Center for Operational Oceanographic Products and Services (CO-OPS) Updates and Outlook

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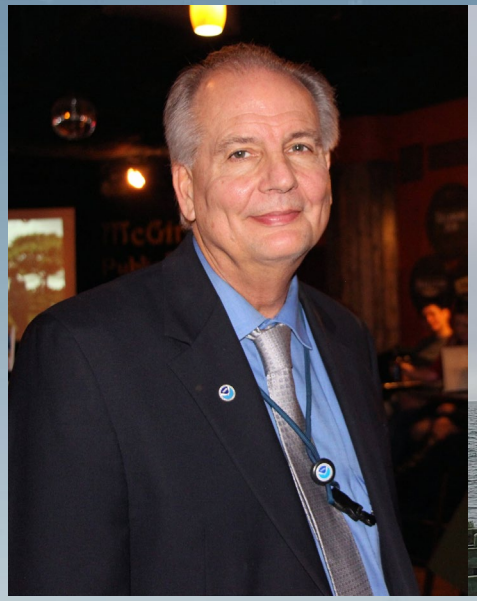
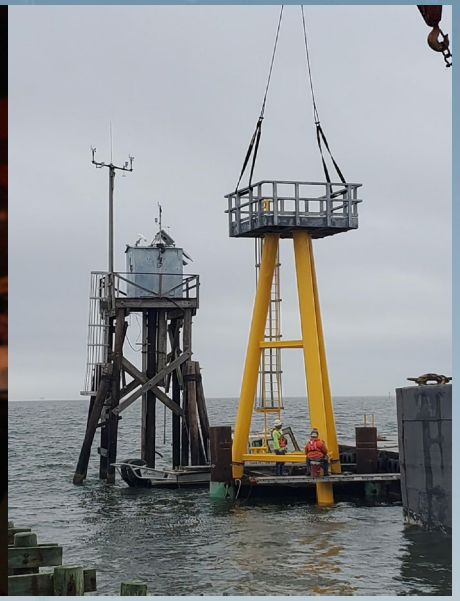
Overview

- Bipartisan Infrastructure Law Funding
- External Evaluation Findings
- PORTS® Program Updates
- PORTS® Assessment
- NCOP Tidal Current Survey Update
- High Tide Flooding Product Enhancements
- Coastal Inundation Dashboard: New Features



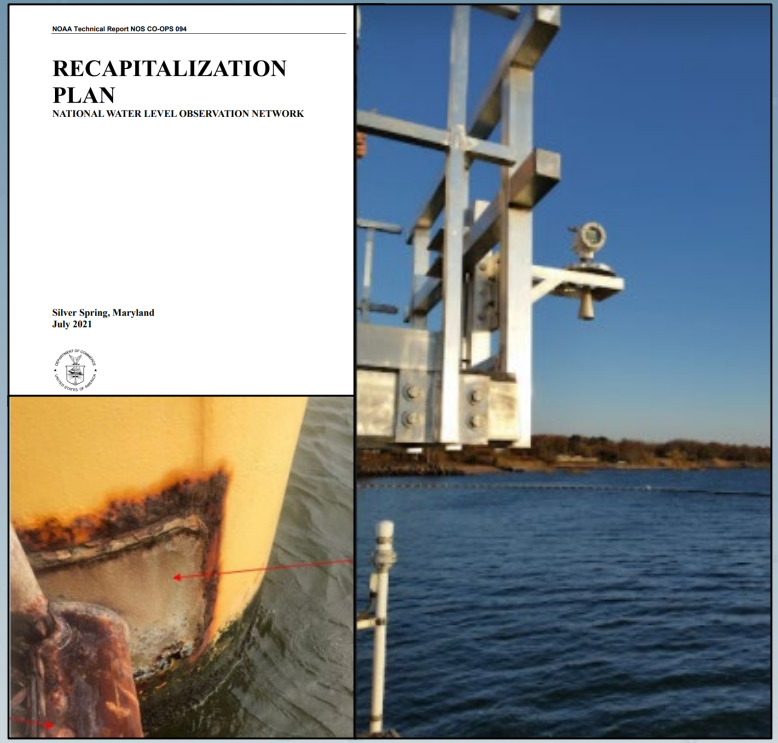


The Dauphin Island, Alabama NWLON Station was recently dedicated to retired CO-OPS Director Richard Edwing

Bipartisan Infrastructure Law Funding

Provision 11 - Support improved and enhanced coastal, ocean, and Great Lakes observing systems

- **NWLON station recapitalization** – improve operational readiness by rebuilding several stations with failing infrastructure
- **NWLON MWWL transition –** accelerate and complete the transition of water level measurement technology from acoustic to microwave technology
- **NWLON IT modernization -** modernize IT infrastructure to eliminate legacy code, reduce security risks, and ensure continuity of operations



Corrosion issues at the Calcasieu Pass SPIP

New Haven MWWL installation

Bipartisan Infrastructure Law Funding

Provision 3 - Support coastal and inland flood and inundation mapping and forecasting, and next-generation water modeling activities, including modernized precipitation frequency and probable maximum studies

- **Coastal Model System Acceleration**–Accelerate and complete the delivery of regional/national coastal 3D hydrodynamic models, including the Great Lakes (in collaboration with OCS & IOOS)

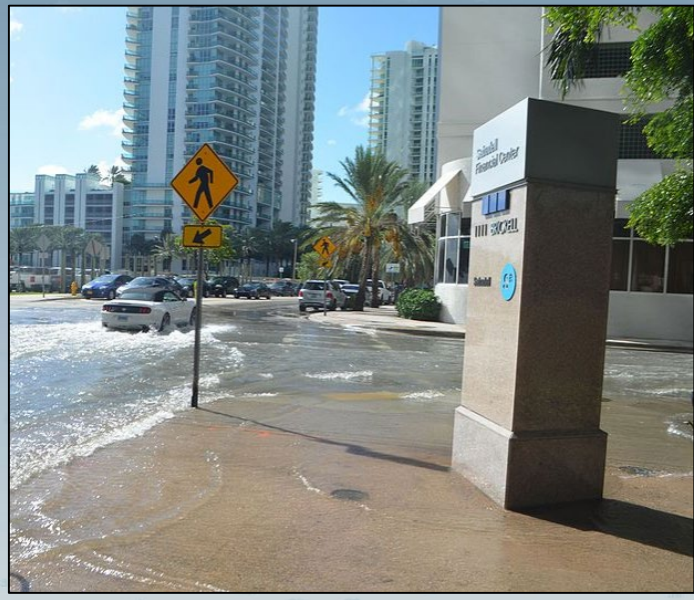
- **Coupling Capabilities** - Advance coupling capabilities of the NextGen National Water Model to NOS 3D hydrodynamic coastal models (in collaboration with OCS, IOOS, and NWS)

Bipartisan Infrastructure Law Funding

Provision 3 - Build subseasonal to annual integrated water capabilities

- **Enhanced Coastal Inundation Prediction –** Advance coastal inundation risk prediction to determine mean and extreme water levels across seasonal to annual time scales for the open coast (East Coast and Gulf of Mexico) and Great Lakes (NOS and OAR collaboration)

- **New Coastal Inundation Data, Products and Applications Development** - Prototype coastal inundation outlook products with gridded model data to support monthly-to-annual planning; work to integrate data and map visualizations into NOAA decision support tools (NOS, OAR, and NWS collaboration)



External Evaluation Findings

1. **Engage with stakeholders as partners** to empower others and outsource rather than “doing it all”.
2. **Integrate across organizations and products** to leverage resources and simplify user experience.
3. **Embrace open strategic planning** and agile implementation to support transparency and justify new initiatives.
4. **Increase intentional branding and outreach** to inform data-driven decisions and make effective calls to action.
5. **Prioritize website and findability enhancements** so that partners can readily navigate to everything CO-OPS provides.

PORTS® Program Updates

FY23 Enhancements

- **Valdez, AK** - Salinity sensor
- **King's Bay, GA** - 1 WL with met., 1 buoy mounted current meter, 1 side looking current meter
- **Corpus Christi, TX** – integrate 1 WL with met.


Corpus Christi Seaport

New PORTS

Freeport, TX (went live in early FY23)

- Partnership with Port Freeport
- Integrate 1 NWLON, installed 2 current meters

Upcoming new PORTS

Pearl Harbor, HI (FY23 or FY24)

- Partnership with the U.S. Navy
- Integrate 1 NWLON, install 1 WL with met., 2 current meters

Seattle, WA (FY24)

- Partnership with Port of Seattle
- Integrate 1 NWLON, add a current meter and stand alone met. station

PORTS® Assessment

Determine requirements for a fully built out system

- Minimum number, types & locations of sensors needed to support safe and efficient marine navigation in each of the 175 top seaports

Outline and evaluate governance options for:

- Existing cost share model
- A fully federally funded program

Evaluate the equity considerations for underserved communities in the two governance model options

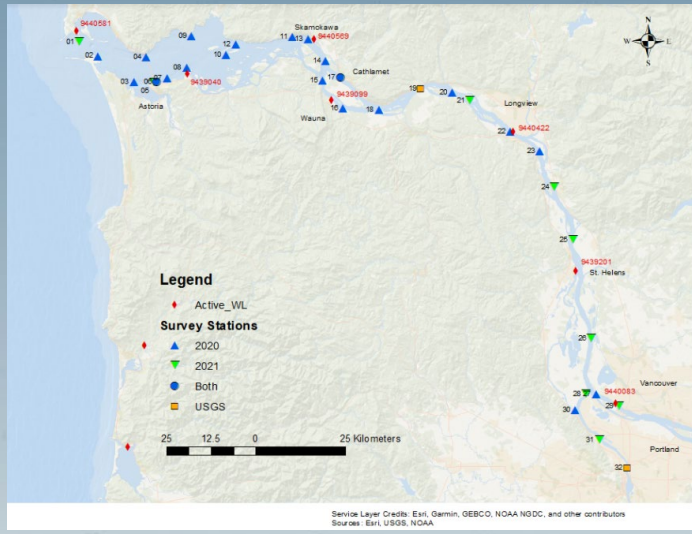
NCOP Tidal Current Survey Update

Delaware Bay

- Currents observations collected in 2021
- Predictions updated at 31 locations
- Conductivity, temperature and density data collected

Columbia River

- Channel deepened to 43’ by the USACE between 2005 and 2010 to allow larger container and grain ships to reach ports of Portland and Vancouver
- Currents observations collected in 2022; additional observations will be collected in 2023.
- Predictions will be updated at 32 locations in the Lower Columbia River and two long-term stations will collect data for the entire survey period



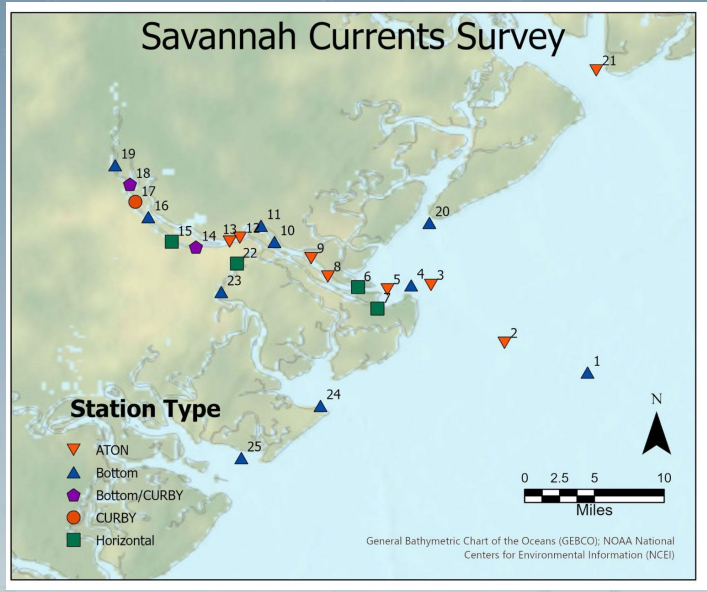
NCOP Tidal Current Survey Update

Savannah River

- Pilots have been requesting updated currents information for over 10 years
- Following completion of harbor deepening project, observations will be collected in 2023 at 25 locations

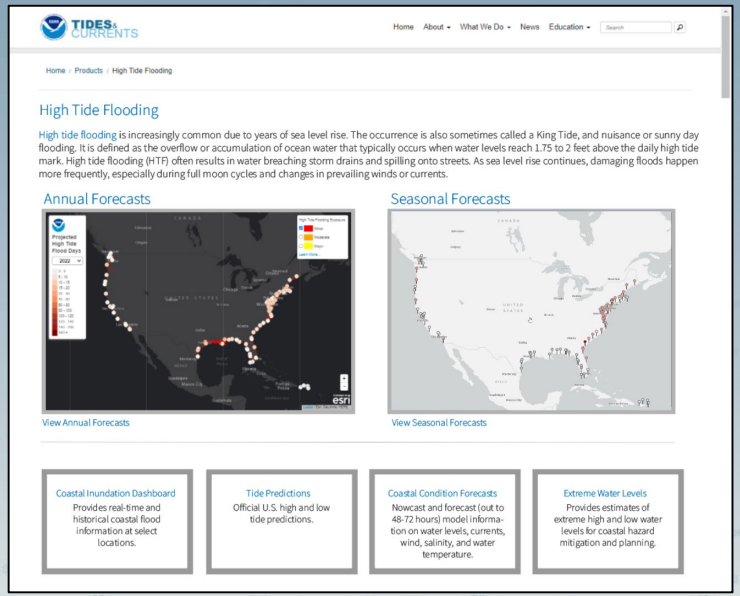
Charleston Harbor

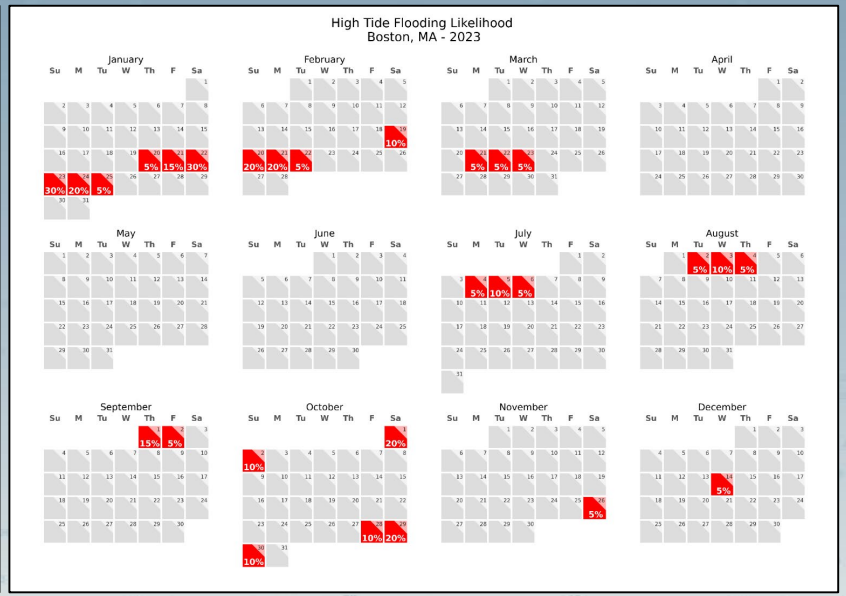
- Field reconnaissance planned for summer 2023 for ~40 locations in the Harbor and surrounding rivers
- Requirements based primarily on navigation needs.
- Data will also support model validation and coastal circulation analyses



High Tide Flooding Product Enhancements

- **Integrated High Tide Flooding Products**
- **Interactive dashboards** & visualizations
- Links to additional **internal & external resources**
- **Enhanced flood prediction** capabilities

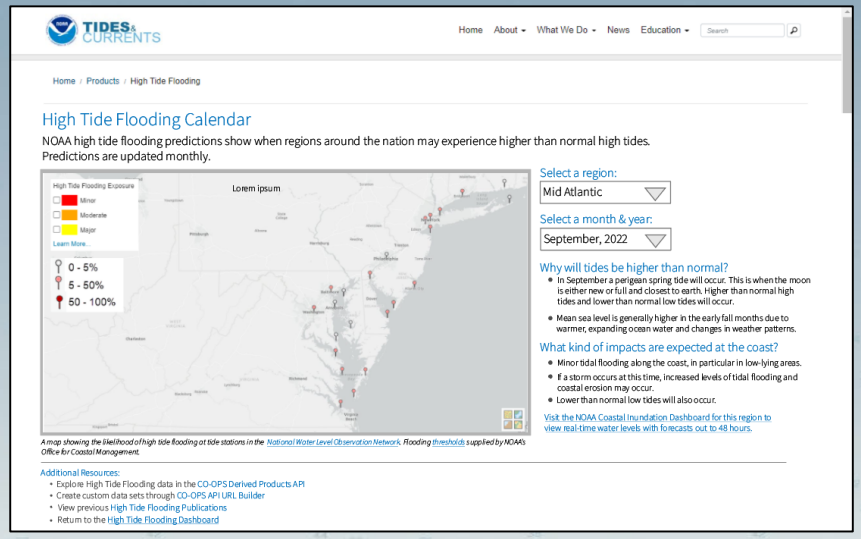




High Tide Flooding Product Enhancements

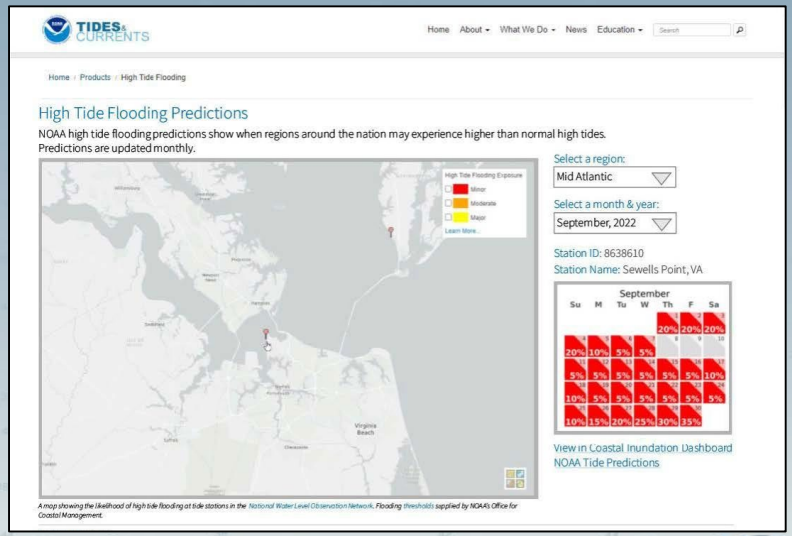
HTF Predictions by Region

- Interactive geospatial data visualizations
- Regional impact summaries
- Flooding likelihoods



HTF Predictions by Station

- Flood prediction calendars for each station
- Links to station page in Coastal Inundation Dashboard

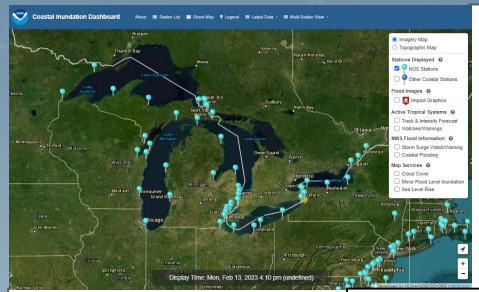


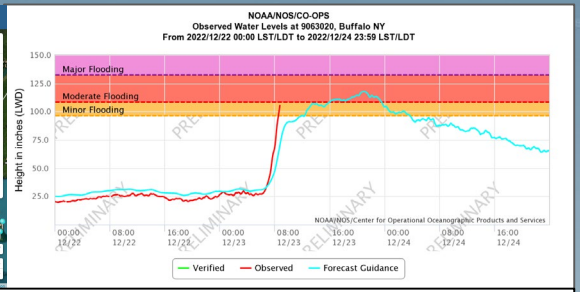
Coastal Inundation Dashboard: New Features

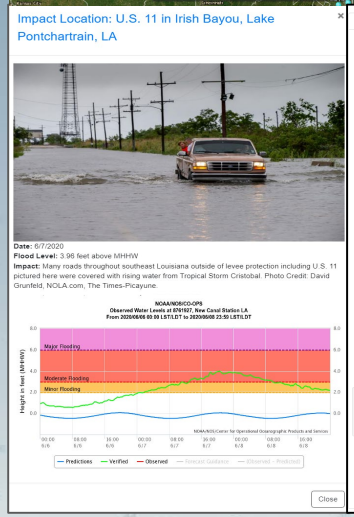
- **Coastal Inundation Dashboard (CID)** provides real-time and historic coastal flood information at 53 water level stations in the Great Lakes.

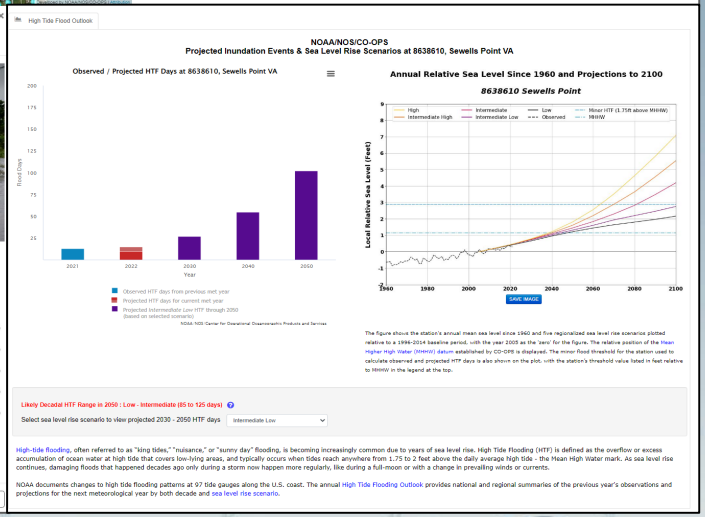
- Over 200 *Impact Graphics* recently added, relating observations to images taken during flood events.

- Users can view projected decadal High Tide Flood (HTF) days for 97 stations included in the annual **HTF Outlook** within CID based on a selected sea level rise scenario.









Questions?