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Mark Breederland  
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Re: IGLD in Great Lakes States (NSGLC-16-04-06)

*This product was prepared by the National Sea Grant Law Center under award number NA140AR4170065 from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce. The statements, findings, conclusions, and recommendations are those of the author and do not necessarily reflect the views of NOAA or the U.S. Department of Commerce.*

Dear Mark:

Below is the summary of research of the National Sea Grant Law Center regarding your request for information on the use of the International Great Lakes Datum (IGLD) in Great Lakes state law. The following information is intended as advisory research only and does not constitute legal representation of Michigan Sea Grant or its constituents by the National Sea Grant Law Center. It represents our interpretation of the relevant laws and cases.

The International Great Lakes Datum (IGLD) is used to measure water levels in the Great Lakes-St. Lawrence River Basin.<sup>1</sup> The IGLD was developed through the use of measurements and benchmarks that generally align with sea level. The first IGLD was called IGLD 1955. The datum is updated every 25-30 years due to movement of the earth's crust. The most recently updated datum is called IGLD 1985.

Below is a summary of references to the IGLD in the state law of the requested Great Lakes states.

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<sup>1</sup> Coordinating Committee on Great Lakes Basic Hydraulic and Hydrologic Data, IGLD 1985, Brochure on the Great Lakes Datum 1985 (January 1992).

## **Michigan**

Michigan's Great Lakes Submerged Lands Act refers to the IGLD 1955 in its definition of "land."

*The word "land" or "lands" as used in this part refers to the aforesaid described unpatented lake bottomlands and unpatented made lands and patented lands in the Great Lakes and the bays and harbors of the great lakes lying below and lakeward of the natural ordinary high-water mark, but this part does not affect property rights secured by virtue of a swamp land grant or rights acquired by accretions occurring through natural means or reliction. For purposes of this part, the ordinary high-water mark shall be at the following elevations above sea level, international Great Lakes datum of 1955: Lake Superior, 601.5 feet; Lakes Michigan and Huron, 579.8 feet; Lake St. Clair, 574.7 feet; and Lake Erie, 571.6 feet.<sup>2</sup>*

In *Glass v. Goeckel*, the Michigan Supreme Court ruled that the Act establishes the regulatory scope of the state's authority over submerged lands.<sup>3</sup> This means that in Michigan, the IGLD is used to determine which lands are subject to the state's authority under the Great Lakes Submerged Lands Act.

Although the statute refers to the IGLD 1955, the Michigan Department of Environmental Quality has published a revised Ordinary High Water Mark based on IGLD 1985.<sup>4</sup>

## **Minnesota**

Minnesota does not have any references to the IGLD in state law.

## **Wisconsin**

Wisconsin does not have any references to the IGLD in state law.

## **Illinois**

The Illinois Rivers, Lakes, and Streams Act of 1911 requires permits for shoreline construction projects from the Illinois Department of Natural Resources, Office of Water Resources for shoreline construction projects. While IGLD is not mentioned in state statutes or regulations, in its guidance for shoreline construction permits, the Department refers to the IGLD 1985.

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<sup>2</sup> MICH. COMP. LAWS ANN. § 324.32502.

<sup>3</sup> *Glass v. Goeckel*, 473 Mich. 667, 684, 703 N.W.2d 58, 68 (2005).

<sup>4</sup> MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY, *Ordinary High Water Mark*, [http://www.michigan.gov/deq/0,4561,7-135-3313\\_3677\\_3702-352662--,00.html](http://www.michigan.gov/deq/0,4561,7-135-3313_3677_3702-352662--,00.html).

*Any activity along the Lake Michigan shoreline that is located at or below the Ordinary High Water Mark (OHWM) requires a permit from the Department. In cases where the OHWM is lakeward of the existing bluff, the toe of the bluff will be used to determine the Department's jurisdiction. Both the IDNR/OWR and the U.S. Army Corps of Engineers define the OHWM as a water elevation of 581.5 ft. International Great Lakes Datum-1985 (IGLD-85).<sup>5</sup>*

## **Indiana**

For the Indiana shoreline of Lake Michigan, the Indiana Natural Resources Commission's regulations define ordinary high watermark by reference to the IGLD.

*"Ordinary high watermark" means the following:*

*(1) The line on the shore of a waterway established by the fluctuations of water and indicated by physical characteristics. Examples of these physical characteristics include the following:*

- (A) A clear and natural line impressed on the bank.*
- (B) Shelving.*
- (C) Changes in character of the soil.*
- (D) The destruction of terrestrial vegetation.*
- (E) The presence of litter or debris.*

*(2) Notwithstanding subdivision (1), the shore of Lake Michigan at five hundred eighty-one and five-tenths (581.5) feet I.G.L.D., 1985 (five hundred eighty-two and two hundred fifty-two thousandths (582.252) feet N.G.V.D., 1929).<sup>6</sup>*

## **Ohio**

In regulations for the Voluntary Action Program, which facilitates environmental contamination cleanup, Ohio references the IGLD in its definition of "sediment"

*(120) "Sediment" is unconsolidated inorganic and organic material that has precipitated and deposited below surface waters. Sediment includes the following:*

- (a) Materials below the water surface under bankfull conditions in streams, lakes and ditches.*
- (b) Materials below normal pool elevation for reservoirs.*
- (c) Materials within the federal and state jurisdictional boundaries of wetlands.*
- (d) Materials below maximum capacity for ponds and lagoons.*

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<sup>5</sup> ILLINOIS DEPARTMENT OF NATURAL RESOURCES, *Guidelines for the Submittal of Applications for Illinois Department of Natural Resources, Office of Water Resources Permits for Shore Protection Projects in Lake Michigan* (Nov. 2015), available at <https://www.dnr.illinois.gov/WaterResources/Documents/Lake%20Michigan%20Permit%20Guidelines.pdf>

<sup>6</sup> 312 IND. ADMIN. CODE 1-1-26.

*(e) Materials found below the ordinary high water mark of lake Erie, as defined by "International Great Lakes Datum."*<sup>7</sup>

## **Pennsylvania**

Pennsylvania's Bluff Recession and Setback Act defines "shoreline" as "[t]he ordinary high water mark of Lake Erie of 573.4 feet as defined in accordance with the International Great Lakes Datum 1985 (IGLD 1985) as recognized by the United States Army Corps of Engineers."<sup>8</sup>

Pennsylvania regulations for dams, reservoirs, water obstructions, and encroachments also use the IGLD to define the Department of Environmental Protection's authority.

*For the purposes of this chapter, the Department's jurisdiction in and along Lake Erie will be defined by the high water elevation of 572.8 feet International Great Lakes Datum (IGLD) and low water elevation of 568.6 IGLD. Dams, water obstructions and encroachments constructed between elevation 572.8 IGLD and elevation 568.6 IGLD require a permit under section 6 of the act (32 P. S. § 693.6). Dams, water obstructions and encroachments constructed lakeward of elevation 568.6 IGLD require both a permit under section 6 of the act and a Submerged Lands License Agreement under section 15 of the act (32 P. S. § 693.15).<sup>9</sup>*

## **New York**

New York does not use IGLD in state law.

Thank you for bringing this request to the National Sea Grant Law Center. I hope this information is helpful. If you have any further questions or would like additional information, please let me know.

Sincerely,



Terra Bowling  
Sr. Research Counsel  
National Sea Grant Law Center

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<sup>7</sup> OHIO ADMIN. CODE 3745-300-01.

<sup>8</sup> 32 PA. STAT. ANN. § 5203.

<sup>9</sup> 25 PA. CODE § 105.3