Rhode Island Coastal Hazards, Analysis, Modeling and Prediction (RICHAMP)

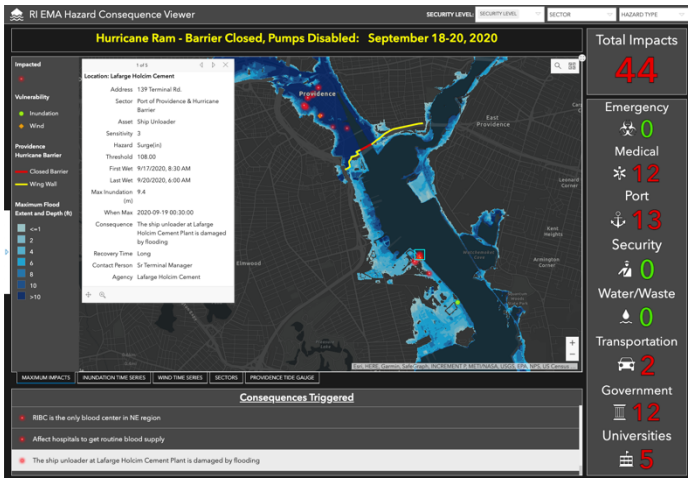
University of Rhode Island Project funded by DHS Coastal Resilience Center of Excellence

Summary

The RICHAMP system incorporates enduser concerns into real-time tools used at Emergency Operation Centers (EOCs). It integrates qualitative data into a real-time hazard & impact prediction system for hurricanes & nor'easters in New England, including: 1) a methodology to collect qualitative concerns for critical infrastructure facilities, 2) a secure ArcEnterprise database for storage/management of consequence threshold data, tiered access, and integration with ADCIRC-Surge Guidance System, 3) a mobile application or web tool for self-reporting and updating of georeferenced consequence data (see also www.richamp.org).

Project goals

- Comprehensively investigate storm hazards and their consequences for critical infrastructure in Rhode Island using the most advanced coastal storm surge, wave, and hydrological prediction models.
- Transition new modeling capabilities to the *real-time* storm modeling used by emergency managers in their emergency operation centers.
- Display integrated qualitative and quantitative concerns collected directly from infrastructure managers, making model outputs relevant to decision making.
- Develop online dashboards that integrate infrastructure consequences into storm models outputs.
- The combined storm hazard and impact modeling system (i.e., dashboard) will not only aid emergency managers with determining when damage will occur to infrastructure (e.g., when a network server room may be flooded), but also can capture consequences (e.g., loss of communications across a sector the depends upon that network).



End-user Focus

The project engages key users of information in the development and dissemination of the tools to make them more relevant, and useable as a planning and response tool.

- Federal partners - FEMA Region 1, NOAA National Weather Service (NWS) Northeast, Department of Homeland Security Science and Technology.
- State and municipal partners – Emergency responders, facility managers and other critical decision makers can support development a “concern thresholds database” that includes quantifiable thresholds of critical infrastructure failures and tie these concerns back to the hazard prediction models.

URI Project Team

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