

U.S. Climate Resilience Toolkit

Tools (221)	Parent Topic											Functionality											Great Lakes Relevance	Comments on climate resilience tools relative to potential use in the Great Lakes region.
	Coastal Flood Risk (75)	Ecosystem Vulnerability (64)	Tribal Nations (60)	Human Health (50)	Energy Supply and Use (43)	Water Resources (41)	Transportation and Supply Chain (36)	Food Resilience (30)	Arctic (29)	Identify Vulnerabilities (112)	View Past/Current Conditions (83)	Analyze/Download Data (68)	Check Applied Forecasts (51)	Engage/Communicate (46)	Find Adaptation Planning Support (46)	Recover/Rebuild (18)	Visualize Climate Projections (16)							
Adaptation Tool Kit: Sea-Level Rise and Coastal Land Use	x																	yes	Report with case studies.					
Adaptation Workbook for Natural Resources		x	x															yes	Structured process to consider the effects of climate change on forests and related ecosystems. Applied in Wisconsin.					
AdaptWest Climate Adaptation Planning Database			x							x	x	x						?						
Advanced Hydrologic Prediction Service	x	x			x	x				x	x	x						yes - GL coverage	National web-based tool that includes data for the Great Lakes.					
AgroClimate—Tools for Managing Climate Risk in Agriculture							x			x	x		x	x				no						
Alaska Climate and Weather Highlights										x	x							no	Specific to Alaska.					
Alaska Coastal Profile Tool	x									x	x	x						no	Specific to Alaska.					
Alaska Shoreline Change Tool	x									x	x	x						no	Specific to Alaska.					
Alaska ShoreZone Coastal Mapping and Imagery										x	x	x					x	no	Specific to Alaska.					
Alaskan Arctic National Parks Landscape Viewer										x	x	x						no	Specific to Alaska.					
Annual Greenhouse Gas Index											x	x						no						
Arctic Adaptation Exchange	x	x	x	x	x		x	x	x					x	x			no	Specific to Arctic.					
Arctic ERMA® (Environmental Response Management Application)										x							x	no	Specific to Arctic.					
Arctic LCC Projections										x	x							no	Specific to Arctic.					
ASR Recovery Initiation Index						x					x	x						no	Specific to Florida? Broken Link.					
Assessing Health Vulnerability to Climate Change: A Guide for Health Departments					x					x								?						
Atlas of Community-Based Monitoring and Traditional Knowledge in a Changing Arctic				x						x	x			x	x			no	Specific to Arctic.					
Atlas of the Cryosphere										x	x							no	Specific to Arctic.					
Barrow Sea Ice Thickness and Sea Level Webcam and Radar										x	x							no	Specific to Arctic.					
Beach-fx	x		x		x							x				x		?	Desktop software to model and measure the costs and benefits of protecting beaches.					
Being Prepared for Climate Change: A Workbook for Developing Risk-Based Adaptation Plans	x	x				x				x				x	x			yes						
Benefits Mapping and Analysis Program—Community Edition (BenMAP-CE)					x							x						?	Report in pdf					
Beyond Downscaling										x								?						
Biodiversity Information Serving Our Nation (BISON)		x	x								x							?	National web-mapping site to view patterns of plant/animal species by Oak Ridge NL.					
Bioenergy Knowledge Discovery Framework					x							x						no						
Biofuels Atlas					x							x						no						
Biopower Atlas					x							x						no						
Cal-Adapt	x	x	x	x	x	x	x	x		x	x	x						no	Specific to California.					
CalWeedMapper		x								x								no						
CanVis	x				x		x						x					yes	Desktop tool for photo simulation of coasts.					
Carbon Storage in Forests		x	x	x								x						no	National website by EPA to examine carbon storage in forests.					
CarbonTracker			x									x	x					no	NOAA product to keep track of sources and sinks of carbon dioxide.					
Cities Impacts & Adaptation Tool (CIAT)		x		x	x							x		x				yes - GL specific	Developed by Graham institute. Tool identifies a custom network of "climate peers" through an interactive map interface.					
Climate Adaptation Knowledge Exchange (CAKE)	x	x	x	x	x	x	x	x						x	x			yes						
Climate at a Glance				x		x					x	x						?	NOAA website that generates graphs and maps of climate variables for selected cites to the globe.					
Climate Change & Extreme Weather Vulnerability Assessment Framework							x								x			yes						
Climate Change Atlas for Tree and Bird Species		x	x								x			x				yes-GL coverage	National website by USFS to define ranges of birds and trees in the eastern US - includes Great Lakes region.					
Climate Change Resource Center		x									x			x	x			?						
Climate Commons		x										x			x			?						
Climate Explorer	x	x	x	x	x	x	x	x		x	x	x	x					yes	National web mapping site by NOAA to display climate stressors and their impacts - stressors are ocean specific.					
Climate Inspector																	x	yes	Global web mapping site by UCAR to explore projected changes in temperature or precipitation for four different emissions trajectories.					
Climate Outlooks	x			x	x			x				x						yes	National web mapping site by NOAA to show expert judgment on 1 week to 3 month temp/precip outlooks, as well as potential hazards and drought conditions.					
Climate Registry for the Assessment of Vulnerability (CRAVe)		x	x												x			yes						
Climate Resilience Evaluation & Awareness Tool (CREAT)						x									x			yes						
Climate Resilience in Alaskan Communities: Catalog of Federal Programs	x		x							x	x				x	x		no	Specific to Alaska.					
Climate-Smart Conservation: Putting Adaptation Principles into Practice		x	x												x			yes						
ClimateData.us																	x	yes	National web map to compare projected changes in temp and precip under reduced and high-emissions scenarios.					
ClimateWizard											x						x	yes	TNC interactive web map by TNC for nation of globe to view past or projected temp/precip by emission scenario.					
CMIP Climate Data Processing Tool							x					x						yes						
CMIP5 Global Climate Change Viewer (GCCV)											x						x	?	Global website to display past and future temperature and precipitation projections simulated by global climate models.					
Coastal Change Analyses for Western Alaska: Interactive Map	x									x	x	x						no	Specific to Alaska.					
Coastal Change Analysis Program (C-CAP) Land Cover Atlas	x	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.					
Coastal Change Hazards Portal	x		x		x		x			x	x	x		x				no	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				yes - GL coverage	Select a coastal county and explore flood exposure, wetland benefits, or economic benefits from ocean jobs. Includes Great Lakes region.					
Coastal Flood Exposure Mapper	x		x		x		x								x			no	Specific to coastal PA/DE/NJ/NY.					
Coastal Inundation Mapping for Saco, Maine	x												x					no	Specific to Saco, Maine.					
Coastal Inundation Mapping for Scituate, Massachusetts	x																	no	Specific to Scituate Massachusetts.					
Coastal Resilience	x	x			x		x					x						no	Specific to sites on the ocean coast.					
Coastal Resilience Index	x				x		x							x	x			yes	Questionnaire by MS/AL Sea Grant to help communities discuss and discover their climate-related vulnerabilities. [Note: Has been adapted by Minnesota Sea Grant for the Great Lakes.]					
COMET-Farm			x				x					x						no	Carbon accounting tool by NREL. Complex. Evaluate the impacts of alternative management strategies on net emissions.					
Community Health Resilience Guide and Toolset				x	x										x	x		yes						
Community-Based Water Resiliency (CBWR) Tool											x				x	x		yes						
Conservation Blueprint 2.0	x	x										x						yes						
Crop Decision Dashboard			x			x		x				x						no						
CropScope												x	x					yes	National web map by USDA for crop history from 2008 to 2013. Includes Great Lakes region.					
Cryosphere Now										x		x						no	Specific to Arctic.					
Data Access Viewer (DAV)	x											x						yes						
Data Basin		x				x					x	x	x	x			x	yes						
Delaware Community Flood Map Visualizations	x												x	x				no	Specific to Delaware.					
Delaware Homeowners Handbook to Prepare for Natural Hazards	x													x				no	Specific to Delaware.					
Dialysis Facility Comparison					x												x	?						
Digital Shoreline Analysis System	x						x				x							yes	Desktop tool. ArcGIS extension will compute rates of change for historical positions of a shoreline.					
Disaster Behavioral Health Information Series					x											x		?						

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Disease Maps				x					x	x							no		
Downscaled CMIP3 and CMIP5 Climate and Hydrology Projections																x	?		
eCoastal Tools	x						x				x						?		
Economics: National Ocean Watch (ENOW) Explorer	x						x		x	x							yes - GL coverage	National	
EJSCREEN: Environmental Justice Screening and Mapping Tool				x					x								yes		
El Niño-Southern Oscillation (ENSO) Diagnostics Discussion		x						x				x					?		
El Niño-Southern Oscillation (ENSO) Indicators						x				x		x					?		
Emergency Preparedness and Response: Natural Disasters and Severe Weather			x	x					x				x		x		yes		
Energy Infrastructure with Flood Vulnerability	x				x	x			x								?		
Energy Infrastructure with Real-Time Storm Information						x			x								?		
Energy Savings Plus Health: Indoor Air Quality Guidelines for School Building Upgrades				x								x	x				no		
EnviroAtlas		x	x	x					x								?		
Environmental Sensitivity Index		x	x						x						x		yes		
Essential Fish Habitat Mapper		x	x					x	x								?		
Excessive Heat Events Guidebook				x					x								?		
Exploring Ocean Wind Energy					x					x							no		
Extreme Water Levels	x					x			x	x							?		
Famine Early Warning System Network (FEWS NET)							x		x	x							no		
Federal Crowdsourcing and Citizen Science Toolkit	x	x	x	x		x		x	x	x			x	x			?		
Federal Highway Administration Scenario Planning Guidebook						x			x				x	x			?		
FEMA and Tribal Nations: A Pocket Guide			x										x	x	x		yes		
FEMA Map Service Center	x		x	x	x	x			x	x					x		yes		
Flood Resilience: A Basic Guide for Water and Wastewater Utilities	x					x			x								yes		
Food Access Research Atlas				x				x	x	x							no		
Food Environment Atlas				x				x	x	x							no		
ForWarn Forest Change Assessment Viewer		x	x						x	x							?		
Future San Francisco Bay Tidal Marshes	x	x							x			x					no	Specific to California.	
G-WOW (Guiding for Tomorrow) Changing Climate, Changing Culture Initiative			x										x	x			yes - GL specific	Incorporating scientific research with place-based evidence to increase awareness of climate change impacts around Lake Superior.	
Geothermal Prospector			x		x					x							no		
Getting to Resilience	x											x	x				yes		
Global Ecosystems Map Viewer		x							x								?		
Great Lakes Climate Atlas		x		x		x			x	x				x			yes - GL specific		
Great Lakes Coastal Resilience Planning Guide	x	x							x				x	x			yes - GL specific	Great Lakes specific	
Guidelines for Considering Traditional Knowledges in Climate Change Initiatives			x					x					x	x			yes		
Gulf Coast Prairie LCC Conservation Planning Atlas		x									x						no	Specific to Gulf Coast.	
Gulf Coastal Plains and Ozarks LCC Conservation Planning Atlas		x									x						no	Specific to Gulf Coast.	
Habitat Priority Planner	x	x	x								x						yes		
Hawaii's Tsunami Hazard Information Service	x								x				x		x		no	Specific to Hawaii.	
Hazus-MH				x	x	x	x		x			x			x		yes	Desktop tool	
Heat Safety Tool				x					x				x				?		
Historical Hurricane Tracks	x			x						x							no	Specific to ocean coast.	
Historical Sea Ice Atlas								x		x							?		
HURREVAC	x			x					x			x					no	Specific to ocean coast.	
Hurricane-Induced Coastal Erosion Hazards	x					x			x			x					no	Specific to ocean coast.	
HydroGIS Viewer					x					x	x						?		
Imiq Data Portal		x				x			x	x							no	Specific to Arctic.	
Indigenous Health Indicators Tool			x						x				x				?		
Integrated Climate and Land Use Scenarios (ICLUS) Tools and Datasets											x					x	yes		
Integrated Rapid Visual Screening for Buildings	x				x	x			x								?		
Integrated Rapid Visual Screening for Tunnels	x				x	x	x		x								?		
Integrated Valuation of Environmental Services and Tradeoffs (InVEST)			x								x						?		
Interactive Flood Planning Map and Flood Forecast Display Tool						x						x					yes		
Inundation Analysis Tool	x				x		x			x							yes		
Inundation Mapping Interface	x				x		x			x							yes		
Know Your Line—High Water Mark Initiative	x												x				yes		
Lake Level Viewer: United States Great Lakes	x								x			x					yes - GL specific	Great Lakes specific	
LandCarbon		x	x							x		x					no		
LANDFIRE		x	x							x	x						no		
Life Cycle Assessment (LCA) Digital Commons Database							x		x								?		
Living Near Dams						x			x					x			yes		
Local Climate Analysis Tool (LCAT)					x							x					?		
Local Environmental Observer (LEO) Network				x					x				x				no	Specific to Alaska.	
Lyme Disease Communications Toolkit				x									x				?		
MACA CMIP5 Statistically Downscaled Climate Projections																x	?		
Maryland Coastal Atlas	x								x		x						no	Specific to Maryland.	
Metadata Access Tool for Climate and Health (MATCH)					x						x			x			?		
Multiscale Integrated Earth Systems Model (MIMES)		x	x								x						?		
National Assessment of Coastal Vulnerability to Sea Level Rise	x								x			x					no	Specific to sea level rise.	
National Climate Change Viewer																x	?		
National Gap Analysis										x	x						?		
National Land Cover Database Evaluation, Visualization, and Analysis (EVA) Tool		x						x		x	x						yes		
National Sea Grant Resilience Toolkit	x		x										x	x			yes	Portal to tools.	
National Stormwater Calculator—Climate Assessment Tool	x	x		x					x		x	x					yes		

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Web Soil Survey		x					x	x		x	x								?
WestMap—Climate Analysis & Mapping Toolbox										x	x								no

Updated: 1/20/16 by David Hart, University of Wisconsin Sea Grant Institute

yes - GL specific = 5
 yes - GL coverage = 6
 yes = 58
 no = 86
 ? = 66