

CAPISTRANO-DOHENY BEACH

NATURE-BASED SHORELINE ADAPTATION PROJECT

COMMUNITY MEETING: November 13, 2025, 6:00-7:30pm

AGENDA

Introduction

Land Acknowledgment

Welcome

Overview

Presentation – 30 minutes

Public Participation – 45 minutes



CAPISTRANO-DOHENY BEACH

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INTRODUCTION

Pam Passow

Director,
OC Parks



CAPISTRANO-DOHENY BEACH

NATURE-BASED SHORELINE ADAPTATION PROJECT

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LAND ACKNOWLEDGMENT

Chena Edmundson

Tribal Council Member at Large,
Juaneño Band of Mission Indians,
Acjachemen Nation



CAPISTRANO-DOHENY BEACH

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WELCOME

Katrina Foley

Orange County Vice Chair,
Fifth District



Katrina
FOLEY
SUPERVISOR - FIFTH DISTRICT

CAPISTRANO-DOHENY BEACH

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OVERVIEW

Scott Kibbey

District Superintendent,
California State Parks

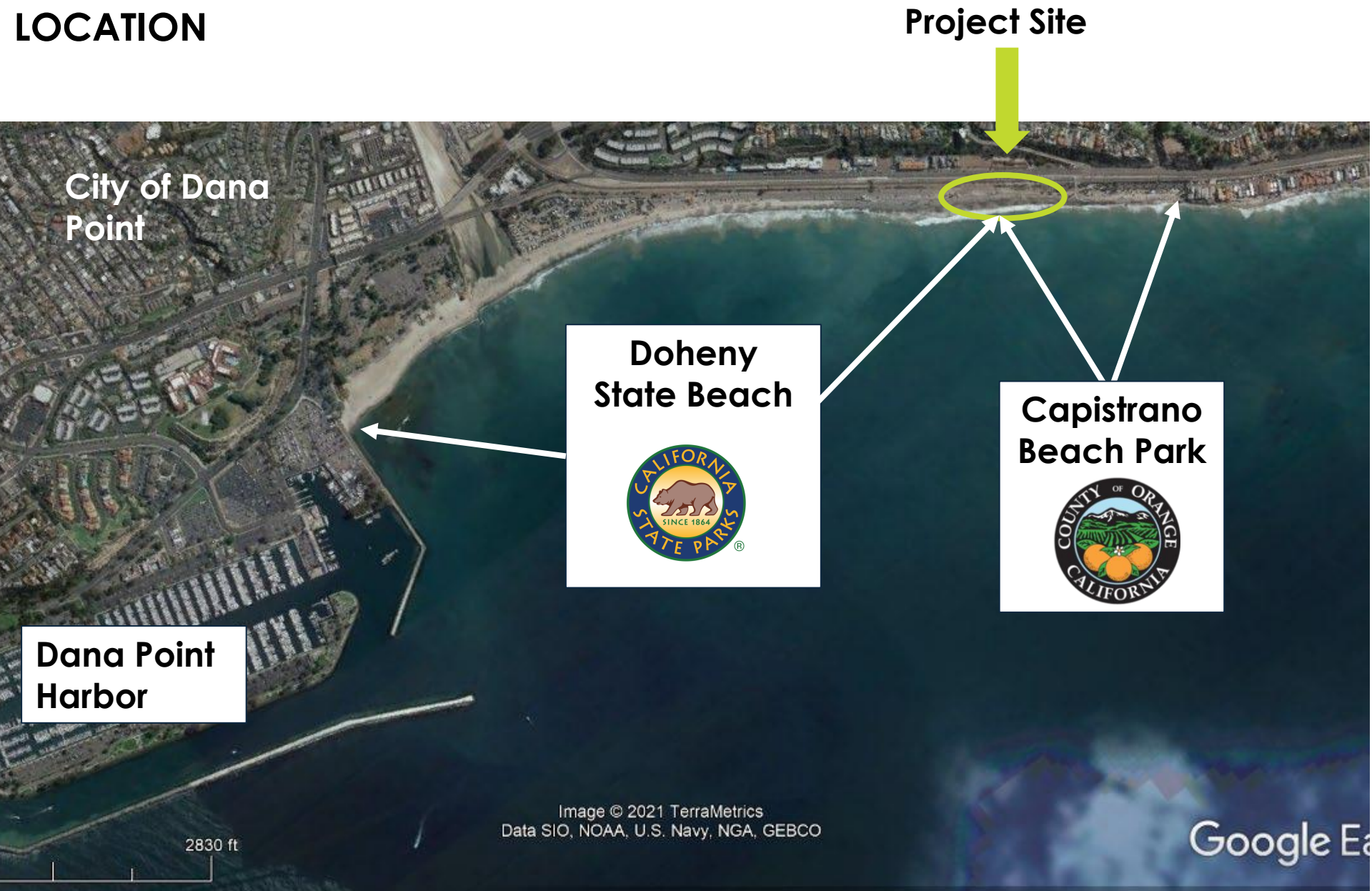


AGENDA

- **Presentation**
 - Project Background
 - Design Overview
 - Project Status
 - Overview of Stations
- **Ask an Expert Stations**

PROJECT BACKGROUND

LOCATION



Project Site

Doheny
State Beach



Capistrano
Beach Park



Dana Point
Harbor

2830 ft

Image © 2021 TerraMetrics
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Google Earth

PROJECT BACKGROUND



PROJECT BACKGROUND

What is the Nature-Based Shoreline Adaptation Project?

- **Vegetated sand dunes** with a buried **cobble berm** for long-term structural stability
- **Pilot project** that will be monitored for effectiveness at slowing or preventing beach erosion
- Grant-funded **collaboration** between state and local agencies working together to protect our beaches



Vegetated dunes with buried cobble berm adjacent to Coast Highway along Cardiff State Beach

Precedent: Cardiff State Beach Living Shoreline

Vegetated Dunes with Buried Cobble Berm



San Elijo
Lagoon

Pedestrian
Access Path

Vegetated dunes with
buried cobble berm

Coast Highway

30

Precedent: Cardiff State Beach Living Shoreline

Vegetated Dunes with Buried Cobble Berm



Precedent: Cardiff State Beach Living Shoreline

Vegetated Dunes with Buried Cobble Berm



PROJECT BACKGROUND

Why is this project needed?

- Nourishment and flooding events in the 1960s and 1970s delivered over a million cubic yards of sand to the beaches
- Provided recreation and protection of landward facilities



Visitors enjoying wide sandy beach in early 1980s

PROJECT BACKGROUND

Why is this project needed?

KEY

Sand sources to project site in green



Sand losses from project site in red



More sand is lost than received: Annual deficit of approximately 50,000 cy

PROJECT BACKGROUND

Why is this project needed?

- **Doheny State Beach:** loss of 50 parking spaces, ADA facilities including showers, vehicle turnaround
- Long-term shoreline management alternatives analysis completed 2018
- Found that a living shoreline with vegetated dunes should be included in long-term management strategies

DOHENY STATE BEACH LONG-TERM SHORELINE MANAGEMENT ALTERNATIVES ANALYSIS REPORT



May 2018

Prepared for:



California Department of Parks and Recreation
Orange Coast District

Prepared by:



moffatt & nichol

3780 Kilroy Airport Way, Suite 600
Long Beach, CA 90806

M&N Job No. 9280-S4

PROJECT BACKGROUND

Why is this project needed?

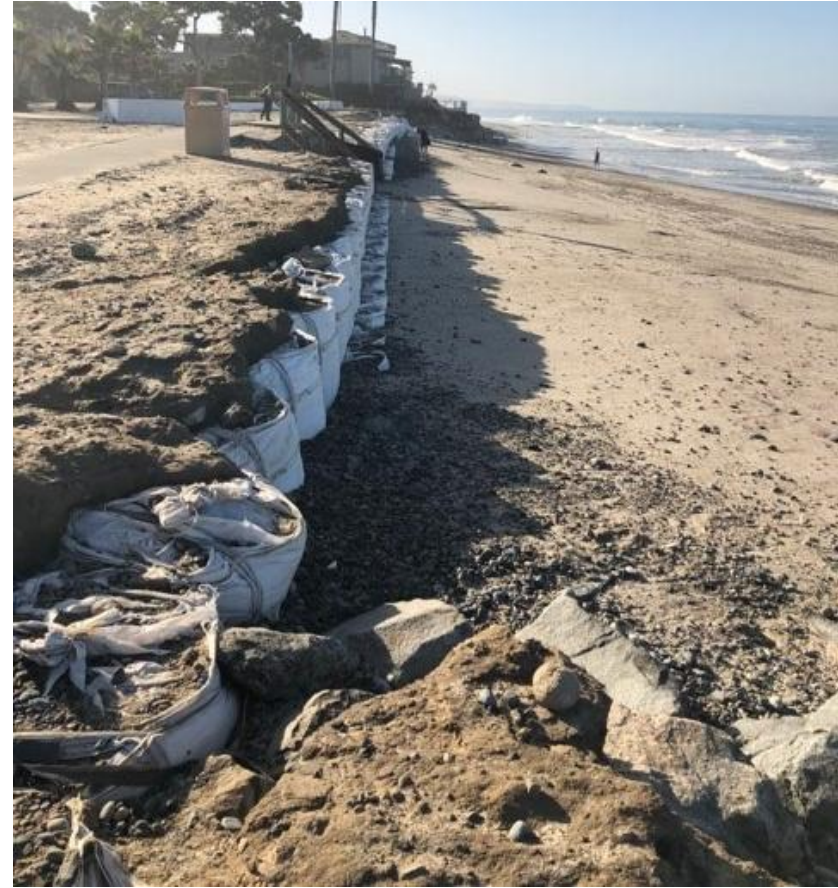
- **Capistrano County Beach:** loss of restrooms, basketball court, boardwalk, sidewalks, parking, bike trail
- Threatened critical infrastructure
- First emergency CDP issued in 2005



PROJECT BACKGROUND

Why is this project needed?

- OCParks launched the Capistrano Beach Master Plan effort in 2018 to create a long-term plan for the beach
- Continued need for emergency CDPs and interim CDPs



Ongoing damage at Capistrano Beach in June 2020

PROJECT BACKGROUND

Why is this project needed?

- OC Parks required to submit a **nature-based adaptation feasibility study** and an **application to implement** such a strategy, if found feasible

CAPISTRANO BEACH
COUNTY PARK
NATURE-BASED PILOT PROJECT
FEASIBILITY STUDY REPORT



June 2021

Prepared for:
County of Orange, OC Parks


13042 Old Myford Road
Irvine, CA 92620

Prepared by:

moffatt & nichol
4225 E. Conant St.
Long Beach, CA 90806

M&N Job No. 8189-04 and 10186-09

PROJECT BACKGROUND

Nature-Based Pilot Project Feasibility

- Study evaluated two locations for nature-based adaptation and looked at multiple concepts at each location



PROJECT BACKGROUND

Nature-Based Pilot Project Feasibility

- Concepts included a variety of nature-based strategies
- Study also addressed:
 - Likelihood of pilot project providing information for long-term plans
 - Likelihood of success in protecting the shoreline
 - Risks to existing infrastructure if the pilot project protection is not successful



Impacts to bike path and exposed drainage pipes on beach

PROJECT BACKGROUND

Nature-Based Pilot Project Feasibility

- Preferred Concept: North Reach **buried cobble berm and vegetated dunes**



DESIGN OVERVIEW

Buried Cobble Berm and Vegetated Dunes

Goals include:

- Reducing coastal erosion
- Protecting critical infrastructure
- Preserving recreational and economic value
- Serving as a scalable model



View from Capistrano Beach to Doheny State Beach, January 2025

DESIGN OVERVIEW

Buried Cobble Berm and Vegetated Dunes

Best Practice Guidelines:

- Expect and allow for changes to the system
- Use local examples for the best basis of design

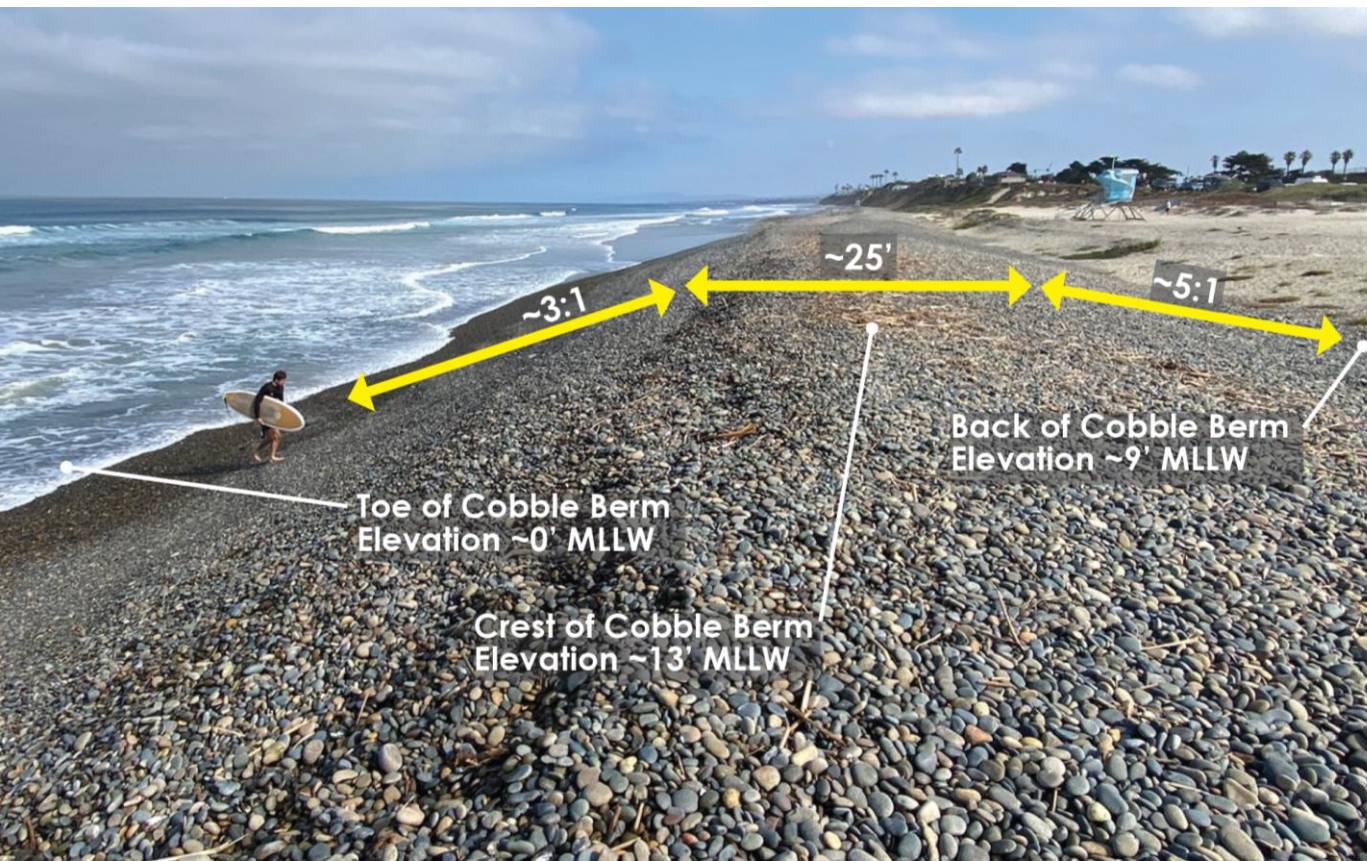


Local example: Cardiff State Beach
Living Shoreline

DESIGN OVERVIEW

Best Practice Guidelines, cont'd:

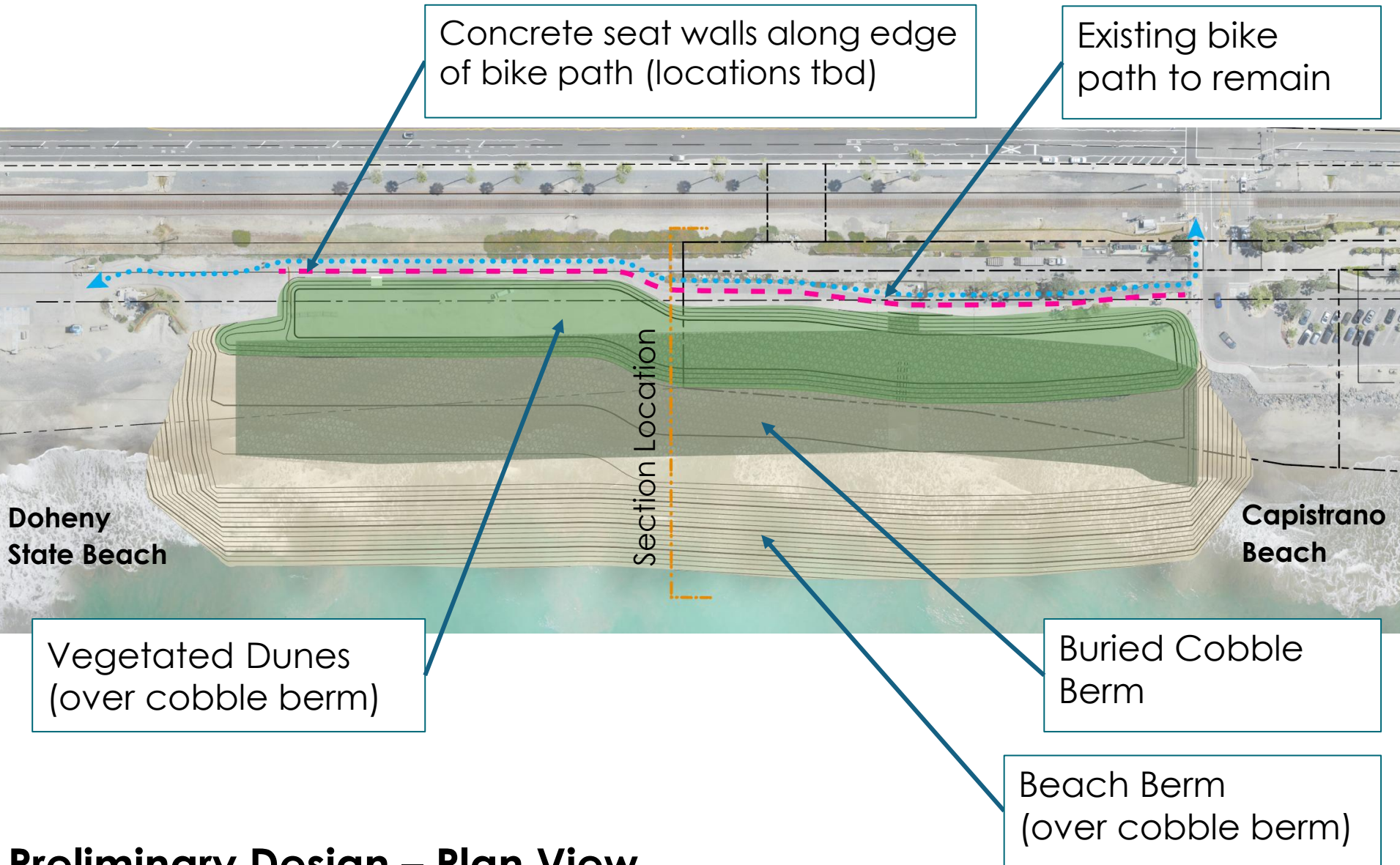
- Important design parameters are front slope, crest width, toe elevation, cobble volume, and crest elevation
- Include adaptive management plans



Example of **local natural cobble berm** cobble berm at North Ponto Beach, Carlsbad.

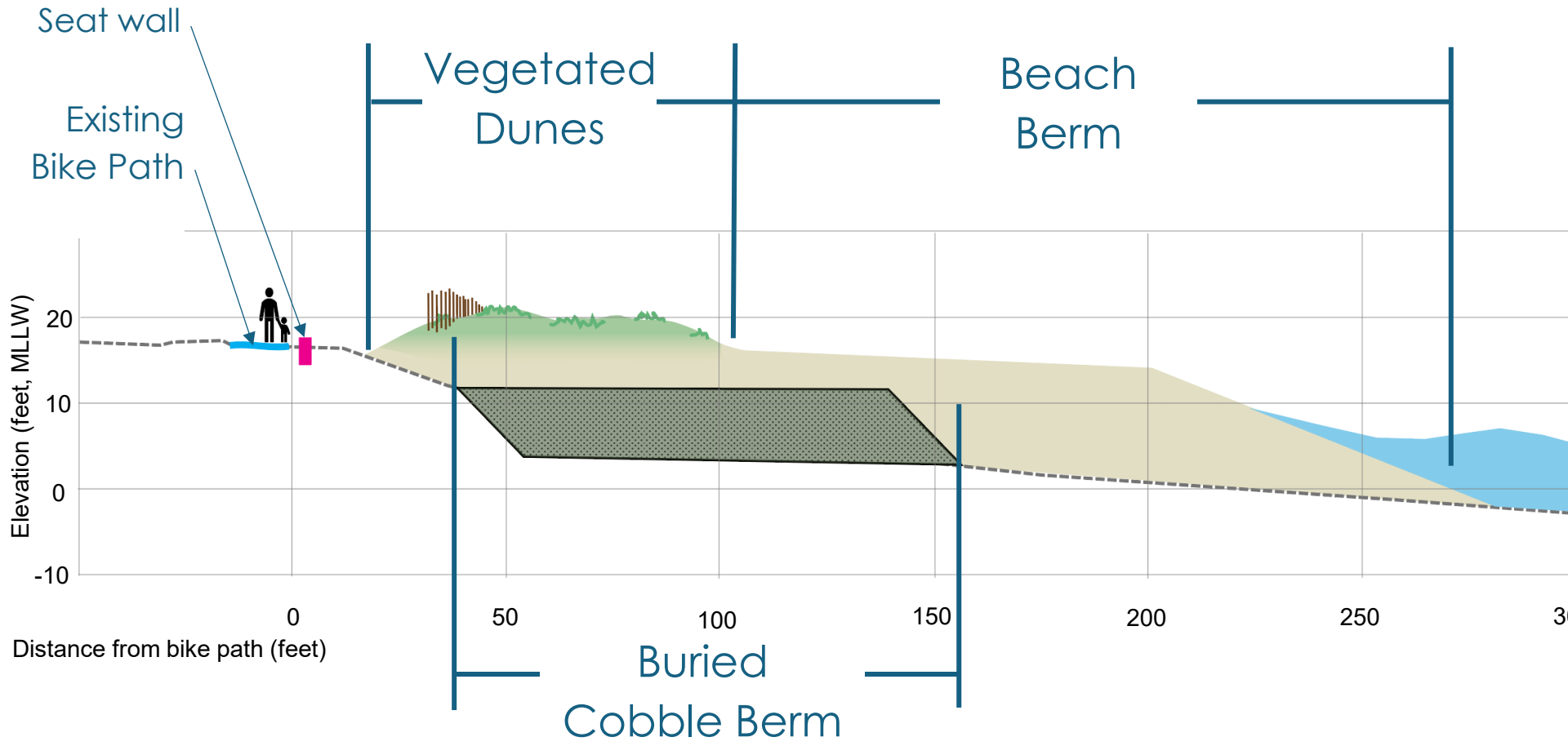
Berm is approximately 100' wide, with a volume of ~700-800 cf/ft

DESIGN OVERVIEW



Preliminary Design – Plan View

DESIGN OVERVIEW



Preliminary Design – Section View

Preliminary Design: artist rendering of buried cobble berm and vegetated dunes, looking north along existing bike trail



CAPISTRANO-DOHENY BEACH
NATURE-BASED SHORELINE ADAPTATION PROJECT

Community Meeting
November 13, 2025

Preliminary Design: artist rendering of buried cobble berm and vegetated dunes, looking north from Capistrano Beach entry drive



CAPISTRANO-DOHENY BEACH NATURE-BASED SHORELINE ADAPTATION PROJECT

Community Meeting
November 13, 2025

Preliminary Design: artist rendering of buried cobble berm and vegetated dunes, looking south along Coast Highway



CAPISTRANO-DOHENY BEACH
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Community Meeting
November 13, 2025

PROJECT STATUS

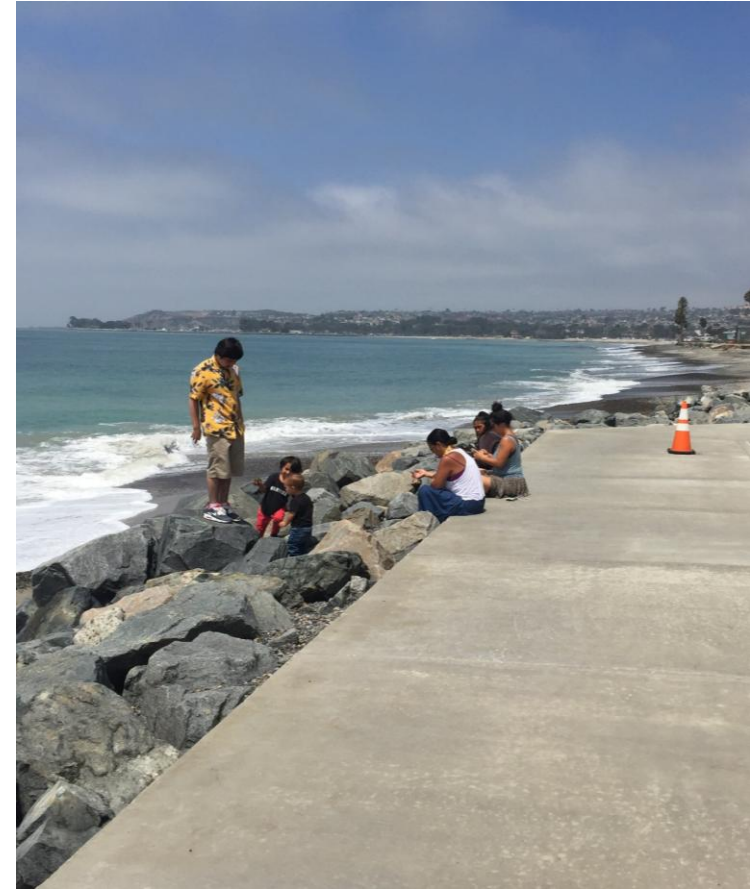
Design

- Preliminary designs shared tonight are about 35% complete
 - Additional work required includes detailed engineering, planting plans, permitting, and materials sourcing
 - Completion of design and permitting anticipated for Summer 2026
- Preparation of CEQA analysis is underway
 - Initial Study/Mitigated Negative Declaration (IS/MND) is anticipated
 - Public review period of draft IS/MND will be in the new year

PROJECT STATUS

Outreach and Engagement

- Additional community meeting anticipated for sharing final design in spring/summer 2026
- Tribal participation includes required consultation under CEQA as well as voluntary participation that will include additional outreach, tribal acknowledgement, review of plant palette and input on potential interpretive signage

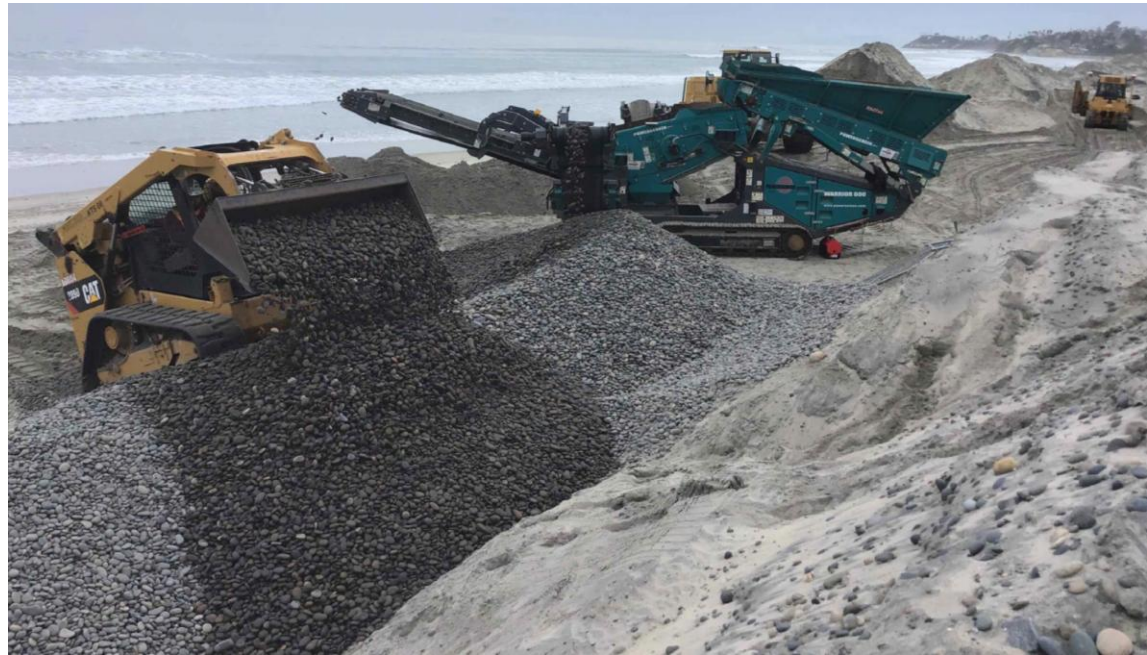


PROJECT STATUS

Construction and Monitoring

- Funding for design development and permitting secured through a \$422,00 Federal BRIC grant and a \$220,000 SB1 grant
- Construction is not yet funded; seeking funding from a variety of sources including State grants and federal sources
- Preliminary construction cost estimate is approximately \$20 million
- Materials sourcing is under study
- Once built, will be monitored for 5 years to evaluate performance

Cobble berm construction
at Cardiff State Beach



PROJECT STATUS

Interim Management

- **August 2021:** installation of sand cubes along bike trail and new entry
- **December 2021:** completed relocation of revetment and installation of sandbags
- **2023 and 2024:** opportunistic sand placement totaling 65,000 cy
- **2023 and 2025:** replacement of sand-filled geotextile units with revetment



Opportunistic sand placement

PROJECT STATUS

South Orange County Regional Coastal Resilience Strategic Plan

- Recommendations were made to develop a collaborative agency for the south Orange County region from Dana Point south to the county border
- **South County Beach Coalition** is being formed to encourage participating agencies to work collaboratively to prioritize needs and examine long-term improvement opportunities



June 2024
South Orange County Regional Coastal Resilience Project

South Orange County Regional Coastal
Resilience Strategic Plan



ASK AN EXPERT STATIONS

- **Design Overview**

- Information about the design, including the location, size, materials, and access

- **Shoreline Dynamics**

- Information about waves, water, sand and cobbles and how these dynamics influence project design

- **Beach Environment**

- A naturalist's perspective on the beaches

THANK YOU

Questions or comments?

CapoDohenyShorelineProject@ocparks.com

Project Website

<https://ocparks.com/beaches/capistrano-beach>

Mailing List

Sign up for the project mailing list by providing your email address at the sign-in table