

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

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ABSTRACT

This project will explore 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 legal research will be carried out by faculty and students at Vermont Law School (VLS) and integrated with the existing project led and coordinated by a multi-disciplinary team at the University of New Hampshire. The UNH-led team is developing “new” floodplain maps for the Lamprey River basin, 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 (CICEET).

Current FEMA 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 the volume and flashiness of stormwater runoff and contributing to flooding. The map set will include current (2005) land use and precipitation data as well as projected changes based on different land use and climate scenarios. More up-to-date information about expanding flood zones should help communities better prepare and thereby reduce threats to health, property and infrastructure from flooding.

An advisory board of local decision makers and professional planners guides the technical mapping team in anticipating how the map series will be used by community leaders within the watershed. The board anticipates that the maps may influence community plans and decisions related to development location and impact, riparian buffers, planning and zoning ordinances, road and drainage standards and community expansions of FEMA standards.

During discussions with the advisory committee, concerns about legal consequences of these decisions 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. The legal research will result in suggestions for policy and implementation alternatives for protecting health and property from flooding based on anticipated uses of the maps. Research results will be shared with watershed communities and delivered with the maps.

The mapping team and the advisory committee consider the legal research as an integral component of the overall project that will contribute enormously to the relevance and usefulness of the community outreach. Sea Grant Extension programs encourage local officials to use science-based information to inform their decision making. Land use decisions are mostly made at the local level in New England and land use boards comprise volunteers with varying levels of comfort with scientific information and processes. It is anticipated that integrating the 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 and implementation options when using these new technical tools.

This project addresses Sustainable Coastal Development and Hazard Resilience focus areas.