Preparations for 2026-27 El Niño Tidal & Weather Pattern

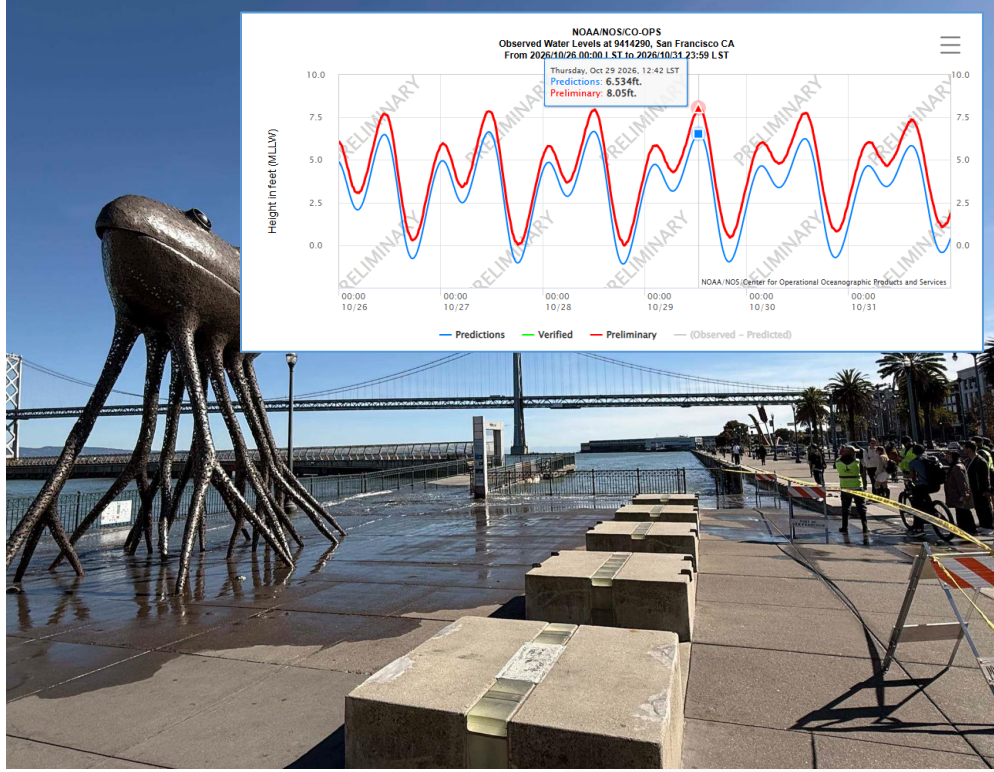
Informational Presentation – Item 13A
November 10, 2026

Presented By:
Matthew Bell, Chief Harbor Engineer, Engineering Division
Meghan Wallace, Deputy Director, Finance and Administration

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This Year's El Niño – What we know

- National Weather Service (NWS), agency within National Oceanic and Atmospheric Administration (NOAA), is the authority
- Global forecast based on record high temperatures in the Pacific Ocean near the equator
- California is already experiencing impacts
- State of California and City & County of San Francisco have declared emergencies to streamline preparedness
- Tides exceeded 8 feet during last week of October (SF record is 8.66 feet in Jan. 1983). Even higher tides are expected Thanksgiving, Christmas, Martin Luther King Jr. Day
- Water levels have been 1.5 feet higher than long term predictions due to El Niño effects
- Concern: water levels are consistently high, increasing likelihood of storm + high tide events



National Oceanic and Atmospheric Administration
U.S. Department of Commerce

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El Nino looms large over U.S. Winter Outlook

Expected impacts include warmer North, wetter South and East

Focus areas: Weather Topics: winter, forecasts, seasonal outlooks Share:

October 15, 2026



A car drives through a snowstorm in Broomfield, Colorado, in 2024. (Image credit: Bob Hyatt/NOAA)
Download Image

NOAA's U.S. Winter Outlook, released today, shows how El Nino will likely influence the upcoming winter months (December 2026 to February 2027), with warmer-than-average temperatures expected across the northern U.S.; wetter-than-average conditions likely across the southern U.S., from California to Florida, and along the Eastern Seaboard; and drought improving for the majority of the country, including areas in the East, Southern Great Plains and Southwest.

Oct 27, 2026

Governor Newsom orders action to protect Highway 1 and coastal communities ahead of El Niño storms

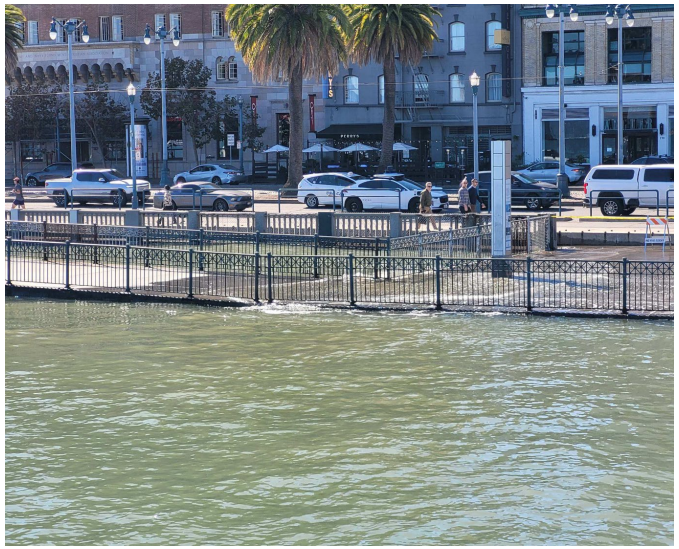
Protecting a vital economic corridor and the communities, businesses, and jobs that depend on it



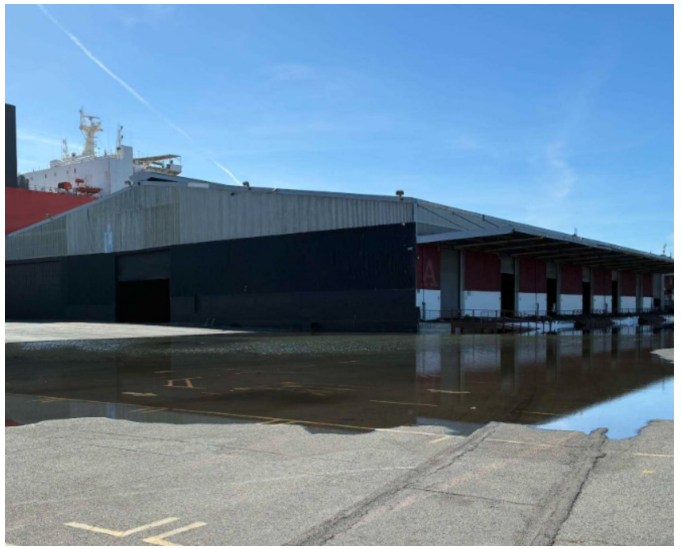
What you need to know: Governor Newsom is directing state agencies to prepare Highway 1 and surrounding communities for potential El Niño storm damage and address longer-term climate threats. The order brings state agencies together to protect a vital economic artery, reduce storm-related closures, and strengthen the coast's defenses against worsening climate

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Week of October 26-31 Observed Flooding



Pier 14 south of Ferry Building water levels at top of seawall

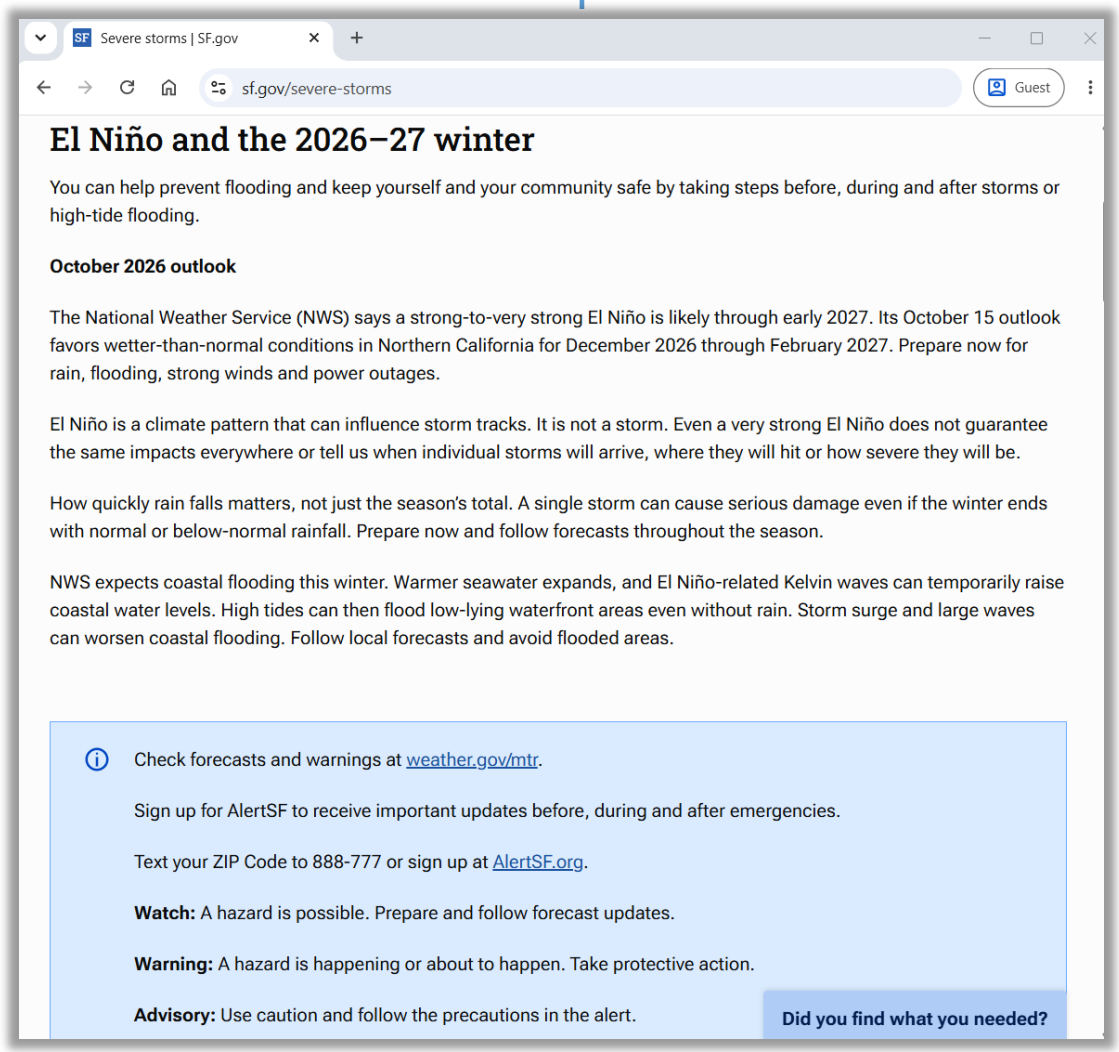


Pier 80 – seawater coming up through storm drains



Pier 96 – seawater seeping though seawall extension

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Public Communications

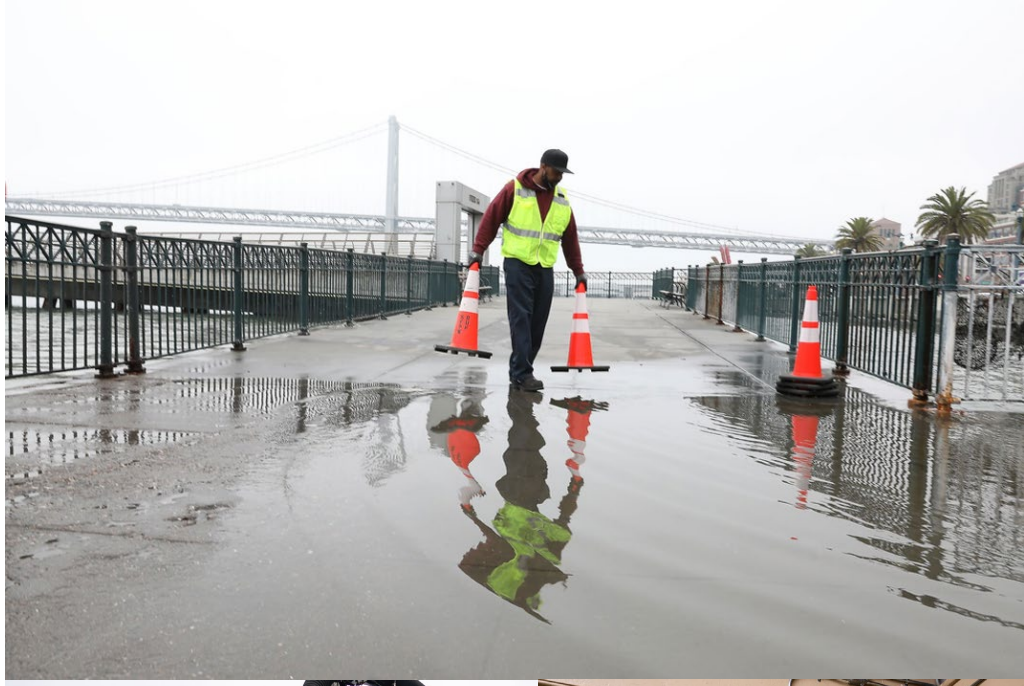
- Ongoing communication to Port Tenants via Real Estate and Maritime staff
- Presentations to Port Advisory Committees and other community groups
- Public communications:
  - El Nino pages on sf.gov and sfport.com
  - Signage on Port Property
  - Media engagement by Communications staff
- Hazard communications:

  All of the above plus
  - AlertSF emergency text message service
  - Communicate urgency using **Watch** → **Advisory** → **Warning** terminology across multiple levels of government

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Preparing for Facility Impacts

- Ordering additional large water pumps and generators
- Clearing storm drains port wide before November and checking regularly thereafter
- Clearing roof drains and gutters port wide
- Deploying message boards along Embarcadero and other high flood areas
- Inspecting mooring for barges, boats, marinas and ferry terminals
- Staging sandbags port wide
- Preparing water pumps, back-up power and pump sensors on drydocks at the shipyard
- Staging barricades and signage to close flooded facilities







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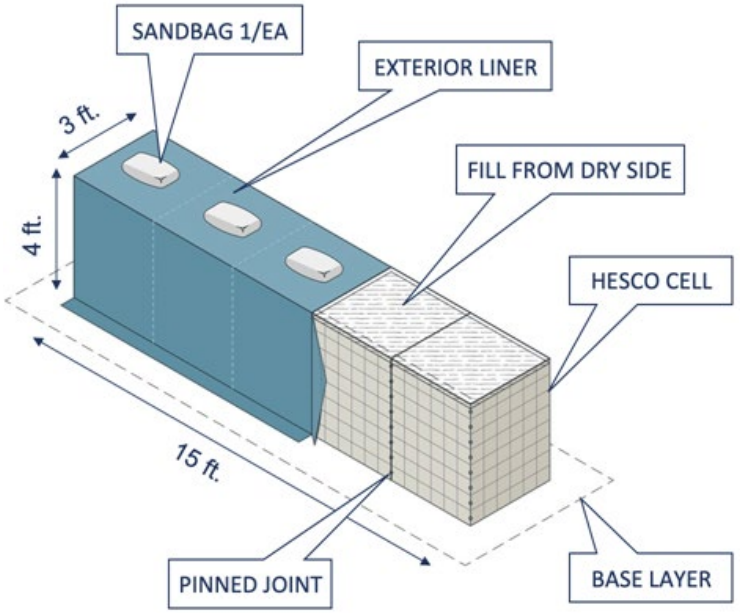
Seasonal Coastal Defenses Locations & Overview

- Locations (North to South):
  - Pier 45
  - Ferry Building
  - Pier 80
  - Pier 96
- Fixed barriers remain in place for entire season with limited gaps for access
- Gaps closed with deployable barriers, pumps for seepage and inland rainwater
- Locations informed by recent Port and City sea level rise planning work
- Rapid development of plans and quantities enabled resource request to State, expedited contracting and procurement

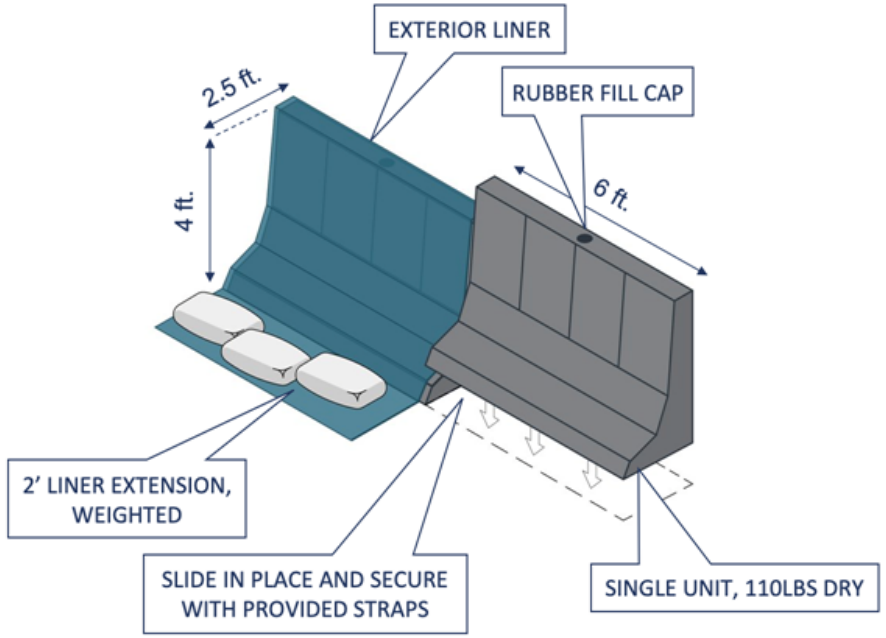
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Seasonal Coastal Defenses
Barrier Types

HESCO Floodline: Fixed barrier, sand filled



Muscle Wall: Deployable or fixed barrier, water filled



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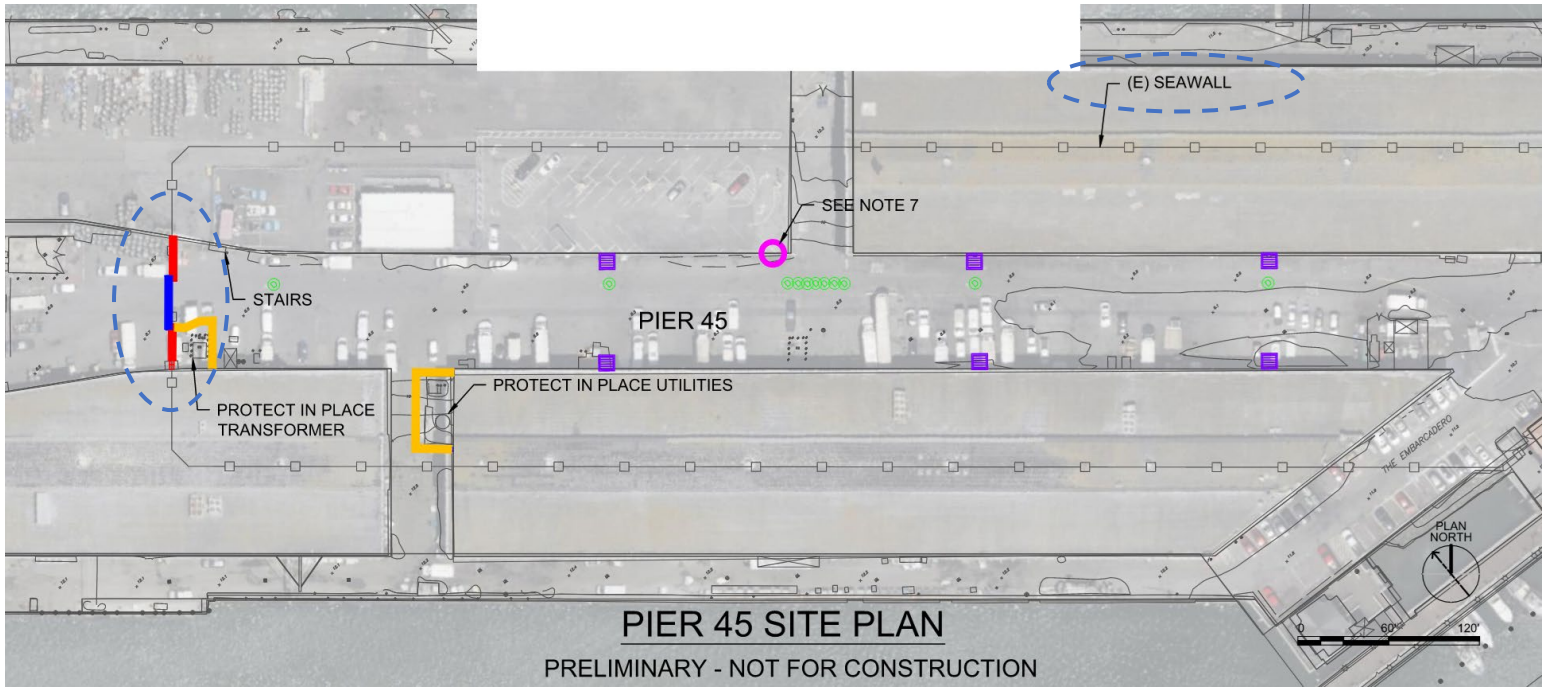
Seasonal Coastal Defenses

Pier 45: low point at end of “valley” drive aisle

LEGEND:

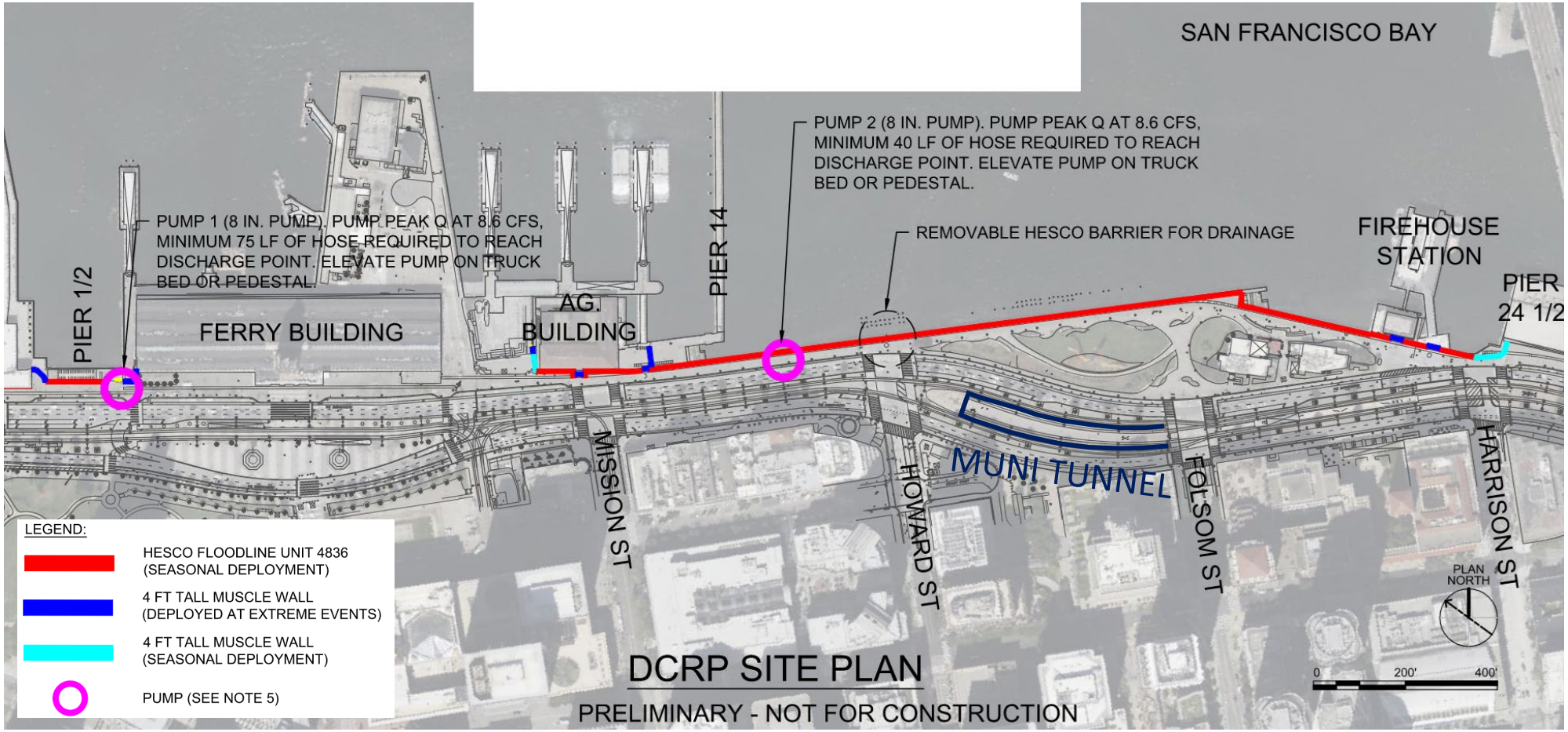
- HESCO FLOODLINE UNIT 4836 (SEASONAL DEPLOYMENT)
- 4 FT TALL MUSCLE WALL (DEPLOYED AT EXTREME EVENTS)
- 2 FT TALL MUSCLE WALL (SEASONAL DEPLOYMENT)
- INLET (SEE NOTE 5)
- STORM DRAIN MANHOLE (SEE NOTE 6)
- PUMP (SEE NOTE 7)





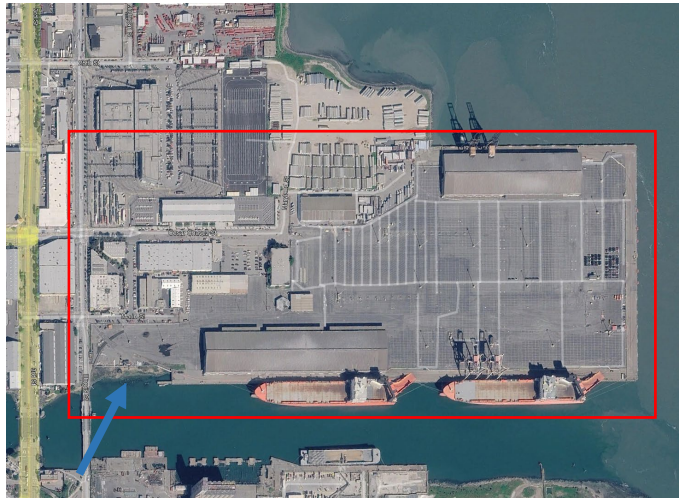
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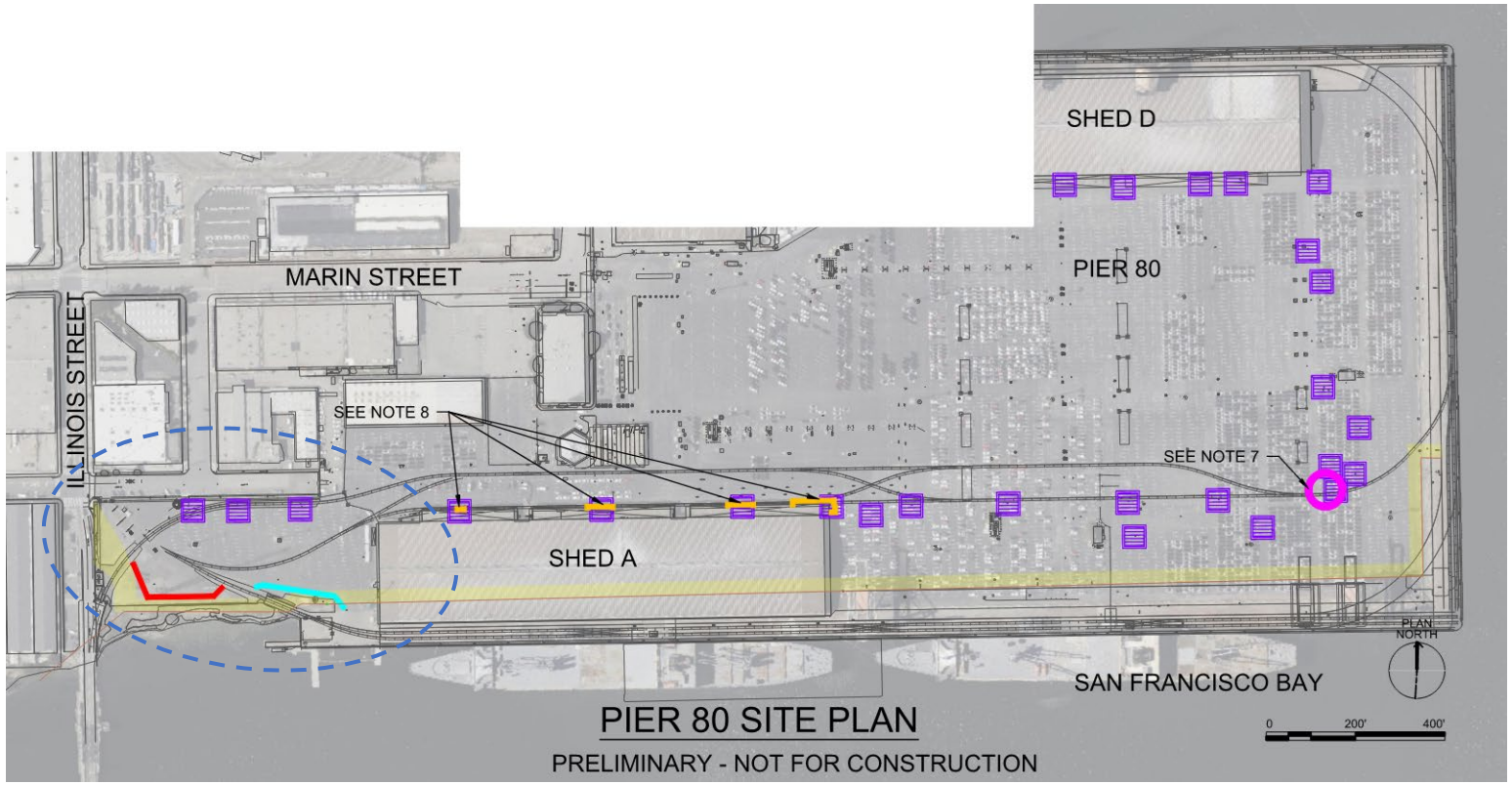
Seasonal Coastal Defenses
Ferry Building Area: Pier 1 to ½ & Ag. Bldg. to 22½



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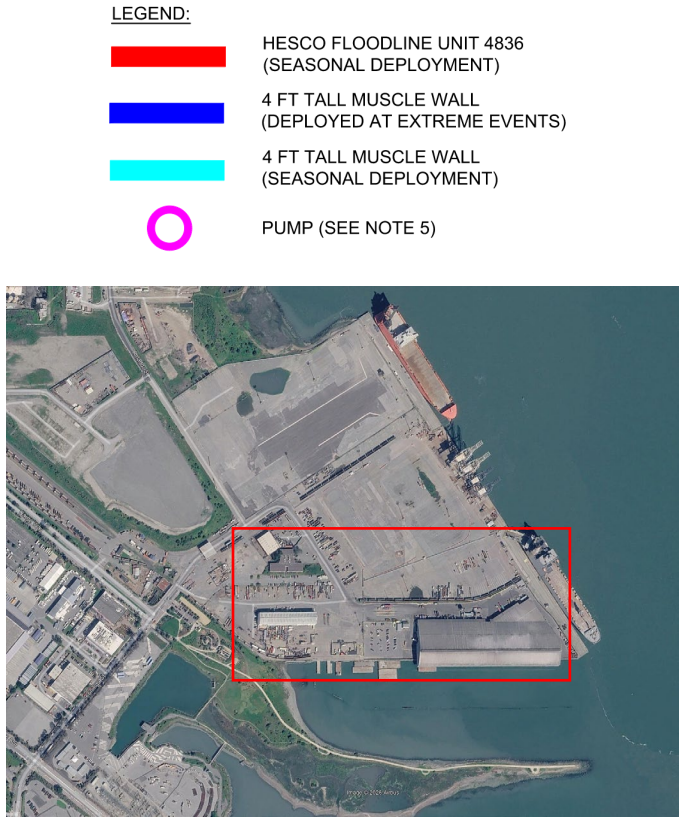
Seasonal Coastal Defenses
Pier 80: low point along Islais Creek

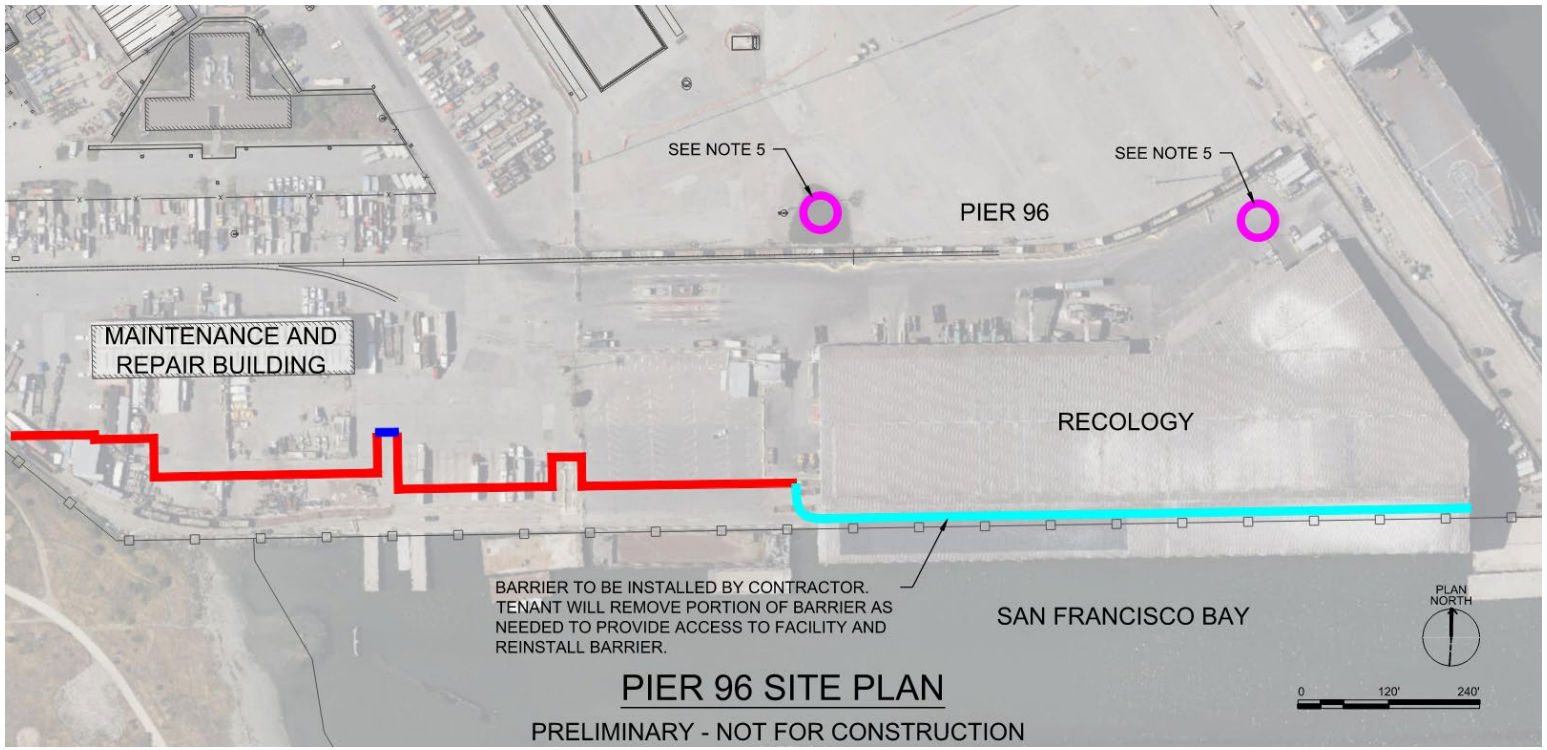




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Seasonal Coastal Defenses
Pier 96: along south seawall





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Risk Management and Disaster Recovery Funding

Protect First Approach

- Prevent or minimize damage before it occurs
- Reduce disruption to Port operations, tenant businesses, and public
- Reduce fiscal impact from damage and downtime

Insurance

- Port maintains property insurance that includes flood coverage
- Reimbursement is subject to deductible
- Port is documenting existing property conditions in preparation for potential claims

Disaster Recovery Funding

- No current disaster funding has been identified
- We are preparing to qualify for State and Federal reimbursement if it becomes available
  - Procurement and contracting in accordance with state and federal reimbursement requirements
  - Tracking Port staff time and equipment utilization

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Fiscal Impacts & Planned Supplemental

EXPENDITURE TYPE	FUNDING AUTHORITIES ($ millions) F&A	Resilience/ Maintenance	Maritime/ Real Estate	Total
Materials & Equipment	$1.0	$-	$-	$1.0
Seasonal Defenses: Install, Operate, Remove	$0.8	$2.0	$1.1	$3.9
Other Services	$-	$-	$1.1	$1.1
TOTAL	**$1.8**	**$2.0**	**$2.2**	**$6.0**

- Current cost estimates for preventative work and anticipated response work range from $4-6 million.
- Funding drawn from the following Port funds results in tradeoffs for other uses:
  - **Finance & Administration (F&A)** – Drawdown of reserves for project contingencies, grant matches, and insurance deductibles
  - **Resilience** – Non-bond eligible expenses
  - **Maintenance** (new) – HazMat abatement and sidewalk, parking lot, and roadway maintenance
  - **Maritime** – Dry dock demolition and disposal
  - **Real Estate** – Facility improvements to attract or retain tenants
- Planned request for supplemental appropriation in early 2027, to replenish the funds used for this emergency response

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Summary of Port's Preparations for 2026-27 El Niño

Elevated risk along the shoreline

Water levels may remain elevated until spring, with highest peaks during weeks of Thanksgiving, Christmas, and Martin Luther King Jr. Day, compounded by storms

The Port is taking action

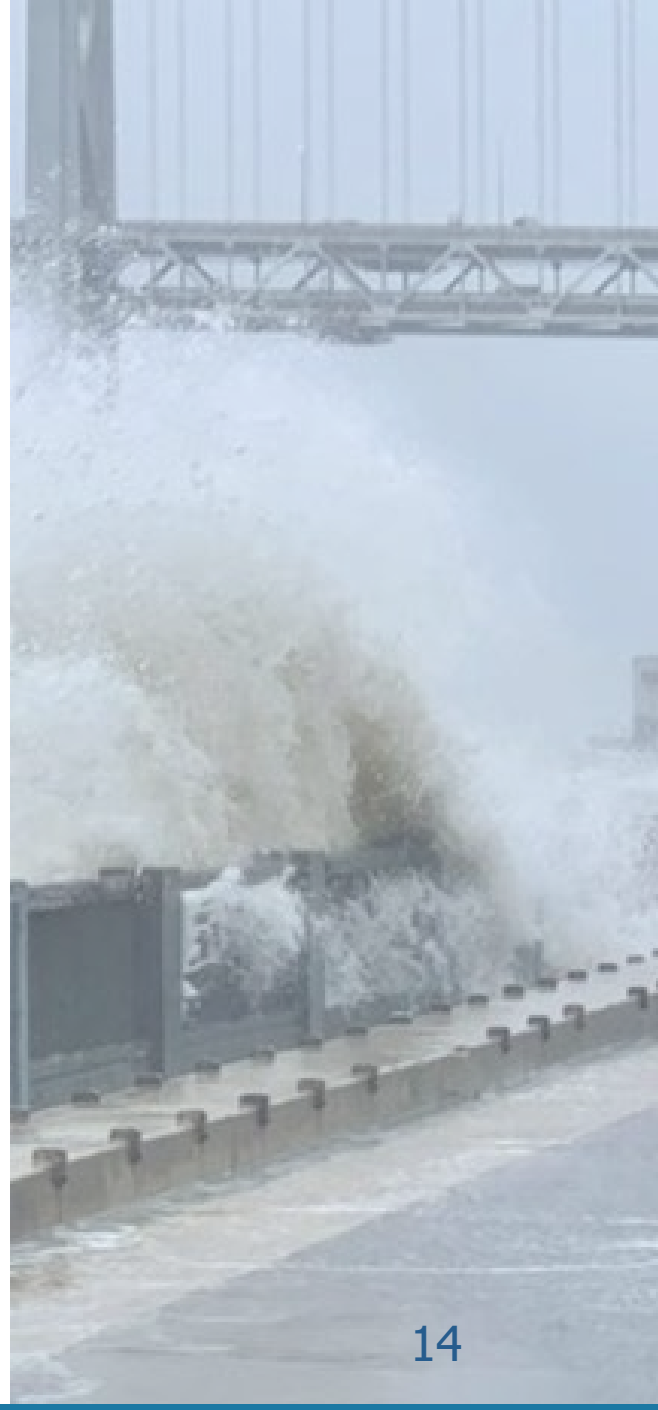
We are taking swift action to reduce coastal flood risk to our own facilities and City infrastructure, and strengthening our preparedness for changing weather conditions

Public safety is priority #1

All levels of government are communicating risk, guiding public preparedness, and preparing to send alerts via multiple channels

Prevention is self-funded

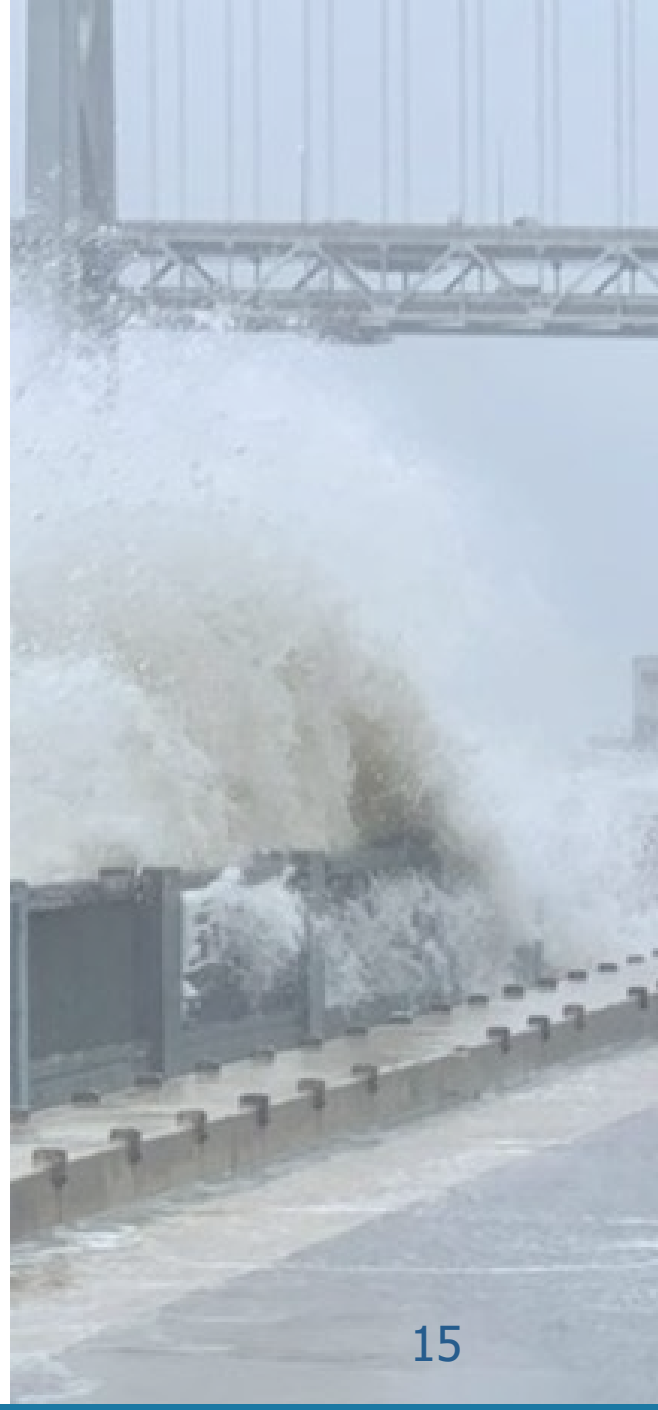
The Port is taking a "protect first" approach, investing in prevention now while preparing to seek insurance and disaster relief reimbursement



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Thank You

Questions?



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