

U.S. Climate Resilience Toolkit

	Parent Topic											Functionality											Great Lakes Relevance	Comments on tools relative to potential use in the Great Lakes region.
	Built Environment (220)	Coasts (146)	Ecosystems (121)	Health (108)	Water (110)	Tribal Nations (95)	Energy (72)	Transportation (59)	Food (63)	Marine (48)	Identify Vulnerabilities (204)	View Past/Current Conditions (150)	Analyze/Download Data (126)	Engage/Communicate (123)	Find Adaptation Planning Support (97)	Check Applied Forecasts (88)	Recover/Rebuild (42)	Visualize Climate Projections (39)						
Tools (393 as of 11/30/17)	x				x						x								yes	Draws from four case studies - three from Great Lakes (Duluth, Green Bay, Toledo)				
A Guide to Assessing Green Infrastructure Costs and Benefits for Flood Reduction	x	x								x									yes	Report with case studies.				
Adaptation Tool Kit: Sea-Level Rise and Coastal Land Use	x		x			x			x	x					x				yes	Structured process that helps land managers and owners consider the potential effects of climate change on forests and agricultural lands. Great Lakes case studies.				
Adaptation Workbook for Land Management and Conservation	x	x								x			x	x					no	Specific to Jamaica Bay, NY.				
AdaptMap Jamaica Bay	x				x					x	x	x	x	x				x	yes	Spatial database designed to compare conservation approaches and inform planning. National but prioritized to northwest.				
AdaptWest Climate Adaptation Planning Database	x	x	x							x	x	x							yes - GL coverage	National web-based tool that includes data for the Great Lakes.				
Advanced Hydrologic Prediction Service	x	x	x	x	x		x			x	x	x				x			?	Suite of economic, financial, and environmental decision tools designed for businesses that grow, harvest, package, add value, and sell agricultural products. Geared to northwest?				
AgBiz Logic									x	x	x	x	x	x				x	?					
Agricultural Conservation Planning Framework (ACPF) Toolbox			x		x				x	x	x	x							?					
AgroClimate—Tools for Managing Climate Risk in Agriculture					x				x	x	x	x	x	x					no					
AirNow: Air Quality Index (AQI) Monitoring and Forecasts				x						x									?					
Alaska and Northwestern Canada Quarterly Climate Impacts and Outlook	x	x	x	x	x	x	x	x	x	x									no	Specific to Alaska.				
Alaska Arctic Observatory and Knowledge Hub		x	x										x						no	Specific to Alaska.				
Alaska Climate and Weather Highlights											x								no	Specific to Alaska.				
Alaska Coastal Change Viewer	x	x								x	x								no	Specific to Alaska.				
Alaska Coastal Profile Tool		x								x	x								no	Specific to Alaska.				
Alaska Community Inundation Maps		x				x				x			x						no	Specific to Alaska.				
Alaska Online Aquatic Temperature Site (AKOATS)			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.				
Alaska Weeds ID Mobile App			x							x	x		x						no	Specific to Alaska.				
Alaskan Arctic National Parks Landscape Viewer										x	x								no	Specific to Alaska.				
Annual Greenhouse Gas Index											x	x							no					
Aquatic Connectivity Assessment and Prioritization Tool	x	x	x		x			x		x	x	x			x		x		check					
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						x	no	Specific to Arctic.				
Arctic Risk Map										x	x								no	Specific to Arctic.				
ASR Recovery Initiation Index	x				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									no	Specific to Arctic.				
Barrow Sea Ice Thickness and Sea Level Webcam and Radar										x									no	Specific to Arctic.				
Beach and Tidal Inlet Habitat Inventories—North Atlantic		x	x							x	x	x							?	Specific to North Atlantic.				
Beach-fx	x	x			x												x	x	?	Desktop software to model and measure the costs and benefits of protecting beaches.				
Beat the Heat in Houston					x								x						no	Specific to Houston.				
Being Prepared for Climate Change: A Workbook for Developing Risk-Based Adaptation Plans		x	x		x					x	x		x	x					yes					
Benefits Mapping and Analysis Program—Community Edition (BenMAP-CE)				x													x		check	Report in pdf				
Bering Strait Response Teaching Tool	x					x				x	x		x						no	Specific to Arctic.				
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				x							no					
Biofuels Atlas										x			x						no					
Biopower Atlas	x									x			x						no					
Bringing Wetlands to Market: BWM Wetland GHG Model			x							x							x		?					
Building Resilience Against Climate Effects (BRACE) Framework				x						x									check					
Cal-Adapt	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				no	Specific to California.				
CalWeedMapper			x							x									no					
CanVis	x	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.				
CarbonScapes			x			x					x	x							?					
CarbonTracker						x						x							no	NOAA product to keep track of sources and sinks of carbon dioxide.				
Cattle Heat Stress Forecast Maps									x										yes	Contiguous US. Cattle producers can consult maps to anticipate when heat stress may affect their animals.				
Cities Impacts & Adaptation Tool (CIAT)	x		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	x					yes					
Climate at a Glance	x			x	x		x	x			x	x							?	NOAA website that generates graphs and maps of climate variables for selected cities to the globe.				
Climate at a Glance Application											x								yes	National in scope. Use this application to comprehensively explore the question "Climate variability or climate change?" The app allows users to change parameters, times scales, and locations.				
Climate Change & Extreme Weather Vulnerability Assessment Framework	x									x									yes					
Climate Change Adaptation Planning Manual for Coastal Alaskans and Marine-Dependent Communities	x	x				x				x	x			x	x				no	Specific to Alaska.				
Climate Change Adaptation Resource Center (ARC-X)	x		x	x	x									x					check					
Climate Change and Human Health Literature Portal				x						x		x							?					
Climate Change Atlas for Tree and Bird Species	x		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 Preparedness and Resiliency Checklist	x	x														x	x		no	Specific to Boston.				
Climate Change Resilience Roadmap	x									x				x	x			x	check					
Climate Change Resource Center	x		x							x				x	x				?					
Climate Change Vulnerability Assessment Tool for Coastal Habitats (CCVATCH)		x	x							x	x			x	x				check					
Climate Change: Ecosystem Considerations		x								x	x	x		x					check					
Climate Commons			x									x		x					?					
Climate Explorer		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 Explorer (Legacy Version)	x	x	x	x	x	x	x	x	x	x	x	x					x		?					
Climate Inspector	x	x	x	x	x	x	x	x	x	x									x	yes	Global web mapping site by UCAR to explore projected changes in temperature or precipitation for four different emissions trajectories.			
Climate Mapper Tool			x							x	x								x	yes	Contiguous US. Display relevant past and projected future climate information to assist with decisions related to agriculture, drought, and fire conditions.			
Climate Registry for the Assessment of Vulnerability (CRAVe)	x		x			x				x					x				yes					
Climate Resilience Evaluation & Awareness Tool (CREAT)	x				x					x					x				yes					
Climate Resilience in Alaskan Communities: Catalog of Federal Programs	x	x				x				x				x	x				no	Specific to Alaska.				
Climate Service Providers Database NOAA Western Region	x	x	x	x	x	x	x	x	x	x				x	x				no	Specific to western region of the US.				
Climate-Smart Conservation: Putting Adaptation Principles into Practice	x		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.				

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Tools (393 as of 11/30/17)																										
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					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.						
GeoHEALTH Platform	x			x							x	x					x		?							
Geothermal Prospector					x	x					x								no							
Getting to Resilience	x	x											x	x					yes							
Global Ecosystems Map Viewer	x		x								x								?							
Great Lakes Climate Atlas	x	x	x	x	x						x	x			x				yes - GL specific	Great Lakes specific						
Great Lakes Coastal Resilience Planning Guide	x	x	x								x			x	x				yes - GL specific	Great Lakes specific						
Great Lakes Region Quarterly Climate Impacts and Outlook	x	x	x	x	x	x	x	x	x	x	x					x			yes - GL specific	Great Lakes specific						
Great Lakes Shoreviewer	x	x									x	x	x						yes - GL specific	Great Lakes specific						
Great Lakes Water Level Dashboard		x									x	x	x			x			yes - GL specific	Great Lakes specific						
Green-Gray Analysis (GGA)	x	x									x	x	x						yes	This methodology facilitates objective comparison of the costs and benefits of water management options that utilize natural and conventional infrastructure. Article with Portland ME case study.						
Groundwater Watch					x						x	x	x						?							
Guidelines for Considering Traditional Knowledges in Climate Change Initiatives						x							x	x					yes							
Gulf Coast Prairie LCC Conservation Planning Atlas	x		x										x						no	Specific to Gulf Coast.						
Gulf Coastal Plains and Ozarks LCC Conservation Planning Atlas	x		x										x						no	Specific to Gulf Coast.						
Gulf of Maine Region Quarterly Climate Impacts and Outlook	x	x	x	x	x	x	x	x	x	x	x					x			no	Specific to Gulf of Maine.						
Habitat Priority Planner	x	x	x			x						x							yes							
Hawai'i and U.S. Pacific Islands Region Climate Impacts and Outlook	x	x	x	x	x	x	x	x	x	x	x		x		x				no	Specific to Hawaii and Pacific Islands.						
Hawai'i Climate Adaptation Portal		x	x								x			x	x				no	Specific to Hawaii.						
Hawai'i Coastal Erosion Website	x	x									x	x	x						no	Specific to Hawaii.						
Hawai'i Drought Monitor			x		x					x	x			x	x				no	Specific to Hawaii.						
Hawai'i Flood Hazard Assessment Tool		x									x	x							no	Specific to Hawaii.						
Hawai'i Social Network Analysis	x	x											x	x					no	Specific to Hawaii.						
Hazards Mapper and HazPop Mobile App	x			x		x					x	x	x						check							
Hazus-MH	x			x	x		x	x			x					x	x		yes	Desktop tool						
Heat and Social Inequity in the United States				x							x			x				x	?							
Heat Illness Prevention Training Guide	x			x									x						?							
Heat Safety Tips	x			x							x		x		x				?							
Heat Safety Tool	x			x							x		x						?							
Heat Stress Toolkit	x			x							x		x						?							
Historical Hurricane Tracks	x	x		x								x							no	Specific to ocean coast.						
Historical Sea Ice Atlas												x							?							
Hudson River Flood Impact Decision Support System	x	x			x						x	x	x	x			x		no	Specific to Hudson River.						
HURREVAC	x	x		x							x					x			no	Specific to ocean coast.						
Hurricane-Induced Coastal Erosion Hazards		x				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		x						?							
Integrated Climate and Land Use Scenarios (ICLUS) Tools and Datasets												x					x		yes							
Integrated Rapid Visual Screening for Buildings	x	x			x		x				x								?							
Integrated Rapid Visual Screening for Tunnels	x	x			x		x	x			x								?							
Integrated Valuation of Environmental Services and Tradeoffs (InVEST)	x		x									x							?							
Intensity Duration Frequency Curves for New York State: Future Projections for a Changing Climate	x	x			x			x				x	x					x	check	Specific to New York.						
Interactive Flood Planning Map and Flood Forecast Display Tool	x				x											x			yes							
Inundation Analysis Tool	x	x					x	x				x							yes							
Inundation Mapping Interface	x	x					x	x				x				x			yes							
Iowa Flood Information System					x						x	x	x	x		x			no	Specific to Iowa						
J-SCOPE (JISAO's Seasonal Coastal Ocean Prediction of the Ecosystem)			x			x					x	x	x			x			?							
Keeping Pace: A Short Guide to Navigating Sea-Level Rise Models	x	x									x				x			x	no	Specific to ocean coast.						
Know Your Line—High Water Mark Initiative	x	x											x						yes							
Lake Level Viewer: United States Great Lakes	x	x									x					x			yes - GL specific	Great Lakes specific						
LandCarbon			x			x						x				x			no							
LANDFIRE	x		x		x							x	x						no							
Landslide Inventory Pilot Project											x				x				check							
Landslide Overview Map	x										x	x	x						check							
Life Cycle Assessment (LCA) Digital Commons Database											x								?							
Living Near Dams	x				x						x					x			yes							
Local Climate Analysis Tool (LCAT)	x			x												x			?							
Local Environmental Observer (LEO) Network	x					x					x		x						no	Specific to Alaska.						
Low Income Home Energy Assistance Program (LIHEAP)	x			x		x	x				x			x	x				?							
Lyme Disease Communications Toolkit				x										x					?							
MACA CMIPS Statistically Downscaled Climate Projections																		x	?							
Maryland Coastal Atlas	x	x									x		x						no	Specific to Maryland.						
Massachusetts Wildlife Climate Action Tool		x	x		x						x	x	x	x	x	x	x	x	no	Specific to Massachusetts.						
Metadata Access Tool for Climate and Health (MATCH)	x			x									x		x				check							
Methodology for Tidal Wetland and Seagrass Restoration			x														x		?							
Midwest Region Quarterly Climate Impacts and Outlook	x	x	x	x	x	x	x	x	x		x					x			yes - GL specific	Specific to Midwest Region of the US.						
Minnesota Extreme Heat Toolkit	x													x	x				check	Specific to Minnesota.						
Missouri River Basin Region Quarterly Climate Impacts and Outlook	x	x	x	x	x	x	x	x	x		x					x			no	Specific to Missouri River Basin.						
Multiscale Integrated Earth Systems Model (MIMES)	x	x	x									x							?							
NACo County Explorer	x	x	x	x	x	x	x	x	x		x		x						check	National tool. Provides key county-level information on a wide variety of topics: demographics, the economy, education, healthcare, and public safety.						
National Assessment of Coastal Vulnerability to Sea Level Rise		x									x					x			no	Specific to sea level rise.						
National Climate Change Viewer																		x	?							
National Environmental Public Health Tracking Network	x			x							x	x	x					x	?							

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West Coast Ocean Data Portal		x										x							no	Specific to West Coast.					
West-Wide Climate Risk Assessments	x		x		x						x				x				no	Specific to western region of the US.					
Western Region Quarterly Climate Impacts and Outlook	x	x	x	x	x	x	x	x	x	x									no	Specific to western region of the US.					
WestMap—Climate Analysis & Mapping Toolbox											x	x							no	West US?					

393 220 146 121 108 110 95 72 59 63 48 204 150 126 123 97 88 42 39

9 yes - GL specific
6 yes - GL coverage
70 yes
141 no
62 check
105 ?
393

Updated: 11/30/17 by David Hart, University of Wisconsin Sea Grant Institute