Legislative Fiscal Bureau
One East Main, Suite 301 • Madison, WI 53703 • (608) 266-3847 • Fax: (608) 267-6873
Email: fiscal.bureau@legis.wisconsin.gov • Website: http://legis.wisconsin.gov/lfb

June, 2021 Joint Committee on Finance Paper #472

Great Lakes Erosion Control Loan Program (Natural Resources -- Water Quality)

[LFB 2021-23 Budget Summary: Page 444, #5]

CURRENT LAW

The Department of Natural Resources (DNR) is responsible for management and protection of the waters of the state, including regulation of shoreland development. Under current law, DNR imposes restrictions on development adjacent to navigable waterways and requires permits for modification of shorelines or placement of fill material in water bodies.

DISCUSSION POINTS

1. During the 2020 season, Lake Superior and Lake Michigan-Huron[1] experienced record high lake levels. As seen in the attachment, Superior water levels reached record monthly highs in May of 2019 and remained high through much of 2020. Further, Michigan-Huron similarly reached record monthly highs from January through August of 2020. Lake levels have since dropped from historic highs, and as of May, 2021, Michigan-Huron is 18 inches lower and Superior is six inches lower than in 2020. However, these levels remain significantly above normal, with Michigan-Huron 18 inches above average while Superior is six inches above average.

2. Water levels on the Great Lakes have been known to vary significantly in recent decades, and exact determinants are difficult to identify. Research is ongoing, although trends reflecting increasing precipitation in the Midwest are believed to contribute to record high lake levels. The U.S. Global Change Research Program is required to report to Congress and the President at least every four years on effects of climate change on the natural environment, economy and human health, and

[1] While historically described as two lakes, water levels in Michigan and Huron vary in unison as water flows through the Straights of Mackinac. Thus, Michigan-Huron is considered one lake for purposes of hydrologic study.

identify trends for anticipated changes in the next 25 to 100 years. The program's 2018 report identified that precipitation in the Midwest has increased by 5% to 15% during the period of 1986 to 2015, relative to 1901 to 1960. Further, since data began being collected in 1895, four of Wisconsin's five highest precipitation years have occurred since 2010, with the wettest recorded in 2019. Based on conservative climate models, it is anticipated that precipitation levels will continue to increase in Wisconsin throughout the twenty-first century.

3. As lake levels have risen, lakefront landowners have experienced significant erosion in recent years, with shorelines receding more than 50 feet or more in certain areas. It is difficult to estimate the value of property lost to coastal erosion on Great Lakes. However, the Great Lakes and St. Lawrence Cities Initiative, a consortium of cities located on coastal areas of the Great Lakes and St. Lawrence River, estimates that flooding and coastal erosion caused at least $500 million in damage to coastal areas during 2019 and 2020. In some instances, erosion has caused homes and roads to collapse into Michigan and Superior.

4. Assembly Bill 68/Senate Bill 111 would provide $5,000,000 from the environmental management account of the segregated (SEG) environmental fund in 2021-22 to create a revolving loan fund for municipalities and homeowners to ensure structural integrity of buildings threated by erosion of shoreline on Michigan and Superior. The bill would require DNR to promulgate rules to administer the program, including establishing eligibility criteria and income limits for loans. Further, DNR would be authorized to promulgate an emergency rule while final rules were being drafted. DNR suggests that the program could support perhaps 12 to 13 projects per year based on the proposed funding level.

5. According to DNR, Wisconsin has approximately 1,000 miles of coastline on Superior and Michigan. No reliable estimate is available for the cost to reinforce Great Lakes shorelines to limit property damage associated with erosion. The cost to install protective structures along coastlines often exceeds $1,000 per foot of shoreline. For example, an Ozaukee County homeowner reported receiving a cost estimate of $1,400 per foot of shoreline. Based on the 1,000 miles of Great Lakes coastline in Wisconsin, a cost of $1,000 per foot would total perhaps $5.3 billion to install protective structures along its entire coastline. However, significant portions of shoreline may not be inhabited or otherwise at immediate risk of significant erosion. Assuming a cost of $1,000 per foot of shoreline, the AB 68/SB 111 proposal would provide initial loans sufficient to protect perhaps one mile of shoreline. Regardless of any cost to reinforce Great Lakes shorelines, such practices may not be effective in preventing shoreline erosion in the long term. Further, while protective structures prevent erosion along one portion of shoreline, they may exacerbate erosion along adjacent areas by diverting or strengthening wave action.

6. Provision of funding for a Great Lakes erosion control program would be dependent on availability of funding in the environmental management account of the environmental fund. Based on Committee action to date, the environmental management account is anticipated to have a June 30, 2023, available balance of $37.8 million. Given that proposed funding would be one-time, it is expected that the account balance could support the proposal without affecting future availability of funding for other environmental management programs.

7. Given relatively high lake levels in recent years, the high property damage costs

associated with shoreline erosion, and the availability of environmental management account revenues, the Committee could consider creating a Great Lakes erosion control loan program [Alternative 1]. Conversely, given that lake levels have begun to decline from their record highs in 2019 and 2020, and that proposed funding may not be cost-effective in preventing long-term erosion along Great Lakes shorelines, the Committee could consider taking no action [Alternative 2].

ALTERNATIVES

1. Create a Great Lakes erosion control revolving loan fund by creating a continuing appropriation and providing $5,000,000 environmental management account SEG in 2021-22. Specify that funding be provided as loans to municipalities and homeowners to cover costs related to ensuring structural integrity of buildings threatened by erosion of the shoreline of Lake Superior and Lake Michigan. Require DNR to promulgate rules to administer the program, including establishing eligibility criteria and income limits for loans. Further, allow DNR to promulgate an emergency rule while final rules are being drafted.

ALT 1	Change to Base
SEG	$5,000,000

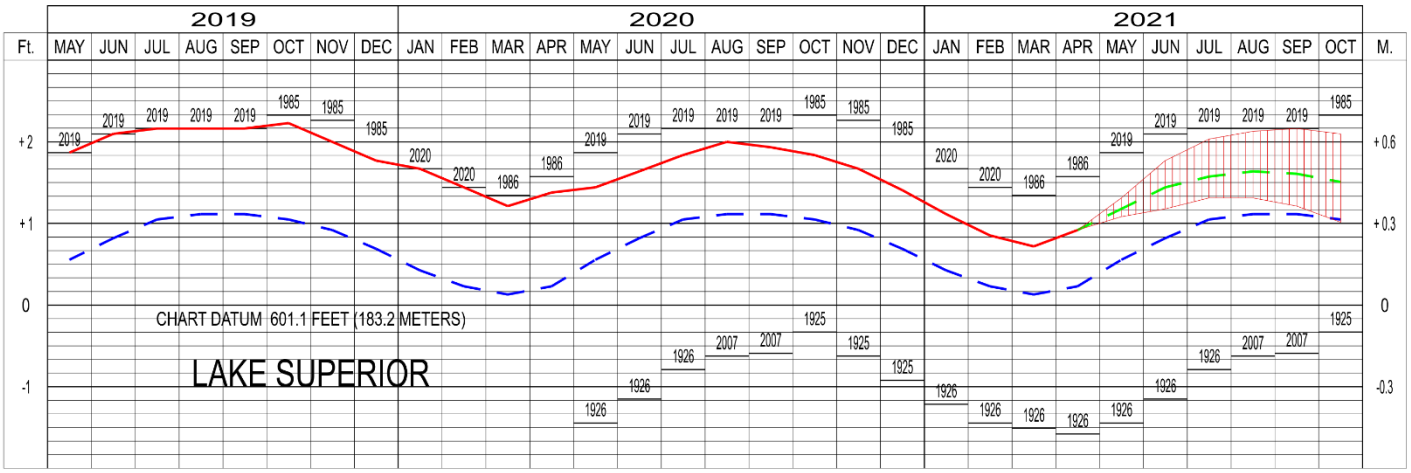
2. Take no action.

Prepared by: Rory Tikalsky
Attachment

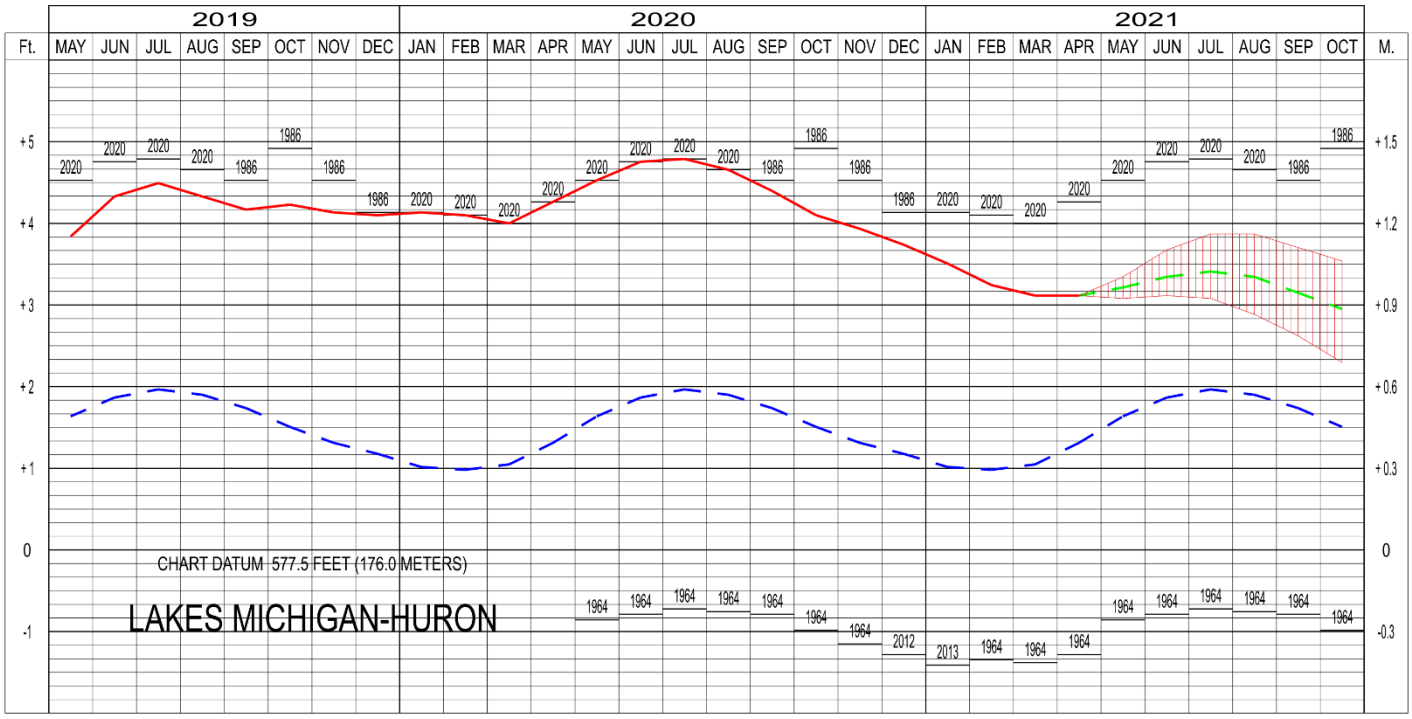
ATTACHMENT

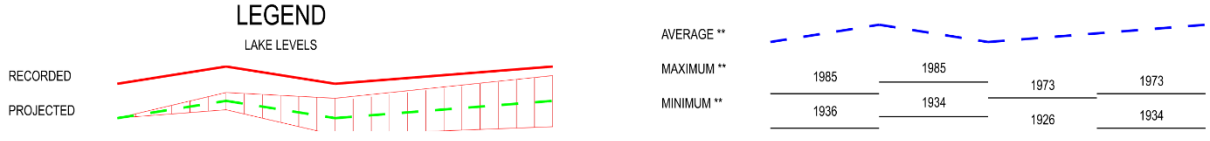
Great Lakes Water Levels 2019-2021

LAKE SUPERIOR WATER LEVELS - MAY 2021



LAKES MICHIGAN-HURON WATER LEVELS - MAY 2021





Source: U.S. Army Corps of Engineers