(CASE STUDY)

Lystek

From Landfill Disposal to Resource Recovery in Under a Year

ABOUT

North Battleford is a City in west-central Saskatchewan, with a approximate population of 14,505. **www.cityofnb.ca**

CHALLENGES

- Biosolids were being disposed of in the City's landfill, causing nuisance odours and structural concerns
- Landfill also had limited remaining capacity
- Regulatory mandate by provincial Water Security Agency to move to beneficial use

PROJECT DRIVERS

North Battleford was looking for an advanced biosolids treatment technology with the following benefits:

- Ability to produce a Canadian Food Inspection Agency (CFIA, or Class A) regulated fertilizer product from biosolids for sale to local farmers for agricultural use
- Small equipment footprint which could be retrofit into the existing dewatering building, saving space and capital cost
- Easy-to-operate, cost effective solution delivered ahead of the deadline required by the provincial agency

RESULT

- Lystek THP was implemented in the existing solids truck loading bay
- CFIA-regulated fertilizer (Class A) sold to local farmers
- Elimination of landfilling as a biosolids management practice
- Capital and operational cost savings of over 110% by implementing Lystek THP compared with competing technologies, established during a competitive bidding process
- Lystek THP deployed on a rapid timeline (1 year) to meet the Water Security Agency's timeline

City of North Battleford, Saskatchewan

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.

KEY METRICS

Population Served: 14,505

WWTP Rating: 7,320 m^3 / day (1.9 MGD)

Lystek THP Processing Footprint: 111 m^2 (1,200 ft^2)

Lystek THP Module Size: 1 x LY6 (0.6 dry tons / hr)

Feedstock: Municipal biosolids (aerobically digested)

Project Delivery Model: Design-Build-Transfer

The City of North Battleford is located along the North Saskatchewan River in west-central Saskatchewan.

Historically the North Battleford Wastewater Treatment Plant's (WWTP) biosolids management strategy was disposal of dewatered biosolids in the City-owned landfill. By 2012, this practice was causing problems, "***We were basically dumping more dewatered biosolids into the landfill than it could handle,***" confirms Stewart Schafer, Director of Operations for North Battleford. "***This was far from ideal***," continues Schafer, "***the material took up valuable space, created problems for our landfill equipment and was a major source of odour***".

As a result, the Provincial Water Security Agency, mandated that North Battleford have a new biosolids management solution in place by November 1, 2015.

The City of North Battleford saw this as an opportunity to turn their "waste" into a resource. "***Wastewater treatment plant biosolids should be considered a resource not a liability***" says Schafer.

The City issued a Request for Proposals (RPF) outlining specific requirements for a process that could transform their wastewater biosolids residuals into a Class A quality fertilizer that would be acceptable to the Water Security Agency. The RFP process generated three responses. Lystek THP was selected because it produced a CFIA-regulated fertilizer (Class A) product at the lowest capital and operating cost and was the only option that could be fully deployed in the required timeline. In addition, due to the small footprint of the Lystek THP processing equipment, the system was easily retrofit into existing building space in a truck bay of the dewatering building. This approach allowed for significant cost and time savings in project deployment and utilized the existing solids conveyance equipment.

Lystek THP was implemented at the North Battleford WWTP in 2014, with a construction schedule of less than one year, and has been operational since that time.

"***It was unreal how easy the deployment of this system was. This, combined with the small footprint, low cost, and excellent support from the Lystek team, it was almost like the system was designed especially for our facility***"

Stewart Schafer, Director of Operations for North Battleford.

About Lystek

Lystek International is the leading provider of advanced, thermal hydrolysis solutions in North America, servicing over 60 utilities globally. Lystek offers turnkey solutions including technology supply, design-build and installation services, regional processing solutions, and comprehensive LysteGro sales and management. **Lystek THP®** is proven across a range of small, medium, and large communities. We work with public and private sector clients to enhance operations, reduce GHG emissions, and recover valuable nutrients and carbon from biosolids and organic feedstocks through the production of increased renewable biogas with **LysteMize®** and **LysteGro®** Class A quality biosolids fertilizers.

Toll Free 888.501.6508 • www.lystek.com • info@lystek.com