



SUSTAINABILITY & RESILIENCE DEPARTMENT

## ADAPTATION & RESILIENCE DIVISION

# WATERFRONT ADAPTATION PLAN

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Planning Commission – April 9, 2026



CALIFORNIA  
**COASTAL**  
COMMISSION



SantaBarbaraCA.gov

# ADAPTATION & RESILIENCE PROGRAM

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# Program Purpose

Help our community **prepare for current and future** climate-related hazards like sea level rise, flooding, erosion, and wildfires.



# Active Major Projects

- Regional Coastal Adaptation Monitoring Program
- Wastewater & Water Systems Climate Adaptation Plan
- Waterfront Adaptation Plan
- Laguna Flood Resilience Study
- Airport Climate Adaptation Plan



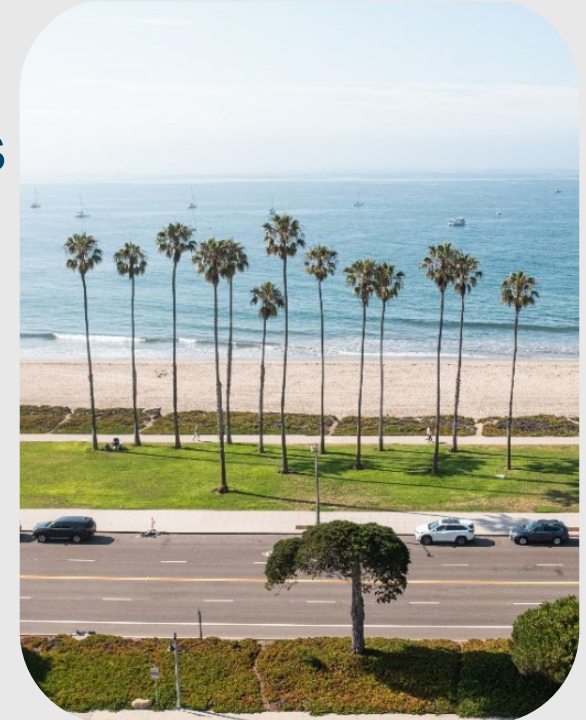
# WATERFRONT ADAPTATION PLAN

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# Today's Topics & Objectives

- Current & Future Coastal Hazards
- Toolbox of Potential Solutions
- Opportunities to Improve the Experience
- Potential Options for Further Study
- Discussion



# Waterfront Adaptation Plan Vision

**Develop practical solutions to address coastal flooding and erosion for the next 30 years, while enhancing beach access, recreation, boating, and habitat.**

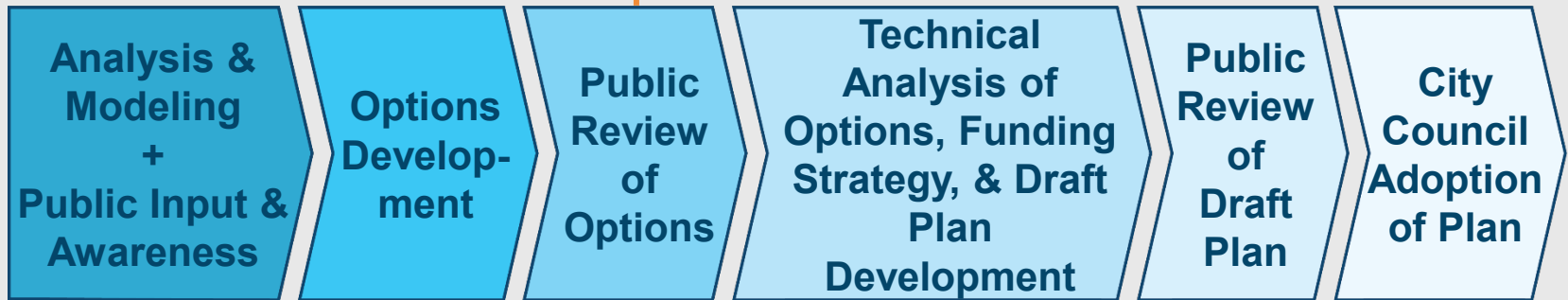
# Project Schedule

2024

2025

2026

2027



Today

# Project Area



# The Everchanging Waterfront Shoreline



**Syuxtun Chumash Village**



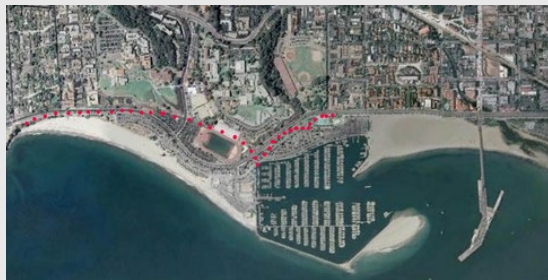
**Wharf Spur Construction 1890**



**Waterfront Pre Harbor**



**Harbor Under Construction**



**Harbor Post Construction**



**The Current Waterfront**

# CHALLENGES TODAY & IN THE FUTURE

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Beach erosion, flooding, and sea level rise

# Today's Damages from the Ocean

## Erosion from waves



## Flooding from ocean



**Storms today** are causing damages and disruption - \$3M from 2023 storm alone

# Today's Erosion at East Beach

November 2025

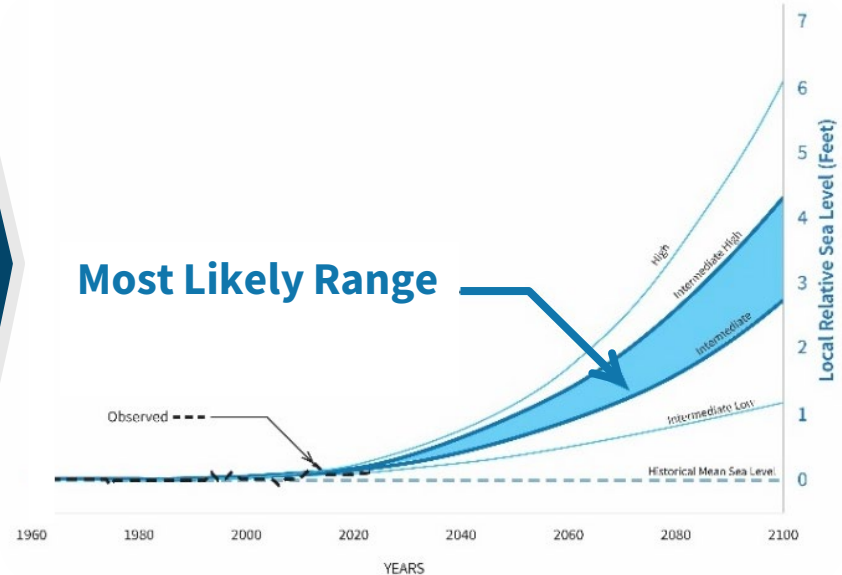
Over the last 20 years, East beach **eroded significantly** (5 ft/yr in some areas)



Increased erosion causes **more inland flooding risk**

# Sea Level Rise & Tomorrow's Shoreline

- Today, El Niño and big waves are biggest threat
- Sea level rise will increase storm damage and erosion
- 3-4" of sea level rise since 2000
- Will accelerate in coming years



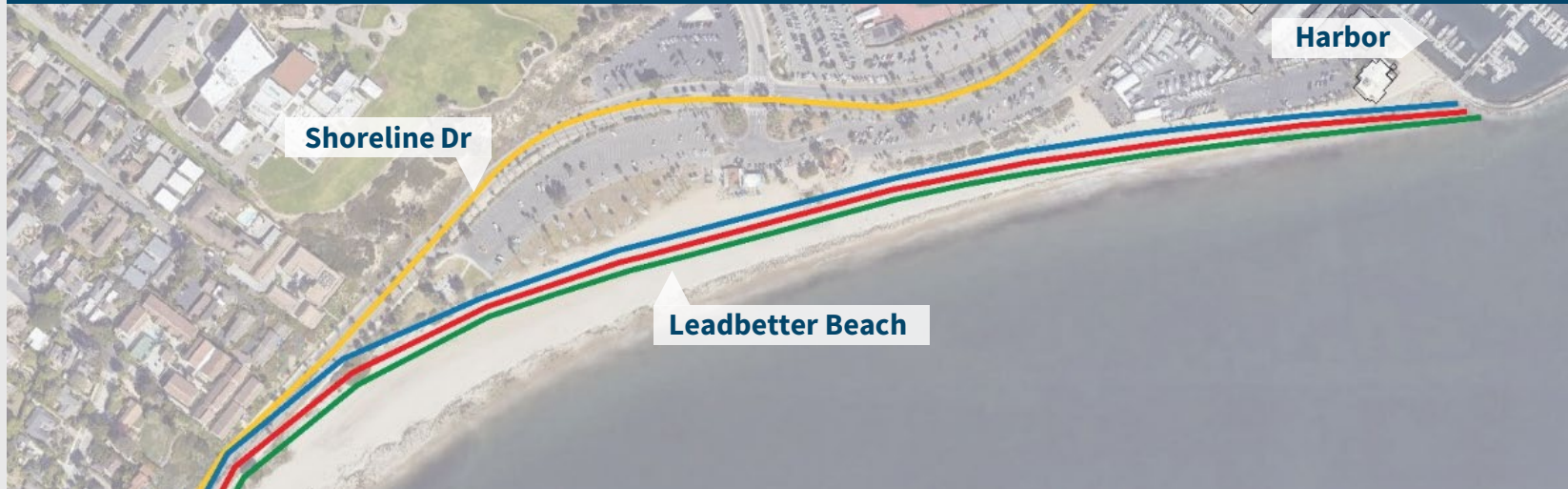
# Tomorrow's Bluff Areas



Access to beaches with bluffs will become limited, making **Waterfront beaches even more important**

# Tomorrow's Waterfront Beaches (no action)

## Leadbetter Beach narrows



0.8' SLR ~2050

1.6' SLR ~2065

2.5' SLR ~2075

Waterfront "Hold the Line" Position

# Tomorrow's Waterfront Beaches (no action)

## West Beach remains wide



0.8' SLR ~2050

1.6' SLR ~2065

2.5' SLR ~2075

Waterfront "Hold the Line" Position

# Tomorrow's Waterfront Beaches (no action)

## East Beach narrows fast



0.8' SLR ~2050

1.6' SLR ~2065

2.5' SLR ~2075

Waterfront "Hold the Line" Position

# We Need a Backstop for Ocean Flooding



High tide today   Future High tide   1-year storm   20-year storm   100-year storm

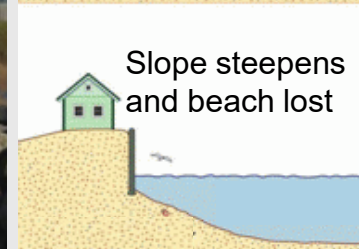
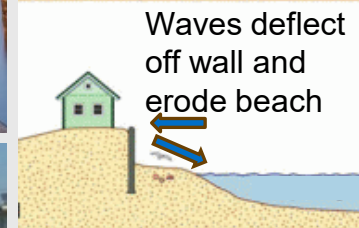
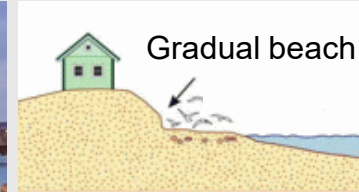
# THE TOOLBOX OF POTENTIAL SOLUTIONS & OPPORTUNITIES

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It's not all doom and gloom; there's a toolbox

# Sea Walls & Revetments

- Fixed edge along shoreline to limit erosion & flooding
- Make beaches narrower when close to ocean
- Complex permitting



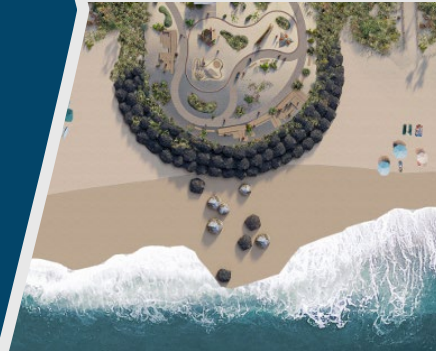
# Beach Nourishment, Sand Berms, Dunes

- Widen beaches
- Quickly lost with big waves and storms
- Require maintenance
- Need sand source
- Waterfront lacks conditions for self-building dunes



# Groins, Headlands & Artificial Reefs

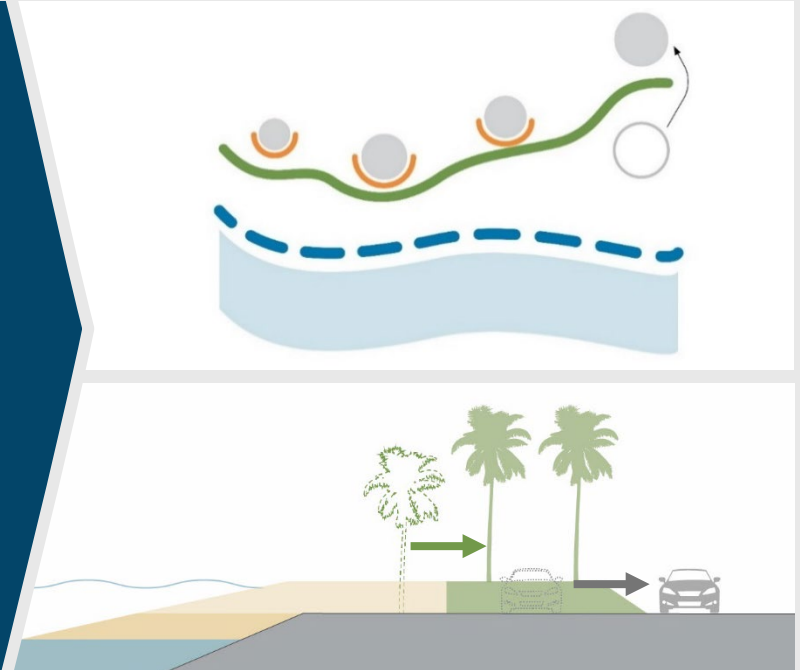
- Trap sand
- Need to prefill with sand & regularly renourish with sand
- Hard to permit, costly, & controversial
- Reefs only effective under certain conditions



Source: ReBeach.Org

# Relocation or Removal of Development

- Maintains sandy beach as shoreline migrates inland
- Reduces risks
- Need to consider:
  - *Ability to relocate*
  - *Changes in use, revenue, & leases*



# Opportunities to Improve the Experience



**Add walking & biking path**



**Reimagine West Beach**



**Improve views & entries**



**Add facilities**



**Enhance economic vitality**



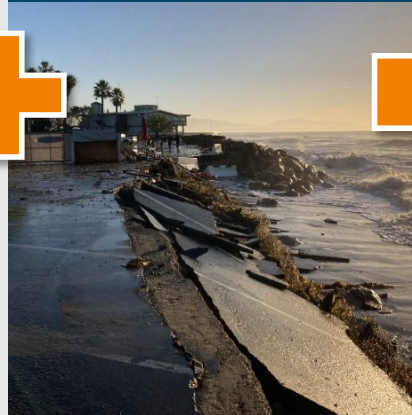
**Expand recreation**

# Opportunity for Multi-benefit Solutions

Opportunity:  
**New separated  
walk & bike path**



Opportunity:  
**Address hazard  
risk**



Multi-benefit Solution:  
**Elevated & separated  
walk & bike path**



# PUTTING THE PIECES TOGETHER

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*Preliminary List of Options for Further Evaluation*

# Waterfront-Wide Goals & Priorities



# Project Categories

## 30-Year Plan Timeline

**Quick Wins**  
(\$)

**Core Measures**  
(\$\$\$)

**Future Options**  
(\$\$\$\$\$)



# LEADBETTER BEACH OPTIONS

*A sandy beach &  
recreation  
destination*





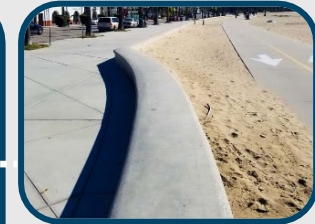
# Leadbetter Potential Quick Wins: *Immediate safety & flooding fixes*



**1** Restripe first row of parking to a walking & biking path



**2** Deployable flood proofing



**3** Low wall next to new path



**4** Convert unused area to parking

# Leadbetter Potential Core Measures:

## *Keep sandy beach by moving things back*

1



Move parks, paths, & assets inland to keep sandy beach

2



Raise path to limit flooding

3



Relocate when replacement facilities available or flood & erosion risk reach set limits



4



Relocate parking to new parking garages at existing surface lot

5



Improve stormwater drainage

# Leadbetter Potential Future Options:

*Larger projects for a wider beach & more protection*



1

Keep sandy beach for longer by moving paths, parks, and facilities further inland



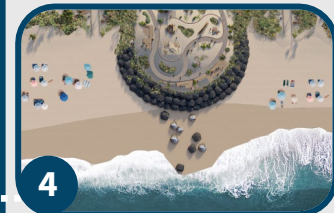
2

Raise path higher to reduce flood risk for higher sea levels



3

Space for park and relocated facilities

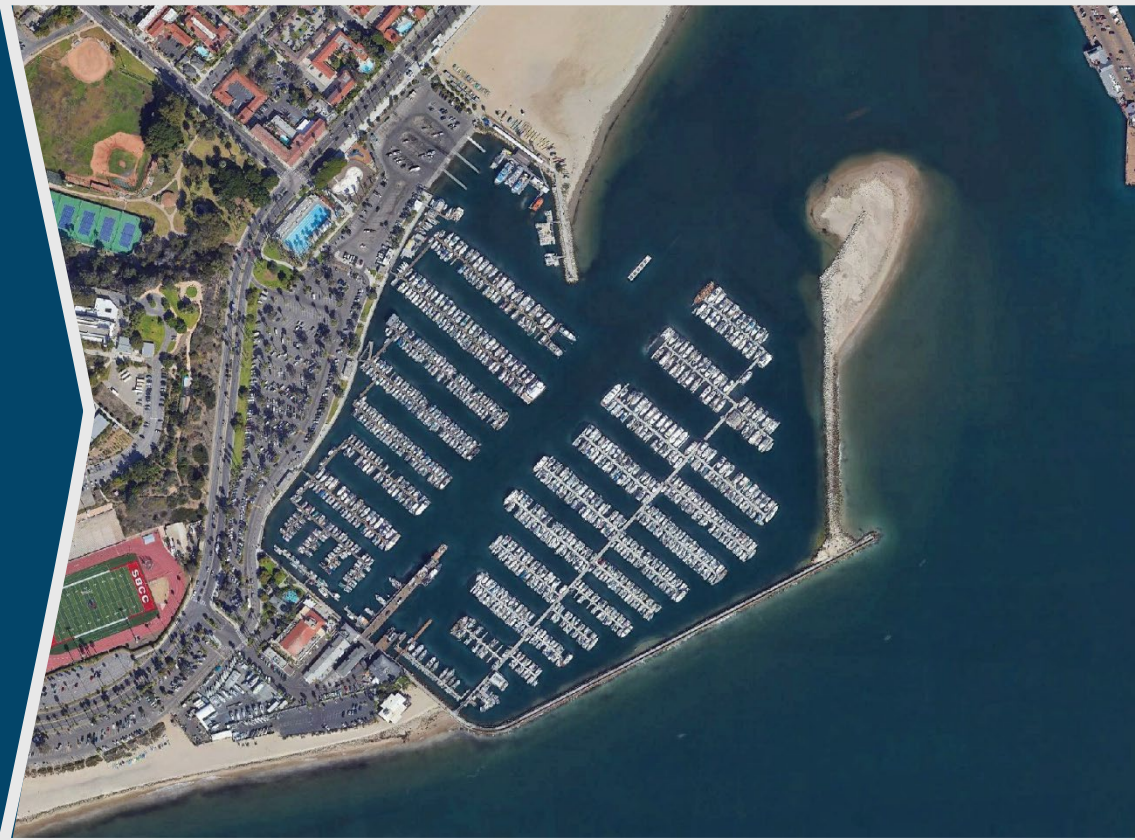


4

Headland at Harbor breakwater (not shown) with nourishment to widen beach

# HARBOR OPTIONS

*A commercial  
fishing,  
recreation, &  
public access  
destination*



# Harbor Potential Quick Wins:

*Immediate safety & flooding fixes*



**1** Deployable flood proofing



**2** Drainage improvements



**3** Restripe first row of parking to a walking & biking path

# Harbor Potential Core Measures:

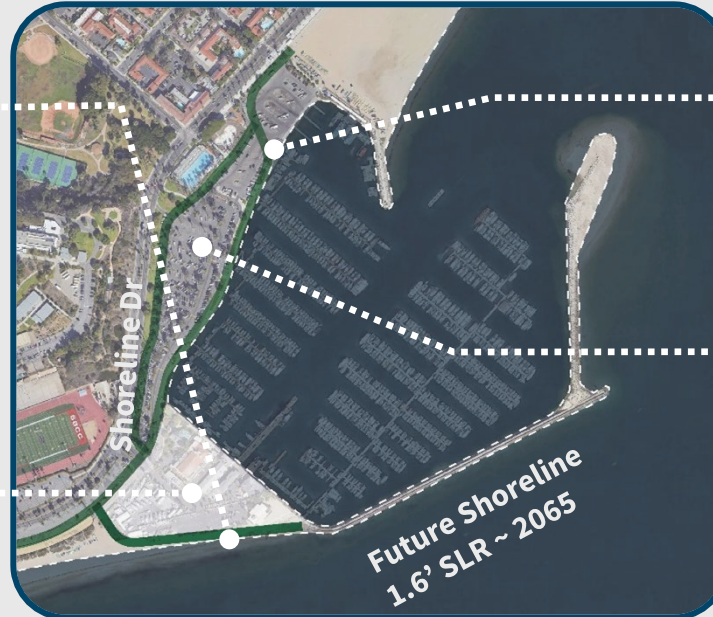
*Flood protection, prioritize public access & boating*



**Pedestrian promenade on raised revetment for flood protection & better access**



**Protect & improve Harbor Commercial area for better public access & boating**



**Enhance & raise walking & biking paths for better access & flood protection**



**Explore converting some parking for economic development**

# Harbor Potential Future Options: *Further protection*



- 1** Raise all paths and edges for greater flood protection



- 2** Headland with beach nourishment to widen beach



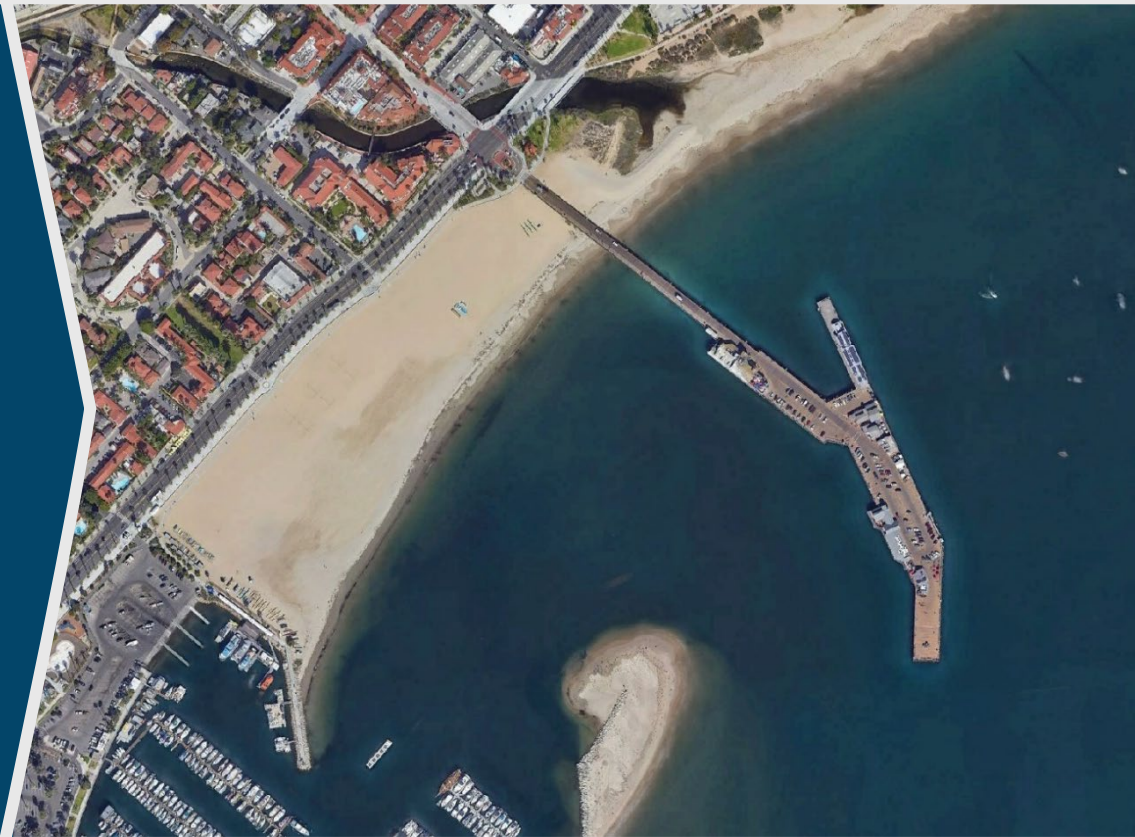
- 3** Sand trap to protect harbor entrance



- 4** Wave screen to protect marinas

# WEST BEACH OPTIONS

*A premier  
sandy beach  
destination*



# West Beach Potential Core Measures:

*Premier sandy beach experience*



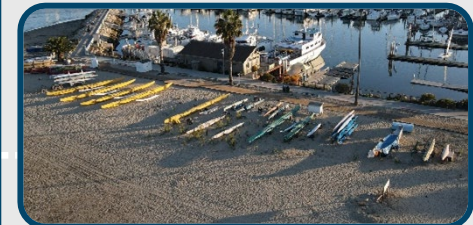
- 1** Relocate storm drain to improve sand quality



- 2** Add restrooms, showers, café, beach concessions



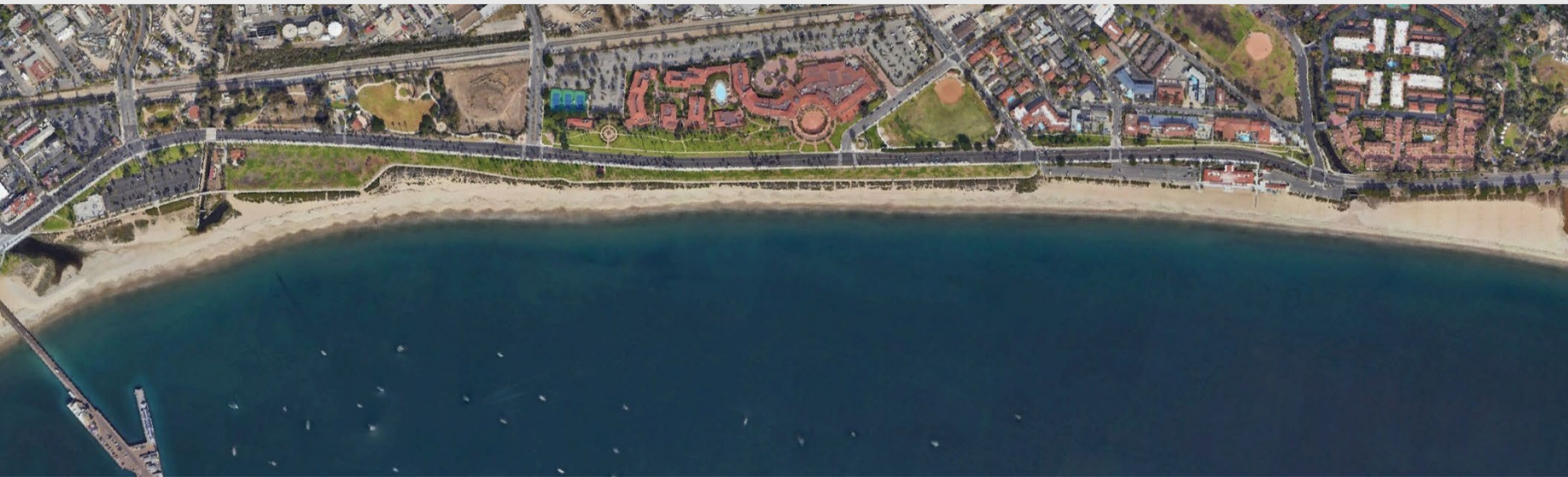
- 3** Raise walking & bike path with new adjacent park



- 4** Retain space for small boats, outriggers, tomols, etc

# ***EAST BEACH OPTIONS***

## ***A sandy beach & recreation destination***



# East Beach Potential Core Measures:

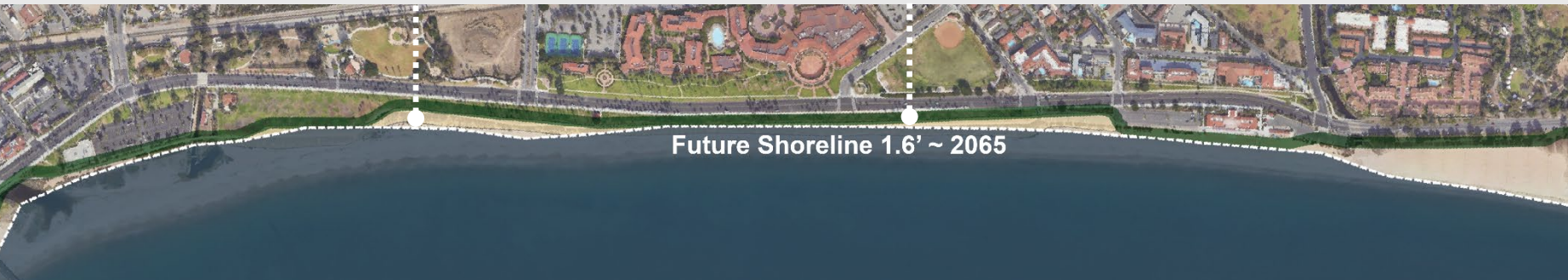
*Preserve as much sandy beach as possible & protect critical infrastructure*



**Keep sandy beach and park for as long as possible by moving parks, paths, & facilities inland**



**Raise & locate walking & biking path to protect Cabrillo Pavilion & inland areas**



Future Shoreline 1.6' ~ 2065

# East Beach Potential Future Options:

*Additional, larger projects for wider beach & increased protection*



**Improve per future Laguna Flood Resilience Study**



**Potential site for additional parking**



**Raise path higher to reduce flood risk for higher sea levels**



**Future Shoreline 2.5' ~ 2075 with nourishment**

**Explore groins, headlands, and offshore reefs to widen sandy beach**

# NEXT STEPS

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# Next Steps



# Get Involved & Learn More

## Visit the Website for Events, Upcoming Survey, & Email List

- [SantaBarbaraCA.gov/WaterfrontAdaptation](https://SantaBarbaraCA.gov/WaterfrontAdaptation)

## Attend an Open House

- Wed, April 29, 5:30-7:00pm – Faulkner Gallery (Central Library)
- Thurs, April 30, 5:30-7:00pm – Maritime Museum (The Harbor)
- Wed, May 6, 12:00-1:00pm – Virtual (Zoom webinar)

## Contact

- Timmy Bolton, Senior Climate Adaptation Analyst  
(805) 730-0836 or [TBolton@SantaBarbaraCA.gov](mailto:TBolton@SantaBarbaraCA.gov)

# Discussion Questions

1. Options headed in the right direction? Any significant initial concerns?
2. Additional options that should be evaluated?
3. Any missing objectives or priorities?
4. Key questions you want answered in detailed follow-on analysis?
5. Any initial thoughts on proposed phasing? Should we consider implementing certain projects sooner?