

SiteLine

Joffre Site Community News

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Coming soon...

NOVA Chemicals' 2016 Sustainability Report

reflects our ongoing commitment to shaping a world where the products vital to human health and happiness are even better tomorrow than they are today.

Visit: www.novachemicals.com



Proactively finding ways to improve our products' sustainability

At our Spring 2017 Community Open House, there was significant interest in the **recycling and the sustainability of plastic products**. We committed to ongoing follow-up with our community on the topic.

With that in mind, my letter to the community provides an overview of NOVA Chemicals' approach to product sustainability. Inside this issue (page 2), and in future issues and Community Open Houses, we will feature more information. I hope to challenge some common misperceptions about plastics and encourage further dialogue. Your comments and suggestions are very important to us.

Throughout our company, we are committed to managing the health, safety, environmental and security impacts of **our products across their life cycles**.

We often use the term "life cycle" as it covers everything from the design of our products, market development, raw material selection, product manufacturing, distribution and sales, product applications through to recovery, reuse or disposal of finished products.

We believe we can continue to innovate better-performing products that are not only safe, but also reduce environmental impacts and increase value to society. To do this, we work together with our suppliers, equipment manufacturers, customers, brand owners, industry associations and others in our value chain.

Here are a few specific **examples of how our commitments to sustainability translate into day-to-day activities right here in Alberta:**

- To coincide with the recent start-up of our expanded polyethylene production at the Joffre Site, we devised a protocol

for testing and assessing new product to confirm its purity and regulatory status.

- All of NOVA Chemicals' polyethylene resins can be recycled. Through membership in the international program Operation Clean Sweep (opcleansweep.org), NOVA Chemicals targets zero-loss of plastic pellets at our operations and during product transportation.
- At our Calgary technology centres, the largest private research facilities in Western Canada, we focus on innovation. For example, we work with our customers to develop products that enable prolonged shelf life of packaged goods to reduce food waste, while using lighter weight packaging with increased recyclability.
- We collaborate with our research centres on innovative energy efficiency projects as part of our commitment to continual improvement.

Our commitments to recycling and sustainability of our products are in evidence throughout our organization. I invite you to see our 2016 Sustainability Report on our web site to learn more.

I recognize there is a lot of work to be done in the areas of plastics recycling and sustainability. Our approach is to be proactive, work with others to find viable solutions and promote discussion about the full lifecycle impacts of the materials we use in our daily lives. Thanks very much for your engagement, and let's keep talking!

Rick Van Hemmen, Joffre Site Leader

Study looks at costs of replacing plastics in consumer goods and packaging

Strong, lightweight plastics help us do more with less material, which provides environmental benefits throughout the life cycle of plastic products and packaging.

Substituting the majority of plastic used in consumer goods with a mix of alternative materials (such as glass, tin, aluminum or paper) would increase environmental costs by a factor of four according to a recent study by Trucost®*.

The report is the largest natural capital study ever conducted for the plastics manufacturing sector based on natural capital accounting methods, which measure and value environmental impacts — such as consumption of natural water and emissions to air, land and water — which are not typically factored into traditional financial accounting.

With its ever-expanding applications, plastics have delivered many benefits for society. Plastic packaged food lasts longer, reducing wastage. Use of plastic in pipes facilitates clean drinking water suppliers. Plastic enables life-saving medical devices such as surgical equipment and drips. As the use of plastic expands, there are also ways to improve the environmental impacts associated with its production and disposal.

The study recommends steps to help reduce plastics' overall environmental cost such as:

- increasing the use of lower-carbon electricity in plastics production;
- adopting lower-emission transport modes;
- developing even more efficient plastic packaging; and
- increasing recycling and energy conversion of post-use plastics to help curb ocean litter and conserve resources.

Canada's chemistry industry is a world leader in low-intensity carbon chemical production. For example, NOVA Chemicals' Centre for Applied Research and the Centre for Performance Applications — our two Calgary technology centres — greatly enhance our ability to collaborate with our customers to bring better-designed, better-performing products to market more quickly.

For the entire report please see:

<https://plastics.americanchemistry.com/Study-from-Trucost-Finds-Plastics-Reduce-Environmental-Costs/>

**Trucost is a company that makes estimates about the hidden costs of unsustainable use of natural resources by companies. It was founded in 2000 and has its head office in London, England.*



As a key contributor in the food packaging chain, NOVA Chemicals recognizes the large impact that food shelf life and packaging durability can have on it. We are working with our customers to produce a variety of new products that are not only cost competitive when compared to traditional packaging, but also help to extend food shelf life while being recyclable.

Annual Lacombe County visit highlights various site projects

Lacombe County Councillors and staff visited the Joffre Site on June 19, 2017. The visit provided an opportunity to review any topics of interest to the County and to discuss our upcoming renewals with Alberta Environment and Parks (AEP) for our Operating Approval and Waterworks Systems (see Regulatory update, page 4).

Our guests also had an opportunity to hear about site activities including progress on our new stormwater retention pond expected to be commissioned this Fall. Also during the visit, the Alberta Plastics Recycling Association (APRA) provided a presentation on agricultural plastics, including the challenges and opportunities for recycling.

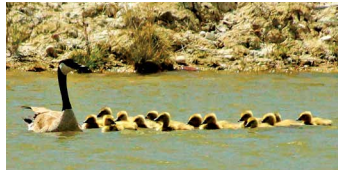


**Celebrating together...
Canada's 150th**



As Canada transitions to a low-carbon economy, "intelligent plastics" will play a pivotal role enabling significant energy conservation and greenhouse gas reductions through greener buildings, lighter-weight cars and new green solar and wind energy. (Source: plastics.ca)

We believe NOVA Chemicals' focus on innovation will contribute to Canada's successful transition.



Nature Trail photos courtesy Lynette Braun

A wonderful summer day's excursion!

Don't forget to visit the 89-hectare NOVA Chemicals' Community Nature Trail, located just north of the Joffre Site.

The official opening ceremony for the trail was last June 8. We're so pleased that so many people return time and again to enjoy the five kilometres of trails running through this valuable wildlife habitat.

We are always looking at ways to enhance the Nature Trail and we are currently investigating the possibility of developing an "educational pollinator garden." Watch for more on this in future issues of *SiteLine*.

For visitor information, please visit:
www.novachem.com/Pages/joffre/joffre.aspx

Buffer zone update Plans for second phase of former greenhouse property

Since demolition of the above-ground portion of the former greenhouse (located just south of the Joffre Site) was completed last year, the area was being used as a temporary laydown site for the E2 Furnace Refurbishment Project.

The second phase will involve the removal of below-ground concrete footings, pads and some foundations, various underground piping and an underground storage tank. Recovery of useful gravel and reclamation of topsoil are included in the work plan.

Once the area is reclaimed and we assess soil quality in the area, we will be able to determine final end use(s) for the land.

Celebrating together... Canada's 150th



Being 85% lighter than most other materials, plastics' use in packaging already contributes to significant energy and emission reductions in transportation. A Trucost Study (see page 2) estimates that substitution of plastic components with alternative materials in passenger vehicles sold in North America in 2015 would lead to an increase in lifetime fuel demand for those vehicles of over 336 million litres (89 million gallons) of gasoline and diesel, and at an environmental cost of \$2.3 billion. This equates to an environmental cost increase of \$169 per gasoline or diesel passenger car sold in North America in 2015.

Coming soon: Updated Community Information Handbook

We regularly update our Community Information Handbook for our neighbours who live within five kilometres of the Joffre Site. A new handbook will be available this Summer at our Annual Neighbour Event (see invitation page 4). Our representatives will also bring neighbours the handbook when they conduct their regular neighbour visits. At these visits we provide information about our facilities, hear from you and update your confidential emergency contact information.



As part of the handbook we have a mail-in form where you can tell us about any suggestions, questions or concerns you might have about our operations.

We hope you find the information in the handbook useful. Please let us know if you have any suggestions for future updates.

Six steers go to NOVA Chemicals

At the 2017 Lacombe & District 4H Steer Sale this May, we were very pleased with our purchase of six steers — one from each of the clubs represented at the sale. Pictured to the right are Dylan Fuller of the East Lacombe 4H Club and his Supreme Grand Champion banner with Robert MacTaggart of NOVA Chemicals. This is the second year we have been lucky enough to purchase the Supreme Grand Champion. Congratulations to all the sale participants!



Congratulations on a terrific milestone for the Central Lacombe 4-H Beef Club:

Grand Champions of the 4-H contest marking the 100th anniversary of 4-H in Canada!



Regulatory updates

New back-up caustic deep well: In March 2017 we completed the public notification process for surface rights holders within 0.5 km of the wellhead and subsurface rights holders within 2.4 km of the well. As no issues or concerns were identified, we submitted our final regulatory applications to the Alberta Energy Regulator under Directive 051 (well design and designation) and Directive 065 (amend existing disposal scheme approval). All regulatory applications have been approved and the new disposal well should be operational this Fall once conditions of the approval have been met and construction of the tie-in piping is complete.

The back-up well provides for enhanced reliable operations and flexibility for disposal system maintenance.

An essential component of both of these renewal processes is consultation with our neighbours and community. Your input is welcome.

Applications for Renewal of Operating Approval and Renewal of Waterworks System Approval:

In 2019, both of these approvals expire. We are now developing renewal applications to AEP. We expect to submit both applications by early 2018.

Please watch for our September edition of *SiteLine* where we will include an overview of the comprehensive evaluation of our site's environmental performance for the last 10 years. This is an important component of the Operating Approval Renewal application. We also plan to discuss the performance information with you at our October 11 Community Open House.

A great event for the whole family!

FREE BBQ

As a neighbour within our 5-km radius, you and your family are invited to the

NOVA Chemicals' Annual Emergency Preparedness Awareness Community BBQ

Thursday, August 17, 2017 at 5:00 p.m.

at NOVA Chemicals Joffre Site Loss Prevention Building 3 (watch for BBQ entrance signage)

Become familiar with the Joffre Site and our level of emergency preparedness. Ask us any questions about our "One Site – One Plan." Validate your emergency response contact information with us.

We hope to see you there!
NO RSVP REQUIRED

FUN KIDS' ACTIVITIES

CHANCE TO WIN PRIZES



Information booths



Tours of our emergency equipment

SiteLine is published by NOVA Chemicals Corporation

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For more information, please see these websites:

- www.novachemicals.com | www.novachemicals.com/Joffre
- Chemistry Industry Association of Canada: www.canadianchemistry.ca
- American Chemistry Council: www.americanchemistry.com

