



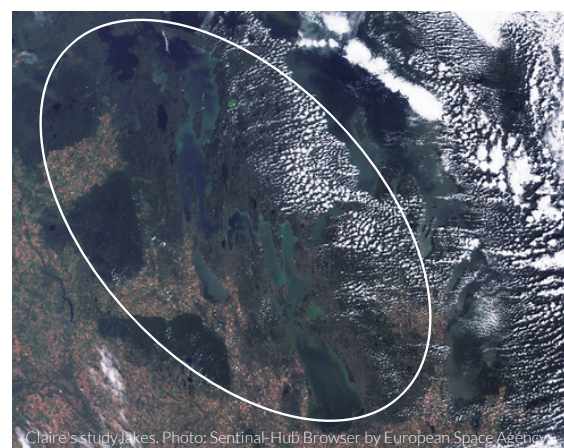
Photo: Greg McCullough

I Spy with My Little Eye...Something Green: Using Satellites to Assess Algal Blooms on Prairie Lakes

In Canada, freshwater systems are increasingly impacted by climate change and land use practices. As a result, it is important to understand how water quality conditions are changing over time. Satellites are a cost-effective tool used by scientists to monitor and understand factors that affect the water quality of lakes.

HOW SATELLITES ARE USED TO MONITOR ALGAE

- Satellite images are used to help understand the amount of algae in lakes and oceans
- Step-by-step recipes, or algorithms, are used to translate what scientists observe in satellite images into measurements of algae by calculating chlorophyll concentrations
- We can also use algorithms to translate satellite images into other water quality indicators like turbidity”
- In order to verify whether the representation of algae is correct, water samples are taken to compare algal concentrations with the satellite algorithm



Claire's study lakes. Photo: Sentinel-Hub Browser by European Space Agency



Photo: Whitney Light

ADDITIONAL RESOURCES

- Find out more about [The Manitoba Great Lake Program](#)
- Read about how [Earth Observation \(EO\) satellites](#) help monitor and understand factors that affect the water quality of lakes across Canada
- Explore Environment and Climate Change Canada's [interactive algal bloom monitoring tool](#)
- Watch the International Institute for Sustainable Development's [video](#) about the impacts of eutrophication on freshwater

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Handout created by:



Funding support:

Peterborough K.M Hunter Charitable Foundation
S.M. Blair Family Foundation