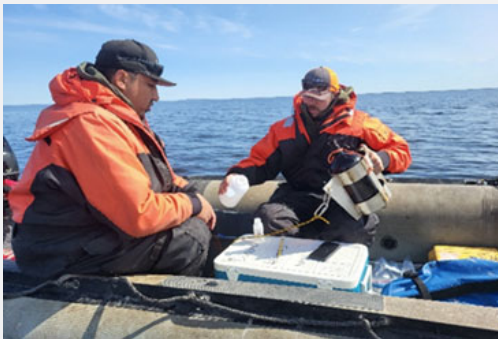




AYIMIHITUUNAANUWICH
Joint Process on Potential La Grande Upgrades
Community Update



Field work update



Richard Macleod (EnviroCree) and Geoffrey Marselli (AECOM) take water samples as part of the sediment load study in June 2025.



Alexandre Paradis (Avizo) and John Sam (CH33) prepare to survey a control station downstream of LG-1 during a field survey of riverbank dynamics on July 30.

Study Updates

Riverbank dynamics (erosion)

- The main objectives were to confirm and update photo-interpretation mapping of the state and morphology of the riverbanks and shores, observe and document hydro-geomorphological characteristics of the river stretches and install control stations.
- The field campaign took place from July 15 to July 31, with a study area spanning from La Grande-4 to the estuary.
- Some land users participated in the field campaign, which was an occasion for **reciprocal sharing of knowledge**: Avizo team members demonstrated their methods and techniques for conducting surveys and land users shared their knowledge and observations about erosion.

George Pachano (CH14) joined the flyover of northern shorelines downstream of La Grande-3 and provided input on riverbank recess in the area, while Samuel Cox (CH36) joined a flyover of the La Grande-1 reservoir and shared a photo album documenting the impacts of a major landslide that occurred in 2003. John Sam (CH33) joined a flyover of the whole estuary and helped survey a control station on the left (south) bank.

Sediment load in water

- The field campaign for the sediment load took place on July 14 and 15 as well as on August 10 and 11 by a team composed of two AECOM and two EnviroCree employees, as well as Wesley Washipabano, from Chisasibi.

Fish community and mercury

- The first field campaign took place from July 13 to August 2 by a team made up of four AECOM-Synergis employees and four Cree employees from Niigaan, as well as our intern, Isaiah Coonishish. Land user Kyle Napash also helped the team at station G2275 in Lake Wawa from July 27 to 29.
- Fish communities were sampled at 16 stations between La Grande-4 and the estuary. Flesh was taken from targeted fish species (Lake Whitefish, Northern Pike, Longnose Sucker and Walleye) at 13 stations to perform mercury analysis. The team made a fishing effort of 5 net-days per fishing station.
- The second field campaign was held from August 5 to September 4. From August 5 to 7, all Cree employees attended a training session titled "Prevention and Intervention in Riparian Areas", which covered basic safety principles as well as various techniques for water rescue.

eDNA sampling

- Environmental DNA (eDNA) is the genetic material shed by organisms in the water column (mucus, feces or tissue particles). By collecting water samples and filtering it, teams can collect different particulates on filters. These filters are then sent to the IBIS laboratory in the city of Québec. Results from laboratory analyses will enable us to identify the fish species present in the water body at that moment.
- From July 9 to 12 and August 9 to 14, samples were collected at 14 stations for eDNA analysis. Charlie Ratt accompanied the team to carry out sampling at stations south of La Grande-3 reservoir, in Corvette Lake and in Frigate Lake.
- The samples are now at the laboratory. A broad approach will be used to identify the general fish community composition and a second technique will be used to target Lake Sturgeon and Lake Trout.

Fish habitat

- From July 24 to August 5, a team characterized potential habitats in three areas: downstream of Robert-Bourassa (La Grande-2) to the coast, downstream of La Grande-3 and downstream of La Grande-4.
- The team was composed of two AECOM and two EnviroCree employees, and we took advantage of the opportunity to train our intern, Isaiah Coonishish.
- The team successfully identified potential spawning areas, which will be further investigated in the fall.

Eelgrass

- The campaign was held from August 3 to 15.
- The diving team assessed the state of coastal eelgrass beds at 50 stations between Point Louis-XIV and Rivière Conn north of Eastmain. They were able to measure various parameters such as eelgrass abundance, shoot length, presence of algae, water temperature, salinity, conductivity and pH levels. They took water samples and sediments for further analysis. At each station, an underwater GPS photo and video were also taken.

Water quality

- Water samples were collected between La Grande-4 and the estuary from August 16 to 20. Several community members joined the BBA team on the field: Sam Cox, Andrew Snowboy and Rupert Snowboy. Some stations were reached by hydroplane and some by boat.
- The water samples were sent to an accredited laboratory in Montréal for analysis.

Comparing fishing methods: a close collaboration between AECOM-EnviroCree and the Georgekish family

- The Georgekish family (VC26) and biologists from AECOM and EnviroCree worked together over several days to compare Cree traditional fishing methods and western science-based fishing methods. Fish from both groups were measured, weighed and sampled for further analysis.
- On August 7, members of the Ayimihituunaanuwich Technical Table visited Bertie-John Georgekish's family camp to participate in traditional and scientific fishing and shared a traditional meal.



From left to right: Félix-Antoine Dumontier, Ariel Jacques, Elisa Mignot, Sammy Blackned, Marie-Eve Lemieux, Mila Oser, Judith Georgekish, Zoe Lalonde, Edouard Georgekish, Yanneck Branchaud, André Lord, Pierre Potvin, Ernie Rabbitskin, John Longchap and Marc Dunn.



Upcoming activities

Cree land use

- In preparation for the interviews with land users to come this Fall, survey grids were discussed with Cree representatives at the Ayimihituunaanuwich Technical Table during the month of August.

The Crees of Eeyou Istchee and Hydro-Québec have established the Ayimihituunaanuwich Joint Process on Potential La Grande Upgrades to assess the environmental, social and cultural aspects of the potential upgrades of Robert-Bourassa, La-Grande-3 and La-Grande-4 generating stations.

For more information

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