

Coastal Hazards Resilience Committee - Projects

1. Establish a water level sensor community of practice in New England
 - Budget: \$187,000
 - Duration: 2 years
2. Advancing living shorelines in New England - Phase 3
 - Budget: \$170,500
 - Duration: 2 years
3. Roundtable: Approaches for integrating updated sea level rise projections into planning tools & policies
 - Budget: \$27,500
 - Duration: 1 year

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Establish a water level sensor community of practice in New England

- **Need:**
 - More localized, real-time water level data to monitor storm surges & sea level rise
 - Inform storm awareness/response, coastal inundation modeling & planning
- **Tasks:**
 - Host a 2-day workshop including a showcase of sensors/networks & regional discussion on sensor requirements, locations & data management
 - Develop a brief fact sheet on sensor types, costs & deployment tips
 - Purchase & deploy a variety of sensors across the region for testing of performance over water & land, data transfer & data quality

Task Timeline

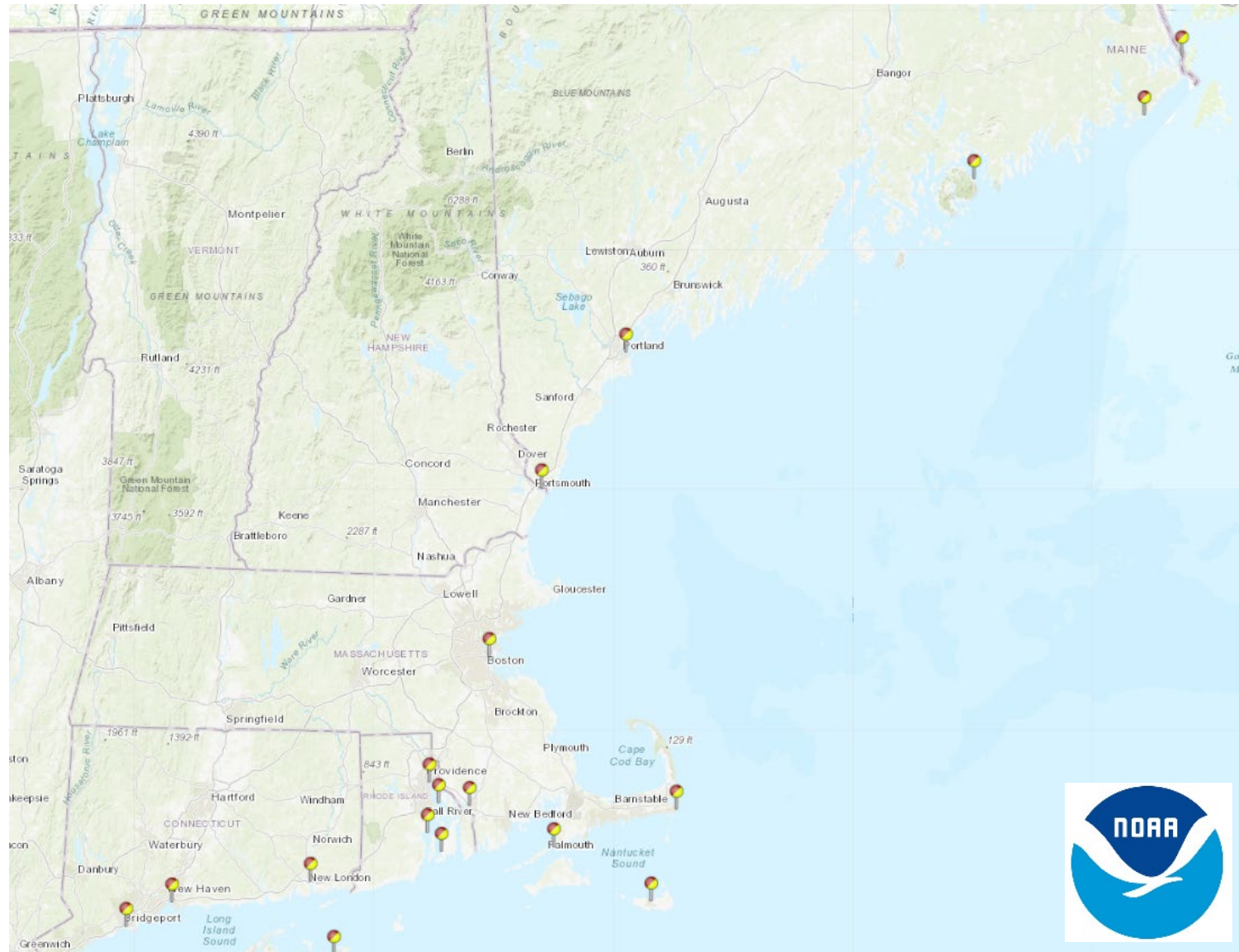


Outcomes & Products

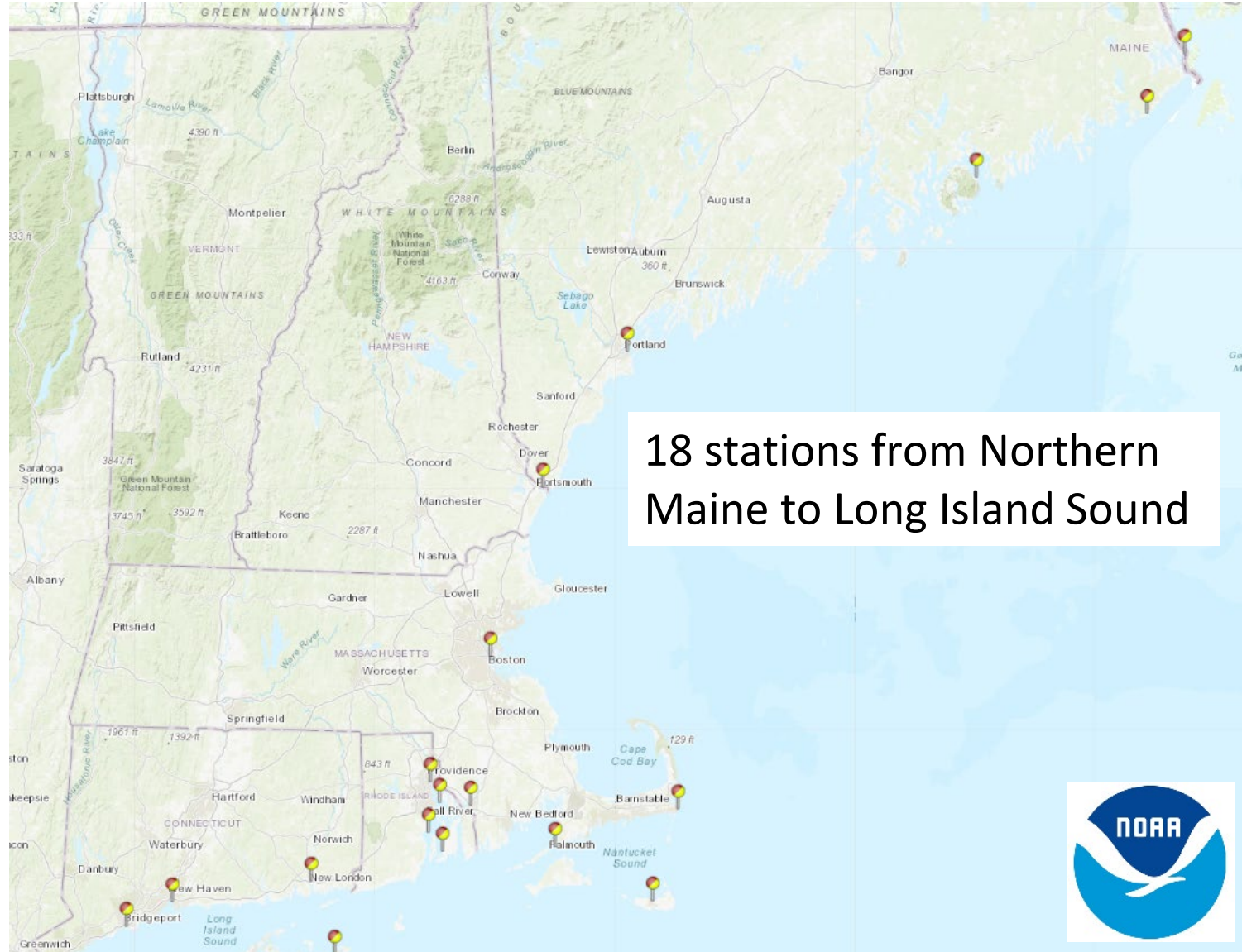
- Increased awareness of cost-effective sensors that are suitable for New England conditions (e.g., tides, weather, coastal development, etc.)
- Fact sheet on water level sensor types, selection & deployment
- Establishment of a pilot sensor network across the region
- Summary of findings from pilot deployment

Where are we currently monitoring water levels?

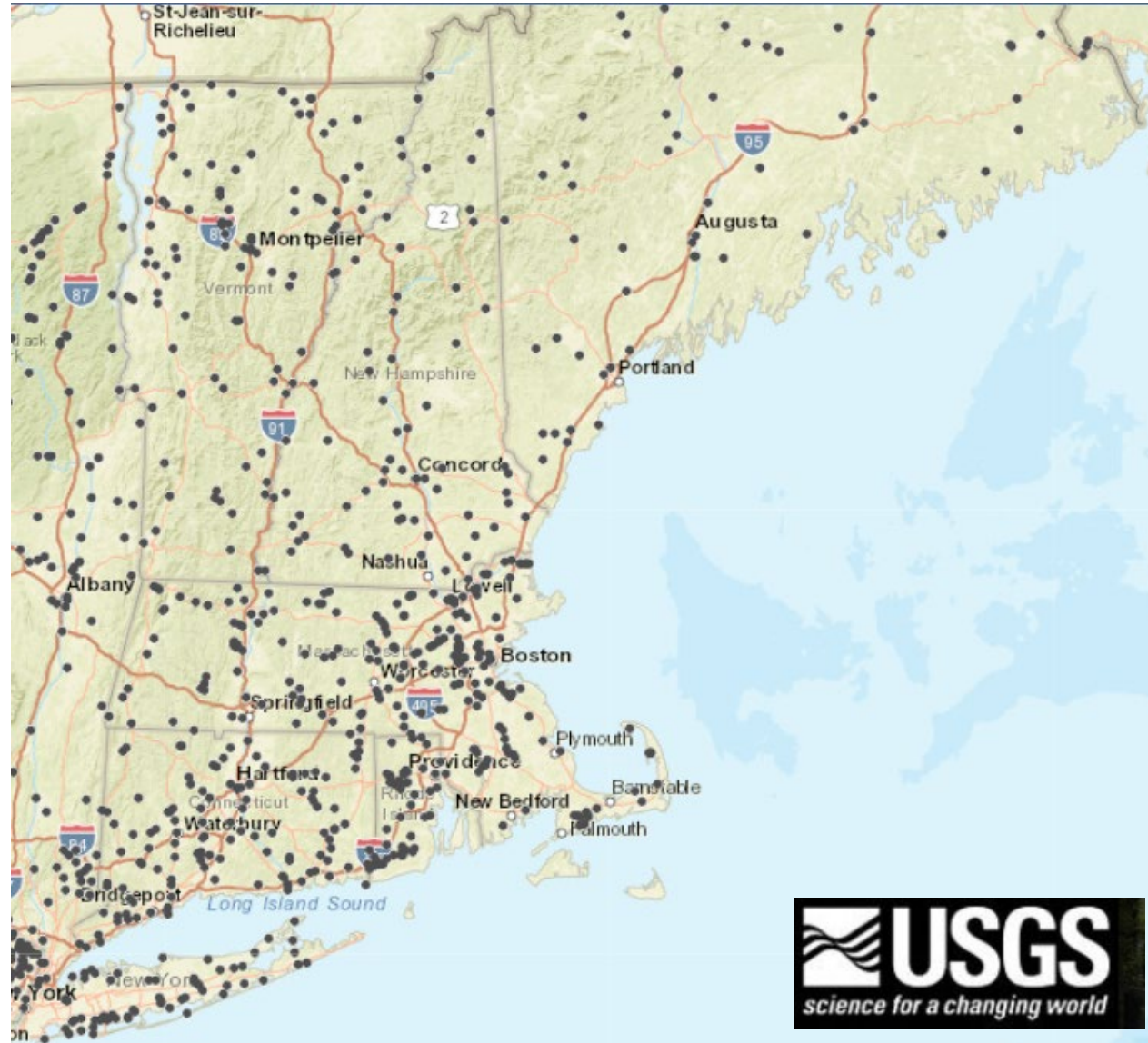
NOAA Water Level Stations - Tides



NOAA Water Level Stations - Tides



USGS Water Level Stations - Tides & Streams



Low-Cost Sensors



Ultrasonic flood sensor
(Photo courtesy of FloodNet)

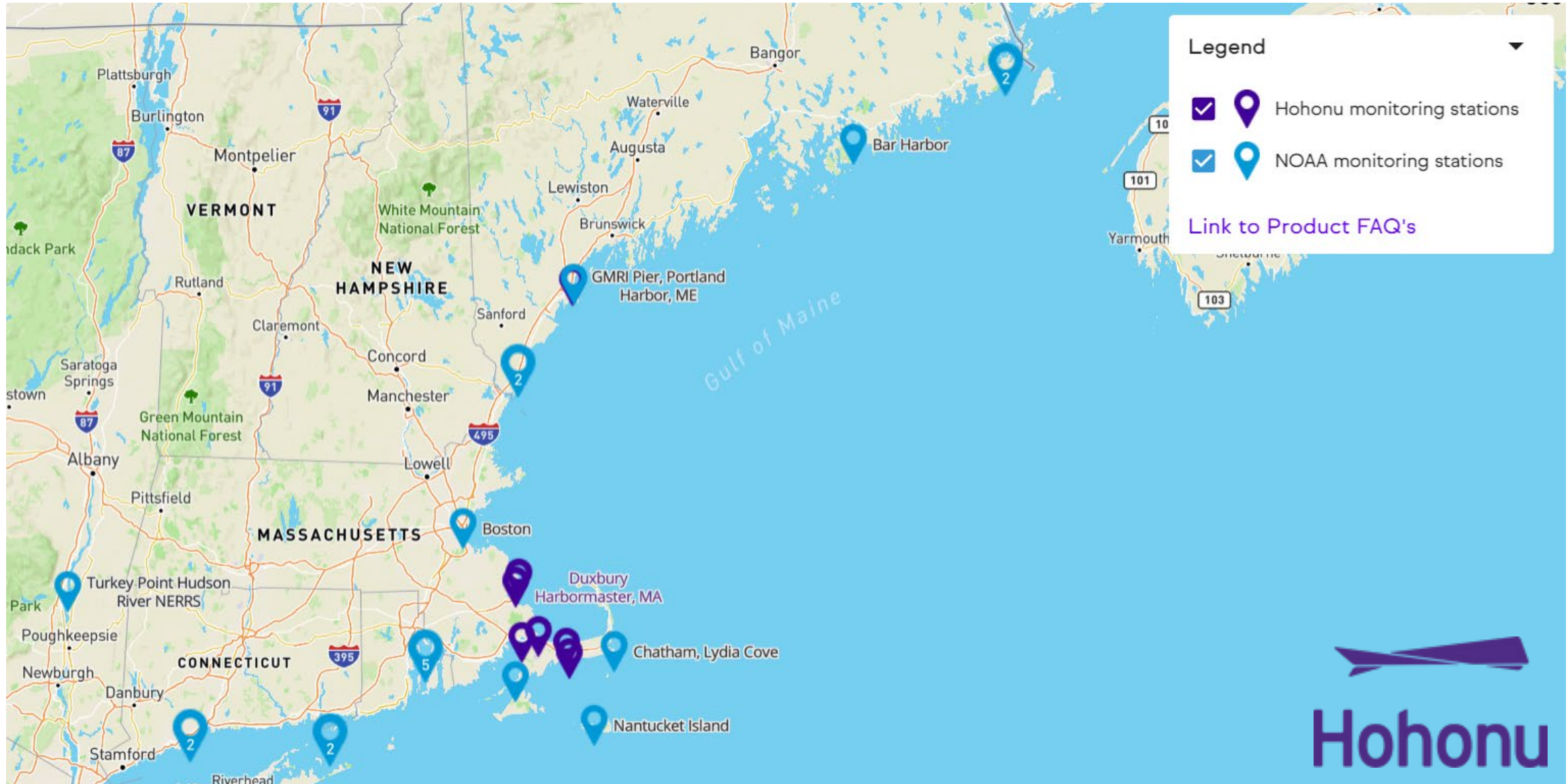


Divirod water level sensor
(Photo courtesy of US Harbors)

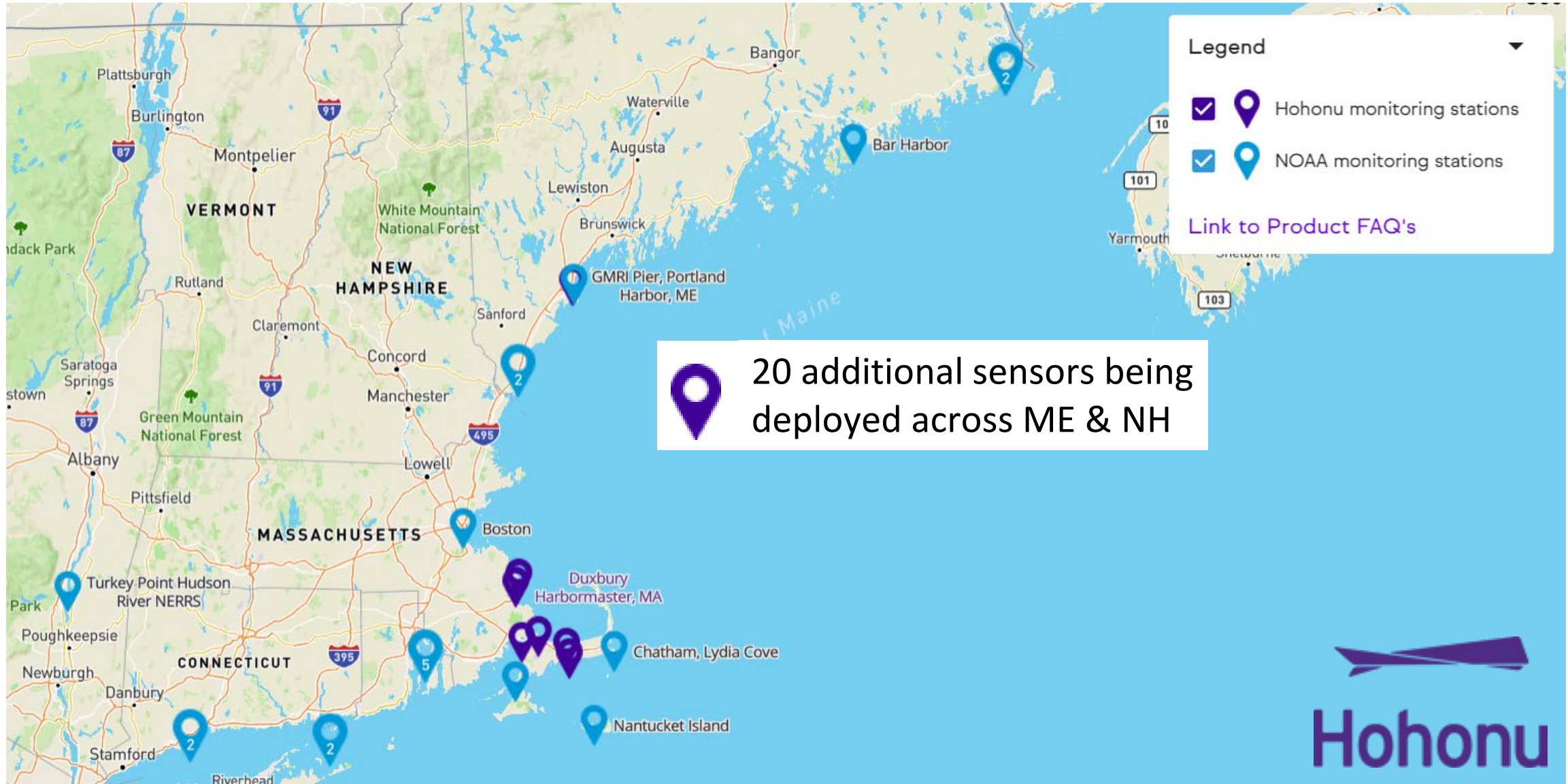


Ultrasonic flood sensor
(Photo courtesy of Hohunu)

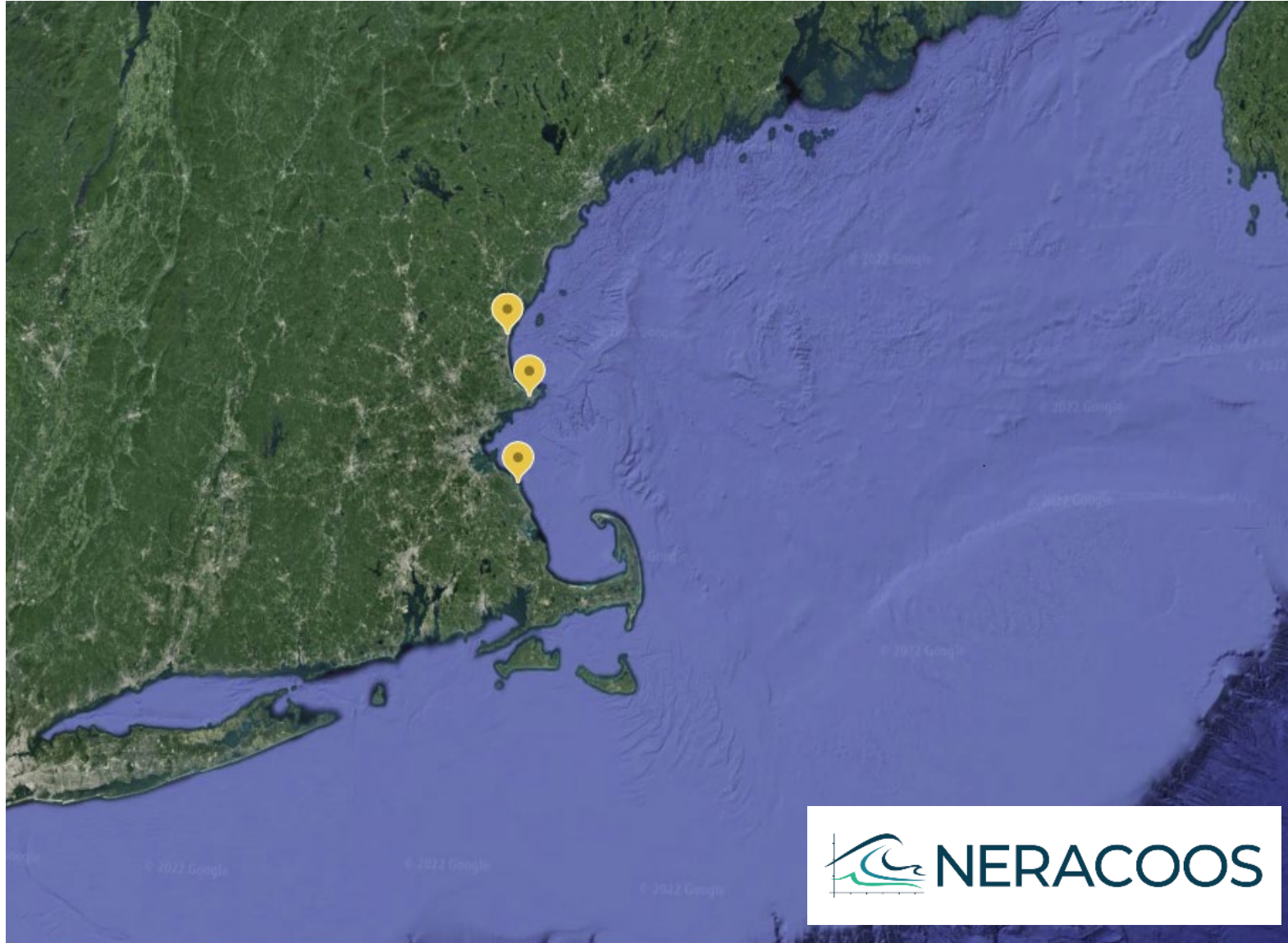
Hohonu Water Level Monitoring



Hohonu Water Level Monitoring



NERACOOS Supported Water Level Monitoring



Data Storage & Analysis

- Multiple local initiatives observing or planning to observe coastal water levels
- Water level data archives and data communications currently not implemented consistently
- NERACOOS & NOAA OCM are collaborating on a new data management initiative to address this discrepancy
- New Solution:
 - Easily access data from multiple providers in one location
 - Integration of low cost off the shelf systems
 - Data integration and QA/QC data, applying QARTOD protocols
 - Standardized data products serving multiple end-users

Discussion Topics

- Where are the highest priority data needs for coastal water levels and overland flooding?
 - Regional distribution
- What sensors do we want to test?
 - Wide range of costs, technologies, and uses
- Potential partners?
 - Existing contracting and deployment capabilities
 - Tribal engagement