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**Lake Winnipeg Basin Information
Network (LWBIN)**



Lake Winnipeg Basin Information Network

Data Statement

April 23, 2014



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1. Introduction

The Lake Winnipeg Basin Information Network (LWBIN) is a web based data and information network created by Environment Canada as part of the Lake Winnipeg Basin Initiative under Canada's Action Plan on clean water. It was created to facilitate sharing of water quality data and information for the Lake Winnipeg Basin and its contributing watersheds (4 provinces and 4 U.S. states). In 2012 management of the network transferred to the Centre for Earth Observations Science (CEOS) at the University of Manitoba, where it supports the CEOS key theme of aquatic ecosystems.

The LWBIN enhances research, education and decision making in the watershed by:

1. Enabling networking and collaboration among researchers, decision makers, government agencies, organizations and the public by acting as a portal for open-source data, metadata and information;
2. Acting as a central hub where decision makers and managers share access to current scientific information to guide and evaluate water and land management policy and programs; and
3. Facilitating Citizen Science and public Education and Outreach throughout the basin through tools such as Know Your Watershed.

2. Objectives

This document describes the LWBIN Data Statement (DS) and Terms of Use (TOU) for accessing, uploading and searching LWBIN data, metadata, information and products. It aims to strike a balance between the rights of investigators and the need for wide spread access through open data sharing of data, meta-data and products. The ultimate goal of this document is to facilitate the production of data analysis, reports and management decisions by stating the conditions for data submission, access and use.

Specific objectives of the LWBIN DS include:

- Facilitating information exchange among LWBIN researchers and user groups;
- Developing, maintaining and updating a Lake Winnipeg Basin Data and MetaDatabase, based on Canadian Geospatial Data Infrastructure Standards (CGDI) and North American Profile (NAP) to ensure international interoperability;
- Using existing knowledge and infrastructure in working towards an integrated data management system (i.e. connect to existing services such as web map (WMS) or web feature (WFS)) to avoid duplication of systems;



- Respecting confidentiality requirements and researcher rights to publication;
- Ensuring the long term preservation of LWBIN data sets; and
- Ensuring databases are widely and easily accessible to users.

3. Definitions and LWBIN Assets

- **Data:** mean representation of information or concepts, in any form (*Personal Information Protection and Electronic Documents Act*)
- **Data points:** are individual numerical data
- **Data products:** are aggregated or combined sets of observation data, model data, metadata or images (e.g. Know Your Watershed map)
- **Data sets:** are sets of data points grouped by any kind of pertinent criteria (e.g. vertical profiles, time series, survey data)
- **Data sources:** may be the originators of the data, metadata, images or products, including producers of scientific work or intermediaries such as associated institutes that commissioned or funded the work
- **Distributed database:** A distributed database or system is where data can be located at various geographically distributed nodes but still be accessible through one unique hub (i.e. LWBIN).
- **Image data:** are images (e.g. Satellite, maps, pictures) providing information on various aspects of the Lake Winnipeg Basin.
- **Metadata:** are data about data sets: can include information about observation, image, data sets and the related attribute data such as type, location, date/time, unit of measurement, accuracy of geolocation data, precision or method of measurement and owner/contact of the data and metadata.
- **Observation data:** are measurements or observations (*in situ* and remote sensing) of freshwater environmental variables. In order to interpret and process these data, related attribute data such as data type, location, time and unit of measurement are required.
- **Quality flags:** are alphanumeric indicators added to datasets after quality check protocols have occurred



4. Contribution of Data

4.1 Data sources

Data sources may be the originators of the data, metadata, images or products, for example, persons responsible for the scientific work that produce them; or an intermediary such as the data sources' associated institute(s), the agency that commissioned or funded the work, or even the information technology group responsible for preparing the data for submission to the LWBIN. The data source must precisely specify through use of the metadata entry form, any access restrictions that it wishes the LWBIN to uphold. Some cases that call for restrictions include data which is protected by law and data submitted during a prescribed period of exclusive use.

4.2 Data distribution

All data accessible through the LWBIN are considered to be freely available, unless otherwise explicitly specified and agreed. Where possible, data quality flags are also appended to datasets.

4.3 Metadata and catalogue services

Metadata and other supplemental information are required to enable the use of data without ambiguity or uncertainty. Metadata is structured in Canadian Geospatial Data Infrastructure (CGDI) and North American Profile (NAP) format to ensure compatibility with ISO-standards. Information about the CGDI and NAP meta data fields required by LWBIN can be found on the FAQ or Data Templates pages of the LWBIN website. Details about the CGDI and NAP profiles can be found on the CGDI website at <http://www.fgdc.gov/metadata/documents/MetadataQuickGuide.pdf> and <http://www.fgdc.gov/metadata/geospatial-metadata-standards#nap>.

4.4 Data Sets Integration

Uniformity of data format and quality have a high priority. All data, are made available by using LWBIN standardized coding formats and protocols to the greatest extent possible.

4.5 Quality Assurance

The LWBIN develops and applies quality assurance procedures as appropriate and feasible, and in cooperation with data sources and other organizations. The data source always retains



complete responsibility for data quality. To indicate the quality control that has been applied to a specific data set, the LWBIN utilises quality flags. The system allows re-submission of data throughout the quality control process, and thus also allow for accelerated submission of data. The reporting of suspected errors in the data will be facilitated, and that information relayed to the respective data source so corrections can be made.

4.6 Preservation of Data

For the LWBIN to succeed, archival systems must be in place, so that the collected data, images, products and metadata may be safeguarded for future analysis. Data, images and products and related metadata will be permanently archived by the LWBIN and the University of Manitoba Information Services and Technology department.

5. Use of Data

5.1 General Conditions

LWBIN data is accessible as per the following definitions by the associated agencies (in brackets):

- **Availability and Access** (Government of Canada and the Open Knowledge Foundation): data available as a whole, in a convenient and modifiable form, and at no more than a reasonable reproduction cost, preferably by downloading over the internet.
- **Free and unrestricted** (World Meteorological Organization (WMO) Resolution 40): non-discriminatory and without charge. “Without charge” meaning a charge that is no more than the cost of reproduction and delivery without charge for the data and products themselves

Access conditions may vary by asset (Section 3) type:

- 1) Metadata are freely accessible without any condition;
- 2) Data and data products require:
 - a. Website registration to obtain username and pw;
 - b. Acceptance of user conditions and terms for each data/data product as set by data owners.

The availability of the data and data products may include an obligation by the users to contact the data source or designee to request permission to use the data and/or an obligation to acknowledge the data source and the LWBIN in any publication using these data. Data or data products may be password protected by the data source.



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Exceptions to the open, free and unrestricted data access include:

- Where local and Traditional Knowledge is used, rights of the Knowledge holders shall not be compromised;
- Where data release may cause harm, specific aspects of the data may be kept protected, or generalized to a broader geographic region (e.g.: location of nests of endangered species, location of traditional use areas or sacred sites); and
- Where pre-existing data is already subject to access restrictions.

5.2 Data Acknowledgment

The users of LWBIN data must formally acknowledge data originators, contributors and sources. This acknowledgement should appear as a citation, such as when citing a book or journal article. In instances where formal citations are not possible, the use of ethical policies for data collection and data use are recommended. Such models are available in Article 8(j) of the 1992 Convention on Biological Diversity



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6. References

Convention on Biological Diversity. 1992. Article 8(j): Traditional Knowledge, Innovations and Practices. <http://www.biodiv.org/programmes/socio-eco/traditional/default.asp>

ICSU (International Council for Science). 2004. ICSU Report of the CSPR Assessment Panel on Scientific Data and Information

The Freedom of Information and Protection of Privacy Act (C.C.S.M. c. F175) , Access and Privacy Regulation. Retrieved from the government of Manitoba website: <http://web2.gov.mb.ca/laws/regs/pdf/f175-064.98.pdf>

The Personal Information Protection and Electronic Documents Act (S.C. 2000, c. 5), Retrieved from the government of Canada website: <http://laws-lois.justice.gc.ca/PDF/P-8.6.pdf>

The University of Manitoba Act (C.C.S.M. c. U60). Retrieved from the Manitoba Laws website: <http://web2.gov.mb.ca/laws/statutes/ccsm/u060e.php>

WMO Resolution 40 (Cg-XII; see <http://www.nws.noaa.gov/im/wmor40.htm>)



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APPENDIX A

TERMS OF USE FOR THE LAKE WINNIPEG BASIN INFORMATION NETWORK (LWBIN)



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Terms of Use of the Lake Winnipeg Basin Information Network (LWBIN)

IMPORTANT: YOUR ACCESS TO THIS WEB SITE IS SUBJECT TO LEGALLY BINDING TERMS OF USE. CAREFULLY READ ALL OF THE FOLLOWING TERMS OF USE BEFORE PROCEEDING.

1. Terms

By accessing this Web site and Database, you are agreeing to be bound by these Terms of Use, all applicable laws and regulations, and agree that you are responsible for compliance with any applicable local laws. If you do not agree with any of these terms, do not use this site. Any claim relating to this web site shall be governed by the laws of the Province of Manitoba without regard to its conflict of law provisions.

2. Ownership and Copyright

In using this Web site, you acknowledge that any and all information, content, reports, data, databases, graphics, interfaces, web pages, text, files, software, product names, company names, trademarks, logos and trade names contained on this website (collectively the "Content") including the manner in which the content is presented or appears and all information relating thereto are the property of their respective owners as indicated, the LWBIN administrators or its licensors, as the case may be.

3. Purpose of Database

The LWBIN Database is formed of specific metadata and data provided by researchers ("Researcher"), with their express consent. The purpose of adding metadata is to create an internationally standardized and searchable data collection. Please note that the addition of Content in the Database does not constitute an endorsement by the LWBIN administrators of any such Content provided by the Researcher. The University and LWBIN administrators have no control or power over such Content.

4. Use Licence

Permission is granted to temporarily download one copy of the materials within the Database for personal, non-commercial transitory viewing only.

This is the grant of a licence, not a transfer of title, and under this licence you may not:



- (a) modify or copy the materials without acknowledgement of the change from the original data;
- (b) use the materials for any commercial purpose without permission from the data distribution contact or unless specifically noted in the dataset constraints;
- (c) attempt to decompile or reverse engineer any software contained on the LWBIN website;
- (d) remove any copyright or other proprietary notations from the materials; and
- (e) transfer the materials to another person or “mirror” the materials on any other server, unless otherwise noted in the data set constraints.

5. Database access

The University or the LWBIN administrators may terminate your access to this Database if you make or permit any unauthorized use of this Database or Content. Such actions by you may violate applicable laws including, without limitation, copyright, patents and trademark laws and communications regulations and statutes.

6. Exclusion of Warranties

The University and the LWBIN administrators make no representation or warranty regarding the functionality or condition of this Database, its suitability for use, or that its use will be uninterrupted or error-free.

THE DATABASE AND ALL ITS CONTENT ARE PROVIDED TO YOU "AS IS" WITHOUT WARRANTIES OF ANY KIND. THE UNIVERSITY AND THE LWBIN ADMINISTRATORS DISCLAIM ALL WARRANTIES OR CONDITIONS, WRITTEN OR ORAL, STATUTORY, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, NO REPRESENTATION OR WARRANTY THAT (I) THE CONTENT CONTAINED IN OR MADE AVAILABLE THROUGH THE DATABASE WILL BE OF MERCHANTABLE QUALITY AND FIT FOR A PARTICULAR PURPOSE, (II) THE DATABASE OR ITS CONTENT WILL BE ACCURATE, COMPLETE, CURRENT, RELIABLE, OR TIMELY, (III) THAT THE OPERATION OF THE DATABASE WILL BE UNINTERRUPTED OR ERROR-FREE, (IV) THAT DEFECTS OR ERRORS IN THE DATABASE OR THE CONTENT, BE IT HUMAN OR COMPUTER ERRORS, WILL BE CORRECTED, (V) THAT THE DATABASE WILL BE FREE FROM VIRUSES OR HARMFUL COMPONENTS, AND (VI) THAT COMMUNICATIONS TO OR FROM THE DATABASE WILL BE SECURE AND/OR NOT INTERCEPTED.

The Content is not intended to provide specific technical, business, accounting or other advice for your individual circumstances, and you should consult your own professional



advisors to determine how any information or material provided in this Database apply to your individual circumstances.

These exclusions are in addition to any specific exclusion otherwise provided in these Terms of Use. To the extent that the jurisdiction to which you are subject does not allow exclusion of certain warranties, such exclusions which are not permitted, do not apply.

7. Limitation of Liability

THE UNIVERSITY AND LWBIN ADMINISTRATORS WILL NOT BE LIABLE FOR ANY DAMAGES, EITHER DIRECT OR INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL, FOR USE OF OR INABILITY TO USE PRODUCTS OR SERVICES OF ANY KIND, DELAY OF OR PARTIAL DELIVERY, TERMINATION OF RIGHTS OR LOSS OF PROFITS, DATA, BUSINESS OR GOODWILL, WHETHER ON A CONTRACTUAL OR EXTRACTIONAL BASIS, OR TO PROVIDE INDEMNIFICATION OR ANY OTHER REMEDY TO YOU OR ANY THIRD PARTY. THE FOREGOING LIMITATION SHALL APPLY EVEN IF THE UNIVERSITY OR THE LWBIN ADMINISTRATORS KNEW OF OR OUGHT TO HAVE KNOWN OF THE POSSIBILITY OF SUCH DAMAGES.

Your sole and exclusive remedy is to discontinue using and accessing this Database. To the extent that the jurisdiction to which you are subject does not allow any part of such limitation, such part does not apply.

8. Ownership and Confidentiality

The Content is provided by the Data Sources and Researchers. The University and the LWBIN administrators do not represent or warrant that such Content does not infringe the rights of any other person or entity. Furthermore, you acknowledge that information or material which you provide electronically through your access to or usage of this Database is not confidential or proprietary, except as may be required under applicable law, and acknowledge that unprotected e-mail communication over the Internet is subject to possible interception, alteration or loss. Trademarks and logos (collectively, "Marks") displayed on this Database are registered or unregistered Marks of the respective Partners, Collaborators, the LWBIN, the University or others, are the property of their respective owner, and may not be used without written permission of the owner of such Marks except where stated.

9. Links

Links and references to other Internet websites are provided to you as a convenience



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only. The University and LWBIN have not reviewed and do not expressly or impliedly endorse other Internet websites or any information or material, or the accessibility thereof, via such links, and do not assume any responsibility for any such other Internet websites, information or material posted thereon, or products or services offered thereon.

10. Damage to Others

You agree not to introduce into or through this Database any information or material which may be harmful to others. Among other things, you agree not to include, knowingly or otherwise, any error or defect in Content which may, among other things, be a libel, slander, defamation or obscenity, or promote hatred or otherwise give rise to a criminal offence or civil liability on the part of any person or entity.

11. Changes to Terms of Use

The University or LWBIN administrators may modify, alter or otherwise update the Terms of Use applicable to this Database from time to time without notice, and you agree to be bound by such terms as are in effect at the time at which you access the Database.

12. Contact Information

If you have any questions or concerns about the Database terms, practices, third party material, or about your personal information if you provide any, please contact the LWBIN at:

Phone: (204) 474-8657

Email: portalco@umanitoba.ca

Mail: Lake Winnipeg Basin Information Network
522 Wallace Building
Winnipeg, MB
Canada
R3T 2N2



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APPENDIX B

LAKE WINNIPEG BASIN INFORMATION NETWORK PRIVACY AND ONLINE PROTECTION



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Privacy Statement

The LWBIN is committed to preserving and safeguarding your right to privacy. As part of the University of Manitoba, the LWBIN must comply with *The Freedom of Information and Protection of Privacy Act* (FIPPA) and the related University policy, available online at: http://umanitoba.ca/admin/governance/governing_documents/community/244.html

The University of Manitoba Personal Information Collection Statement shown on information submission forms states:

Your personal information is being collected under the authority of *The University of Manitoba Act*. The information you provide will be used by the University for access to the Lake Winnipeg Basin Information Network, to ship a requested product, to anticipate and resolve problems with your service, and to inform you of products and services that better meet your needs. Your personal information will not be used or disclosed for other purposes, unless authorized by *The Freedom of Information and Protection of Privacy Act* (FIPPA). If you have any questions about the collection of your personal information, contact the Access & Privacy Office (tel. 204-474-9462), 233 Elizabeth Dafoe Library, University of Manitoba, Winnipeg, MB, R3T 2N2.

How the University of Manitoba Protects Your Privacy Online

Collection and Use: The University of Manitoba will collect and use identifiable information for use of the service, to ship a requested data product, to anticipate and resolve problems with your service, and to inform you of products and services that better meet your needs. Data is stored on a dedicated and secure server within the UM secure data center.

The nature of the Internet is such that Web servers automatically collect certain information about a visit to a website, including the visitor's Internet Protocol (IP) address. IP addresses are unique numbers assigned by Internet Service Providers (ISP) to all devices used to access the Internet. Web servers automatically log the IP addresses of visitors to their sites. The IP address, on its own, may not identify an individual. However, in certain circumstances, such as with the co-operation of an ISP for example, it could be used to identify an individual using the site. For this reason, the IP address can be considered to be personal information, particularly when combined with other data automatically collected when visitor requests a Web page such as the page or pages visited, date and time of the visit.

Unless otherwise noted, the University of Manitoba and the LWBIN do not automatically gather any specific information from you, such as your name, telephone number or email address. The LWBIN would obtain this type of information only if you supply it to us, for example, by email



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or by filling in a contact form. In such cases, how your personal information is handled is noted in the Personal Information Collection Statement.

In cases where services are provided by organizations outside of the University and the Government of Canada, such as social media platforms or mobile applications, IP addresses may be recorded by the Web server of the third-party service provider.

Third-Party Social Media: The LWBIN's use of social media serves as an extension of its presence on the Web. Social media account(s) are public and are not hosted on University of Manitoba servers. Users who choose to interact with us via social media should read the terms of service and privacy policies of these third-party service providers and those of any applications you use to access them. The LWBIN uses *Twitter* and YouTube.

Digital Markers (including cookies): A digital marker is a resource created by the visitors' browser in order to remember certain pieces of information for the Web server to reference during the same or subsequent visit to the website. Examples of digital markers are "cookies" or HTML5 web storage. Some examples of what digital markers do are as follows:

- they allow a website to recognize a previous visit each time the visitor accesses the site;
- they track what information is viewed on a site which helps website administrators ensure visitors find what they are looking for.

The LWBIN website may use *sessional* digital markers on its website. During your on-line visit, your browser may exchange data with the LWBIN's Web server. Upon ending your session by closing your browser, this digital marker does not remain on your computer. As such, the digital marker used does not allow the LWBIN to identify individuals upon subsequent visits.

You may adjust your browser settings to reject digital markers, including cookies, if you so choose. Visiting our website with cookies disabled will have no significant impact on your browsing experiences on the LWBIN site. Please consult your browser's Help Menu for instructions.

Web Analytics: Web analytics is the collection, analysis, measurement, and reporting of data about Web traffic and visits for purposes of understanding and optimizing Web usage.

When your computer requests a LWBIN Web page, our institution collects the following types of information for Web analytics using digital markers (as described above):



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- the originating IP address;
- the date and time of the request;
- the type of browser used; and
- the page(s) visited

Information used for the purpose of Web analytics is collected by the LWBIN pursuant to its mandate as outlined within *FIPPA* and the *Personal Information Protection and Electronic Documents Act*. Such data may be used to improve the LWBIN website as well as for information technology statistical purposes, audit, evaluation, research, planning and reporting.

The LWBIN uses Google Analytics to conduct Web analytics internally. The information is not disclosed to an external third party service provider. Users wishing to prevent their data being collected and used by the LWBIN through Google Analytics can opt-out by installing the Google Analytics Opt-out Browser Add-on from Google (<https://tools.google.com/dlpage/gaoptout>).

Disclosure: The University of Manitoba and the LWBIN will not sell, trade, or disclose to third parties any identifiable user information derived from the registration for or use of an LWBIN online service -- including user names and addresses -- without the consent of the user, unless authorized by FIPPA or other Act.

If the University of Manitoba or the LWBIN uses other agents, contractors or companies to perform services on its behalf, the University and the LWBIN will ensure that the organization protects your user identifiable information consistent with University standards under FIPPA. If the University or the LWBIN includes your name and any other user identifiable information in a directory that the LWBIN creates from information we receive as an online service provider, the organization will give you the opportunity to have your information excluded from that directory.

Security: The University of Manitoba has implemented technology, security features and guidelines to safeguard the privacy of your user identifiable information from unauthorized access or improper use.

Improper Conduct: The University of Manitoba may also use user identifiable information to investigate and help prevent potentially unlawful activity or activity that threatens the network or otherwise violates the user agreement for that service (e.g. MY LWBIN).

Account Information: The University of Manitoba and the LWBIN honors requests from users to review all user identifiable information maintained in reasonably retrievable form, which currently consists of your name, address, e-mail address, telephone number and/or shipping



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information, and will correct any such information which may be inaccurate. Users may verify that appropriate corrections have been made.

Changes in Practices: The University of Manitoba will keep this document current. The LWBIN will inform you of any changes that are made.