

DOCKETED

Docket Number:	17-MISC-01
Project Title:	California Offshore Renewable Energy
TN #:	247106
Document Title:	Presentation - Humboldt Bay Wind Port - October 31, 2022 Workshop
Description:	CEC Presentation #2 Humboldt Bay Wind Port for the October 31, 2022, AB 525 Assessing California's Seaports to Support OSW Activities
Filer:	susan fleming
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	10/28/2022 4:15:06 PM
Docketed Date:	10/28/2022

Humboldt Bay Wind Port

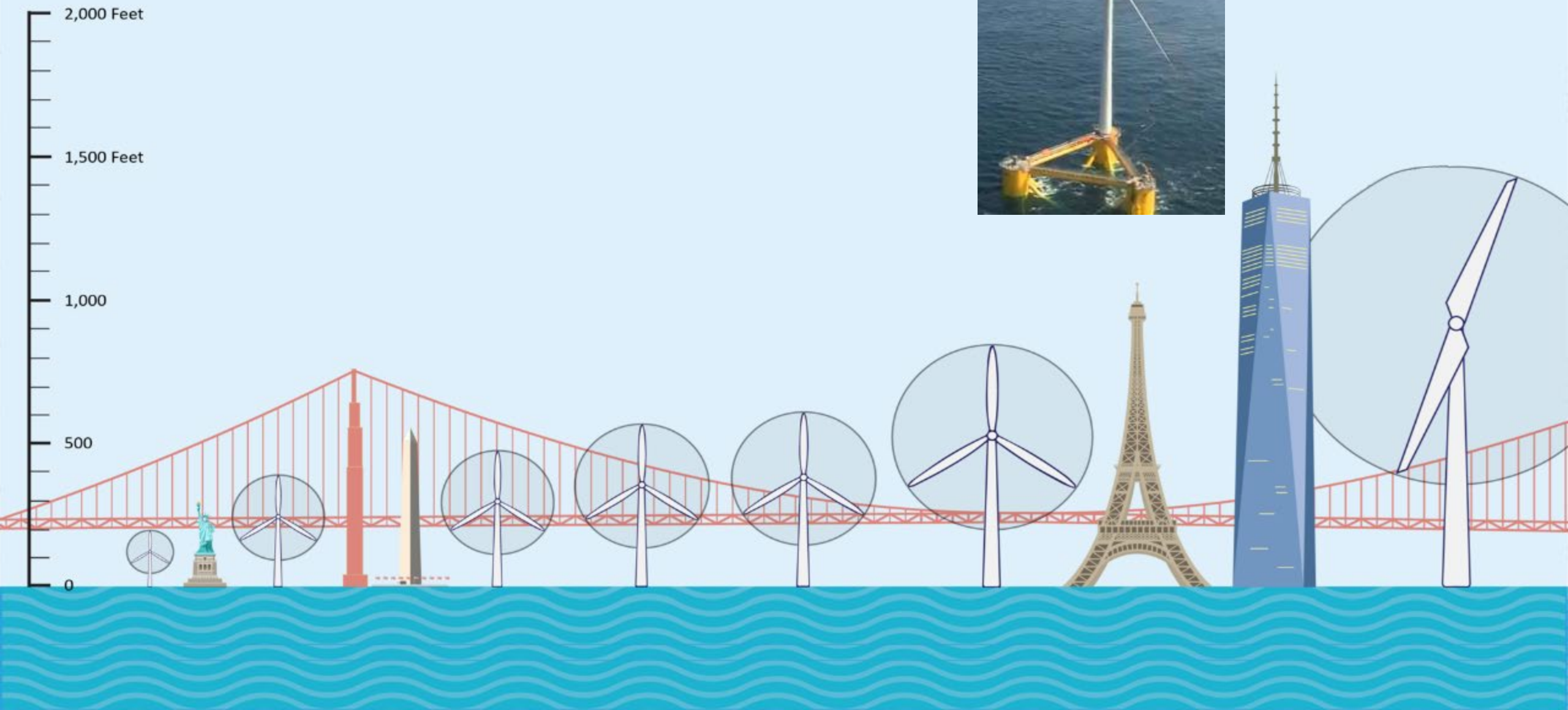


California Energy Commission
Assessing California's Seaports to Support Offshore Wind Energy Activities

9/14/22

HUMBOLDT BAY





It is very difficult to find ports/terminals that can service the offshore wind industry due to a combination of constraints:

- Vertical draft restrictions (e.g. bridges)
- Limited navigation channel widths/depths
- Limited capacity / over-commitment of facilities
- Limited available developable space
- Heavy traffic limiting towing capabilities
- Others

Humboldt Bay doesn't have any of these constraints...

**Planned BOEM Oregon
Call Area**



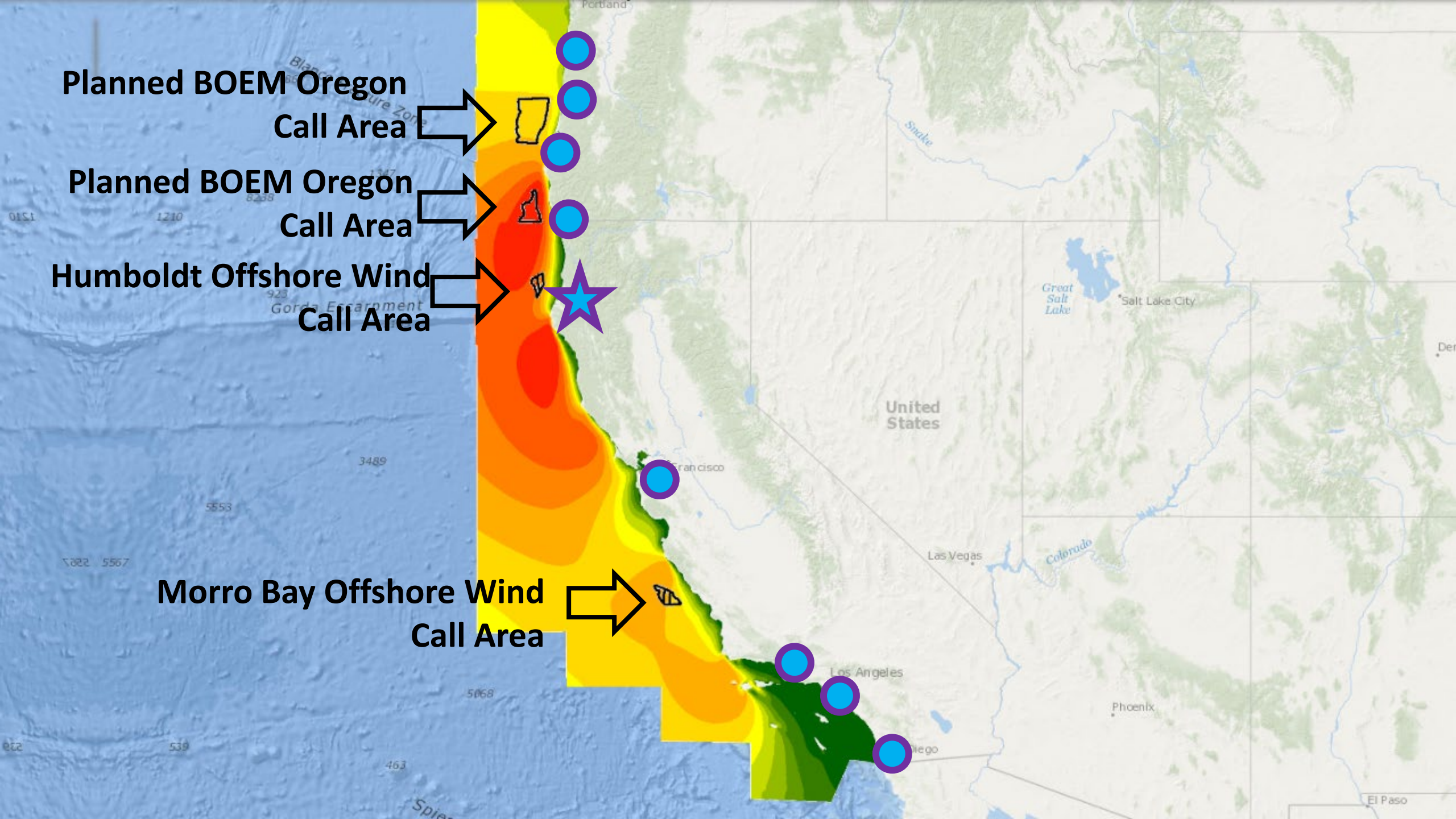
**Planned BOEM Oregon
Call Area**

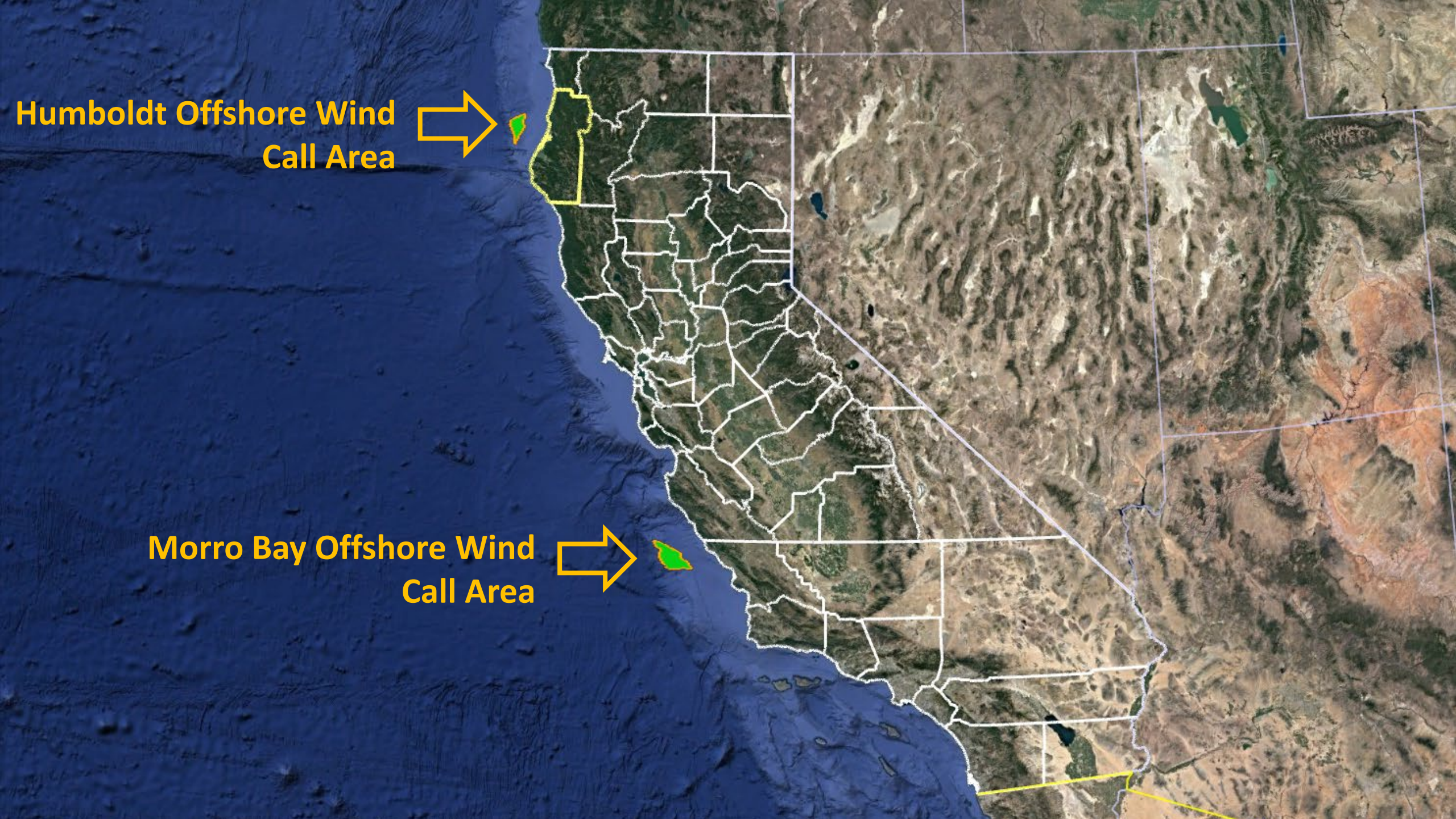


**Humboldt Offshore Wind
Call Area**



**Morro Bay Offshore Wind
Call Area**





**Humboldt Offshore Wind
Call Area**



**Morro Bay Offshore Wind
Call Area**



**Humboldt Offshore Wind
Call Area**



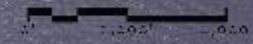
Humboldt Bay





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KEY MAP



LEGEND

- FEDERAL NAVIGATION CHANNELS
- POTENTIAL WET STORAGE SITES **
- INDUSTRIALLY ZONED LANDS ***
- HUMBOLDT OFFSHORE WIND TERMINAL PROJECT SITE

** The Humboldt Bay Harbor and Recreation & Conservation District (HBRCD) has identified potential wet storage sites in the Humboldt Bay area. These sites are located in the Humboldt Bay area and are subject to HBRCD review and approval.

*** The Humboldt Bay Harbor and Recreation & Conservation District (HBRCD) has identified industrially zoned lands in the Humboldt Bay area. These lands are located in the Humboldt Bay area and are subject to HBRCD review and approval.



HUMBOLDT BAY OFFSHORE WIND & HEAVY LIFT MULTIPURPOSE MARINE TERMINAL OVERALL BAY VIEW

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SOUTH JETTY

NORTH JETTY

EXISTING ENTRANCE CHANNEL (48')



SAMOA FIELD AIRPORT

NEW NAVY BASE ROAD

NEW NAVY

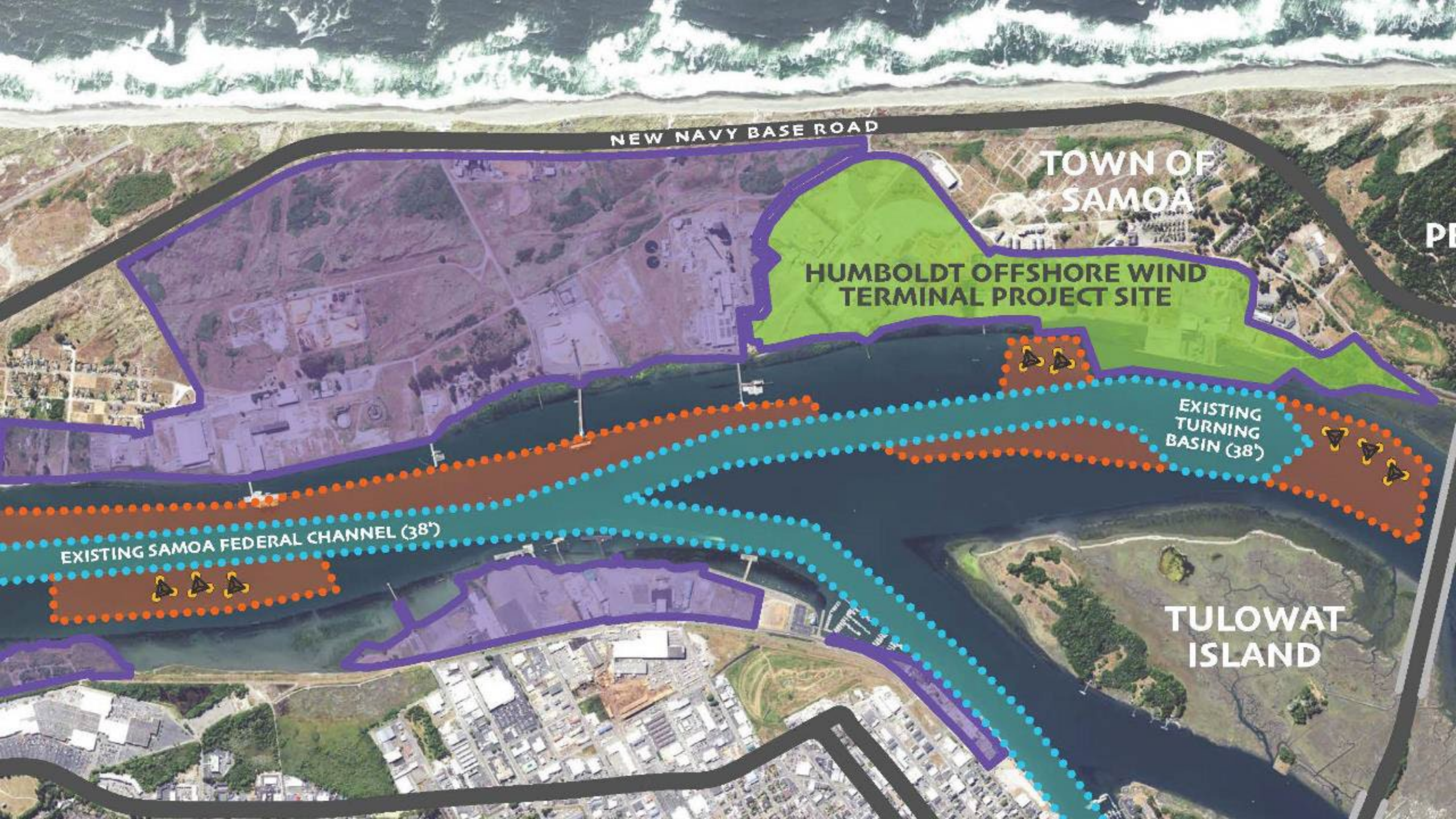
EXISTING SAMOA FEDERAL CHANNEL (38')

EXISTING SAMOA FEDERAL CHANNEL (38')

HUMBOLDT BAY

CITY OF EUREKA





NEW NAVY BASE ROAD

TOWN OF SAMOA

HUMBOLDT OFFSHORE WIND TERMINAL PROJECT SITE

EXISTING SAMOA FEDERAL CHANNEL (38')

EXISTING TURNING BASIN (38')

TULOWAT ISLAND

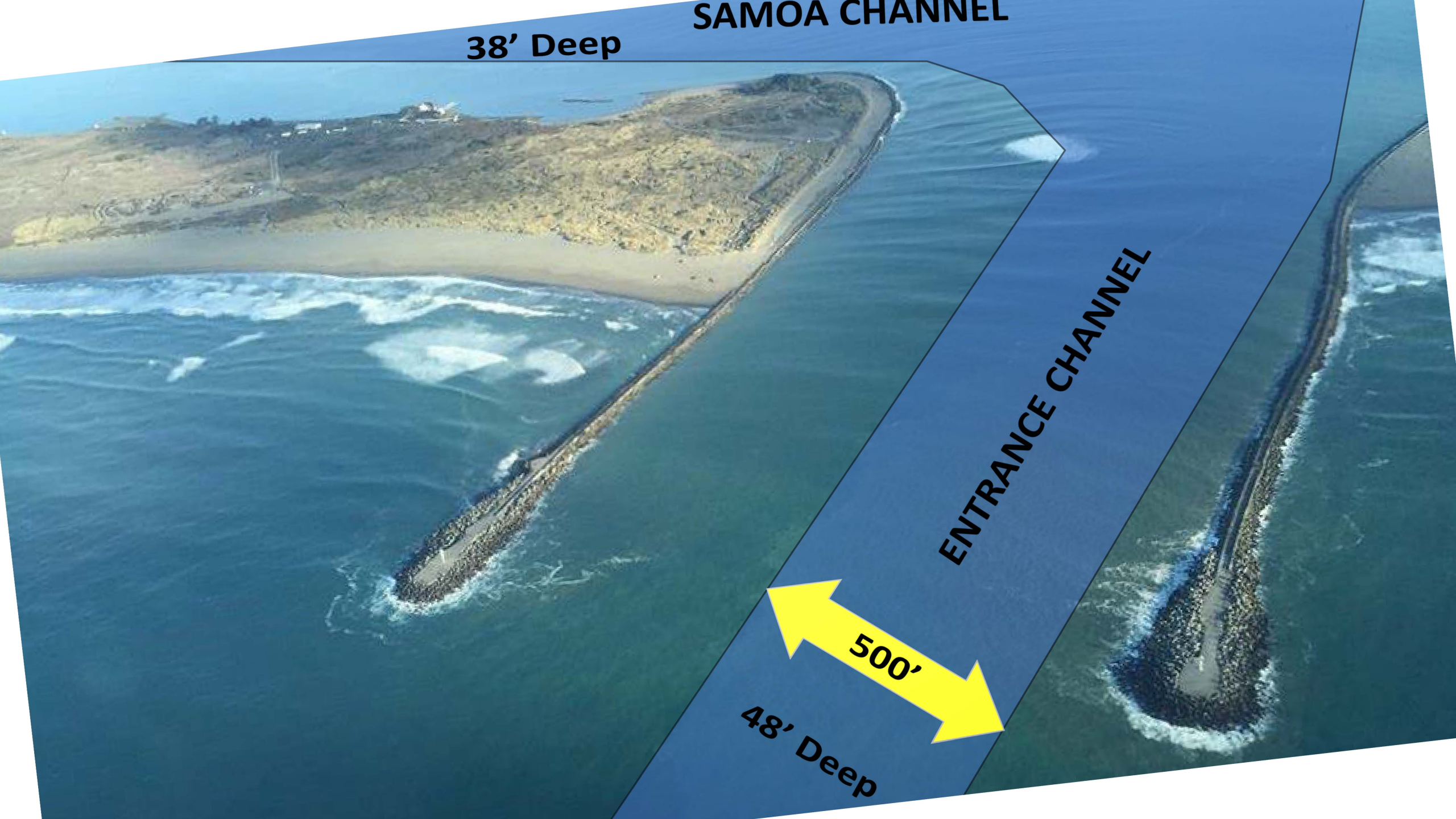
SAMOA CHANNEL

38' Deep

ENTRANCE CHANNEL

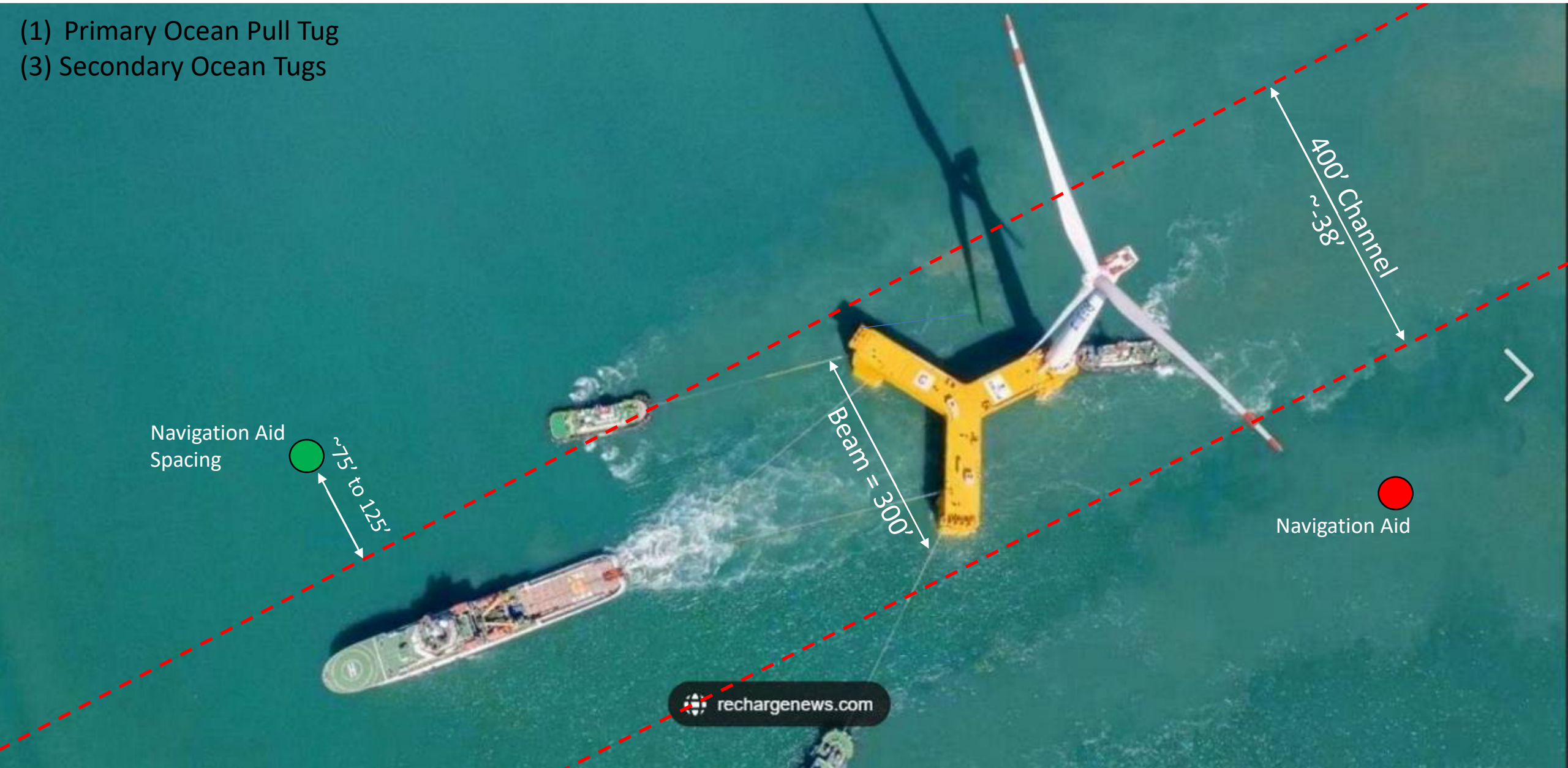
500'

48' Deep



Prototype Example – Tow-out to Ocean (Samoa Channel Superimposed; approx. scale)

Source: Three Gorges Offshore Floating Wind Farm; China; circa Summer 2021.



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SCALE: 1" = 1,000'



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** The potential wet storage sites are identified based on the best available information. These potential wet storage sites are not intended to be used for storage of materials or other purposes. The information is provided for informational purposes only.

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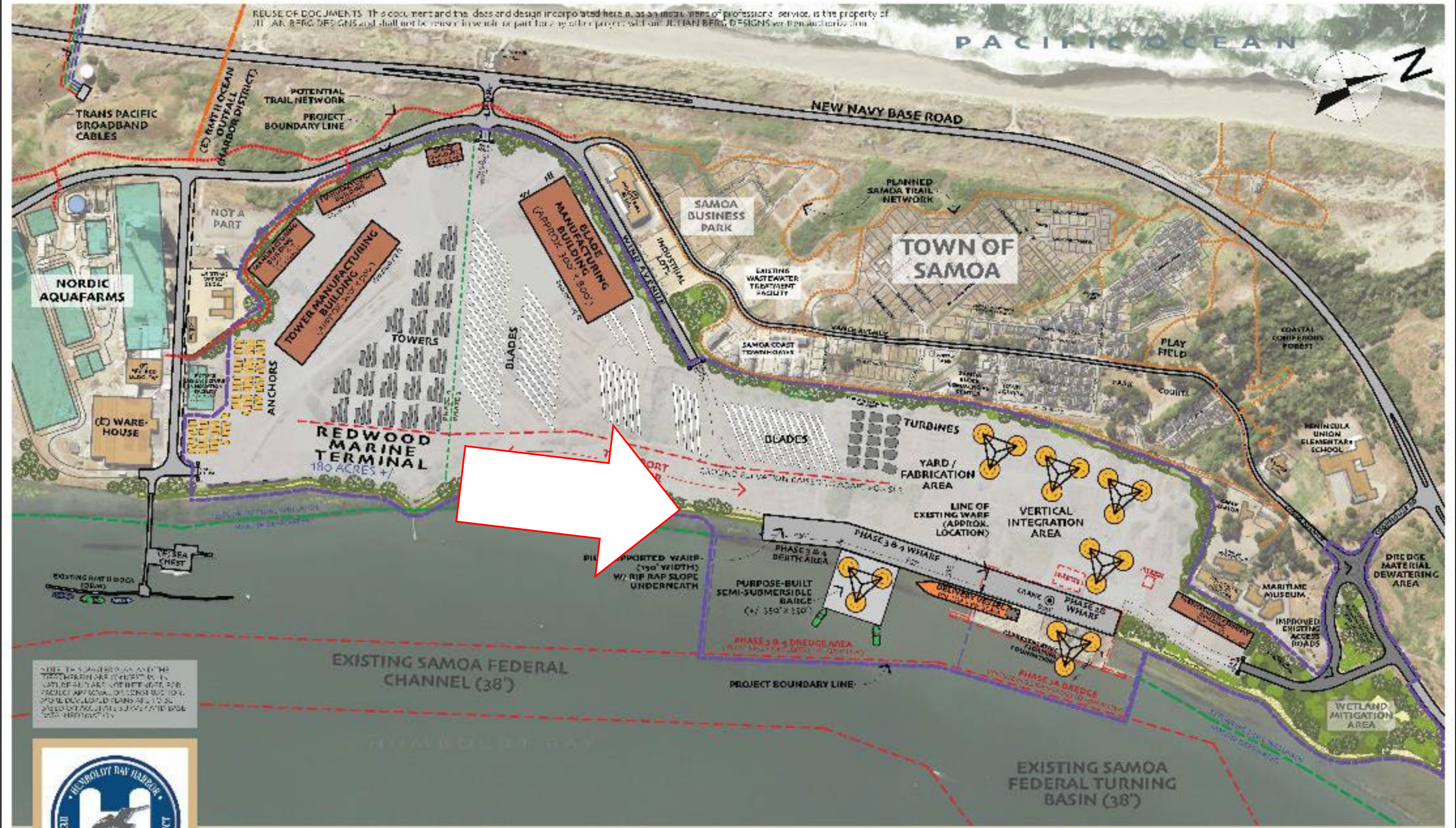


HUMBOLDT BAY OFFSHORE WIND & HEAVY LIFT MULTIPURPOSE MARINE TERMINAL OVERALL BAY VIEW

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NOTE: THIS MASTER PLAN AND THE DEVELOPMENT CONCEPTS IN THIS PLAN ARE NOT INTENDED FOR PROJECT APPROVAL. DEVELOPMENT OF THIS PLAN AND THE CONCEPTS IN THIS PLAN ARE SUBJECT TO THE NECESSARY PERMITS AND REGULATORY REQUIREMENTS.



0' 100' 500' 1,000'

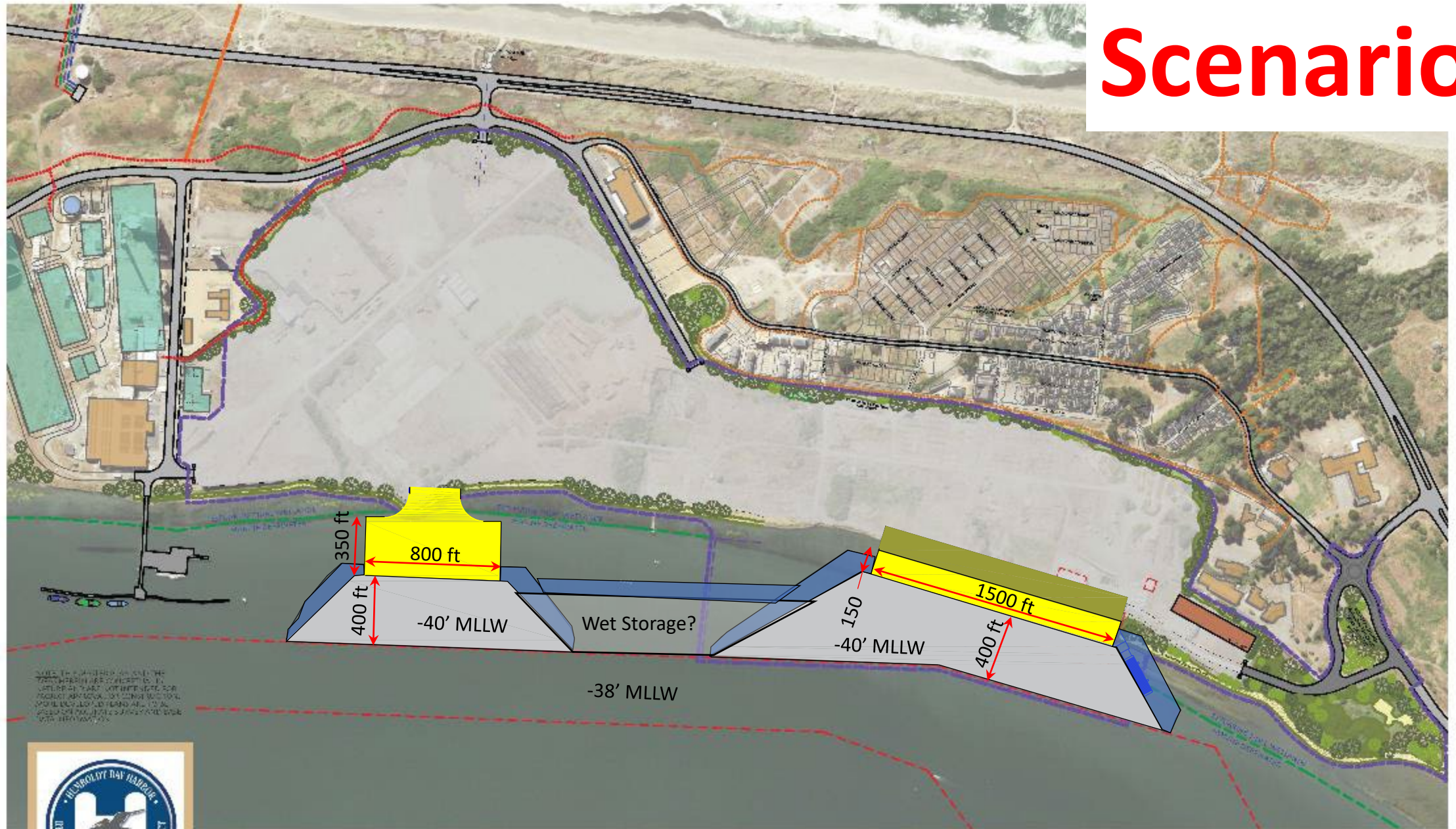
HUMBOLDT BAY OFFSHORE WIND & HEAVY LIFT MULTIPURPOSE MARINE TERMINAL CONCEPTUAL MASTER PLAN

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Scenario 2



NOTES: THIS PLAN IS BASED ON THE PRELIMINARY CONCEPTS OF THE JULIAN BERG DESIGN ARCHITECTURE & PLANNING. THE LOCATION AND DIMENSIONS OF THE STRUCTURES ARE SUBJECT TO CHANGE. THE LOCATION AND DIMENSIONS OF THE STRUCTURES ARE SUBJECT TO CHANGE. THE LOCATION AND DIMENSIONS OF THE STRUCTURES ARE SUBJECT TO CHANGE.



HUMBOLDT BAY OFFSHORE WIND & HEAVY LIFT MULTIPURPOSE MARINE TERMINAL CONCEPTUAL MASTER PLAN

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Scenario 3



NOTES TO BE REVIEWED AND APPROVED BY THE CALIFORNIA DEPARTMENT OF BOAT AND WATERWAY DEVELOPMENT (CDBWD) FOR THE CALIFORNIA MARITIME ACT (CMA) PROJECT. THIS PLAN IS A CONCEPTUAL MASTER PLAN AND IS NOT A FINAL DESIGN. THE CDBWD WILL REVIEW THIS PLAN FOR COMPLIANCE WITH THE CMA AND WILL PROVIDE COMMENTS AND APPROVALS AS APPROPRIATE.



HUMBOLDT BAY OFFSHORE WIND & HEAVY LIFT MULTIPURPOSE MARINE TERMINAL CONCEPTUAL MASTER PLAN



5.10.22

Summary of Progress to Date

- Topographic and Hydrographic Surveys
- Geotechnical Investigation (preliminary)
- Cultural Surveys
- Wetland Delineations and Terrestrial Biological Surveys
- Marine Resources and Aquatic Habitat Assessments
- Phase I Environmental Site Assessment (hazardous materials)
- Dredge Sediment Characterization
- Basis of Design Report
- Traffic Analyses
- Power/electrical/stormwater/utility options evaluations
- Shoreline Planning and Sea Level Rise Analyses



Plans for 2023

- Identify strategy to support as many call areas as possible
- Determine needs/options for wet storage
- Stakeholder and public engagement
- CEQA
- NEPA
- Permits
- >30% design
- Channel tow-out modeling
- Finalize field surveys
- Acquire construction funding
- Stimulate additional projects throughout Humboldt Bay

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** The Humboldt Bay Harbor Rehabilitation & Conservation District (HBCD) has identified potential wet storage sites in the bay. These sites are located in the bay and are subject to the HBCD's jurisdiction. The HBCD is currently conducting a study to determine the feasibility of these sites.

*** The Humboldt Bay Harbor Rehabilitation & Conservation District (HBCD) has identified industrial zones in the bay. These zones are located in the bay and are subject to the HBCD's jurisdiction. The HBCD is currently conducting a study to determine the feasibility of these zones.



HUMBOLDT BAY OFFSHORE WIND & HEAVY LIFT MULTIPURPOSE MARINE TERMINAL OVERALL BAY VIEW

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Growing a Wind Energy Cluster

Supply Chain Activities



- Project development and management
- Manufacturing
 - Nacelle, hub, and assembly
 - Blades
 - Tower
 - Foundation supply
 - Array cable supply
 - Export cable supply
 - Onshore and offshore substation supply
 - Operational infrastructure
- Installation
 - Turbine installation
 - Foundation installation
 - Array cable installation
 - Export cable installation
 - Other installation
- Operation, maintenance, and service
 - Wind farm operation
 - Turbine maintenance and service
 - Foundation maintenance and service
 - Subsea cable maintenance and service
 - Substation maintenance and service
- Decommissioning



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