

Policy Summit
"One California, One Coast"

Coastal Resiliency: Planning Policy & Project Implementation

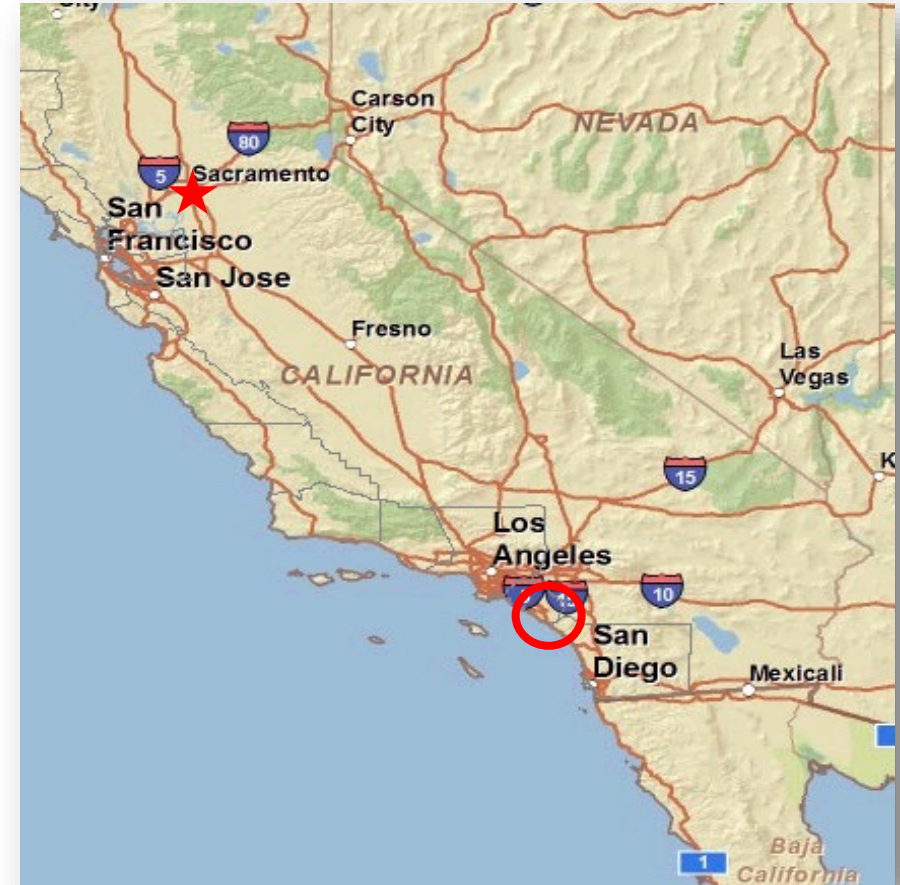
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San Clemente Overview

- 5 miles of coastline in the City
- 20+ acres of public beaches
- 15 public access ways
- Coastal bluff backed shoreline
- Entire shoreline is developed with existing structures
- The City's Coastal Zone extends inland to Interstate 5
- Approx. 15% of the City is within the Coastal Zone



San Clemente Coastal Zone



- LOSSAN rail corridor runs along City coastline
- Railroad sits atop a revetment

San Clemente Coastal Zone



❖ Existing structures + critical public infrastructure:

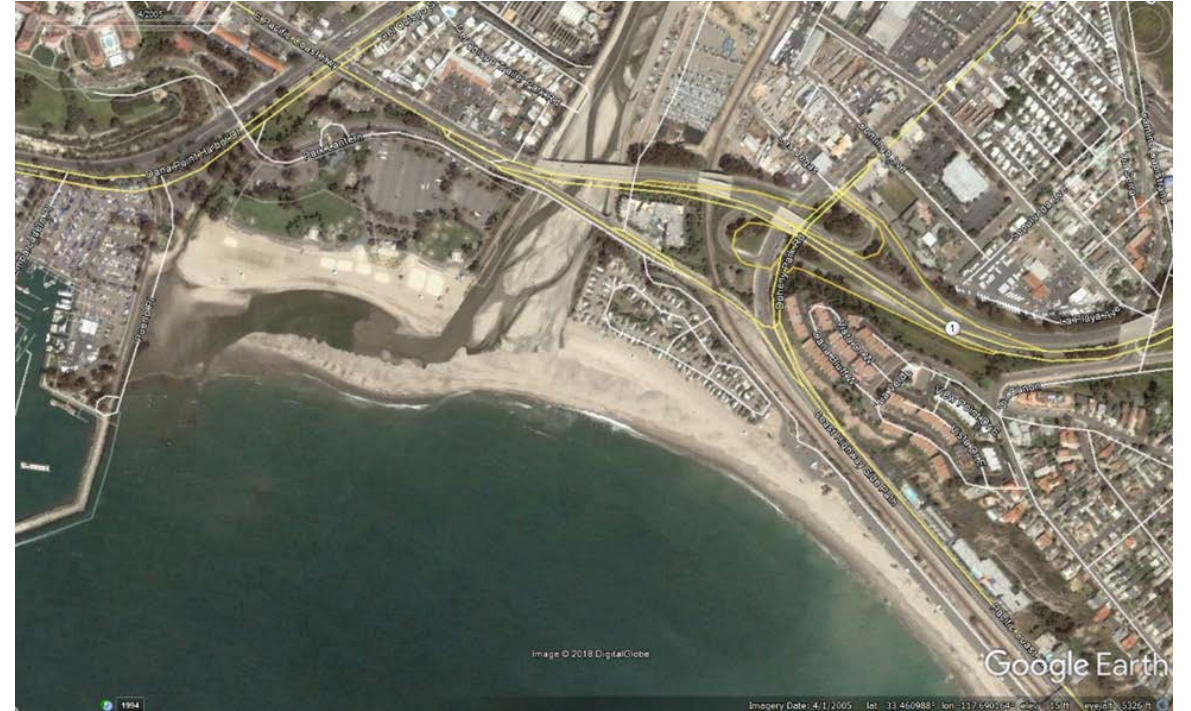
- Municipal Pier
- Marine Safety Headquarters
- Concessions
- Public Restrooms
- Beach parking

❖ Private homes on the beach

❖ California Coastal Trail, State Park & Beach, Public recreational amenities for visitors

Key Coastal Challenge: Loss of Sand

- Northern end (top) of the Oceanside Littoral Cell: Dana Point in the north to La Jolla in the south
- Primary sand supply has been San Juan Creek
- Sediments delivered to the beach have been drastically reduced over time
- Result = generally eroding shoreline and the loss of the public beach



North Beach



Capistrano Shores Mobile Home Park

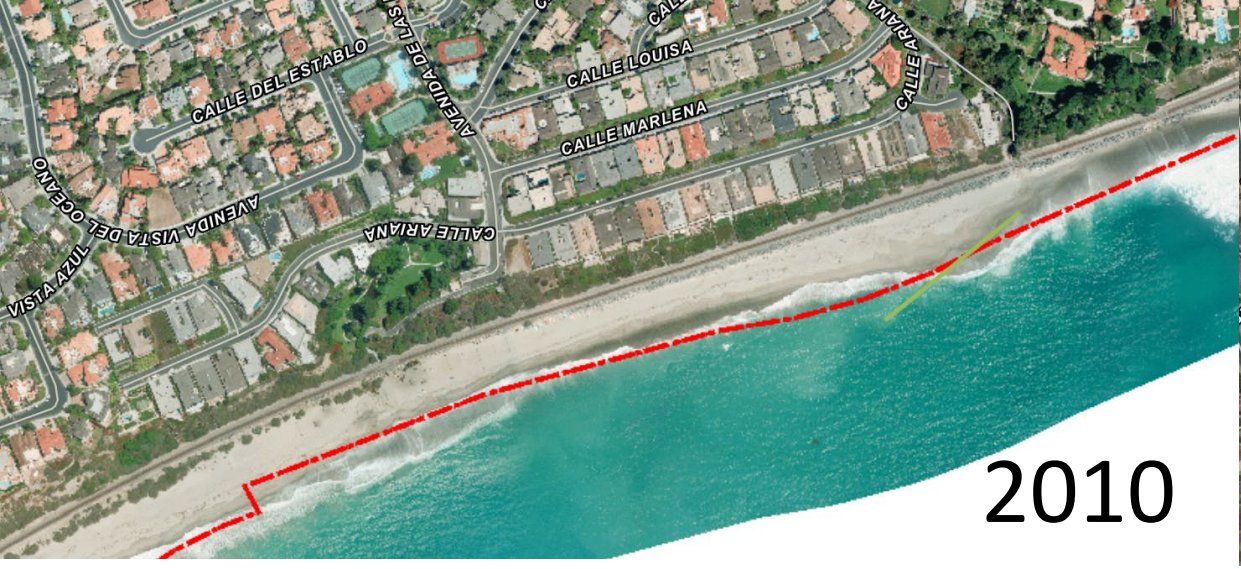
North Beach



Lifeguard Tower + Beach Restroom/Concessions

Key Coastal Challenges & Opportunities

- Ancient landslides along City coastline are being reactivated by loss of sandy beach
- Sandy beach functions as a natural buffer from wave energy
- Existing structures and railroad are being affected by the loss of the sandy beach
- City has been actively working to solve coastal erosion and hazards for more than two decades
- The City's solutions include policies, plans and projects highlighted on next few slides



Cyprus
Shores

Cyprus Shores - September 16, 2021



Cyprus Shores – May 2022



San Clemente Coastal Resiliency Solutions

San Clemente has begun implementing a Comprehensive Shoreline Management Program: neighborhood-scale endeavors to large federal projects

Example Resiliency Projects & Plans include:

- Winter Beach Berm Project (Ongoing)
- Opportunistic Beach Sand Placement Projects (2015-2020)
- Sea Level Rise Vulnerability Assessment (2019)
- Coastal Resiliency Plan (2021)
- Shoreline Monitoring Program (2022 - Ongoing)
- USACE 50-Year Beach Sand Replenishment Project (2023-2073)
- Nature Based Coastal Resiliency Project Feasibility Study (2022-2025)
- Regional Collaboration and Coordination



Resiliency Solution #1

San Clemente 50-Year USACE Beach Sand Project

- San Clemente has partnered with the USACE and State Parks
- Developed a 50-year beach sand replenishment project for the City
- EIR/EIS completed, and all regulatory permits obtained
- Project was authorized by U.S. Congress
- Federal and State funding has been secured
- Sand will begin to be placed this Fall (2023)
- 250,000 cubic yards of sand
- 7,800 linear feet of beach to be nourished
- Renourishment every 5 years to maintain beach profile



Photo Simulation: Before & After Beach Nourishment



Resiliency Solution #2

San Clemente Coastal Resiliency Plan

The Coastal Resiliency Plan recommended that the City:

- ✓ Restart shoreline monitoring program (originally initiated in 1986) to better understand beach conditions
- ✓ Closely track sea level trends using nearest local NOAA Tide Gage at La Jolla
- ✓ Pursue nature-based coastal resiliency solutions as a first priority
- ✓ Collaborate with local, regional, state and federal partners to promote coordinated efforts

Resiliency Solution #3: Nature-Based Coastal Resiliency Project Feasibility Study

Nature Based Study initiated in 2022, funded in part by a \$500,000 grant from the California Coastal Commission.

Goal: Advance shoreline protection and sand retention opportunities

Objectives:

- Identify feasible nature-based projects to reduce coastal erosion
- Maximize sand retention to widen sandy beach area
- Provide multiple benefits – public recreation and habitat
- Complement the upcoming USACE 50-year beach nourishment project

Resiliency Solution #3: Nature-Based Coastal Resiliency Project Feasibility Study

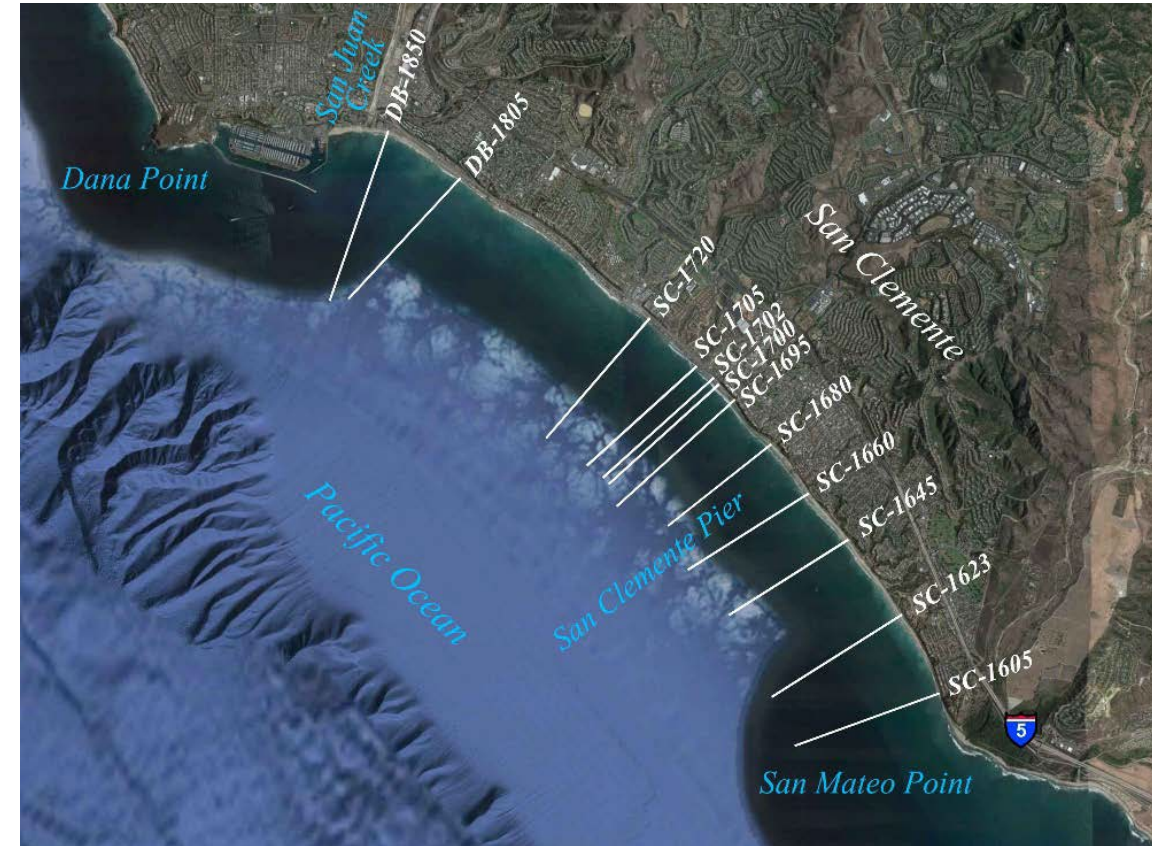
- Nature Based Solutions the City is exploring include:
 - Sand retention structures to retain sand placed by USACE through next 50-years
 - Re-establishing sand dune complex where there are still native habitat remnants
 - Creating a living shoreline (shore parallel structure) with cobble berms (shore perpendicular structure)
 - Offshore multi-purpose reef system - design to provide retention/habitat/recreation benefits

Resiliency Solution #4

Shoreline Monitoring Program

12 transects covering all of South Orange County

- Dana Point Harbor to San Diego County Line
- Data collected each Fall and Spring
- Data is reported to highlight shoreline trends
- Annual “State of the Coast” Presentation
- Beaches measure 0-238’ wide as of Fall 2022



Shoreline Monitoring Program (Continued)



- Shoreline monitoring to identify eroding areas and map beach sand movement
- inform the City's Nature Based Coastal Resiliency Feasibility Study
- Data is public and is being shared with
 - City of Dana Point
 - County of Orange
 - Orange County Transportation Authority

Resiliency Solution #5

Ongoing Regional Collaboration

- San Clemente is coordinating with the County of Orange, Parks Department (OC Parks)
- San Clemente is coordinating with the Orange County Transportation Agency (OCTA)

San Clemente: No Certified LCP

- Original Land Use Plan (LUP) certified in 1988
- Comprehensive LUP update approved in 1996
- Implementation Plan (IP) approved in 1996 but CCC suggested modifications not accepted by City
- LUP was comprehensively updated and certified again in 2018
- Updated Draft IP is in progress and is anticipated to be completed by the end of 2023 – Main Issue Areas:
 - Major Remodel - Section 30253 CA
 - Existing - Section 30235 CA

Promoting Resilient San Clemente

- Coastal erosion threatens the City's triple bottom line
 - Community character
 - Local environment - coastal recreation and resources
 - Local economy - 2.6M annual visitors to the City = \$37M/Year

Inaction → is not an option.

Failing to plan....is planning to fail.



Thank you for your time!



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