

NHDOT
Sea Level Rise / Resiliency Resources
April 15, 2024

Planning Resources

NHDES Coastal Hazards and Adaptation Website – NH Coastal Program resource list using the best available science to avoid and adapt to coastal hazards. (<https://www.des.nh.gov/climate-and-sustainability/resiliency-and-adaptation/coastal>)

NHDES Sea Level Rise Map – Provides easy access to future coastal inundation scenarios. It is intended to be used as a screening tool for planning purposes.

(<https://nhdes.maps.arcgis.com/apps/webappviewer/index.html?id=c231e2f3b1f94d05bc0c8faf0265f569>)

Science and Technical Advisory Panel (STAP) 2019-2020 Coastal Flood Risk

Summary – Updates the 2014 report: “Sea-Level Rise, Storm Surges, and Extreme Precipitation in Coastal New Hampshire, Analysis of Past and Projected Trends.” – Provides a synthesis of the state of the science relevant to coastal flooding in NH, as well as guidance for using scientific projections.

(<https://www.des.nh.gov/about/boards-and-committees/coastal-flood-risk>)



NHDOT Coastal Vulnerability Assessment – Cambridge Systematics completed this assessment for the NHDOT in 2023. Three outcomes of the assessment were:

- 1) Identification of state roads and bridges in the coastal area that are likely vulnerable to sea-level rise through 2050 and 2100;
- 2) Development of a framework for criticality and vulnerability that could be applied to the rest of the state, and
- 3) A process for NHDOT personnel to determine which sea-level rise scenario to consider for different projects on different facilities. *The vulnerable locations are available upon request in an ArcGIS format.*

Rockingham Planning Commission Vulnerability Assessment and Resiliency Plan – This document completed a vulnerability assessment of transportation assets in the NH Coastal Zone and developed recommendations to better prepare for climate change impacts. (https://www.therpc.org/application/files/3816/6196/9236/STCVA_Plan_FINAL_08312022.pdf)

Design Resources

NH Coastal Viewer – Online mapping tool that brings coastal resources spatial data, hazards-related special data, and other special data sets within the 42 coastal watershed communities together in one place. Serves as a one-stop shop for all coastal resources and hazards-related spatial data in NH’s coastal watershed. (<https://www.nhcaw.org/new-hampshire-coastal-viewer/>)

A Primer on Modeling in the Coastal Environment, FHWA-HIF-18-002, December 2017 – Provides an introduction to coastal hydrodynamic modeling for transportation engineering professionals. (<https://rosap.ntl.bts.gov/view/dot/44393>)

NHDES Administrative Rules PART Env-Wt 100-900 – NH Wetlands Bureau administrative rules regarding design and construction of projects in RSA 482-A jurisdiction. (https://www.gencourt.state.nh.us/rules/state_agencies/env-wt.html)

NHDES Administrative Rules PART Env-Wq 300-2200 – NH water quality administrative rules regarding protection of water quality. (https://www.gencourt.state.nh.us/rules/state_agencies/env-wq.html)

Legislative Resources

RSA 483-B:22 Coastal and Great Bay Region Reports – Multiagency group that meets every 5 years to supervise and update storm surge, sea level rise, precipitation, and other relevant projects recommended in the Coastal Risks and Hazards Commission 2014 report “Sea-Level Rise, Storm Surges, and Extreme Precipitation in Coastal New Hampshire: Analysis of Past and Projected Trends.” (<https://www.gencourt.state.nh.us/rsa/html/L/483-B/483-B-22.htm>)

Chapter 195 Laws of 2016 – Required certain state agencies to conduct an audit of laws governing coastal regions to enable authorities to take appropriate actions. *NHDOT reports available upon request.*
(https://www.gencourt.state.nh.us/bill_status/legacy/bs2016/billText.aspx?sy=2016&id=27242016&txtFormat=html)

Committees & Workgroups

NH Coastal Adaptation Workgroup – A collaboration of over 30 organizations working to assist communities in NH’s coastal watershed to prepare for the impacts of extreme weather and long-term climate changes. (<https://www.nhcaw.org>)

New Hampshire Silver Jackets – Pre-and post-incident response and recovery team designed to maintain and integrate comprehensive relationships with federal, state, and local agencies and programs to increase awareness and reduce flood risk and facilitate partnerships related to mitigating and recovering from flood events in NH.
(<https://www.iwr.usace.army.mil/Silver-Jackets/State-Teams/New-Hampshire/>)



NH Coastal Risks and Hazards Commission – Established by SB 163/Chapter 188 in 2013, the purpose is to, “recommend legislation, rules and other actions to prepare for projected sea-level rise and other coastal watershed hazards such as storms, increased river flooding and storm water runoff, and the risks such hazards pose to municipalities and state assets in New Hampshire.” (<https://www.nhcrhc.org/establishmen/>)

NHDOT internal climate change committee – Serves as a forum for initiating and overseeing climate change information and guidance from state, regional, and national resources with the goal of protecting the state’s transportation assets.
(<https://www.dot.nh.gov/about-nh-dot/divisions-bureaus-districts/materials-research/research-projects/research-program-4>)

NHDOT Project Review Committee – Ensures that projects in the Ten Year Plan, or entering the Ten Year Plan, have scopes of work of significant detail, budgets, and schedules that are aligned, and include/address climate change and resiliency.

Ongoing Studies

Coastal Resilience Hydraulic Modeling Guidance – NHDOT has hired GZA GeoEnvironmental, Inc. to update the “Highway Design Manual on Drainage Design for Highways” to incorporate consideration of coastal resilience and hydraulic modeling.

New Hampshire Coastal Flood Risk Model (NH-CFRM) – Woods Hole Group is working under contract with NHDES to complete simulations for New Hampshire’s coastal flood risk model and applying them to several land use and transportation areas in the seacoast. While not complete, a similar model has been completed for Massachusetts.
(<https://experience.arcgis.com/experience/23d861b79aed450eb8972013dd28579b/page/MA-Coast-Flood-Risk-Model/>)

NHDOT Resiliency Improvement Plan – This Plan will adapt and expand the framework developed as part of the “NHDOT Coastal Vulnerability Assessment” to the rest of the state of NH. Two outcomes will be the: 1) Identification of areas on state roads that are vulnerable today and in the future due to projected increases in rainfall, and 2) Recommendations for NHDOT to improve our processes. Cambridge Systematics is assisting the Department and the plan is on-track for completion by the end of 2024.