

International Great Lakes Datum: Possible Impacts and What You Need to Know

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The International Great Lakes Datum (IGLD) is the common height reference system, or vertical datum, used to coordinate the management of water resources in the Great Lakes to meaningfully relate measurements of water levels, depths, volumes and flows to each other. IGLD is defined and maintained under the auspices of the Coordinating Committee on Great Lakes Basic Hydraulic and Hydrologic Data (Coordinating Committee), a bi-national committee with representatives from the Governments of Canada and the United States. IGLD was first introduced as a common datum between the two countries in 1955. IGLD is updated every 25-30 years to account for crustal movement due to glacial isostatic adjustment (GIA). The present reference datum is IGLD (1985) which is being actively updated to IGLD (2020) by the Coordinating Committee and is planned for release by 2027.

Water levels referenced to a common datum are critical for marine navigation and transportation, nautical product updates, lake level forecasting, regulation of lakes and river flow rates, coastal zone management activities, and shoreline use planning. Updating the IGLD will have an impact on these operations and services. Major changes will be reflected in water level heights measured by the U.S. and Canada. Another change will be the potential update in the low water datum or chart datum and the resulting changes in heights for restoration, engineering and management projects. This presentation will provide an overview of IGLD, and examine some of the potential impacts to these critical projects and activities in the Great Lakes.