



LOS ANGELES COUNTY

# COASTAL RESILIENCE STAKEHOLDER MEETING

April 16, 2025

# COUNTYWIDE LAND ACKNOWLEDGMENT

As Adopted by the County of Los Angeles Board of Supervisors on November 1, 2022

The County of Los Angeles recognizes that we occupy land originally and still inhabited and cared for by the Tongva, Tataviam, Serrano, Kizh, and Chumash Peoples. We honor and pay respect to their elders and descendants—past, present, and emerging—as they continue their stewardship of these lands and waters. We acknowledge that settler colonization resulted in land seizure, disease, subjugation, slavery, relocation, broken promises, genocide, and multigenerational trauma.

This acknowledgment demonstrates our responsibility and commitment to truth, healing, and reconciliation and to elevating the stories, culture, and community of the original inhabitants of Los Angeles County. We are grateful to have the opportunity to live and work on these ancestral lands. We are dedicated to growing and sustaining relationships with Native peoples and local tribal governments, including (in no particular order) the

- Fernandeano Tataviam Band of Mission Indians
- Gabrielino Tongva Indians of California Tribal Council
- Gabrieleno/Tongva San Gabriel Band of Mission Indians
- Gabrieleño Band of Mission Indians—Kizh Nation
- San Manuel Band of Mission Indians
- San Fernando Band of Mission Indians

To learn more about the First Peoples of Los Angeles County, please visit the Los Angeles City/County Native American Indian Commission website at [lanaic.lacounty.gov](http://lanaic.lacounty.gov).



# Agenda

- This meeting is being recorded
- Raise Hand or use Chat Box when you have questions or comments
- Stay muted until your turn to speak
- Meeting materials will be available on the website:  
<https://beaches.lacounty.gov/coastal-resilience/>
- Questions and comments can be sent via Email [coastalresilience@bh.lacounty.gov](mailto:coastalresilience@bh.lacounty.gov)



**01** Coastal Resilience Initiative Update

**02** Living Shoreline Projects  
Feasibility Study Overview/Results

**03** Next Steps

**04** General Feedback

**05** Breakout Rooms  
Site-specific Feedback & Discussion

**06** Report Back  
Summary of each breakout room discussion



# Coastal Resilience Initiative Update

FEASIBILITY STUDY  
Posted on DBH Website  
Comments due 4/30/25

Implement nature-based  
solutions to coastal  
erosion at 3 project sites.

Living Shoreline  
Demonstration  
Projects

Sand  
Compatibility  
and  
Opportunistic  
Use Program  
(SCOUP)

CEQA MND PUBLIC NOTICE  
(4/7 - 5/7/2025)  
Posted on DBH Website

Establish 5 pre-approved sites for  
relatively small beach nourishment  
projects (up to 150k cubic yards per  
year) using opportunistically available  
sand sources, such as those generated  
from upland land development projects,  
and flood control maintenance  
operations. Estimate completion in mid-  
2026.

LA County  
Regional  
Coastal  
Strategic  
Adaptation Plan

GRANT EXECUTION IN APRIL 2025;  
FIRST WORKSHOP IN MAY 2025

Develop a regional coalition of stakeholders and  
prepare a strategic plan to facilitate implementation  
of regional shoreline management activities for the  
Los Angeles County coast.

DBH Coastal Resilience Webpage

<https://beaches.lacounty.gov/coastal-resilience/>





# Living Shoreline Demonstration Projects

## Purpose

- Increase resilience to present and future coastal hazards
- Preserve and enhance equitable public access to County-owned or maintained beaches

## Projects

### • Zuma Beach and Point Dume

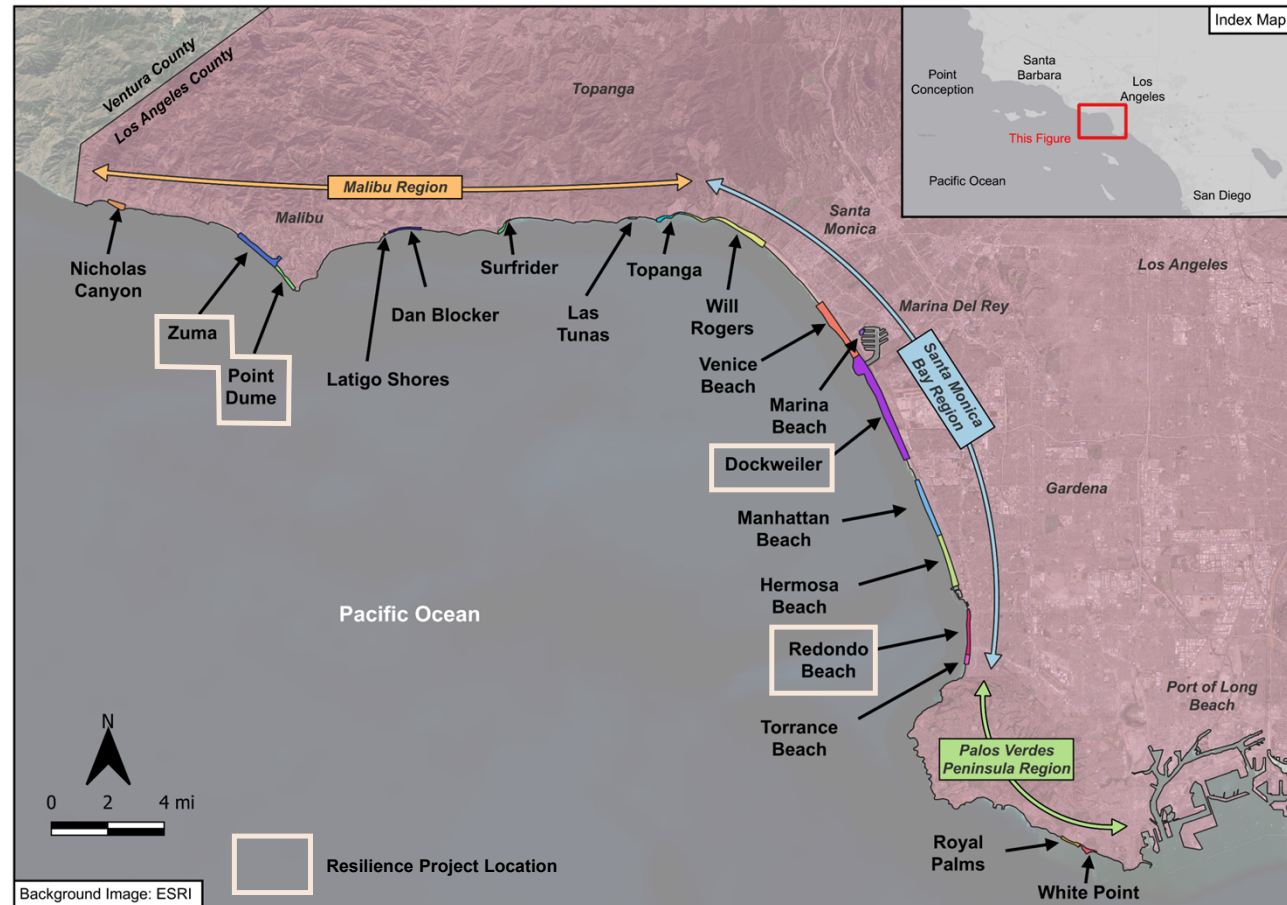
Increase sand supply and expand recreational area and habitat through beach nourishment and dune creation

### • Dockweiler State Beach

Enhance and expand dune habitat and limit sediment transport onto bike path, sidewalk, and parking lot

### • Redondo Beach

Increase beach widths and create dune habitat between Topaz Groin and Redondo Pier through beach nourishment



# Living Shorelines – Recreating Naturally Resilient Coastlines

## Beach Nourishment

1. Import sand to **widen beaches**
  - Expands recreation space (“towel space”)
  - Makes room for dunes on narrow beaches

## Dune Restoration/Enhancement

1. All these beaches supported dunes **historically**
2. Restored dunes
  - Provide habitat
  - Store sand
  - Trap blowing sand
3. Restored dunes are **self-repairing**
  - Dunes rebuild naturally after large storms
  - Minimal annual and long-term maintenance

### **Multiple Benefits:**

- Human recreation
- Habitat
- Flood protection
- Economic revenue

# Zuma Beach and Point Dume Beach

## Objectives

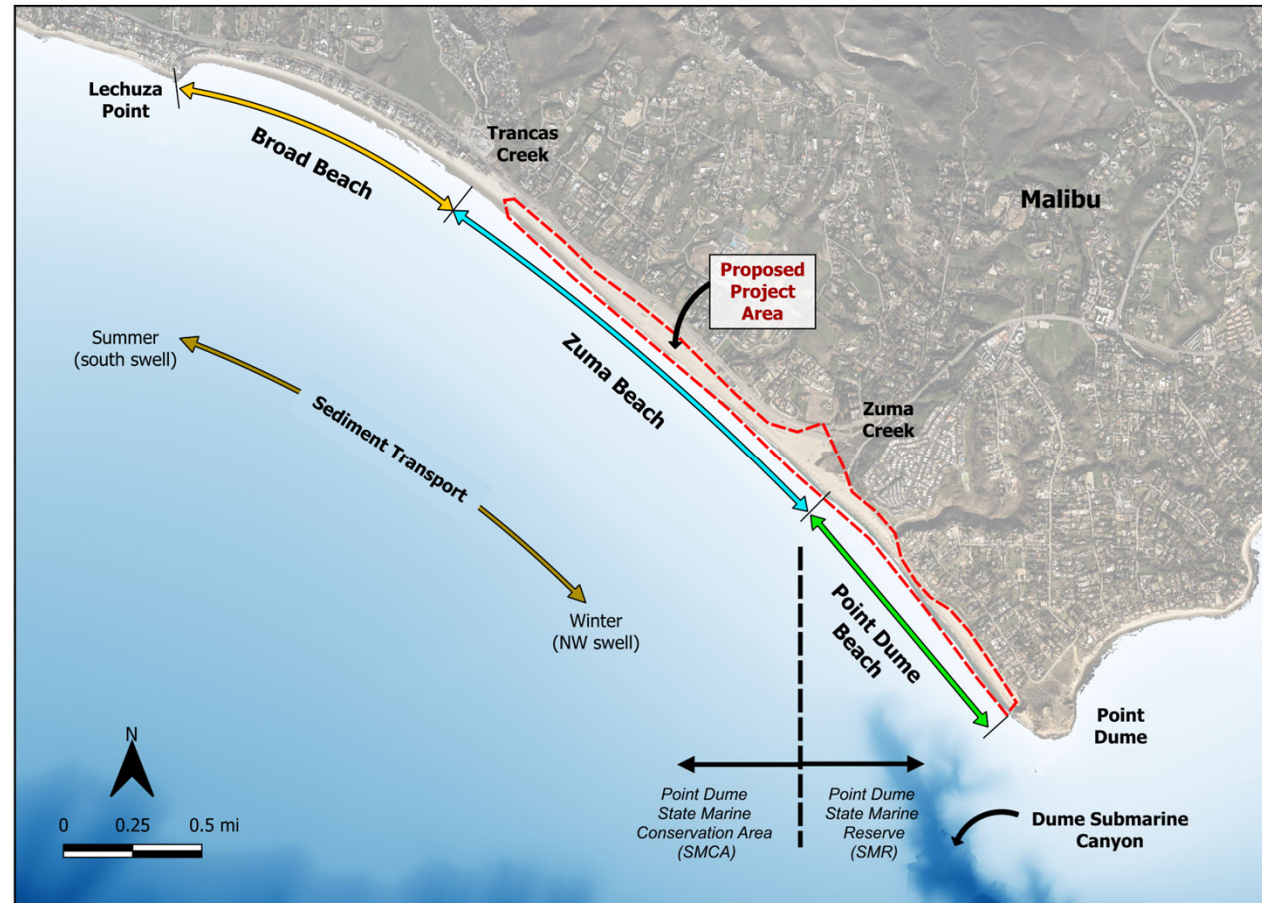
- Expand public access and recreational opportunities
- Increase protection of coastal infrastructure
- Increase sandy beach and dune habitat
- Expand local and regional economic benefits

## Opportunities

- Sand placed at Zuma Beach is expected to **benefit neighboring beaches** (e.g., Point Dume Beach)
- Significant portions of the shoreline have “high potential” for **self-sustaining dunes**

## Constraints

- Point Dume Beach is in the Point Dume **State Marine Reserve**





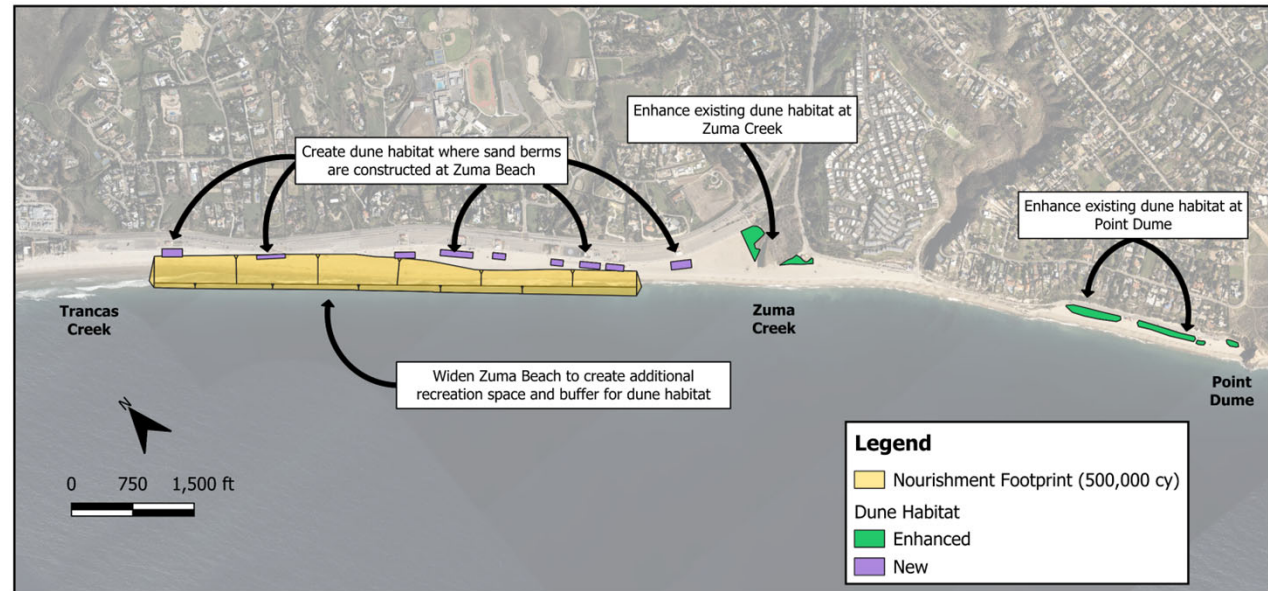
# Zuma Beach and Point Dume Beach

## Proposed Project

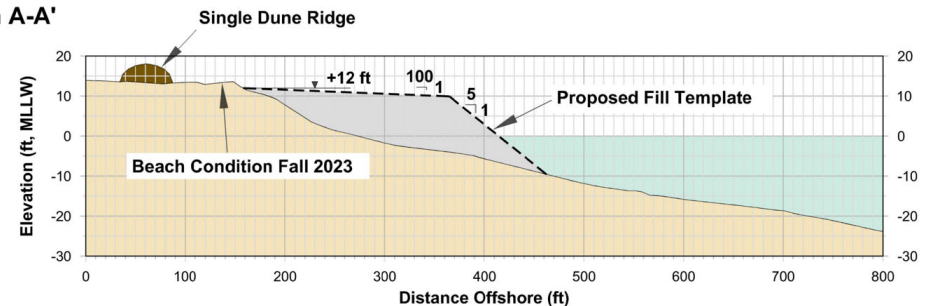
- Beach nourishment at Zuma (500,000 cy)
- Create dune habitat at Zuma Beach where winter sand dikes are typically built
- Enhance existing dune habitat at Zuma Creek and Point Dume Beach

## Cost-Benefit

- Cost = \$48.9M
- Recreation Benefits = \$0
  - Sufficient capacity for current visitation
- Storm damage reduction and habitat benefits are currently being evaluated



Section A-A'



# Zuma Beach and Point Dume Beach

## Alternative 1

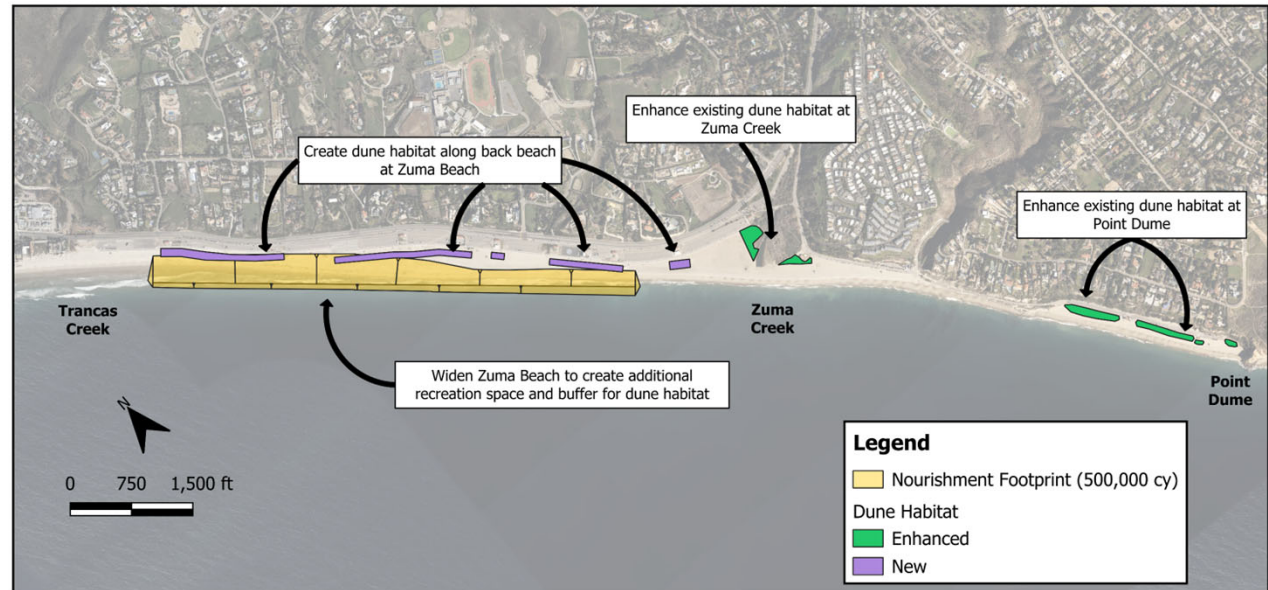
- Beach nourishment at Zuma (500,000 cy)
- Create dune habitat at Zuma Beach where winter sand dikes are typically built and along back beach
- Enhance existing dune habitat at Zuma Creek and Point Dume Beach

## Difference from Proposed

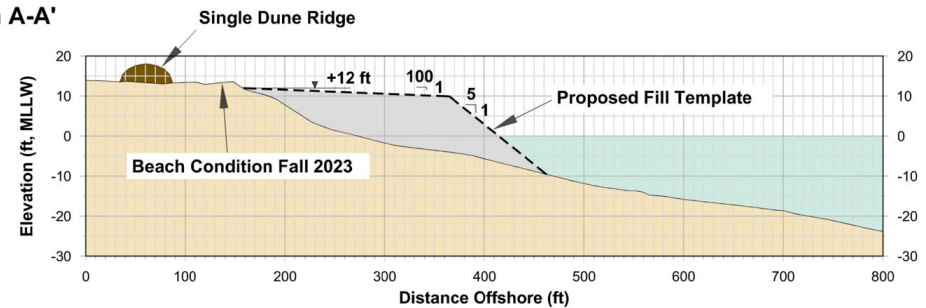
- Increase new dune area at Zuma Beach

## Cost-Benefit

- Cost = \$49.0M
- Recreation Benefits = \$0
  - Sufficient capacity for current visitation
- Storm damage reduction and habitat benefits are currently being evaluated



Section A-A'



# Zuma Beach and Point Dume Beach

## Alternative 2

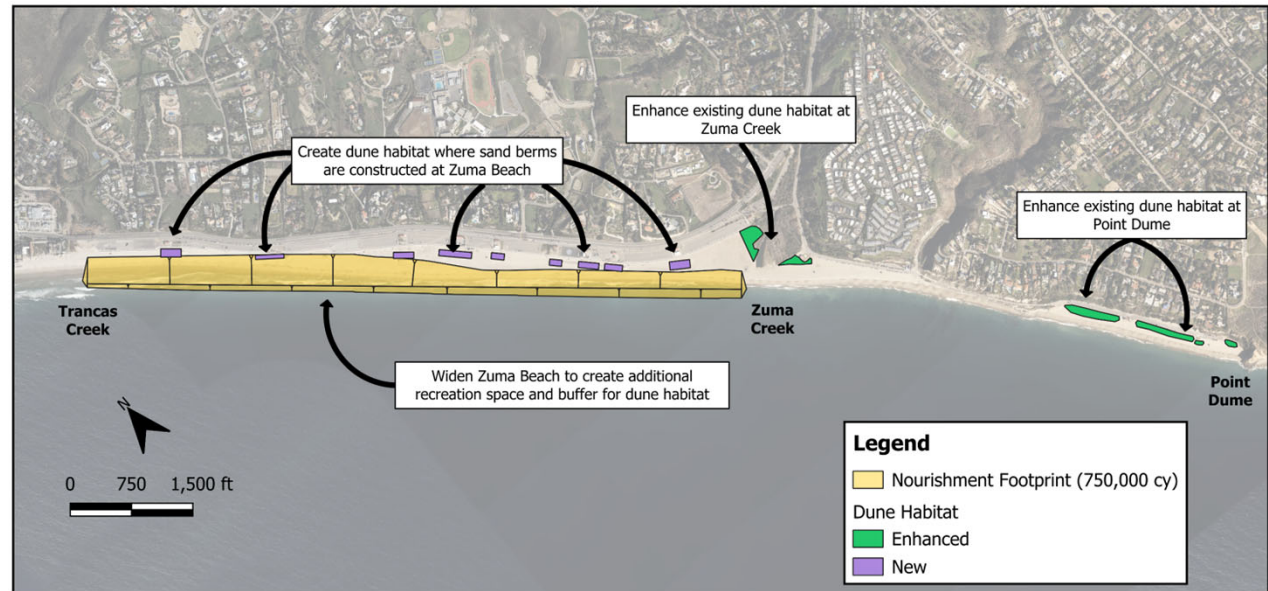
- Beach nourishment at Zuma (750,000 cy)
- Create dune habitat at Zuma Beach where winter sand dikes are typically built
- Enhance existing dune habitat at Zuma Creek and Point Dume Beach

## Difference from Proposed

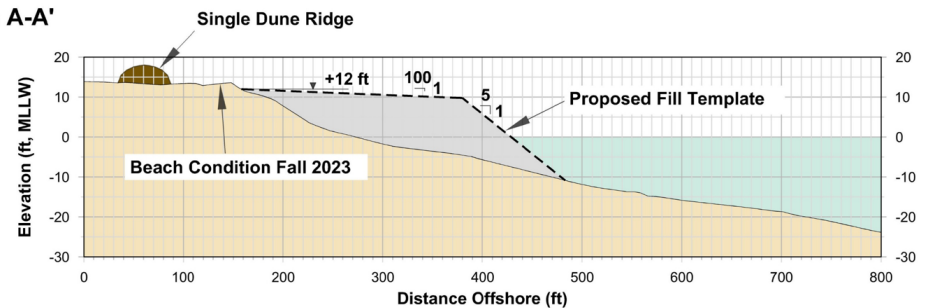
- Larger nourishment volume

## Cost-Benefit

- Cost = \$67.6M
- Recreation Benefits = \$0
  - Sufficient capacity for current visitation
- Storm damage reduction and habitat benefits are currently being evaluated



Section A-A'





# Zuma Beach and Point Dume Beach- Ranking

	Category				Weighted Score
	Recreation <sup>3</sup>	Public Access <sup>4</sup>	Dune Habitat <sup>5</sup>	Cost <sup>6</sup>	
<b>Weight</b>	25%	25%	25%	25%	-
<b>Scoring</b>	0 = No Added Beach Width	0 = Significant Impacts	0 = No New or Expanded Habitat	0 = Highest Relative Cost	1 = Highest Score
	1 = Maximum Added Beach Width	1 = No Impacts	1 = Maximum New or Expanded Habitat	1 = Lowest Relative Cost	0 = Lowest Score
<b>Proposed Project</b> 500,000-cy Nourishment; 8.6-acre Dune Habitat	<b>0.76</b> Average Additional Beach Width = 12.5 ft	<b>0.68</b> 4,600 ft of 14,500-ft long shoreline impacted by dunes	<b>0.67</b> 8.6 acres of new/expanded dune habitat	<b>1.00</b> Cost = \$48.9M	<b>0.78</b> Runner Up
<b>Alternative 1</b> 500,000-cy Nourishment; 12.8-acre Dune Habitat	<b>0.76</b> Average Additional Beach Width = 12.5 ft	<b>0.53</b> 6,830 ft of 14,500-ft long shoreline impacted by dunes	<b>1.00</b> 12.8 acres of new/expanded dune habitat	<b>1.00</b> Cost = \$49.0M	<b>0.82</b> <b>Selected Project</b>
<b>Alternative 2</b> 750,000-cy Nourishment; 8.6-acre Dune Habitat	<b>1.00</b> Average Additional Beach Width = 16.4 ft	<b>0.68</b> 4,600 ft of 14,500-ft long shoreline impacted by dunes	<b>0.67</b> 8.6 acres of new/expanded dune habitat	<b>0.62</b> Cost = \$67.6M	<b>0.74</b> Last Place

Legend: **Low Score (0 – 0.5)**, **Average Score (0.6 – 0.7)**, **High Score (0.8 – 1.0)**

<sup>3</sup> Recreation Score computed as Average Additional Beach Width normalized by maximum Average Additional Beach Width for all alternatives. Average values computed relative to pre-construction condition over first renourishment cycle (Section ).

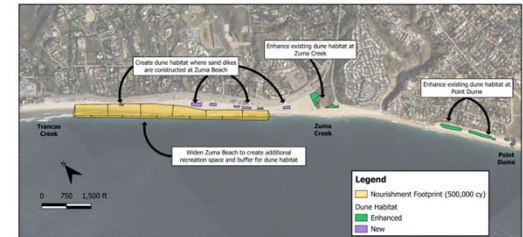
<sup>4</sup> Public Access Score computed as % of shoreline not impacted by dune creation or expansion.

<sup>5</sup> Dune Habitat Score computed as area of new or expanded dune habitat normalized by maximum area of new or expanded dune habitat.

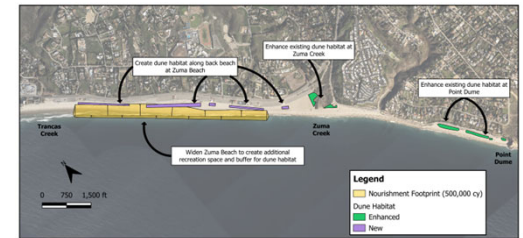
<sup>6</sup> Cost Score computed as the difference between the project cost and the lowest cost, normalized by the lowest cost. Cost includes initial nourishment only. No renourishment.



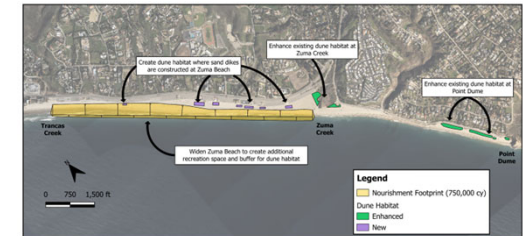
Proposed Project



Alternative 1

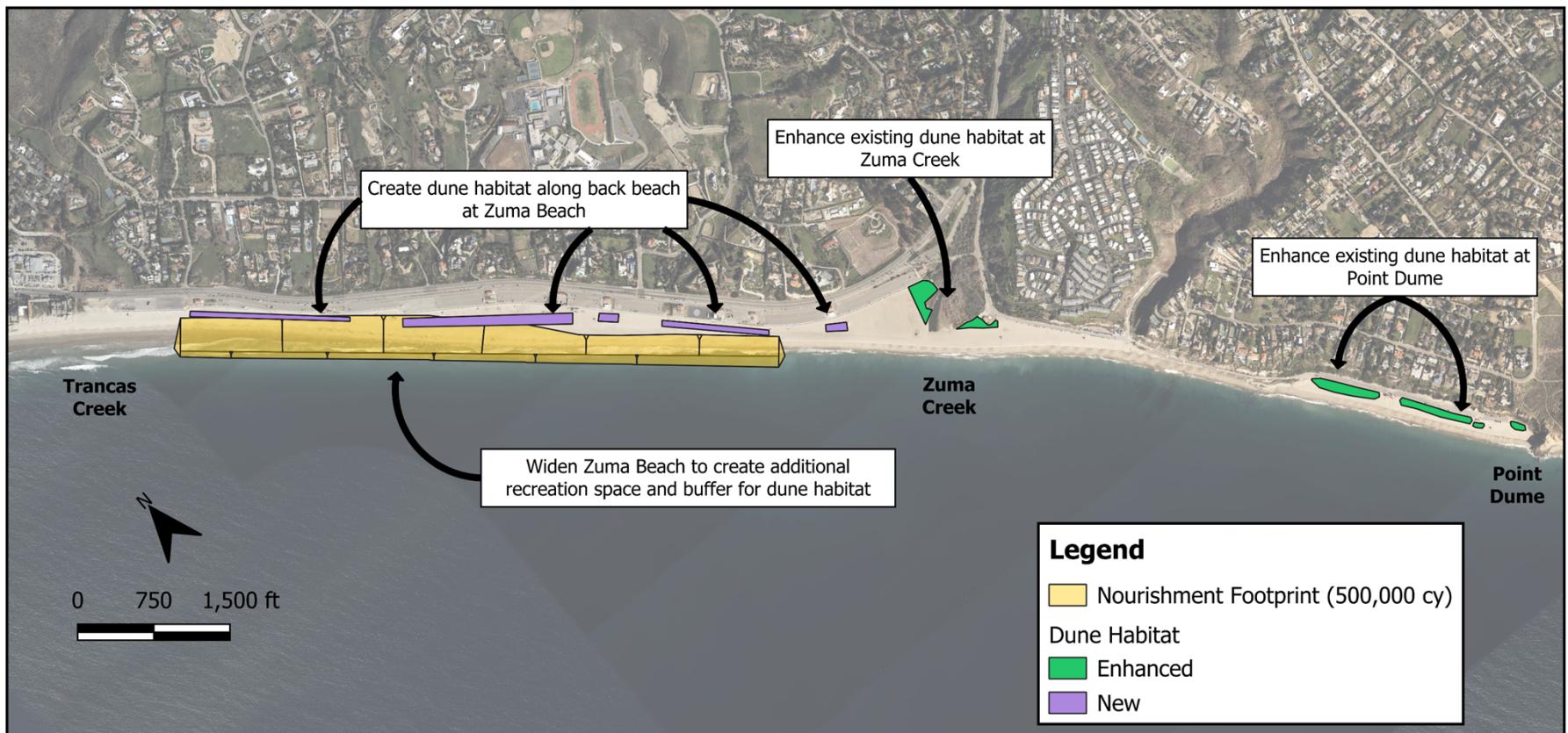


Alternative 2



# Zuma Beach and Point Dume Beach – Selected Project

## Alternative 1



# Dockweiler State Beach

## Objectives

- Manage and expand existing dune system
- Reduce wind-blown sediment on bike path and parking lot
- Provide educational information related to dunes

## Opportunities

- Dunes presently exist at the site

## Constraints

- Existing public use  
(Hang Gliding at South End)





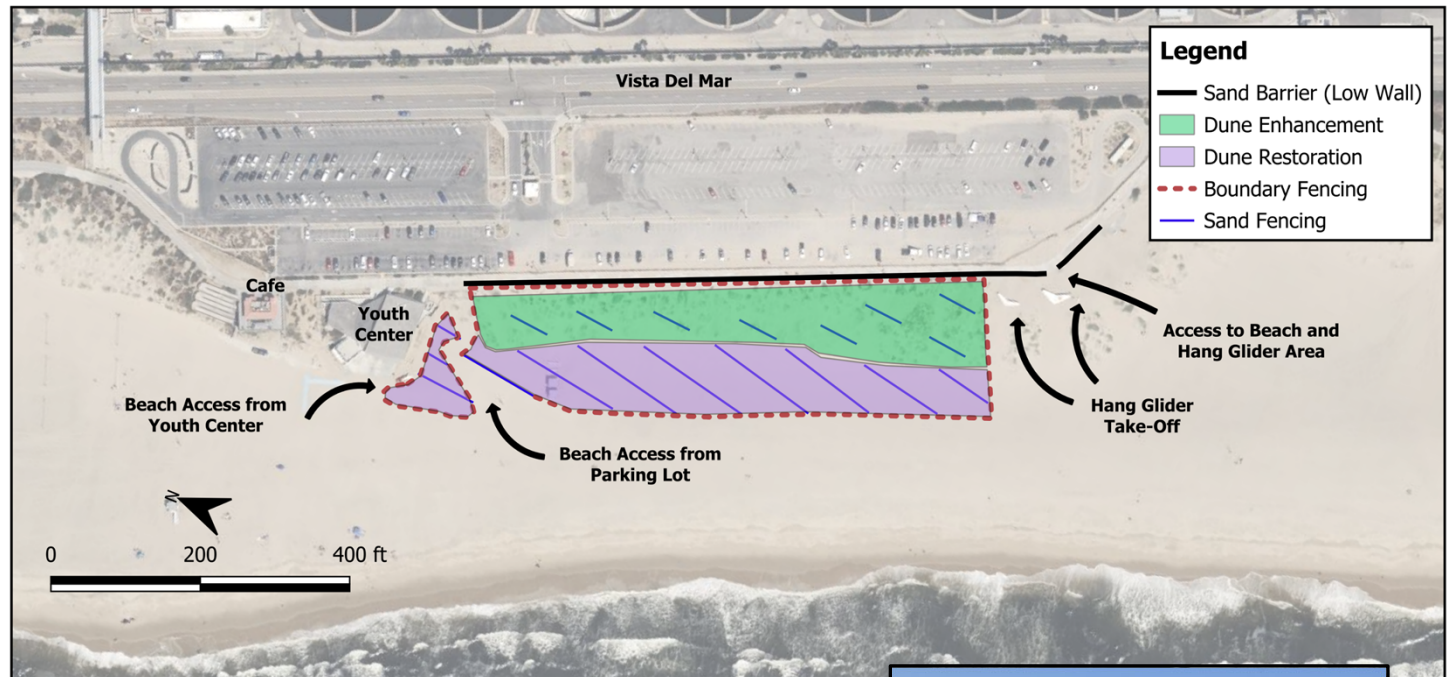
# Dockweiler State Beach

## Proposed Project

- Low sand barrier at bike path
- Enhancement of existing dunes
- Expansion (restoration) of dunes seaward
- Three public accessways

## Cost-Benefit

- Cost = \$2.30M
- Recreation Benefits = \$0
  - Sufficient capacity for current visitation
- Storm damage reduction and habitat benefits are currently being evaluated



Low sand barrier at Zuma Beach

# Dockweiler State Beach

## Alternative 1

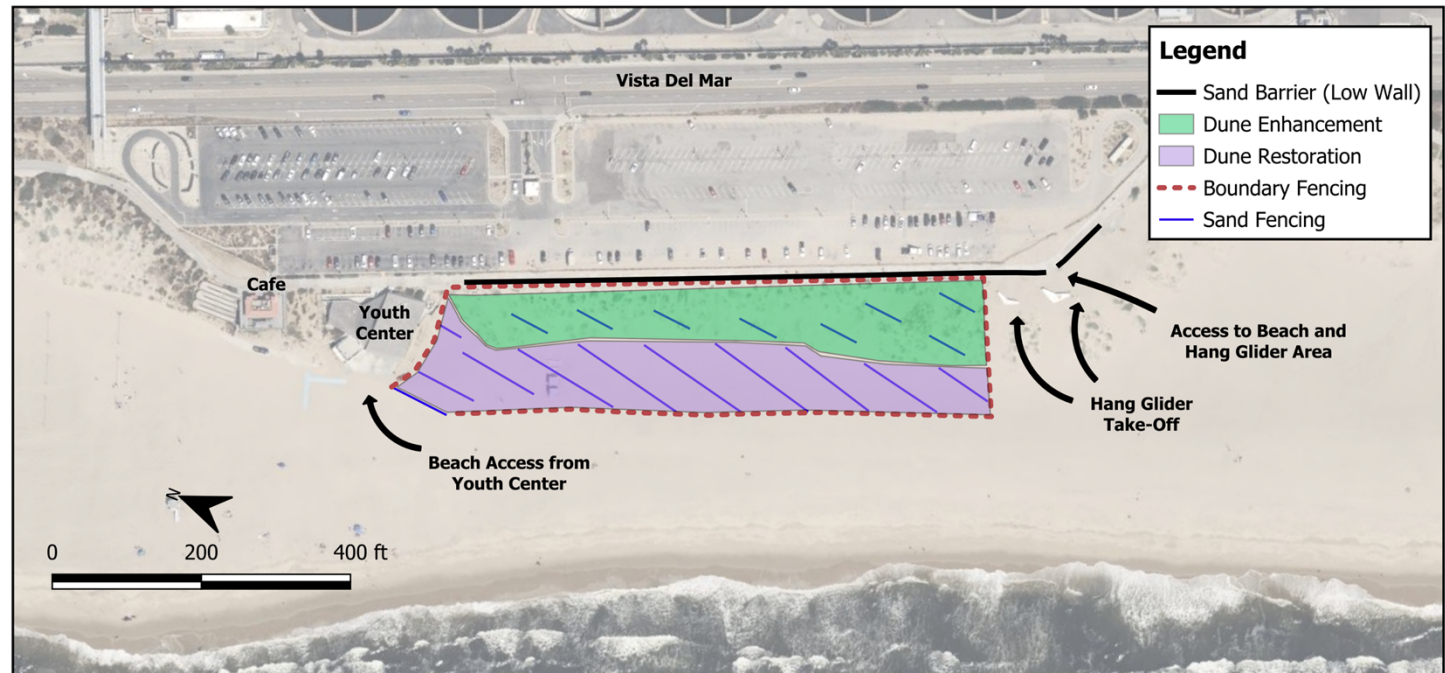
- Low sand barrier at bike path
- Enhancement of existing dunes
- Expansion of dunes seaward
- Two public accessways

## Difference from Proposed

- Increase restored dune area
- No beach access through dunes

## Cost-Benefit

- Cost = \$2.31M
- Recreation Benefits = \$0
  - Sufficient capacity for current visitation
- Storm damage reduction and habitat benefits are currently being evaluated



# Dockweiler State Beach

## Alternative 2

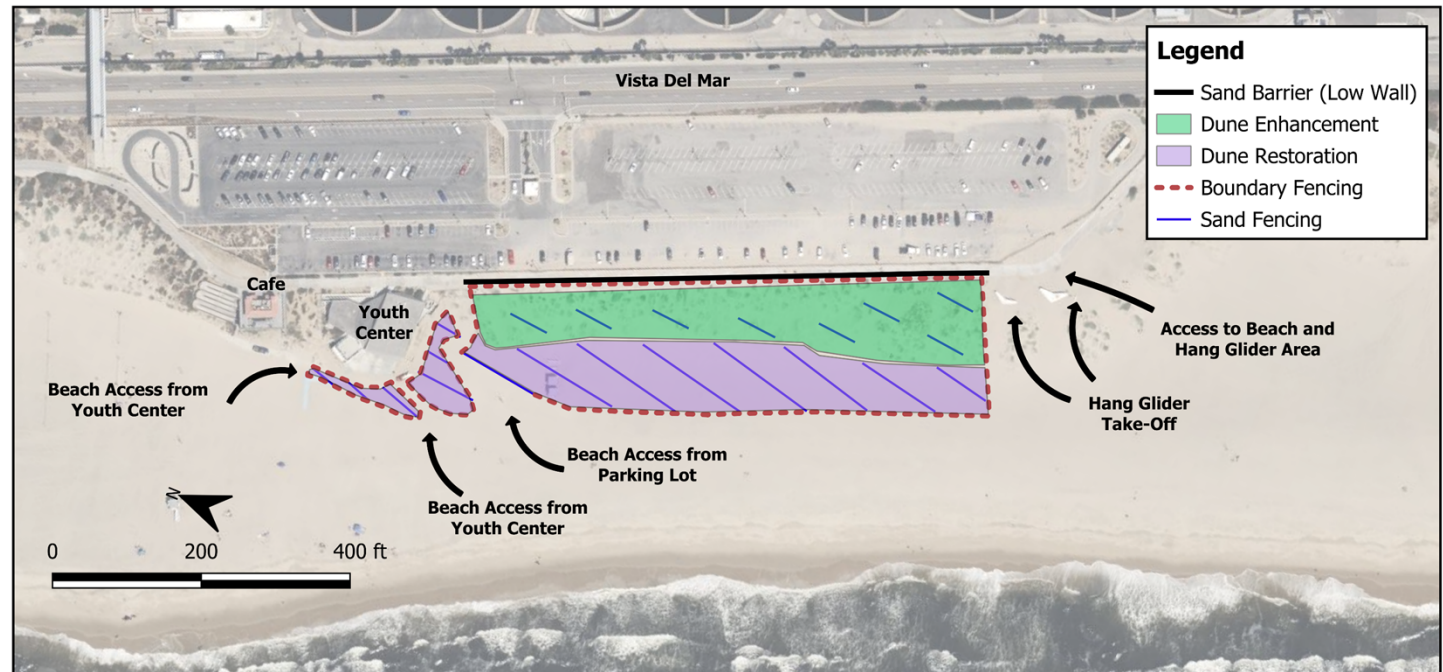
- Low sand barrier at bike path
- Enhancement of existing dunes
- Expansion of dunes seaward
- Four public accessways

## Difference from Proposed

- Decrease length of sand barrier
- Increase restored dune area

## Cost-Benefit

- Cost = \$1.94M
- Recreation Benefits = \$0
  - Sufficient capacity for current visitation
- Storm damage reduction and habitat benefits are currently being evaluated





# Dockweiler State Beach - Ranking

	Category				Weighted Score
	Recreation <sup>7</sup>	Public Access <sup>8</sup>	Dune Habitat <sup>9</sup>	Cost <sup>10</sup>	
<b>Weight</b>	25%	25%	25%	25%	-
<b>Scoring</b>	0 = No Protection for Bike/Pedestrian Path	0 = No Beach Access Points	0 = No Enhanced or Restored Habitat	0 = Highest Relative Cost	1 = Highest Score
	1 = Max Protection for Bike/Pedestrian Path	1 = Maximum No. of Beach Access Points	1 = Maximum Enhanced or Restored Habitat	1 = Lowest Relative Cost	0 = Lowest Score
<b>Proposed Project</b> 850-ft Sand Barrier; 2.6-acre Dune Habitat with 3 Beach Access Points	<b>1.00</b> 850-ft long Sand Barrier to Prevent Sand Accumulation on Bike and Pedestrian Path	<b>0.75</b> 3 Beach Access Points	<b>0.93</b> 2.6 acres of Enhanced or Restored Dune Habitat	<b>0.81</b> Cost = \$2.30M (2030 to 2050)	<b>0.87</b> Runner Up
<b>Alternative 1</b> 850-ft Sand Barrier; 2.8-acre Dune Habitat with 2 Beach Access Points	<b>1.00</b> 850-ft long Sand Barrier to Prevent Sand Accumulation on Bike and Pedestrian Path	<b>0.50</b> 2 Beach Access Points	<b>1.00</b> 2.8 acres of Enhanced or Restored Dune Habitat	<b>0.81</b> Cost = \$2.31M (2030 to 2050)	<b>0.83</b> Last Place
<b>Alternative 2</b> 700-ft Sand Barrier; 2.7-acre Dune Habitat with 4 Beach Access Points	<b>0.82</b> 700-ft long Sand Barrier to Prevent Sand Accumulation on Bike and Pedestrian Path	<b>1.00</b> 4 Beach Access Points	<b>0.96</b> 2.7 acres of Enhanced or Restored Dune Habitat	<b>1.00</b> Cost = \$1.94M (2030 to 2050)	<b>0.95</b> <b>Selected Project</b>

Legend: **Low Score (0 – 0.5)**, **Average Score (0.6 – 0.7)**, **High Score (0.8 – 1.0)**

<sup>7</sup> Recreation Score computed as % of bike and pedestrian path protected by low sand barrier along 850-ft long project reach.

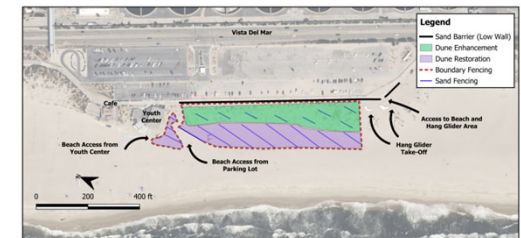
<sup>8</sup> Public Access Score computed as number of beach access points relative to maximum number of beach access points (4).

<sup>9</sup> Dune Habitat Score computed as area of enhanced or restored dune habitat normalized by maximum area of enhanced or restored dune habitat.

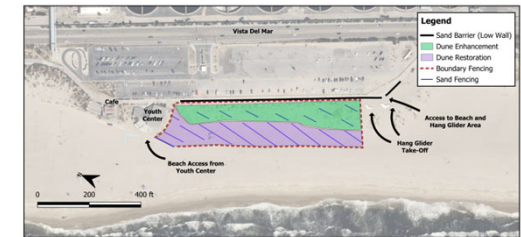
<sup>10</sup> Cost Score computed as the difference between the project cost and the lowest cost, normalized by the lowest cost. Cost includes initial nourishment only. No renourishment.



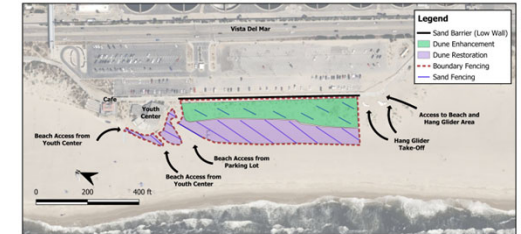
Proposed Project



Alternative 1

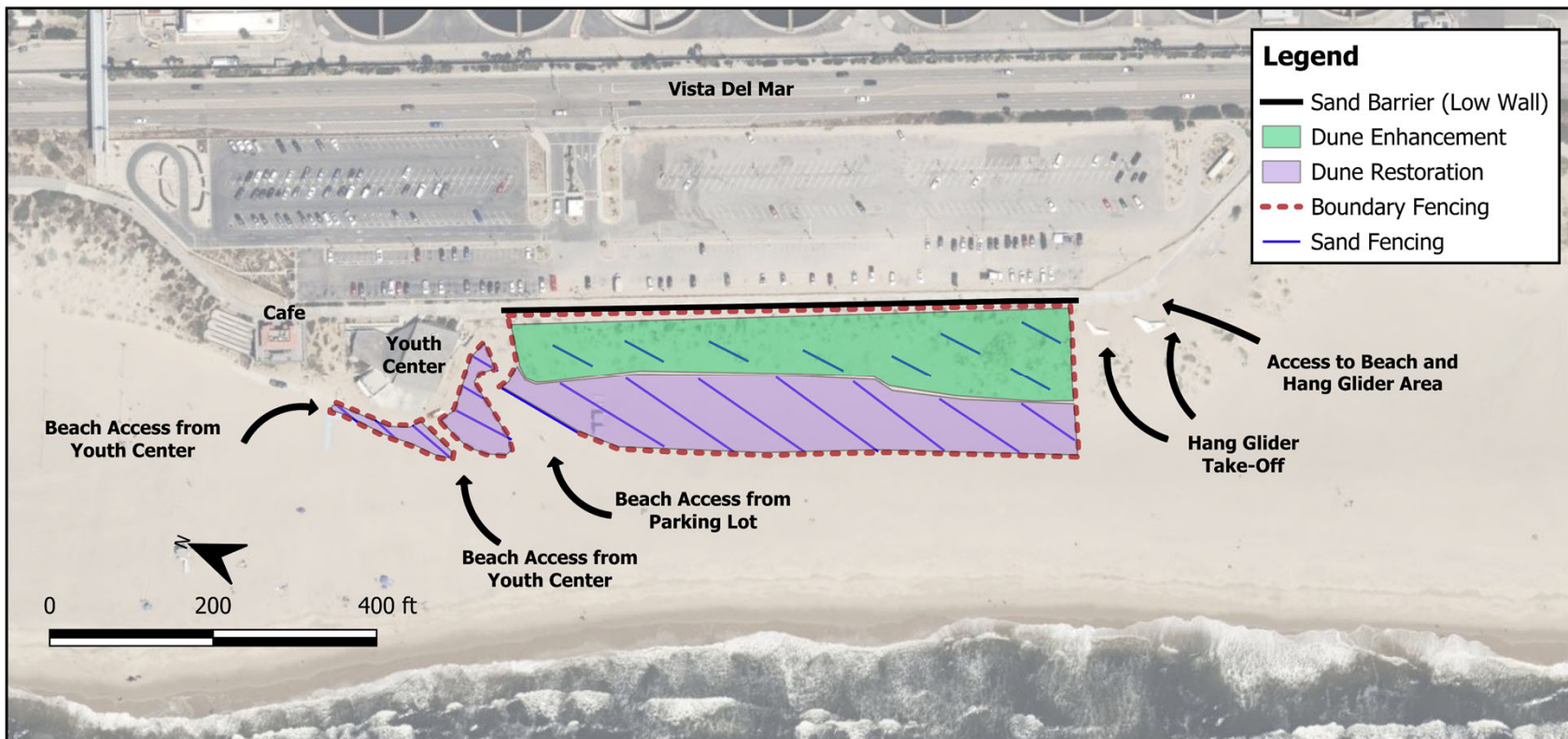


Alternative 2



# Dockweiler State Beach – Selected Project

## Alternative 2



# Redondo Beach

## Objectives

- Expand public access and recreational opportunities
- Increase protection of coastal infrastructure
- Increase and enhance sensitive sandy beach and dune habitat
- Expand local and regional economic benefits

## Opportunities

- Prior use as beach nourishment site (USACE)
  - Relatively stable beach following nourishment
- Pier provides possible location for sediment retention

## Constraints

- Proximity to Redondo Submarine Canyon

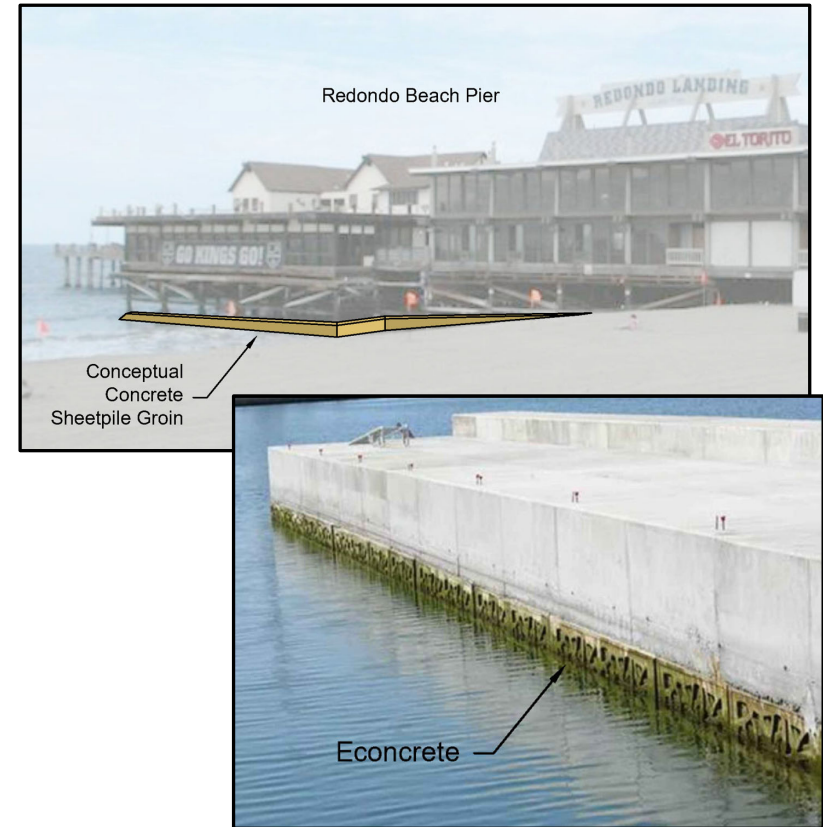




# Redondo Beach – Sediment Retention

## Pier Groin

- Similar to Seal Beach Pier
- Potential ecologic facade (ECONcrete)
  - Encourages biological recruitment, increases carbon sequestration



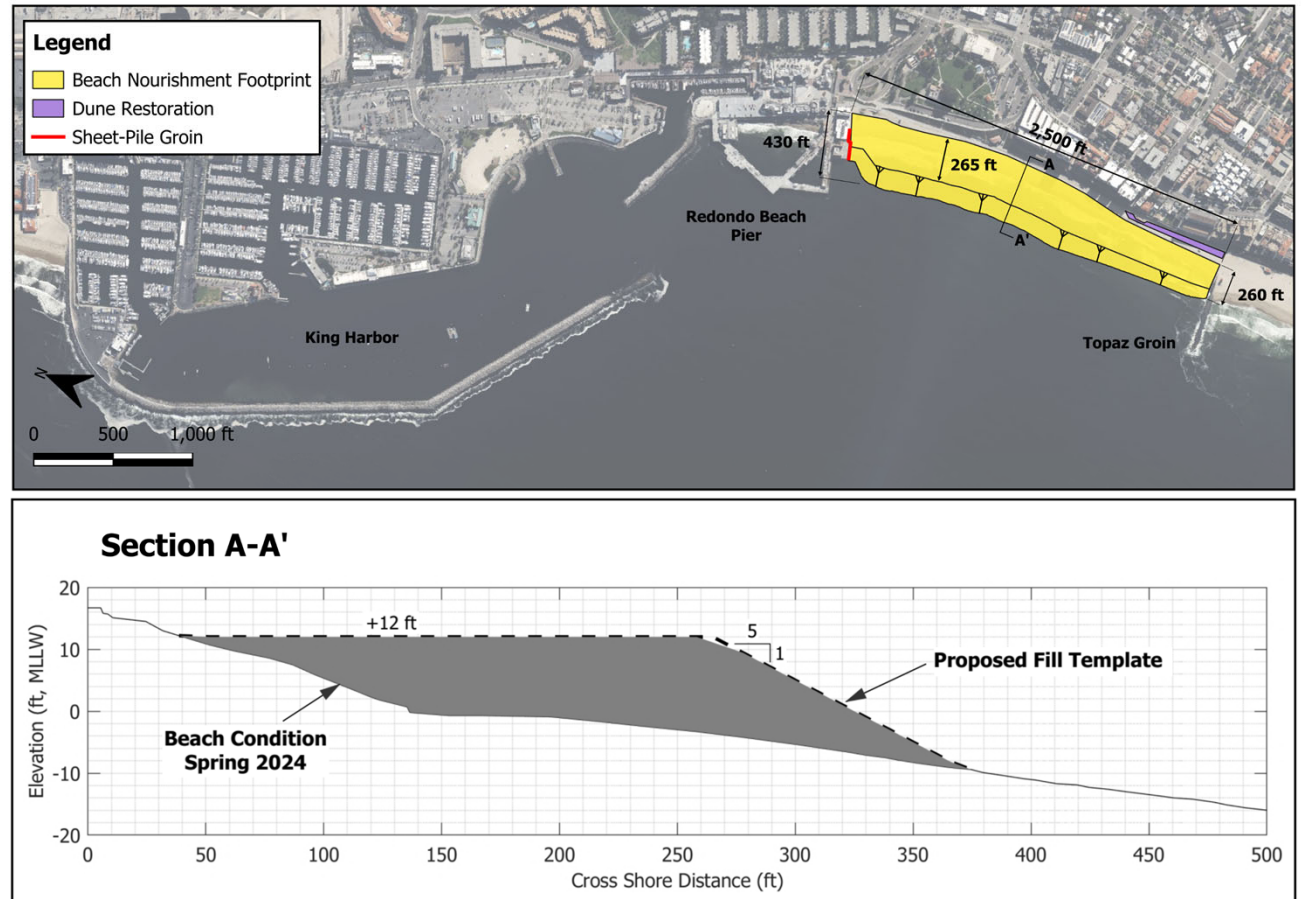
# Redondo Beach

## Proposed Project

- Beach nourishment (300,000 cy)
  - ~90-ft wide equilibrated beach width at start of project
  - ~60-ft wide beach after 20 years
- Sediment retention (groin) at pier
- Dune restoration at south end (0.5 acre)

## Cost-Benefit

- Cost = \$32.8M
- Recreation Benefits = \$202.7M
  - 20-year project life
- **BC Ratio = 6.2**



# Redondo Beach

## Alternative 1

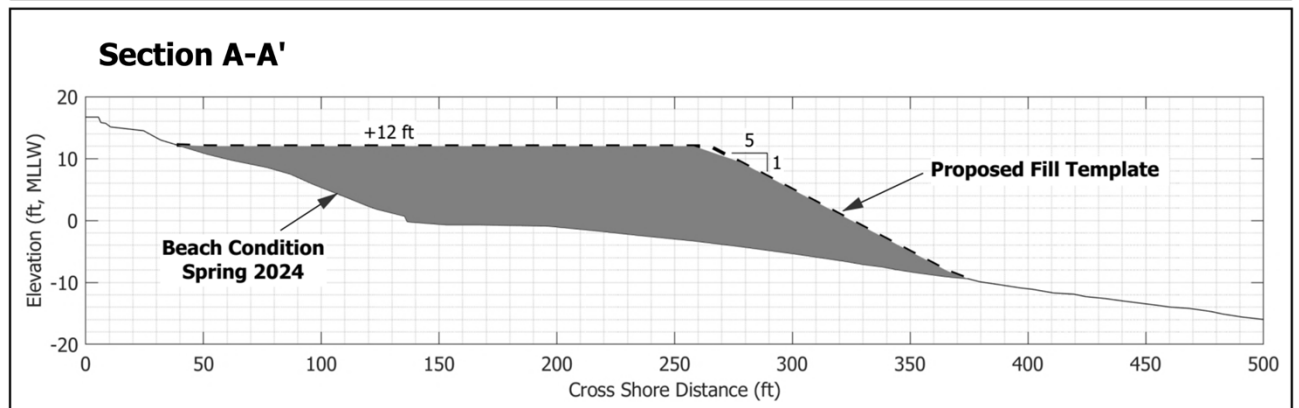
- Beach nourishment (300,000 cy)
  - ~90-ft wide equilibrated beach width at start of project
  - ~40-ft wide beach after 20 years
- Dune restoration at south end (0.5 acre)

## Difference from Proposed

- No sediment retention at pier

## Cost-Benefit

- Cost = \$27.2M
- Recreation Benefits = \$202.5M
  - 20-year project life
- **BC Ratio = 7.5**





# Redondo Beach

## Alternative 2

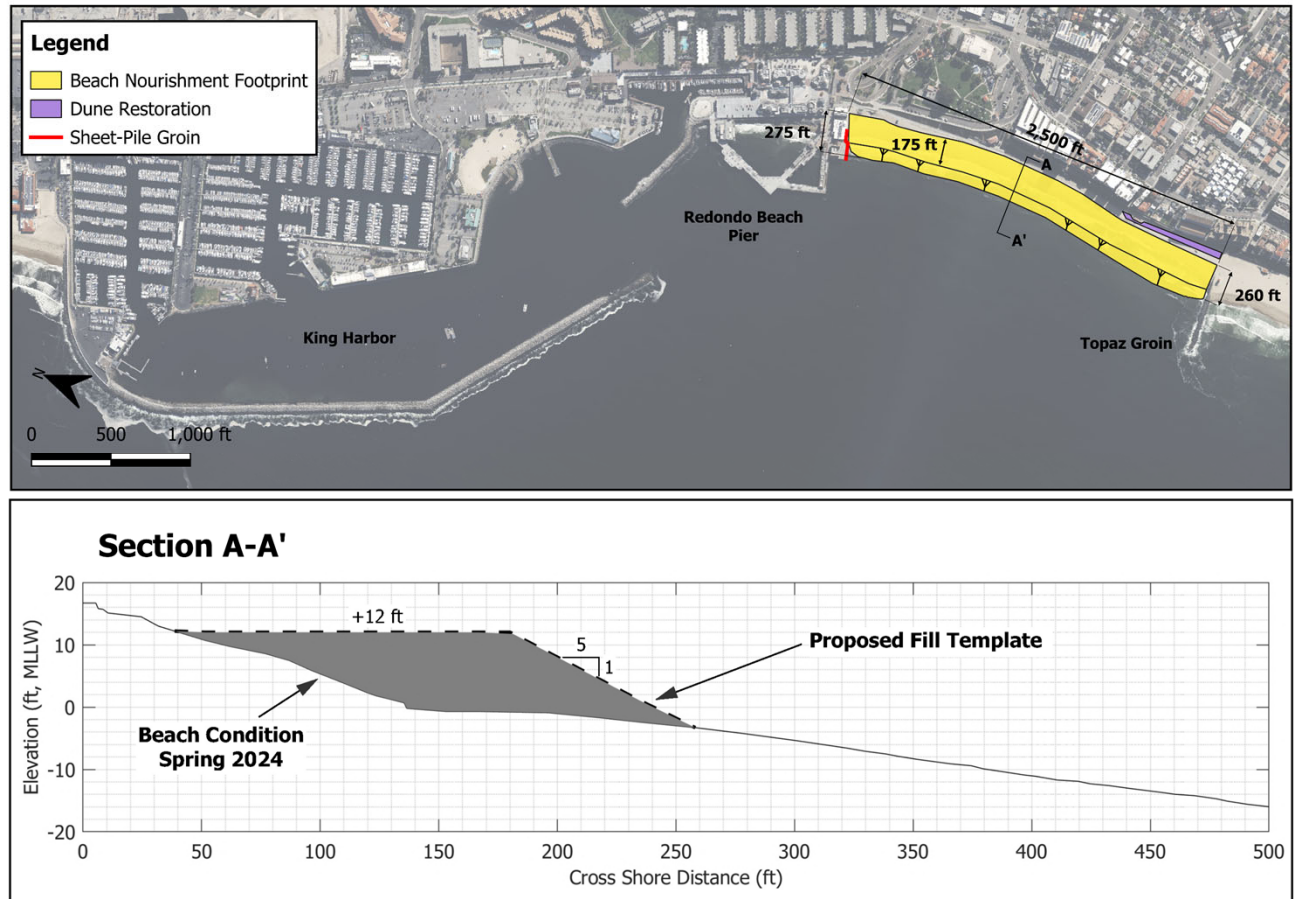
- Beach nourishment (150,000 cy)
  - ~45-ft wide equilibrated beach width at start of project
  - ~15-ft wide beach after 20 years
- Dune restoration at south end (0.5 acre)
- Sediment retention (groin) at pier

## Difference from Proposed

- 50% of beach nourishment volume

## Cost-Benefit

- Cost = \$24.7M
- Recreation Benefits = \$187.8M
  - 20-year project life
- BC Ratio = 7.6



# Redondo Beach - Ranking

	Category				Weighted Score
	Recreation <sup>11</sup>	Public Access <sup>12</sup>	Dune Habitat <sup>13</sup>	Cost <sup>14</sup>	
<b>Weight</b>	25%	25%	25%	25%	-
<b>Scoring</b>	0 = No Protection for Bike/Pedestrian Path	0 = Maximum Impact	0 = No Enhanced or Restored Habitat	0 = Highest Relative Cost	1 = Highest Score
	1 = Max Protection for Bike/Pedestrian Path	1 = No Impact	1 = Maximum Enhanced or Restored Habitat	1 = Lowest Relative Cost	0 = Lowest Score
<b>Proposed Project</b> 300,000-cy Beach Nourishment; Groin at Pier; 4.5-acre Dune Habitat	<b>1.00</b> Average Additional Beach Width = 75 ft	<b>0.75</b> Lateral access impeded by groin at pier	<b>1.00</b> 4.5-acre dune habitat	<b>0.67</b> Cost = \$32.8M (2030 to 2050)	<b>0.86</b> Runner Up
<b>Alternative 1</b> 300,000-cy Beach Nourishment; 4.5-acre Dune Habitat	<b>0.87</b> Average Additional Beach Width = 65 ft	<b>1.00</b> No Impacts	<b>1.00</b> 4.5-acre dune habitat	<b>0.90</b> Cost = \$27.2M (2030 to 2050)	<b>0.94</b> <b>Selected Project</b>
<b>Alternative 2</b> 150,000-cy Beach Nourishment; Groin at Pier; 4.5-acre Dune Habitat	<b>0.40</b> Average Additional Beach Width = 30 ft	<b>0.75</b> Lateral access impeded by groin at pier	<b>1.00</b> 4.5-acre dune habitat	<b>1.00</b> Cost = \$24.7M (2030 to 2050)	<b>0.79</b> Last Place

Legend: **Low Score (0 – 0.5)**, **Average Score (0.6 – 0.7)**, **High Score (0.8 – 1.0)**

<sup>11</sup> Recreation Score computed as Average Additional Beach Width normalized by maximum Average Additional Beach Width for all alternatives.

<sup>12</sup> Public Access Score computed as 0.75 for alternatives with groin at pier and 1.00 for alternatives without groin at pier.

<sup>13</sup> Dune Habitat Score computed as area of enhanced or restored dune habitat normalized by maximum area of enhanced or restored dune habitat.

<sup>14</sup> Cost Score computed as the difference between the project cost and the lowest cost, normalized by the lowest cost. Cost includes initial nourishment only. No renourishment.



Proposed Project



Alternative 1

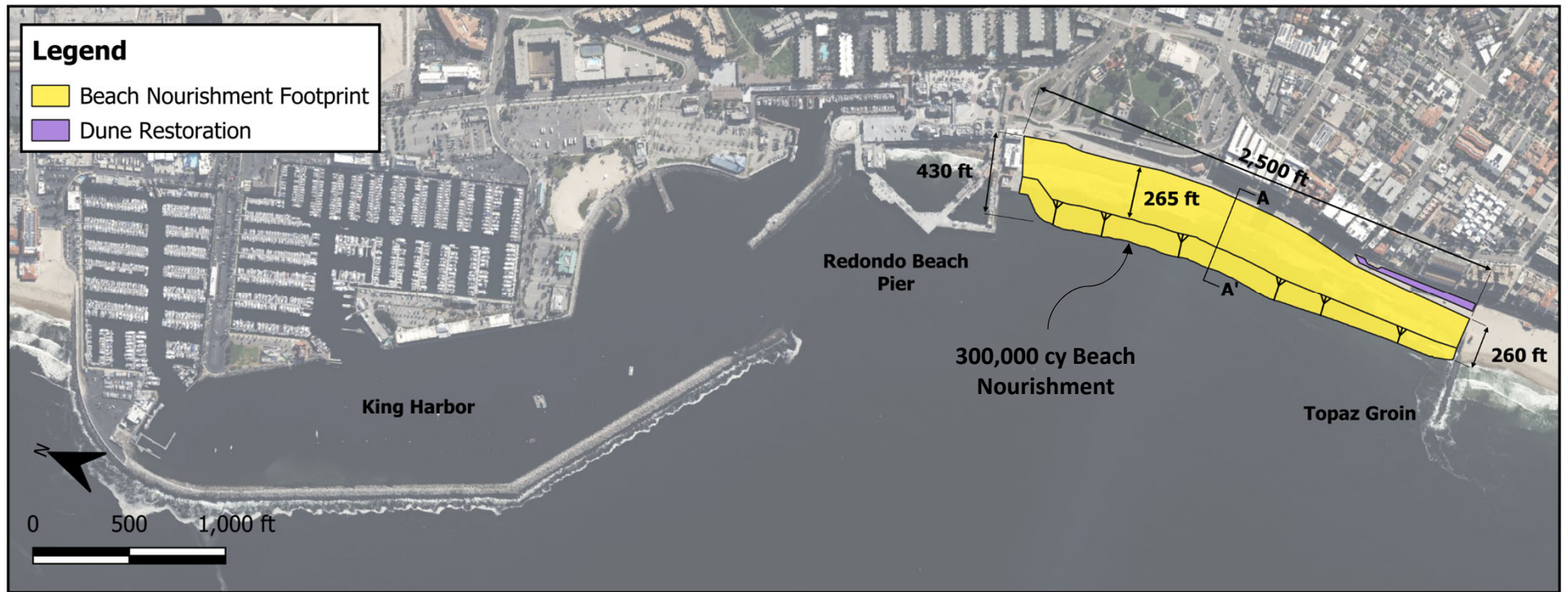


Alternative 2



# Redondo Beach – Selected Project

## Alternative 1





# Potential Sand Sources

## Harbor Maintenance Dredging

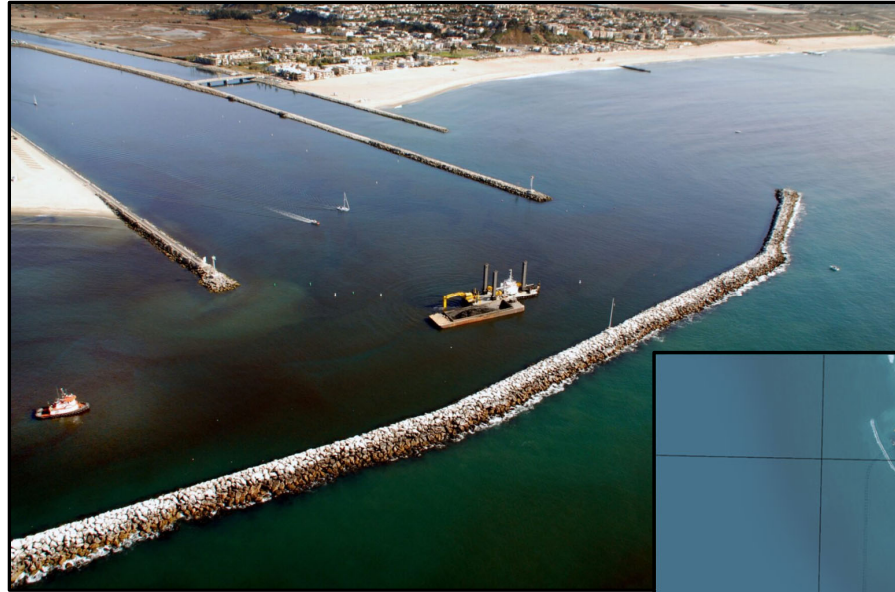
- Marina del Rey
  - Cost share with USACE
  - ~400,000 cy sand planned for 2026-27
- King Harbor
  - Not dredged often
- Temporary Placement Area

## Offshore Borrow Site

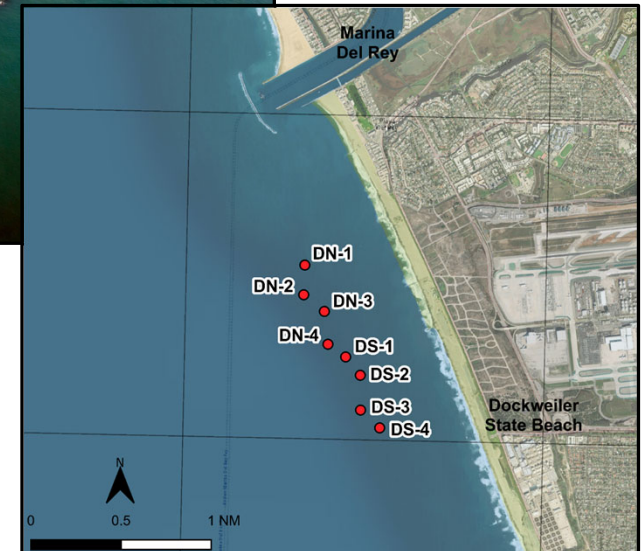
- Offshore Dockweiler
  - Compatible grain size
  - Volume ~3,000,000 cy

## Inland Source

- Rindge Dam
- Sedimentation Basins / Reservoirs
  - Unlikely to have quantities sufficient for large-scale nourishment
  - Could be used for maintenance or renourishment



Maintenance Dredging – Marina del Rey



Dockweiler Borrow Site



# Next Steps

## Final Report

- Gather stakeholder feedback (due April 30, 2025)
- Complete additional economic analysis
- Issue final report in May 2025

## Phase 2

- Preliminary Engineering and Design
  - Detailed Design Drawings
  - Sampling and Analysis Plan for Dockweiler Offshore Borrow Site
- Environmental Review and Permitting
- Graphic Design, Educational Signage

# Any General Feedback?

# Breakout Rooms

Each room is given 20 minutes to discuss site-specific comments and questions.

You can enter any rooms at any time.

To return to the Main Room, select “Leave” and “Leave Room”.



**Zuma-  
Point Dume**



**Dockweiler**



**Redondo**





# Breakout Rooms – Report Back

Summary of discussion from each room



**Zuma-  
Point Dume**



**Dockweiler**



**Redondo**



# Thank You!

- DBH Coastal Resilience Webpage  
<https://beaches.lacounty.gov/coastal-resilience/>
  - Find past and current reports
  - Sign up for email notification
  - Find stakeholder meeting materials
- Submit your feedback on the Feasibility Study by **April 30, 2025**  
[coastalresilience@bh.lacounty.gov](mailto:coastalresilience@bh.lacounty.gov)

