



Costly Liquid Storage Becomes Fertilizer Sales Success Story

ABOUT

Centre Wellington is a township in South-Central Ontario, with a population of 26,000. The township consists of two small urban centres, Elora and Fergus, with a number of other smaller communities. www.centrewellington.ca

CHALLENGES

- Liquid biosolids production had exceeded the Elora Wastewater Treatment Plant's (WWTP) processing and storage capabilities
- Limited space on-site for the construction of additional biosolids storage
- Costs for year-round off-site storage and disposal were escalating

PROJECT DRIVERS

Centre Wellington selected Lystek THP as a biosolids treatment technology, along with additional plant upgrades, providing these benefits:

- Dramatic reduction in storage and hauling requirements for biosolids
- Production of a high-quality CFIA regulated fertilizer to provide a source of organic matter and cost effective nutrients for local farmers

RESULT

- More than **9,000 m³** of LysteGro fertilizer produced and sold to local farmers
- Ability to store almost two years of LysteGro production volume on-site
- Minimal staff hours dedicated to advanced treatment process
- Annual LysteGro fertilizer revenue returns offset program costs and continue to outpace inflationary increases

Elora Wastewater Treatment Plant
Township of Centre Wellington, ON

Centre Wellington takes advantage of its wastewater plant upgrade to reduce volumes, alleviate costly storage problems, and convert "waste" into a nutrient-rich, saleable fertilizer.



KEY METRICS

Population Served: 7,500

WWTP Rating: 5,000 m³ / day (1.1 MGD)

Lystek THP Processing Footprint: 74 m³ (800 ft²)

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

Feedstock: Municipal biosolids (aerobically digested)

Project Delivery Model: Technology & Equipment Supply

The Town of Elora is a growing community located along the Grand River in Wellington County, Ontario. The WWTP historically generated a low-solids non-agricultural source material (NASM, or Class B biosolids) that was applied to local farmlands from spring to fall and hauled to off-site storage and disposal in the winter. Increasing biosolids volumes and costs of management, along with additional required plant upgrades, led Township council to approve a project to expand and upgrade the treatment plant.

Lystek THP was pre-selected by the Town and specified as a mandatory part of the overall strategy to upgrade the plant's biosolids management practices. Christine Furlong, P.Eng., of Triton Engineering (the Township's Engineering Firm) said that ***"Lystek was selected because, when combined with an effective dewatering strategy, the process reduces typical issues associated with Class B biosolids. The net result is a substantial reduction in the volume of end product requiring management as well as a smaller biosolids storage building."***

"We also liked the fact that the process is returning organic material back to the earth," says Furlong. Another benefit is that Lystek THP eliminates pathogens, producing a Canadian Food Inspection Agency (CFIA) regulated fertilizer (Class A biosolids), which can be used in agriculture the same as any commercial fertilizer product.

Ease-of-operations was another key requirement for the solution. ***"Our plant operations staff also has to look after other plants and lift stations,"*** says Colin Baker, Managing Director of Infrastructure for the Township of Centre Wellington. A major benefit of Lystek THP is that while it must be monitored by plant staff, the process itself is fully automated and requires minimal operator intervention.

Lystek THP was implemented alongside additional upgrades at Elora WWTP by Wellington Construction Contractors, supervised by Triton Engineering Services in 2014. The Lystek process significantly reduced the storage requirements by concentrating the product, increasing the solids from 3% to 15%. ***"It's much easier to handle and store than a dewatered or dry product,"*** confirms Furlong. The site now has approximately 2-years of storage capacity, and with Lystek's fertilizer management services, has sold more than

9,000 m³ of LysteGro fertilizer to local farmers. The Town's fertilizer revenue sharing agreement with Lystek has provided long-term price certainty with fertilizer revenues continuing to offset management costs such that the Township is paying less per ton of biosolids nearly a decade into operations than when the program first began.

"LysteGro is showing to be a highly valued product in our area and, as proof of that, our revenue sharing returns have reduced our biosolids management fees. That's a real-game changer." John den Hoed, Supervisor of Wastewater Services, Elora WWTP



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.