Snapshots: Resilient Lands and Waters Initiative

Introduction

As called for in the Administration's *Priority Agenda for Enhancing the Climate Resilience of America's Natural Resources*, Federal agencies worked with state, local, and tribal partners over the past six months to select a suite of geographic areas that will demonstrate the feasibility, practice, and benefits of landscape-scale management approaches toward building climate resilience through the use of existing, cooperative, inter-agency institutions and partnerships (see attached Q&A). These *Resilient Lands and Waters* represent a range of scales, geographies, and ecological stressors such as fire, sea-level rise, changing ocean conditions, and drought, and will focus on multiple community and ecosystem needs, such as coastal resilience, protecting drinking water for urban areas, improving wildlife habitat connectivity, and preventing threats like wildfire and invasive species.

The *Resilient Lands and Waters Initiative* announced in this first tranche include locations in Washington, Southwest Florida, Hawaii, and the Great Lakes, and all have strong state and local support. Each of these areas has committed to identify and map by October, 2016, initial priority areas for conservation, restoration, or other investments, to build resilience in vulnerable regions, enhance carbon storage capacity, and support management needs, and to follow upon those efforts by developing landscape-scale resilience strategies to assist in advance planning and management activities. Identifying such priority areas will benefit wildfire management, mitigation investments, restoration efforts, water and air quality, carbon storage, and the communities that depend upon natural systems for their own resilience.

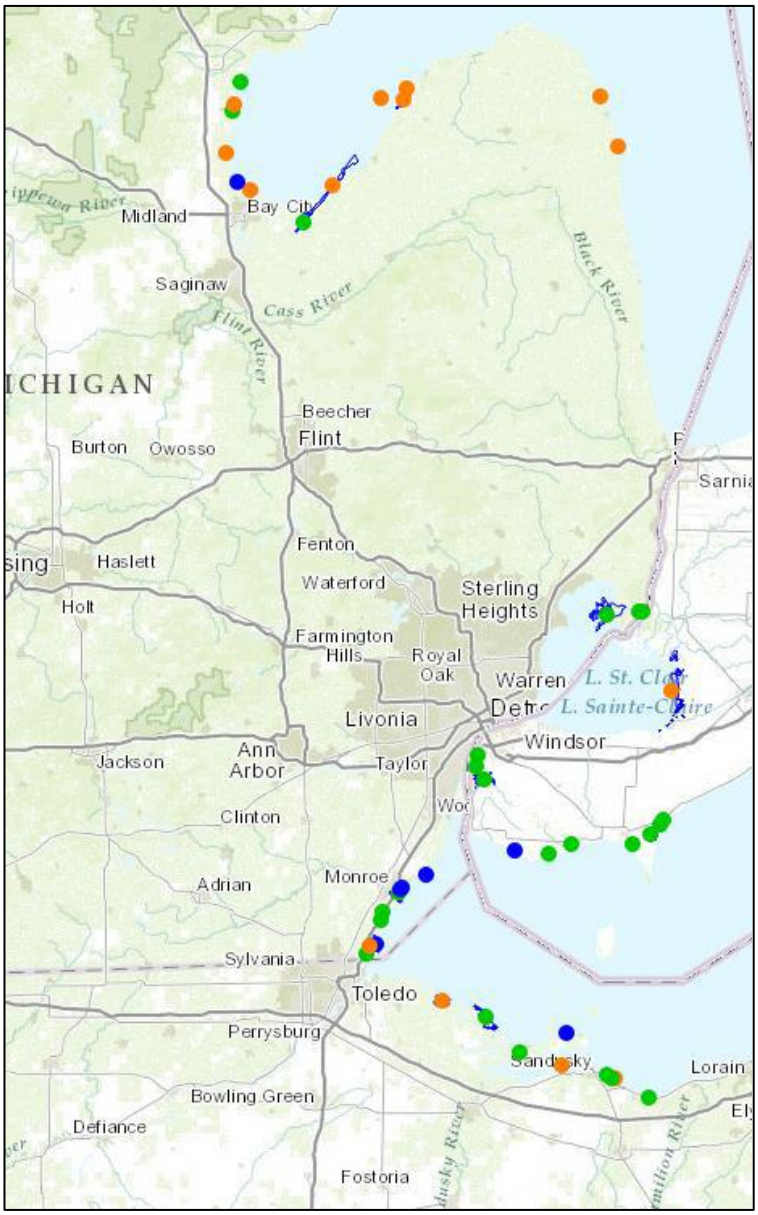
The goal of the *Resilient Lands and Waters Initiative* is to put a national spotlight on these important efforts and demonstrate that by organizing at a landscape scale, Federal, state, tribal, and local partners are able to improve their ability to plan for the future and address climate impacts that respect no jurisdictional boundaries. By tracking the successes and lessons-learned from these efforts, this initiative will encourage the development of similar resilience efforts in other areas where such strategies may provide a path forward that advances conservation, restoration, and sustainable development in a rapidly changing environment.

NOTE: Selection as a Resilient Lands and Waters *geographic area is not a formal designation that confers special legal or regulatory significance, but rather highlights the partnerships on the ground and builds upon the work of existing landscape-scale collaboratives nationwide in order to demonstrate and advance the resilience benefits of this type of approach to planning and management. As well, many of these areas provide enhanced opportunities for developing and demonstrating tools, much like the Western Governors Association's Crucial Habitat Assessment Tool, that help inform and guide investments and management across a landscape scale, increase certainty for development proponents, and increase the likelihood of success for conservation efforts. This initiative is a non-regulatory approach to planning in advance to enhance resilience.*

Lakes Huron and Erie Coastal Wetlands (Saginaw Bay (MI) to Maumee River (OH/IN)) (Lead Agency or Organization: NOAA)

Identifying priority wetlands for conservation and restoration

The Upper Midwest and Great Lakes Landscape Conservation Cooperative is leading the development of a Landscape Conservation Design of coastal wetlands. *A key component of that effort is the creation of a coastal wetland prioritization tool. This tool will reflect wetland conditional health and quality monitoring data as collected over the past 5 years throughout the entire Great Lakes basin. A ranked list of wetlands will be available as a by-product from this deliverable – the first of its kind.*



Higher quality/functional wetlands provide many resilience-related benefits, including but not limited to flood/inundation mitigation, storm water storage, water quality filtering, fish nurseries and critical wildlife habitat, as well as carbon sinks for mitigating greenhouse gas emissions. When completed, this tool is expected to inform the selection of locations where restoration, enhancement, and protection of wetlands should occur

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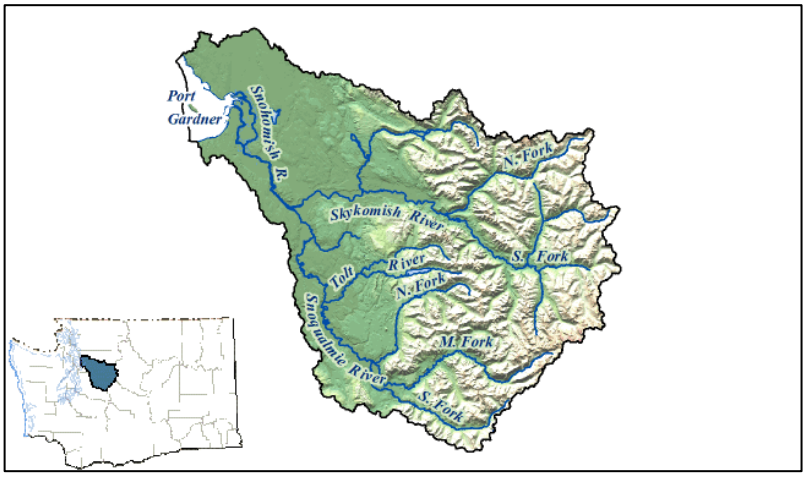
Puget Sound/Snohomish River Watershed (Lead Agency or Organization: NOAA)

Building resilience by identifying priority areas for habitat conservation and wetland restoration

An innovative approach called Coordinated Investment (CI) is currently being implemented in Puget Sound to accelerate conservation and resilience of natural resources and communities in coastal watersheds. This approach is intended to increase collaboration and coordination to better align the financial resources and authorities of state and federal agencies behind large scale projects that deliver multiple benefits to nature and our communities, broaden the base of support for recovery, and generate more return on our public investments. It is currently being used to help restore and build resilience in several areas of Puget Sound where it focuses on achieving salmon, water quality, and shellfish goals while strengthening working farms and forests. Current partners include EPA, USGS, FEMA, NOAA, NRCS, ACOE, Washington State, and several county organizations. *Efforts include using flooding hazard scenarios and predictions to inform project selection and planning efforts for agriculture and other land uses including identification of priority areas for habitat conservation (protection, restoration) to reduce impacts and increase resilience in the basin.*



In the Snohomish River watershed and estuary in particular, a diverse variety of federal, state, tribal, and NGO partners have been working together to promote conservation and climate resilience. Numerous projects are underway in the watershed to address these issues at a landscape scale. These include supporting a study that found major climate mitigation benefits from restoring tidal wetland habitats in the estuary; the Smith Island floodplain restoration and levee setback project to increase flood storage capacity and enable lower river to evolve to a changing climate and sea level rise, and a survey of climate data needs for floodplain managers to help inform better decision-making.

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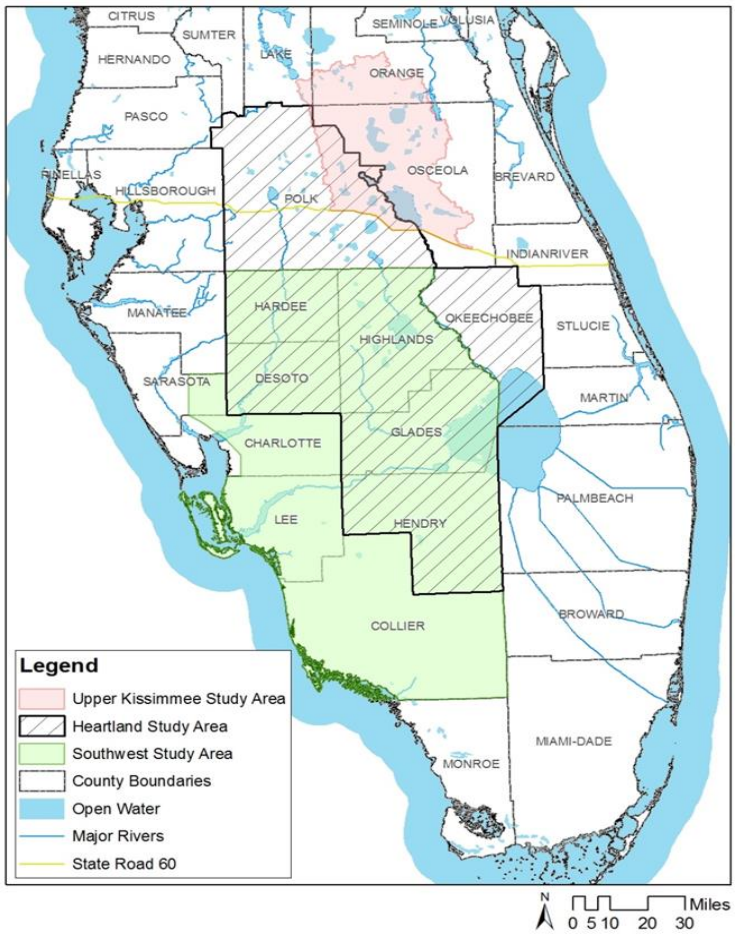
Southwest Florida (Lead Agency or Organization: Peninsular Florida LCC)

A regional vision for collaborative conservation efforts and building resilience

The southwest region of Florida consists of a number of diverse habitats including coastal mangroves, sea grasses, oyster reefs, Everglades' wetlands, pine flatwoods, and riverine/estuary. The area hosts a variety of endangered species including the iconic Florida panther. Public lands include the western side of the everglades, Big Cypress National Preserve, Panther and Everglades Headwaters National Wildlife refuges and other state and local parks. Threats include rapidly increasing urbanization increase, land use changes, invasive species, sea level rise, and changing patterns of precipitation and temperature. Florida has over 19,000,000 people and is predicted to reach 31,000,000 by 2060 with the southwest part of the state being one of the fastest growing areas. The Cooperative Conservation Blueprint for Florida (CCB) and Peninsular Florida LCC (PFLCC) have both designated this area as a focal zone and have developed strong partnerships with private land owners, federal and state agencies, the SW Florida regional planning council and NGOs such as The Nature Conservancy.

The CCB and PFLCC goal and guiding principles are dedicated to the creation and use of voluntary and non-regulatory conservation incentives that can be applied to a comprehensive vision of wildlife habitat and connectivity priorities across Florida. A broad array of incentives is needed for conservation in SW Florida due to a very heterogeneous landscape and large tracts of open and working lands. *The landscape conservation design and mapping of priority resources for SW Florida will be the foundation framework to determine where to focus various conservation incentives.* The strong partnerships involved will provide the needed interagency coordination and landowner and stakeholder involvement to apply incentives to meet the conservation targets for this region and provide resilience from future threats.



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West Hawai‘i, West Maui, He‘eia Watershed (O'ahu) (Lead Agency or Organization: Pacific Islands LCC)

Ridge to reef efforts to build resilience in the most vulnerable areas

The three Hawaii locations chosen for this initiative have ongoing and active management schemes in place with participation from an extensive list of federal, state, and local government agencies as well as community and non-profit organizations. Each location is already designated a priority location by the State of Hawai‘i and NOAA. He‘eia is a NOAA Sentinel Site and the State is nominating it for inclusion in NOAA’s National Estuarine Research Reserve System. Several local non-profits are leading conservation efforts in He‘eia which include stream and wetland restoration, invasive species eradication, and fishpond restoration. West Maui is a State of Hawai’i and US Coral Reef Task Force designated priority area with a watershed restoration initiative led by a large, multi-stakeholder group including numerous federal agencies such as NOAA, FWS, NRCS, EPA, and USGS in partnership with the State, as well as community and local non-profit organizations. The State of Hawai‘i and the US Coral Reef Task Force have also designated South Kohala within West Hawai‘i as a priority area, which is a NOAA-designated Sentinel Site location and Habitat Blueprint Focus Area. Priorities in West Hawai‘i include reef resilience, erosion and wildfire control, and dry forest restoration. West Maui and West Hawai‘i are also within National Marine Sanctuary boundaries.

While each location has slightly different participants and focus, they all incorporate robust community engagement and multi-sectoral partnerships in addressing a range of resilience options. Much of the work is utilizing existing tools and services while using new science and tools to understand climate vulnerability and develop management options. In He‘eia, organizations are using the NOAA Sea Level Viewer, reef resilience studies, and various reef and terrestrial invasive species removal techniques while also identifying new assessments needs for flooding and sedimentation. West Maui has an ongoing Ridge-to-Reef effort that has utilized PICCC’s analysis of projected vegetation changes under future climate scenarios as well as identifying key reef stressors, high erosion locations, and post-fire rehabilitation plans. West Hawai‘i is conducting similar reef resilience studies and erosion assessments while working to better prevent wildfire impacts, which will be exacerbated by climate change.

Selection as one of the Resilient Lands and Waters areas will help coalesce the many efforts around specific climate change-related issues in areas of high vulnerability. *The improved coordination and maps will aid in the identification of new partnership opportunities and more effectively and efficiently address resilience across this network of sites. It will also help prioritize which climate change impacts are the most widespread and of greatest concern.*

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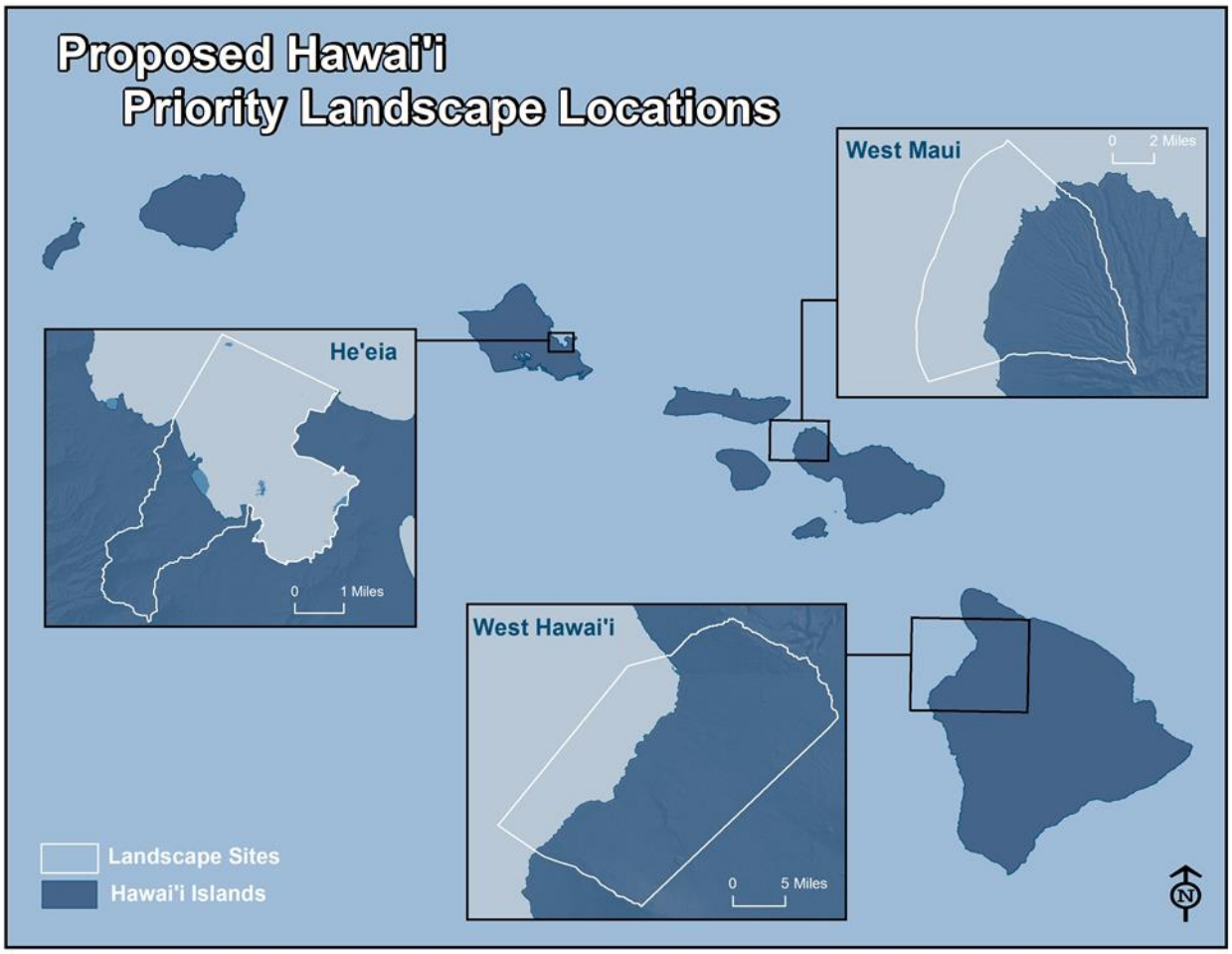
Proposed Hawai'i
Priority Landscape Locations
West Maui
0 2 Miles
He'eia
0 1 Miles
West Hawai'i
0 5 Miles
Landscape Sites
Hawai'i Islands
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PARTNERS

These partner organizations have collaborated in the development of these Resilient Lands and Waters. These organizations will be in dialogue to develop more explicit strategies, maps and programs of work for these Resilient Lands and Waters within 18 months as laid out in the Climate and Natural Resources Priority Agenda (https://www.whitehouse.gov/sites/default/files/docs/enhancing_climate_resilience_of_americas_natural_resources.pdf).

Hawaii Partners (PICCC Charter Members)

- American Bird Conservancy
- Bishop Museum
- Hawai‘i Conservation Alliance
- Hawai‘i Wetland Joint Venture
- Kamehameha Schools
- National Park Service Inventory and Monitoring
- National Park Service Pacific West Region
- NOAA National Marine Fisheries Service
- NOAA NESDIS NCDC Climate Services Pacific Region
- NOAA Office of National Marine Sanctuaries
- NOAA Pacific Services Center
- Office of Hawaiian Affairs
- Pacific Science Association
- State of Hawai'i Department of Land and Natural Resources Division of Aquatic Resources
- State of Hawai‘i Department of Land and Natural Resources Division of Forestry and Wildlife
- The Nature Conservancy of Hawai‘i Office
- Trust for Public Lands Hawai‘i
- U.S. Army Garrison Hawai‘i Natural Resource Program
- U.S. Fish and Wildlife Service Ecological Services Pacific Islands Fish and Wildlife Office
- U.S. Fish and Wildlife Service Migratory Birds
- U.S. Fish and Wildlife Service National Wildlife Refuge System Hawaiian and Pacific Islands National Wildlife Refuges
- U.S. Fish and Wildlife Service Wildlife and Sport Fish Restoration Program
- U.S. Geological Survey Pacific Island Ecosystems Research Center
- University of Hawai‘i at Mānoa Center for Conservation Research and Training
- University of Hawai‘i at Mānoa Social Science Research Institute
- University of Hawai‘i at Hilo Office of Research

Peninsular Florida LCC Steering Committee

- US Fish & Wildlife Service
- US Geological Survey
- National Park Service
- National Oceanic and Atmospheric Administration
- Department of Defense

- Florida Fish & Wildlife Conservation Commission
- Florida Department of Agriculture and Consumer Services
- Florida Department of Transportation
- Southwest Florida Water Management District
- The Nature Conservancy
- Florida Wildlife Federation
- Florida Forestry Association
- Florida Farm Bureau Federation
- Wildlands Conservation
- Plum Creek
- Breedlove, Dennis & Associates, Inc. (Florida Land Council)
- Ken Passarella, and Associates, Inc.
- Family Lands Remembered, LLC
- Florida State University, Florida Natural Areas Inventory
- University of Florida, Center for Landscape Conservation
- Private Landowners

Lakes Huron and Erie Coastal Wetlands (Saginaw Bay (MI) to Maumee River (OH/IN))

- *Interagency Groups:* Upper Midwest and Great Lakes Landscape Conservation Cooperative; Great Lakes Restoration Initiative Habitat Committee; Great Lakes Wetlands Consortium
- *Bi- national Agencies:* Environment Canada, Ontario Ministry of Natural Resources, Great Lakes Commission
- *Federal Agencies:* NOAA, USFWS, USGS, NPS, BIA, EPA
- *State Agencies:* WI, MN, IL, MI, OH
- *NGOs:* TNC, Ducks Unlimited, Audubon, NFWF
- *Universities:* University of MN, WI, MI, Oregon State, Grand Valley State, University of Notre Dame, Lake Superior State University, SUNY, University of Windsor, Central Michigan University

Puget Sound/Snohomish River Watershed

- *Coordinated Investment (CI) Approach:* EPA, USGS, FEMA, NOAA, USFWS, ACOE, Washington State Puget Sound Partnership
- *Floodplains by Design partnership*-- Washington Department of Fish and Wildlife, Puget Sound Partnership, and The Nature Conservancy
- *Sustainable Lands Strategy*