SCC-CIVIC-PG Track A: Ocean Model Infrastructure For A Resilient Coastal City

Portland Harbor, Portland and South Portland, Maine

NSF Award ID: 2228535

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Project Challenge

The people of the Port of Portland face daily decisions regarding operations, economic opportunities and climate change. Ocean models can help, but only if information gets to people. The team is building networks and tools to deliver ocean information to help community members make smart, resilient decisions for the future of the harbor.

Portland Harbor's marine businesses generate $650 million in annual revenue, and support 2,250 jobs

Civic Partners:

- **Portland Waterfront Alliance**
- **City of Portland**

Research Questions

- How can better access to ocean data benefit the harbor community?
- What ocean information do people value most?
- What prevents people from using data that is already available?
- How can we make ocean data more useful and easier to access?

Over 100 people took part in community workshops, interviews and meetings

Lessons Learned

Interest in ocean data is wide and deep but needs vary widely. People are excited to gain access to ocean forecasts for the first time ever. They see dozens of uses, from preparing for storms and search and rescue to boater safety and design of harbor infrastructure. Information should be accessible both on phones and computers, with a simple user interface that shows how conditions vary across the Harbor. No single solution can address all community needs. Long term dialog between community members and ocean scientists is essential.

A nor'easter on Dec. 23, 2022, flooded the waterfront. Better forecasts could help businesses prepare.

Pilot Vision

- Co-develop with community members web content and apps that people use to access three-day ocean forecasts from ocean models.
- Develop "backend" data tools to deliver ocean data not only to user interface designers, but also students, planners, and non-specialists.
- Design and implement a forecast data archive to simplify assessment of pattern and risk.
- Establish relationships and governance to support long-term engagement between ocean scientists and community members

Research Partners:

- **NERACOOS**
- **Scientific Solutions, Inc.**
- **University of Maine Portland Gateway**
- **University of Maine Darling Marine Center**