

Data Plan Executive Summary

Project protocols invite people to share observations and assessments of high water events and impacts. Data will inform community decision making.

Data Plan

Data Quality Assurance

Our protocols are clear and simple, requiring participants to take digital photographs and answer questions about what they are seeing. We are confident that the majority of people interested in participating in this project will be successful.

Data Quality Control

This project relies on sensors to collect data on sea level and weather, and people to share their observations, photographs, and assessment of the impacts of high water and weather conditions at sites throughout our community. One use of the data set will be by the National Weather Service to verify the output of their models of coastal water levels.

Data sensors associated with the deployments of this project will be maintained by the respective municipality in which they are deployed. Participant-submitted data will be combined with data from sensors that record local weather reading (barometric pressure, wind speed and direction, precipitation, and temperatures) and water level data. The combination of data from the weather station and observations submitted by participants may be cross referenced to verify one another.

Project leaders will encourage multiple residents to participate and contribute data to this project, both to verify one another's observations of high water and to contribute their own individual evaluation of what they are seeing. The duplication of observations in space and time will help to verify the collected data.

Data Quality Assessment

Images will be reviewed for authenticity by project owners.

Sensors (weather station and tide gauges) will be maintained according to their manufacturers' recommendations by the project partner or municipality in which they are deployed. Project partners will review data from sensors to evaluate its validity. In some cases, multiple sensors

will be deployed side-by-side to assist with this. Data sensors associated with the deployments of this project will be maintained by the respective municipality in which they are deployed.

Planned Data Analysis

John Cannon of the National Weather Service will use the date- and time-stamped images of coastal flooding to refine his interpretation of coastal flooding models.

In collaboration with water level data collected from tide gauges placed in Portland's Back Cove and Southern Island in St. George, images and condition data will be used to better understand and develop more accurate flood thresholds and tide predictions in these municipalities.

The participating municipalities will analyze data from values questions using simple spreadsheet software to identify the locations of greatest vulnerability and importance to residents. Results will not be used by themselves to inform policy, but rather be used as the basis of community discussion leading to municipal policy or action.

In addition, all data collected through this project will remain accessible to anyone via the project website. People are invited to perform their own analysis and encouraged to share their methods and findings with our community.

Project Metadata

The Ecosystem Investigation Network has a defined data model and metadata structure for project data that includes global elements common to all projects and specific data elements unique to the individual projects. These data include date, time, location, and selected project. The Ecosystem Investigation Network does not have a global data schema that conforms to one common standard, but leverages elements of existing standards used by scientific communities based on the nature of the project (e.g. OBIS, EML, FGDC, Darwin Core, CF, ISO 19115, etc.).

Data, observations, comments, photographs, and associated metadata submitted by users to individual projects are retained in the Ecosystem Investigation Network database and follow data management and retention policies established by the program. Specific data that is collected during this project will be stored in the Ecosystem Investigation Network during the life of the project.

With questions about the project's utility for interpretation of National Weather Service models, contact John Cannon, Senior Meteorologist, National Weather Service Gray Maine, john.w.cannon@noaa.gov.

Data Sheet Revision

Through close collaboration with project partners and a variety of end users, there was a realization of increased uses for the data collected and the need for refinement of current questions. This led to the revision of the data collection protocol in 2023. These revisions sought to include detailed weather condition observations as well as more questions understanding the social implications of coastal flooding.

The old data sheet with protocols can be found here: [Data Sheet With Protocols](#)

The old data sheet without protocols can be found here: [Data Sheet Without Protocols](#)