Metadata for: Benthic Invertebrate Community (Great Lakes nearshore areas)

This table provides essential information about the program data.

Title	Benthic Invertebrate Community (Great Lakes nearshore areas)
Alternative Title	n/a
Description	The objectives of the Great Lakes Nearshore Long-term Monitoring Network are to identify temporal trends in the nearshore of the Great Lakes, to use the information in identifying lake-wide or regional changes in environmental conditions, and to establish sites removed from major point-source influences in each of the Great Lakes such that the data collected at the sites may be used as a reference when assessing environmental conditions at physically similar sites. Information on the status and trends of environmental conditions are essential for the management of sediment and water quality on local to regional scales. The success, need for refinement, or continued need for management of programs cannot be adequately assessed without feedback derived from appropriate monitoring. Through-time monitoring allows us to identify the onset of anomalous patterns, or document changing conditions due to stressors in the environment. A long-term monitoring station approach enables us to identify predominating stressors and their potential impacts in areas of the Great Lakes. Stations have been selected to reflect a combination of conditions along the nearshore, ranging from overall background-like conditions to areas with a natural integration of stressors such as delta zones of rivers, depositional zones of embayments, and areas where prevailing water circulation patterns focus stressors. Surveys are typically conducted in one of the Great Lakes basins (including connecting channels) in each year of a 3 to 6 year cycle. Approximately 15-20 stations are surveyed annually. Sampling occurs approximately every three years in Lake Ontario and Lake Erie and every six years in Lake Superior and Lake Huron. The shorter sampling interval for the lower lakes reflects the higher level of anthropogenic stress on the lower lakes compared with the upper lakes. The sampling protocols employ standard Ministry methodology, thereby permitting comparisons with historical and ongoing data collections elsewhere in the Ministry. The composition of the benthic invertebrate community at a sampling station is used as a biological indicator of trophic status and general environmental condition to help understand Great Lakes ecosystem function, structure and change. Composition of benthos integrates stress effects over time. In most cases 5 replicate samples were collected at each station. A nine-inch Ponar grab and 600 µm mesh bag were used. The sample (with remaining sediments and plants) was washed into labelled jars and preserved with 10% formalin (by volume) buffered to pH 7. The benthic invertebrate identification and enumeration was completed by external contractors.
Status	Ongoing
Frequency of Updates	Yearly
Contact	Name: Nadine Benoit Email: Nadine.benoit@ontario.ca Organisation: Ministry of the Environment, Conservation and Parks Role: Point of contact
Cited Responsible Parties	See the Open Government Licence - Ontario
Keywords	Benthic Invertebrate, Benthos, Ecosystem, Lake Ontario, Lake Erie, Lake Superior, Lake Huron, Environmental Monitoring

Tags	Great Lakes, EMRB, Water Quality
Use Limitations	n/a
Legal Constraints	See the Open Government Licence - Ontario
Geographic Bounds	Ontario: province-wide West bound: -95.15699 East bound: -74.30798 South bound: 41.6723 North bound: 56.850117
Supplemental Information	Accompanying datasets are available on Open data: Sediment chemistry: https://data.ontario.ca/dataset/sediment-chemistry-great-lakes-nearshore-areas Water chemistry: https://data.ontario.ca/dataset/water-chemistry-great-lakes-nearshore-areas
Date Stamp	July 4, 2023

Date of metadata preparation: 2024-02-28 16:03:08