

NOAA Digital Coast Tools

	Focus Area					Tool Type					Data Type					Platform					Can the tool be used for the Great Lakes?	Comments on NOAA Digital Coast tools relative to potential use in the Great Lakes region.				
	Climate Adaptation	Coastal Conservation	Coastal Economy	Coastal Hazards	Community Resilience	Green Infrastructure	Land Use Planning	Ocean Planning	Water Quality	Viewer	Reporting	Analysis	Learning	Benthic	Socioeconomic	Elevation	Weather, Hazards and Climate	Imagery	Jurisdictions and Boundaries	Land Cover			Ocean Uses and Planning	Desktop	Web	Mobile
Tools (68 as of 11/30/17)																										
Atlas of Ocean Wealth		x																							no - ocean	Geared for ocean coast.
Benthic Terrain Modeler							x					x									x				yes - general	ArcGIS extension. Supports benthic terrain classification. Creates bathymetric position index and rugosity data.
C-CAP Coastal Comparison		x					x	x												x					yes - GL coverage	Allows comparison of land cover categories at county, state to national levels.
C-CAP Land Cover Atlas		x					x	x			x									x					yes - GL coverage	National web map by NOAA to view land cover from 1996 to 2010 by county or watershed. Includes Great Lakes region.
CanVis		x	x	x	x	x	x	x	x																yes - general	Useful photo simulation tool. Desktop software.
Census Explorer										x						x									yes - GL coverage	Map different social, economic, and housing characteristics at state, county, or census tract. Requires Flash plugin.
Climate Wizard		x								x	x														yes - GL coverage	TNC interactive web map by TNC for nation of globe to view past or projected temp/precip by emission scenario.
CMECS Crosswalk Tool		x												x											yes - general	ArcGIS tool. Translates existing spatial benthic habitat data sets into output data compliant with the Coastal and Marine Ecological Classification Standard. Will work for deep water of the Great Lakes.
Coastal Change Hazards Portal		x			x						x	x					x								no - ocean	Web map by USGS to examine hazards for severe storms, shoreline erosion, and sea level rise. For ocean coasts.
Coastal County Snapshots		x	x	x	x	x	x									x				x					yes - GL coverage	Web-based. Provides county level profiles of flood exposure, wetland benefits, and jobs. Includes Great Lakes.
Coastal Flood Exposure Mapper		x	x		x	x	x									x									no - ocean	Web-based. Needs more data (currently expanding). Creates maps that are easy for communities to make and share that are meaningful. Easy to use. Does not include Great Lakes yet.
Coastal Resilience Mapping Portal		x	x	x	x	x	x					x				x	x								no - ocean	Only cases for ocean coast.
Data Access Viewer														x						x					yes - GL coverage	Data access for Digital Coast. Includes Great Lakes.
Digital Shoreline Analysis System											x	x				x					x				yes - general	Desktop GIS-based shoreline change analysis tool.
eCoastal Tools																					x				yes - general	Desktop GIS-based (ArcViewer). Tools to help create raster grids, TIN surfaces, loading and analysis of hydrographic survey data. Need GIS skills to use. Need ArcGIS and other expensive programs.
Electronic Navigational Chart Handler												x				x					x				yes - general	ArcGIS extension. Allows access to GL nav charts.
ENOW Explorer				x											x										yes - GL coverage	Allows exploration of six sectors of the ocean and Great Lakes economy at the county scale.
EnviroAtlas		x	x			x	x	x			x				x	x	x	x	x	x					yes - GL coverage	Provides interactive tools and resources for exploring the benefits people receive from ecosystem goods and services. Requires Adobe Flash and other Adobe plugins for interactive map to work.
Environmental Response Management Application		x	x	x	x									x		x				x	x				yes - GL specific	Web-based response mapping. Used to analyze oil spill response plans. Easy to use, needs account in order to use all data. There is a Great Lakes specific ERMA.
Environmental Studies Program Information System											x										x	x			no - ocean	Access studies that inform policy decisions related to outer continental shelf resource development. No GL info.
Essential Fish Habitat Mapper			x												x										no - ocean	Interactive map that shows fish habitat for oceans. Does include a nautical chart layer that includes Great Lakes.
Estuary Data Mapper			x									x			x	x	x			x					no - ocean	Desktop software to be installed? Only includes Atlantic states.
Flood Event Viewer					x						x	x					x								yes - GL coverage	Interactive map provides viewable and downloadable flood event data from the U.S. Geological Survey's Short-Term Network (STN) database. Includes Lake Ontario 2017 flooding and other events in Great Lakes states.
FUSION					x	x										x									yes - general	LIDAR data viewer and processing software. Desktop software.
GeoCoServ			x												x										yes - general	Searchable inventory of valuation studies for ecosystem services.
Great Lakes Coastal Resilience Planning Guide		x	x	x	x	x	x	x					x												yes - GL specific	Includes robust resilience case studies, local stories, other resources.
Great Lakes Coastal Wetland Decision-Support Tool			x																x		x				yes - GL specific	Users can view, filter, and rank Great Lakes coastal wetlands based on conditions and access wetland monitoring program data. Data only for Michigan and Ohio.
Great Lakes Water Level Dashboard		x										x	x												yes - GL specific	Powerful visualization tool for Great Lakes water levels. Includes climate scenarios.
Habitat Priority Planner		x	x													x	x								yes - general	ArcGIS extension. Includes story about use in a Great Lakes watershed.
Hazards U.S. Multi-Hazard (HAZUS-MH)				x	x	x										x									yes - general	Nationally-applicable method to estimate potential losses from various hazards. Hazus-MH 2.1 works with ArcGIS 10.
Historical Hurricane Tracks					x																				no - ocean	For ocean coasts. Interactive map of hurricane tracks.
Impervious Surface Analysis Tool			x																		x				yes - general	ArcGIS extension. Calculates the percent impervious area from land cover and categorizes water quality in selected areas such as watersheds.
Information for Planning and Consultation			x																		x				yes - GL coverage	This online tool quickly identifies USFWS-managed resources based on user-drawn project locations and provides resource lists and information such as conservation measures. Includes Great Lakes coverage.
Integrated Valuation of Environmental Services and Tradeoffs (InVEST)		x	x	x	x	x	x	x							x	x	x								yes - general	A family of ecosystem service evaluation tools from the Natural Capital Project led by Stanford University. Desktop GIS.
Lake Level Viewer (U.S. Great Lakes)		x	x	x	x											x									yes - GL specific	Interactive map that visualizes GL water levels in one foot increments.
MAPTITE		x	x	x	x	x	x																		no - ocean	ArcGIS Spatial Analyst extension. Appears to be designed for tidal areas.
Marine Cadastre Track Builder																									yes - general	ArcGIS tool. Utilizes ship AIS information.
Marine Geospatial Ecology Tools																									yes - general	Open source geoprocessing toolbox supporting marine ecology. Requires ArcGIS 9.1 or later.
Marine Protected Areas Data Viewer																									yes - GL coverage	Displays boundaries and provides access to the marine protected area data inventory. Includes Great Lakes coverage.
MarineCadastre.gov National Viewer																									yes - GL coverage	Interactive map. Includes some data for Great Lakes, but seems targeted for ocean use.
Marxan with Zones			x	x			x	x													x				yes - general	Desktop software.
NACo County Explorer				x												x									yes - GL coverage	Visualizes county-level data on indicators related to demographics, economy, education, healthcare, and public safety & profiles cnty performance related to key federal policies. Includes GL region.
National Beach Nourishment Database				x																					yes - GL coverage	Seems much more focused on ocean coast. Does list a couple projects for Michigan, but doesn't support searching on Great Lakes states.
Nature's Network Prioritization Tool																									yes - general	Helps identify conservation priorities. Displays a series of prioritization maps developed for a set of pre-defined scenarios. Coverage for Northeastern United States including NY, PA.
NatureServe Vista		x	x		x	x																			yes - general	Integrates data and expert knowledge on conservation with land use and resource planning. Requires ArcGIS 10 and Spatial Analyst.
Nautical Chart Reprojector																									yes - general	Desktop software for file conversion - reprojection or output to tiff.
Nautical Chart Viewer																									yes - general	ArcGIS extension.
NEPAAssist			x																						yes - GL coverage	EPA tool that draws environmental data from publicly available federal, state, and local GIS sources and web services and screens environmental assessment indicators for a user-defined area of interest.
NOAA Tides and Currents Inundation Dashboard																									no - ocean	Geared towards mid-Atlantic region.
Ocean Law Search																									yes - general	Searches legal documents concerning environmental statutes, legislative history, cases, & other documents. Planning purposes only.
OnTheMap				x	x																				yes - GL coverage	Interactive map shows population and workforce stats for areas being affected by natural disasters. Includes GL coverage.
OpenNSPECT																									yes - general	Desktop using MapWindow. Provides a means to analyze "what if" land use change scenarios. Estimates runoff volumes and pollutant loads. Story for Mullet River near Sheboygan.
Practitioner's Toolkit for Marine Conservation Agreements			x																						no - ocean	Only for oceans - hope to include GL in the future.
Quick Report Tool for Socioeconomic Data				x												x									yes - GL coverage	Allows quick access to socioeconomic (census, critical facilities, workforce, etc.) data down to county level. Includes GL coverage.
Rain Garden App			x																						yes - general	Helps users determine rain garden size, placement and plant selection. Includes plant catalogs for MN and OH.
Riverine Flood Inundation Maps																									yes - general	Interactive web maps help decision-makers visualize river flood stages to see how inundation could impact local resources. Limited coverage. No GL coastal sites.
Science in the Great Lakes Mapper				x																					yes - GL specific	Spatially displays information about scientific research and monitoring efforts throughout the Great Lakes basin.
Sea Level Affecting Marshes Model		x	x																						no - ocean	For ocean coasts. Model uses digital elevation data and other info to simulate impacts of sea level rise on wetlands and shorelines.
Sea Level Change Curve Calculator																									no - ocean	For ocean coasts. Calculates projected rates of sea level change to assess vulnerability and compare several published sea level rise scenarios.
Sea Level Rise Viewer		x	x	x	x																				no - ocean	For ocean coasts. Visualize impacts from sea level rise. Lake level viz tool coming to Great Lakes in FY14.
Sediment Volume Change Mapper			x																						yes - general	View, query, and download data derived from comparing multiple lidar data sets and the changes between them. Couldn't load layers when checked.
SLAMM-VIEW 2.0		x	x																						no - ocean	Powerful tool, models sea level rise (has scenario creation function). Limited to very few locations. Great Lakes not available.
Soil Data Viewer																									yes - GL coverage	ArcGIS extension.
Surging Seas		x		x	x																				no - ocean	Specific to sea level rise on ocean coast.
Tsunami Information Service																									no - ocean	Specific to Hawaii.
United States Interagency Elevation Inventory				x																					yes - GL coverage	Inventory of topographic and bathymetric data. Includes Great Lakes.
VDatum																									yes - general	Datum conversion desktop software.
Weather and Hazards Data Viewer																									yes - GL coverage	Interactive map brings weather forecast information and hazards planning data into the same location. Helps managers monitor storms and fire weather and visualize potential impacts.

Updated: 11/30/2017 by David Hart, University of Wisconsin Sea Grant Institute

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