



Les Îles-de-la-Madeleine
Communauté maritime



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Groundwater characterization project in the Magdalen Islands

A scientific study that aims at better understanding, protecting and managing our groundwater resources

A groundwater characterization project is currently being carried out in The Magdalen Islands. This project is led by a team of hydrogeologists and geophysicists from Laval University, under the supervision of professors Jean-Michel Lemieux and Christian Dupuis. It covers the entire archipelago and it aims at protecting and sustainably managing groundwater resources. This CA\$ 1 million program, which started in 2018 and will end in 2022, is financed by the Ministère de l'Environnement et de la Lutte contre les changements climatiques.

The project will answer the following questions:

- 1) What are the geological formations that contain groundwater?
- 2) Where does groundwater come from and where does it go?
- 3) Is groundwater fit to drink? How is it being used?
- 4) How much groundwater can be extracted in a sustainable way?
- 5) Is groundwater vulnerable to human activities?

In order to do answer these questions, teams of research professionals, graduate students and interns will criss-cross the archipelago all summer for field research. Data will be collected and fieldwork completed using state-of-the-art measurement instruments. Don't be surprised to see an all-terrain vehicle slowly traveling on the archipelago's roads, or driving off the beaten track to access remote areas (which also need to be studied)! Specialized measuring equipment will also be lowered in groundwater wells.

The team from Laval University is working in collaboration with the Communauté maritime des Îles. The Communauté maritime des Îles has made its documentation and knowledge of water resources available and the research group will share its complete groundwater portrait so that water supply, protection and management can be planned.

Such groundwater characterization projects have been carried out since 2008 in the Quebec province. In 2013 a BAPE (Bureau d'audiences publiques sur l'environnement) took place on the subject of exploration and exploitation of natural resources in the Magdalen Islands and their effects on groundwater resources. This specific project has since then been placed on hold. In its report, the Environmental Public Hearings Office recognized that the archipelago's aquifers were irreplaceable and vulnerable to human-induced contamination.

A request for citizen science

The researchers need your help! They need access to your groundwater wells to carry out their field research, during the summers of 2019 and 2020. They are particularly interested in wells that are out of use (no pump in the well) and accessible from the outside (not located in basements). For example, they would be interested by old wells in households now connected to the water supply network. They will carry out a preliminary evaluation of your well beforehand, to determine whether it is compatible with their analyses. The researchers also wish to sample groundwater from private wells that are regularly used by citizens. Laboratory results will be sent to the well owners for free.



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Every island is investigated. The more wells are analyzed, the more survey results will be precise: your cooperation will help improve our comprehension of groundwater in the islands. If you know of groundwater wells that are out of use and still accessible, or if you wish that your groundwater well be sampled, please contact the Grosse Île Municipality.

Participation in a scientific survey on groundwater

Access to your groundwater well

A team from Laval University (Quebec City) is carrying out a groundwater characterization project in the Magdalen Islands, to protect the archipelago's groundwater resources and ensure their sustainability.

We are seeking your cooperation to learn more about the characteristics of your groundwater well and to access your well this summer and/or next summer.

Should your groundwater well be compatible with our analyses, these would last a day.

We wish to analyze:

- ✓ The geological nature and/or
- ✓ The water quality and/or
- ✓ The water level in your well.



Your contribution will help us improve our comprehension of groundwater in the islands. The results will be available for free.

Participation in a scientific survey on groundwater

Access to your groundwater well

This project is led in collaboration with the Communauté maritime des Îles-de-la-Madeleine and is financed by the Ministère de l'Environnement et de la Lutte contre les changements climatiques.

Your cooperation is highly appreciated, thank you.

If you wish to help us or for any question please contact the Grosse Ile Municipality



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