Wabenaki Lodge, La Mauricie National Park, Qc
Phosphorus Removal

ECOTHOR™

HIGHLIGHTS:

- **Parks Canada, a federal government entity sought solutions for phosphorus removal from lodge wastewater discharge**
- **La Mauricie National Park is an environmentally sensitive area and is the source of drinking water for urban areas**
- **ECOTHOR™ Electrocoagulation with magnesium anodes selected for removing the phosphorus.**
- **Commissioned Fall 2016 – Operating today**
- **Design Capacity**
  - **3 m^3/day, operating 24/7**
- **Successful start-up well within compliance with project objectives**

The Wabenaki Lodge, located on Lac-à-la-Pêche in La Maurice National Park, near Shawinigan, Quebec provides seasonal accommodations for vacationers who love the outdoors. The lodge was equipped with a septic tank style bioreactor to treat the waste water generated by the habitants of the lodge. Unfortunately, the bioreactor could not address the phosphate levels in the wastewater. Given that the lake is ultimately the source of drinking water for the City of Shawinigan (50,000 people), Parks Canada decided to address the issue.

In 2016, the park installed and started up a fully-integrated ECOTHOR™ system, with PLC control, feed and settling tanks and automatic valves. Whereas levels of between 5 and 20 mg/L of total phosphorus were being discharged to the polishing field, with ECOTHOR™ in place, these levels were reduced to under 0.5 mg/L, well under the 1 mg/L target.

TOTAL PHOSPHORUS REMOVAL
ECOTHOR

Sample	Influent (mg/L P)	Effluent (mg/L P)
1	15.8	0.45
2	15.2	0.38
3	10.8	0.22
4	7.3	0.35

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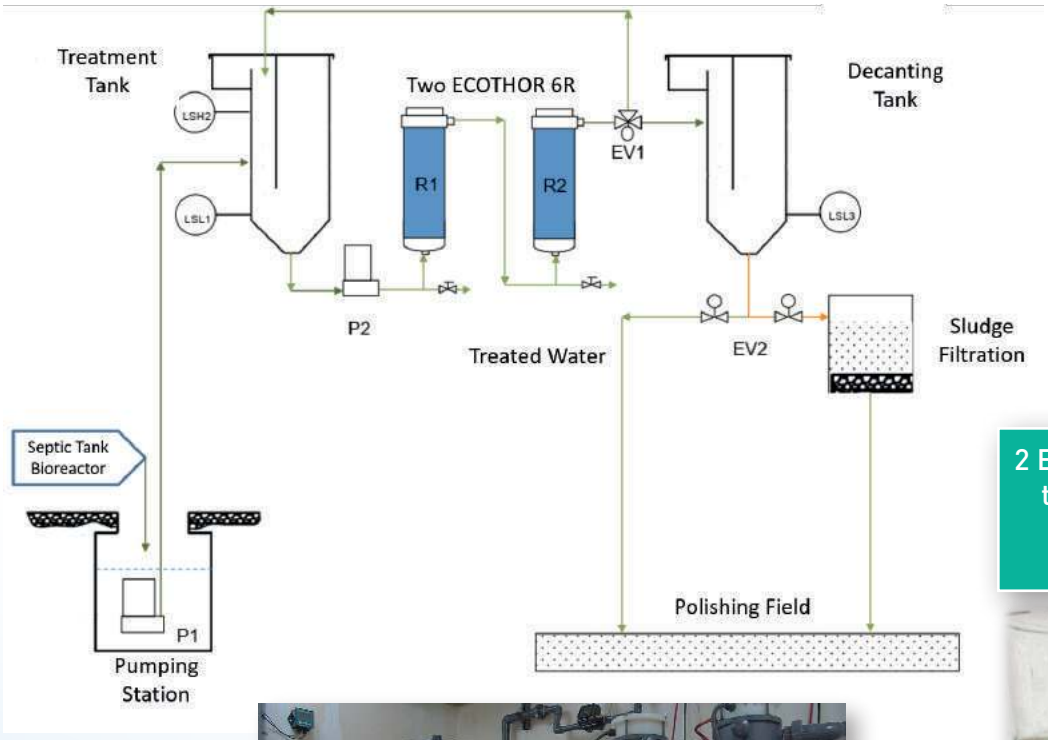
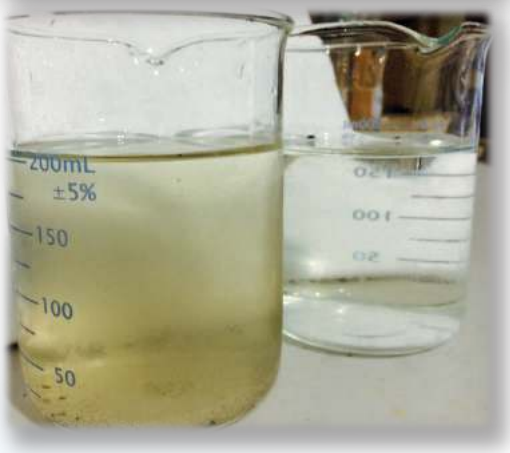
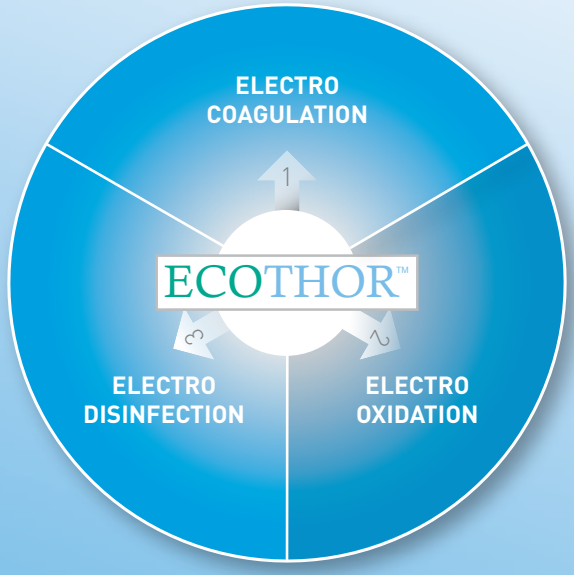


2 ECOTHOR-6R Reactors configured to operate in electrocoagulation mode with AN02M (Mg Alloy) anodes.





E2Metrix is a Sherbrooke, Quebec-based water and wastewater treatment systems company, with a focus on ECOTHOR™, a "plug & play", proprietary electrochemical process for treating process water along with industrial and municipal wastewater, either at a greenfield or an existing site. The modular ECOTHOR™ reactor can be operated alone or in a bank of multiple reactors to treat wastewater discharge flows from as low as a few m^3 to thousands of m^3 per day to target removal of contaminants including, ammonia nitrogen, phosphorus, suspended solids, metals (ex. Zn, Cu, Ni, As, Se, Mn, Fe, etc.), C10-C50 hydrocarbons, cyanides/thiocyanates, fats/oils & greases, pathogens/bacteria, emerging contaminant (including hormones, pharmaceuticals, PFAS), fluorides, and others.

Low Cost of Ownership	Multiple Contaminant Removal
Fully Automated with Remote Operation	Compact – Small Footprint & Modular
On/Off Capabilities	No moving parts

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