



**San Mateo County Flood & Sea Level Rise
Resiliency District
BOARD OF DIRECTORS**

County Supervisors:

At-Large Lisa Gauthier – Vice Chair
District 3 Ray Mueller

City Representatives:

Coast Debbie Ruddock - Chair
North Donna Colson
Central Adam Rak
South Kaia Eakin
At-Large Marie Chuang

HYBRID MEETING: IN-PERSON AND BY VIDEOCONFERENCE

This meeting will be held **in-person on the first floor of 1700 S. El Camino Real in San Mateo, and remotely** for public participation. Participants attending the meeting remotely via Zoom should click on the following link:

<https://oneshoreline-org.zoom.us/j/85952164090>

or call 669-444-9171 (Meeting ID# 8595 2164 090)

AGENDA

March 23, 2026

4:00 PM

1. **Roll Call**
2. **Public Comment** Persons wishing to address the Board on District-related matters not on this Agenda, as well as items listed under Action to Approve the Consent Agenda, may speak for up to two minutes; comments on Agenda items shall be heard during that item for up to two minutes.
3. **Action to Set the Agenda and Approve the Consent Agenda**
 - A. Approve the Minutes of the February 23, 2026 OneShoreline Board meeting
4. **Regular Business**

Discuss Pacific Coastside climate resilience efforts by OneShoreline and other agencies, including:

 - A. OneShoreline requests for federal Congressionally Directed Spending/Community Project Funding
 - B. Receive a presentation by the San Mateo County Planning staff leading the County’s Plan Princeton study
 - C. Receive a presentation by San Mateo County Harbor District General Manager Jim Pruett on the Harbor District’s studies and projects at and near the Pillar Point Harbor
5. **Chair’s Report ***
6. **CEO’s Report ***
7. **Board Member Reports and Items for a Future Agenda ***
8. **Adjournment**

* There is no written staff report for this item

Meeting information, and public access and communications

- Verbal public comments will be accepted during the meeting in person or remotely. Remote comments can be submitted at the appropriate time by raising your hand via Zoom’s Chat or hand raising functions, or speaking if joining by phone. Written public comments can be submitted by email to board@OneShoreline.org by noon on the meeting day – indicate the agenda item to which your comment applies and it will be read or summarized at the meeting by the Board Clerk.
- If you require assistance to participate in the meeting or wish to submit written communication to all Board Members regarding the meeting, please contact the Clerk of the Board by 9:00 am on the day of the meeting.
- Public records relating to an open session item on the agenda are available at least 72 hours prior to a Regular Board meeting or at least 24 hours prior to a Special Board meeting, when these records are distributed to Board members. Public records are available at the District office at 1700 South El Camino Real, Suite 502, San Mateo, CA 94402 and at OneShoreline.org. To receive these documents electronically, please email board@OneShoreline.org.

**SAN MATEO COUNTY
FLOOD AND SEA LEVEL RISE RESILIENCY DISTRICT (ONESHORELINE)
Board of Directors Meeting Held in Person and Remotely via Zoom
February 23, 2026
DRAFT – MINUTES**

1. Roll Call

Chair Ruddock called the meeting to order at 4:01 p.m. via Zoom video conference software. Acting Clerk of the Board, Stephanie Lau, took the roll call.

Directors Present:

Debbie Ruddock, Representing Coast (Chair)

Lisa Gauthier, Representing the Board of Supervisors, District 4 (Vice Chair) *(joined at 4:05 p.m.)*

Donna Colson, Representing Northern San Mateo County Cities

Kaia Eakin, Representing Southern San Mateo County Cities

Marie Chuang, Representing At-Large

Director(s) Absent:

Ray Mueller, Representing the Board of Supervisors, District 3

Adam Rak, Representing Central San Mateo County Cities

Staff Present:

Len Materman, Chief Executive Officer

Brian Kulich, Esq., Legal Counsel

Lucy Dong, Director of Finance and Administration

Summer Bundy, Director of Project Management

Johnathan Perisho, Project Manager

Stephanie Lau, Consulting Grant and Communications Advisor and Acting Clerk of the Board

2. Public Comment

Public Speaker(s): None

3. Action to Set the Agenda and Approve the Consent Agenda

- A. Approve the Minutes of the January 26, 2026 OneShoreline Board meeting

Motion made by Director Chuang and seconded by Director Colson to set the agenda and approve the consent agenda:

Ayes: Chuang, Colson, Eakin, Ruddock

Noes: None

Absent: Gauthier, Rak, Mueller

Vote: 4-0-3

4. Regular Business

- A. Adopt Resolution No. 2026-02-23 in support of a OneShoreline application to the California State Parks Division of Boating and Waterways to fund the City of Pacifica Beach Boulevard Offshore Artificial Reef Study

Vice Chair Gauthier joined the meeting at 4:05 p.m.

Len Materman and Christine Boles, Mayor of Pacifica, spoke on this item. Director Colson, Vice Chair Gauthier, and Chair Ruddock also spoke on this item.

Public Speaker(s): Bob Battalio from Pacifica, Sam Casillas from Pacifica Land Trust

Motion made by Vice Chair Gauthier and seconded by Director Chuang to approve this item:

Ayes: Chuang, Colson, Eakin, Gauthier, Ruddock

Noes: None

Absent: Rak, Mueller

Vote: 5-0-2

- B. Receive an update on OneShoreline's *Guidance for Resilient Public Infrastructure in San Mateo County*, the first iteration of which provides planning, design, and policy recommendations for stormwater systems, roads, and wastewater and water recycling systems based on an updated understanding of climate impacts

Len Materman, Summer Bundy, and Johnathan Perisho spoke on this item. Director Eakin, Vice Chair Gauthier, Chair Ruddock, and Director Colson also spoke on this item.

Public Speaker(s): Ann Schneider of Millbrae, Gita Dev from the Sierra Club Loma Prieta Chapter

- C. Authorize the CEO to execute Amendment 2 to an Agreement with Stantec Consulting Engineers, Inc. to develop the *Guidance for Resilient Public Infrastructure in San Mateo County*

Len Materman and Summer Bundy spoke on this item.

Public Speaker(s): None

Motion made by Director Chuang and seconded by Vice Chair Gauthier to approve this item:

Ayes: Chuang, Colson, Eakin, Gauthier, Ruddock

Noes: None

Absent: Rak, Mueller

Vote: 5-0-2

5. Chair's Report

None.

Public Speaker(s): None

6. CEO's Report

Len Materman spoke on the following items:

- Storms and King Tides in December 2025 and January 2026
- Requests for Proposals (RFPs) planned in 2026
- 2026 San Mateo County Multijurisdictional Local Hazard Mitigation Plan

Summer Bundy, Johnathan Perisho, and Stephanie Lau also spoke on this item. Directors Chuang and Colson spoke on this item as well.

Public Speaker(s): None

7. Board Member Reports and Items for a Future Agenda

Chair Ruddock spoke on livestreaming future OneShoreline Board meetings on social media channels. Len Materman also spoke on this item.

Public Speaker(s): None

8. Adjournment

The meeting was adjourned at 5:09 p.m.

San Mateo County Flood and Sea Level Rise Resiliency District
Agenda Report

Date: March 23, 2026
To: San Mateo County Flood and Sea Level Rise Resiliency District Board of Directors
From: Len Materman, CEO
Subject: OneShoreline requests for Congressionally Directed Spending/Community Project Funding

Recommendation

That the San Mateo County Flood and Sea Level Rise Resiliency District (“OneShoreline”) Board of Directors (“Board”) receive an update from OneShoreline’s CEO on funding requests to Congress.

Background and Discussion

Over the past year, OneShoreline has made targeted funding requests to our elected representatives in the U.S. House of Representatives and U.S. Senate to address the significant climate change-fueled vulnerabilities along our Pacific Coast. These vulnerabilities include flooding and erosion associated with the rain, wind, and waves accompanying more extreme storms and higher ocean water levels resulting from sea level rise.

In FY2026, OneShoreline’s request resulted in Rep. Sam Liccardo and Senator Alex Padilla asking their respective appropriations committees to provide funding for the U.S. Army Corps of Engineers (“USACE”) to initiate a study of resilience measures for the Sewer Authority Mid-Coastside (“SAM”) Wastewater Treatment Plant. In the appropriations bill signed by the President in January 2026, the \$50,000 for this project constituted one of only three new projects nationally to receive funding in USACE’s Continuing Authorities Program (Section 205) Flood Control Project account. USACE is currently developing its workplan, a necessary step to begin working this year on the study and determining a federal interest.

The FY2026 funding is important because it initiates the project, and we recognize that much more funding is needed. Thus, for the federal FY2027 budget, OneShoreline has requested that Rep. Liccardo and Senators Alex Padilla and Adam Schiff ask their respective appropriations committees to include \$500,000 in additional funds so that USACE may continue work on this study by developing the project management plan, identifying and analyzing project alternatives, and completing its recommended plan.

Meanwhile, OneShoreline and its federal lobbyist have been meeting with Rep. Liccardo and his staff and with staff at USACE about the potential to secure funds for USACE to initiate a San Mateo County Ocean Shoreline Study that was authorized by the Water Resources Development Act of 2020. Following those conversations, OneShoreline also submitted requests to Rep. Liccardo, Senator Padilla, and Senator Adam Schiff for \$500,000 for USACE to initiate this study to provide flood protection and reduce coastal erosion along the entire shoreline of the City of Half Moon Bay south of Arroyo de en Medio (Mirada Road Bridge). This geographic extent was chosen to complement a separate study recently requested by the San Mateo County Harbor District north of Arroyo de en Medio and because of the major infrastructure and assets at risk, such as a capped landfill, the Ritz-Carlton, and SAM Wastewater Treatment Plant (which would allow the project to additionally benefit unincorporated communities of Montara, Moss Beach, Princeton-by-the-Sea, and El Granada).

At this Board meeting, we will discuss these requests and how they relate to the San Mateo County Harbor District’s efforts with USACE that Harbor District General Manager Jim Pruett will present on as part of Agenda item 4C.

Impact on OneShoreline Resources: This federal funding goes to USACE and not to OneShoreline. OneShoreline staff time and local matching funds would need to be secured from other sources in the future.

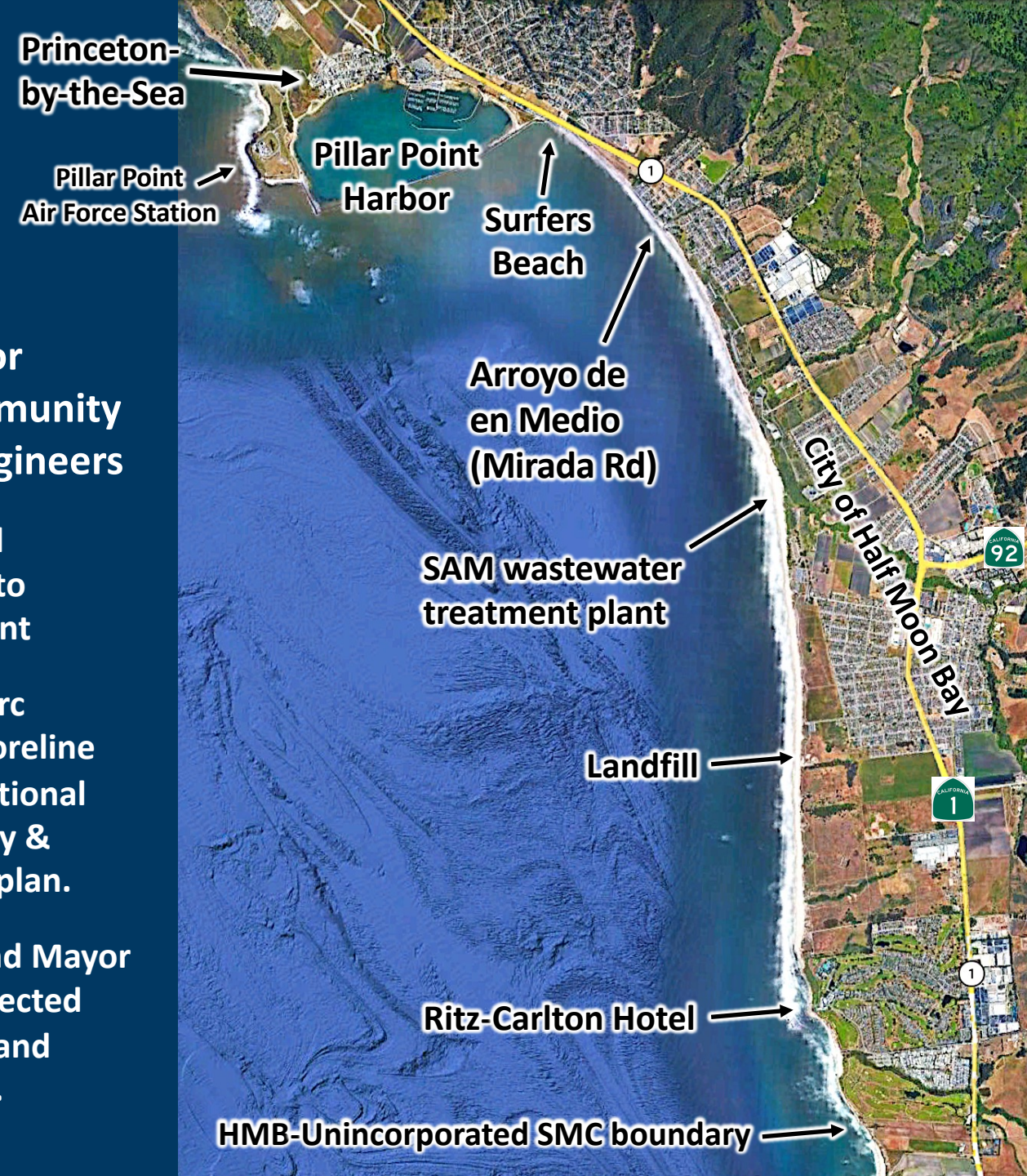
Attachment: One presentation slide summarizing this Agenda item.

Agenda Item 4

Discuss Pacific Coastside climate resilience efforts by OneShoreline and other agencies

Agenda item 4A – OneShoreline federal requests for Congressionally Directed Spending (Senate) and Community Project Funding (House) to the U.S. Army Corps of Engineers

- In the FY2026 budget, Rep. Liccardo and Sen. Padilla secured funding for OneShoreline’s request to initiate a Corps study to make the Sewer Authority Mid-Coastside (SAM) Plant resilient
- For FY2027, with support letters from Assemblymember Marc Berman and Half Moon Bay Mayor Debbie Ruddock, OneShoreline requested of Rep. Liccardo, Sen. Padilla, and Sen. Schiff additional funds to develop the SAM project management plan, identify & analyze project alternatives, and complete a recommended plan.
- Also for FY2027, with similar support from Assm. Berman and Mayor Ruddock, OneShoreline submitted requests to our federal elected officials for the Corps to initiate a study to address flooding and erosion along HMB’s shoreline south of Arroyo de en Medio.



San Mateo County Flood and Sea Level Rise Resiliency District
Agenda Report

Date: March 23, 2026
To: San Mateo County Flood and Sea Level Rise Resiliency District Board of Directors
From: Len Materman, CEO
Subject: Presentation by the San Mateo County Planning staff leading the County's Plan Princeton study

Recommendation

That the San Mateo County Flood and Sea Level Rise Resiliency District ("OneShoreline") Board of Directors ("Board") receive a presentation by the San Mateo County Planning staff leading the County's Plan Princeton study.

Background and Discussion

San Mateo County ("County") is the local government agency responsible for land use planning and permitting in unincorporated areas along the Pacific Ocean. One such area within and adjacent to Pillar Point Harbor is the focus of an initiative known as Plan Princeton, which will update the Local Coastal Program for the communities of Princeton-by-the-Sea and Pillar Ridge, the Half Moon Bay Airport, and the adjacent portion of Highway 1. Plan Princeton represents this area's first comprehensive land use update since 1986, and when complete, it must be approved by the California Coastal Commission.

The County initiated Plan Princeton over a decade ago, establishing a framework with zoning areas for Coastside Commercial Recreation, Marine Industrial, Planned Agricultural District, and Resource Management-Coastal Zone. Work on the Plan was paused when the scale of risk due to sea level rise became clear. In June 2024, the California Ocean Protection Council ("OPC") released updated sea level rise projections, which the County has utilized to resume and refine the effort. The County is using OPC's Intermediate-High scenario for future sea level rise, incorporating significant global carbon emissions and warming and local land subsidence data, which is consistent with California Coastal Commission guidance.

To manage coastal flood risk in Princeton, the County is proposing to create a Sea Level Rise ("SLR") Overlay District. This has similarities with the SLR Overlay District advocated in OneShoreline's Planning Policy Guidance for Bay shoreline areas in that both call for new developments to incorporate consideration of future conditions with more extreme storms, tides, and water levels underground. Plan Princeton would also require that new development propose a SLR Adaptation Plan addressing long-term functionality and contribute a fair share toward any future area-wide shoreline infrastructure and access plan sponsored by a public agency.

Along with the Overlay District, the County is proposing a Transfer of Development Rights ("TDR") program to allow property owners in flood-vulnerable areas to sell their development rights to developers in safer locations that can absorb additional development without significantly altering the character of Princeton. The TDR's goal is to guide new development towards areas that can sustainably accommodate it.

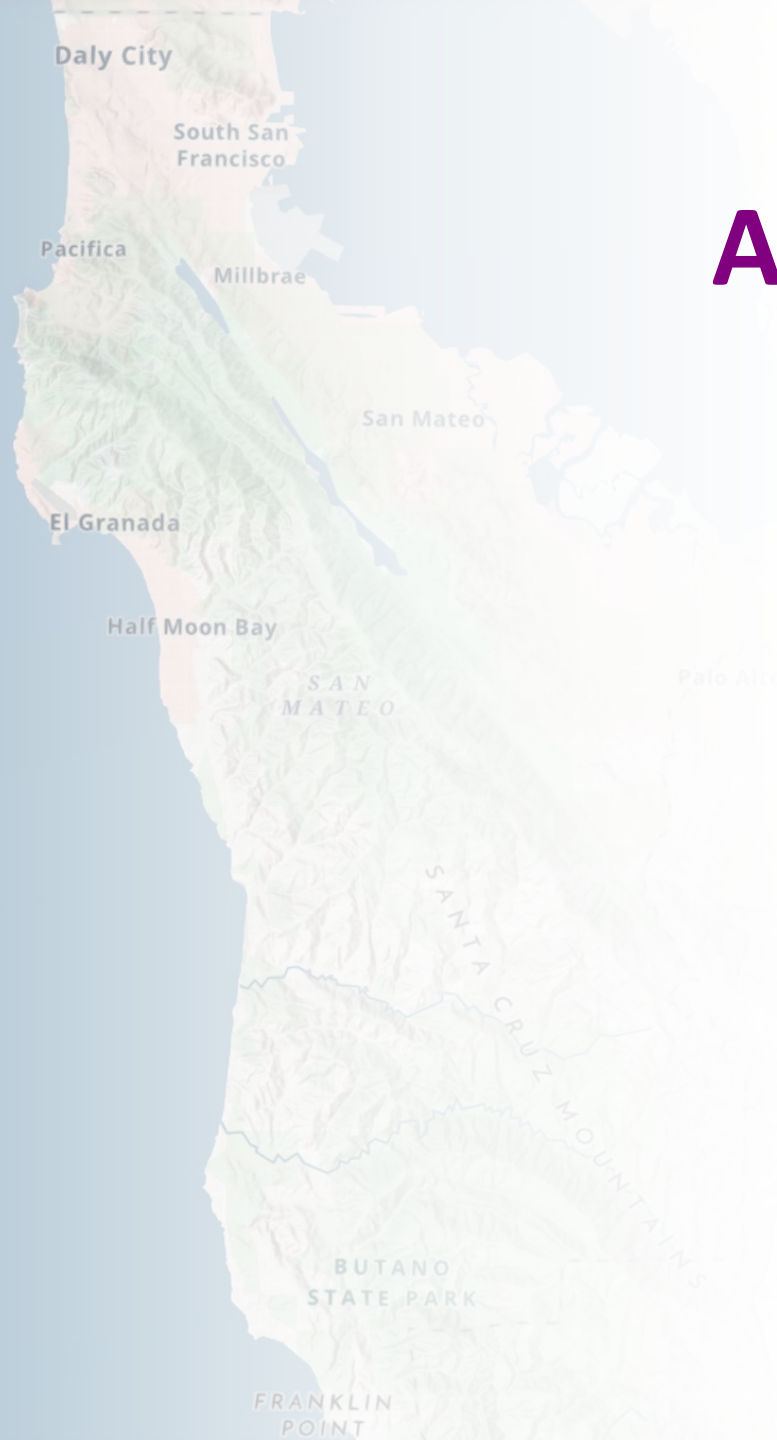
The County has conducted two community workshops since late 2024: a November 2024 half-day session using an interactive "Game of Floods" exercise to explore vulnerability and adaptation strategies, and a September 2025 workshop presenting the proposed SLR Overlay District and TDR program concept. The County anticipates sharing a draft of Plan Princeton with the community by this summer, after which the plan will proceed through the public review and the California Coastal Commission approval process. The goals, design, costs, and benefits of such a program will be described by the San Mateo County Planning staff leading the County's Plan Princeton study.

Impact on OneShoreline Resources: There is no fiscal impact associated with this item.

Attachment: Presentation for this Agenda item provided by County Planning staff



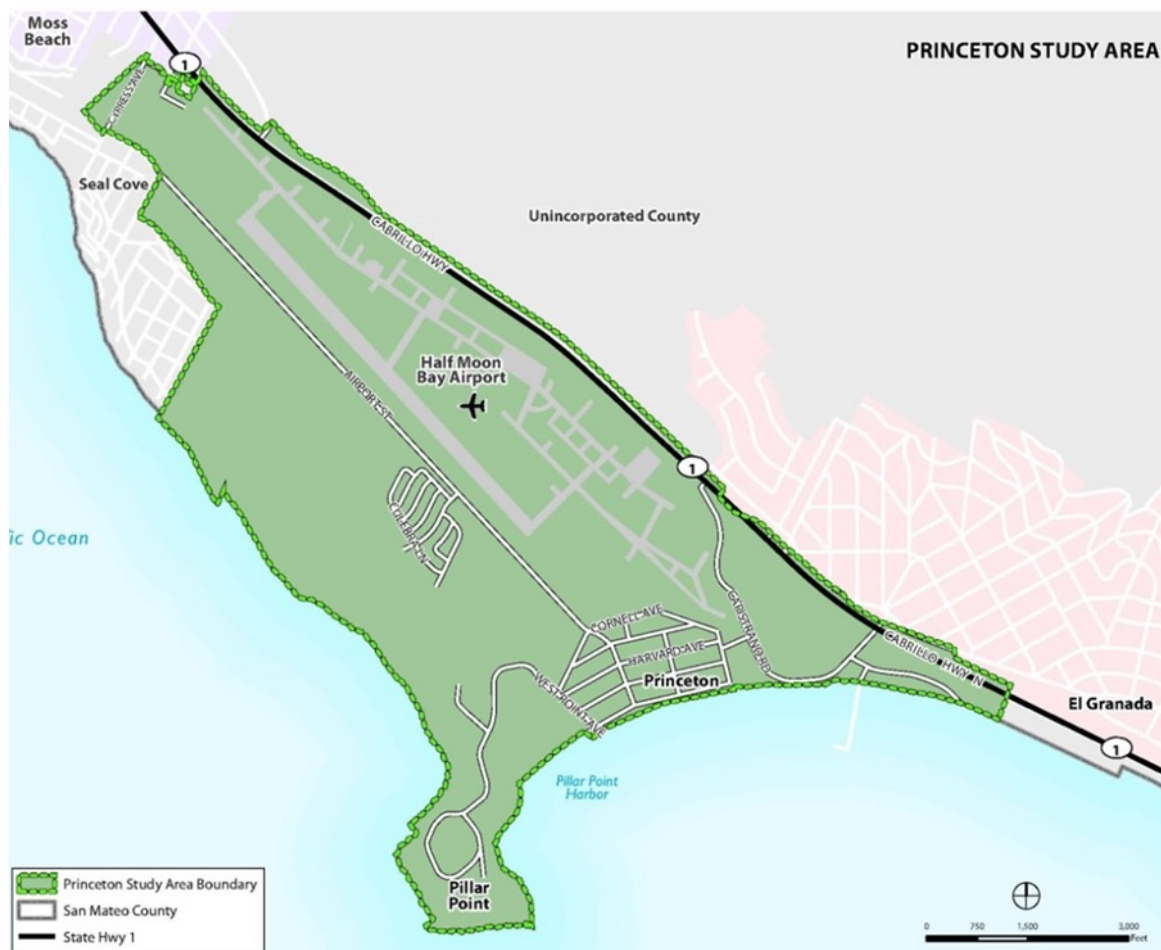
Agenda item 4B



PLAN PRINCETON SEA LEVEL RISE OVERLAY DISTRICT

MARCH 23, 2026





PLAN PRINCETON

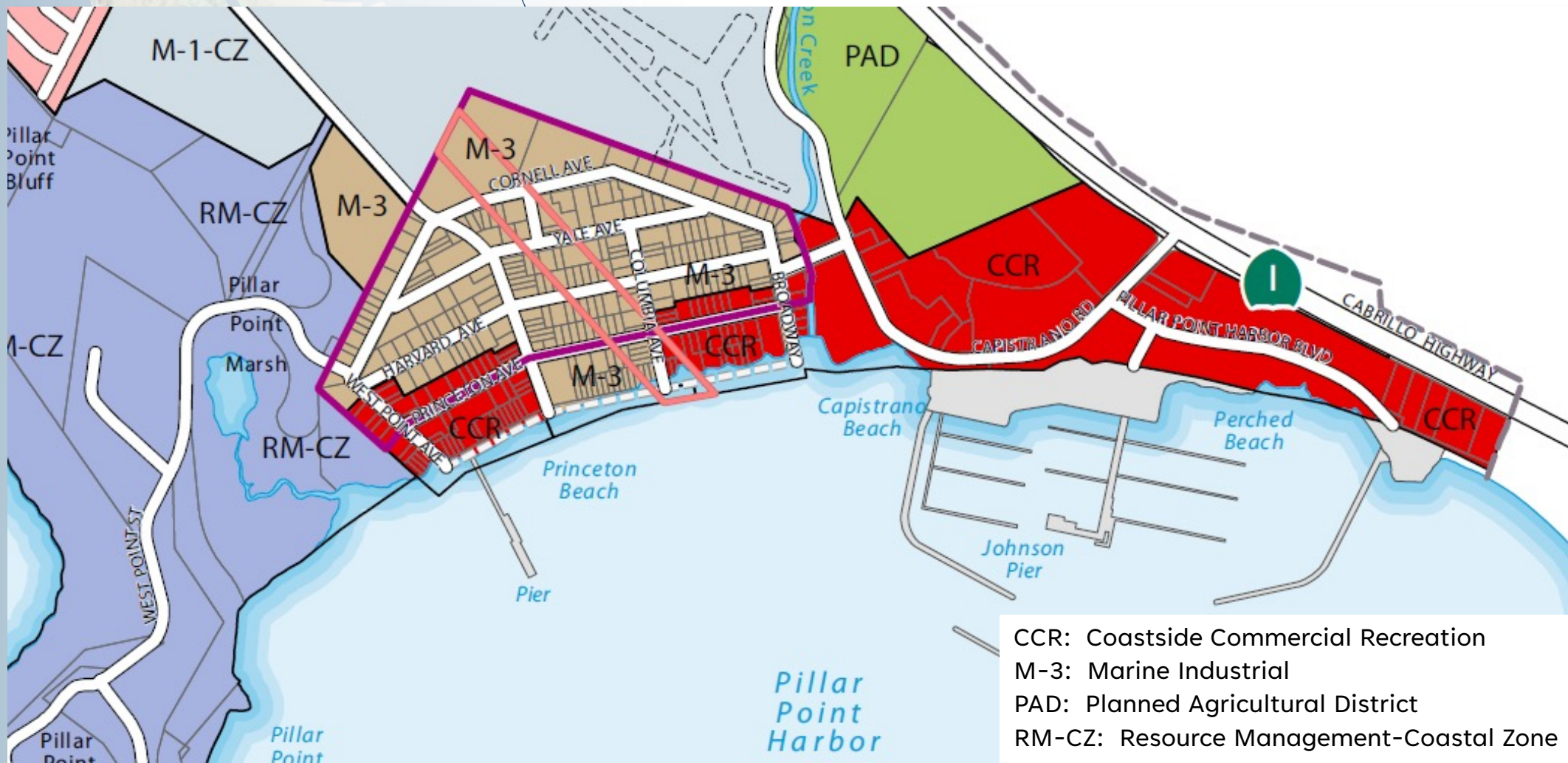
County initiative to develop comprehensive policy, plan, and zoning amendments that will help realize the community's vision for the future of Princeton.

Planning Area

Includes Half Moon Bay Airport, Pillar Ridge residential community, and community of Princeton.



PREFERRED PLAN ZONING

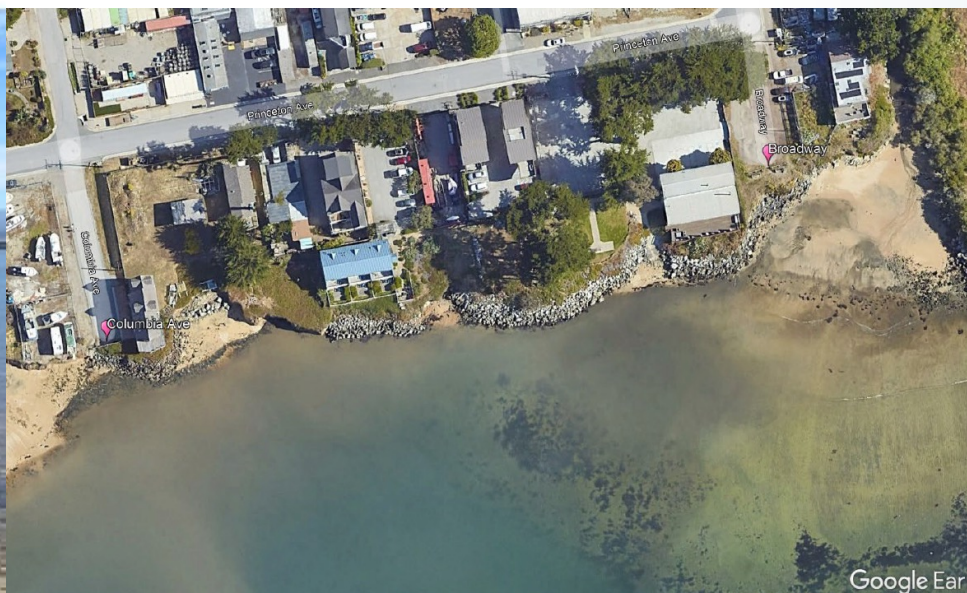




SEA LEVEL RISE & PLAN PRINCETON

Ensure community resilience to the effects of sea level rise.

Resilience is the ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events.



King tide storm waves come right up the street.



CALIFORNIA SEA LEVEL RISE PROJECTIONS

Low Scenario – assumes current rate of sea level rise continuing on into the future.

Intermediate-Low – range of future warming levels and emissions pathways.

Intermediate – driven by high emissions scenarios and higher warming levels.

Intermediate-High – rapid ice sheet loss combined with intermediate to high future emissions, and high warming.

High – high future emissions and high warming with large potential contributions from rapid ice-sheet loss.

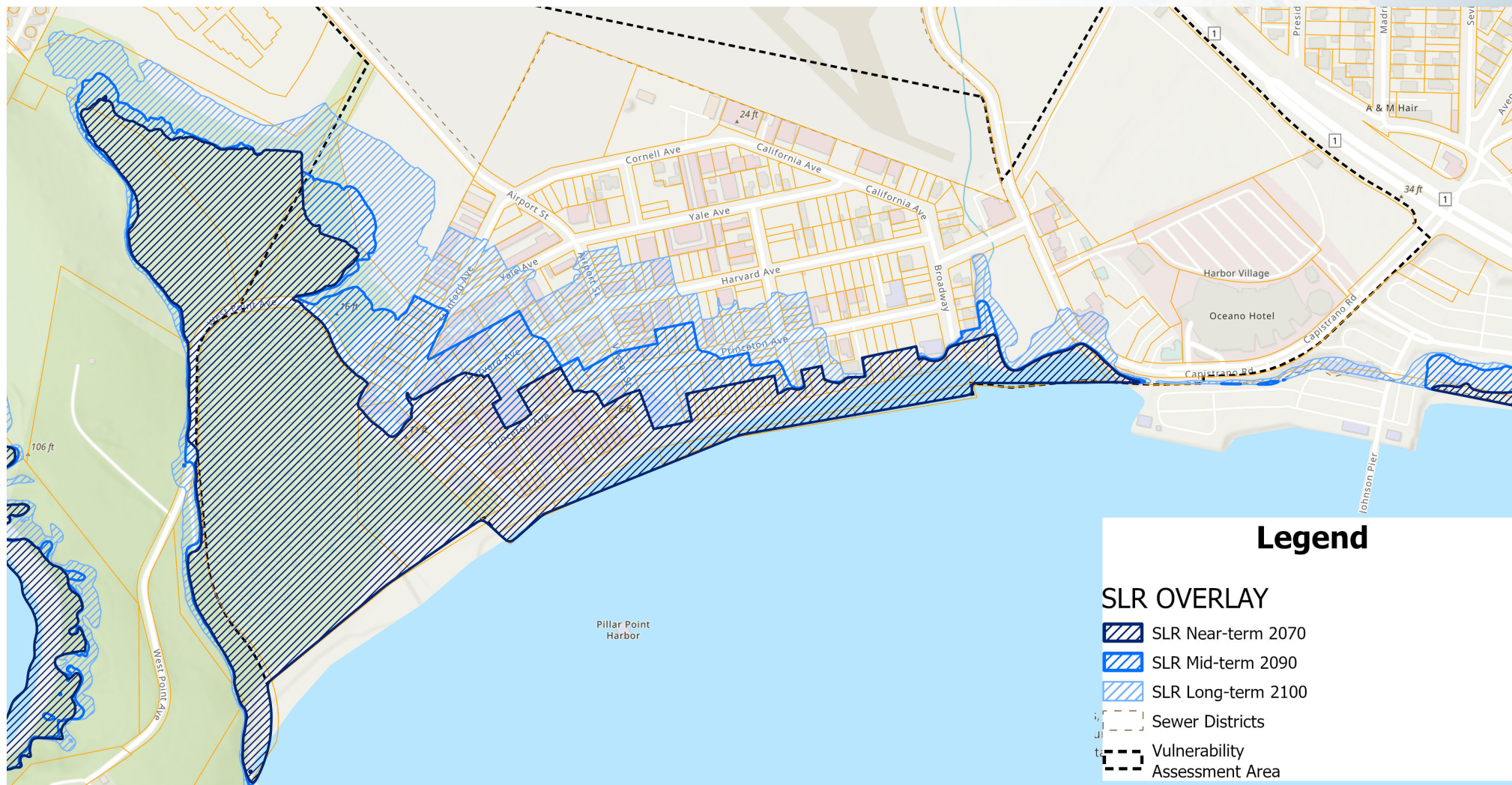
2024 Ocean Protection Council Statewide Averages for Five Sea Level Rise Scenarios

Median values for California Sea Level Scenarios, relative to a 2000 baseline. All median scenario values incorporate the local estimate of vertical land motion.

YEAR	LOW	INT-LOW	INTERMEDIATE	INT-HIGH	HIGH
2020	0.2	0.2	0.2	0.2	0.3
2030	0.3	0.4	0.4	0.4	0.4
2040	0.4	0.5	0.6	0.7	0.8
2050	0.5	0.6	0.8	1.0	1.2
2060	0.6	0.8	1.1	1.5	2.0
2070	0.7	1.0	1.4	2.2	3.0
2080	0.8	1.2	1.8	3.0	4.1
2090	0.9	1.4	2.4	3.9	5.4
2100	1.0	1.6	3.1	4.9	6.6
2110	1.1	1.8	3.8	5.7	8.0
2120	1.1	2.0	4.5	6.4	9.1
2130	1.2	2.2	5.0	7.1	10.0
2140	1.3	2.4	5.6	7.7	11.0
2150	1.3	2.6	6.1	8.3	11.9



SEA LEVEL RISE OVERLAY DISTRICT





SEA LEVEL RISE OVERLAY DISTRICT

Purpose -

Protect life and property from risks associated with flooding and erosion;

Rely on best available science to incorporate sea level rise into long-term community planning;

Provide clear direction for development for design and approval of future development;

Require development to incorporate adaptation strategies and best practices to address uncertainty and allow flexibility to mitigate impacts over time and build resilience through threshold-based actions;

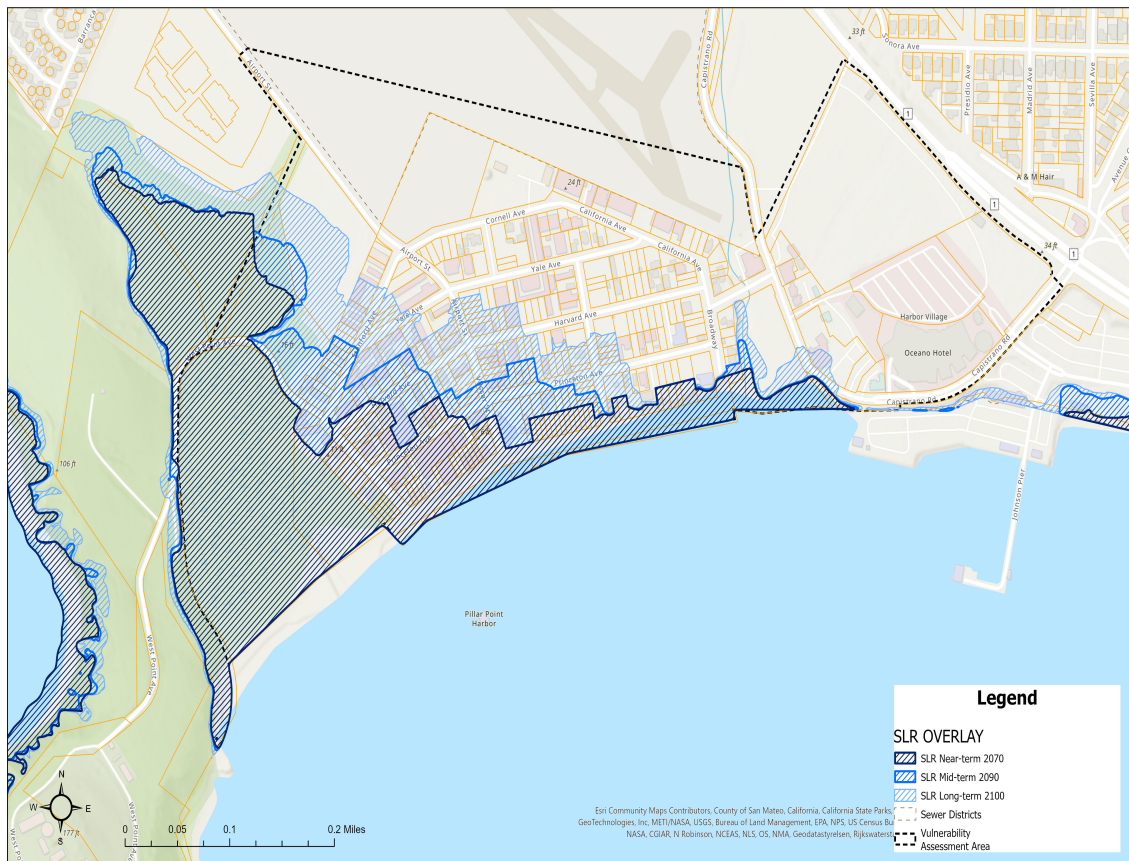
Preserve and/or enhance the quality of Princeton's shoreline for recreation, access, and resource conservation;

Provide reasonable protection of property, infrastructure and uplands in a manner consistent with the area's aesthetic qualities, public access needs, and other community goals and objectives.

Risk	SLR Projection	Horizon
Near-term	3.3 ft.	2070
Mid-term	4.9 ft.	2090
Long-term	6.6 ft.	2100



SEA LEVEL RISE OVERLAY ZONES



- Property risk zone and applicable standards will change over time with increased risk
- Development/use shall cease once the horizon year or the associated sea level rise water level is realized, whichever comes first
- If projected sea level rise is not realized within the horizon year, the County could waive relocation or removal at the designated horizon year



SEA LEVEL RISE OVERLAY

Permitted Uses

Compatible Uses – highly adaptable, minimal flooding impact, or interim uses with limited durations.

Hazardous Materials – prohibit storage or processing.

Critical Infrastructure – prohibit unless necessary to serve existing development.

Use Restriction Disclosures – recorded deed restrictions prior to building permit issuance:

- *Sea Level Rise Disclosure*
- *Coastal Development Permit Disclosure*



SEA LEVEL RISE OVERLAY

Sea Level Rise Adaptation Plan

- Demonstrate that the development will remain functional and accessible for the duration of its lifespan,
- Incorporate adaptation measures to maintain function and access as the water level rises,
- Identify alternative design strategies that would allow incremental or complete removal or relocation,
- Include a plan for dismantling and/or relocating structures if they face increasing risks from sea level rise or erosion,
- Demonstrate that the proposed development will not have adverse impacts on sand supply in the area or contribute to coastal erosion.



SEA LEVEL RISE OVERLAY

Discontinuance of Use, Removal, and/or Relocation

Structures and uses shall be discontinued, removed, and/or relocated -

- Erosion within a specified distance of the structure, or its foundation.
- Average monthly high tides reach within 3 ft. of the occupied finished floor elevation, or the risk zone horizon year is reached, whichever is sooner.
- Prohibition of occupancy as determined by the Building Official.
- Determinations made by the Director of Planning and Building based on evidence that a safety or health hazard is imminent.



SEA LEVEL RISE OVERLAY

Sea Level Rise Base Flood Elevation (SLR-BFE)

Building Height

- Establishment of a minimum lowest floor elevation for structures – *FEMA Base Flood Elevation + 3 ft.*
- Certification by a licensed professional engineer before final building occupancy.
- Prohibit occupancy in areas of a structure below the established SLR-BFE, except for uses such as boat storage or parking.





SEA LEVEL RISE OVERLAY

Critical Equipment and Utilities

- Design critical equipment to withstand flooding from future storms and sea level rise.
- Elevate equipment above the SLR-BFE.
- Design new or replaced sewage and water utilities to minimize or eliminate infiltration of flood waters.

Existing Development

Improvements or additions, including changes of use –

Alterations or changes that would increase useful life beyond the risk zone horizon year would be prohibited.



SEA LEVEL RISE OVERLAY

- Encourage and support water quality monitoring and prioritization for the relocation of wells upland and outside the overlay area
- Require real estate disclosures specifying the risks associated with properties within the Sea Level Rise Overlay District and disclosure of any site-specific analyses concerning sea level rise
- Require property owner waiver to any claims of damage or liability against the County for permitted development in the overlay, and
- Property owner agreement for participation and fair share contribution towards any future area-wide shoreline infrastructure and access plan sponsored by a public agency for the Princeton shoreline..

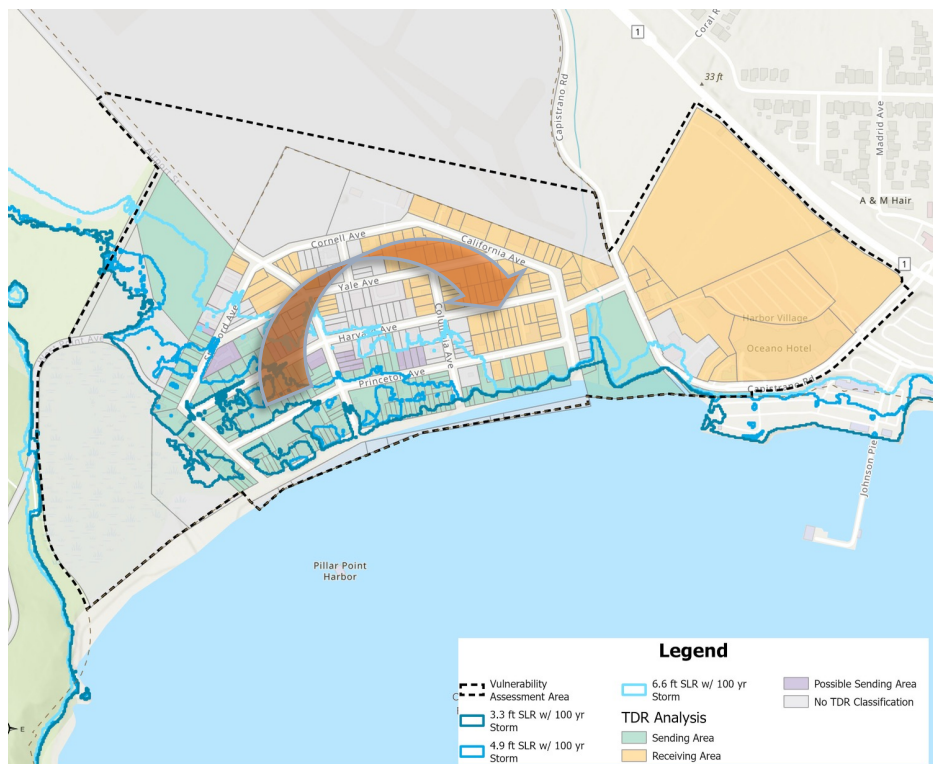
Other Provisions

TRANSFER OF DEVELOPMENT RIGHTS (TDR)





TRANSFER OF DEVELOPMENT RIGHTS (TDR) PROGRAM



What is Transfer of Development Rights

TDR allows property owners to sell development rights (as defined by land use policy) from designated sending areas to developers in receiving areas.

Purpose of TDR Programs

The main goal is to protect vulnerable lands while guiding growth to suitable urban locations.



TYPICAL PURPOSE OF TDR PROGRAMS

Preservation of Open Space

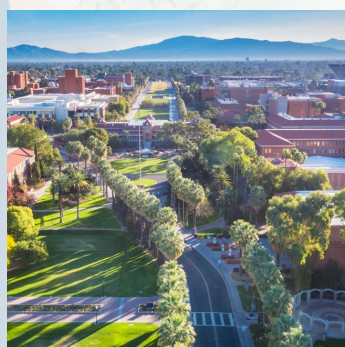
TDR programs help in preserving open spaces and agricultural lands, ensuring they remain available for future generations.

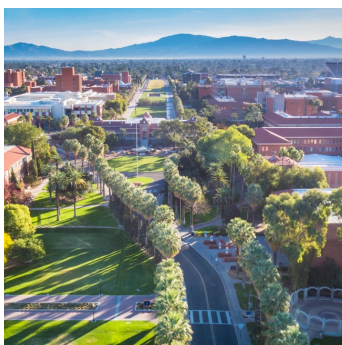
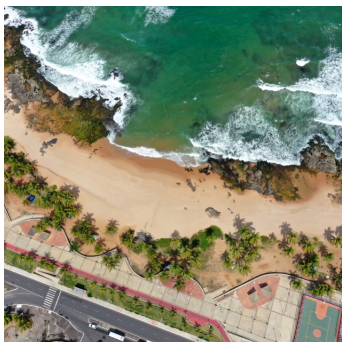
Sustainable Development

These programs guide development towards areas that can sustainably accommodate growth, reducing urban sprawl and environmental impact.

Economic Value Retention

TDR programs allow landowners to keep the economic value of their land while managing development effectively.





UTILIZING A TDR PROGRAM FOR SEA LEVEL RISE

Preserve property's value/Creation of Open Space/Shore access

Ensure a viable mechanism to preserve property value. Commit threatened properties to open space to address sea level rise, and; reduce protection costs against rising water and storm surges.

Sustainable Development

These programs guide development towards areas that can sustainably accommodate growth, reducing urban sprawl and environmental impact.

Economic Value Retention

TDR programs allow landowners to keep the economic value of their land while managing development effectively.



KEY COMPONENTS OF A TDR PROGRAM

- Sending & Receiving Areas
- Development Rights/Credits
- Transaction Mechanisms
- Administration



SENDING AREAS

Definition of Sending Areas

Sending areas are regions where development rights can be transferred from, focusing on preservation. ***In Princeton, it would be parcels under risk of inundation by sea-level rise and related flood risk.***

Types of Sending Areas

These areas often comprise valuable agricultural land and environmentally sensitive regions that communities want to protect. ***In Princeton, it would be areas predicted to be inundated by 6.6 feet slr. + 100-year storm, or loss of access due to sea level rise.***

Community Goals

Communities designate sending areas to safeguard their natural resources and promote sustainable development. ***In Princeton, designating sending areas to safeguard the value of existing and potential development for property owners from sea-level rise.***

A map of the San Francisco Bay Area with a light blue overlay indicating designated receiving areas. Labels on the map include Daly City, South San Francisco, Millbrae, Half Moon Bay, Palo Alto, and Butano State Park. The word 'RECEIVING AREAS' is written in large, bold, blue letters across the top of the map.

RECEIVING AREAS

Designated Locations

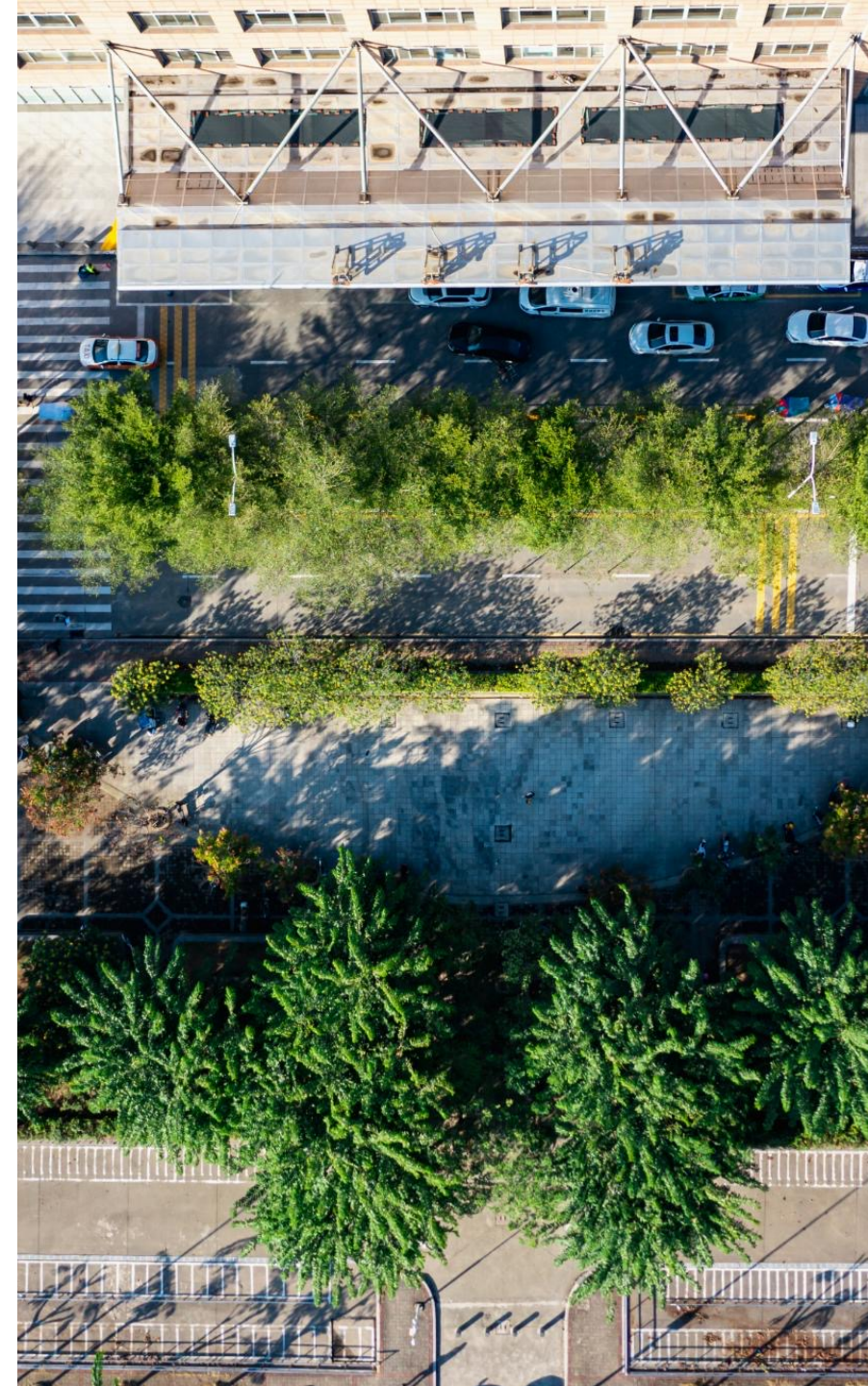
Receiving areas are specific locations selected for transferring development rights, ensuring organized urban growth. ***In Princeton, the receiving areas would be the areas safe from inundation from sea-level rise to 6.6 feet and 100-year storm (projected by year 2070-2100)***

Infrastructure Capacity

These areas possess the necessary infrastructure to support increased development, including roads, utilities, and public services. ***In Princeton, the receiving areas need to be within the same services districts to ensure the overall capacity being served remains the same.***

Sustainable Growth

The goal of these receiving areas is to promote sustainable growth while accommodating new development effectively. ***In Princeton, the receiving areas would need to be assessed to ensure they can intensify without significantly changing the community's vision for Princeton.***





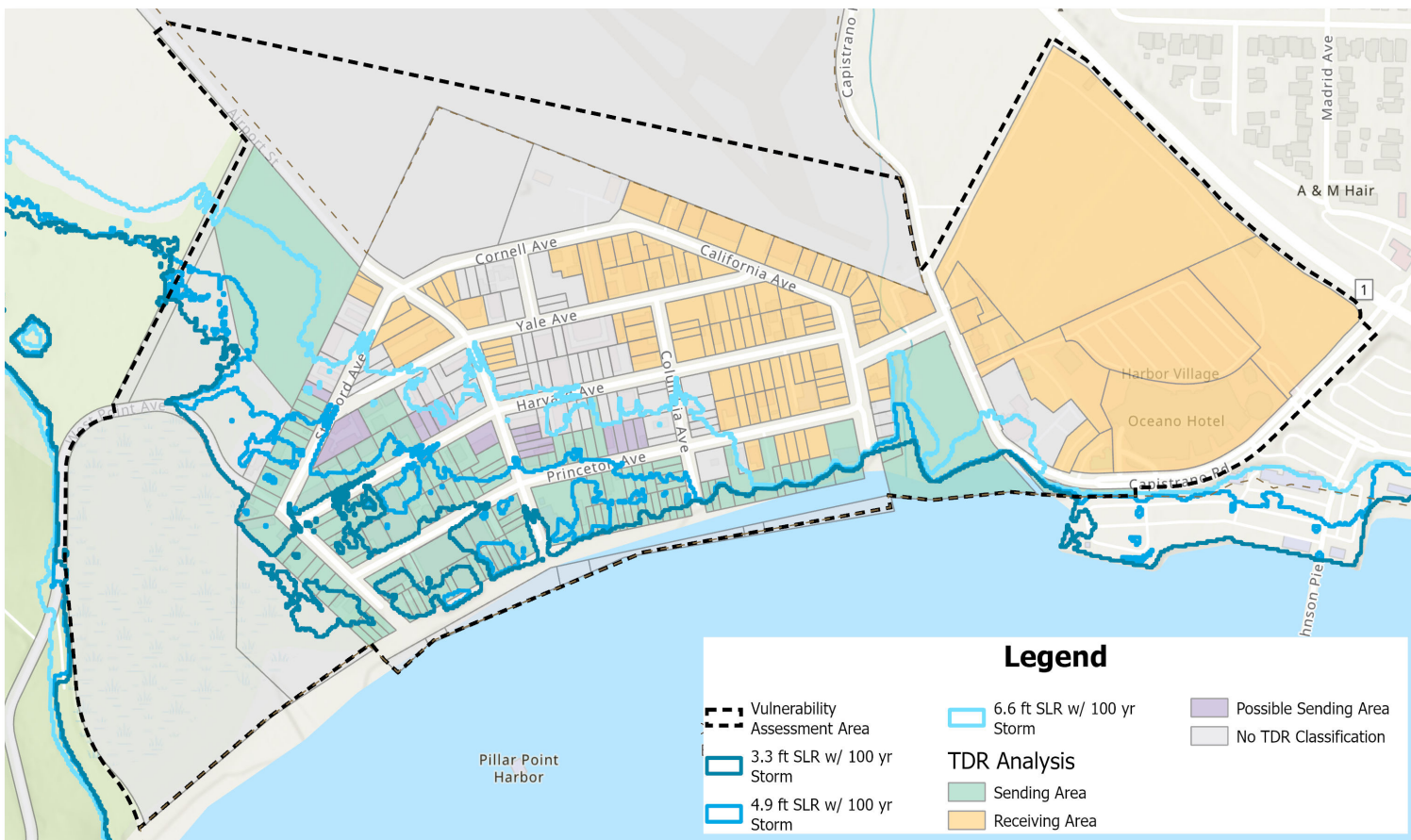
DEVELOPMENT RIGHTS/CREDITS

Definition of Development Rights

Development rights or credits indicate the amount of development allowable to be transferred between designated areas. **In Princeton, it would be the maximum allowed development proposed in Plan Princeton Draft**

Valuation of Rights

The accurate valuation of development rights is essential to ensure equitable transactions between landowners and stakeholders. **The mechanism of valuation would be determined during the establishment of a TDR program for Princeton.**



TRANSACTION MECHANISMS AND ADMINISTRATION

Design of Facilitation Process

The transfer process is facilitated through legal agreements that outline the rights and responsibilities of all parties involved. ***The process needs to be determined for Princeton. Examples-***

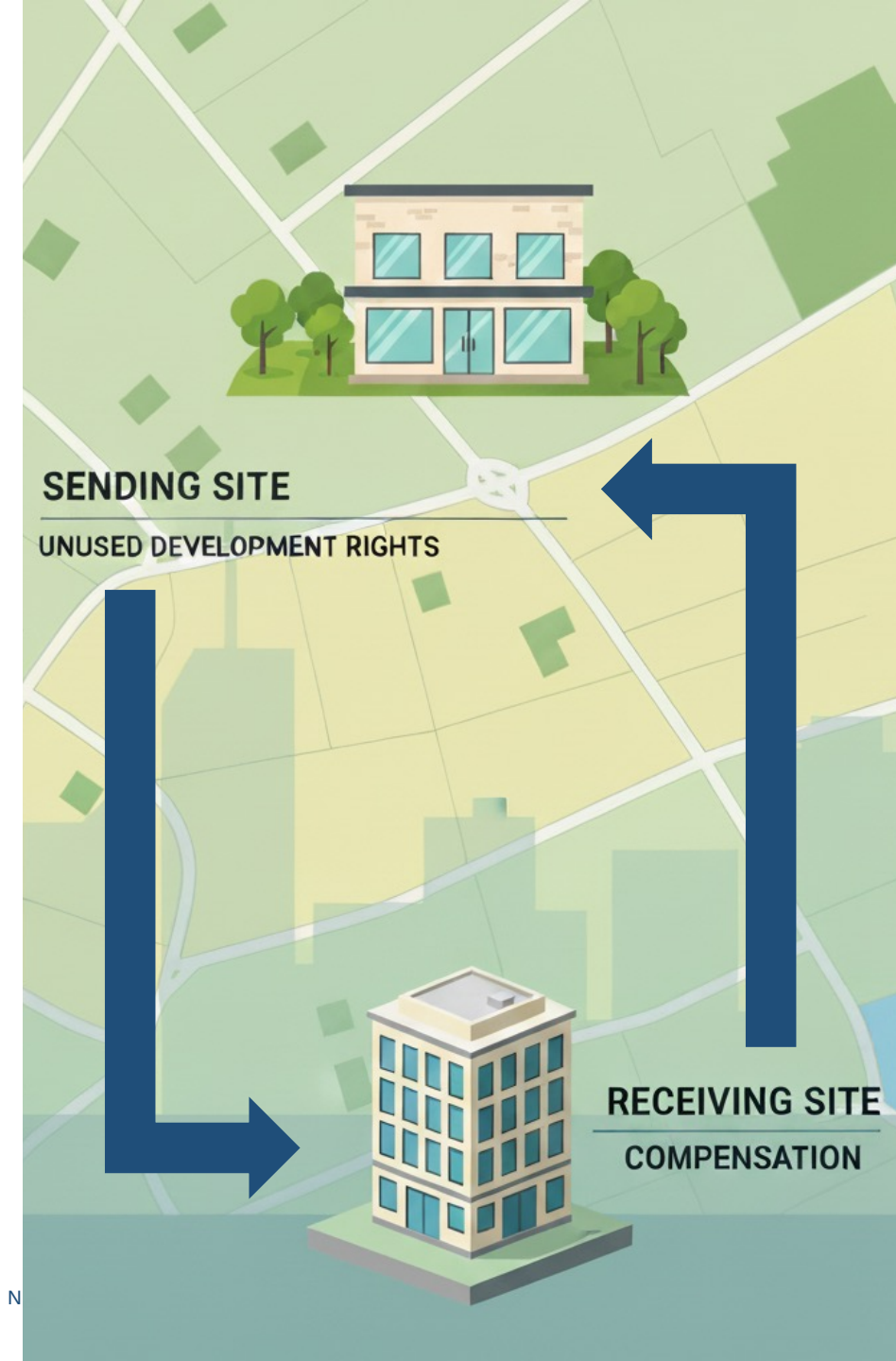
- ***Establish New TDR Commission to approve transfers/compensations***
- ***Establish a marketplace for transactions***
- ***Establish a TDR Bank***

Incentives to Participate

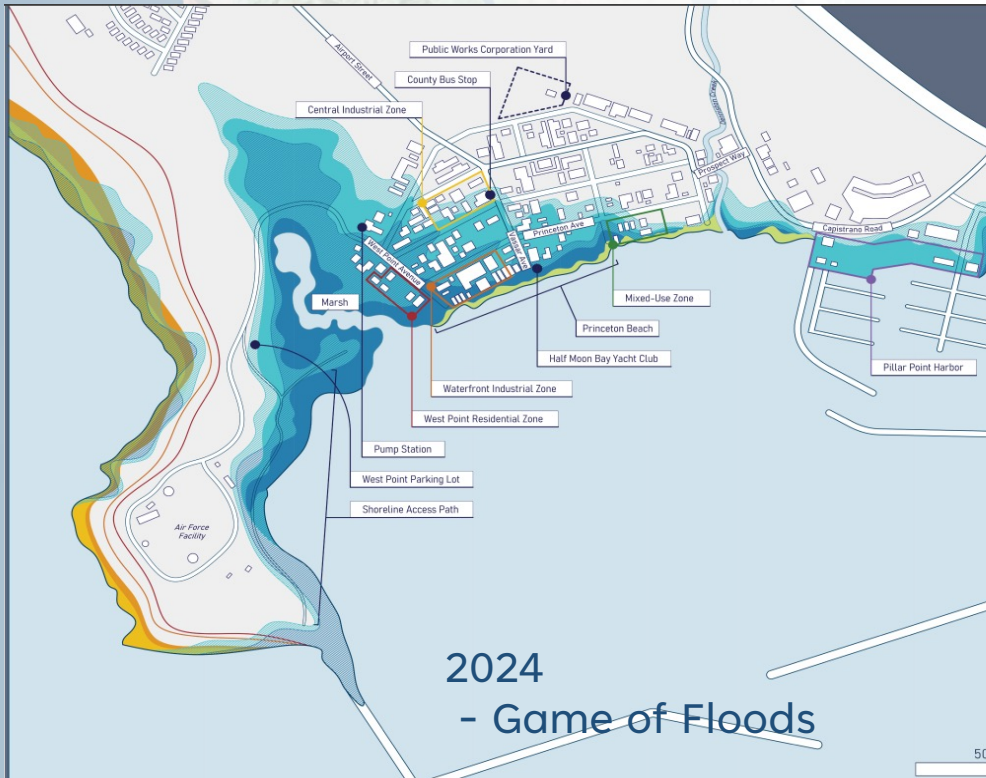
- Compensation for Rights
- Tax Breaks
- Density Bonuses

Government Oversight

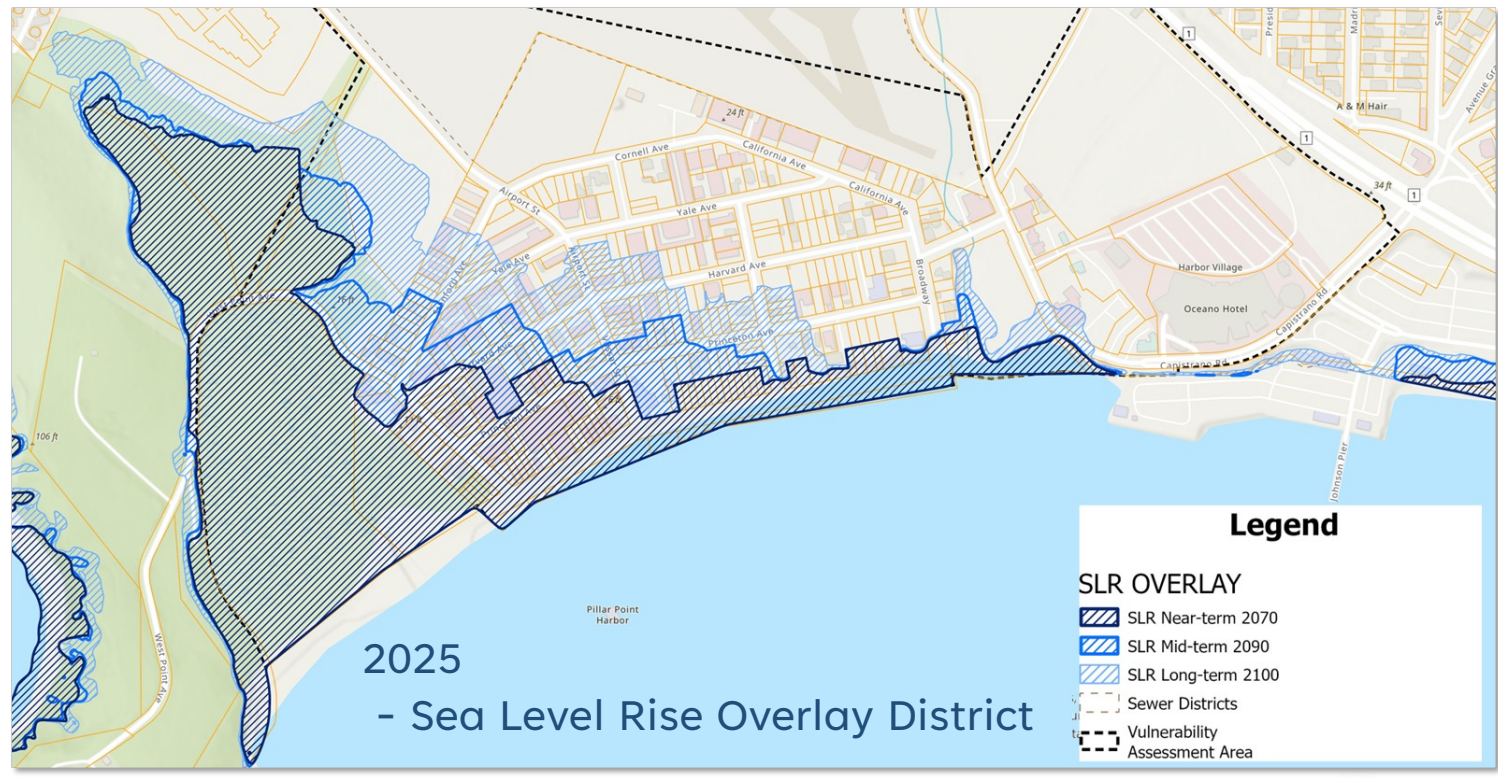
Local government oversight and monitoring ensures that TDR transactions are recorded and comply with zoning laws and community planning objectives.



COMMUNITY ENGAGEMENT



2024
- Game of Floods



2025
- Sea Level Rise Overlay District



NEXT STEPS

Staff is refining the Plan's response to sea level rise and anticipates sharing a draft of the Plan with the community in Spring 2026.

Staff Contacts:

Summer Burlison

sburlison@smcgov.org

Bharat Singh

bsingh@smcgov.org

Project Website:

<https://www.smcgov.org/planning/plan-princeton>

THANK YOU



San Mateo County Flood and Sea Level Rise Resiliency District
Agenda Report

Date: March 23, 2026
To: San Mateo County Flood and Sea Level Rise Resiliency District Board of Directors
From: Len Materman, CEO
Subject: Presentation by San Mateo County Harbor District General Manager Jim Pruett on the Harbor District's studies and projects at and near the Pillar Point Harbor

Recommendation

That the San Mateo County Flood and Sea Level Rise Resiliency District ("OneShoreline") Board of Directors ("Board") receive a presentation by San Mateo County Harbor District General Manager Jim Pruett on the Harbor District's studies and projects at and near the Pillar Point Harbor.

Background and Discussion

The San Mateo County Harbor District ("Harbor District") is an independent district governed by a five-member elected Board of Commissioners established in 1933 to build, operate, and maintain harbor and marina facilities. The Harbor District operates two facilities: on the Pacific coast, the Pillar Point Harbor, a commercial and recreational fishing facility north of Half Moon Bay; and, on San Francisco Bay, the Oyster Point Marina/Park in the City of South San Francisco for recreational boating and ferry service.

Currently, the Harbor District is engaged in interrelated studies and projects to address concerns of coastal erosion, sand management, and flood risk at and near Pillar Point Harbor. These efforts stem from the long-term effects of the Harbor's outer breakwaters, the construction of which was completed by the U.S. Army Corps of Engineers ("USACE") in 1961. While the breakwaters created a historically safe harbor for commercial and recreational fishing, they also disrupted natural sand transport processes along the northern Half Moon Bay shoreline, starving Surfers Beach of sand, accelerating erosion that threatens Highway 1 and areas to at least Arroyo de en Medio (Mirada Road Bridge). The breakwaters have also led to impeded navigation and increased flooding within the Harbor. These effects are expected to worsen with sea level rise and more extreme coastal storms, putting a range of public and private assets at risk.

At this Board meeting, the Harbor District's General Manager, Jim Pruett, will discuss the following projects, which reflect that agency's role as a harbor operator and a steward of the coastal environment:

- *West Trail Living Shoreline Project* is a project completed in 2022 that used nature-based measures to stabilize the West Trail, a popular path leading to Mavericks Beach and the Harbor's west breakwater. The trail had experienced chronic erosion, which threatens public and emergency vehicle access.
- *Surfers Beach Replenishment Pilot Project* dredged sand within the Harbor to improve navigation of the launch ramp and nearby areas, place that sand on Surfers Beach to buffer against erosion impacting the beach and Highway 1 and mitigate environment impacts by planting eelgrass on the western side of the Harbor. Construction was completed in fall 2025 and is now in a monitoring phase to understand sand migration and inform the value of larger, permanent beach nourishment efforts at Surfers Beach.
- *Princeton Shoreline Project* is studying ways to mitigate increasing erosion damage to Princeton's shoreline caused by the federal breakwaters. It began when OneShoreline transferred non-federal sponsor status for this study to the Harbor District and is anticipated to identify alternatives by this fall.
- *Flood and Storm Damage Risk Reduction Project* from Pillar Point to Arroyo de en Medio is a project that the Harbor District is now seeking funding for USACE to study the impacts of the outer breakwaters on the shoreline areas south of the Harbor vulnerable to flooding, coastal erosion, and sea level rise.

Impact on OneShoreline Resources: There is no impact associated with this item.

Attachment: Presentation for this Agenda item provided by the Harbor District

Agenda item 4C

SAN MATEO COUNTY HARBOR DISTRICT

Coastal Resiliency

(Pillar Point to Arroyo de en Medio)

Federal Issue



Local Impact

March 2026

SAN MATEO COUNTY HARBOR DISTRICT



Princeton Shoreline 1972



March 2026



Board of Harbor Commissioners

Commissioner George Domurat, President

Commissioner Virginia Chang Kiraly, Vice President

Commissioner Tom Mattusch, Treasurer

Commissioner Kathryn Slater-Carter, Secretary

Commissioner William (Bill) Zemke



Mission Statement

Provide open, accessible, and well-maintained public marine facilities that encourage and support recreational and commercial activities, beach and ocean safety, educational programs, and environmental and ecological stewardship.

Who We Are/What We Do



Public Servants

Public Harbor and Marina Facilities

Maritime Search and Rescue

Coastal Access/Maritime Recreation

Hiking/Walking Trails

Fiscal Responsibility

Recreational & Commercial Fishing

Maritime Assists

Restaurants, Shops, Fish/Crab Sales

Enviro/Ecological Stewardship

Transparent and Open Governance

San Mateo County Harbor District Coastal Resiliency Projects



Princeton Shoreline Project

West Trail Living Shoreline Project

**Surfers Beach Replenishment Pilot Project
(Harbor Dredge Project/Eelgrass Mitigation Project)**

Flood and Storm Damage Risk Reduction Project

HARBOR DISTRICT'S AREA OF CONCERN BREAKWATER IMPACT AREA

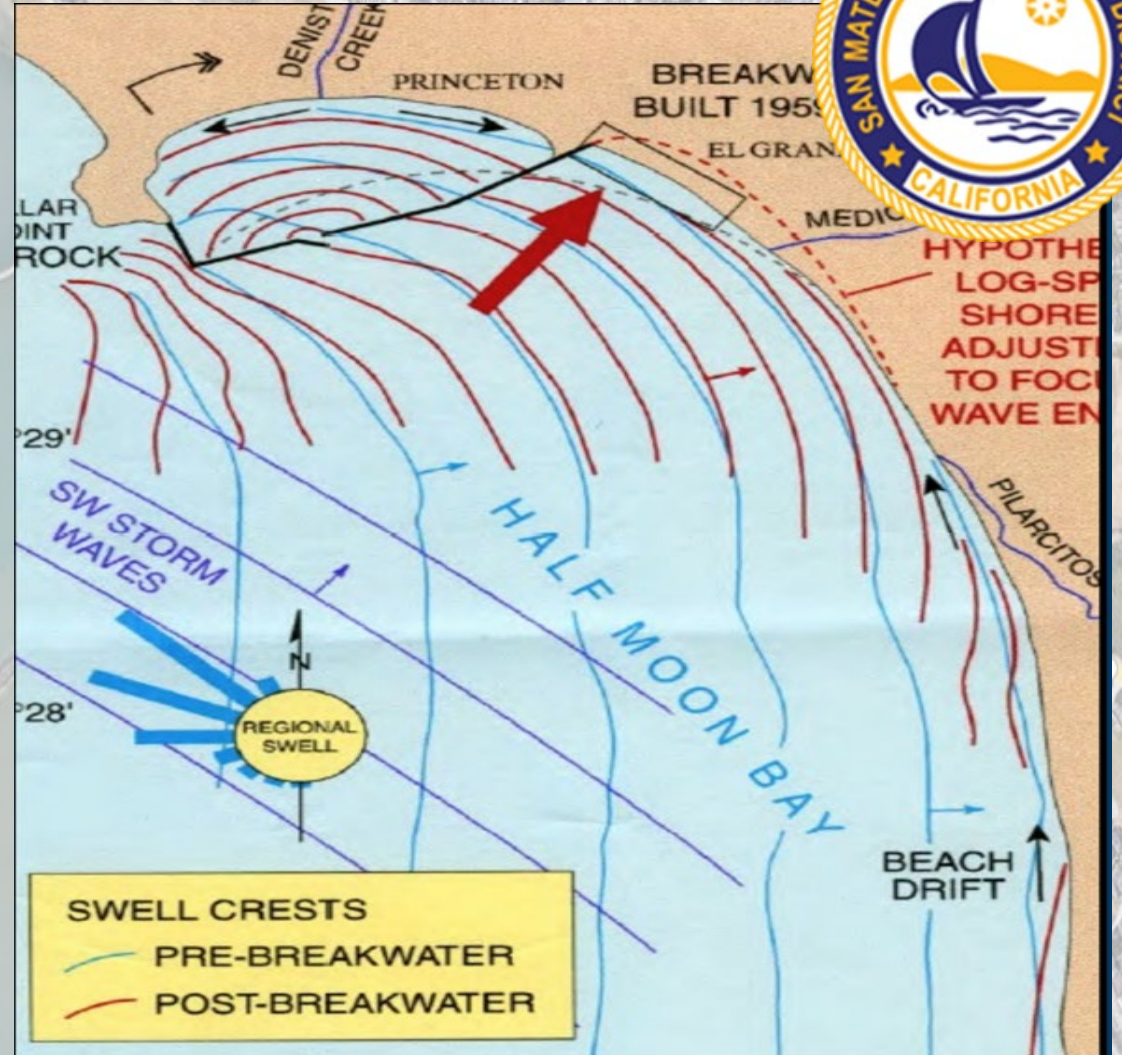


Pillar Point to Arroyo de en Medio

ASSETS AT RISK



THE ISSUE





HARBOR BREAKWATERS

**FEDERAL NAVIGATION PROJECT
FOR THE PURPOSE OF PROVIDING**

SAFE HARBOR FOR COASTAL FISHING FLEET

PROTECTION OF COASTAL INFRASTRUCTURE

HARBOR OF REFUGE

U.S. ARMY CORPS



Chief Engineer's Report March 22, 1948

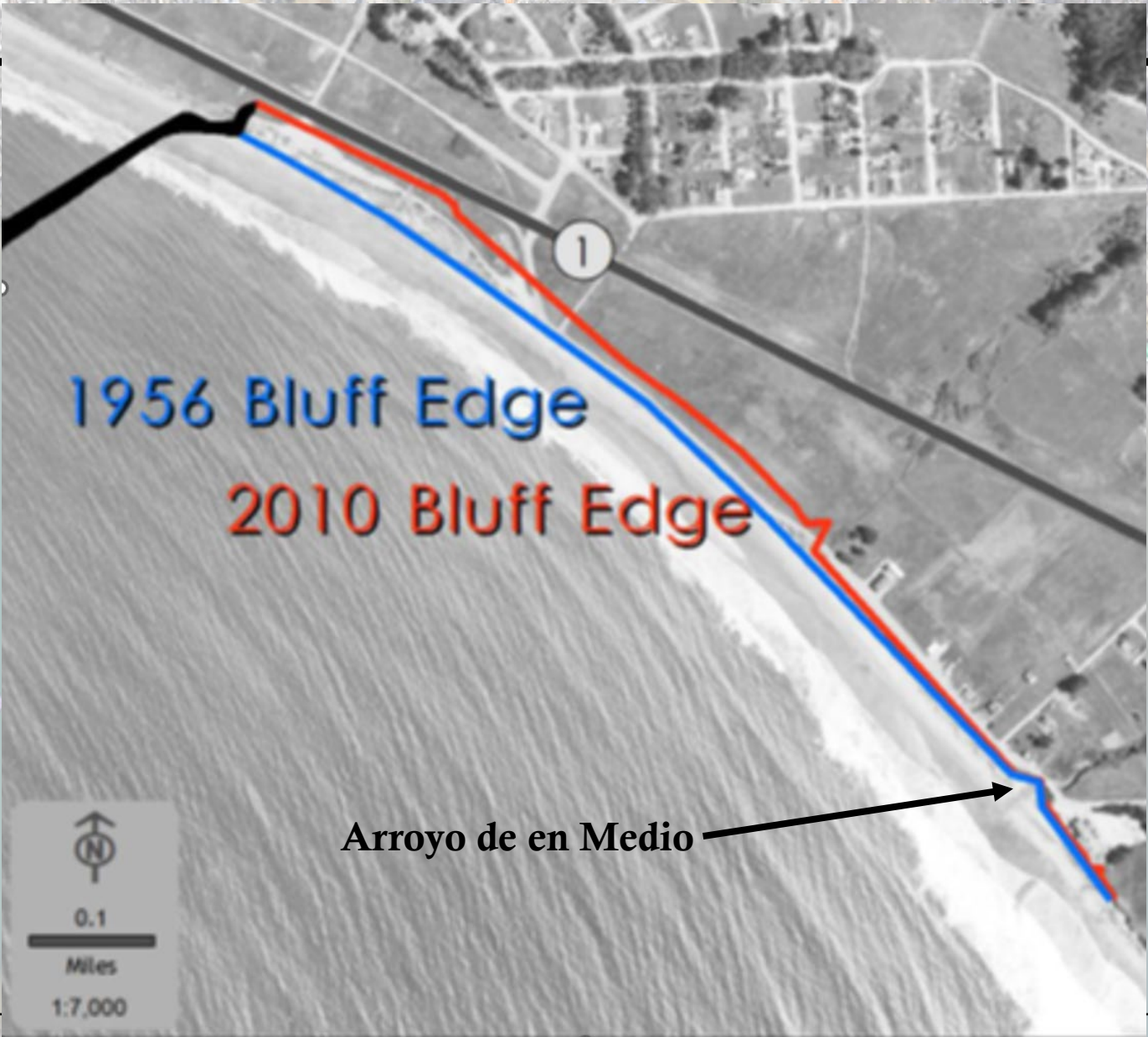
“the proposed improvements will have no adverse effects on the adjacent shoreline **except** for recession of the shoreline southward ofbreakwater.”

“This recession may be of such extent as to require protective works but none are proposed at this time.”

RESULTING DAMAGE



Jack Sutton
Wildbayarea.com



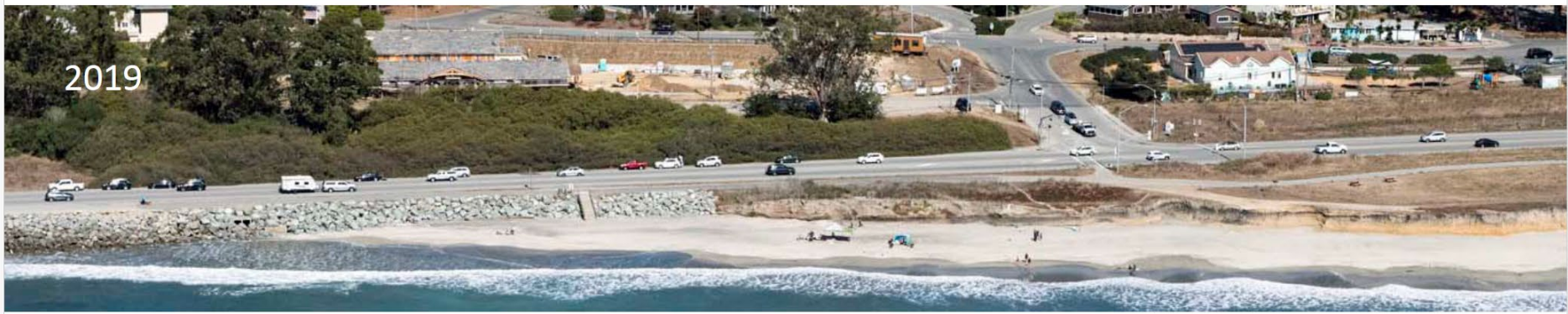




Surfers' Beach 1972



2002



2019

HARBOR DISTRICT

ADDRESSING COASTAL RESILIENCY

- **2008- SMCHD Request to U.S. Army Corps**
- **Breakwater to Arroyo de en Medio**
- **Sept 2010 Cost-Share Agreement**
- **District Cost Share: \$551,590**





South of Pillar Point

Erosion Rate: 1.64 Feet Per Year

1.4 Feet Greater than “Background” Rate



ACOE CONCLUSION

“preponderance of evidence substantiates...the outer breakwaters led to a **dramatical increase in the erosion rate** of the shoreline between the root of the East Breakwater and Arroyo de en Medio.”

Roadblock

Not Economically Feasible

THE 2015 SECTION 111 CAP ECONOMIC ANALYSIS



did not fully consider damage to or loss of Hwy 1
did no fully consider damage to the California Coastal Trail
did not consider the value of the Community of Miramar
did no consider the loss of Mirada Rd
significantly undervalued loss of Mirada Park
only considered Beach Nourishment as an option
No root cause analysis

Benefit-cost ratio: 0.37 to 1

NO FEDERAL INTEREST

Surfers Beach Replenishment Pilot Project

Beach Replenishment Project
Harbor Dredge Project
Eelgrass Mitigation Project





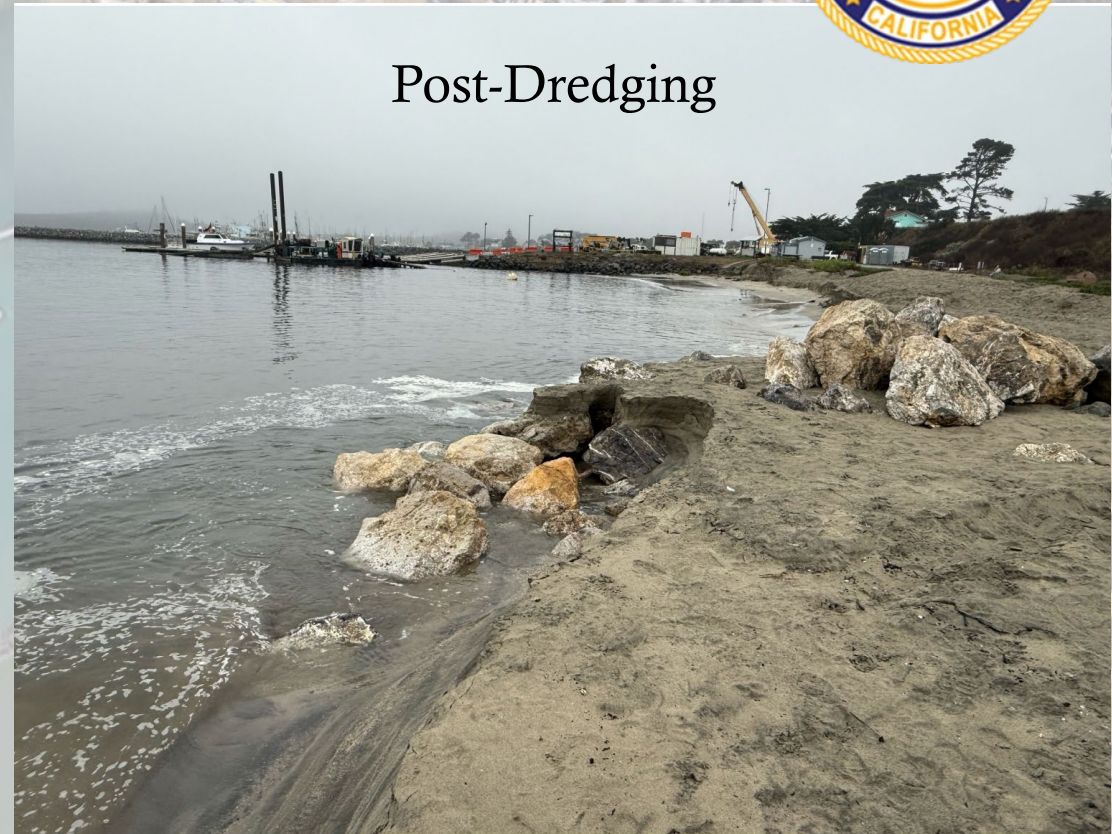
Total of 96,000 cubic yards of sand dredged from areas 1 and 2



Pre-Dredging Condition



Post-Dredging





Before Discharge Started



After ~ 2 weeks / 10,000 cy





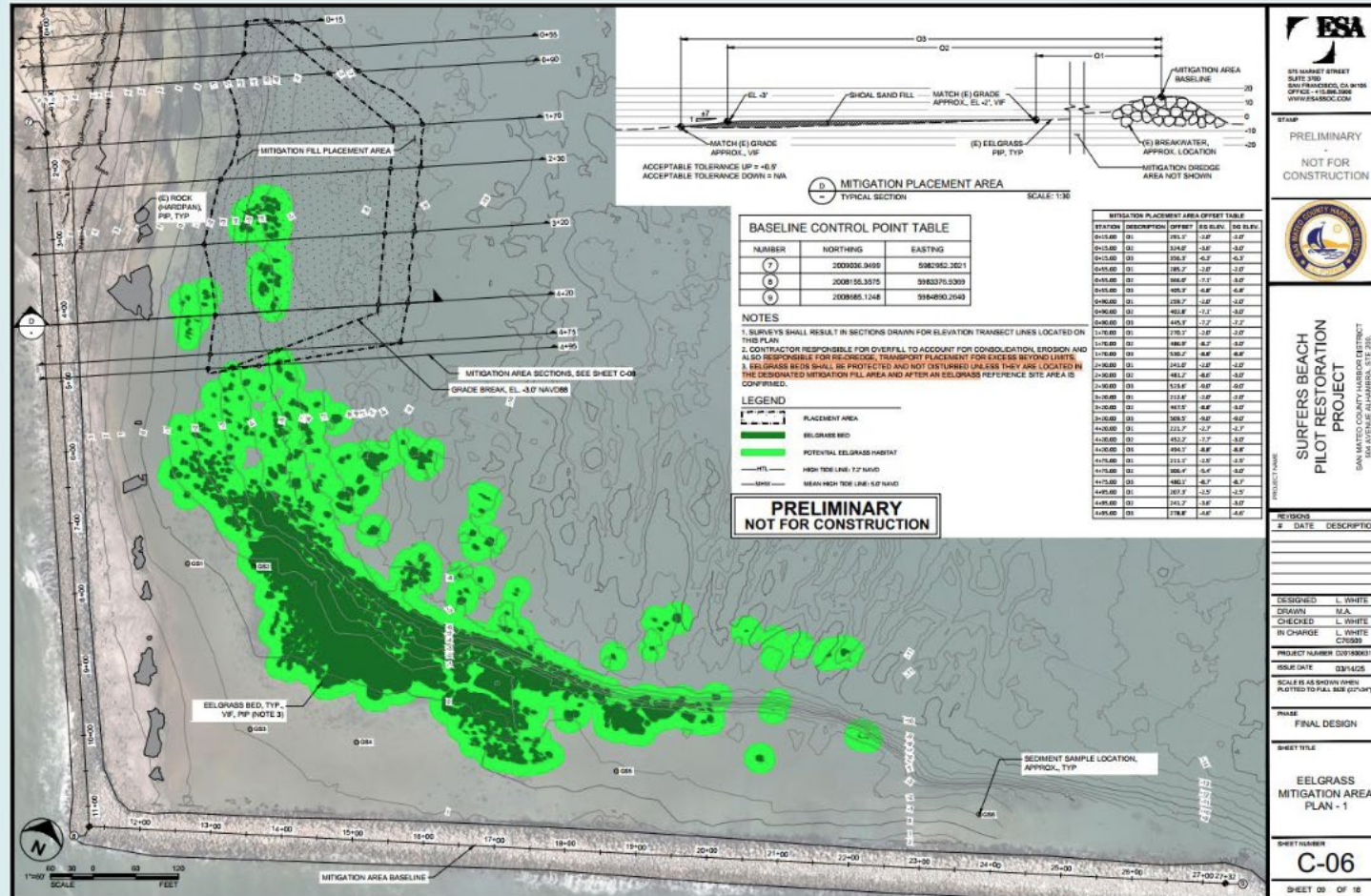
Sand Placed on beach as of 09/30/25



10/02/2025



Eelgrass Mitigation Area Pre-Construction Conditions



ESA
500 MARKET STREET
SANTA MONICA, CA 90401
OFFICE: +1 310 392 3262
WWW.ESA-INC.COM

STAMP
PRELIMINARY
NOT FOR CONSTRUCTION

**SURFERS BEACH
PILOT RESTORATION
PROJECT**
SAN MATEO COUNTY HARBOR DISTRICT
1000 MARINA DRIVE, SUITE 200
SANTA MONICA, CALIFORNIA 90401

DESIGNED: L. WHITE
DRAWN: M.A.
CHECKED: L. WHITE
IN CHARGE: C79399

PROJECT NUMBER: 03190001-00
ISSUE DATE: 03/14/25
SCALE: AS SHOWN (WHEN PLOTTED TO FULL SIZE (24"X36"))

PHASE: FINAL DESIGN

SHEET TITLE: EELGRASS MITIGATION AREA PLAN - 1

SHEET NUMBER: C-06
SHEET 00 OF 18



EELGRASS





COST

Total Cost is \$8,113,703.67

Total Grant \$3,031,250.00

Total Paid by District: \$5,082,453.67

Lost \$800,000 State Grant



5-YEAR POST-CONSTRUCTION MONITORING

- Surveys to track progress & movement of sand
- Waves – Install a buoy to measure waves offshore
- Water Levels / Tides – Install tide gauge in harbor
- Surfing & Beach Recreation – observations & camera/video
- Sediment sampling – grain size distributions over space & time
- Time lapse & other photography



COORDINATION:

- **SAN MATEO COUNTY**
- **MONTEREY BAY NATIONAL MARINE SANCTUARY (MBNMS)**
- **GREATER FARALLONES NATIONAL MARINE SANCTUARY (GFNMS) & GREATER FARALLONES ASSN.**
- **CALIFORNIA COASTAL COMMISSION (CCC)**
- **SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD (RWQCB)**
- **CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (CDFW)**
- **CALTRANS**
- **U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)**
- **ARMY CORPS OF ENGINEERS (USACE, CORPS)**
- **US FISH AND WILDLIFE SERVICE (USFWS)**
- **NOAA'S NATIONAL MARINE FISHERIES SERVICE (NMFS)**
- **CITY OF HALF MOON BAY**
- **ONESHORELINE**



WEST TRAIL LIVING SHORELINE PROTECTION PROJECT



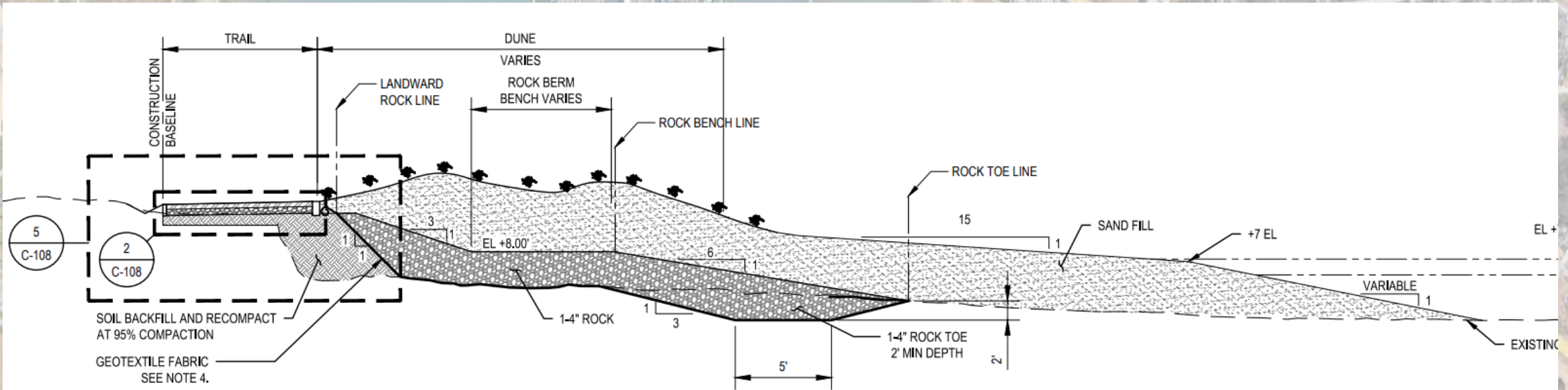




Project Cost: \$4,500,000



ENGINEERED BEACH PROFILE



NOTE:

1. TYPICAL SECTION FOR STATIONS 3+00 THROUGH 5+50.



TYPICAL BEACH & TRAIL SECTION

NOT TO SCALE



Looking to the Future

It is very bright!

Addressing the Root Cause

Water Resource Development Act (WRDA) 2024

Princeton Shoreline Project



Water Resources Development Act

Provides Congressional Authorization to ACOE

Every Two Years

Bipartisan/Bicameral

Authorizes Only/Does Not Provide Appropriations



WRDA 2024

Signed into Law on January 4, 2025

(PUBLIC LAW 118-272—JAN. 4, 2025)

Authorized Army Corps to conduct a Feasibility Study

**Flood Risk Management & Storm Damage Risk Reduction,
Pillar Point Harbor**

(Pillar Point to Arroyo de en Medio)



Existing Reef

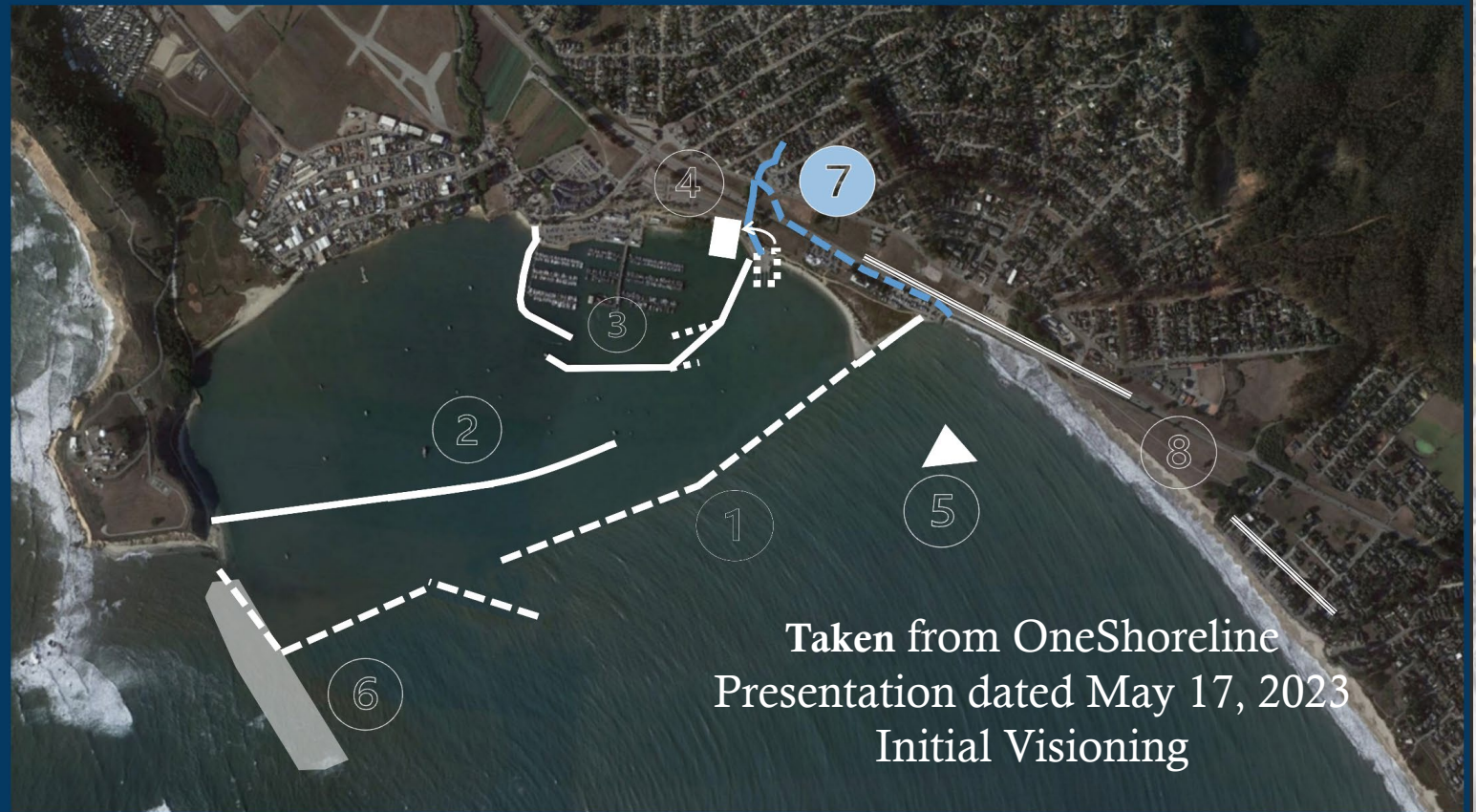
Arroyo de en Medio

SAM



With OneShoreline's Guiding Principles, what might sea level rise adaptation look like?

- 1 Outer breakwaters mostly removed
- 2 New west outer breakwater constructed with repurposed rock
- 3 Inner breakwaters upgraded and slightly realigned
- 4 Boat launch ramp relocated
- 5 Submerged rock reef constructed off Surfers Beach
- 6 Existing rock reef enhanced and raised
- 7 Optional: Deer Creek re-routed
- 8 If needed, raise / realign Highway 1 and Miramar shoreline area



Taken from OneShoreline
Presentation dated May 17, 2023
Initial Visioning



Princeton Shoreline Project

ACOE CAP 111

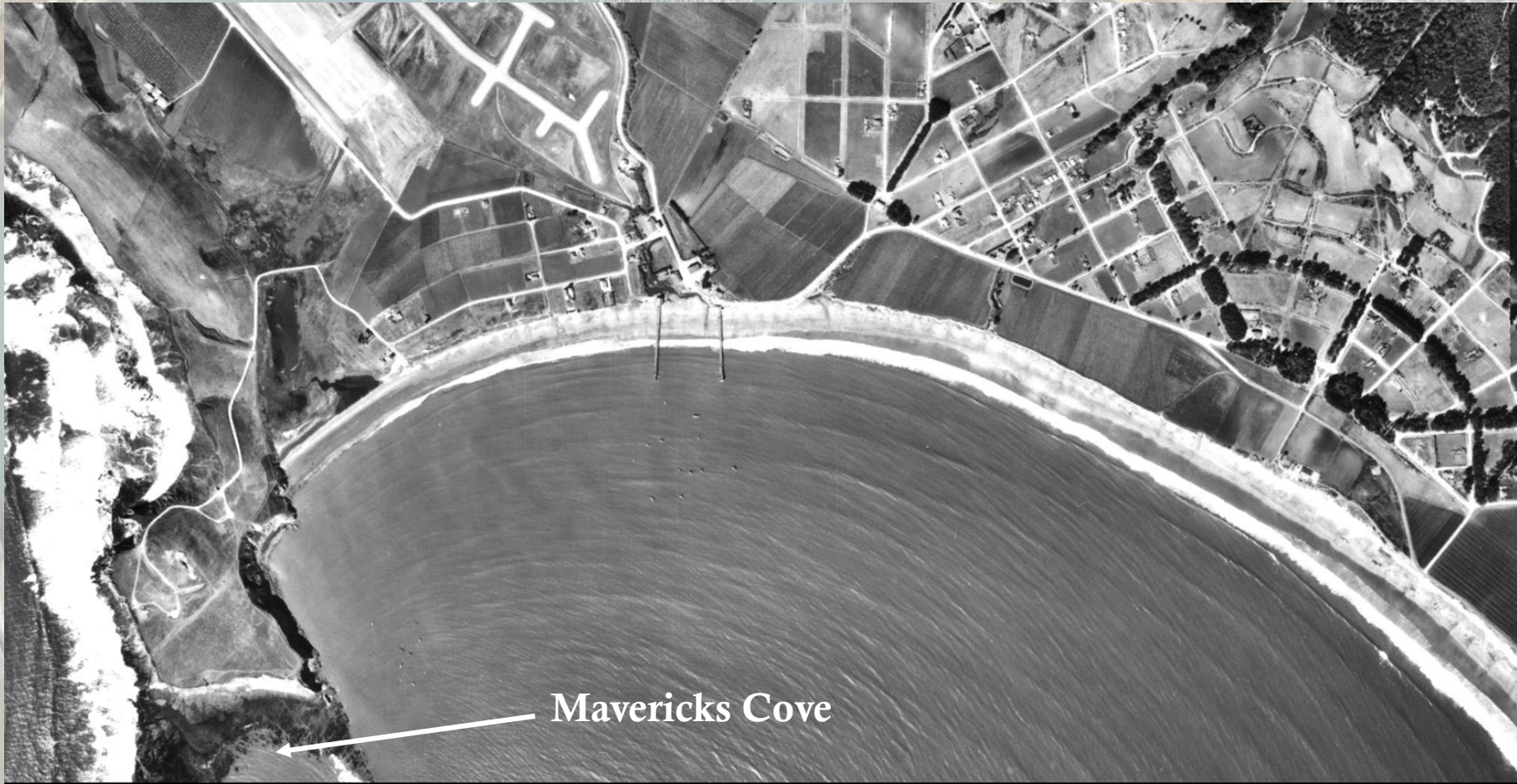
Harbor District Non-Federal Sponsor



Area of Concern



NORTHERN HALF MOON BAY 1944



Mavericks Cove

PRINCETON SHORELINE



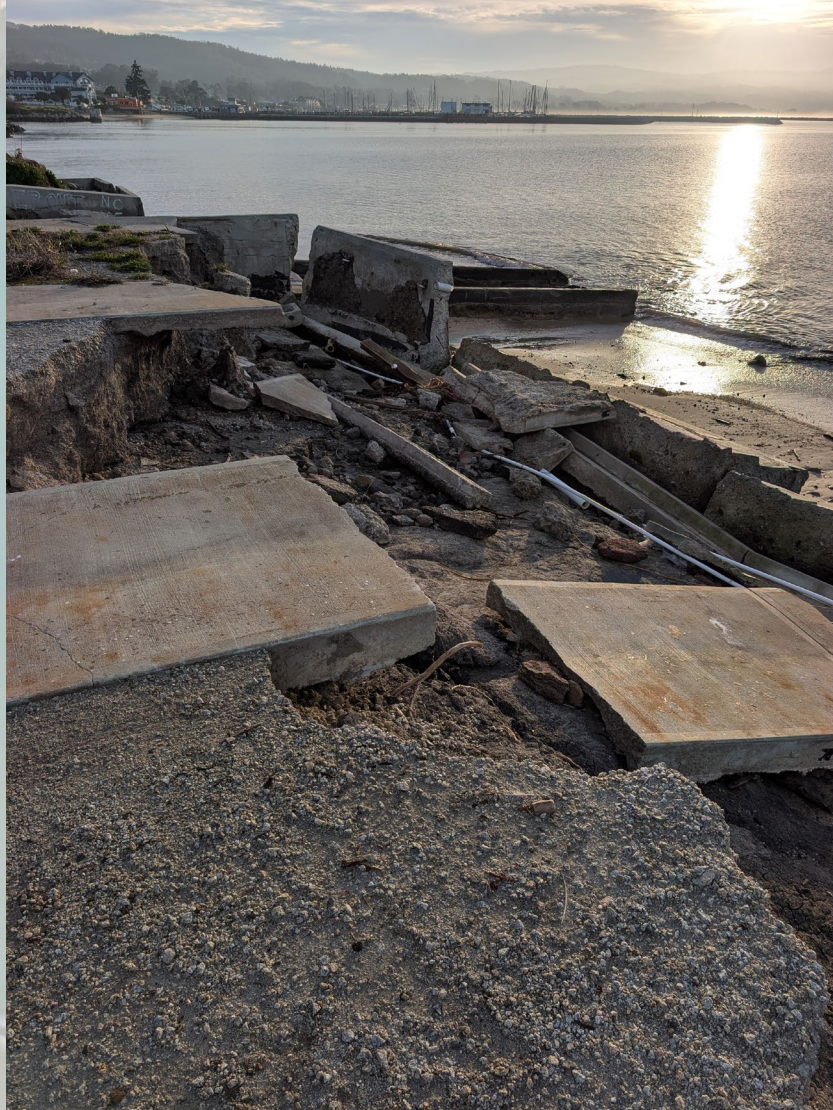


Erosion Rate

Shoreline Retreat (1969-2000)

- Near Romeo 45 ft (17 inches/year)
- Near Vassar 38 ft (15 inches/year)
- Vassar to Columbia 31 ft (12 inches/year)
- Near Columbia 19 ft (7 inches/year)

(Erosion rates after construction of the Federal breakwaters)





Project Initiation

San Mateo County Harbor District Section 111 Request



Schedule

- **January/February 2026:** Shoreline change analysis; virtual measure screening workshop and development of alternatives workshop
- **March/April 2026:** Screening of initial array (5-10) alternatives to the focus array (3-4)
- **Spring 2026:** Coastal modeling & conceptual design development of “focused array”
- **May 2026 timeframe:** Screening from “focused array” to “final array”
- **Summer 2026:** “Final array” of alternatives (2) identified



Sea Level Change

Purpose is not to address sea level change, but sea level change will be taken into account



Cost Share

- **Feasibility Study: \$209,832**
- **Construction: Up to \$1 million based on 6.8% Cost Share of \$15 million**



Questions?

Agenda item 6, CEO's Report

Grant Application to National Fish and Wildlife Foundation (NFWF) National Coastal Resilience Fund

OneShoreline is partnering with the UC Santa Cruz Center for Coastal Climate Resilience and two other research entities on a proposal to:

- Model compound (rainfall, tidal, groundwater) flooding on the Bayside of San Mateo County
- Quantify flood risk reduction benefits of various nature-based adaptation measures
- Advance conceptual designs of nature-based measures at the mouths of Colma, San Bruno, and Belmont Creeks
- Develop publicly-accessible tools to communicate risks of compound flooding and benefits of nature-based measures

The grant's maximum federal contribution is \$1.5M.



CEO'S Report: Colma Creek Clean Up Day

OneShoreline partnered with the County's Public Works and Sustainability Depts for a volunteer clean up event on March 14:

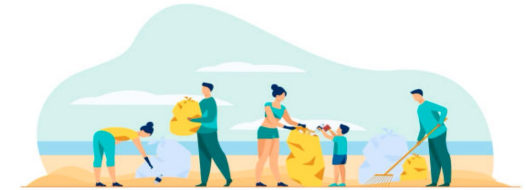
- 550 gallons trash collected
- 28 participants including students from El Camino High School and Alta Loma Middle School, parents, residents, staff



COLMA CREEK VOLUNTEER CLEAN-UP

Saturday, March 14, 2026

9AM – 12PM



Volunteers needed! Come join OneShoreline and County of San Mateo's Public Works and Sustainability Department to pick up trash and create a healthier and more beautiful environment. Great opportunity for student volunteer hours! **Help clean up Colma Creek!**

LOCATION:

Meet along the Bay Trail at the Public Shore parking lot near Littlefield Ave.

Scan QR code for meetup location

WHAT TO BRING:

Wear comfortable clothes and closed toe shoes that you don't mind getting dirty! Dress in layers.

All tools and equipment (gloves, trash pickers, etc.) will be provided, but you are welcome to bring your own if you'd like!

Refreshments will be provided



Please RSVP contact: ralbanese@smcgov.org



Upcoming Board meetings:

April 27, 2026 at 4:00 PM

May 18, 2026 at 4:00 PM