

# Metadata

<b>Title</b>	The Manitoba Great Lakes Program
<b>Research Program Name</b>	Manitoba Great Lakes Program
<b>Keyword Vocabulary</b>	Polar Data Catalogue
<b>Keyword Vocabulary URL</b>	<a href="https://www.polardata.ca/pdcinput/public/keywordlibrary">https://www.polardata.ca/pdcinput/public/keywordlibrary</a>
<b>Website</b>	<a href="https://umanitoba.ca/earth-observation-science/research/manitoba-great-lakes-program">https://umanitoba.ca/earth-observation-science/research/manitoba-great-lakes-program</a>
<b>Theme</b>	
<b>Title</b>	Freshwater
<b>URL</b>	<a href="https://canwin-datahub.ad.umanitoba.ca/data/group/freshwater">https://canwin-datahub.ad.umanitoba.ca/data/group/freshwater</a>
<b>Title</b>	Remote Sensing
<b>URL</b>	<a href="https://canwin-datahub.ad.umanitoba.ca/data/group/remote-sensing">https://canwin-datahub.ad.umanitoba.ca/data/group/remote-sensing</a>
<b>Status</b>	In Progress
<b>Project Area</b>	Lake Winnipeg Basin,Manitoba Great Lakes
<b>Spatial regions</b>	manitoba-great-lakes
<b>Spatial extent West Bound Longitude</b>	127.45739221572876
<b>Spatial extent East Bound Longitude</b>	-27.066243609948597
<b>Spatial extent South Bound Latitude</b>	-19.980860824921276

<b>Spatial extent North Bound Latitude</b>	140.81676721572876
<b>Project DOI</b>	10.5203/2nq5-pc53
<b>Metadata Creation Date</b>	2024
<b>Publisher</b>	CanWIN
<b>Principal Investigators</b>	
<b>Principal Investigators 1</b>	
<b>Principal Investigator Name</b>	Barber, David
<b>Type of Name</b>	Personal
<b>Principal Investigator Email</b>	<a href="mailto:david.barber@umanitoba.ca">david.barber@umanitoba.ca</a>
<b>Principal Investigator Affiliation</b>	Centre for Earth Observation Science - University of Manitoba
<b>Principal Investigator ORCID ID</b>	0000-0001-9466-3291
	ORCID
	<a href="http://orcid.org/">http://orcid.org/</a>
<b>Co-Investigators</b>	
<b>Co-Investigators 1</b>	
<b>Co-Investigator Name</b>	Papakyriakou, Tim
<b>Co-Investigator Role</b>	ProjectMember
<b>Co-Investigator Email</b>	<a href="mailto:Tim.Papakyriakou@umanitoba.ca">Tim.Papakyriakou@umanitoba.ca</a>

**Co-  
Investigator  
Affiliation** Centre for Earth Observation Science - University of Manitoba

**Co-  
Investigator  
ORCID ID**

**Co-  
Investigators 2**

**Co-  
Investigator  
Name** Herbert, Claire

**Co-  
Investigator  
Role** ProjectManager

**Co-  
Investigator  
Email** [Claire.Herbert@umanitoba.ca](mailto:Claire.Herbert@umanitoba.ca)

**Co-  
Investigator  
Affiliation** Centre for Earth Observation Science - University of Manitoba

**Co-  
Investigator  
ORCID ID** 0000-0003-2724-4200

ORCID

<http://orcid.org/>

**Co-  
Investigators 3**

**Co-  
Investigator  
Name** McCullough, Greg

**Co-  
Investigator  
Role** ProjectLeader

**Co-  
Investigator  
Email** [Greg.McCullough@umanitoba.ca](mailto:Greg.McCullough@umanitoba.ca)

**Co-  
Investigator  
Affiliation** Centre for Earth Observation Science - University of Manitoba

**Co-  
Investigator  
ORCID ID**

<b>Project Data Curator</b>	Herbert, Claire
<b>Project Data Curator email</b>	<a href="mailto:portalco@umanitoba.ca">portalco@umanitoba.ca</a>
<b>Project Data Curator Affiliation</b>	Centre for Earth Observation Science - University of Manitoba
<b>Project Start Date</b>	2012-04-01
<b>Project End Date</b>	
<b>License Name</b>	Creative Commons Attribution 4.0 International
<b>Licence Schema Name</b>	SPDX
<b>Licence URL</b>	<a href="https://spdx.org/licenses">https://spdx.org/licenses</a>
<b>Terms of Access</b>	CanWIN datasets are licensed individually, however most are licensed under the Creative Commons Attribution 4.0 International (CC BY 4.0) Public License. Details for the licence applied can be found using the Licence URL link provided with each dataset. By using data and information provided on this site you accept the terms and conditions of the License. Unless otherwise specified, the license grants the rights to the public to use and share the data and results derived therefrom as long as the proper acknowledgment is given to the data licensor (citation), that any alteration to the data is clearly indicated, and that a link to the original data and the license is made available.
<b>Terms of Use</b>	By accessing this data you agree to [CanWIN's Terms of Use]( <a href="https://dev.umanitoba.links.com.au/data/publication/canwin-data-statement/resource/5b942a87-ef4e-466e-8319-f588844e89c0">https://dev.umanitoba.links.com.au/data/publication/canwin-data-statement/resource/5b942a87-ef4e-466e-8319-f588844e89c0</a> ).
<b>Awards</b>	
<b>Related Facilities</b>	□

## Data and Resources

<b>URL</b>	<a href="https://canwin-datahub.ad.umanitoba.ca/data/dataset/2f8c057e-a1df-4ff8-8a76-744212ea379a/resource/88b2600d-eb58-4bda-b79d-21b8ceb90b3c/download/lmb_algal_stns_thesis.png">https://canwin-datahub.ad.umanitoba.ca/data/dataset/2f8c057e-a1df-4ff8-8a76-744212ea379a/resource/88b2600d-eb58-4bda-b79d-21b8ceb90b3c/download/lmb_algal_stns_thesis.png</a>
<b>Name</b>	Lake Manitoba sample stations from 2016-2020

<b>Description</b>	Map showing stations sampled as part of the [Seasonal Monitoring in the Manitoba Great Lakes Project](https://canwin-datahub.ad.umanitoba.ca/data/project/mbgl-mooring) and [Claire Herbert's Masters Thesis](https://canwin-datahub.ad.umanitoba.ca/data/project/satellite-mbgl).
<b>Format</b>	PNG
<b>Resource Category</b>	documents
<b>URL</b>	<a href="https://share.garmin.com/mbgl">https://share.garmin.com/mbgl</a>
<b>Name</b>	MBGL Live Field sampling
<b>Description</b>	See where we are when we're in the field. View our location sent from our Garmin InReach
<b>Format</b>	HTML
<b>Resource Category</b>	web_services
<b>URL</b>	<a href="https://umanitoba.ca/earth-observation-science/field-stories#manitoba-great-lakes-program">https://umanitoba.ca/earth-observation-science/field-stories#manitoba-great-lakes-program</a>
<b>Name</b>	Stories from the Field
<b>Description</b>	**Click the link above to view the field stories from the Manitoba Great Lakes Program webpage.** Students in CEOS conduct research that contributes to the global conversation on climate change and its effects on our planet. From their field research, they write stories and bring photos back from their experiences.
<b>Format</b>	HTML
<b>Resource Category</b>	web_services
<b>URL</b>	<a href="https://canwin-datahub.ad.umanitoba.ca/data/dataset/2f8c057e-a1df-4ff8-8a76-744212ea379a/resource/fc5097ad-3a58-4fbc-9173-f75b633da822/download/lwpo_stns.png">https://canwin-datahub.ad.umanitoba.ca/data/dataset/2f8c057e-a1df-4ff8-8a76-744212ea379a/resource/fc5097ad-3a58-4fbc-9173-f75b633da822/download/lwpo_stns.png</a>
<b>Name</b>	Lake Winnipegosis sample sites, 2016-2020
<b>Description</b>	Map showing stations sampled as part of the [Seasonal Monitoring in the Manitoba Great Lakes Project](https://canwin-datahub.ad.umanitoba.ca/data/project/mbgl-mooring) and [Claire Herbert's Masters Thesis](https://canwin-datahub.ad.umanitoba.ca/data/project/satellite-mbgl).
<b>Format</b>	PNG
<b>Resource Category</b>	documents

# Sub-projects

<b>Title</b>	Seasonal lake monitoring in the MBGL
<b>URL</b>	<a href="https://canwin-datahub.ad.umanitoba.ca/data/project/mbgl-mooring">https://canwin-datahub.ad.umanitoba.ca/data/project/mbgl-mooring</a>
<b>Title</b>	Nutrient Exports in the Swan Lake Watershed - Master's Thesis
<b>URL</b>	<a href="https://canwin-datahub.ad.umanitoba.ca/data/project/nutrient-exports-swan-lake-masters">https://canwin-datahub.ad.umanitoba.ca/data/project/nutrient-exports-swan-lake-masters</a>
<b>Title</b>	MBGL Idronaut Data
<b>URL</b>	<a href="https://canwin-datahub.ad.umanitoba.ca/data/project/mbgl-idronaut-data">https://canwin-datahub.ad.umanitoba.ca/data/project/mbgl-idronaut-data</a>
<b>Title</b>	Land to Ocean Aquatic Continuum of Carbon Research Program
<b>URL</b>	<a href="https://canwin-datahub.ad.umanitoba.ca/data/project/ct-freshwater-marine-spectrum">https://canwin-datahub.ad.umanitoba.ca/data/project/ct-freshwater-marine-spectrum</a>
<b>Title</b>	A comparison of water quality in the Upper Manitoba Great Lakes
<b>URL</b>	<a href="https://canwin-datahub.ad.umanitoba.ca/data/project/satellite-mbgl">https://canwin-datahub.ad.umanitoba.ca/data/project/satellite-mbgl</a>

# Related Publications

<b>Title</b>	Manitoba Great Lakes Protocols
<b>URL</b>	<a href="https://canwin-datahub.ad.umanitoba.ca/data/publication/mbgl-protocols">https://canwin-datahub.ad.umanitoba.ca/data/publication/mbgl-protocols</a>
<b>Title</b>	Hydrological forcing of a recent trophic surge in Lake Winnipeg
<b>URL</b>	<a href="https://canwin-datahub.ad.umanitoba.ca/data/publication/hy-forc-lwpg">https://canwin-datahub.ad.umanitoba.ca/data/publication/hy-forc-lwpg</a>
<b>Title</b>	The Chemical Analysis of Fresh Water
<b>URL</b>	<a href="https://canwin-datahub.ad.umanitoba.ca/data/publication/fwi-chem-fw">https://canwin-datahub.ad.umanitoba.ca/data/publication/fwi-chem-fw</a>

# Campaigns

<b>Title</b>	MBGL Synoptic Survey 2 August 4 - August 12 , 2017
<b>URL</b>	<a href="https://canwin-datahub.ad.umanitoba.ca/data/campaign/mbgl-ss2-2017">https://canwin-datahub.ad.umanitoba.ca/data/campaign/mbgl-ss2-2017</a>
<b>Title</b>	MBGL Synoptic Survey 1 May-June 2016
<b>URL</b>	<a href="https://canwin-datahub.ad.umanitoba.ca/data/campaign/mbgl-ss1-may-june-2016">https://canwin-datahub.ad.umanitoba.ca/data/campaign/mbgl-ss1-may-june-2016</a>
<b>Title</b>	MBGL_2021_09_M2
<b>URL</b>	<a href="https://canwin-datahub.ad.umanitoba.ca/data/campaign/mbgl_2021_09_m2">https://canwin-datahub.ad.umanitoba.ca/data/campaign/mbgl_2021_09_m2</a>
<b>Title</b>	MBGL Synoptic Survey 3 September 17 - September 29 , 2017
<b>URL</b>	<a href="https://canwin-datahub.ad.umanitoba.ca/data/campaign/mbgl-ss3-2017">https://canwin-datahub.ad.umanitoba.ca/data/campaign/mbgl-ss3-2017</a>
<b>Title</b>	MBGL Synoptic Survey 2 July 27 - August 20, 2016
<b>URL</b>	<a href="https://canwin-datahub.ad.umanitoba.ca/data/campaign/mbgl-ss2-july-august-2016">https://canwin-datahub.ad.umanitoba.ca/data/campaign/mbgl-ss2-july-august-2016</a>
<b>Title</b>	MBGL Synoptic Survey 1 May 15 - May 23, 2017
<b>URL</b>	<a href="https://canwin-datahub.ad.umanitoba.ca/data/campaign/mbgl-synoptic-survey-1-may-15-2017">https://canwin-datahub.ad.umanitoba.ca/data/campaign/mbgl-synoptic-survey-1-may-15-2017</a>