



GLPRN Policy Brief Series: Water Levels and Recreation in the Great Lakes Basin

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Overview

Fluctuating water levels in the Great Lakes Basin can strongly influence the economic return of several different industries, the livelihood of residents and those who engage in recreational activities in the Basin. Shipping industries, power generation, fishers, recreational boaters, property owners, manufacturers, marinas, hotels, restaurants and beachgoers all have a strong interest in the water levels in the Great Lakes – but their needs and ideas regarding the ideal water level can vary considerably.

Historically, the alteration of water flows has been primarily driven by the commercial needs of hydroelectric generation and shipping. Less consideration has been given to the impact that changing water levels have on recreational interests - a surprising oversight since the recreation industry is highly profitable. Spending on boats and boating activities in the United States alone totaled nearly \$16 billion in 2003 and supported over 107,000 jobs (Great Lakes Recreational Boating's Economic Punch, 2007). Further, estimates of the annual economic impact of sport fishing in the Great Lakes range from \$4 billion to \$7 billion (The Great Lakes: A Waterways Management Challenge, n.d.). For example, in 2010, Ontario had more than 73 million tourist visits in the Great Lakes region, injecting \$12.3 billion into the economy (Why We Need Our Great Lakes, 2012).

In addition to the economic returns, there is also an incentive for political representatives to pay heed to the vast number of people who “play” in the Great Lakes Basin – as there are over 100,000 cottage owners along the Great Lakes shoreline in Canada alone. (“Why We Need Our Great Lakes, 2012).

Existing Policies and Legislation

The legal and policy framework governing acceptable water levels is complex and multi-level. The primary laws and agreements are as follows:

Transboundary

The Boundary Waters Treaty of 1909 is the basis for cooperation between Canada and the United States. Under the Treaty and as implemented by the International Joint Commission (IJC), domestic and sanitary water uses, navigation, and power and irrigation are given order of precedence in determining acceptable water levels and formulating management plans for flows

into and out of the lakes. In 2012, however, the IJC International Upper Great Lakes Study recommended the approval of the Lake Superior Regulation Plan which would give equal consideration to boating, tourism, ecosystems and coastal zone use.

In setting water levels, the two countries must take into account their commitment under the Canada-US Great Lakes Water Quality Agreement (GLWQA) to restore and maintain the ecological integrity of the Lakes, in their shared and domestic programming.

Canada (Ontario)

The federal government and the Government of Ontario share responsibility for meeting the requirements of the GLWQA under the Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem.

Ontario also has a number of laws which support the restoration and protection of the Great Lakes Basin ecosystem and affect water levels:

- Water Opportunities Act, which encourages sustainable infrastructure and conservation planning, and creates a Water Technology Acceleration Partnership (WaterTAP)
- Ontario Water Resources Act, designed to conserve, protect and manage Ontario's water resources for efficient and sustainable use
- Great Lakes Protection Act (Proposed), intended to implement measures to ensure the Great Lakes stay drinkable, swimmable and fishable

United States

Domestic activities to engage in restoration and protection efforts are carried out under the terms of the Boundary Waters Treaty and the GLWQA, with additional responsibilities defined in Section 118 of the Clean Water Act, Section 112 of the Clean Air Act Amendments, and the Great Lakes Critical Programs Act of 1990. Much of the U.S. programming is coordinated through the Great Lakes National Program Office. State responsibility to ensure the Great Lakes are maintained is also highlighted in the Great Lakes-St. Lawrence River Basin Water Resources Compact which outlines the means by which states can uphold their commitments under the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement.

Specific policies and regulations governing water levels include:

- 33 USC 426o-1 regulates dredging as necessary to ensure minimal operation depths when water levels in the Great Lakes are low
- International Great Lakes Datum 1985 (IGLD) is an elevation reference system used to define water levels previous within the Great Lakes-St. Lawrence River system
- 42 USC 1962d-21 (John Glenn Great Lakes Basin program) under which the Corps of Engineers submits strategic plans for water level maintenance activities in the Basin
- Great Lakes Legacy Act 2002 provides guidelines for projects that can be undertaken and establishes the program as a partnered, cost shared program between states

Stakeholders

The stakeholder communities on this policy issue are varied and numerous.

Boating/Shipping - Lake Carrier's Association, Great Lakes Maritime Task Force, Saint Lawrence Seaway Management Corporation, Great Lakes Boating Federation, Great Lakes Boating, Lakeland Boating, Great Lakes Cruising Club, Great Lakes Sea Kayaking Association, Michigan Charter Boat Association.

Fishing - Lake Superior Steelhead Association, Lake Huron Fishing Club, American Fisheries Society, Western Basin Sportfishing Association.

Property Owners - Great Lakes Coalition, Georgian Bay Association, Wisconsin Great Lakes Coalition, North of Superior Tourism Association, Federation of Ontario Cottagers' Association, Niagara Cottages Association

Environmental - Great Lakes United, Association of State Floodplain Managers, Coastal States Organization, Lake Huron Center for Coastal Conservation, Michigan Lake and Stream Associations, Lake Erie Improvement Association

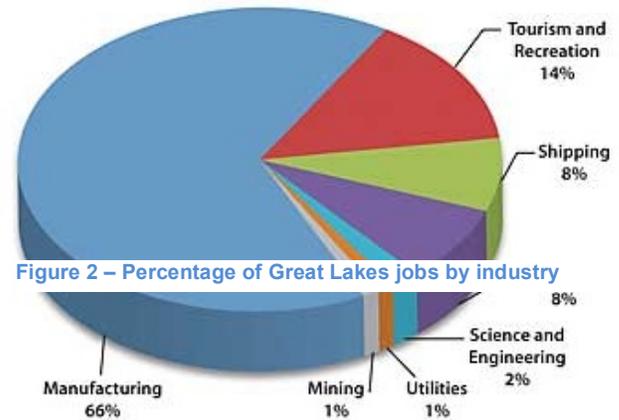
Governmental - In addition to the national government agencies noted above, there are other sub-national governments and bodies engaged in water level and recreation policies including the Great Lakes Commission, Council of Great Lakes Governors, State system of Sea Grant organizations, National Oceanic and Atmospheric Administration Coastal Services Center.

Policy Challenges

Most stakeholders agree on the need for greater regulation and control over water levels, particularly in light of uncertainty in regards to future water levels (e.g., due to climate change). However, these groups do not agree on "how high" levels should be. While higher water levels would benefit commercial navigation, recreational boating, wetlands and tourism; they would adversely affect coastal zone interests, hydroelectric generation, and indigenous peoples. The general public appears to be split on not only the severity of the issue, but also on the best way to mitigate fluctuating water levels.

Policy Alternatives and Policy Futures

At the present time, water levels are fluctuating within historical ranges, and the task for policy-makers, in any given year, will be to mediate between different stakeholders who have varying preferences regarding levels, using mechanisms that seen as transparent and fair. A related concern here is managing public expectations. While most industries are currently able to deal



with high or low levels, both are perceived as problematic by the broader public. A complicating factor is that public concern regarding water levels differs greatly depending on geographic location, e.g., those living in the Upper vs. the Lower Great Lakes (Lake Superior Regulation: Addressing Uncertainty in Upper Great Lakes Water Levels, 2012).

In response, the IJC has created the International Great Lakes – St. Lawrence River Task Team, which is charged with developing a detailed Adaptive Management Plan to address future extreme water levels. This is being done in collaboration with politicians, scientists, citizens, and government agencies. Additionally, the IJC has developed three control boards (Niagara Board of Control, St. Lawrence River Board of Control and the Lake Superior Board of Control,) all of which are responsible for overseeing water levels and outflow regulations in their respective geographic areas. The boards hold annual public meetings to evaluate differing opinions as to what water levels should be and how water outflows should be regulated.

Over the longer term, the most significant challenge is the lack of certainty regarding future water levels. Future water levels which go outside of historical ranges may force some stakeholders to undertake costly adaptive responses – e.g. restoration structures. Yet, the calculations regarding restoration structures are complex; while they may be able to reduce the occurrence of low water levels, they may also increase the occurrences of extreme high lake levels. Accordingly, there is considerable debate as to their practicality and necessity. The IJC, however, has strongly urged both the Canadian and American governments to look into creating such structures. In this respect, any multi-lake approach needs to take into consideration the affect raising water levels of Huron and Michigan have on the lower section of the Great Lakes Basin; it is likely that extensive mitigating measures would be necessary.

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