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New Hampshire Estuaries Project Launches Pilot Project To Help Coastal Communities Adapt To Climate Change

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New Hampshire Estuaries Project

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DURHAM, N.H. -- With a $50,000 Climate Ready Estuaries grant from the U.S. Environmental Protection Agency, the New Hampshire Estuaries Project (NHEP) at the University of New Hampshire is initiating a pilot project in the Oyster River watershed to identify road culverts that are subject to failure during the increasingly extreme storm events projected for New England by climate change scientists.

The NHEP is partnering with the Town of Durham and the Strafford Regional Planning Commission on a comprehensive inventory of most major road-stream culverts throughout the Oyster River watershed ï¿½ including portions of the towns of Durham, Madbury, Dover, Lee, and Barrington. Based on the size and condition of each culvert assessed, its capacity to handle increased flows due to climate change and development impacts will be evaluated.

The project team will then develop recommendations for culvert improvements based on risk analysis and cost estimates. In this way, the project will demonstrate to public works staff, road agents, and other community stakeholders how climate change is expected to impact an important component of community infrastructure and safety, while providing an action plan to make improvements. The results of this watershed-based storm impact modeling pilot project will be shared with other area communities as well as the other 27 National Estuary Programs across the country.

According to researchers at the Climate Change Research Center at UNH, the frequency of extreme rainfall events is increasing. At the same time, watersheds are being altered by impervious surfaces associated with development, such as roads, roofs, and parking lots. Both of these factors contribute greater quantities of water running off the land and increase the potential for damaging floods. Many of the culverts currently found under local roads were not designed to safely pass the amount of water that can be anticipated due to these changes. This means that during future flood events road-stream crossings are likely to fail, which could result in damage to infrastructure and property, loss of life, and degradation of aquatic ecosystems.

The highly destructive rainstorms of 2006 and 2007 have sparked heightened regional awareness of increasing storm intensity and other impacts associated with climate change. "We wanted a project that could demonstrate tangible environmental, economic, and social impacts associated with climate change," says Derek Sowers, NHEP project coordinator. Sowers hopes this project will act as a catalyst for inspiring local communities to take proactive measures to adapt to changing conditions.

Sowers notes, "Citizens and community leaders need to understand that climate change impacts are happening and will only get more severe over the next 50 years - we can plan for and adapt to those impacts now, or respond to them in crisis mode as they play out in our communities and incur much greater environmental and economic costs."

The NHEP is a collaborative program involving governmental agencies, universities, nonprofit organizations, businesses and the public to protect, enhance and monitor the environmental quality of the region's coastal bays and rivers. The NHEP is funded in part by a grant from the U.S. Environmental Protection Agency, through an agreement with the University of New Hampshire. Learn more at www.nhep.unh.edu

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