

Resilient Connecticut 2.0 Synthesis Report

Appendix H

Flood Sensor Project Fact Sheet

Dual Sensor Systems for Water Monitoring and Flood Response

Fieldwork application for [Resilient Connecticut](#)

What is the purpose for real-time flood monitoring?

The goal of implementing real-time flood monitoring is to equip emergency response teams and decision-makers with immediate, precise data on water levels and flood occurrences. This initiative enables proactive measures, efficient resource management, and strategic emergency responses, significantly mitigating the adverse effects of floods on communities and infrastructure.

How does it work?

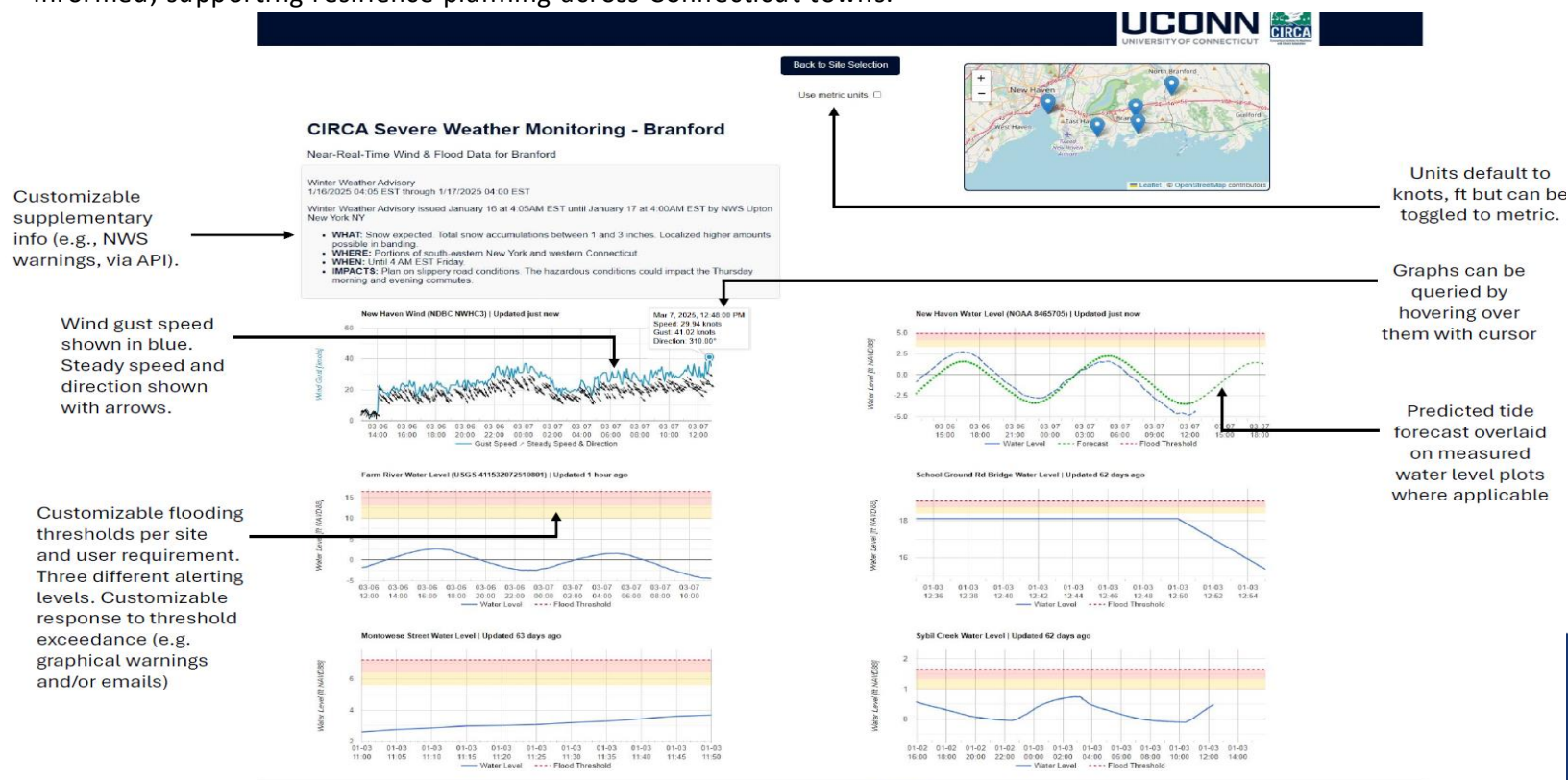
The project utilizes two types of sensors: water level sensors and flood elevation sensors, deployed strategically across vulnerable coastal areas. Water level sensors help bridge data gaps in flood risk mapping, while flood elevation sensors rapidly detect and assess flood events in key locations like underpasses and flood-prone streets. Data from these sensors is transmitted in real-time to a central dashboard that displays current conditions, and alerts. So far, pilot projects have been successfully initiated in Stamford and Branford. These locations were chosen based on historical flood data and current risk assessments to maximize the impact and effectiveness of the monitoring systems.

Dashboard Overview

The real-time dashboard is a central component of the sensor network, designed to provide stakeholders with instant access to flood data. It features user-friendly interfaces that display data charts, and notifications. Users can download data in CSV format for further analysis, and the system ensures that the latest information on flood risks is readily available for emergency management and public awareness.

Who can use the data?

This real-time flood monitoring system provides crucial data for emergency responders and decision-makers, enhancing preparedness and response in flood-prone areas. The sensors record water levels, elevations, and GPS coordinates, enabling quick evacuations and resource deployment. Automated alerts keep all stakeholders informed, supporting resilience planning across Connecticut towns.





What is Resilient Connecticut?

The Connecticut Institute for Resilience and Climate Adaptation (CIRCA) initiated the *Resilient Connecticut* project in 2018 working with state agencies, Councils of Governments (COGs), and municipalities. This project originally focused on communities impacted by Superstorm Sandy and was later expanded to cover more regions of Connecticut. Activities included science-based risk assessments, community outreach, and pilot project development for addressing flooding and extreme heat events. Products include map viewers, policy recommendations, academic research, and identification of areas for focusing community resilience. The goal of this work is to help decision-makers prepare for sea level rise and changes in flooding, precipitation, and heat; and to advance planning for more resilient communities relative to housing, transportation, and infrastructure. Refer to <https://resilientconnecticut.uconn.edu/> for more information. Fourteen pilot projects have been launched in Danbury, Norwalk, Ansonia, Fairfield, Stratford, Fair Haven, Branford, Portland, East Haddam, Jewett City, Mystic, East Hartford, Piper/Webster Brook, and the Yantic River. Developing community resilience hubs has been identified as a recommended action across several of these projects.

What is CIRCA?

CIRCA is a multi-disciplinary, center of excellence that brings together experts in the natural sciences, engineering, economics, political science, planning, finance, and law to provide practical solutions to problems arising as a result of a changing climate. The Institute helps vulnerable communities in Connecticut and throughout the Northeast better adapt to changes in climate through assessment and planning to support community infrastructure while protecting valuable ecosystems and the services they offer to human society (food, clean air and water, and energy). CIRCA combines the world-class research capabilities of UConn and the progressive policies and practical regulatory experience of the Connecticut Department of Energy and Environmental Protection (CTDEEP) to translate sound scientific research to actions that can ensure the resilience and sustainability of both the built and natural environments of the coast and watersheds of Connecticut.

