

# From “Waste” to Resource Recovery

City of North Battleford, Saskatchewan, Canada

**Lystek**  
Nothing wasted.  
Everything to gain.



*The City of North Battleford is the first municipality in Western Canada to adopt and successfully implement Lystek's advanced, award-winning biosolids management solution.*

## ABOUT

Home to about 14,000 residents, North Battleford is a growing City located in west central Saskatchewan.

[www.cityofnb.ca](http://www.cityofnb.ca)

## CHALLENGES

- Odor issues, regulatory pressures & other challenges

## SOLUTION

- Implementation of a new environmentally sustainable, year-round, long term biosolids management solution developed by Lystek

## RESULTS

- Biosolids diverted from landfill and converted into a nutrient-rich, Class A quality fertilizer that can generate new revenue to offset costs
- Exceeded City's requirements for a proven, year-round management program
- No additional staff or special skills required
- Project was completed on-budget and ahead of schedule

## NB THE BEST!

"NB the BEST!" is the slogan for North Battleford and sums up the City's passion and commitment to innovation, growth, and enhancing the quality of life for its community.

In some respects the City's positive attitude and growth strategy caught up with it in 2012, causing odor and other management issues. "We were basically dumping more dewatered biosolids into the landfill than it could handle," confirms Stewart Schafer, Director of Operations for North Battleford.

## NOT AN IDEAL SITUATION

The City had been using a drum thickener with dewatering by centrifuge and polymer to stabilize the biosolids for disposal. The material was ultimately loaded into dump trucks via a discharge chute and transported to the City's landfill for disposal.

"This was far from ideal," admits Schafer. "The material took up valuable space and created problems for our landfill equipment and was a major source of odor," he adds.

Additional pressure for change also came from the Province's Water Security Agency, which mandated that North Battleford have a new biosolids management solution in place by November 1, 2015.

***“Biosolids should be considered a resource not a liability.”***

**– Stewart Schafer**

**Director of Operations, North Battleford**

## **IN SEARCH OF A PROVEN SOLUTION**

The City issued a Request for Proposal (RFP) that outlined specific requirements for a treatment process to transform the existing Waste Water Treatment Plant (WWTP) into a Resource Recovery Centre. The Resource Recovery Centre would divert biosolids from the landfill and convert them into an organically-based biofertilizer product that is pathogen-free, federally registered and recognized as Class A quality by both the CFIA (Canadian Food Inspection Agency) and the US Environmental Protection Agency.

Requirements of the RFP included the provision of all budgetary costs and the capability of the successful partner to enter into an innovative marketing, sales and profit sharing contract with the City. North Battleford had a vision to turn their “waste” into a resource.

Central to North Battleford’s strategy was the conviction that the landfill problem was in fact an opportunity in the making. “Waste Water Treatment Plant biosolids should be considered a resource not a liability,” says Schafer.

## **LYSTEK SYSTEM IS SELECTED**

The competitive RFP process generated three responses, the City selected Lystek because it:

- Was deemed to be the most fiscally and environmentally responsible option
- Exceeded the City’s requirements for a proven, year-round, sustainable management program
- Allowed the City to efficiently divert biosolids from its landfill and convert them into a nutrient-rich, federally registered (CFIA) Class A quality fertilizer
- Would provide the City with the opportunity to generate revenue and offset costs by producing a highly valued product for use in the local market
- Was the only proposed solution that would meet the Water Security Agency’s deadline while also adhering to the City’s tight capital and operating budget.

**Lystek provided a complete turnkey solution for the City including engineering services for the design, build, commissioning, and permitting, and initial operation of its new system. “The installation was completed on-budget,” confirms Schafer.**

**The system was also commissioned and operational by November, 2014, a full year ahead of schedule.**

***“Converting biosolids into a commercial fertilizer that is high in organic matter is a win-win for both the City and local farmers. We expect the fertilizer to help the City generate new revenue and help offset costs,” says Schafer***



## **About Lystek International**

Lystek is a leading provider of Thermal Hydrolysis solutions for the sustainable management of biosolids and organics. The multi-use, award-winning Lystek system reduces costs, volumes and GHG’s by converting municipal and industrial wastewater treatment facilities into resource recovery centers. This is achieved by transforming organic waste streams into value-added products and services, such as the patented LysteMize® process for optimizing digester performance, reducing volumes and increasing biogas production; LysteGro®, a high-value, nutrient-rich biofertilizer and LysteCarb®, an alternative source of carbon for BNR systems.