

# Managed Shoreline Retreat, Surfers' Point, Ventura, CA



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**MANAGER, SURFRIDER**  
**FOUNDATION**



# Managed Shoreline Retreat Surfers' Point, Ventura, CA

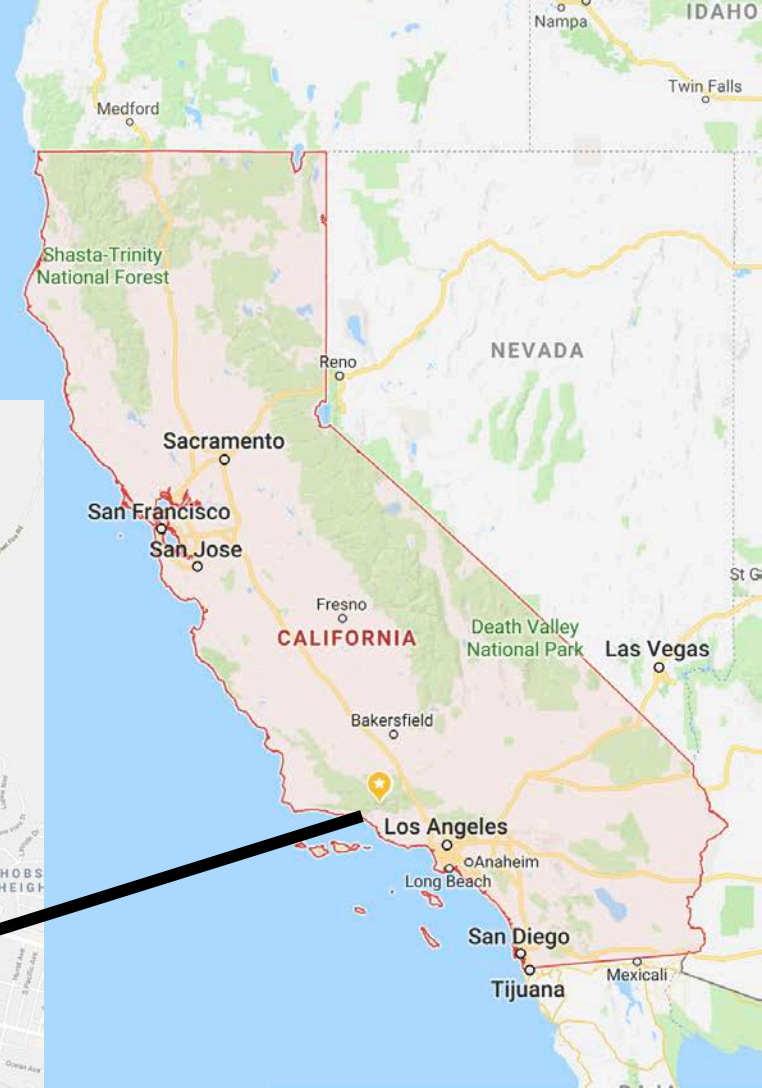
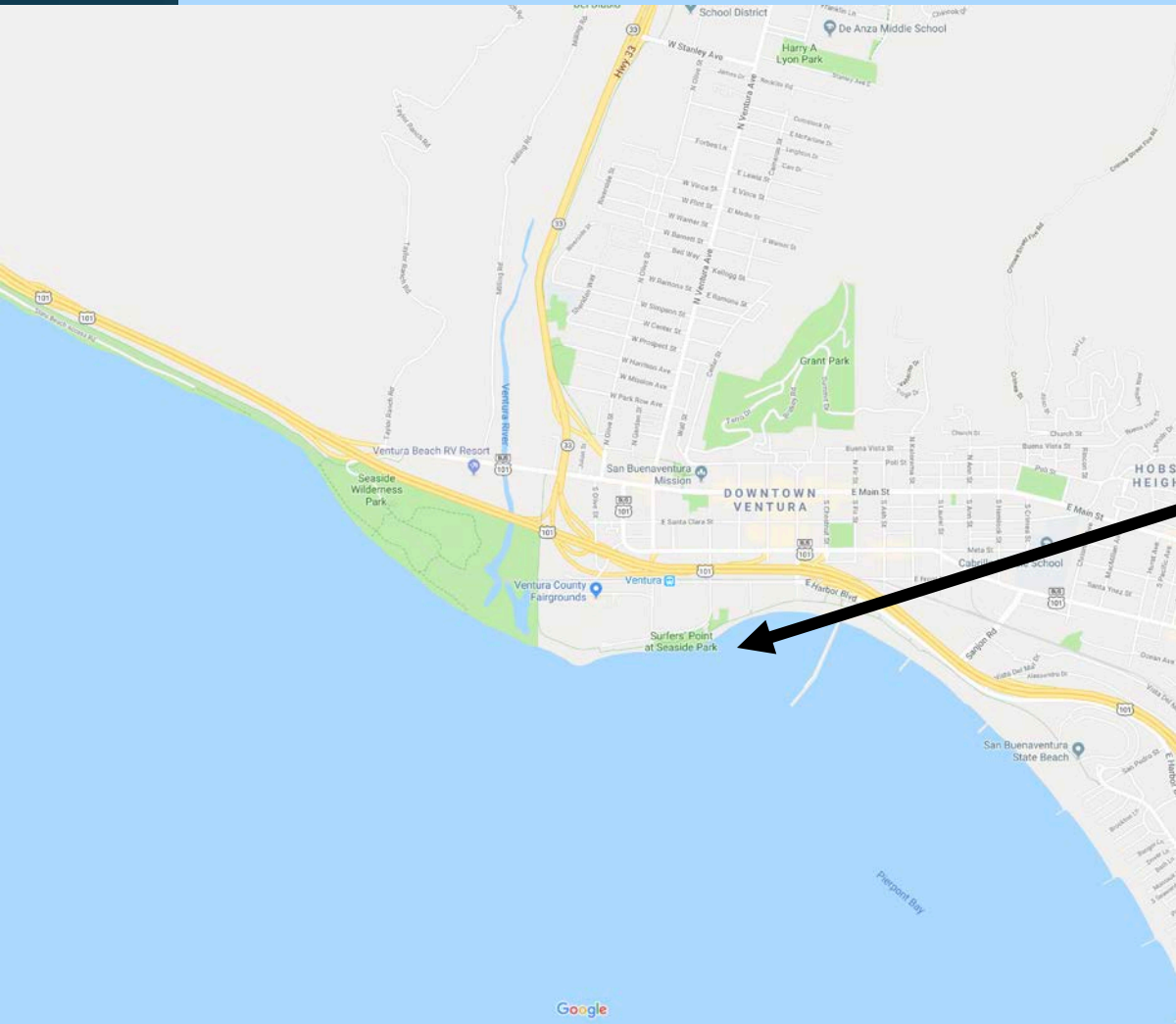
Presented by: Stefanie Sekich-Quinn on behalf of Paul Jenkin

*Surfrider Foundation*

# Surfers' Point, Ventura, CA

- [https://www.youtube.com/watch?v=4eYxM\\_3cAyg&feature=youtu.be](https://www.youtube.com/watch?v=4eYxM_3cAyg&feature=youtu.be)

# Surfers' Point, Ventura, CA









# Shoreline History: 1929 to 1994





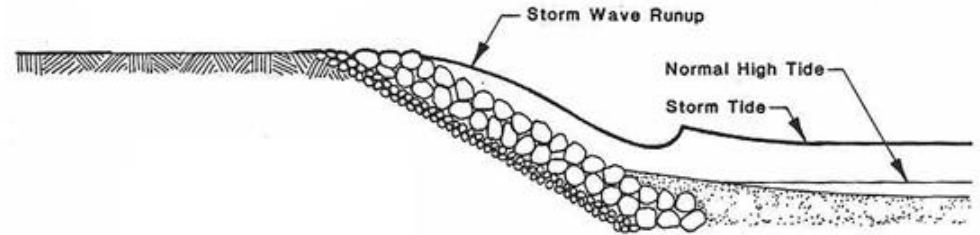
...1995 - a bike path or a beach?



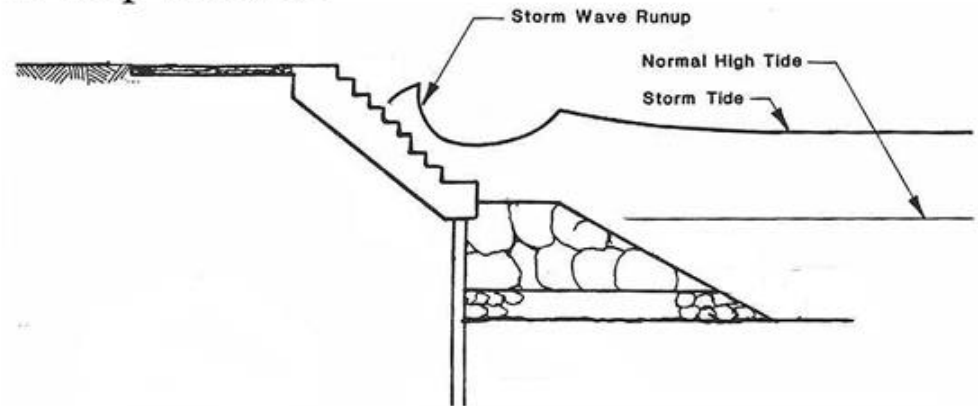
1995  
options:

Typical  
response  
to coastal  
erosion

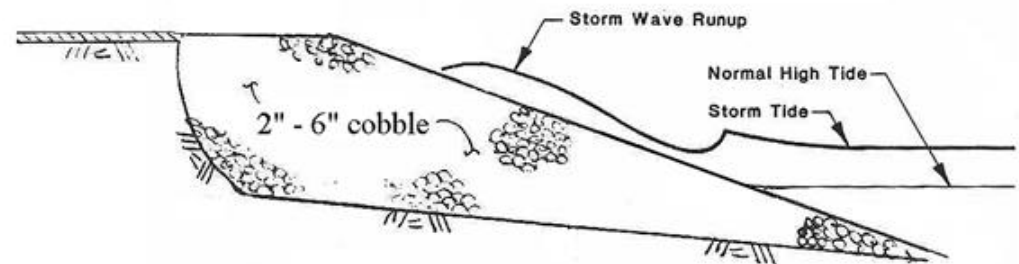
### 1. revetment



### 2. step seawall



### 3. cobble berm

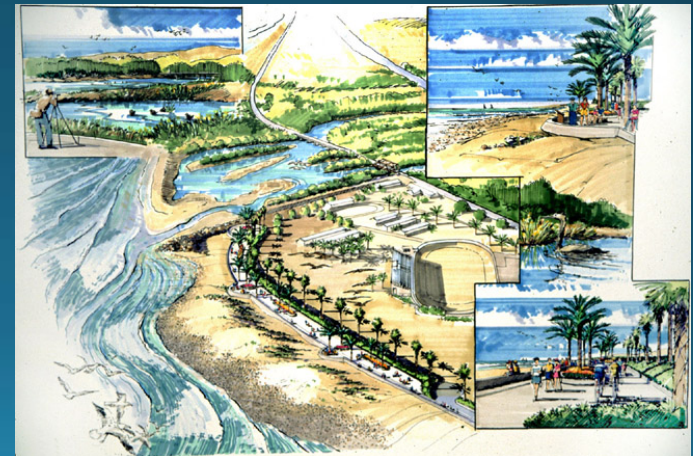


# The future...



# Early history

- 1989 Fairgrounds Improvements. Path and parking
- 1991 Erosion Damage
- 1992 Emergency Revetment
- 1995 Working Group Formed
- 1996 Conceptual Plan Approved
- 1997 A plan, but no funding.
- 1998 Grants (\$1.45 million)



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# Working Group

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- Ventura County Fairgrounds/31<sup>st</sup> Agricultural District
- City of Ventura
- California State Parks
- California Coastal Commission
- California Coastal Conservancy
- State Legislators
- Surfrider Foundation
- Full Sail Windsurfing Club
- Ventura County Bicycle Coalition

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# Project Goals

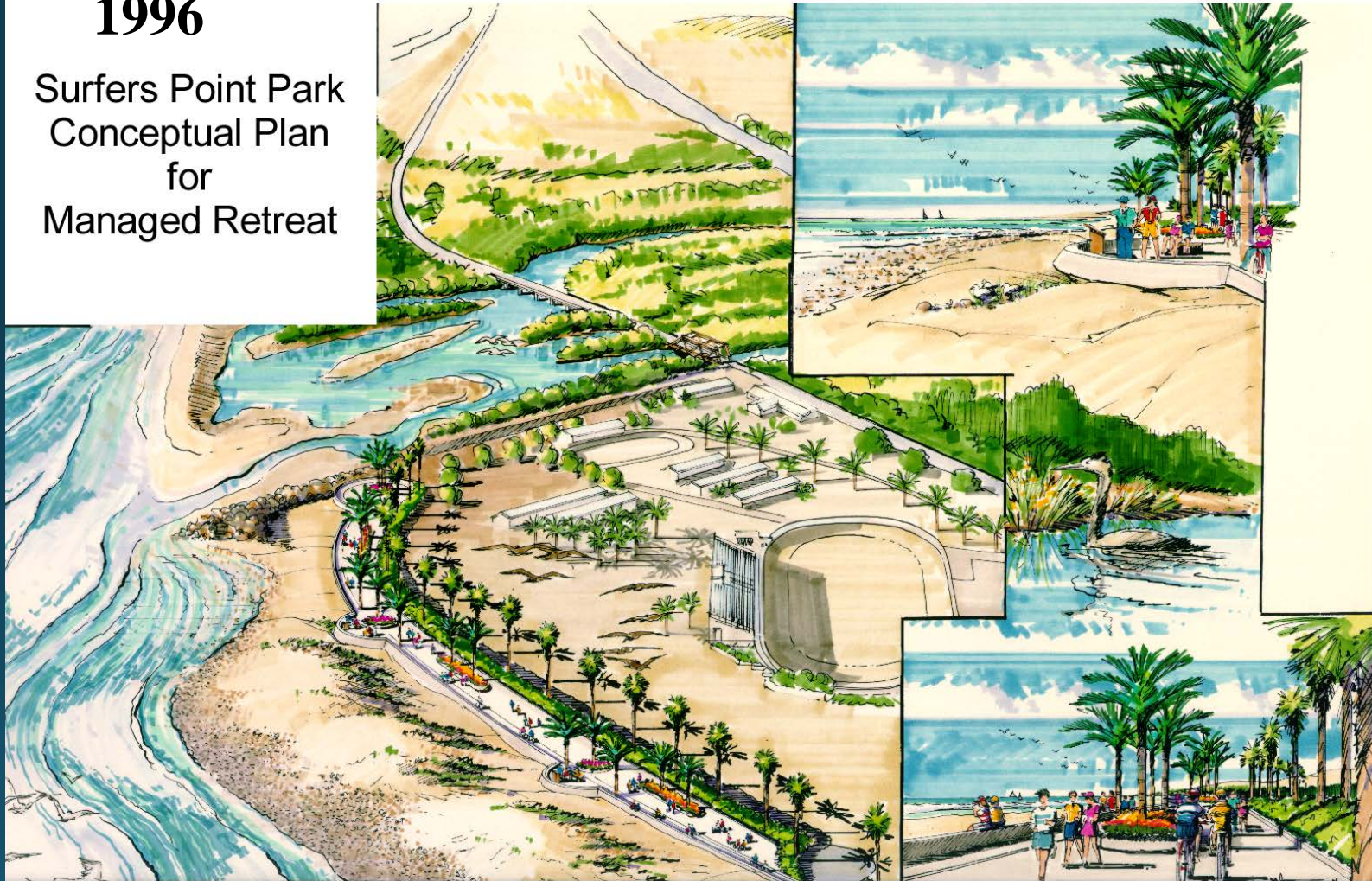
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- Protect Shoreline Drive and Bike Path from Future Erosion
- Replace Lost Parking
- Stabilize Shoreline
- Relocate Bike Path
- Restore Area to a More Natural Setting

# "Managed Shoreline Retreat"

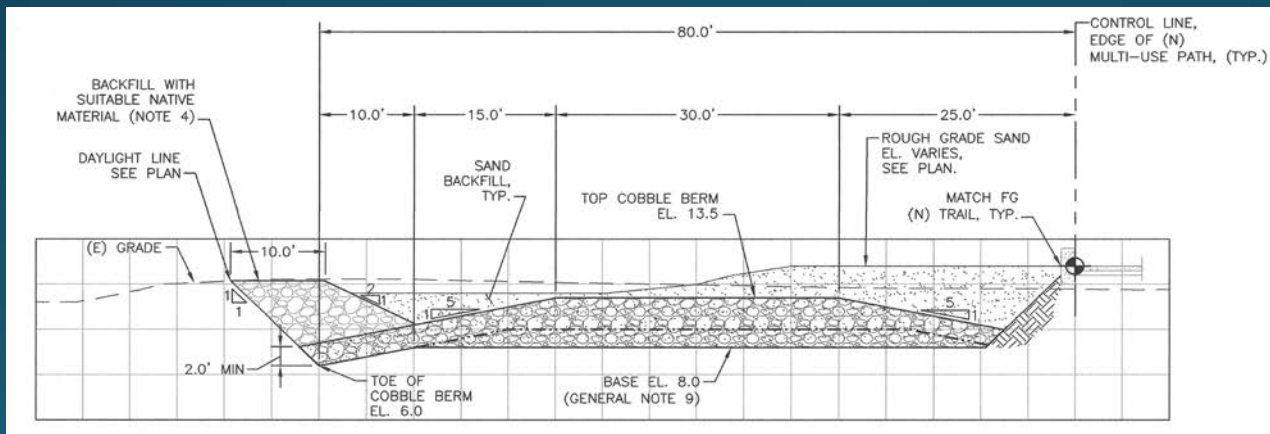
**1996**

Surfers Point Park  
Conceptual Plan  
for  
Managed Retreat



# Project Timeline (cont)

- 1999 Preliminary Coastal Engineering. City Approved
- 2000 Cobble Nourishment Pilot Project
- 2002-2003 Environmental Impact Report
- 2008 MOU Between Fair Board and City
- 2007-2009 Final Design/Permits





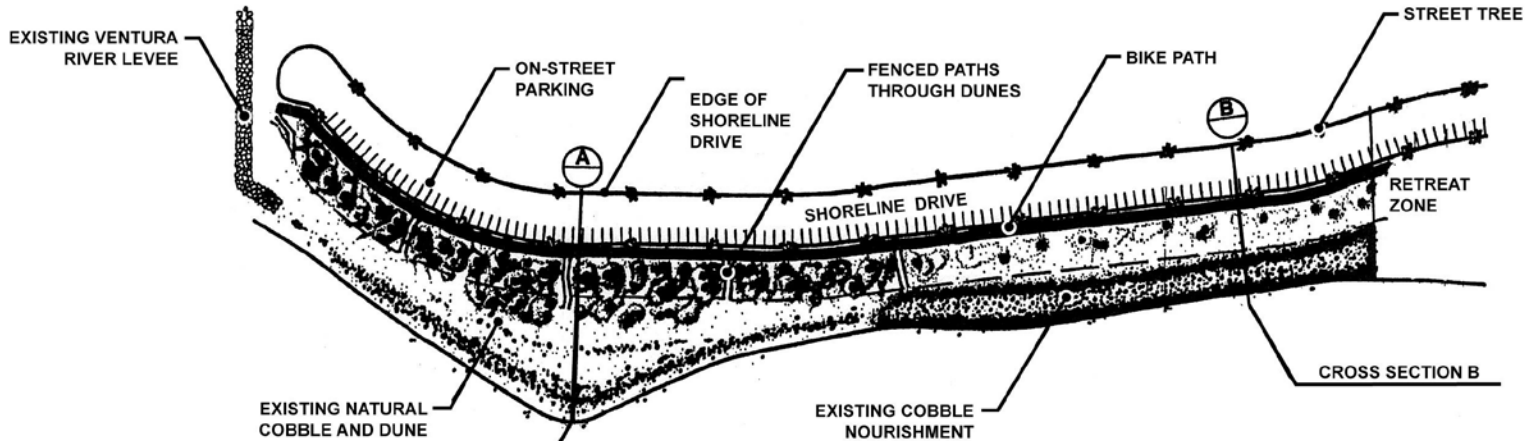


Cobble Nourishment Pilot Project September 2000

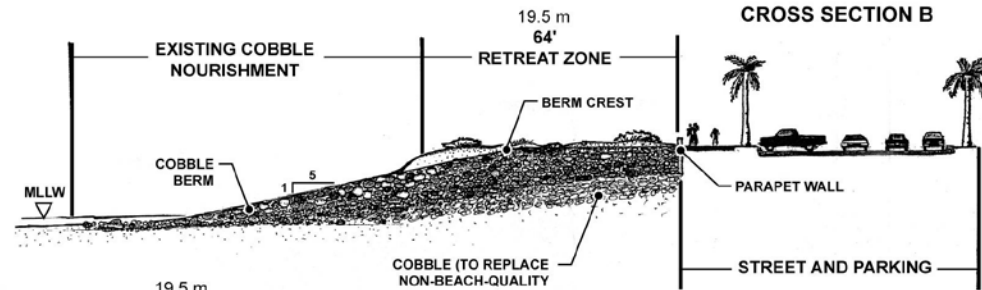
# EIR Preferred Alternative

## Alternative 5: Preferred Alternative

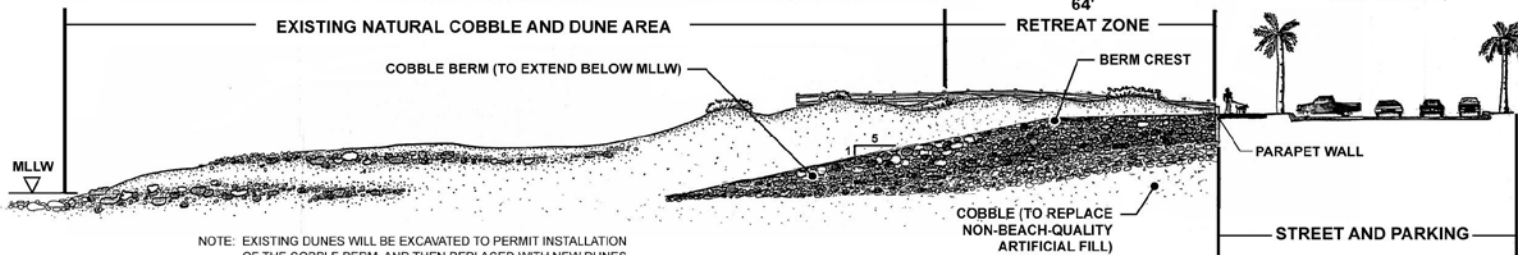
PLAN VIEW



CROSS SECTION A



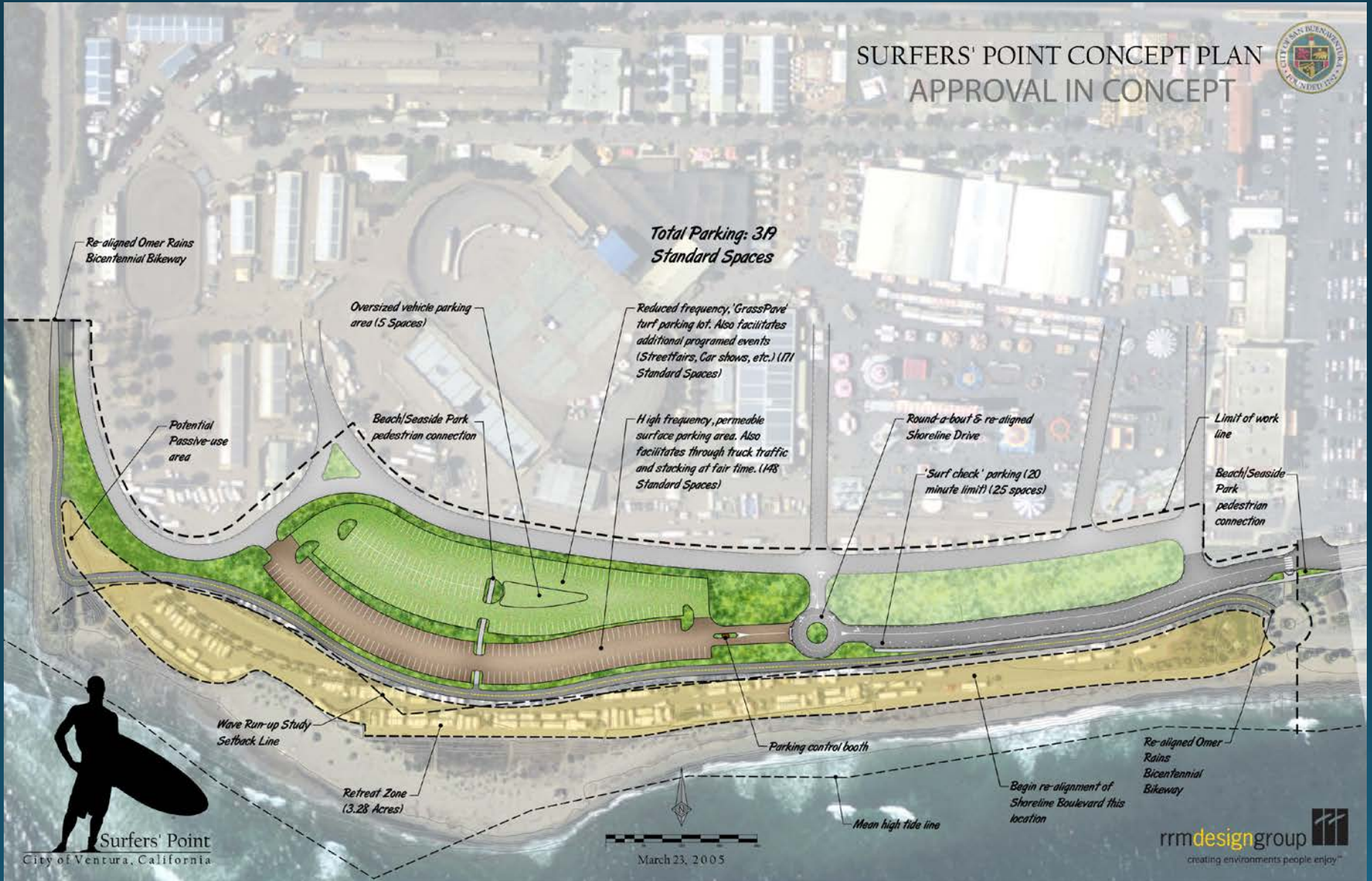
CROSS SECTION A



NOTE: EXISTING DUNES WILL BE EXCAVATED TO PERMIT INSTALLATION OF THE COBBLE BERM, AND THEN REPLACED WITH NEW DUNES.

# Surfers Point Concept Plan

SURFERS' POINT CONCEPT PLAN  
APPROVAL IN CONCEPT



March 23, 2005

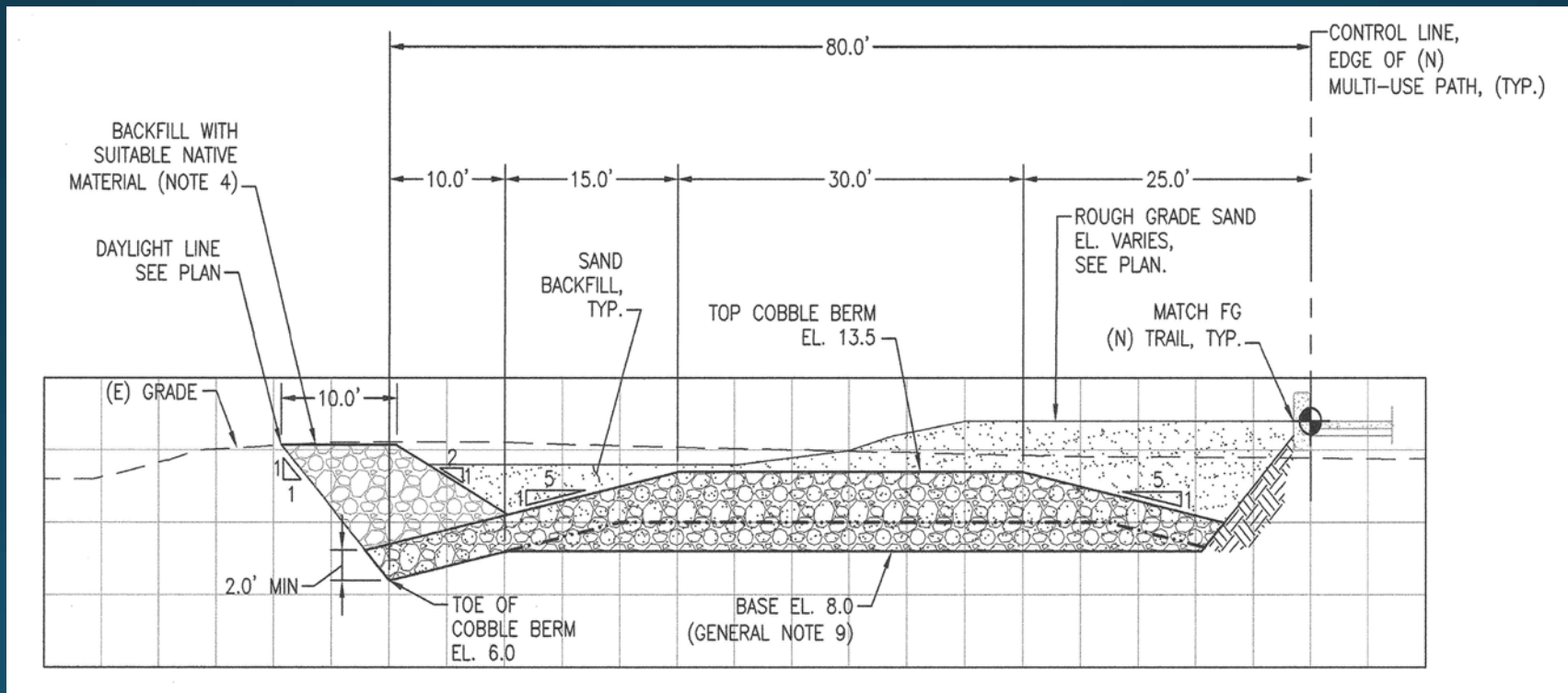
PERSPECTIVE VIEW LOOKING WEST  
APPROVAL IN CONCEPT



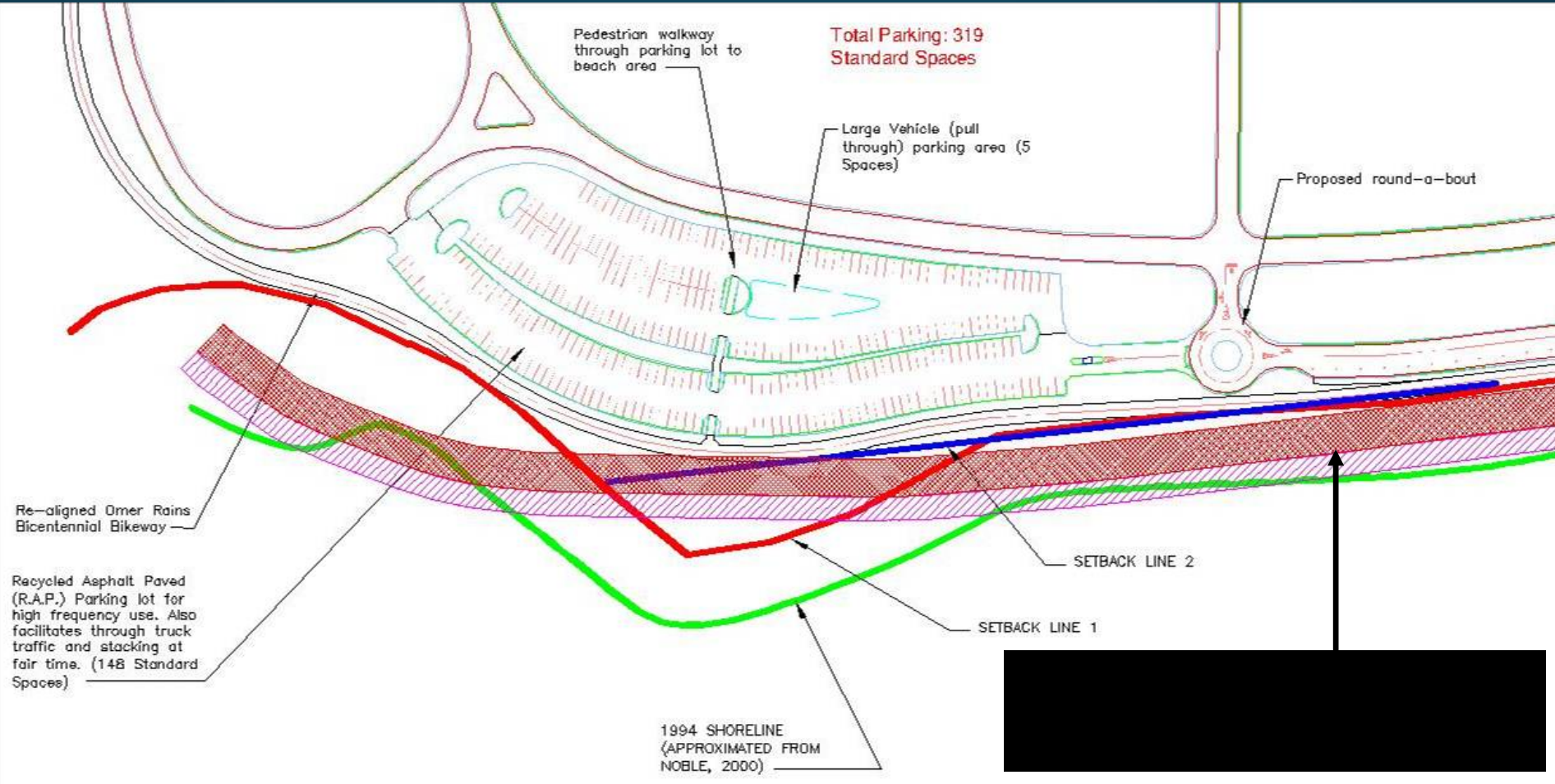


# Overview of Design

- 2005 Final Design
  - PWA/ESA - Coastal engineering & design
  - RRM Design Group – landward improvements



# Proposed Cobble Berm and Setback Lines



# Beach Cross-section





# SURFERS' POINT MANAGED RETREAT PROJECT (PHASE I)

## THE CITY OF VENTURA AND VENTURA COUNTY FAIRGROUNDS ARE PRESERVING OUR BEACH!

Ventura's beaches are a natural asset and vitally important to the overall economy and quality of life in our community. Beaches provide endless recreational opportunity and enjoyment for residents and visitors to Ventura each year.

### SUSTAINABLE SOLUTION

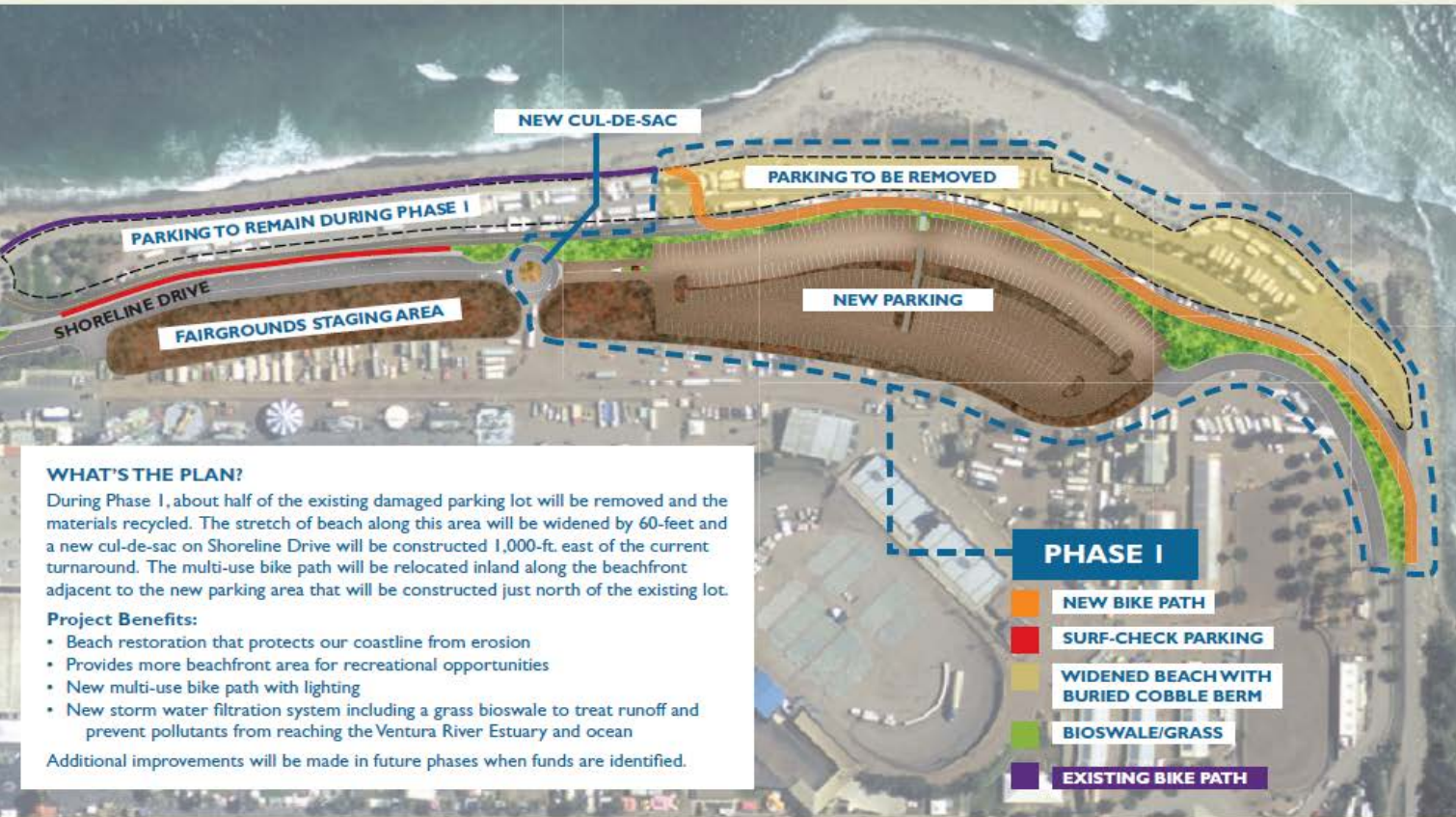
To protect our beach from erosion, we are pursuing an environmentally friendly and economically viable option that will replicate the natural protective characteristics of the beach. While hard structures, like seawalls, are sometimes used to protect the shoreline, they inevitably lead to loss of sand and beach area. We have adopted a more sustainable solution by initiating a "managed retreat" approach. This process involves relocating the damaged bike path and parking lot. A buried cobble berm will be installed, mimicking what occurs naturally at the river mouth, which will stabilize the shore and help prevent future damage. Over 26,000 tons of imported cobblestone will be buried along the ocean's edge and will be covered with 18,000 tons of new sand that is compatible with the native beach sand.

### COMMUNITY PARTNERSHIPS

Mitigating the erosion along the coastline is limited by strict environmental regulations. That is why we partnered with the California Coastal Conservancy, California State Parks, the State Coastal Commission, Surfrider Foundation and the Ventura County Bicycle Coalition to restore and protect our shoreline. It is because of these creative and collaborative partnerships that we secured an environmentally sensitive and innovative approach to protect our beach and preserve public access.

### Funding Sources

\$1.5M Federal Transportation/Bikeway Grant  
 \$1.5M State Coastal Conservancy  
 \$350,000 City of Ventura Bond



### WHAT'S THE PLAN?

During Phase I, about half of the existing damaged parking lot will be removed and the materials recycled. The stretch of beach along this area will be widened by 60-feet and a new cul-de-sac on Shoreline Drive will be constructed 1,000-ft. east of the current turnaround. The multi-use bike path will be relocated inland along the beachfront adjacent to the new parking area that will be constructed just north of the existing lot.

### Project Benefits:

- Beach restoration that protects our coastline from erosion
- Provides more beachfront area for recreational opportunities
- New multi-use bike path with lighting
- New storm water filtration system including a grass bioswale to treat runoff and prevent pollutants from reaching the Ventura River Estuary and ocean

Additional improvements will be made in future phases when funds are identified.

### PARKING DURING CONSTRUCTION

Beachgoers will have access to the shore and bike path during construction. Ample parking will be available at the remaining portion of the existing parking area along the beachfront and paid parking at the Derby Club/Ventura County Fairgrounds parking area; 20 minute "surf-check" parking will be added along the south side of Shoreline Drive prior to construction.

Construction is scheduled to begin in September 2010 and is slated for completion in May 2011. Construction crews will be on site Monday-Friday from 7 am-5 pm. For more information visit [www.cityofventura.net](http://www.cityofventura.net) or call Mark Garcia at (805) 658-4789. Contractor: C.A. Rasmussen

### BURIED COBBLE BERM



# Project Timeline (cont)

- Construction (2010-2011)
- Dunes (2012-2013)



# Phase I Construction

- Remove approx. half of existing damaged parking lot
- Widen a 900-foot long stretch of beach by over 60 feet
- Bury 26,000 tons of cobble
- Cover cobble with 18,000 tons of sand
- Relocate 1,200 feet of multi-use bike path
- Construct permeable parking to manage rainwater
- Install grass bioswale acting as a storm water system

# Excavation



# Cobble Import & Placement



# Sand Infill & Topping



# Hardscape and Dunes



Sand was imported from an opportunistic nearby source in 2012

# Volunteer-based Dune Vegetation Establishment and Management







Jun 5, 2009

Image USDA Farm Service Agency  
© 2015 Google

©2010 Google

100 m

Imagery Date: May 25, 2009

34°16'25.89" N 119°18'17.44" W elev 0 m

Eye alt 344 m

Surfer's Point, Ventura, California, May 25, 1994 before project. Road, parking lot, vegetation, beach and cobble shoreline are visible in lower half of the photograph.



Image © 2015 DigitalGlobe  
© 2015 Google

©2010 Google

Imagery Date: Aug 29, 2011

34°16'25.89" N 119°18'17.44" W elev 0 m

Eye alt 345 m

Surfer's Point, August 29, 2011 during project. Road, parking lot and bikepath have been reconfigured inland of former locations. Bare sand area covers area where cobble was placed. Patch of older vegetation remains at lower center and right of photograph. The Ventura River levee is visible at upper left.

Aug 26, 2012



100 m

© 2015 Google

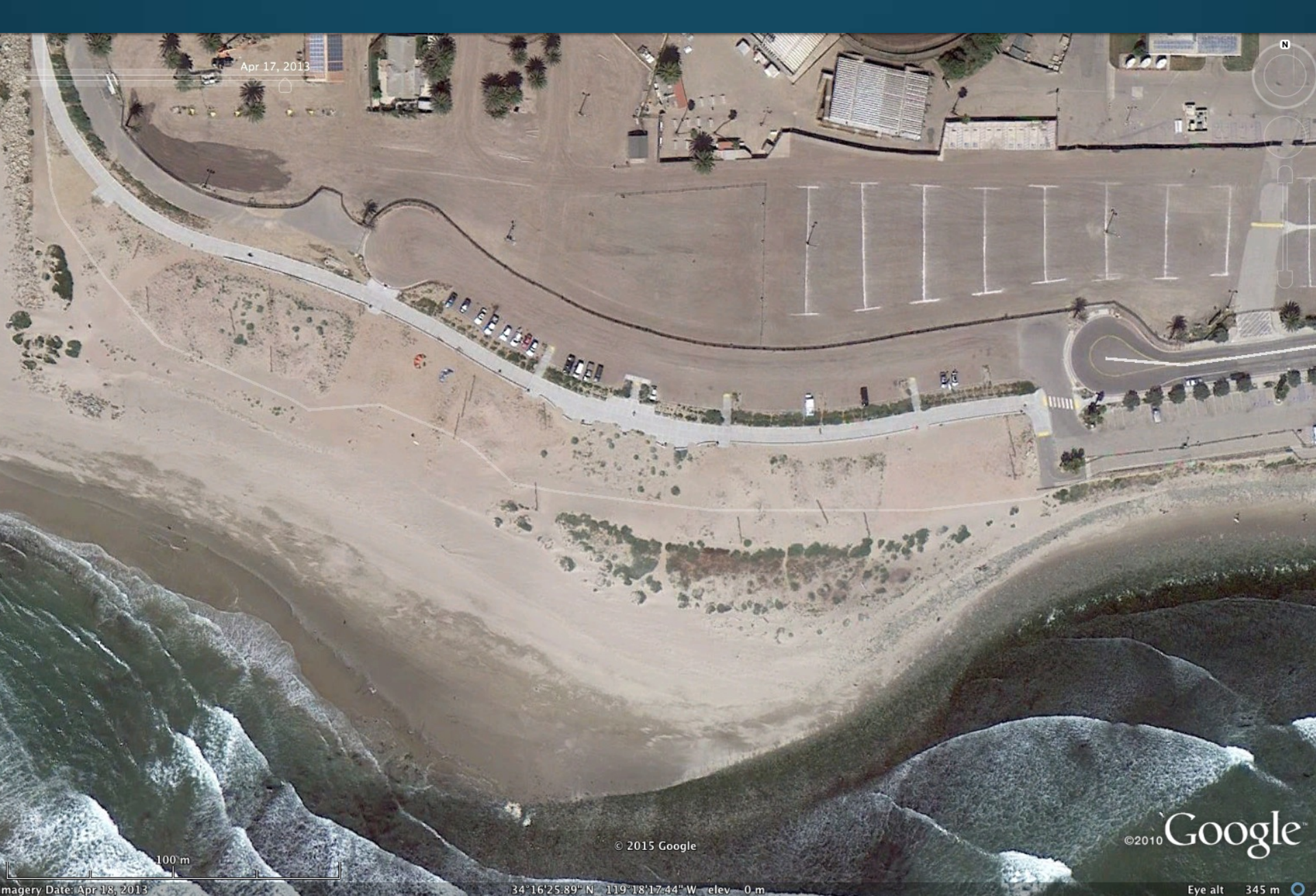
© 2010 Google

Imagery Date: Aug 27, 2012

34°16'25.89" N 119°18'17.44" W elev 0 m

Eye alt 345 m

Surfer's Point, August 27, 2012 during project. Dark lines on bare sand areas are temporary sand fencing installed to slow wind-driven sand movement. Dark patches in the sandy area are a mix of native plants and weeds introduced to the site (as seeds and vegetative propagules) when the sand was imported. Note the establishment of vegetation in the swale between the bikepath and parking lot.



Apr 17, 2013

100 m

© 2015 Google

© 2010 Google

34° 16' 25.89" N 119° 18' 17.44" W elev 0 m

Eye alt 345 m

Surfer's Point, April 18 2013. Four months after placement of dune sand, seeding, stabilization of dunes with crimped rice straw, installation of temporary sand fencing and fencing to concentrate foot traffic on designated paths. Dune vegetation is visible as small, dark dots in the sandy area. Swale vegetation has filled in considerably since the August 27, 2012 photograph.



Dec 31, 2014

100 m

© 2015 Google

©2010 Google

Eye alt 345 m

Imagery Date: Jan 1, 2015

34°16'25.89" N 119°18'17.44" W elev. 0 m

Surfer's Point January 1, 2015. Dune vegetation has increased greatly since the April 18, 2013 photograph. The square gap in the vegetation on the left side is a designated kite-surfing launch area. Plants which grew from seeds are now blending in with the older vegetation along the southern edge of the site. Vegetation is also sparse at the east end in a surf contest staging area and in the rock garden within the boardwalk loop where people are encouraged to play.

# Overall Improvements

Before (1995)



After (2015)



# Enhanced Coastal Resilience

Runup during extreme event  
Dec 11, 2015



# Aesthetics, Recreation, Habitat, Access





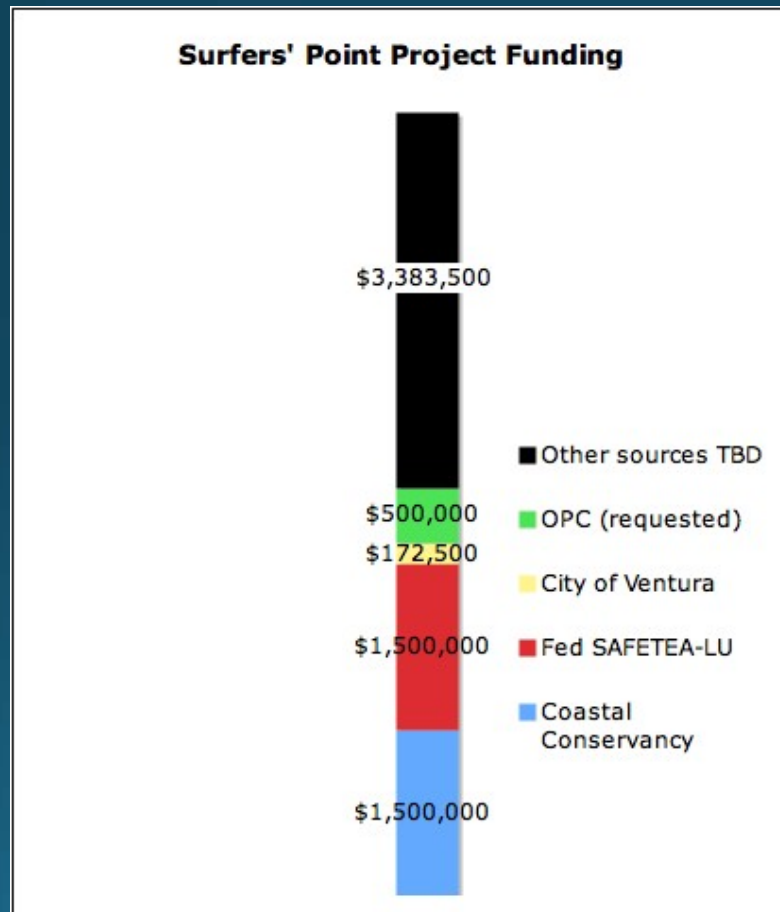


*3-10-17 R. Wilborn Virtual Terrain Tours*



3-10-17 R. Wilborn Virtual Terrain Tours

# Phasing Plan took advantage of Partial Funding



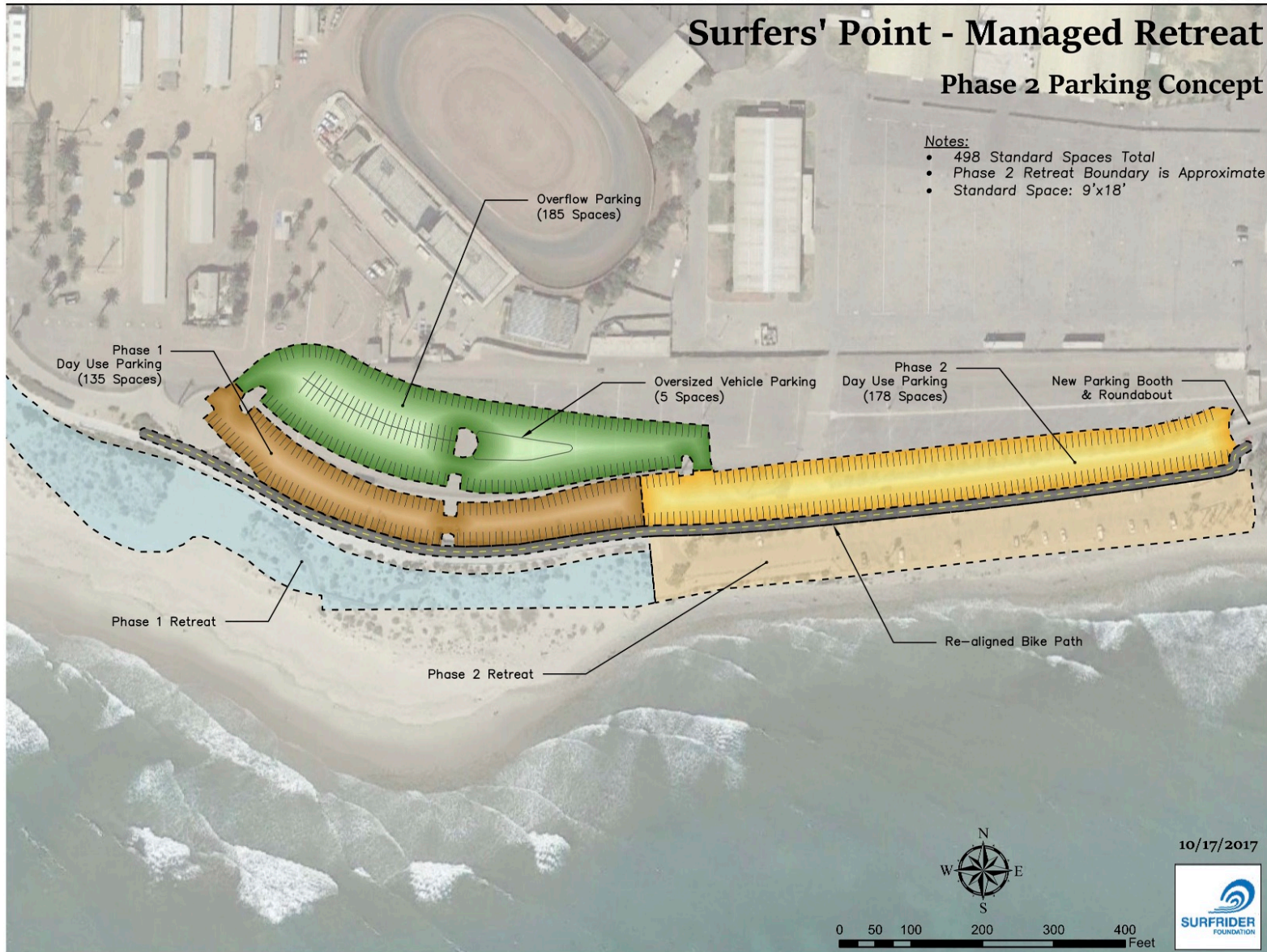
# Surfers' Point - Phase 2 Planning

## Surfers' Point - Managed Retreat

### Phase 2 Parking Concept

Notes:

- 498 Standard Spaces Total
- Phase 2 Retreat Boundary is Approximate
- Standard Space: 9'x18'





Surfrider  
Foundation

***Give a Dam, Free the Sand***

**GROW THE BEACH**



# Surfers' Point as a Case Study

coastalmanagement.noaa.gov/initiatives/shoreline\_ppr\_retreat.html

U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration

This Site NOAA Search

National Oceanic and Atmospheric Administration [US] https://toolkit.climate.gov/taking-action/restoring-surfers-point-partnerships-persistence-pays

U.S. Climate Resilience Toolkit

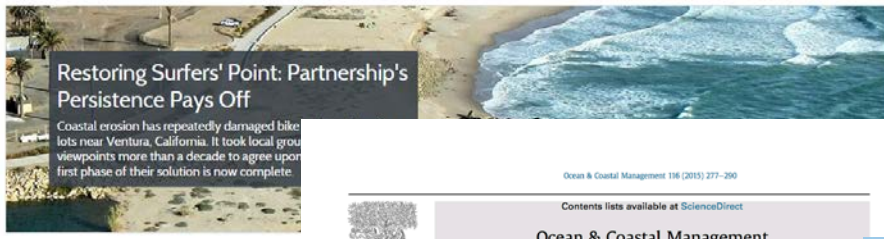
Get Started **Taking Action** Tools Topics Expertise

About Contact Funding Opportunities FAO

- Managed Case Studies
- Pacific
  - Multi-View

**Overview**

Managed unimpeded are either that in more or non-st efforts are ultimately establish this appropriate long-term small enc assistanc their prop approach of shoref or repeat



**Stressors and impacts**

In 1992, the City of Ventura, California, saw the return of path along the beach at Surfers' Point was eroding away portions of the bike path, as well as the parking lot at the area ultimately led to further damage. By 1997, crumbling fences erected to keep people from danger made the area

**A long road to consensus**

In 1995, a working group that included city planners, the Commission, the Ventura County Fairgrounds, the Surf

**Benefits:** Usually less expensive than costly temporary solution, especially in highly erosive shoreline habitats to migrate inland as the shoreline recedes.

**Drawbacks:** Can be politically difficult to implement already occurred. May cause depreciation of shoreline.

**Case Studies:**

Ocean & Coastal Management 116 (2015) 277–290

Contents lists available at ScienceDirect

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journal homepage: www.elsevier.com/locate/ocecoaman

**Factors influencing local decisions to use habitats to protect coastal communities from hazards**

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**ABSTRACT**

Coastal hazard mitigation policy in the US has historically focused on construction infrastructure. Recently, there is increased public interest and policy supporting natural infrastructure (NI), following decades of increasingly supportive economic evidence. This trend suggests that behavioral and institutional factors for mainstreaming NI. To understand what factors affected decisions to use NI structured interviews with a total of 46 individuals associated with three NI Living Shoreline, Maryland (MD); Surfer's Point Managed Retreat, California (CA); and Living Shoreline, North Carolina (NC). Our grounded theory analysis of the interviews identified four common themes across the decisions: 1) perception of benefits (N = 45); 2) diffusion of innovation led by innovators (N = 34); 3) local champions (N = 46); and norms (N = 30). This grounded theory suggests that the decisions to use innovators (citizens, local non-governmental organization (NGO) staff, and/or state managers) who were influenced by seeing NI successes implemented by trusted NI benefits beyond protecting coastlines (e.g., maintaining coastal heritage and innovators also acted as local champions, getting others "comfortable" with NI interests. In addition, our analysis shows the role of regulatory permitting requirements or controlling biases against innovations like NI. In 2008, MD passed a policy that against NI by changing NI from a preferred option to the required option except in analysis suggested that gray infrastructure would be needed, while in CA and remains only a preferred option. These results suggest an opportunity to have visual demonstrations and messaging from trusted persons, in addition to policy in places where there is evidence that it would be effective. These results also could result in biases that not only lead to underuse but also to inappropriate use similar to the policy in Maryland, are needed to control these biases.

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## Case Studies of Natural Shoreline Infrastructure in Coastal California

A COMPONENT OF IDENTIFICATION OF NATURAL INFRASTRUCTURE OPTIONS FOR ADAPTING TO SEA LEVEL RISE

# Conclusions

- Managed retreat widened the beach
- People enjoy the new path and beach areas
- Multi-jurisdiction complicates the process.

# Recommendations

- Engage agencies and local public interest groups
- Align state and federal funding sponsors
- Choice of materials is very important
- Advocate for new State funding sources
- Frame federal funding as transportation and park improvements. Harder to get for “climate adaptation”
- Provide public access and general information
- Respect The Beach



# Additional Managed Retreat Examples

- Oregon—home relocation (+)
- Cayucos WWTP—denied permit in favor of relocation (+)
- Sloat—multi levels (+) (-)
- Goleta Beach—hardscape removal, relocation path & utilities. (+) (-)
- Montauk lighthouse (-)





# Challenges Hinderling Adaptation

- Striking a **balance** between public and private interests.
- **Triggers** promoting adaptation.
- Lack of economic analysis on relocation of structures and armoring.
- **Coastal Hazard Zone Overlays**—prioritize structure removal, rezoning at-risk areas to open space, and new developments.
- **Inventory: Potential land acquisition**—accommodating SLR and public access.



# Challenges Hinderling Adaptation

- Requiring **economic** analysis of SLR impacts to recreation and ecological values
- Strategic “Beach fill” that is ecologically and economically sound
- **Inventory:** Environmentally Sensitive Areas (marine and coastal)
- **Restrictions** on new developments and armoring
- Require **setbacks** based upon projected calculations of SLR and erosion rates



# Challenges Hindering Adaptation

- Analyzing sea level rise impacts to **access and recreation** and requiring adaptation and mitigation.
- Seawalls on public land require lease **and** mitigation for use of the public trust.
- Lack of **legal** guidance: rezoning, “takings”, property taxes, insurance, etc.



# Future Needs

- Studies:
  - Mechanisms for managed retreat (engineering and financial)
  - Economic analysis comparing adaption forms
  - Buy outs
  - Rent backs
  - SLR implications on:
    - Property tax
    - Mortgage
    - Insurance
  - Financial incentives—grants, tax breaks for managed retreat, deed restrictions, easements, etc.)
- Local paradigm shifting
  - **Building political support for adaption is a marathon not a sprint.**



**Thank  
you!**

**Stefanie Sekich-Quinn  
Ssekich@surfrider.org**



# Questions:

- **What was the scope and duration of your managed retreat project?**
  - Phase 1 relocated 120 ft of bike path and restored 900 ft of beach. The process began in 1991, construction completed in 2011, and ongoing discussions for Phase 2
- **How were you able to secure funding to implement your managed retreat project? What were the sources of funding? How difficult was it to obtain funding?**
  - Federal and State (Coastal Conservancy) grants totaling \$3M plus local funding for planning
- **How were you able to secure public and private buy-in to implement managed retreat?**
  - Working group process and public outreach

## Questions (cont):

- **How was the area preserved as open space after implementing managed retreat? Did new laws or regulations have to be passed or adopted?**
  - Dune areas were planted and cabled off, bike path serves as boundary
  - MOU between Fairgrounds and City – City street was abandoned
- **What were the hurdles that you encountered in implementing your managed retreat project and how were you able to overcome them, if you did so?**
  - Biggest hurdle was getting buy-in from property owner/manager (31<sup>st</sup> Agricultural District/Ventura County Fairgrounds)
  - Parking for beach access as well as perceived loss of parking for the annual fair
  - Multi-jurisdictional conflicting mandates
  - Solution: political support through years of Working Group meetings