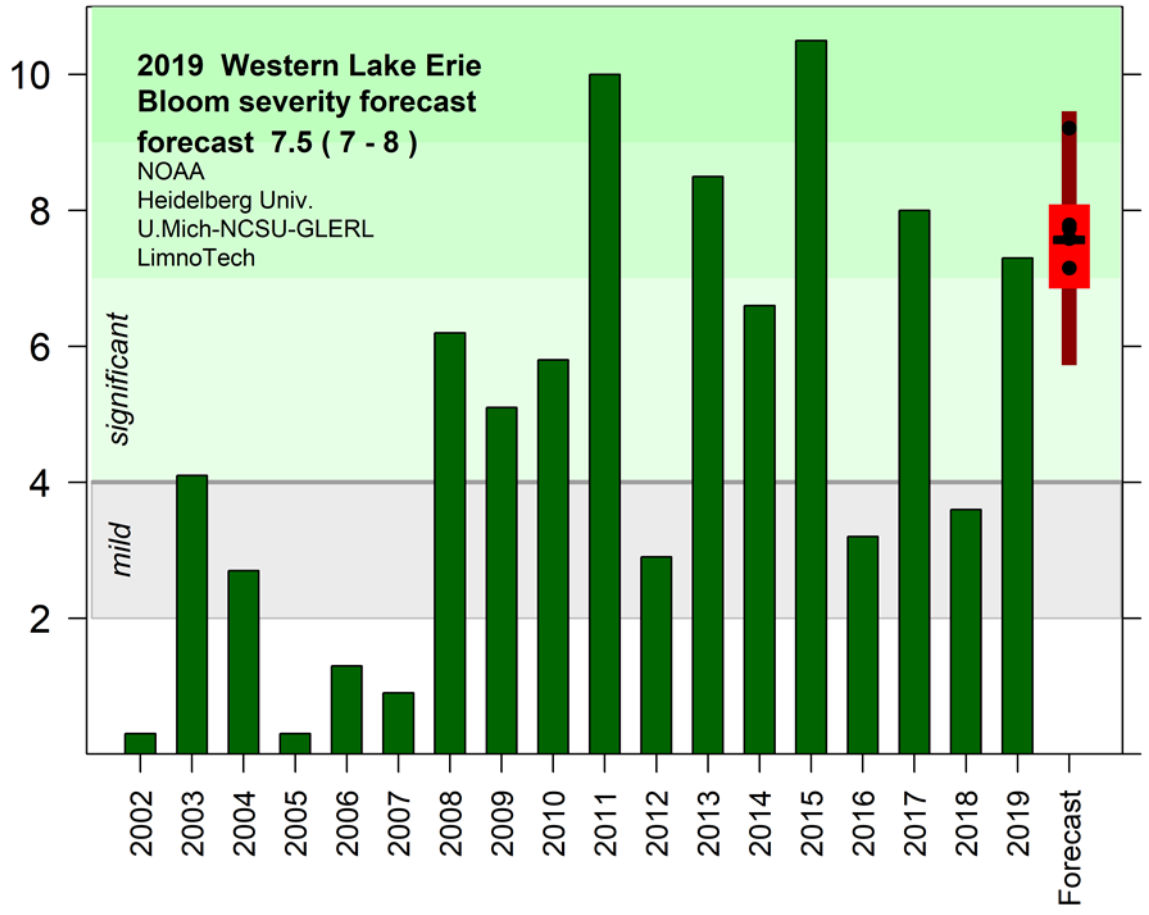
NOAA GLRI Webinar - Project Fact Sheet

(For distribution to all audience members. Not to exceed 2 pages.)

Project Title	**Decision support tools to link P reductions to harmful algal blooms and source water protection**
Project Lead	PI: Henry Vanderploeg Co-PIs, if applicable: Reagan Errera, Mark Rowe, Craig Stowe (GLERL); Greg Doucette, Richard Stumpf (NOAA NOS NCCOS)
Funding amount ($) and years funded	$1,949,529 in 2020 (various versions of project since 2013)
External partners, collaborators and/or sub-awardees	Casey Godwin & Tom Johengen (CIGLR)
GLRI Focus Area	Nonpoint Source Pollution Impacts on Nearshore Health
GLRI Action Plan Primary Measure	**Objective:** Improve effectiveness of nonpoint source control and refine management efforts
	Measure(s) of Progress: *Primary:* Nutrient monitoring and assessment activities conducted *Secondary:* Nutrient or stormwater runoff reduction practices or tools developed or evaluated
Brief project description	Linking the response of Great Lakes phytoplankton community composition and bloom toxicity to changes in nutrient loading is a critical step towards documenting the success of watershed nutrient runoff mitigation practices, developing effective, long-term nutrient management plans for the Great Lakes and protecting waters used for drinking and recreation. This project builds upon previous FA3 GLRI-supported NOAA HAB programs. These initial efforts have developed substantial datasets, executed experiments linking in-lake nutrient concentrations and cHA growth and toxicity, and development of forecasting tools in western Lake Erie and Saginaw Bay. This project now includes areas within three of the five Great Lakes that regularly experience HABs, Western Lake Erie, Saginaw Bay (Lake Huron) and Green Bay (Lake Michigan) as well as Lake St. Clair. The scope of proposed work will include new **observational approaches**, **experiments**, and **modeling** to address critical knowledge gaps and improve previously established forecasting tools. We will develop similar capabilities in other

	cHAB-impacted Great Lakes regions and continue to improve cHAB toxicity models for western Lake Erie to assist recreational groups, resource managers, and public health officials in their decision-making. This fundamental research and product development will be guided by our **stakeholder engagement** program, which is designed to meet the needs of public water utilities, public health departments, and recreational groups. To aid in the prediction and understanding of toxin production, transport, and hazard we will deploy an early warning network of three near real-time **Environmental Sample Processors** (ESPs; two purchased on EPA funds) to report out toxin concentrations in western Lake Erie as well as develop new remote sensing tools making use of the **new satellites** coming on line.