



# **External Assessment of the Scope and Governance Framework of the NOAA Physical Oceanographic Real Time System (PORTS®) Program**

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# Physical Oceanographic Real Time System (PORTS®)

- A domestic shared responsibility partnership program between the NOAA and the maritime community.
- Provides real-time oceanographic and meteorological observations in busy seaports across the U.S.
- All real-time PORTS® data is quality controlled by NOAA 24/7/365

## **A NOAA program that provides:**

- **Accurate real-time information to improve safety**
- **Efficiency of maritime commerce**
- **Environmental Protection and Planning Assistance**
- **Improved Forecasts**
- **Recreational Planning Assistance**
- **Scientific and Educational Information**



# Background on Need for Assessment

- Exponential program growth in recent years, but only small increases in appropriations for PORTS, so need to understand what a fully-built out PORTS program looks like to better justify requests for new funding
- Some vocal stakeholders have strongly advocated for a wholly owned federal PORTS program, given navigation safety is federally mandated, so need to know how the whole stakeholder community feels about program governance
- Equity considerations: Need to know how program governance options affect smaller and shallow water seaports, and seaports without access to sustained cost-share funding
- Strong support from NOS Leadership for this assessment, in order to engage with OMB with assessment results



# Physical Oceanographic Real Time System (PORTS®)

PORTS® is a **partnership** with responsibility shared between NOAA and the local maritime community.

## NOAA

- Program management
- Data collection and infrastructure
- Data dissemination
- 24/7 quality control
- National standards
- Development for future enhancements

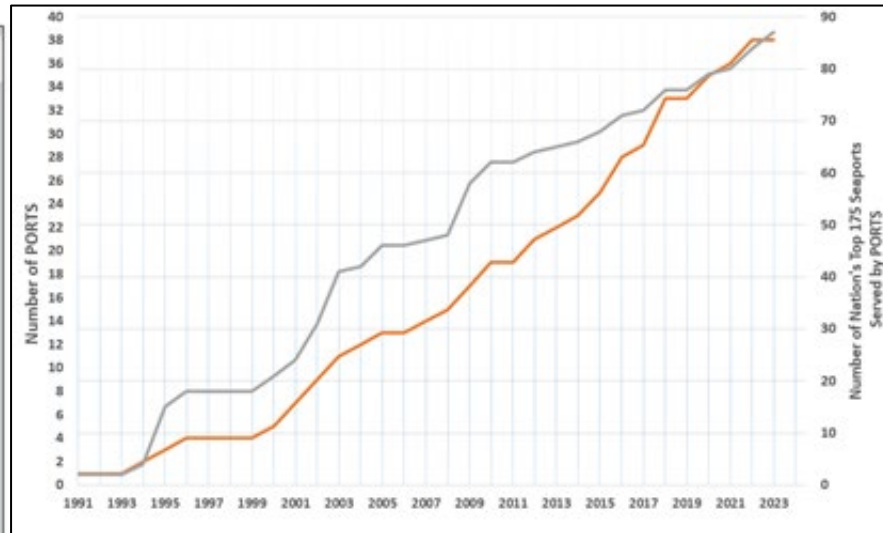


## Partner

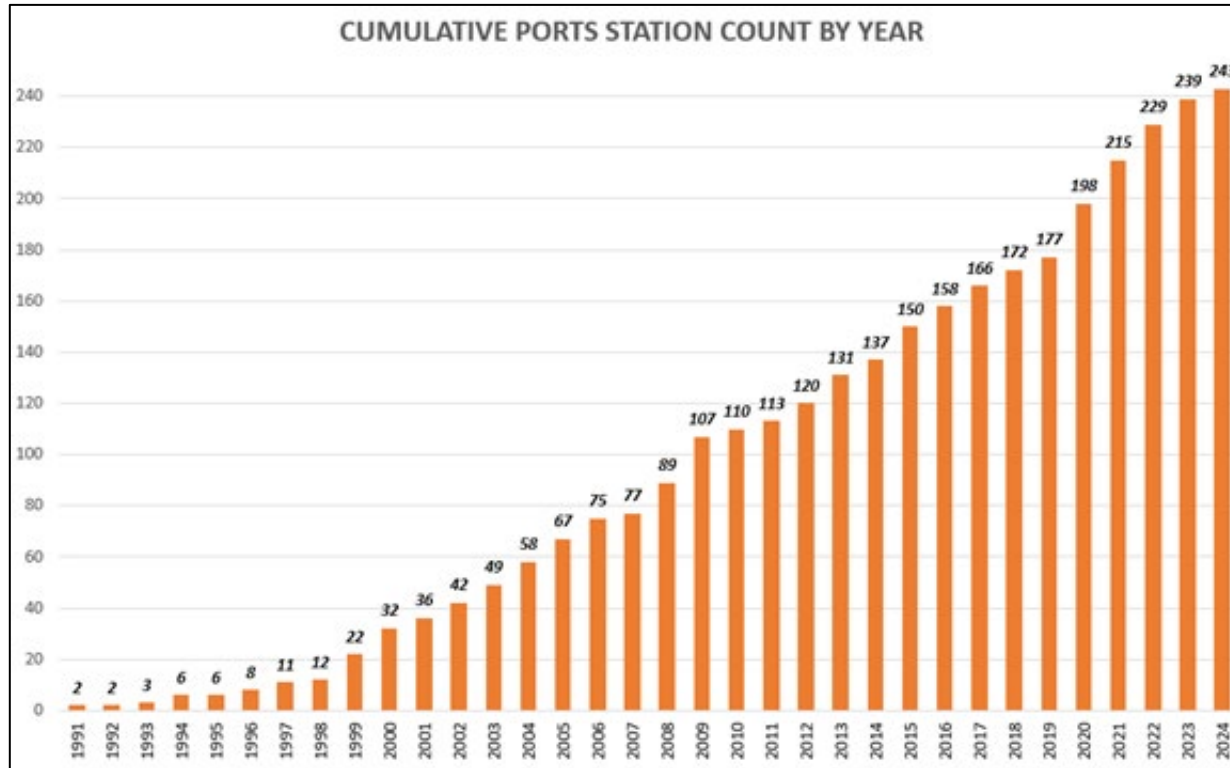
- Site selection for a user-defined system
- **Funding** for local:
  - Equipment
  - Installation
  - Annual operation
  - Maintenance

# Physical Oceanographic Real Time System (PORTS®)

## 38 Systems Nationwide Supporting 87 top U.S. Seaports



# Physical Oceanographic Real Time System (PORTS®) 38 Systems Nationwide Supporting 87 top U.S. Seaports



PORTS incorporates over 240 real time *stations* + use of 59 NWLON stations

# NOAA's Local PORTS<sup>®</sup> Partners

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Existing PORTS<sup>®</sup> partners are diverse and made up of...

- Harbor pilot associations
- Port Authorities
- Marine exchanges
- State agencies
- Private industry, including oil and gas industry and shipyards
- Other federal agencies, including US Navy and USACE



# Assessment Overview

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## Objectives

- Better Understand Requirements to Fully Build Out the PORTS® Program
- Better Understand Stakeholder Sentiment Regarding the PORTS® Program Governance Model

## Approach

- Outreach to contacts at 175\*\* in-scope seaports
- Conducted 21 workshops that
  - Provided background on the *PORTS® Program*
  - Discussed station needs
  - Discussed governance models
  - Conducted a mapping exercise
- Followed up with attendees and reviewed data with NOAA project team

## Output

- Map and database of additional stations needed
- Report







# PORTS® Workshop Series Overview

# Workshop Agenda

- I. Welcome and Introductions
- II. Background of PORTS® Program
  - Recording on PORTS® Program
  - Recording on PORTS® sensor types
- III. **Discussion** of Sensor Needs (**Slido**)
- IV. **Discussion** of Financial Commitments and Governance Models (**Slido**)
  - Recording on Cost-share Model

*Break (**Existing PORTS Slido survey**)*

- I. **Mapping activity** - Station needs for fully built out system (**via Felt**)
- II. Close-out and Thank you

**Louisiana and the Lower Mississippi River** (up to Baton Rouge); June 1, 2023, 9am-11am CDT

**Southeast** (NC, SC, GA, FL [Atlantic Coast to Key West]); June 6, 2023, 10am-12pm EDT

**Alaska**; June 15, 2023, 9am-11am AKDT

**Caribbean** (PR and USVI); June 28, 2023, 10am-12pm AST/EDT

**Pacific Northwest** (WA and OR); July 11, 2023, 9am-11am PDT

**California**; July 20, 2023, 9am-11am PDT

**Gulf Coast** (AL, MS, TX, FL [Gulf of Mexico, North of Florida Keys]); July 26, 2023, 1pm-3pm CDT

**Pacific Islands** (HI, GU, CNMI); August 1, 2023, 1pm-3pm HST / August 2, 2023, 9am-11am ChST

**Great Lakes and St. Lawrence Seaway**; August 9, 2023, 1pm-3pm CDT

**Mid-Atlantic** (NY, NJ, DE, PA, MD, VA, D.C.); August 24, 2023, 9am-11am EDT

**New England** (ME, NH, MA, RI, CT); September 13, 2023, 9am-11am EDT

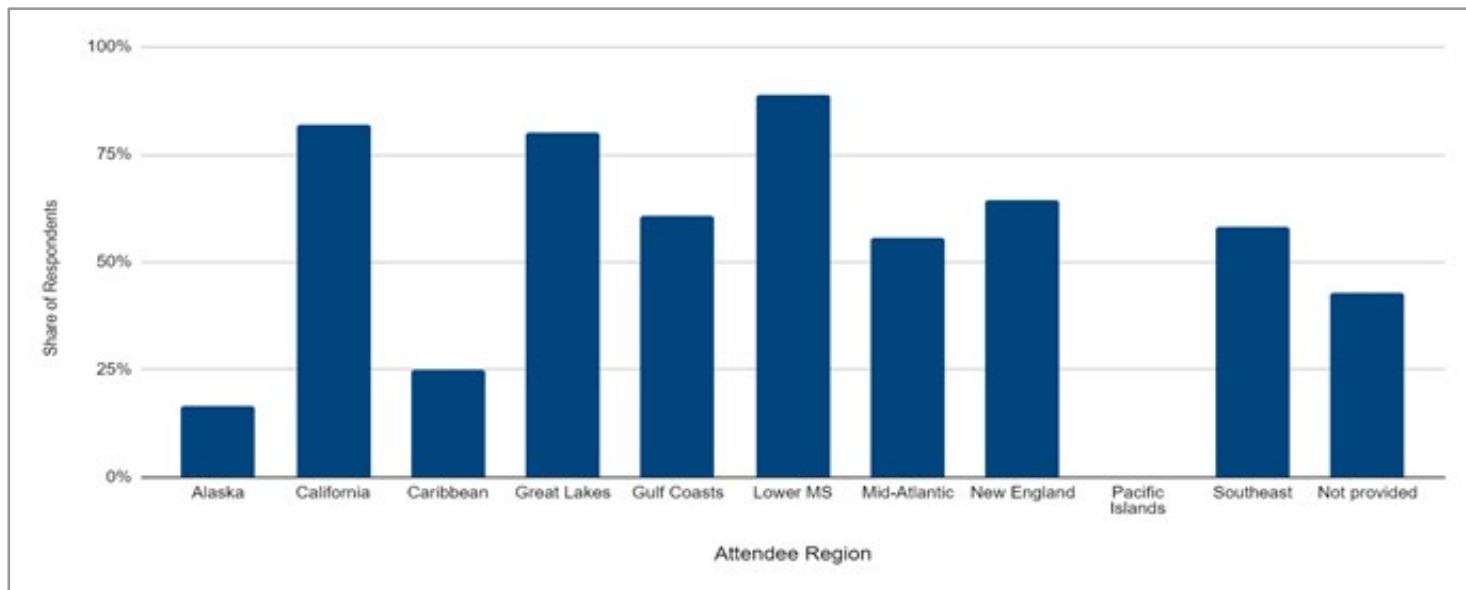
**All-region Make-ups**; 10 sessions held between June 21- September 19

# Workshop Attendance

Region	Attendees	% of Seaports Represented
Alaska	14	70%
California	25	95%
Caribbean	17	55%
Great Lakes	16	92%
Gulf Coasts	43	100%
Lower Mississippi	21	79%
Mid-Atlantic	40	80%
New England	23	59%
Pacific	8	86%
Pacific Northwest	32	95%
Southeast	32	100%
Not provided	13	NA
<b>Across all 175</b>	<b>284</b>	<b>85%</b>

# Attendee Background

**60.8%** of workshop attendees were familiar with PORTS® Prior to Workshop, while **39.2%** of attendees were unfamiliar.



Share of Workshop Attendees with Direct Experience with NOAA PORTS® by Region

# Sensor Needs

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## **New technologies:**

- Ice depth and/or coverage
- Marine mammal sensing
- Precipitation measurements

## **Most common PORTS® technology needs:**

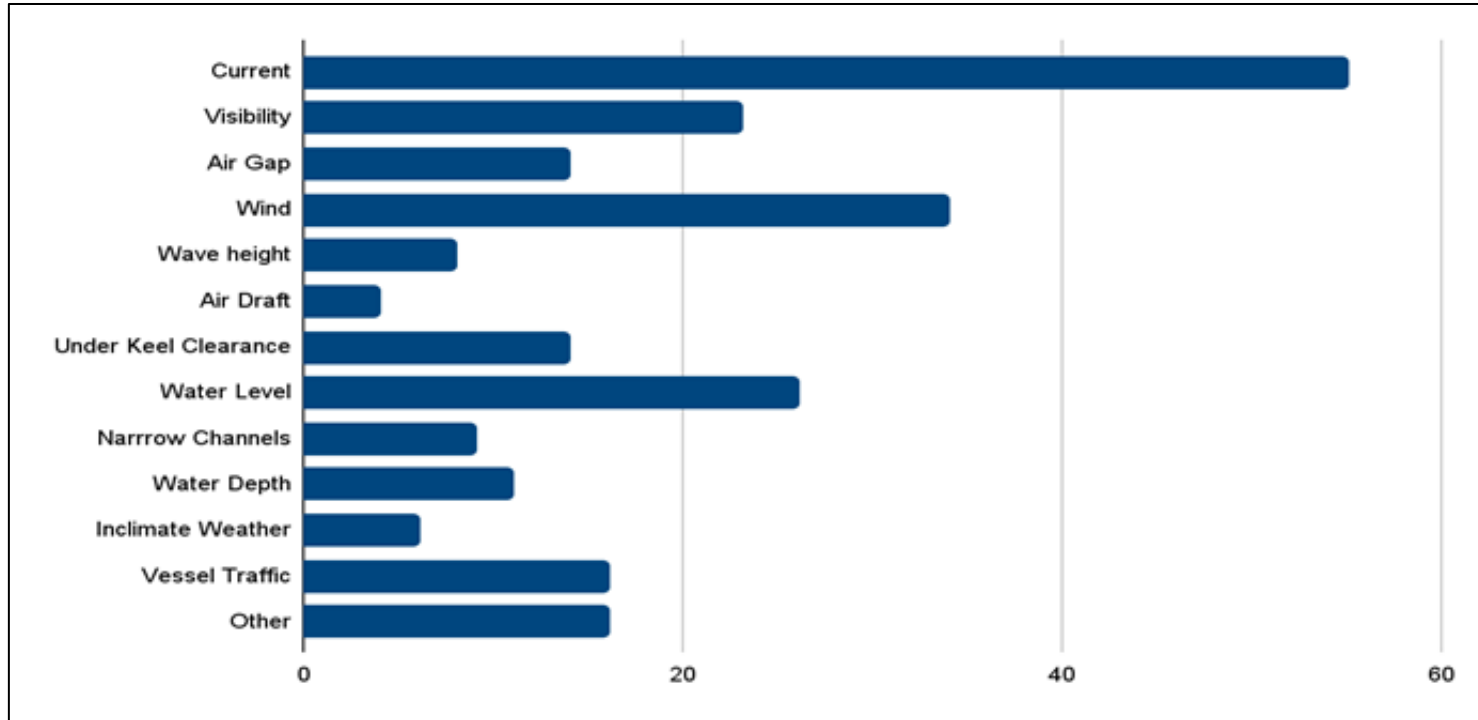
- Currents
- Visibility
- Wind

## **Non-PORTS® related needs:**

- High tide flooding and storm surge data
- Seaport infrastructure data
- Anchorage usage
- Adjacent inland waterway data

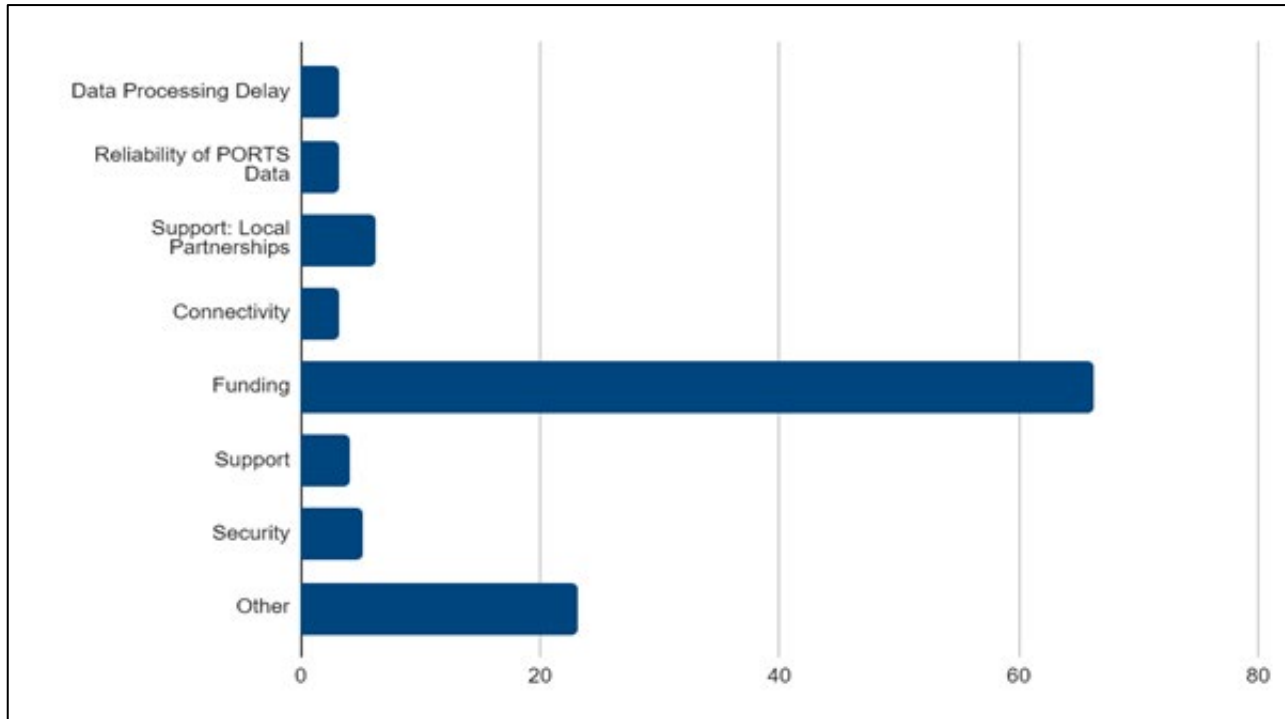
# Sensor Needs

**Currents** and **wind conditions** were most often cited as the most critical safety issue



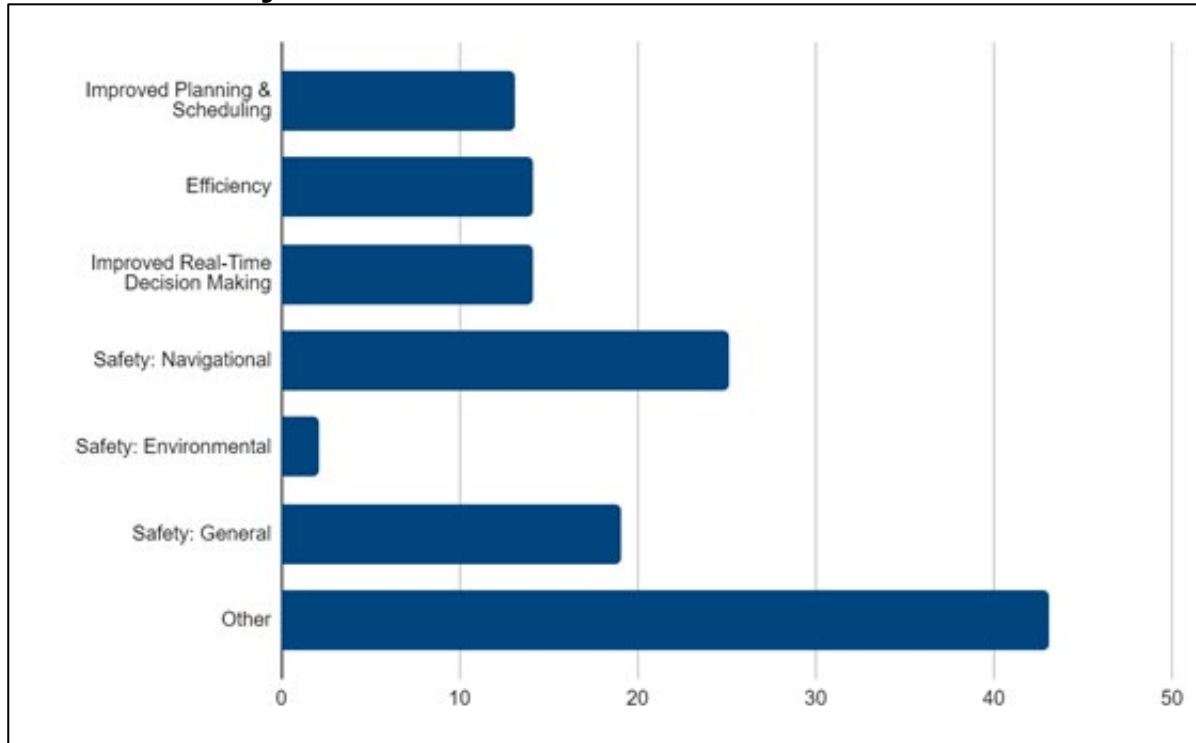
# Sensor Needs

**Funding** was identified as the biggest barrier to adding real-time PORTS® observations



# Sensor Needs

Realized and anticipated benefits emphasized the importance of **real-time data in improving** all types of **navigation and safety decisions**.







# PORTS® Program Governance

- Strengths and limitations of current cost-share model
- Anticipated strengths and limitations of a wholly-owned Federal program model
- Equity considerations of current cost-share and wholly-owned Federal program models
- Should the PORTS® program continue as the current cost-share model, or move to a wholly-owned Federal program model?
- Are there only specific aspects of the current cost-share model that should be a wholly-owned Federal program?

# Current Cost-Share Model

## Strengths

- Local control and decision making
- Local ownership and buy-in of the program
- Helps build local partnerships of seaport users

## Limitations

- Funding
  - Difficulty in finding funding at local level
  - Publically available data leads to a lack of incentive for non-paying users to contribute.
  - Inequity between the few funders and many users of the data
- Limitations to entry for smaller seaports

# Wholly Owned Federal Program

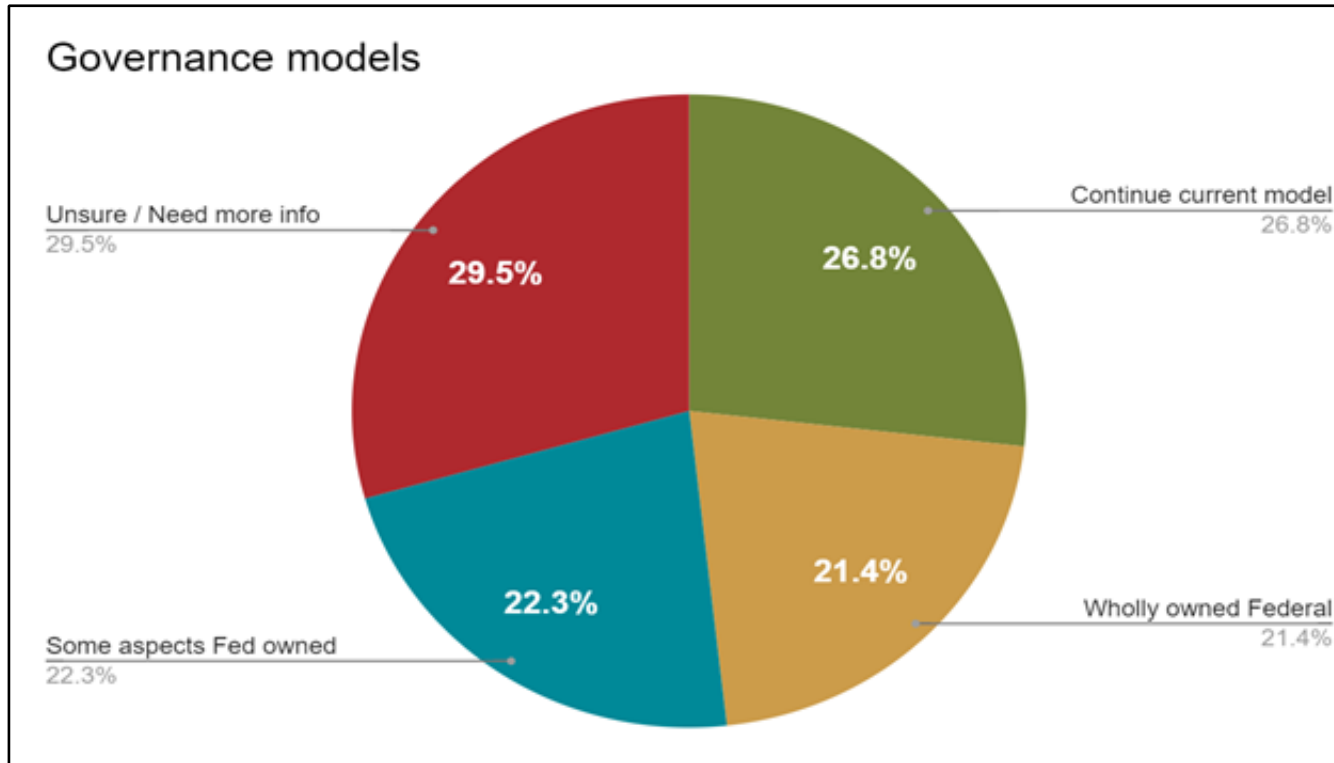
## Anticipated Strengths

- More consistent and accessible funding
- More equitable cost distribution
- More equitable access to the program - smaller and underserved seaports could participate.
- More standardized approach could lead to some program efficiencies

## Anticipated Limitations

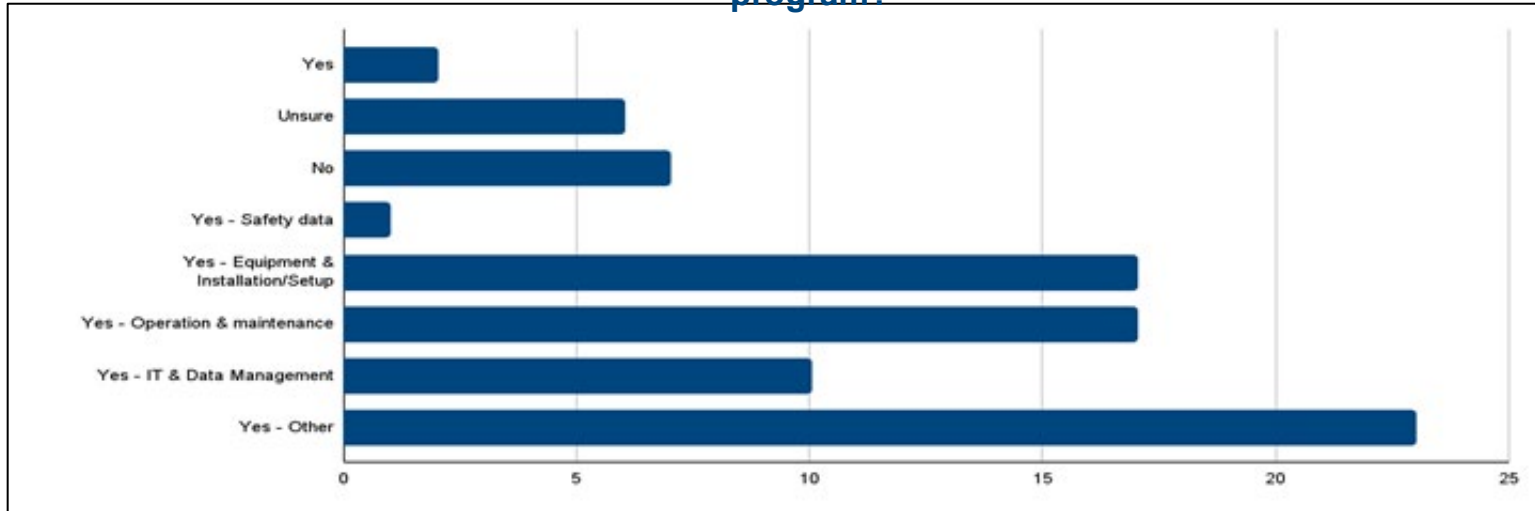
- Less local control and input
  - Local needs may not be prioritized due to standardize approach
- Slower timeline and more potential delays
- Uncertainties in federal budgeting process
- Smaller ports may be underserved (depending on how seaports are prioritized)

# Should the PORTS® program continue as the current cost-share model, or move to a wholly-owned Federal program?



# Hybrid Governance Model

Are there only specific aspects of the current cost-share model that should be a wholly owned Federal program?



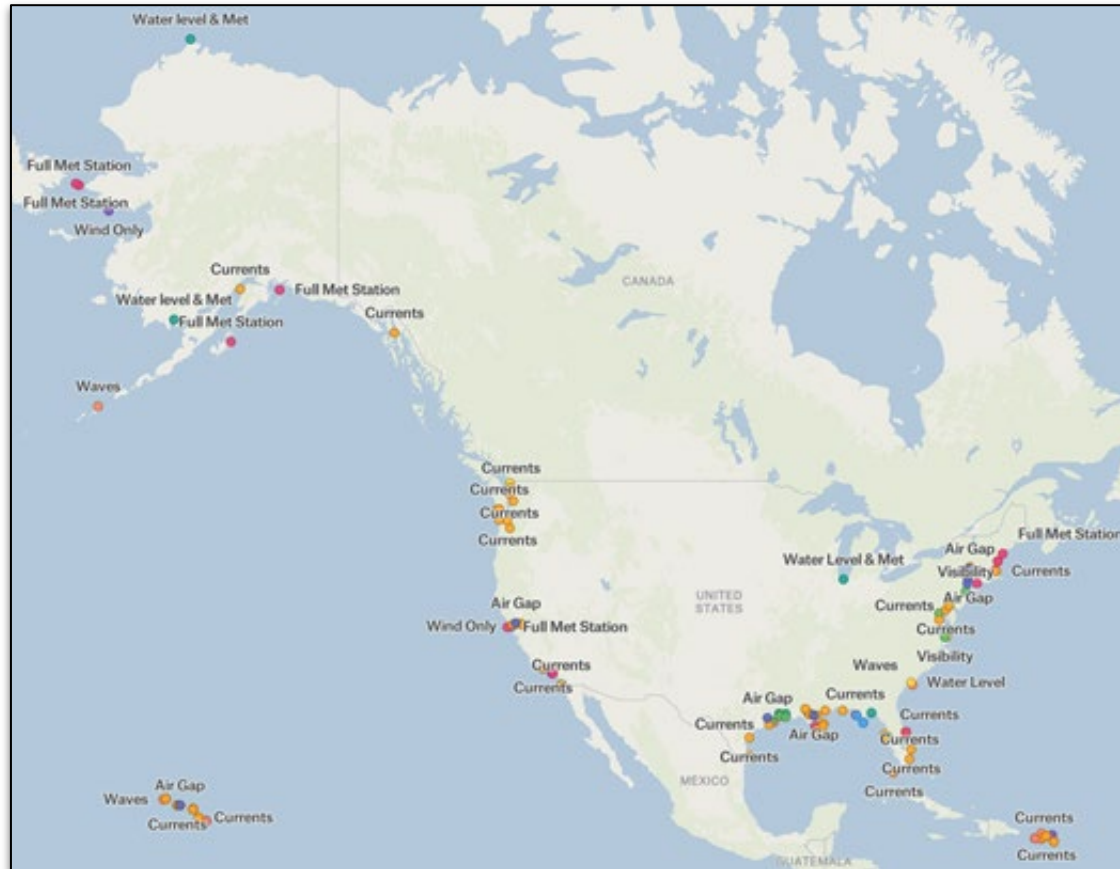
Aspects included in “other” included:

- Specific station types (air gap, tide/water level, etc.)
- Specific support services (permitting assistance, emergency sensor replacement, etc.)
- A wholly-owned Federal program with opportunities for expanding with local match
- A Federal program that supplies annual funds to locals to support and operate local stations.



# Fully Built-Out PORTS® System

# Additional New Stations Identified in a Fully Built-Out PORTS® System



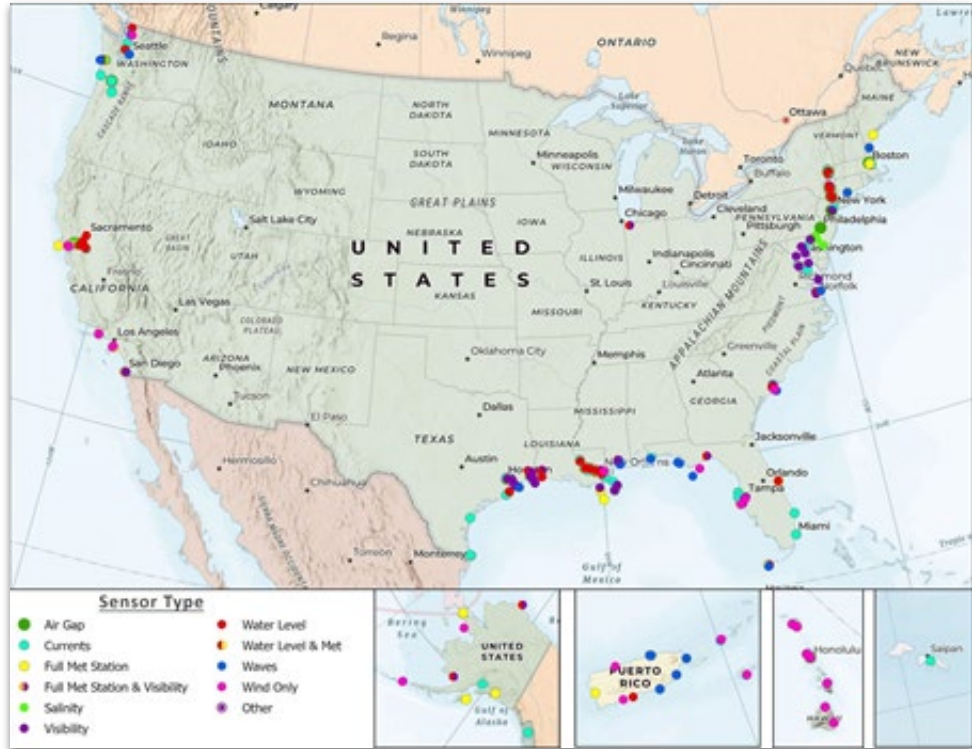
# Attribute Data

Field Name	Description
Draft Sensor ID	5 digit unique ID
Station Name	Proposed Station Name
Station Type	Data type(s) collected
Region	Geographic region
Seaport	Main Seaport Name
Seaport ID	Seaport ID, if there is no existing Seaport ID, the Seaport Name is used
Seaport 2	Secondary Seaport Name
Seaport 2 ID	Seaport ID for Secondary Seaport
Seaport 3	Tertiary Seaport Name
Seaport 3 ID	Seaport ID for Tertiary Seaport
Y Latitude	Latitude, decimal degrees
X Longitude	Longitude, decimal degrees
Contact	Point of Contact Name
Notes/Comments	Additional Notes
State	State the Main Port is located
Port Name Full	Full name of the Main Port



# Additional New Stations

Station Type	Count
Air Gap	14
Currents	122
Full Met. Station	23
Full Met. Station & Visibility	18
Salinity	7
Visibility	39
Water Level & Met. Station	16
Water Level	24
Waves	44
Wind	41
Other (CORS)	1
<b>Total</b>	<b>349</b>



- Current stations represented 35 percent of the new additions
- Wind, visibility, waves, and water level data were also highly requested

# Limitations/Considerations

- Low participation from some regions
- Feedback from the right contacts?
- Approximate locations
- “Minimum” needs vary
- Many stakeholders receive and use data from other systems/sources

# Key Takeaways

01	<b>PORTS® Program Governance</b>	<ul style="list-style-type: none"><li>• Preference for a governance model was almost evenly split between all options.</li></ul>
02	<b>Fully-built Out PORTS® System</b>	<ul style="list-style-type: none"><li>• Found a particular need for additional real-time currents stations in all 11 regions.</li><li>• Strong need for stations in less trafficked, more shallow water or geographically isolated seaports</li></ul>
03	<b>New Sensor Technology Needs</b>	<ul style="list-style-type: none"><li>• Ice depth and/or coverage</li><li>• Marine mammals sensing</li><li>• Vessel traffic/congestion</li><li>• Precipitation sensors</li></ul>
04	<b>Site-Specific Return on Investment Case Studies</b>	<ul style="list-style-type: none"><li>• Site specific case studies might better contextualize how these benefits qualitatively and quantitatively impact PORTS® partners</li></ul>



# Questions?