



Sea Level Rise Resiliency in Capital Improvement Projects

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November 12, 2024

THE PORT OF LOS ANGELES



7,500 acres

- 4,300 land and 3,200 water

43 miles of Waterfront

- Water depth of -53 ft

Market Share

- 41% West Coast, 16% Nationally

Jobs

- 1.6 Million jobs Nationwide,
 - 500,000 regionally
 - 150,000 locally

270 berths

- Includes 30 berths with Alternative Maritime Power

8.6 Million TEUs in 2023!

27 Terminals

- Auto (1)
- Breakbulk (4)
- Container (8)
- Dry Bulk (3)
- Liquid Bulk (7)
- Multi-Use (2)
- Passenger (2)

Public Amenities And Attractions

**Neighbor to San Pedro
and Wilmington
Communities**

SEA LEVEL RISE STUDY OVERVIEW



2018

- Task 1 → Asset Inventory
- Task 2 → Sea Level Rise Inundation Maps
- Task 3 → Vulnerability Assessment
- Task 4 → Development of Resiliency Strategies
- Task 5 → Finalize Sea Level Rise Study

2024

- Task 1 → Revise Sea Level Rise Study
 - ✓ UPDATED SLR PROJECTIONS
 - ✓ UPDATED RESILIENCY STRATEGIES
 - ✓ MAPS THROUGH 2150
 - ✓ GROUNDWATER IMPACTS
 - ✓ CASE STUDIES
 - ✓ DESIGN GUIDELINES

ASSET INVENTORY

1. Terminals

*Container, Liquid/Dry Bulk,
Passenger, Miscellaneous Operations*

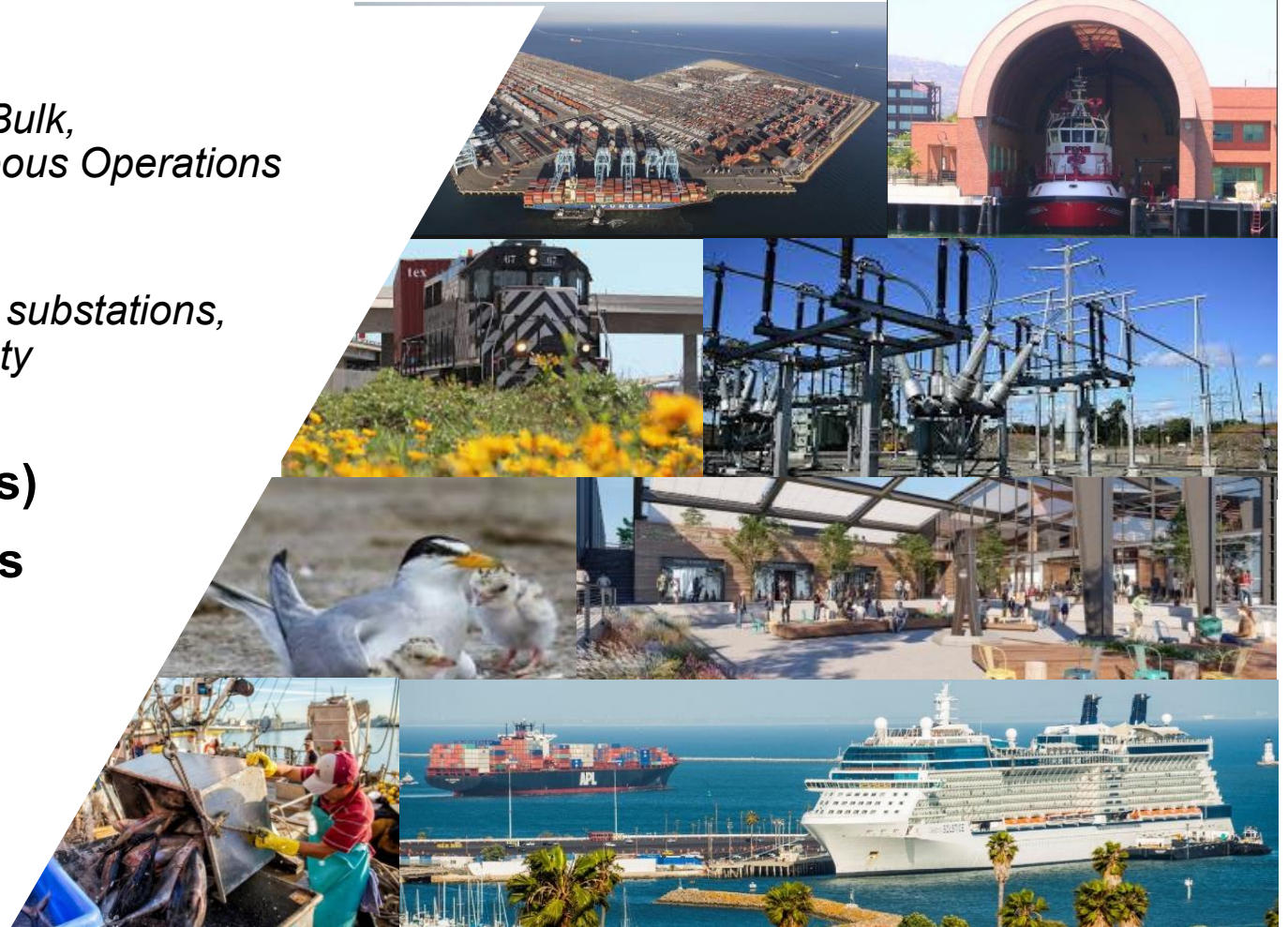
2. Critical Facilities

*Fire Stations, electrical substations,
pump stations, life/safety*

3. Transportation (Rail/Road/Bridges)

4. Community Assets

5. Natural Habitats

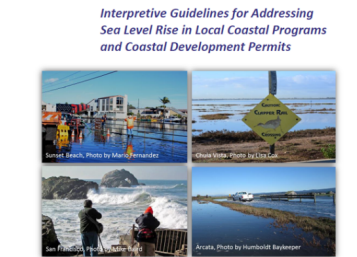


SEA LEVEL RISE PROJECTIONS



Year	2018 POLA SLR STUDY	Draft 2024 Ocean Protection Council Guidance		
	Med-High	Intermediate	Intermediate-High	High
2030	1 ft (0.3 m)			
2050	2 ft (0.6 m)	0.7 ft (0.2 m)	0.9 ft (0.27 m)	1.1 ft (0.33 m)
2100	3 - 5.5 ft (0.9 – 1.7 m)	2.8 ft (0.8 m)	4.5 ft (1.37 m)	6.3 ft (1.9 m)
2150		5.5 ft (1.68 m)	7.7 ft (2.13 m)	11.3 ft (3.4 m)

Sea Level Rise relative to year 2000



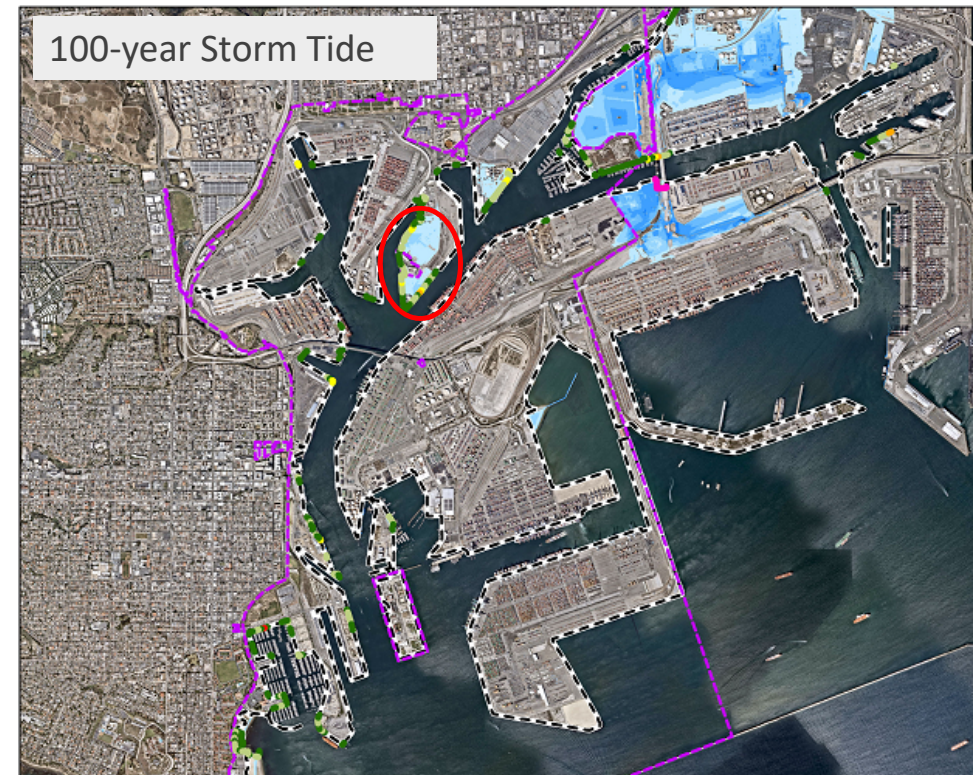
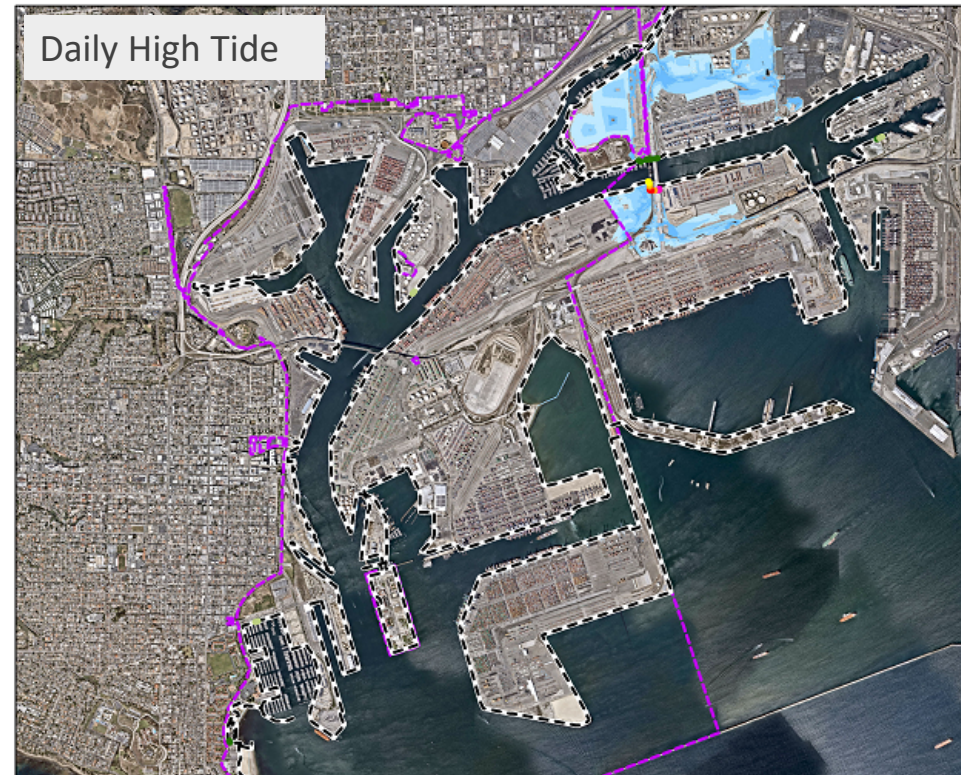
Original Guidance unanimously adopted – August 12, 2015
Science Update unanimously adopted – November 7, 2018

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Science Update unanimously adopted – November 7, 2018

DRAFT 2024 UPDATE

Daily High Tide

100-year Storm Tide



YEAR 2050 – HIGH (1.1 FT SLR)

Inundation Mapping - MHHW + 1.1 ft SLR

- | | |
|---------------------|--------------------|
| Inundation | Overtopping |
| Depth (ft NAVD) | Depth (ft NAVD) |
| 0-2 | --- No Overtopping |
| 2-4 | 0-1 |
| ≤ 4 | 1-2 |
| Port of LA Boundary | 2-3 |
| | 3-4 |
| | 4-5 |
| | <5 |

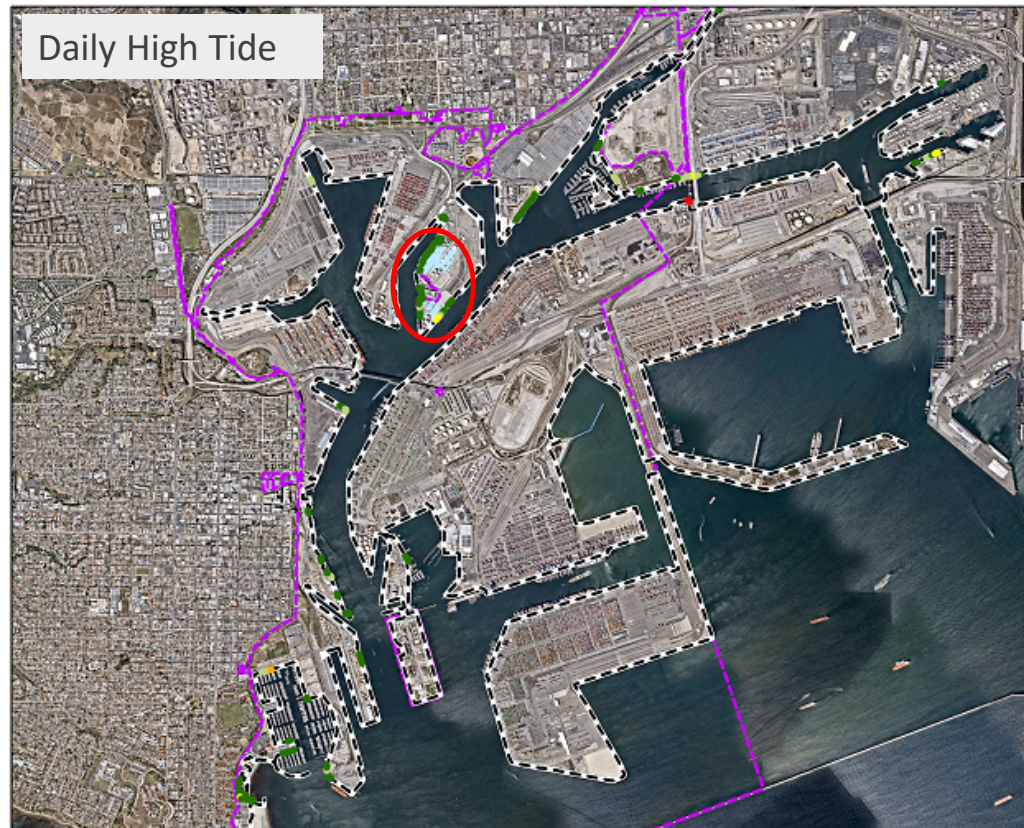


Inundation Mapping -100-Year Storm + 1.1 ft SLR

- | | |
|---------------------|--------------------|
| Inundation | Overtopping |
| Depth (ft NAVD) | Depth (ft NAVD) |
| 0-2 | --- No Overtopping |
| 2-4 | 0-1 |
| 4-6 | 1-2 |
| 6-8 | 2-3 |
| ≤ 8 | 3-4 |
| Port of LA Boundary | 4-5 |
| | <5 |



Daily High Tide

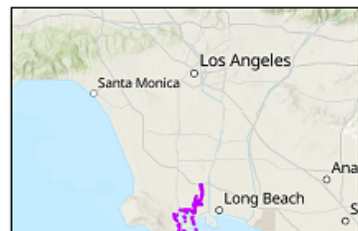
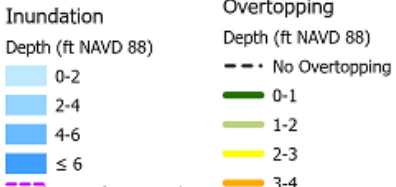


100-year Storm Tide

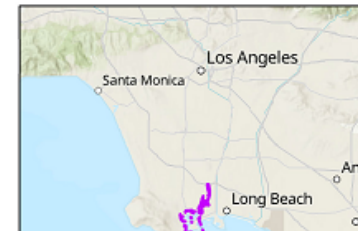
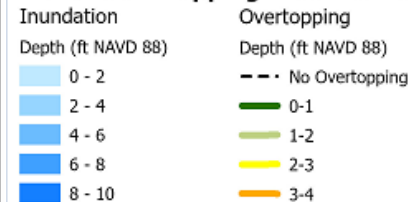


YEAR 2100 – INTERMEDIATE (2.8 FT SLR)

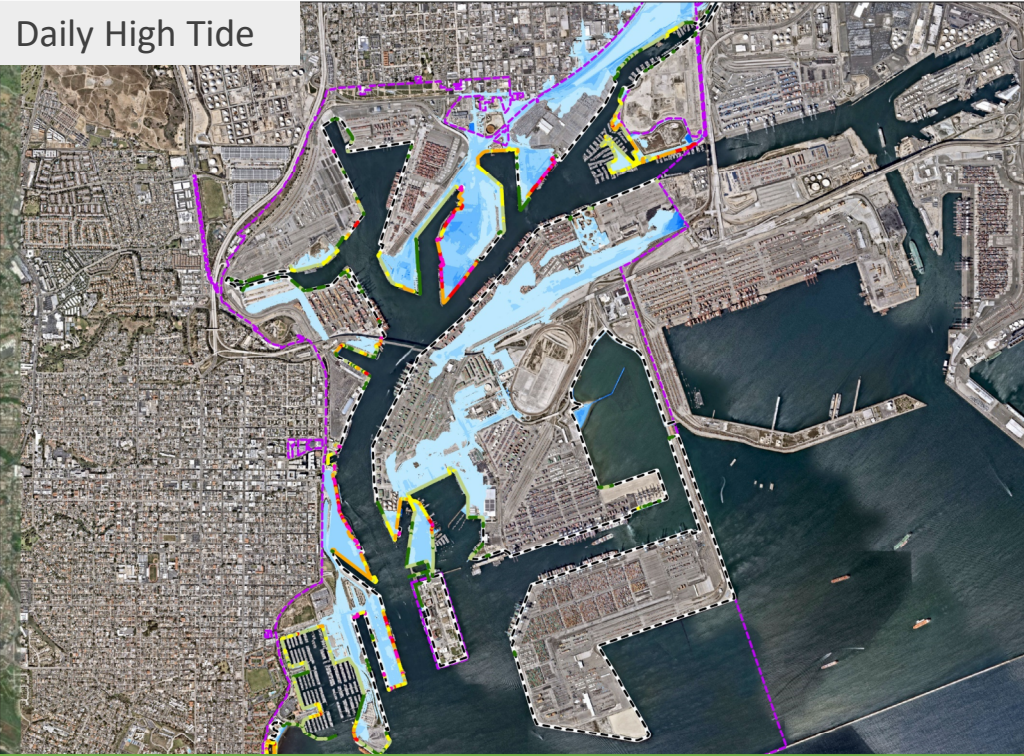
Inundation Mapping - MHHW + 2.8 ft SLR



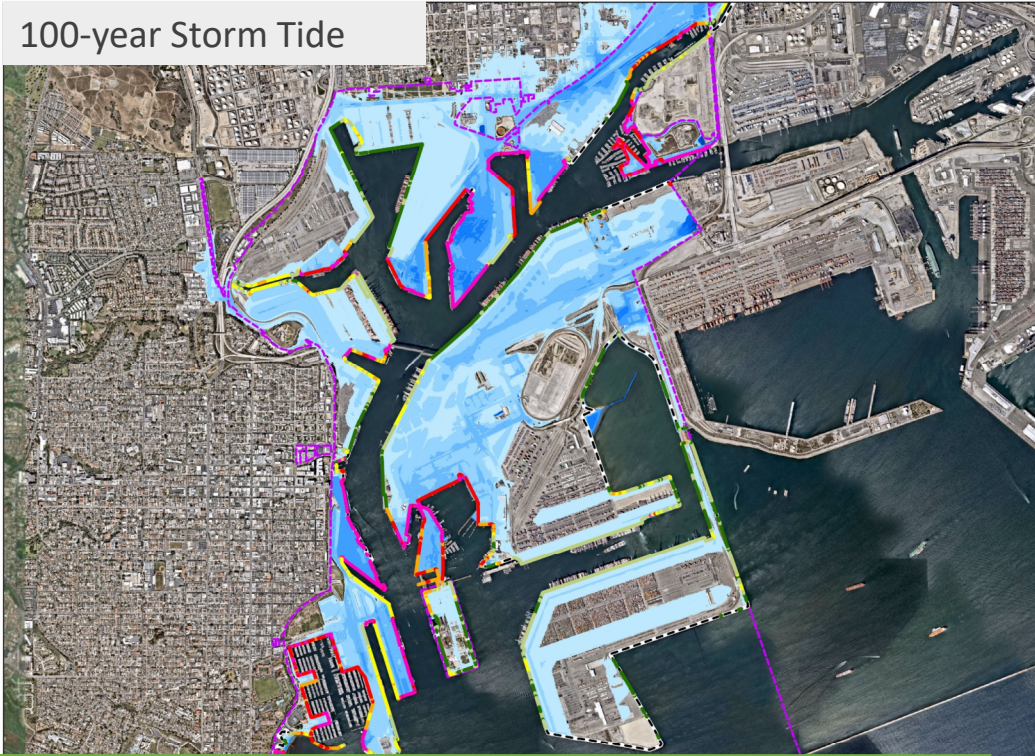
Inundation Mapping -100-Year Storm + 2.8 ft SLR



Daily High Tide



100-year Storm Tide



YEAR 2150 – INTERMEDIATE HIGH – (7.7 FT SLR)

- | Inundation | Overtopping |
|---------------------|--------------------|
| Depth (ft NAVD 88) | Depth (ft NAVD 88) |
| 0-2 | No Overtopping |
| 2-4 | 0-1 |
| 4-6 | 1-2 |
| 6-8 | 2-3 |
| 8-10 | 3-4 |
| 10-12 | 4-5 |
| 12-14 | <5 |
| ≤ 14 | |
| Part of LA Boundary | |



- | Inundation | Overtopping |
|---------------------|--------------------|
| Depth (ft NAVD 88) | Depth (ft NAVD 88) |
| 0-2 | No Overtopping |
| 2-4 | 0-1 |
| 4-6 | 1-2 |
| 6-8 | 2-3 |
| 8-10 | 3-4 |
| 10-12 | 4-5 |
| 12-14 | <5 |
| ≤ 14 | |
| Part of LA Boundary | |



RESILIENCY STRATEGIES



GOVERNANCE

- SLR language in policy, planning, and design
- CCC case Studies
- SLR in Capital funded projects
- Monitor and update

INITIATIVES

- Local, State, Federal, and International collaboration
- Funding Opportunities
- Subject Matter Experts
- Climate Resilience – Advancement in Zero Emission Technology

INFRASTRUCTURE

- Temporary and Permanent protection
- Innovative solutions
- Elevating and nature based solutions

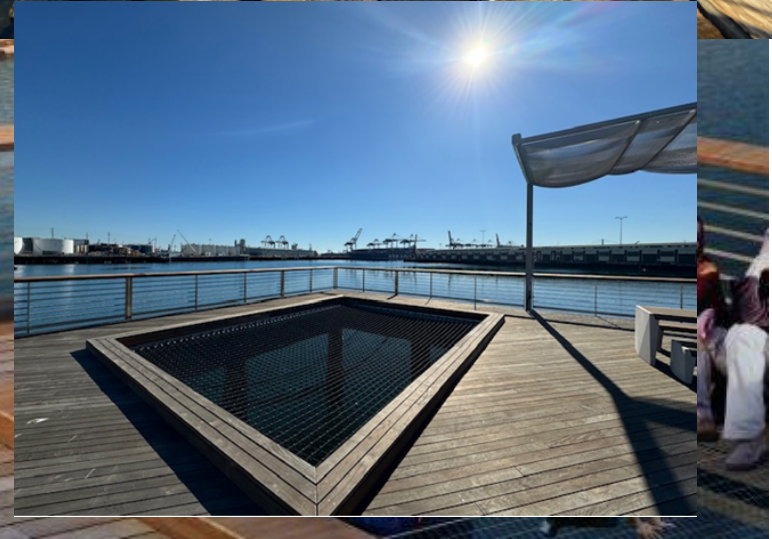


FEMA



INFRASTRUCTURE ACCOMMODATION (continued)
Wilmington Waterfront Promenade





INFRASTRUCTURE ACCOMMODATION (continued)

West Harbor Development

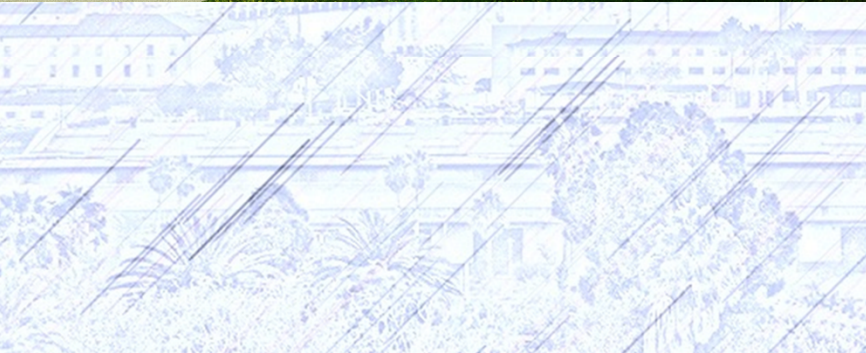
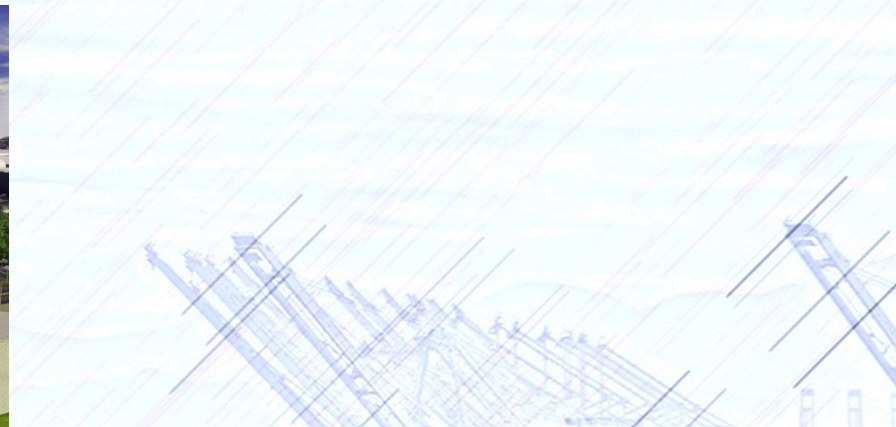
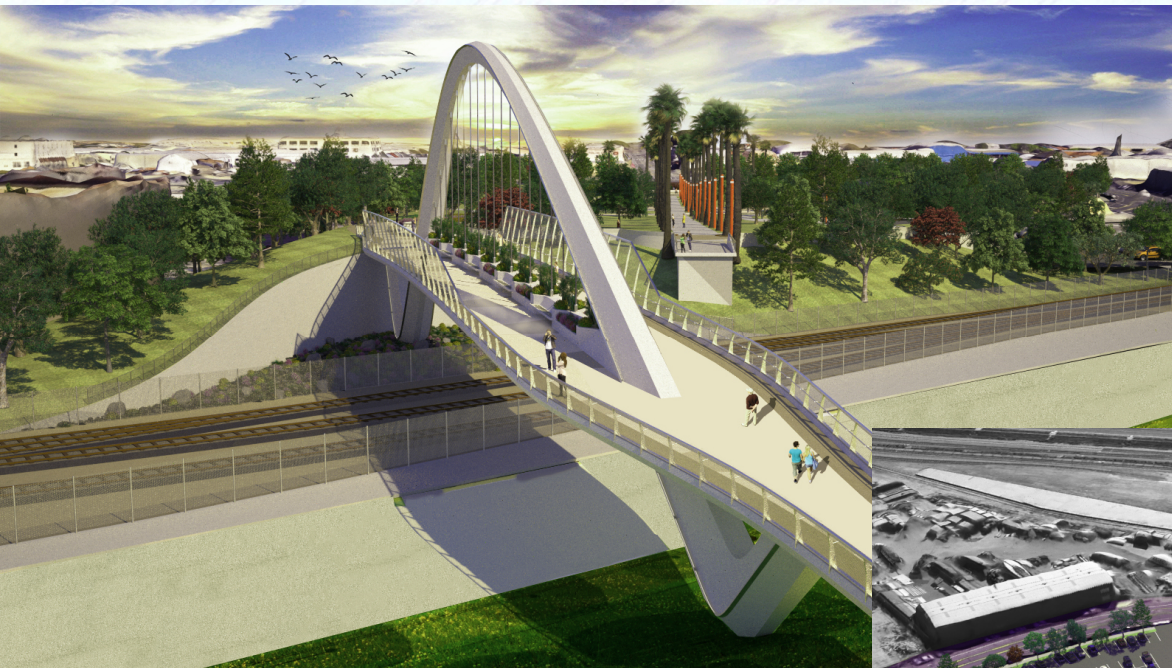


INFRASTRUCTURE ACCOMMODATION (continued)

West Harbor Development



Wilmington Waterfront Promenade Avalon Pedestrian Bridge and Promenade Gateway



POLA-POLB Goods Movement Workforce Training Facility



KEY TAKEAWAYS

- POLA is committed to staying resilient to climate change
- Early Planning helps invest in the future
- Sea Level Rise is a component of our general plan
- Continue to Monitor Sea Level Rise



THANK YOU! QUESTIONS?



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