

LITTLE RED RIVER CREE NATION FOX LAKE LAGOON UPGRADE

PROJECT BACKGROUND

Located adjacent to the Peace River, Fox Lake's existing lagoon lacked sufficient capacity and inspections noted integrity of the existing berms was compromised. As a result of the existing lagoon condition, untreated wastewater was being directly released into the surrounding environment. BCL was retained by the Little Red River Cree Nation and the community of Fox Lake to complete design of a new lagoon and related sewer infrastructure to meet the long term needs of the community.

Preliminary field investigation included extensive topographic surveying and geotechnical site excavations to confirm site selection and soil conditions for lagoon expansion. BCL completed the design and provided construction services for a new six cell HDPE lined lagoon and incorporated modifications to the existing storage cell to serve as an exfiltration cell for gradual release of treated effluent. The project also included a new sewage force main as well as a new pumping station complete with an upstream sewage grinder and back-up power generator to ensure continued sewage handling capabilities in power failure situations.

PROJECT HIGHLIGHTS

- A new six cell, 430,000 m³ total capacity, HDPE lined sewage lagoon.
- 350,000 m³ of earthwork and 230,000 m² of HDPE liner.
- 1.4 Km of upgraded lagoon access road.
- New 2,100 lin.m, 200 mm dia. HDPE sewage force main.
- A new wet well with building sewage pumping station, complete with sewage grinder, 35 hp 38.9 L/s sewage pumps, and 100 kw backup power generator.

BUDGET

Construction \$19,125,000 (Including \$5,500,000.00 of local content utilization)

COMPLETION DATES

Design August 2015
 Construction Anticipated February 2019



Existing Lagoon Facility

