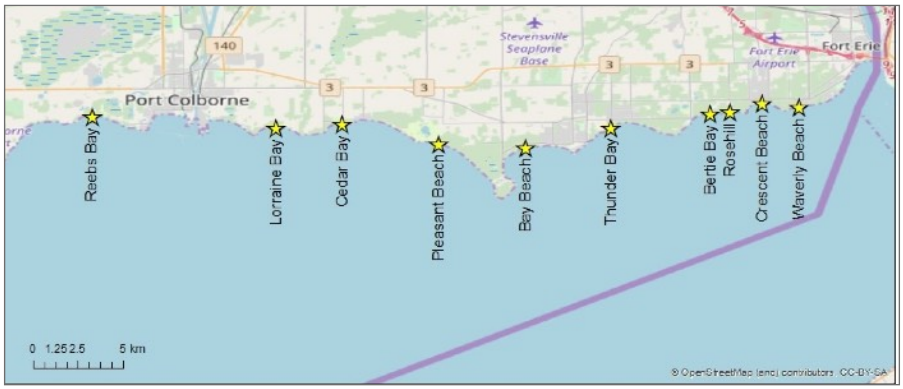
CITIZEN SCIENCE CLADOPHORA SURVEYS

What's Washing up on Lake Erie's Beaches?

Cladophora wash up on shore can be a major detriment to the enjoyment of the coast and is of particular concern in eastern Lake Erie. While great efforts are being made to maintain impacted beaches, little is known about where fouling is occurring from a lakeside perspective. To fill this data gap the Niagara Coastal Community Collaborative has begun a volunteer program to monitor how much Cladophora is washing up, where, and when. The data will be used by federal and provincial governments to inform science as they to develop land based nutrient reduction targets. It will also support local management of beaches.



The Survey Protocol

The intent of the Cladophora surveys is to visually estimate the quantity and level of decay of Cladophora that has washed up on the shore weekly from June - October. The study sites consist of 100m lengths of shoreline broken into 5m segments. Volunteers survey 5/20 segments at random, estimating the volume of cladophora present to fill a sandwich bag, backpack, wheelbarrow, pickup truck, or dumpster.

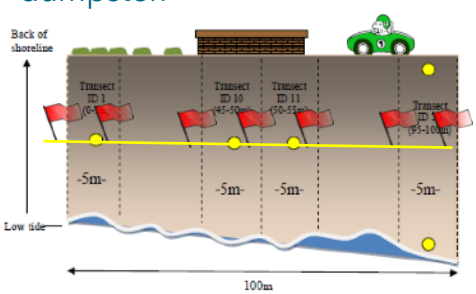
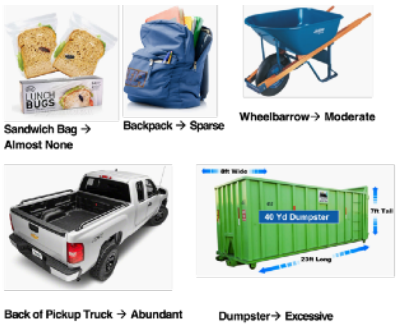


Figure 3. Example of a shoreline section (100m) with yellow circles indicating marked GPS coordinates. Width determines location of GPS coordinates.



What is Cladophora and Why is it a problem?

Cladophora is a green slimy, filamentous algae found naturally along some of the Great Lakes coastlines. It grows on submerged rocks, logs, and other hard surfaces. As the algae grows and dies off, it is dislodged from the lake bottom and wind and wave action cause it to wash up on the shoreline, fouling beaches.

Cladophora needs phosphorus and good water clarity to allow its growth on the bottom of the lake in areas with a hard substrate, such as boulders or bedrock. Wash up of cladophora can impair beach use; it not only impacts the aesthetics of a site but as it decomposes it produces significant odour and potentially promotes bacterial growth that can pose a health risk to people.