The Great Lakes
Policy Report

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The Great Lakes Policy Report is a quarterly news report published by the Little Traverse Bay Bands of Odawa Indians Natural Resource Department's Environmental Services Program. The report features Great Lakes policy updates and relevant initiatives, projects, and issues.

The report is meant to be an educational document, and does not express an opinion on the subjects discussed. Stories and information cited in this report are taken from a variety of sources including news articles, non-governmental reports, interviews, and government documents.

Great Lakes Lakewide Action and Management Plans: *collaborative management and targeted actions*

Under the Great Lakes Water Quality Agreement (GLWQA), the governments of Canada and the United States are committed to protecting the physical, biological and chemical integrity of the waters of the Great Lakes.

The Lakewide Action and Management Plans (LAMPs) are collaborative, adaptive management programs that assess each lake ecosystem. They also sets priorities, and implement actions to achieve the GLWQA objectives on a lakewide scale.

Each of the five Great Lakes has a LAMP. LAMPs are governed by committees of federal, tribal, state, and local government representatives. LAMPS also have participation from local non-governmental participants. For example, the Lake Michigan LAMP has active participation from the Lake Michigan Stakeholder's Forum and local planning commissions' Watershed Academy network. But each LAMP is distinct and their structures vary.

LAMPs use a watershed approach that looks at land use, urban development, habitat and biodiversity issues that im-

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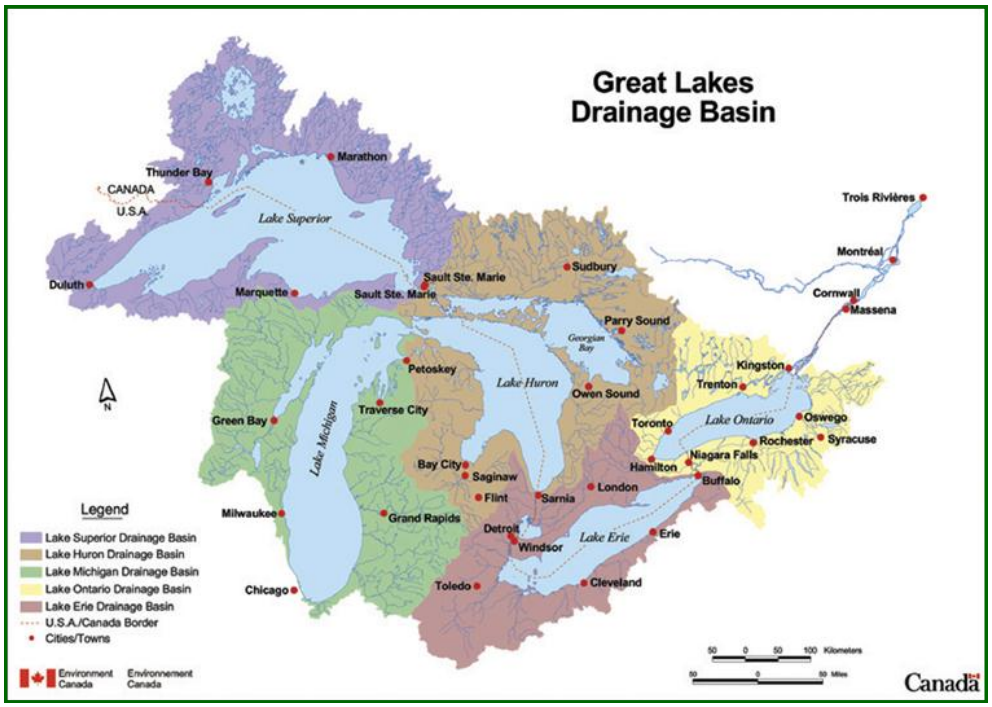

The Great Lakes Lakewide Action and Management Plans (LAMPs) follow each Great Lake's drainage basin boundary (pictured above). Photo Credit Environment Canada

Great Lakes Water Levels Update

The water levels of the Great Lakes were at record lows this past winter and caused understandable concerns. But after a wet spring to start 2013, levels have been slowly increasing. Although levels are still well below their long-term average on Lake Michigan-Huron, water levels are no longer hitting record lows. The other Great Lakes, such as Lake Superior, are closer to their long-term average than Lake Michigan-Huron.

As we continue to experience water level fluctuations, it is important to remember that there are many factors that influence Great Lakes water levels. Natural water level drivers include wind and seiche - a storm surge or sustained winds from one direction push the water level up at one end of the lake and make the level drop at the opposite end – activity in the short-term (hours to days), mid-term (months to years) factors include: lake surface evaporation, land evaporation,

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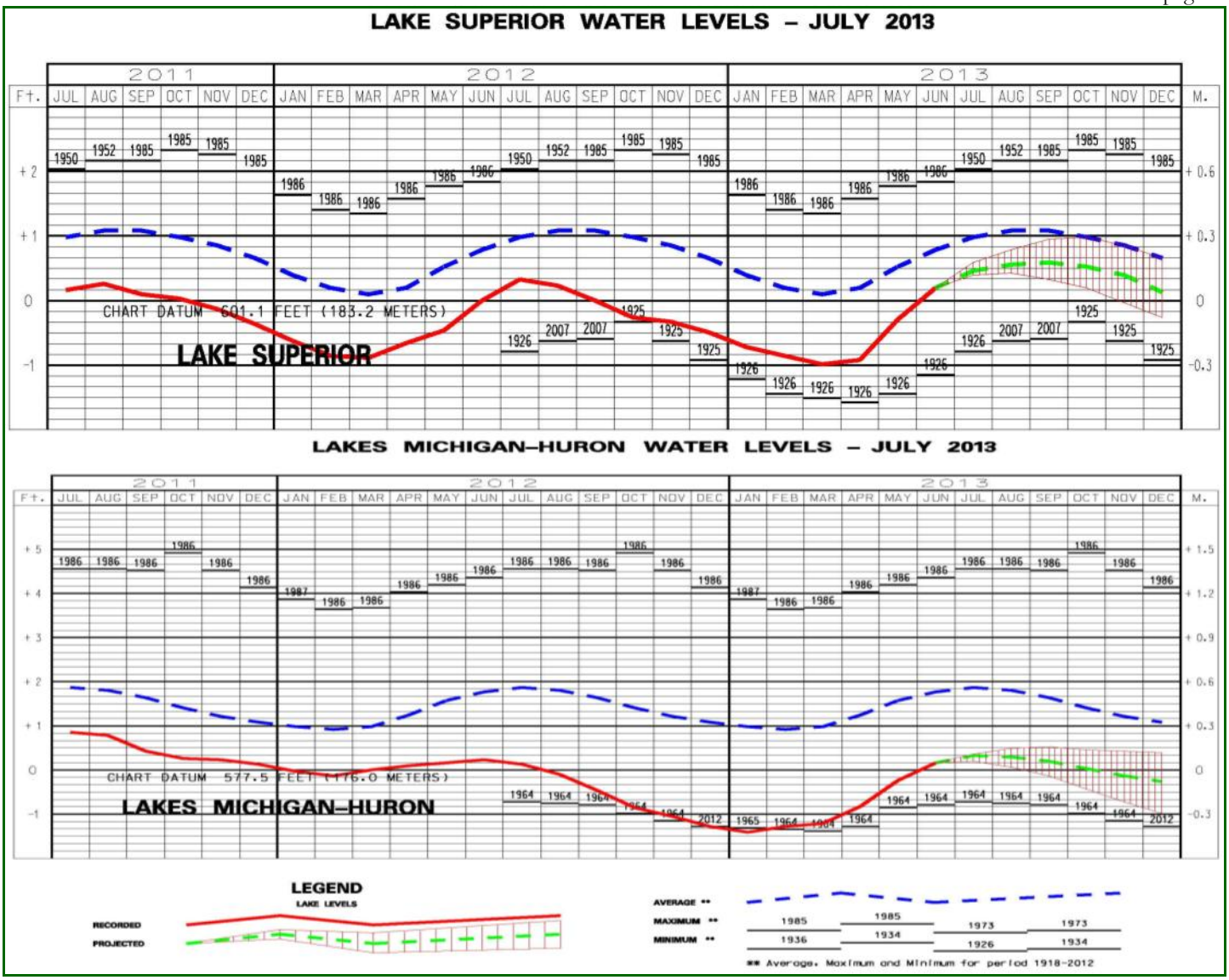

Lake Superior (top) and Lake Michigan-Huron (bottom) water levels over the last 24 months. The long term averages for each lake is shown as a dashed blue line, while projected levels are shown as a dashed green line through December 2013. Graph Credit U.S. Army Corps of Engineers.

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pact the Great Lakes ecosystem, as well as looking at the lake system itself. Again, issues may be lake specific. For example, the Lake Superior watershed contains active mining, and is a focus of the lake's binational LAMP, whereas Lake Erie suffers from high nutrient loads leading to harmful algal blooms.

Another important duty of the LAMPs is to work with each lake's contaminated Areas of Concern (AOCs). AOCs are designation under the GLWQA and are priority areas to be cleaned up. AOCs can negatively impact local water quality, human health, and fish and wildlife health. LAMPs set actions and monitor the cleanup of AOCs.

Under the 2012 GLWQA, LAMPs have a new priority to develop an "integrated nearshore framework." The framework is intended to put more focus on the nearshore areas of the lakes, which are more vulnerable to human activities than offshore areas. The framework will increase coordination, science monitoring, and identify conservation needs.

Another responsibility of the LAMPs is to identify and formalize Specific Objectives for each lake. There are two forms of Specific Objectives, Lake Ecosystem Objectives and Substance Objectives. Substance Objectives are numeric targets for substances that both the United States and Canada agree upon (except in the case of Lake Michigan, which is solely within the jurisdiction of the United States). For example, a Substance Objective that will be determined for each Great Lake in the coming years is to set a scientifically based value for phosphorus levels, a harmful nutrient that causes algal blooms. But each LAMP will be able to set additional Lake Ecosystem Objectives based on issues relevant to each respective Great Lake.

Lake Ecosystem Objectives can be narrative or numeric. They can include physical parameters for the water, such as temperature or suspended solids. They can also include organisms, such as the desired biomass of an organism. For example, the desired biomass of a fish species. But all objectives established under a LAMP have to support the ecological conditions and desired objectives stated in the GLWQA.

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Great Lakes Geography

Islands of the Great Lakes

The Great Lakes contain over 32,000 islands – the world's largest collection of freshwater islands in the world. They range in size from rocky knolls to the largest freshwater islands in the world, including Manitoulin Island and Isle Royale. Lake Huron contains almost three quarters (75%) of all Great Lakes islands, and most of them are within Georgian Bay. Of the five Great Lakes, Lake Michigan contains the fewest number of islands.

- Lake Superior has 2,591 islands
- Lake Michigan has 726 islands
- Lake Huron has 23,883 islands (22,196 of those are within Georgian Bay)
- The St Clair system has 403 islands
- Lake Erie has 1,773
- Lake Ontario has 1,847
- St. Lawrence River has 852

Great Lakes islands are diverse. Some islands are practically untouched by humans while others are highly developed. But most islands in the Great Lakes have common threats. Invasive species (transported by humans), climate change impacts on species and water, and human development and land-use are some of the more important issues negatively impacting Great Lakes islands today.

Manitoulin Island in northern Lake Huron is one of the largest Great Lakes islands and has strong Native American heritage. Photo Credit Wikimedia

GREAT LAKES POLICY WATCH

In this section you can find current legislation and proposed regulations related to the Great Lakes. When applicable public comment periods and information on how to comment will be given.

Rules and Regulations

The National Oceanic and Atmospheric Administration (NOAA) proposes to expand the boundary of Thunder Bay National Marine Sanctuary (TBNMS or sanctuary) and revise the corresponding sanctuary terms of designation. The proposed new boundary for TBNMS would increase the size of the sanctuary from 448 square miles to 4,300 square miles and would extend protection to 47 additional known historic shipwrecks. NOAA is soliciting public comment on the proposed rule and draft environmental impact statement. More information and comment process can be fount at http://thunderbay.noaa.gov/

The Great Lakes Ecological and Economic Protection Act of 2013 was introduced into the U.S. Senate in late June 2013 by Senators Levin and Kirk. The bill would authorize the Great Lakes Restoration Initiative at $475 million annually for five years; reauthorizes the Great Lakes Legacy Act that helps communities clean up toxic areas; and reauthorizes the EPA's Great Lakes National Program Office, which oversees federal restoration efforts among other things. More information at http://healthylakes.org/news-events/press-release/coalition-supports-new-great-lakes-bill/

On July 1st, the President of the United States officially directed the U.S. Environmental Protection Agency to Address carbon emissions from future and existing power plants. Proposed regulations are expected this fall for future power plants. While existing power plant rules will be proposed by June 2014 and finalized by June 2015—implementation may not occur until 2016. The Presidential memorandum can be found at http://www.gpo.gov/fdsys/pkg/FR-2013-07-01/pdf/2013-15941.pdf

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Tribal representation on the LAMPs has been fairly good over the years. There has perhaps been more tribal participation on the Lake Superior and Lake Michigan LAMPs due to the number of tribes in Minnesota, Wisconsin, and Michigan. But lakes Huron and Ontario have also had tribal and First Nation participation. Little Traverse Bay Bands currently has staff on the Lake Michigan LAMP, and CORA representation on the Lake Superior binational LAMP.

In October 2013, the Lake Michigan LAMP is hosting the biannual State of Lake Michigan Conference in Sheboygan, WI. The conference will allow attendees to learn about the current status of Lake Michigan and projects being undertaken to improve the lake's health. Attendees can expect to learn about invasive species control, AOC work, and monitoring.

More information can be found at the conferences website: http://aqua.wisc.edu/solm/. More information on LAMPS and the Great Lakes Water Quality Agreement can be found at http://www.epa.gov/greatlakes/lamp/ and at Binational.net: http://binational.net/home_e.html

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precipitation on lake, runoff from land precipitation, and ice cover. Long-term (decades to centuries) factors include glacial isotactic adjustment (GIA) and climate processes, including the climate's impact on ice cover.

Although annual fluctuations in water levels are inevitable, lake level trends are being shaped partially by current and future human activity. Climate change projections, based on human releases of greenhouse gas, show the Great Lakes region experiencing warmer winters in the decades ahead. The warmer winters will likely continue to reduce ice cover and increase lake surface evaporation – two important factors influencing lake levels. As we go into fall and winter in 2013, the Great Lakes have an increased risk of experiencing near-record lows again – especially if summer and fall precipitation is low.

For more information on past, current, and future Great Lakes water levels visit the Army Corps website: http://www.lre.usace.army.mil/Missions/GreatLakesInformation/GreatLakesWaterLevels.aspx

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