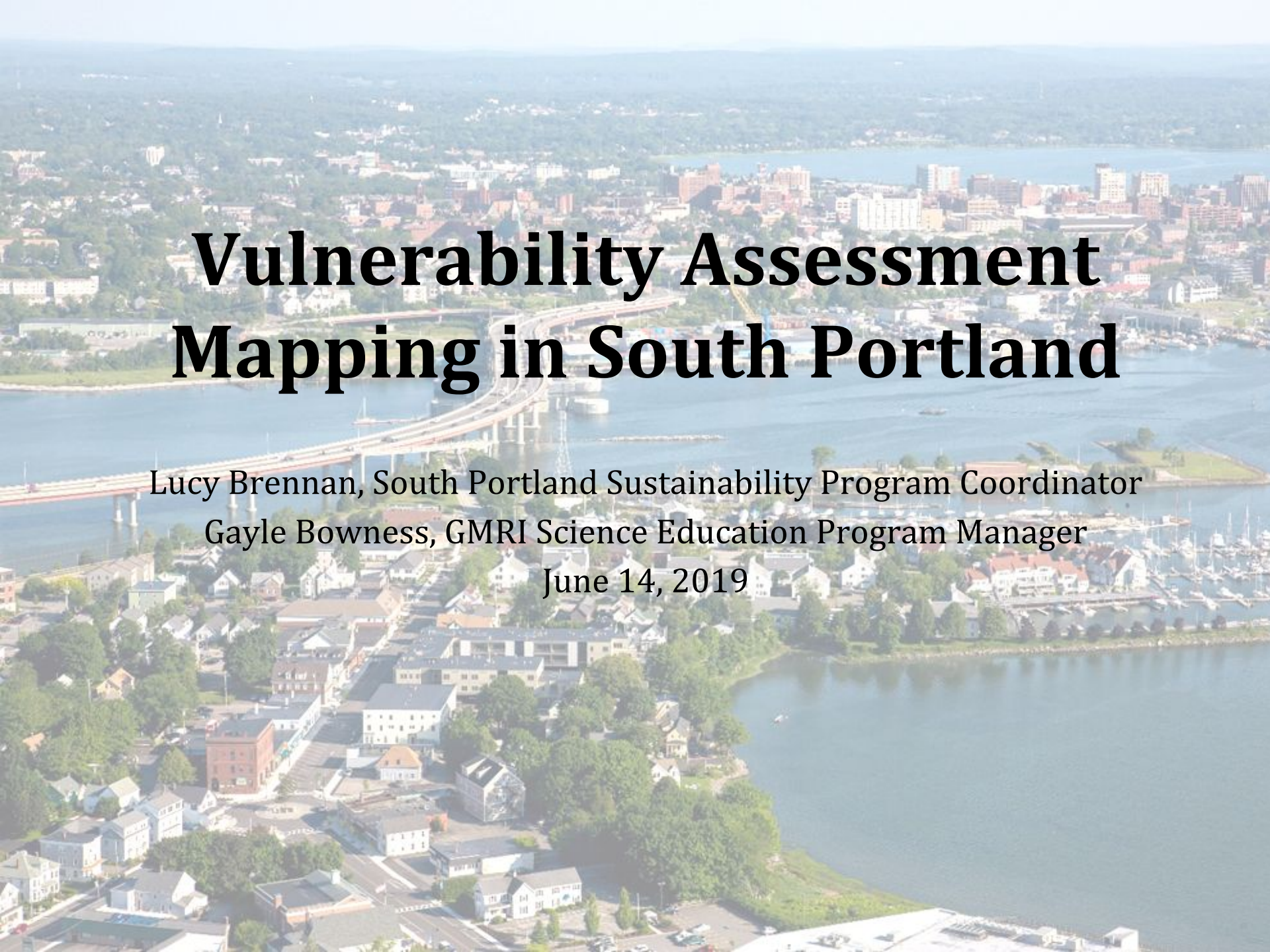


Vulnerability Assessment Mapping in South Portland

Lucy Brennan, South Portland Sustainability Program Coordinator
Gayle Bowness, GMRI Science Education Program Manager

June 14, 2019

Project Overview

What We're Working Towards:

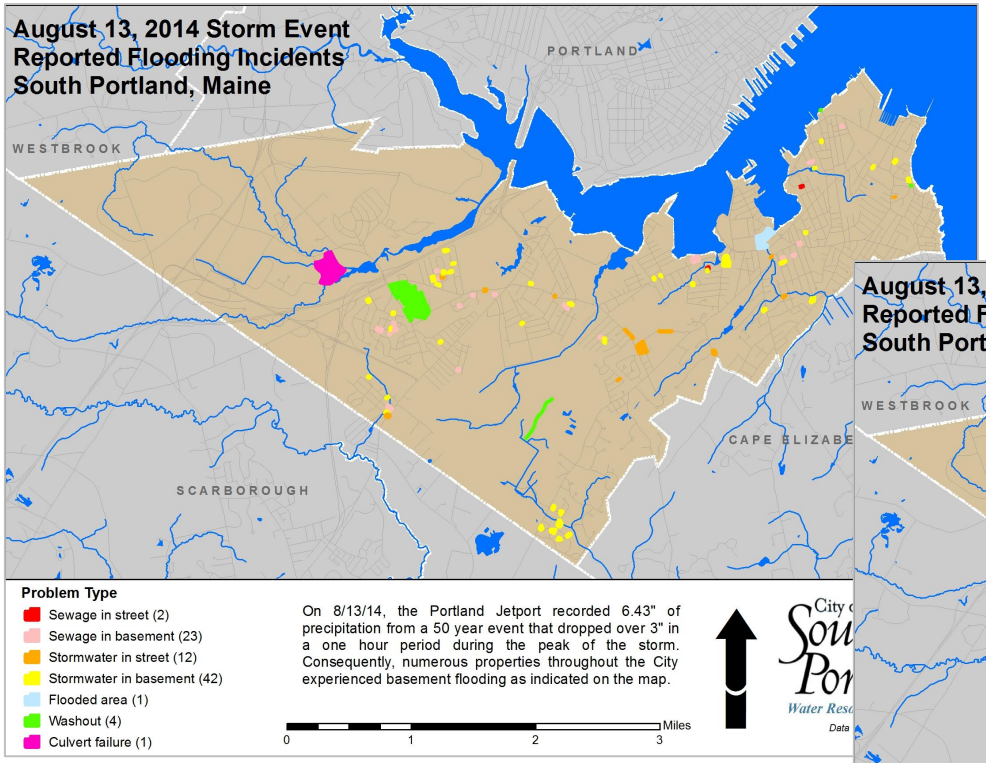
1. Improving community resilience
2. Identifying gaps in City plans
3. Using a data-driven approach
4. Equipping staff with tools
5. Expanding to citizens and other communities

This presentation was prepared by the City of South Portland under award to Maine Coastal Program from the National Oceanic and Atmospheric Administration.

ONE CLIMATE FUTURE

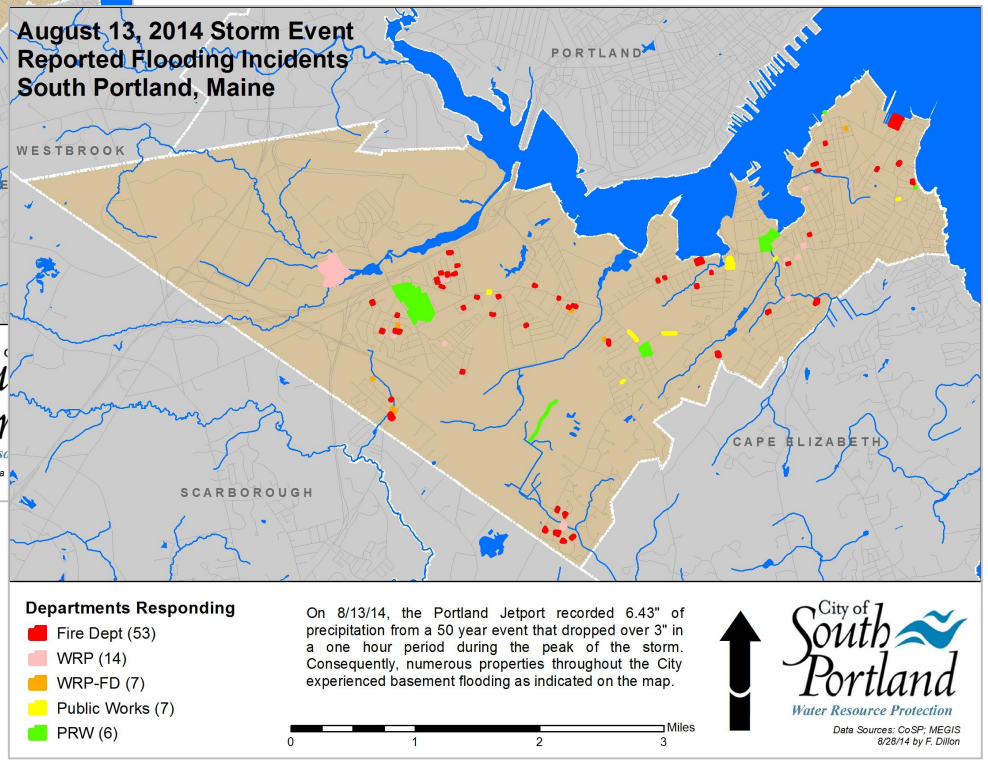
Charting a Course *for* Portland and South Portland

Historic Flooding Events



August 13, 2014: 50-year storm

6” precipitation (3” in one-hour period)



Maine Flood Resilience Checklist

Maine Coastal Community Grant

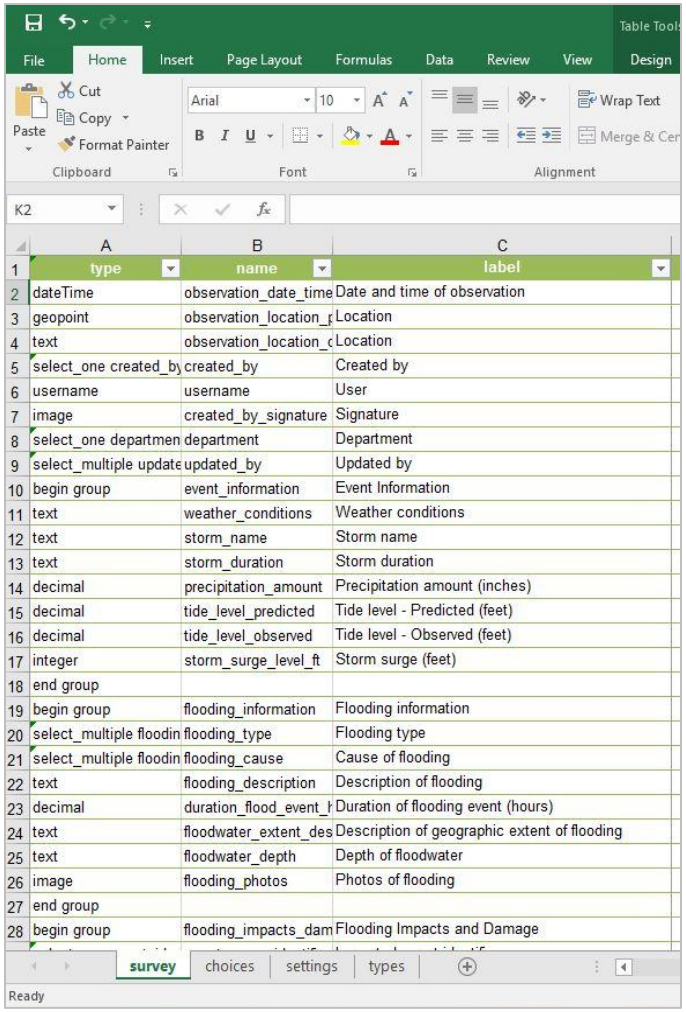
Scope of Work

- Phase 1: Development of Flood Data Collection Protocol
- Phase 2: Data Collection and Aggregation
- Phase 3a: Vulnerability Assessment Map Concept Design
- Phase 3b: Vulnerability Assessment Map Build-out
- Phase 4: Outreach to Support Local and Regional Planning Efforts

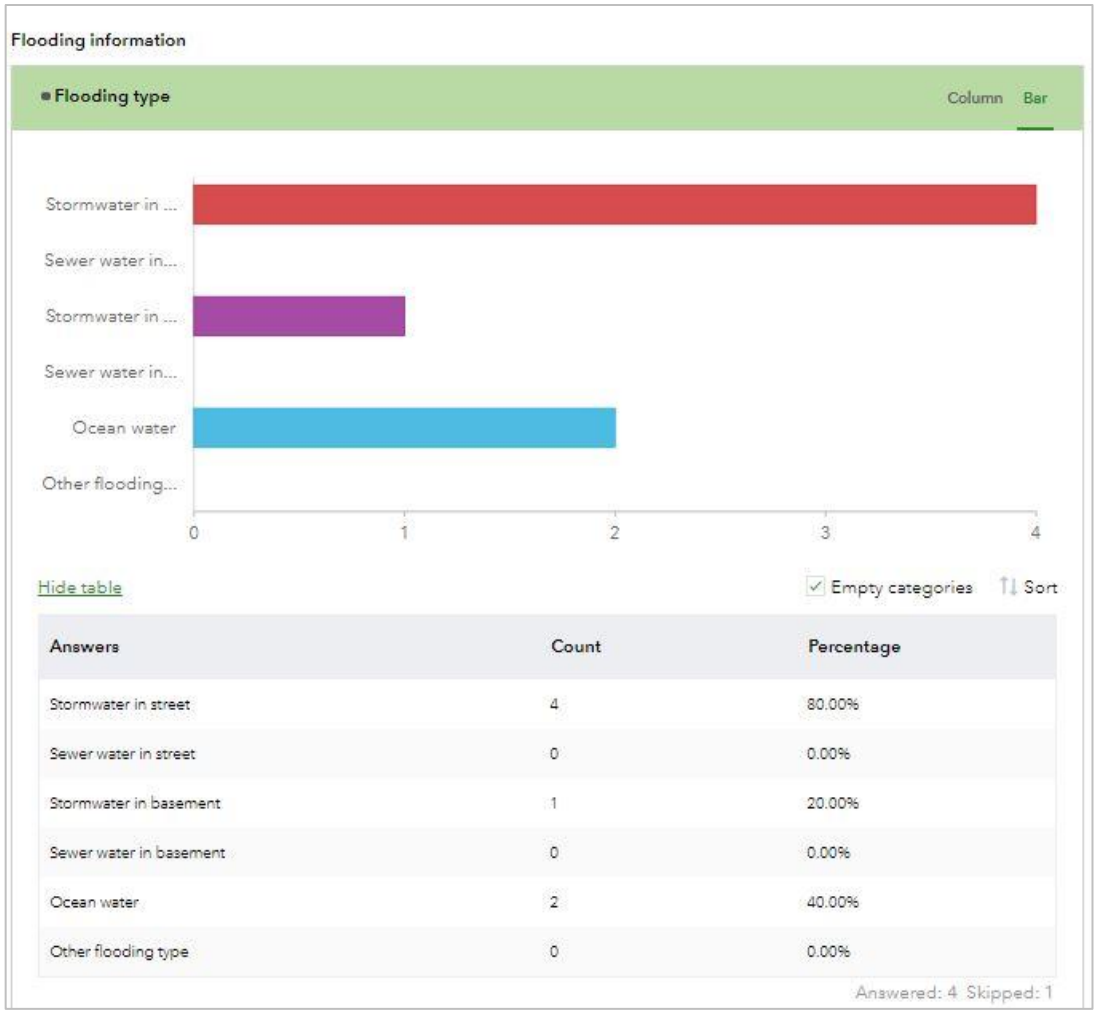
Lead Project Partners

Southern Maine Planning and Development Commission
Gulf of Maine Research Institute

Flood Data Collection Analysis



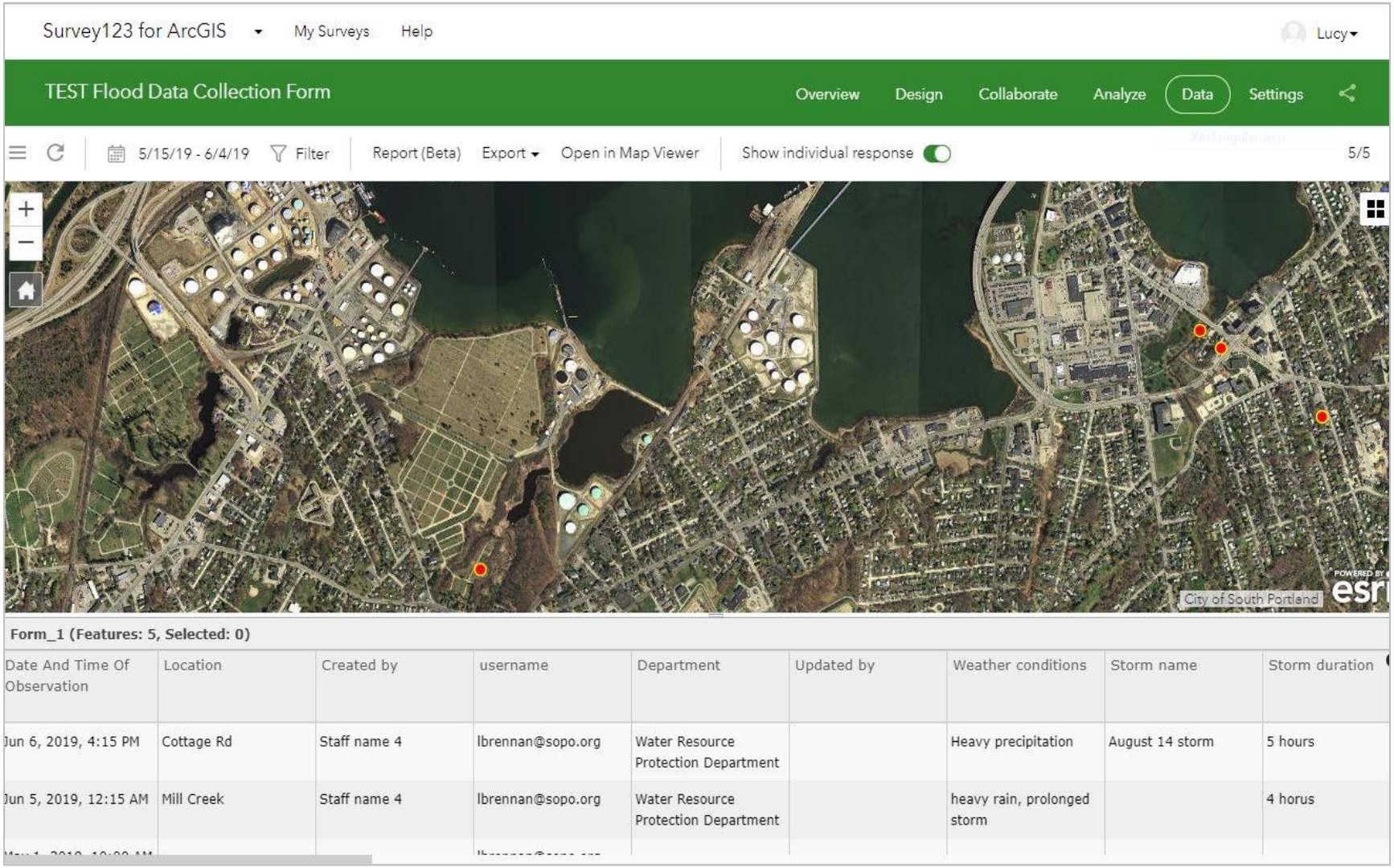
	A	B	C
1	type	name	label
2	dateTime	observation_date_time	Date and time of observation
3	geopoint	observation_location_g	Location
4	text	observation_location_c	Location
5	select_one created_by	created_by	Created by
6	username	username	User
7	image	created_by_signature	Signature
8	select_one departmen	department	Department
9	select_multiple update	updated_by	Updated by
10	begin group	event_information	Event Information
11	text	weather_conditions	Weather conditions
12	text	storm_name	Storm name
13	text	storm_duration	Storm duration
14	decimal	precipitation_amount	Precipitation amount (inches)
15	decimal	tide_level_predicted	Tide level - Predicted (feet)
16	decimal	tide_level_observed	Tide level - Observed (feet)
17	integer	storm_surge_level_ft	Storm surge (feet)
18	end group		
19	begin group	flooding_information	Flooding information
20	select_multiple floodin	flooding_type	Flooding type
21	select_multiple floodin	flooding_cause	Cause of flooding
22	text	flooding_description	Description of flooding
23	decimal	duration_flood_event_h	Duration of flooding event (hours)
24	text	floodwater_extent_des	Description of geographic extent of flooding
25	text	floodwater_depth	Depth of floodwater
26	image	flooding_photos	Photos of flooding
27	end group		
28	begin group	flooding_impacts_dam	Flooding Impacts and Damage



Answers	Count	Percentage
Stormwater in street	4	80.00%
Sewer water in street	0	0.00%
Stormwater in basement	1	20.00%
Sewer water in basement	0	0.00%
Ocean water	2	40.00%
Other flooding type	0	0.00%

Answered: 4 Skipped: 1

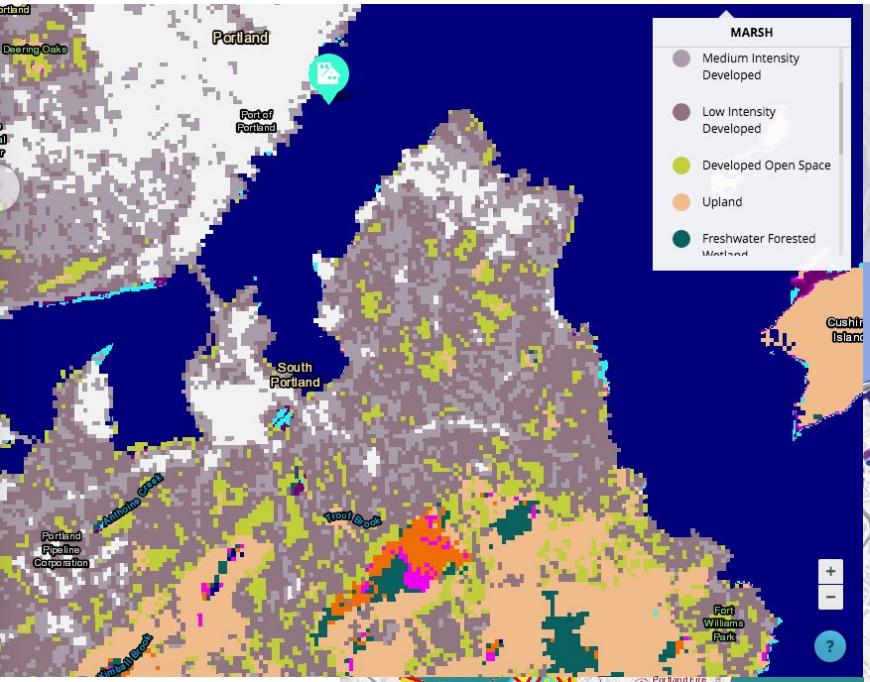
Flood Data Map View

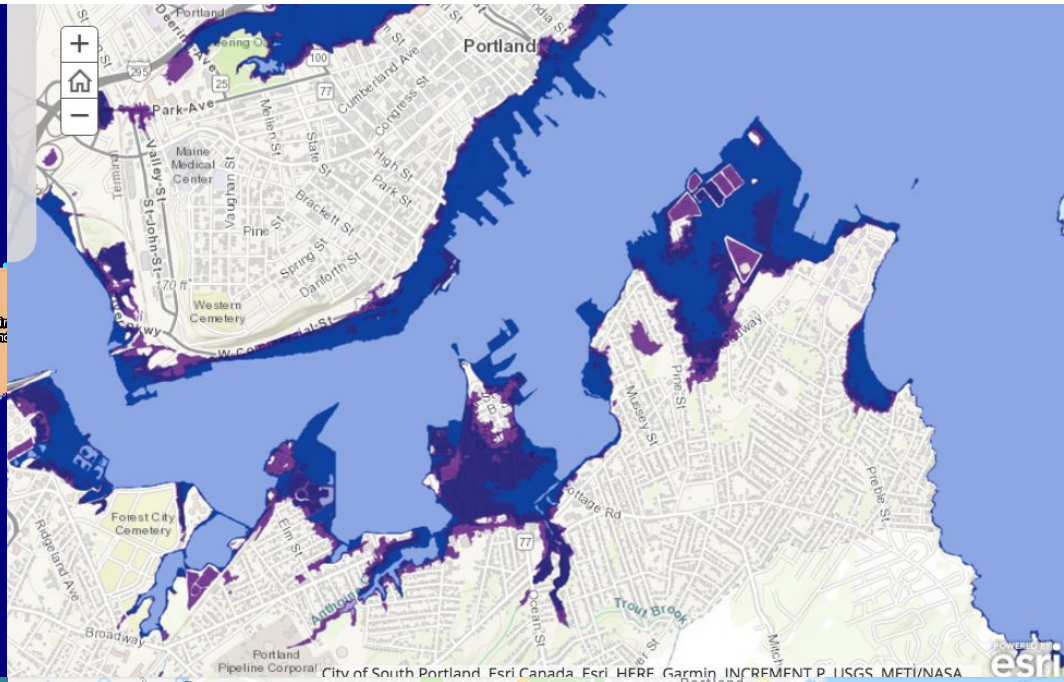


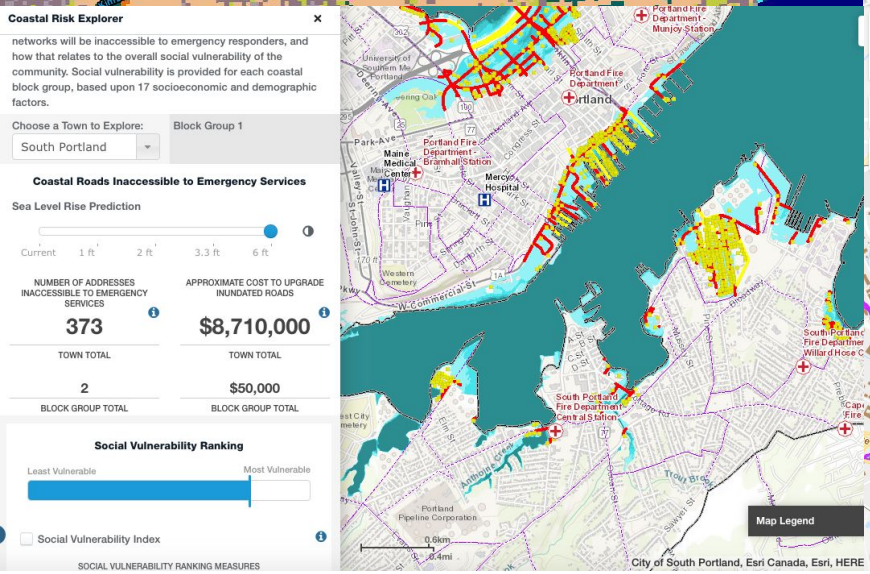
Form_1 (Features: 5, Selected: 0)

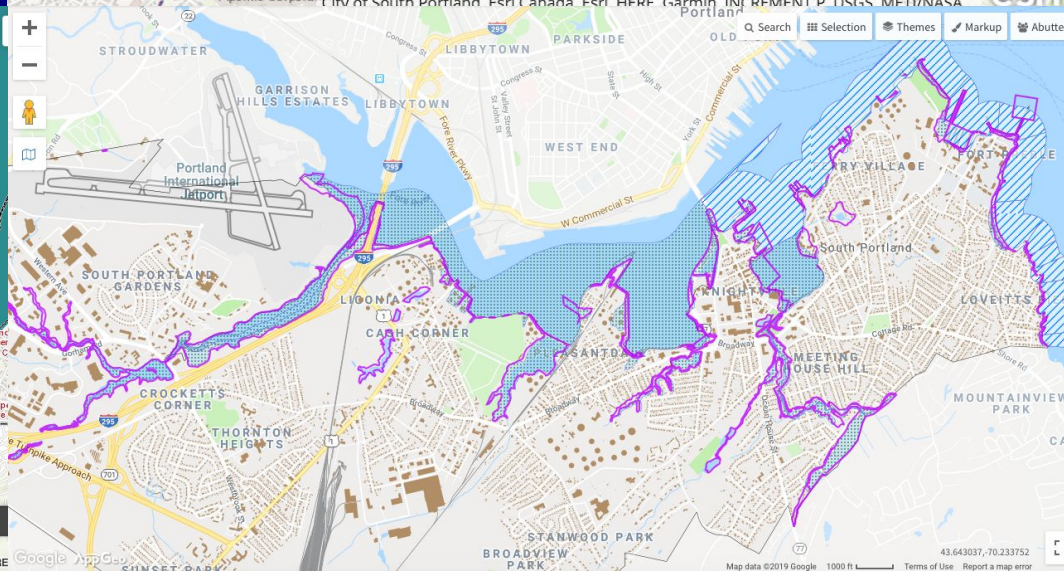
Date And Time Of Observation	Location	Created by	username	Department	Updated by	Weather conditions	Storm name	Storm duration
Jun 6, 2019, 4:15 PM	Cottage Rd	Staff name 4	lbrennan@sopo.org	Water Resource Protection Department		Heavy precipitation	August 14 storm	5 hours
Jun 5, 2019, 12:15 AM	Mill Creek	Staff name 4	lbrennan@sopo.org	Water Resource Protection Department		heavy rain, prolonged storm		4 horus

Vulnerability Assessment Map









Next Steps

Gulf of Maine Research Institute

- Citizen Science for Public Engagement AND Local Data to inform Decisions
- Planning and Prioritization tool for Decision-Making

City of South Portland

- Synthesis with One Climate through Public Engagement and Resilience Planning
- Data Analysis Framework for City Staff