government for the new ecological reserve that was added to the network in 2013, as well as for the establishment of a new provincial park in 2013.

At United Nations sponsored conferences on biodiversity protection Canada's national government has committed to ensure that 17% of Canada's landscape has protected area designation by 2020. This is a central component of a larger strategy to try to stop the global decline in biodiversity.

In the past 40 years global land-based mammal population numbers have declined by approximately one-quarter and fresh water fish by almost two-thirds. Global bird, reptile and amphibian population numbers have declined by an average of 30%.

Many species are also in decline in Saskatchewan. Of particular concern is that approximately 50 plant and animal species in Saskatchewan are considered

species at risk - that is species that are likely to show a very significant decline or extinction in the foreseeable future.

In Saskatchewan approximately 10% of our lands currently have protected status, including our two national parks and our provincial network of provincial parks, ecological reserves and other Representative Areas. **The Saskatchewan Environmental Society encourages the Saskatchewan government to continue to establish new ecological reserves and Representative Areas in order to achieve the 17% protected areas target by 2020.**

We would like to see the designation of new provincial parks in Saskatchewan, as well as the expansion of existing provincial parks. One of our priorities for park expansion is Clearwater River Provincial Park.

We would also like to see your Ministry designate new Representative Areas in key parts of Saskatchewan that are not well represented in the Representative Areas Network right now including: a) the Churchill River b) the Cumberland Delta c) the southern part of the Great Sand Hills.

With respect to the Great Sand Hills, we encourage you to follow-up on well developed recommendations for designation of new ecological reserves in the southern portion of the Great Sand Hills, which are yet to be implemented. (Refer to page 200 of the Great Sand Hills Regional Environmental Study submitted to your department in 2007, which identifies areas of high priority for ecological reserve status.)

There are other natural opportunities to build on as you develop areas for protection. Potential key areas for protection are often identified during the course of the Ministry of Environment's Land Use Planning Processes, and also during the certification process for forestry companies. For example, throughout 2007-2008, forestry company Mistik Management worked with the Saskatchewan Environmental Society, the Saskatchewan Wildlife Federation, the World Wildlife Fund, Ducks Unlimited, and the Ministry's Land Branch (now Landscape Planning) to identify areas that would be suitable as high conservation value forests and worthy of protection. To date, these areas remain un-protected.

Biodiversity decline in Saskatchewan is particularly rapid on the grasslands of our province. For instance, grassland bird populations have declined by 40% since 1970. We are concerned that the federal government's dismantling of the PFRA

Community Pasture Program will have a negative impact on grasslands biodiversity. We commend your government's current plan to retain these pastures as a valuable provincially-owned public asset that will be leased out to patron groups. The preservation of biodiversity and species at risk in these pastures deserves special attention. **In light of the loss of federally-funded professional expertise to manage species at risk in former PFRA community pastures, we urge the Government of Saskatchewan to fund the provision of such expertise to community pasture patron groups.**

The Saskatchewan Environmental Society supports the key stakeholders (APAS, CPPAS, NS, PPPI and SWF) who "share the common belief that over the long term, management of the transitioning federal pasture lands must be based on the principles that: a) conserving native grasslands is critically important; b) land use should reinforce the economic viability of our livestock sector; c) natural working ecosystems must be preserved for the long term; d) business and governance systems must be efficient and effective; and e) producers should not be expected to pay for public benefits.¹

4. Remediation at the Abandoned Gunnar Uranium Mine Site

The Saskatchewan Environmental Society is pleased that the Saskatchewan Research Council will be proceeding with plans for the remediation of the Gunnar uranium mine site on the north shore of Lake Athabasca. We are also pleased that your government is willing to put up significant funds to make this remediation effort possible. However, we are concerned about the lack of commitment by the Government of Canada to provide their share of the financing for this remediation work.

We are also worried that Saskatchewan will be faced with an unfair share of the resulting liability, and – in the absence of new federal dollars – may not have the financial resources needed to undertake a high quality remediation effort.

A brief review of the history of the Gunnar mine site will put matters in context. Uranium ore was mined and milled at the Gunnar site from 1955 to 1963. Mining there was driven by a Government of Canada decision to supply uranium to the United States Atomic Energy Commission for military purposes. All of the Gunnar

¹ Phillips, D. (2015). "PFRA Pastures Transition Study, supported by Agricultural Producers' Association of Saskatchewan, Community Pasture Patrons' Association of Saskatchewan, Nature Saskatchewan, Public Pastures Public Interest and Saskatchewan Wildlife Federation." [Frogwork Consultants](#).

uranium was sold for the manufacture of nuclear weapons. However, the haunting legacy of Gunnar doesn't stop there. The local site was badly polluted from mining and milling operations; minimal de-commissioning took place when the site closed down, and the cost of cleanup will be an ongoing burden.

In 2006 the Governments of Saskatchewan and of Canada entered into an agreement to equally share the cost of remediating the site, at that time estimated to total \$24.6 million: \$12.3 million for each level of government. However, as often happens, the costs spiraled. The remediation task has proven far more complex than originally anticipated. To date \$60 million has been spent, mostly by Saskatchewan. Regrettably, the federal government has not signaled a willingness to pick up any of these extra costs.

Moreover, the most challenging parts of the cleanup and remediation work at Gunnar still remain to be done. These include dealing with a 100 metre deep, heavily contaminated, water-filled, mined-out pit near the shore of Lake Athabasca. Also, more than 2 million cubic metres of radioactive waste rock on the site are a significant source of radium contamination to Zeemel Bay in Lake Athabasca. Perhaps most difficult is the 4.4 million tonnes of radioactive tailings that were deposited as waste over a 70 hectare land area near the lake. At their highest point, the tailings lie 14 metres thick. Surface and groundwater that flows through those tailings picks up contaminants that are then carried into Lake Athabasca. Further complicating matters is that some of the radioactive tailings at Gunnar have moved into Langley Bay of Lake Athabasca, where they release radioactivity into the local environment.

Much can be done to improve the state of the property. For instance, the Saskatchewan Research Council estimates that a 70% reduction in uranium loadings to the environment can be achieved by properly covering the main tailings areas. Nevertheless, the mess left behind at Gunnar is so large that even when the planned remediation work is complete, the site will still be quite badly polluted. For example, two bays of Lake Athabasca will still have significantly elevated levels of arsenic, cadmium, copper, lead and uranium. And the cost for taxpayers will be high too. Your Government is poised to post a liability of more than \$200 million on the provincial books just for the Gunnar uranium mine cleanup.

Our biggest question is: where is the Government of Canada in all of this? Why is it leaving Saskatchewan taxpayers and the Saskatchewan government on the hook for covering these rapidly increasing remediation costs? And why does the Saskatchewan Ministry of Environment appear to be so meekly accepting

this liability without publicly challenging the Government of Canada to assume it financial responsibility.

Our national government should be covering half of remediation costs, not only because of the principle established in 2006 that cleanup costs would be equally shared with the Province of Saskatchewan, but because it was Ottawa's policy of supplying uranium for military purposes that drove the development of the Gunnar uranium project in the first place. For the Government of Canada to decline to step in now to help with additional cleanup costs - beyond the originally committed \$12.3 million- is unfair and a clear case of neglecting responsibility.

We hope that as our provincial Environment Minister you will press Ottawa on this issue.

5. The Need for the Saskatchewan Ministry of Environment to Play a Larger Role on Environmental Issues Pertaining to Energy Production and Pesticide Use

Some of the largest impacts on Saskatchewan's environment stem from practices in energy production and agriculture, and yet the Ministry of Environment appears to have insufficient influence to ensure that decisions in these sectors are premised on environmental sustainability.

Two examples of policy areas where the Saskatchewan Environmental Society would like to see the Ministry of Environment having greater responsibility are the shaping and enforcement of the regulations: (a) governing fracking and (b) governing the use of pesticides.

a) Better Environmental Regulations for Horizontal Fracking and Better Overall Regulation of Saskatchewan's Oil Industry

Fracking policy and overall regulation of the oil industry is largely shaped right now by the Ministry of the Economy. We recommend that the Ministry of Environment be given more authority to regulate oil companies when it comes to licensing of wells to be fracked.

Examples of regulatory action and other initiatives that the Ministry of Environment and the Ministry of Economy should work together on to initiate with respect to multi-stage horizontal fracking include:

- **Require full disclosure by oil companies of all fracking fluids being used during fracking operations in Saskatchewan (i.e. acids, solvents and corrosion inhibitors). Such disclosure is required in Alberta and B.C., but not in Saskatchewan.**
- **Establish a registry of preferred chemicals for fracking operations in Saskatchewan;**
- **Prohibit fracking in or immediately adjacent to habitat designated for at-risk-species;**
- **Ensure oil industry plans for fracking (and conventional oil extraction) consistently minimize the number of roads and trails that are constructed in order to reduce fragmentation and loss of native prairie**
- **Require preparation of Environmental Impact Studies prior to fracking**

There is also need for better overall regulation of the oil industry, especially when it comes to rules governing the venting and flaring of natural gas. We would like to see the Saskatchewan government:

- **Ban venting of methane during oil extraction, except for safety reasons.**
- **Minimize flaring by requiring that infrastructure to properly utilize natural gas resources is in place before oil extraction gets underway**
- **Require that detailed records be kept of all venting and flaring activities and of amounts of carbon dioxide and methane released to the atmosphere.**
- **Establish stricter provisions for clean-up of salt water spillage**

(b) Better Regulation of Pesticides

With respect to pesticides, we urge the Ministry of Environment to begin playing a much larger role in the regulation of pesticide use in the province. We recommend the Ministry act decisively to restrict the use of any pesticide that poses significant risks to public health and safety or to the larger natural environment.

A current example of a class of pesticides on which the Ministry of Environment and the Ministry of Agriculture should be taking regulatory action to limit use is neonicotinoids. Neonicotinoids are widely applied in Saskatchewan. They are systemic pesticides, so the chemical content spreads within the plant as it grows.

Studies conducted around the world and published in peer reviewed scientific journals paint a troubling picture of the ecological damage being caused by neonicotinoids. For instance, a four year assessment of neonicotinoids was completed in 2014 by 29 international researchers. Titled *Worldwide Integrated Assessment on Systemic Pesticides*, it found that neonicotinoids are endangering pollinators and the organisms that create healthy soils. It is clear from the assessment that neonicotinoids have become very pervasive in the environment. Moreover, there are multiple routes of exposure. Neonicotinoids can contaminate air via dust thrown up during planting. Treated seeds can be eaten by birds. Pollen and nectar can be contaminated. And much of the insecticide residue ends up in the soil where there is a year over year buildup. Moreover, local streams and rivers are often contaminated, as the insecticide washes off fields. It is also clear from the four year worldwide assessment that other elements of the natural environment are also being impacted. For example, exposure of worms to the insecticides affects their ability to tunnel, while reptiles face a decline in insect food sources.

These negative ecological effects are so widespread around the world that there is every reason to suspect they are also being experienced in Saskatchewan. We recognize that research work to better understand impacts in our province is already underway at the University of Saskatchewan. Meanwhile, the global evidence is sufficiently compelling that the European Union has severely restricted the application of three neonicotinoids, and the Ontario government is moving to regulate the use of neonicotinoids. The Ontario consultations clearly signal the government's intent to sharply reduce the use of these chemicals.

The Saskatchewan Ministry of Environment should be playing a lead role in moving to reduce the use of neonicotinoids in our province, but does not appear to be doing so. Instead, decisions on the use of these insecticides are simply being left to the Saskatchewan Department of Agriculture, which has chosen to take no action to date. The result is that ecosystems across southern Saskatchewan are being placed at unnecessary risk.

6. The Need for the Ministry of Environment to Improve the Quality of its Work on Environmental Impact Assessments

We have noticed a worrisome shift in the Ministry of Environment's handling of environmental impact studies over the past few years.

It seems that proponents of environmental impact assessments are never turned down, even when the assessments are poorly prepared, and when plans for remediation are unacceptable. Has the Ministry become incapable of ever saying no to a proponent, even when the environmental risks being taken are significant? The case of Fortune Minerals and its proposal for a Metal Processing Plant in Langham is a good example. We are left wondering how the Ministry could possibly approve a processing facility that will leave behind permanently tens of thousands of tonnes of arsenic laced waste (in lined cells) over an important Saskatchewan drinking water aquifer. The approval was given by your Ministry in January 2014, but Fortune Minerals still faces enormous public opposition at the local level. Citizens are left trying to do what your department is supposed to do – scrutinize risks, hold companies accountable for their proposed actions, and reject proposals when they are unsafe.

Another example of the shift is that a major industrial project in Saskatchewan - with a wide range of environmental and potential public safety impacts - is not going to be subjected to an environmental impact assessment. TORQ Transloading is moving forward with plans to develop an oil-by-rail terminal near Kerrobert, Saskatchewan. The project will mean 240 additional rail cars each day hauling a total of 168,000 barrels of crude oil per day through Saskatchewan communities. That in turn increases the risk of a future derailment and explosion involving crude tankers in or near a populated centre in Saskatchewan. The amount of oil that will be moved through the proposed terminal is equivalent to one fifth of the capacity of the proposed Keystone XL pipeline. Yet there is no indication that an Environmental Impact Assessment will be required at either the provincial or federal level.

We recommend you act to ensure that TORQ Transloading and any other oil by rail terminal proponent must undertake a provincial environmental impact assessment on their project as part of the approval and licensing process.

7. The Urgency of Climate Change and Recommended Saskatchewan Policy

You have assumed the responsibilities of the Saskatchewan Ministry of Environment portfolio at a critical time in the world's history. The international climate science community, the International Energy Agency, the World Bank, the United Nations, and every national academy of sciences in the world are all warning governments that the world is rapidly reaching the upper limit of how

much manmade carbon dioxide and other greenhouse gases can be released into the atmosphere without experiencing extremely damaging and irreversible consequences.

To put this in context, it is widely agreed by climate scientists that the atmospheric limit for avoiding the worst dangers of climate change (with more than 66% confidence) is 450 parts per million carbon dioxide equivalent (CO₂e). The global community has already surpassed 430 parts per million CO₂e. We now face a circumstance in which carbon dioxide, methane and nitrous oxide are being released into the atmosphere in such large quantities that atmospheric concentrations are rising at more than 2 parts per million each year (CO₂e).

Yet it seems that the message regarding the urgent need for greenhouse gas emission reduction is not getting through to several governments in North America, including our own. How else is the public to interpret the fact that in Saskatchewan climate change legislation that was passed in 2010 is yet to be proclaimed, or that the emission reduction targets your government set in 2009 (20% reduction in 2006 greenhouse gas levels by 2020) are yet to be acted upon.²

This inaction comes while the warning signs of global danger from climate change are all around us. 2014 was the warmest year on the Earth since temperature records have been kept. Wheat and maize yields are dropping in many parts of the world, and in the global aggregate. Coral reefs – the nursery for one quarter of marine life – are facing major bleaching events (as ocean waters warm), and are in sharp decline in the western Caribbean, in Australia and in tropical Africa and Asia. Greenland's ice sheets are melting at 6 times the pace they did in the 1990's. Global sea level rise is accelerating as mountain glaciers and ice sheets melt, and as thermal expansion of sea water occurs. The rate of global sea level rise has now reached 3.2 mm per year putting thousands of coastal communities and dozens of island nations at risk over the course of this century. The ranges of pests (such as mountain pine beetle) and of diseases (such as West Nile virus, Lyme disease and malaria) are expanding. Extreme rainfall events are becoming more common, and these in turn are leading to increased flooding in many communities. Storm systems are becoming more powerful as illustrated by Hurricane Sandy and by Typhoon Haiyan. In the latter case, the people of the Philippines faced the terrifying

² Your government's original target - a greenhouse gas emission reduction of 32% below 2004 levels by 2020 - was abandoned in 2009. In 2009 a weaker target was set: 20% below 2006 emission levels by 2020. Now, six years later, no reduction of any sort has been achieved.

consequences of a typhoon reaching the highest wind speeds ever recorded over land. And the world's oceans – including those off each of Canada's shores - are acidifying at an unprecedented pace, as they take up excess manmade carbon dioxide from the atmosphere. These trends are all consistent with the warnings climate scientists have issued for the past 20 years. If greenhouse gas emissions are not reduced quickly, these trends will have exceptionally negative social, ecological and economic consequences over the course of this century.

Saskatchewan will not be exempt from these impacts. Already, Provincial Disaster Assistance spending in Saskatchewan is spiraling to unprecedented levels – up 30 fold in a decade. The fact that southeast Saskatchewan was hit by two so-called 1 in 100 years floods – in 2011 and again in 2014 (both caused by intense rainfall events) – is a sign that climate change impacts are beginning to be felt, and that hydrologic stationarity is being lost.

Another reason not to delay making a deep cut in greenhouse gas emissions is the irreversible nature of climate change consequences once they take effect. There are many dimensions to this irreversibility. Here we offer two examples. One is the exceptionally long lifetime of greenhouse gases in the atmosphere, once they are released. For example, the average atmospheric lifetime of the manmade carbon dioxide we release each day - through fossil fuel burning or deforestation - is 100 years. In fact, a small portion of the CO₂ we release today will still be in the atmosphere 1,000 years from now. A second feature that makes climate change consequences extremely difficult to reverse is the nature of the oceans. The oceans are currently taking up more than 90% of the additional energy accumulated in the climate system as a result of rising greenhouse gas emissions. This surplus energy will ultimately be released over the centuries ahead.

Greenhouse gas emissions in Saskatchewan are primarily originating from the oil, gas and mining sector, the electricity generation sector and the transport sector. These three sectors of the economy account for 76% of Saskatchewan emissions. A successful emission reduction plan coordinated by the Ministry of Environment and involving several key departments and Crown Corporations should address each of these large sectors, and should aim at the very least to accomplish your government's official goal of a 20% reduction below 2006 emission levels by 2020. Here are 10 recommendations for policy measures that will help you accomplish that goal:

- i) The Ministry of Environment should introduce strict regulations to reduce greenhouse gas emissions in Saskatchewan's oil and gas sector, the largest source of provincial emissions. A good place to start would be to place restrictions on venting and flaring practices.

Natural gas is being wasted in Saskatchewan every day, as it is flared or vented into the atmosphere because the infrastructure is not in place to capture and utilize it, when oil is being extracted. Not only is this resulting in preventable carbon dioxide emissions, but it is responsible for 15 million tonnes of methane release annually (expressed at CO₂e). It represents astonishing waste and atmospheric pollution.

The U.S. Environmental Protection Agency is actively moving forward with regulations that will sharply curtail venting and flaring in the United States – indicating that action in this field is entirely feasible. North Dakota already appears to have stricter regulatory practices in place than Saskatchewan.

- ii) The Saskatchewan government should start working to build a renewable power future in Saskatchewan's electricity generation sector. This is best done by substantially expanding SaskPower's renewable energy installations, and by introducing feed-in-tariffs to incent wind power, solar power, small scale hydro, and electricity generation through biogas and wood waste biomass. Germany has led in using the feed-in-tariff approach over the past decade. The result today is that in a geographical area half the size of Saskatchewan, Germany meets 27% of the electricity needs of its 80 million people with wind power, solar power and biomass power. That is despite the fact that Germany's wind, sunshine and biomass resources (i.e. the natural resources it is endowed with) are far inferior to those of Saskatchewan.
- iii) The Saskatchewan government should follow Ontario's lead and phase out all coal fired power generation over the next 10 years (with the exception of the retrofitted carbon capture unit at Boundary Dam). Conventional coal should be replaced with major investments in wind power, solar power, biomass power and electricity efficiency. It could also be replaced in part with hydro imports from Manitoba and more co-generation of electricity (using natural gas).

- iv) The Saskatchewan government should reevaluate Saskatchewan speed limits in light of the need to reduce greenhouse gas emissions caused by vehicle travel. Emissions rise steadily at speeds over 90 km per hour and large volumes of gasoline are unnecessarily wasted at speeds of 110 and 120 km per hour. A return to a 100km speed limit on major provincial highways would be a welcome move.
- v) The Saskatchewan Ministry of Environment should encourage Saskatchewan residents to use their cars less and to cycle, walk or use public transit more often. We urge the Province to provide financial assistance to cities to improve the frequency and quality of urban transit services. (The Saskatchewan government is currently one of the few provincial governments in Canada that does not help fund municipal transit operations.) We would also like to see the Ministry of Environment help fund the installation of cycling paths in urban communities.
- vi) The Saskatchewan Ministry of Environment should introduce financial incentives for Saskatchewan residents to purchase super-energy efficient cars, hybrid cars, and electric cars (that are charged from a renewable power source).
- vii) The Saskatchewan Ministry of Environment should ban vehicle idling in Saskatchewan for periods of more than 3 minutes - during the spring, summer and autumn months (when temperatures are above freezing). We recognize some exemptions to this policy will need to be granted, such as for police, ambulance and other emergency vehicles, but unnecessary idling is contributing to an ongoing rise in transport related emissions, while providing no concrete benefits.
- viii) The Saskatchewan Ministry of Environment together with the Provincial Building Inspector should introduce an energy efficiency code for all new building construction in Saskatchewan. When setting a code for residential construction, we recommend adopting Energy Star (E-80) as the minimum requirement. The Government of Ontario has already had Energy Star in place as the basic energy efficiency code for new residential housing construction for several years, with positive results.
- ix) The Saskatchewan Ministry of Environment should encourage and fund Saskatchewan cities to develop as 'Smart Cities' that pursue a wide range of environmentally friendly and innovative initiatives in a

carefully planned way. Smart cities typically pursue low carbon energy production, sustainable agriculture, active transportation, generous open space provisions, and sustainable architecture. Several run primarily on renewable power.

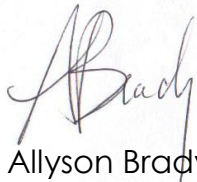
- x) The Saskatchewan Government should follow British Columbia's lead and introduce a revenue-neutral carbon tax to encourage energy efficiency and discourage consumption of fossil fuels.

Thank you for considering these recommendations and for providing our group with the opportunity to make this submission to you.

Sincerely,



Bert Weichel, President



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