



YEARS  
LEADING GREEN



Port of **LONG BEACH**  
THE GREEN PORT

## ***PIER Wind***

*Floating Offshore Wind Turbine  
Assembly Hub*

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*Senior Director / Chief Harbor Engineer*

*National Academy of Sciences*

*April 23, 2025*

FOUNDED IN 1911



STATE  
TIDELANDS  
TRUST

HARBOR DISTRICT

HARBOR DEPARTMENT,  
CITY OF LONG BEACH



LANDLORD  
PORT



GOODS VALUED AT  
\$300B ANNUALLY

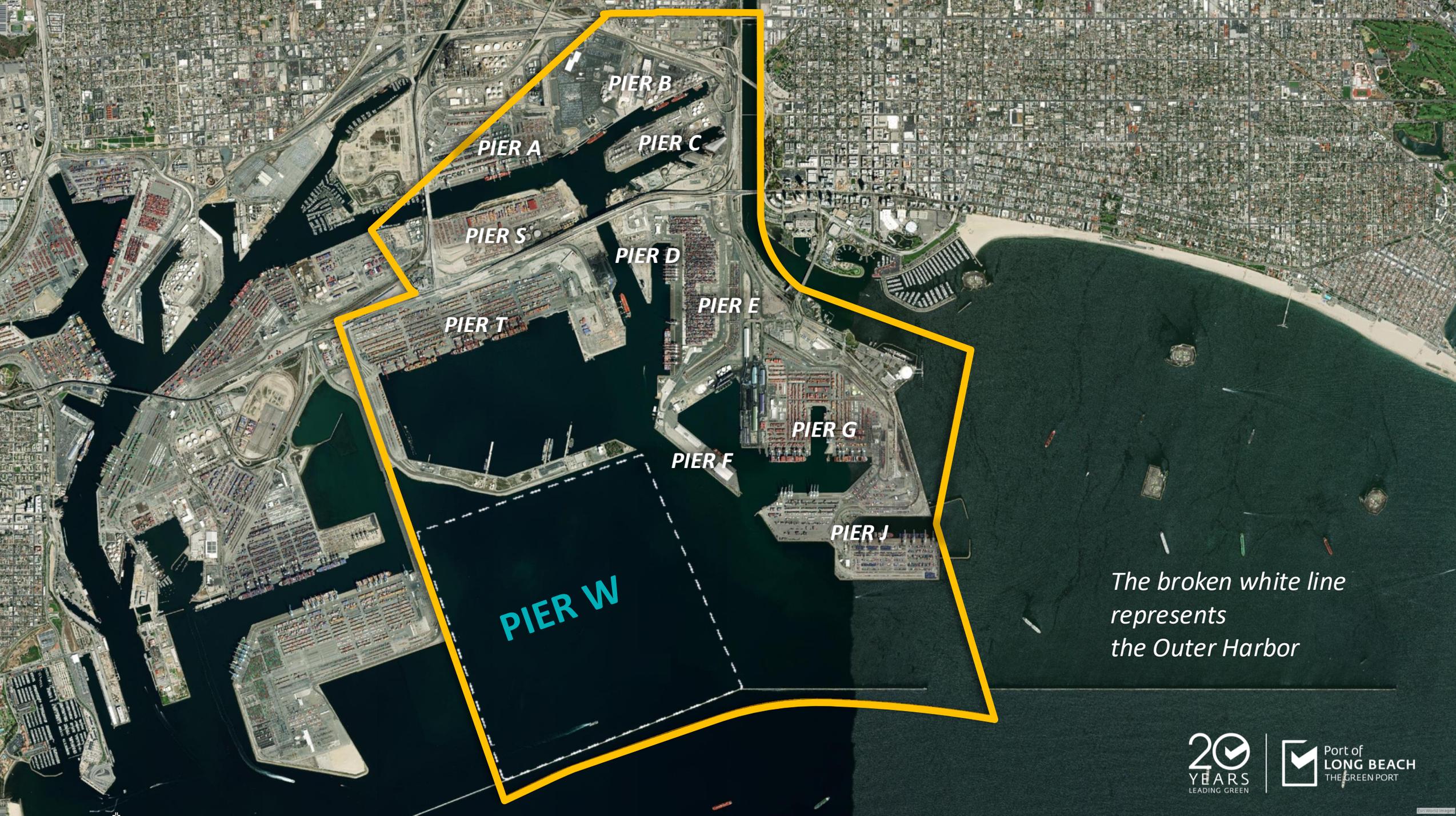
9.6M TEUs (2024)



2<sup>ND</sup> BUSIEST  
CONTAINER  
PORT IN US

20  
YEARS  
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Port of  
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PIER B

PIER A

PIER C

PIER S

PIER D

PIER E

PIER T

PIER G

PIER F

PIER J

PIER W

*The broken white line represents the Outer Harbor*



# PIER Wind Location

PIER Wind

# PIER W *ind*

## *Floating Offshore Wind Turbine Assembly Hub*



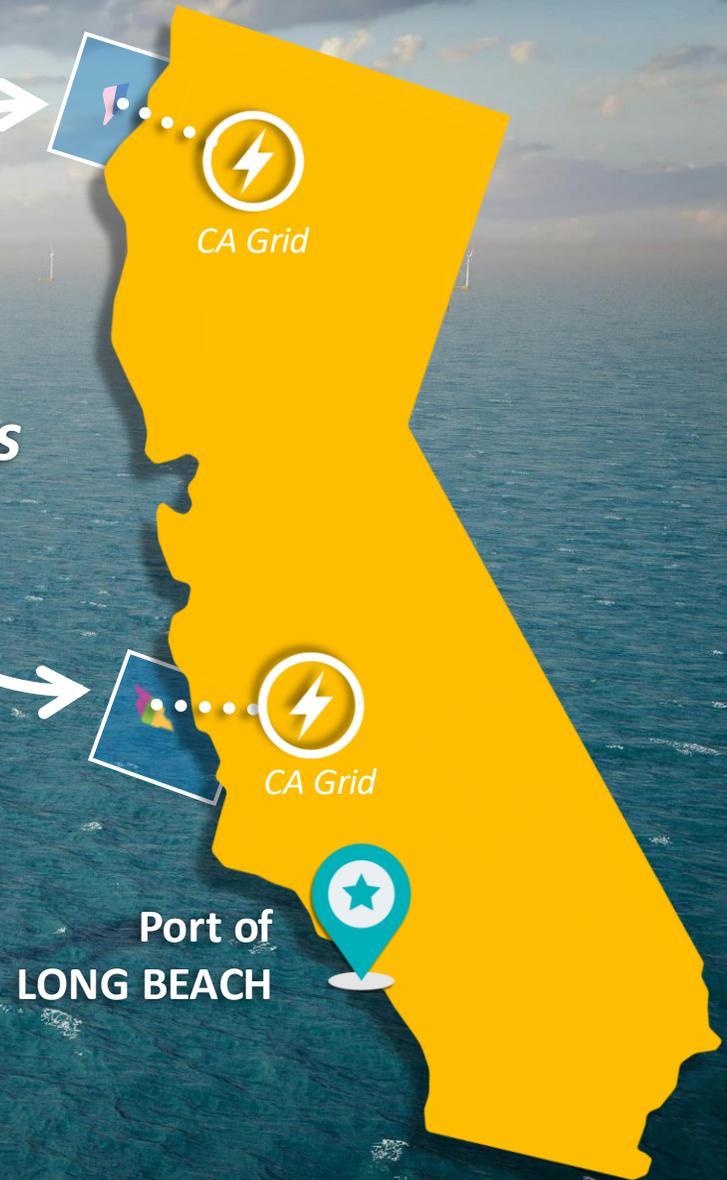
# WIND LEASE HOLDERS

-  RWE Offshore Wind Holdings, LLC
-  California North Floating LLC
-  Equinor Wind US LLC
-  Golden State Wind, LLC
-  Invenergy California Offshore LLC



Source: BOEM [California Activities](#)

## Wind Lease Areas



( Wind Lease Areas are not part of POLB Pier Wind Project )

Photo courtesy of Principle Power



# STAGING AND ASSEMBLY PORT OPERATIONS



*Key Requirements*

# FOUNDATION ASSEMBLY

*Large area to assemble multiple foundations concurrently*

*Heavy Lift Wharf*





*Heavy Lift Warf*

■ *Deep Calm Water*

# FOUNDATION LOAD OUT

# SINKING BASIN

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*Photo courtesy of Principle Power*

# STAGING AND INTEGRATION

- *Large area to stage components*
- *Deep Calm Water*

*Heavy Lift Warf*

*Component Delivery*

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Port of  
LONG BEACH  
THE GREEN PORT

Photo courtesy of Principle Power

SAL

# PRE-COMMISSIONING



Power

Pedestrian Access

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Port of  
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Photo courtesy of Principle Power

SAL



*Wet storage for fully assembled turbines waiting for tow out to the wind farm*

*Wet storage for floating foundations waiting for integration*

## WET STORAGE



Port of  
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# TOW OUT OPERATION

 *Vessel Logistics*

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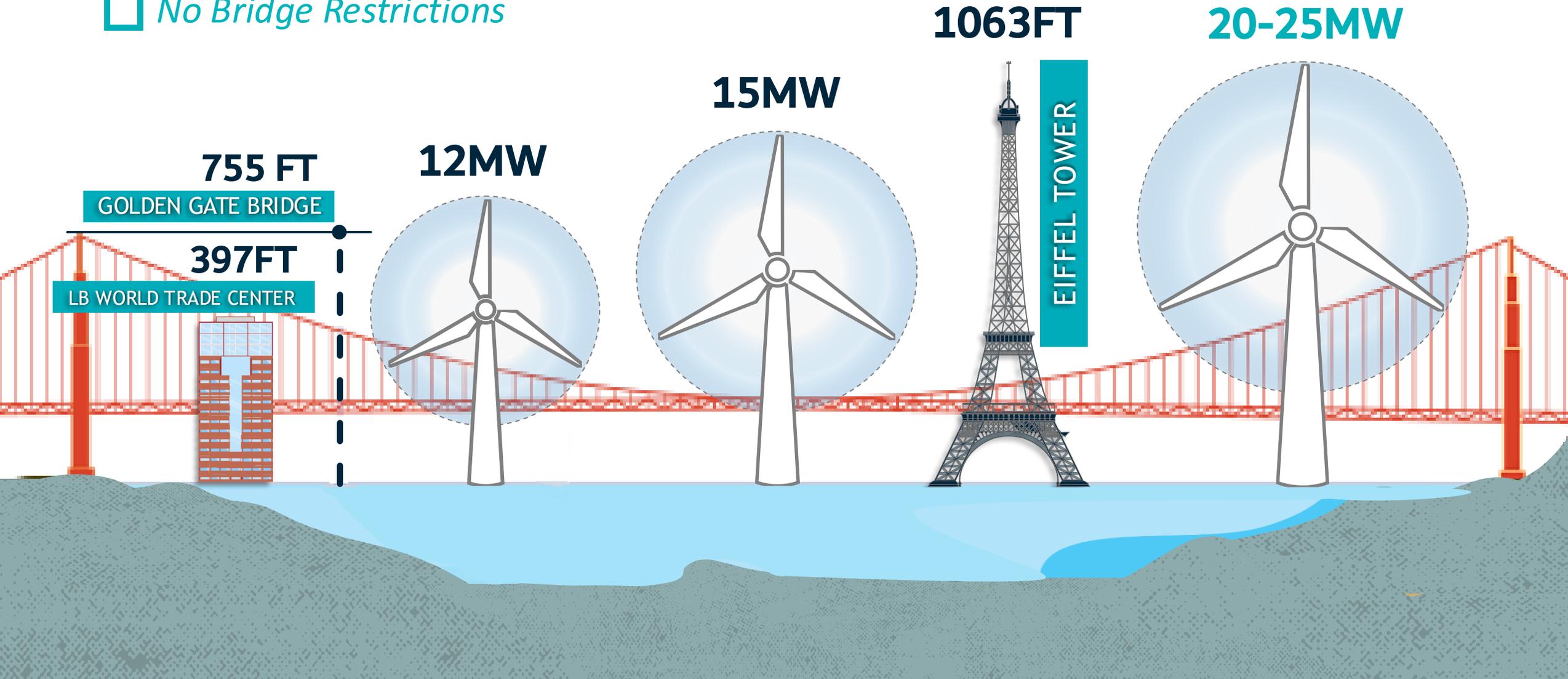


Port of  
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*Photo courtesy of Principle Power*

# SCALE

*No Bridge Restrictions*





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 Port of **LONG BEACH**  
THE GREEN PORT

# PIER Wind



*Meeting the need for  
Staging and Assembly*

# Port of LONG BEACH KEY QUALITIES

✓ STATE'S LARGEST  
SKILLED WORKFORCE  
AND MANUFACTURING BASE

HARBOR DISTRICT

✓ DEEP CALM  
WATER

✓ PART OF LARGEST  
INDUSTRIAL PORT  
COMPLEX IN THE NATION

✓ NO BRIDGE  
RESTRICTIONS

✓ CENTER OF US  
SUPPLY CHAIN

PIER Wind

-76' MAIN CHANNEL

FEDERAL  
BREAKWATER

✓ INDUSTRY LEADER IN  
DEVELOPING LARGE  
MARINE INFRASTRUCTURE

# PIER W *ind* Floating Offshore Wind Turbine Assembly Hub

**DOCKS**  
Supporting vessel logistics

**WET STORAGE**  
For floating foundations waiting for integration

**HEAVY LIFT WHARF**  
For component delivery, foundation loadout, and turbine integration activities

**DOCKS**  
Supporting pre-commission activities and wet storage

**STAGING & INTEGRATION**  
Large area to stage turbine components and integrate onto floating foundations

**FOUNDATION ASSEMBLY**  
Large area to stage sub-assemblies and assemble multiple foundations concurrently

**WET STORAGE**  
For fully assembled turbines waiting for tow out

**GREEN TERMINAL**

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Concept Rendering

# PRELIMINARY SCHEDULE

2023

PERMITTING/DESIGN

FALL 2025  
DRAFT EIS/ EIR

2027

START OF  
CONSTRUCTION

PHASE 1

Late 2031

PHASE 2

2035

WET STORAGE

SINKING BASIN

200  
ACRES

200  
ACRES

WET STORAGE

MAIN CHANNEL



YEARS  
LEADING GREEN

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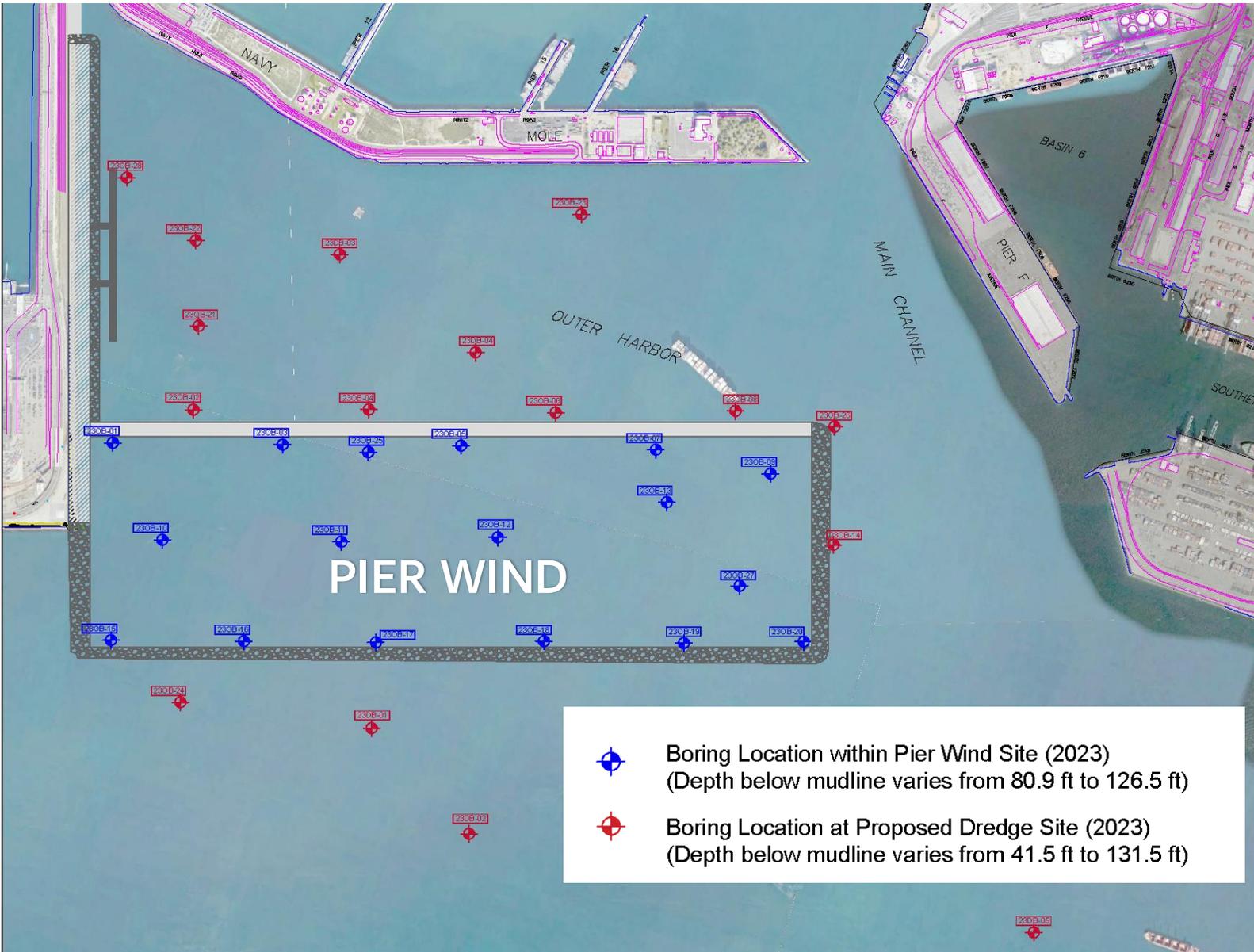
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# PIER Wind



*Design Development*

# GEOTECHNICAL INVESTIGATION



Performed 36 borings to get soil parameters. Information is used to inform:

- Rock dike design
- Pile design
- Fill design, surcharge & wick drain design



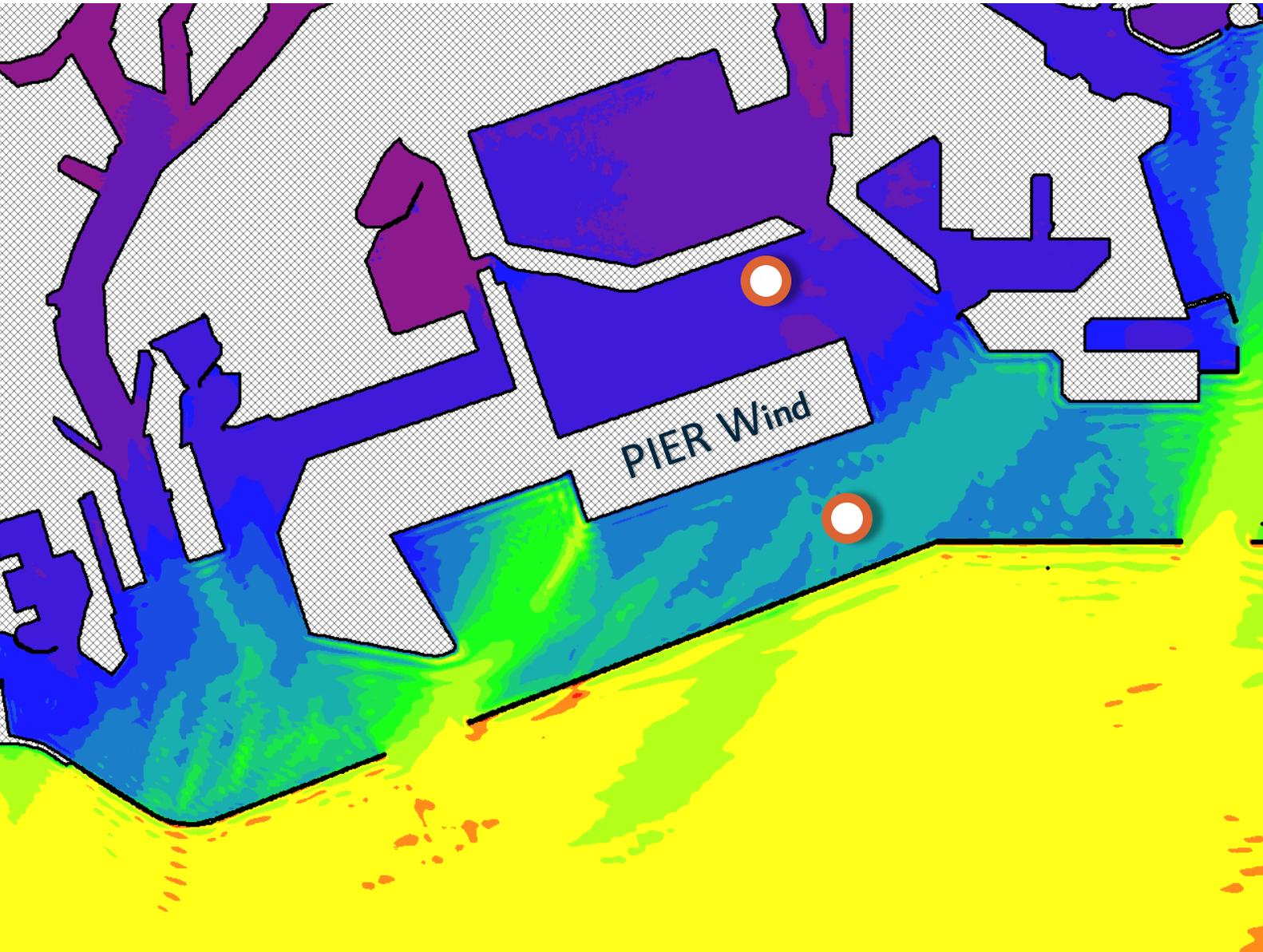
# SEDIMENT INVESTIGATION



Collected 22 sediment samples.  
Information is used to inform:

- Sediment quality for fill planning
- Sediment quality to support environmental document and early agency discussions
- Sand exploration

# WAVE INPUTS AND MODELING

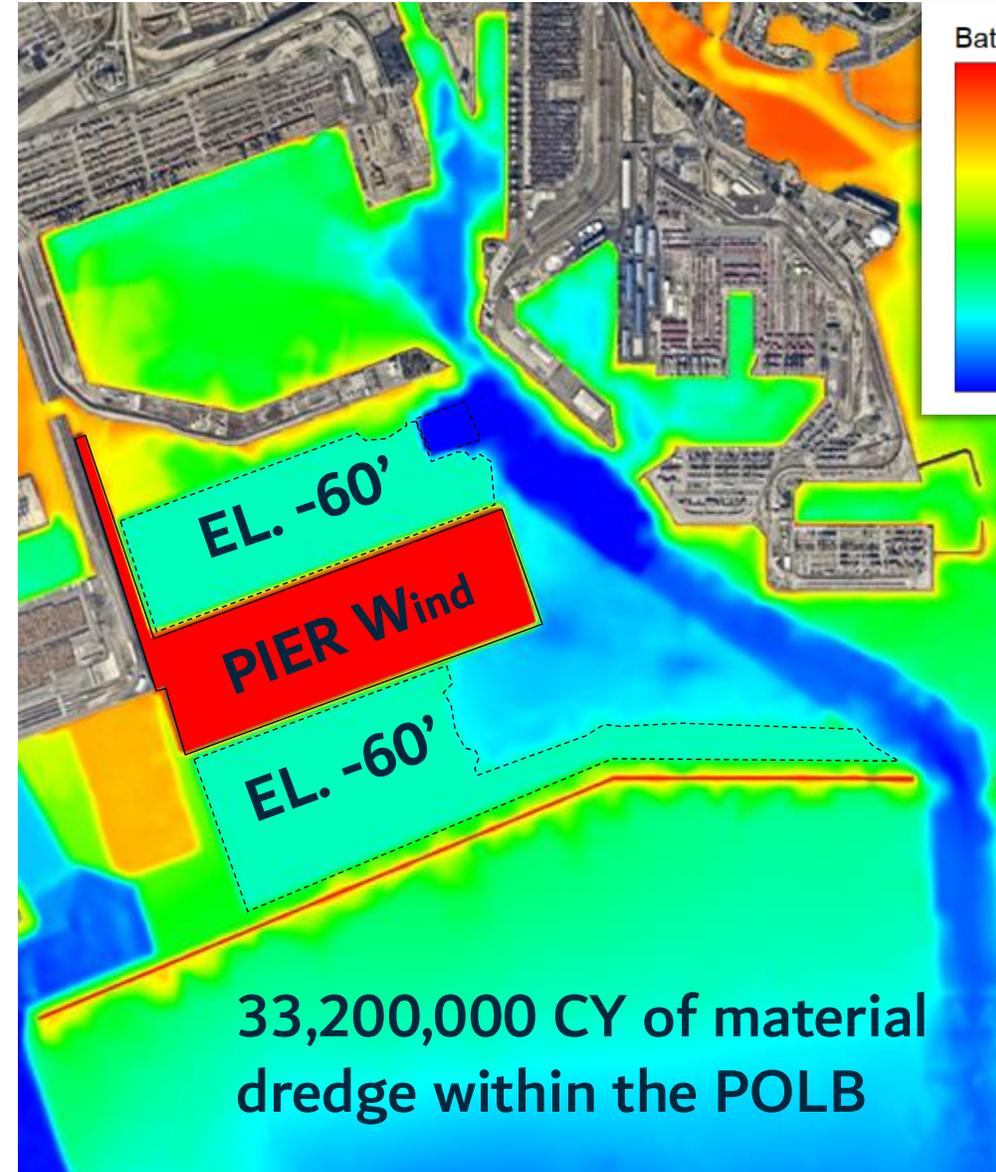
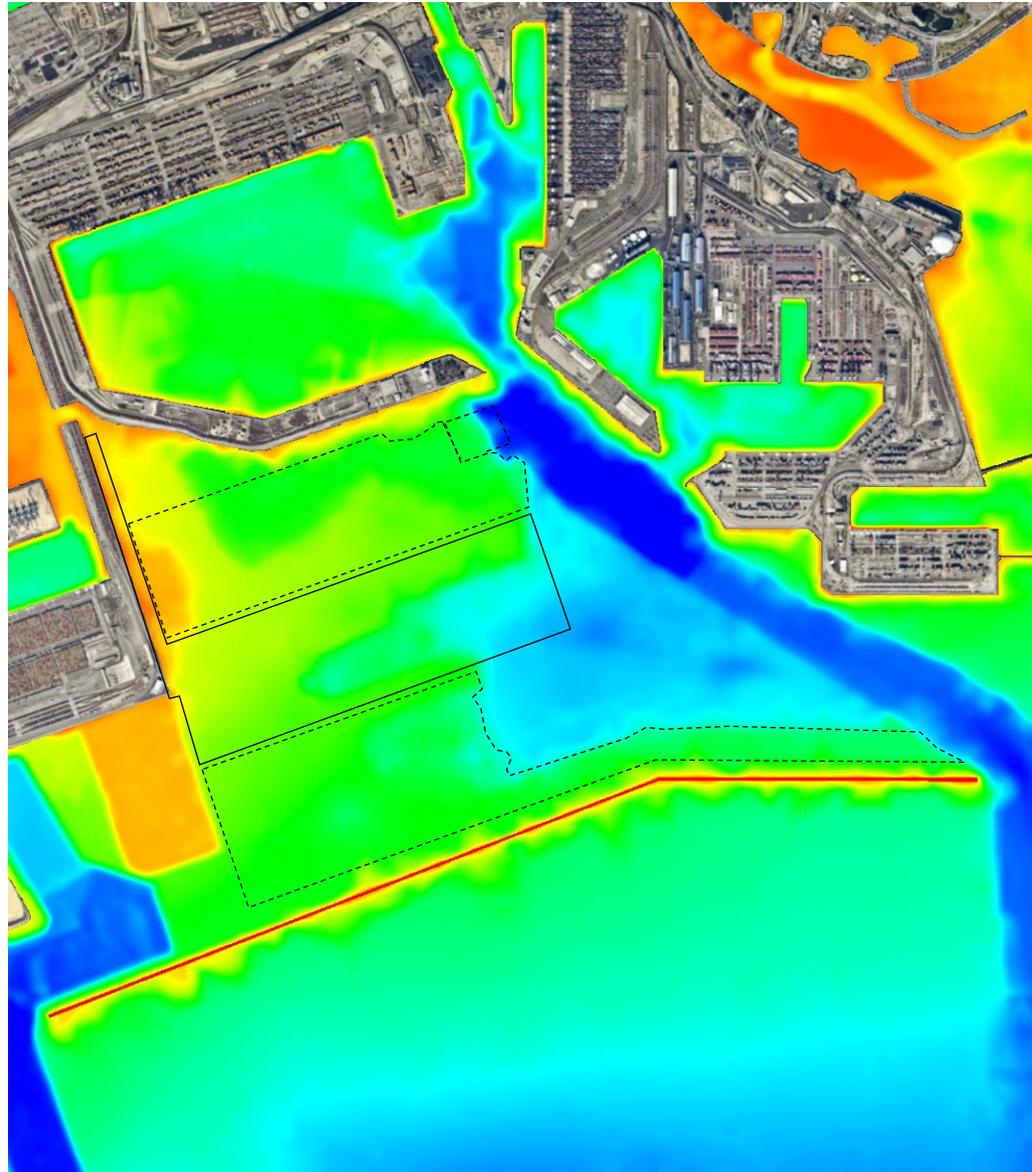


○ *Deployed two instruments in Outer Harbor*



- Collected wave data for 12 months, supplementing existing wave database
- Calibrated and validated model and analyzed multiple wave scenarios and sea level rise
- Confirmed favorable conditions at Pier Wind quay for offshore wind operations
- Confirmed no adverse impact to operations at existing terminals

# EXISTING & PROPOSED BATHYMETRY



20



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PierWind

For more info

[www.polb.com/pierwind](http://www.polb.com/pierwind)