

Impacts of Rising Great Lakes on Natural Resources and Tourism

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Cyclical Nature of Lake Levels

- * Ecosystem has adapted to cyclical rising/falling lake levels
- * Range on Lakes Huron and Michigan from 1918 - 2019
 - * 576 - 582 feet above sea level
 - * Long term average 579
 - * Year 2013 at 576
 - * Year 2019 at 582
- * Nature functions and adapts in long-term, geologic time
 - * People and their developments take a shorter perspective
 - * Cyclical change brings about challenge and opportunity
 - * We need to understand, be resilient and adaptable

At Lower Levels

- * Challenge to navigation and boating access
 - * Emergency dredging supplements regular dredging
- * Opportunity for tourism with large beach areas
- * Opportunity as wetlands able to revegetate in abundance in shallow, mudflat situations
 - * May provide opening for invasive plants to colonize and degrade wetlands such as invasive phragmites
- * Human development may occur
 - * Encroaches on wetlands
 - * Later at risk of inundation by high water

At Higher Levels

- * Challenge as beach erosion intensifies
 - * Limits habitat for species of concern like piping plover
 - * Reduces recreational opportunities for beach goers
 - * Threatens structures built during lower water levels
- * Challenge for wetlands inundated to levels where plants can't survive
 - * Lose buffering effect of wetlands on waves, storm surge
- * Opportunity as managed wetlands use structural solutions to maintain optimal water level/habitat
- * Opportunity with ease of navigation/boating access

Look to the Future

- * Great Lakes will continue to cycle
- * Unlike oceans with steadily rising sea levels
 - * Dry times, lower Great Lake levels will return
- * We need to understand, study and monitor
- * Nature needs room to work
 - * Limit further development in 575-585 ft. zone (L. MI & Huron)
- * Need to be adapt, be resilient to change beyond lake levels
 - * Manage invasive species, optimizing shrinking fish/wildlife habitat base, desire for fresh water worldwide, provide public access, etc.

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