

CLIMATE CHANGE ADAPTATION PROJECTS AND RESOURCES IN COASTAL NH

Adaptation. *Adjustment in natural or human systems in response to current natural hazards and actual or expected climate change impacts. Actions taken to help communities and ecosystems moderate, cope with, or take advantage of actual or expected changes in weather and climate conditions.*

Following is a summary of current and proposed projects which could yield information useful to local climate adaptation planning, hazard mitigation plans and capital improvement plans. Each study or project offers unique data, maps and analysis as well as methods and tools for conducting outreach, raising awareness of important issues, and improving capacity within communities.

Products	Project Description
Maps and Data Future Conditions <i>(land/property flood inundation focus)</i>	NOAA CSC Sea Level Rise Viewer's Marsh Migration Tool – Gulf of Maine Being able to visualize potential impacts from sea level rise is a powerful teaching and planning tool and the Sea Level Rise Viewer brings this capability to coastal communities. This web-based visualization tool shows how various levels of sea level rise will impact coastal communities. Visuals and the accompanying data and information cover sea level rise inundation, uncertainty, flood frequency, and marsh impacts.
Maps Statistical Data Future Conditions <i>(wetland ecology focus)</i>	Sea level Affecting Marshes Model - NH Fish and Wildlife – NH Coastal Region Sea level Affecting Marshes Model (SLAMM) simulates the dominant processes involved in wetland conversions and shoreline modifications during long-term sea level rise. Maps showing location and extent of wetlands and critical habitats are predicted under conditions of accelerated sea level rise, and results are summarized in tabular and graphical form.
Statistical Data Maps and Analysis Future Conditions Recommendations Action Plans	City of Portsmouth Coastal Resilience Initiative The purpose of this initiative is to improve resiliency, to integrate proactive and prescriptive actions into the City's existing framework of management, planning and infrastructure investments. The goal is to evaluate existing vulnerabilities and address ways to significantly reduce or prevent future vulnerability of the City's valuable assets.
Statistical Data Maps and Analysis Future Conditions Recommendations Action Plans	Climate Change Adaptation and Hazard Mitigation Planning in Coastal NH As part of a FEMA grant proposal, the Rockingham Planning Commission hopes to produce a regional vulnerability assessment report and map set for NH coastal communities, utilizing the best available information to assess the impacts of climate change on land, natural resources and infrastructure. Products will include detailed maps, risk and impact analyses, and adaptation and mitigation strategies to address the projected future effects of sea level rise and storm surge.
Recommendations Strategies Action Plans	Applying the NOAA Roadmap for Vulnerability Assessment, Town of Newfields During the 2012 summer, Newfields officials and community members gathered at Town Hall for dinner and discussion about how extreme weather and potential changes in climate affect the town's people, infrastructure, and natural resources. Following presentation of the Great Bay Climate Assessment by UNH researchers, and a few words from the town's emergency management deputy director, participants began community dialogue with a collaborative exercise to identify how weather and climate affect the town and possible actions to reduce impacts of concern. Over the next year, the Natural Resources Outreach Coalition and CAW will help the community address

	these concerns.
Regulatory and Non-regulatory maps	<p>FEMA Risk MAP – Regulatory products Updated and modernized flood risk maps, reports, databases for 17 NH coastal communities</p> <p>FEMA Risk MAP - Non-regulatory products Additional databases, maps, and reports of areas subject to flooding to augment the updated FEMA regulatory products for NH’s 17 coastal communities</p>
Coastal Flood Forecast Tool	<p>Coastal Flooding and Erosion Forecast Tool, Hampton, NH Knowing the relationship between storm tide, waves and coastal flooding will help predict when flooding and splash-over events (such as beach erosion) might occur based on forecast water level (tide height) and wave height data. A prototype model developed for Scituate, Massachusetts is now being customized for use in the Hampton/Seabrook estuary, as well as a local flood/inundation forecast model system. Both products could be used by emergency managers, coastal homeowners and other users with interest and concern about beach erosion and flooding within the estuary during large-wave storms. http://www.neracoos.org/datatools/forecast/coastal_flooding_forecast/scituate</p>
Maps, Spatial Data Climate Trends Future Projections	<p>Climate Change in the Piscataqua/great Bay Region: Past, Present, and Future Climate Change in the Piscataqua/Great Bay Region: Past, Present, and Future is a detailed assessment of climate change for coastal New Hampshire that describes how the region's climate has changed over the past century, and how climate may change over the course of this century based on different global greenhouse gas emission scenarios. This report provides decision-relevant information on a regional scale to individual, municipal, regional, and state decision-makers. The information compiled in the climate assessment provides the foundation for developing local adaptation plans to a changing climate and this project will disseminate this information to seacoast municipalities. Project web site: http://CarbonSolutionsNE.org Contact: Steve Miller, Great Bay NERR (steve.miller@wildlife.nh.gov) or Cameron Wake, UNH (Cameron.wake@unh.edu)</p>
Master Plans Recommendations Strategies Action Plans	<p>Municipal Plans and Documents Town of Hampton – Master Plan - Natural Resources Chapter Town of Seabrook – Hazard Mitigation Plan (recommendations from <i>Adaptation Strategies to Protect Areas of Increased Risk from Coastal Flooding Due to Climate Change, Seabrook, NH</i>, 2009, Rockingham Planning Commission, 2009) City of Portsmouth – Coastal Resilience Initiative – Preparation for 2013 Master Plan Update (in process)</p>

ADDITIONAL RESOURCES ABOUT CLIMATE CHANGE AND ADAPTATION	
Case Studies and Local Stories	<p>Clean Air-Cool Planet A compilation of stories that tell how citizens and organizations in the northeast are dealing with a changing climate. For example, learn the stories of the catastrophic failure of a wastewater treatment plant, of local proactive protection in the Gulf of Maine, and how a Lee, NH farmer is adapting and growing. These local stories are available on the CA-CP website at http://www.cleanair-coolplanet.org/for_communities/adaptation_and_impacts_stories.php</p>