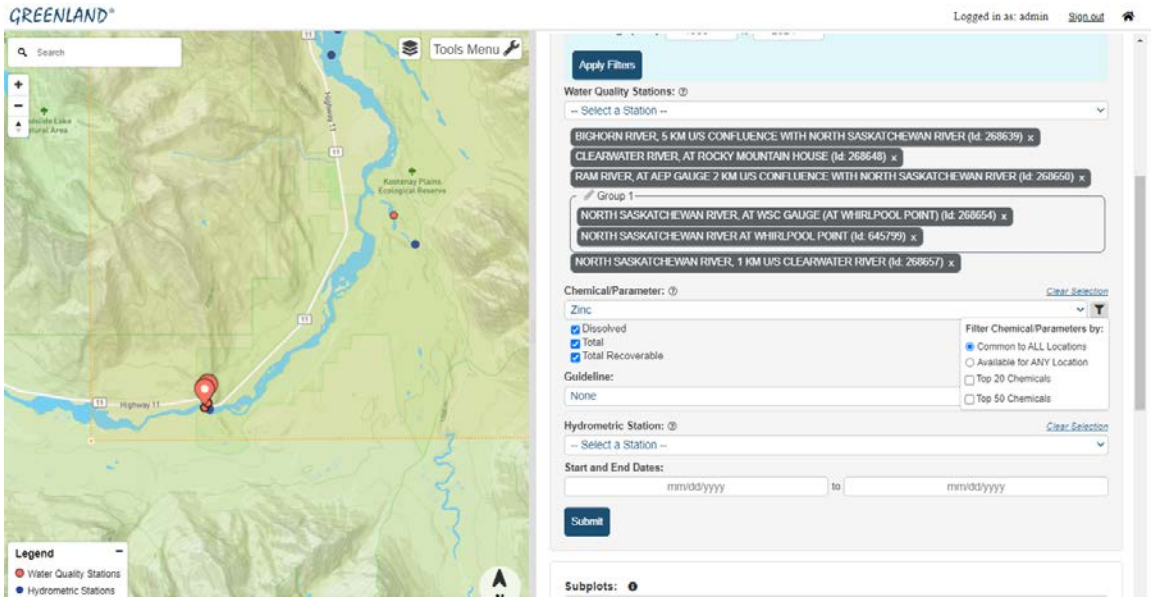
WATERSHED MANAGEMENT

SaaS: Municipality Water Supply Treatment

Web-Based Source Water Protection Assessment Tool

Client: EPCOR Utilities
Location: City of Edmonton, Alberta (Canada)
Project Timeline: On-going



Greenland Consulting Engineers (GREENLAND®) was **initially retained in 2021** by EP**C**OR Utilities to take advantage of an evolving (at that time) new web-based tool that would facilitate watershed management and source water protection (SWP) for the North Saskatchewan River (NSR) watershed. This project was to also improve reporting activities associated with the operation of the City's water treatment facility and which draws raw water daily from the North Saskatchewan River. GREENLAND® built on existing data and modules within its proprietary platform called **T**he **H**ealthy **R**ivers **E**cosystem **A**ssessmen**T** **S**ystem (**THREATS™)**. The tool is a secure, client-facing, multifaceted platform for exploring and analyzing environmental data, including times series (water quality, hydrometric, climate and air quality) with related or complementary spatial data. The initial project's scope of work for EPCOR Utilities included:

- Addition of over 100 new spatial data layers available through the Client and Province;
- Spatial analysis module to calculate indicator metrics (human stressors, natural indicators and climate indicators) for assessment of cumulative environmental effects.
- Customization of the platform's available hydrometric data analysis module;
- Connected Alberta Provincial water quality data following new uploads to DataStream;
- Advanced the statistical analysis and data query features for water quality analysis;
- Added North Saskatchewan River Water Quality Framework guideline comparisons;
- Connected Alberta Provincial hydrometric flow stations data;
- Developed functionality to estimate tributary contributions to downstream flows; and,
- Added functionality to estimate travel times between points on the NSR.

Since 2021, EPCOR Utilities has continued to use the customized platform and has retained GREENLAND® to complete additional enhancements. **This work continues in 2026.**