

## Alberta Land Institute Wetlands Project

The Alberta Land Institute (ALI), based at the University of Alberta, is working on a project that evaluates mechanisms for wetland restoration and retention in Alberta. Among other objectives, the project will involve working with landowners to determine the full costs of wetland restoration including compensation.

Researchers at the University of Alberta and Western University in Ontario are partnering with Alberta Environment and Sustainable Resource Development, Alberta Innovates – Bio Solutions, City of Calgary, and Rocky View County on the project. The study area is north of Calgary in Rocky View County.

The researchers plan to test an innovative market-based instrument to help select wetland restoration sites and allow landowners to participate in the market to determine the price of restored wetlands. Reverse auctions make the seller (landowner) the bidder rather than the buyer (Ducks Unlimited in this case) in a conventional auction.

This is how the reverse auction is supposed to work.

- Researchers will let landowners know where there are dry or drained wetlands on their property and provide information on how good the restored wetland is expected to be based on their modeling work. This ties in with the Alberta Wetland Policy's functional value system of A, B, C, and D wetlands.
- The landowner will need to weigh the value of the lost production against the potential benefits of having the wetland and then decide what they want to bid to take that land out of production.
- Hopefully, a number of landowners will submit bids for restored wetlands at a price they think is fair. The research team will assess all the bids and decide which, and how many, to accept for restoration.
- The researchers have a fixed budget and want to restore as many wetlands as possible, which may lead one to think that only the lowest bids will be accepted. However, the researchers will make their decisions based both on the bid price and the expected functional value of the restored wetlands.
- Researchers and landowners will then sign contracts and the wetlands will be restored. There will be a long term monitoring process to assess the functions of the wetlands.

The Wetland Project provides an opportunity to demonstrate the ecosystems services that can be provided on private land and shed some light on the real value of those services to landowners. The project will provide environmental benefits for the watershed while gaining practical knowledge around restoration. It will also provide some experience in making the wetland policy operational on the ground.

For more information, check out the Alberta Land Institute website at [www.albertalandinstitute.ca](http://www.albertalandinstitute.ca).

## 5 things you should know about ecosystem services

By: Alberta Biodiversity Monitoring Institute (ABMI)

Here are five things you should know about ecosystem services, and you can learn more on our new website: [www.ecosystems-services.abmi.ca](http://www.ecosystems-services.abmi.ca)

1. Ecosystem services are benefits provided by natural systems that contribute to our well-being and health. The ABMI, through the Ecosystem Services Assessment (ESA) project, has come up with ways to measure these benefits so that they can be used in land use planning, sustainability reporting and even in markets where units of ecosystem services can be bought and sold.
2. Economic value is a key measure of nature's benefits. For example, the pollination of crop plants by bees and other insects is a vital ecosystem service, with significant impacts on national economies. In Alberta, wild bees provide a substantial contribution to canola production in agro-ecosystems that support healthy bee populations. While the economic value at a provincial scale is great - likely over \$100 million annually - the regional and local benefits of pollination are unclear. We're collecting bees throughout the province to better understand the distribution and abundance of these vital species.
3. Water purification services provided by healthy upstream landscapes can be assessed by understanding the movement of water, nutrients and sediment. One way to estimate the value of water purification is to calculate the cost savings if fewer nutrients, such as nitrogen and phosphorus, reach water treatment plants, thus reducing the need to remove these nutrients. Because the computer model we used to assess water purification is connected to land cover data, our assessment approach can tell you how this ecosystem service changes based on land cover – so you can discover how your part of the province contributes to high or low water quality.
4. Alberta is well known for its beef production and iconic prairie landscapes. But world-class beef isn't the only benefit from rangelands in the province. Rangelands also store large amounts of carbon, both above and below ground. The ESA project uses established algorithms to assess two ecosystem services highly pertinent to Alberta's Grassland and Parkland Natural Regions: native grassland forage production (estimated at 5 million tonnes per year), and soil carbon stored in native prairie (approximately 115 million tonnes). The rangeland forage and carbon models can be used to explore how different land use scenarios, such as conversion to crops and grazing intensity, can affect carbon storage in Alberta's rangelands.
5. We have a team of experts in Alberta that are developing a system to assess and map ecosystem services across Alberta to better understand how planning and management decisions affect the provision of ecosystem services to Albertans. Resources, such as maps and videos, are fostering a better understanding of ecosystem services - and their benefits for all Albertans.

Be sure to check out [www.ecosystems-services.abmi.ca](http://www.ecosystems-services.abmi.ca) and update your bookmarks.

## **Partner Profile: Association of Municipal Districts and Counties**

*Submitted by AAMDC*

Established in 1909, the Alberta Association of Municipal Districts and Counties (AAMDC) is an independent association of elected rural councils who represent the interests of rural Albertans and are committed to meeting the diverse and changing needs of its membership. Rural Alberta is an economic driver comprised of varied and vibrant communities. The AAMDC provides a unified voice for these communities by representing the interests of all 69 municipal districts and counties in the province.

Through advocacy, communication, education, and the provision of aggregated business services, the AAMDC assists rural municipalities in achieving strong and effective local government. Governed by a Board of Directors, comprised of elected municipal official from across Alberta, the AAMDC strives to serve as an advocate for rural perspectives and priorities on key policy issues at the provincial and federal level.

Municipalities must play a key role in the front-line environmental management of Alberta's air, land, water and biodiversity in order to provide healthy communities for citizens. Environmental stewardship requires effective communication between municipalities, First Nations, the provincial and federal governments, industry, citizens and other stakeholders. The AAMDC communicates our member's interests in these important environmental conversations to develop policy and create a dialogue on issues of municipal importance.

The AAMDC advocates on key agri-environmental issues identified by our members through a formal resolution process to appropriate government ministries and stakeholders. Positions currently being advocated on include:

- Producers in industries such as agriculture perform an invaluable role in Alberta's economy, but are vulnerable to extreme market fluctuations and natural disasters. Assistance for producers should be designed to support the industry and address concerns such as crop damage due to hail, pest infestations, drought and market fluctuations.
- Agricultural production has evolved with the availability of new technologies and educational opportunities for producers. Incorporating technological and educational advancements in order to remain competitive is essential to the viability of the industry.
- The sterilization of large tracts of agricultural lands and competing demands for land-use in a growing province can have significant impacts on the agriculture industry. The Land-use Framework acknowledges the impacts of urban sprawl and seeks to address the fragmentation and conversion of agricultural lands. This should be a consideration in land-use planning decisions being made across Alberta.

- Recycle programs need to be developed to allow the agriculture industry to efficiently promote positive environmental practices when utilizing agriculture plastics.
- The AAMDC values the importance of protecting the agricultural industry from potentially damaging infestations of pests, such as fusarium graminearum that could have significant economic impacts for producers. The *Agricultural Pests Act* is a valued piece of legislation that identifies threats and enables producers, inspectors and local authorities to deal with native and introduced pests and nuisances which affect agricultural production.
- Protecting the environment, including Alberta’s rivers, lakes, wetlands and groundwater is an important priority for municipalities. To promote sound environmental stewardship, it is necessary to have coordinated legislation and jurisdiction to protect water bodies and the environmentally sensitive areas adjacent to them.

More information on the AAMDC is available at [www.aamdc.com](http://www.aamdc.com) .

## Social Licence in Agriculture Conference

Executive Royal Hotel - 8450 Sparrow Drive, Leduc, AB

March 11 & 12, 2015

Draft Agenda (as of January 21)

### Background:

The agriculture industry is facing increasing consumer scrutiny around how the industry operates in the areas of the environment, food production and safety, and animal welfare. Our social licence to operate reflects trust from consumers and society that farming practices align with their values and expectations. Retailers are responding with increasing demands on primary agriculture.

**Target Audience:** Primary producers, producer/commodity organizations, and agriculture stakeholders

### Objectives:

1. Increase knowledge and understanding of social licence
2. Identify and understand drivers of social licence
3. Present options for solutions for the agriculture industry to address social licence

**Cost:** \$150 (including GST)

**Register:** Call the Ag-Info Centre 1-800-387-6030

**Deadline:** March 5

<b>Wednesday, March 11 (evening)</b>	
7:00-7:30 pm	<b>Welcome Reception</b>
7:30-8:00	<b>Insights from Charlie Arnot on Social Licence - an interview</b> - Kim McConnell, <a href="#">Alberta Livestock &amp; Meat Agency (ALMA) Board member</a> with Charlie Arnot, <a href="#">Center for Food Integrity</a>
8:00-8:30 pm	<b>Building public trust - a Canadian model</b> - Kim McConnell
<b>Thursday, March 12 (titles to be confirmed)</b>	
8:15-8:30 am	<b>Welcome</b> - Jack Swainson, <a href="#">Agri-Environmental Partnership of Alberta (AEPA)</a>
8:30-9:30	<b>Keynote Speaker</b> - Charlie Arnot, <a href="#">Center for Food Integrity</a>
9:30-9:45	<b>Minister of Agriculture and Rural Development</b> - Honourable Verlyn Olson, QC
9:45-10:15	<b>Sustainability at McDonald's Corporate: Verified Sustainable Beef Project</b> - Jeff Fitzpatrick-Stilwell, <a href="#">McDonald's Canada</a>
10:15-10:30	<i>COFFEE</i>
10:30-11:00	<b>NGO &amp; Communications Strategist</b> - Kay Johnson-Smith, <a href="#">Animal Agriculture Alliance</a>
11:00-11:30	<b>Retail</b> - Bob Chant, <a href="#">Loblaws</a>
11:30-12:00	<b>Consumers</b> - Carrie Selin, <a href="#">Taste Alberta</a>
12:00-1:00	<i>LUNCH</i>
1:00-1:30	<b>Agriculture Inputs</b> - Ted Menzies, <a href="#">Crop Life Canada</a>
1:30-2:15	<b>Primary Production</b> <ol style="list-style-type: none"> <li>1. Guy Séguin, <a href="#">Dairy Farmers of Canada</a></li> <li>2. Karla Bergstrom, <a href="#">Alberta Canola Producers Commission</a></li> </ol>
2:15-3:15	<b>Food &amp; Agriculture</b> - Steve Savage, <a href="#">speaker/writer/myth buster</a>
3:15-3:40	<i>COFFEE</i>
3:40-4:10 pm	<b>Synthesis Summary</b> - Kim McConnell