

University of New Hampshire Looks into Legal Issues of Flood Zones

New Floodplain Maps for a Coastal New Hampshire Watershed and Questions of Legal Authority, Measures and Consequences

Project Summary/Overview

This project explores the legal authority, measures, and possible consequences associated with the use of new floodplain maps by coastal communities in New Hampshire based on current and projected land use patterns and precipitation amounts.

The primary objective of this project is to provide legal research and analysis to address legal issues relating to whether local governments can and should apply UNH's new flood mapping information in order to plan for projected environmental conditions.

Project Background

Up-to-date information regarding the extent of flood zones is needed to better reflect current conditions. Currently, floodplain maps are largely based on land uses and precipitation data from the 1940s. Today's higher percentages of impervious cover, in conjunction with higher intensity storms, are compounding stormwater runoff and contributing to flooding. In response, a NOAA funded UNH-led team is developing new 100-year floodplain maps for the Lamprey River watershed in southeastern New Hampshire.

The legal research is being conducted by faculty and students at Vermont Law School (VLS) and integrated with an existing project led and coordinated by a team at University of New Hampshire (UNH). The legal research effort is designed to help communities overcome barriers posed by legal uncertainties about using the new floodplain data and information as they attempt to build resiliency through improved plans and policies. Concerns about legal consequences of decisions made in the project arose, including questions about: the authority of communities to develop regulations based on current or projected conditions; liability

for using or not using the new data to guide regulatory controls; the necessary scientific and technical standard required to support regulation; and possible policy options for reducing risks from expanded flood zones.

Project Implementation

The team at UNH is developing new floodplain maps for the Lamprey River Basis, a sub-watershed within New Hampshire's coastal watershed. The mapping project is funded by the NOAA/UNH Cooperative Institute for Coastal and Estuarine Environmental Technology. The new maps will include current (2005) land use and precipitation data as well as projected changes based on different land use and climate scenarios.

Project Outcomes and Conclusions

The mapping team and legal advisory team consider the legal research as an integral component of the overall project. It is anticipated that integrating legal research findings into the mapping project outreach will increase the capacity and comfort level of community leaders to address public health and safety related to floods by offering them guidance on policy implementation options when using these new technical tools.

Land use, municipal infrastructure, property development and emergency management professionals will benefit from the combined efforts of environmental and legal research teams addressing questions about existing and potential future flood zones. Although this particular project focuses on the use of new floodplain maps, the legal questions posed are broader, and many are likely to be applicable to similar climate-related effects.

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Part of the Northeast Climate Change Adaptation Project

*In 2011, the [Northeast Regional Ocean Council \(NROC\)](#) and the [Gulf of Maine Council on the Marine Environment \(GOMC\)](#) received funding from the [National Oceanic and Atmospheric Administration's \(NOAA's\) Climate and Societal Interactions Program \(CSI\)](#) to examine innovative municipal approaches to climate change adaptation in the coastal zone of the Northeast and Bay of Fundy. The two-year project, *Stimulate Innovation and Increase the Pace of Municipal Responses to a Changing Climate in the Coastal Zone of the Northeast and Bay of Fundy*, was completed in June, 2013. The research and outreach for the project was conducted by the following partners: the [Marine Affairs](#)*

Institute, a partnership of [Roger Williams University School of Law](#), [Rhode Island Sea Grant Legal Program](#), and [University of Rhode Island](#); [Blue Urchin](#); [StormSmart Coasts Network](#); and [Clean Air-Cool Planet](#).

Read more about the Northeast Climate Change Adaptation Project on our website:
<http://necca.stormsmart.org/>