NOAA GLRI Webinar - Project Fact Sheet

Project Title	Updating Vertical Datums at Small Ports and Harbors of Refuge through Seasonal Water Level Measurements
Project Lead	PI: Laura Rear McLaughlin Co-PIs: Adam Grodsky
Funding amount ($) and years funded	FY18 Funding: $310,000
External partners, collaborators and/or sub-awardees	National Geodetic Survey (NGS) for GPS/GNSS data analysis as part of the data collected.
GLRI Focus Area	FA 5 – Foundations for Future Restoration Actions
GLRI Action Plan Primary Measure	Objective 5.2 - Conduct comprehensive science programs and projects
	Measure(s) of Progress: 5.2.1 - Annual Great Lakes monitoring conducted and used to prioritize GLRI funding decisions.
Brief project description	This project will collect water level data at 10 small ports and harbors locations in designated Areas of Concern (AOC) during June-September of 2020, and provide International Great Lakes Datum (IGLD) 1985 heights. The 1985 heights will be converted to IGLD 2020 heights when the new datum is updated in 2025/2026. This project will allow for purchasing equipment to measure water levels and will leverage the existing CO-OPS gauge inventory intended for use in the Great Lakes. This project will support the installation of those gauges at the most significant locations in the Great Lakes as determined by a prioritization that incorporates rates of vertical motion, input from the U.S. Army Corps of Engineers, and the EPA AOC program. This project leverages the Federal effort and allows for collection of data in small harbors and ports. Present base funds only allow for the use of the existing water level network, leaving small ports and harbors without an accurately measured updated datum. An accurate Great Lakes wide elevation reference datum is a fundamental requirement for monitoring change in Great Lakes land and water levels and for providing a geospatial foundation for marine spatial planning.

	Additionally, an accurate datum supports effective restoration projects, mapping, dredging, international water regulation and power generation, resource management plans, and more. The IGLD is updated every 20-30 years due to glacial isostatic adjustment and varying rates of vertical movement in the Lakes region. The datum was first defined in 1955 by an international team of scientists and engineers from the U.S. and Canada. The last time IGLD was updated in 1985 there was a change of +1 ft in Lake Superior and about 0.5 ft in Lake Ontario. We expect about the same amount of change with the forthcoming update.