

Marina Local Coastal Program Update



Photo Brad Damitz

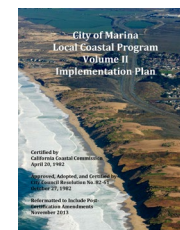
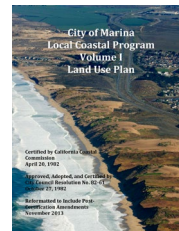
Workshop #4 January 28, 2020



Background/Project Scope

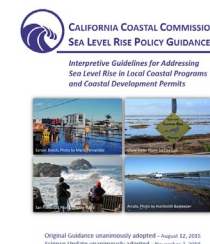
Certified Local Coastal Program (LCP) is required by the Coastal Act

- Marina's LCP – Certified 1982
- Various amendments up to 2009



Coastal Commission LCP Guidance

- *Planning for Accelerated SLR along the California Coast - 1989*
- *CCC Sea Level Rise Policy Guidance – 2015*
 - Guidelines for addressing SLR in LCPs
- *CCC Sea Level Rise Policy Guidance – 2018*
 - Science update to the original document
 - Provides higher level recommendations for how to plan for and address sea level rise impacts in LCPs



Background/Project Scope

Why the Update?

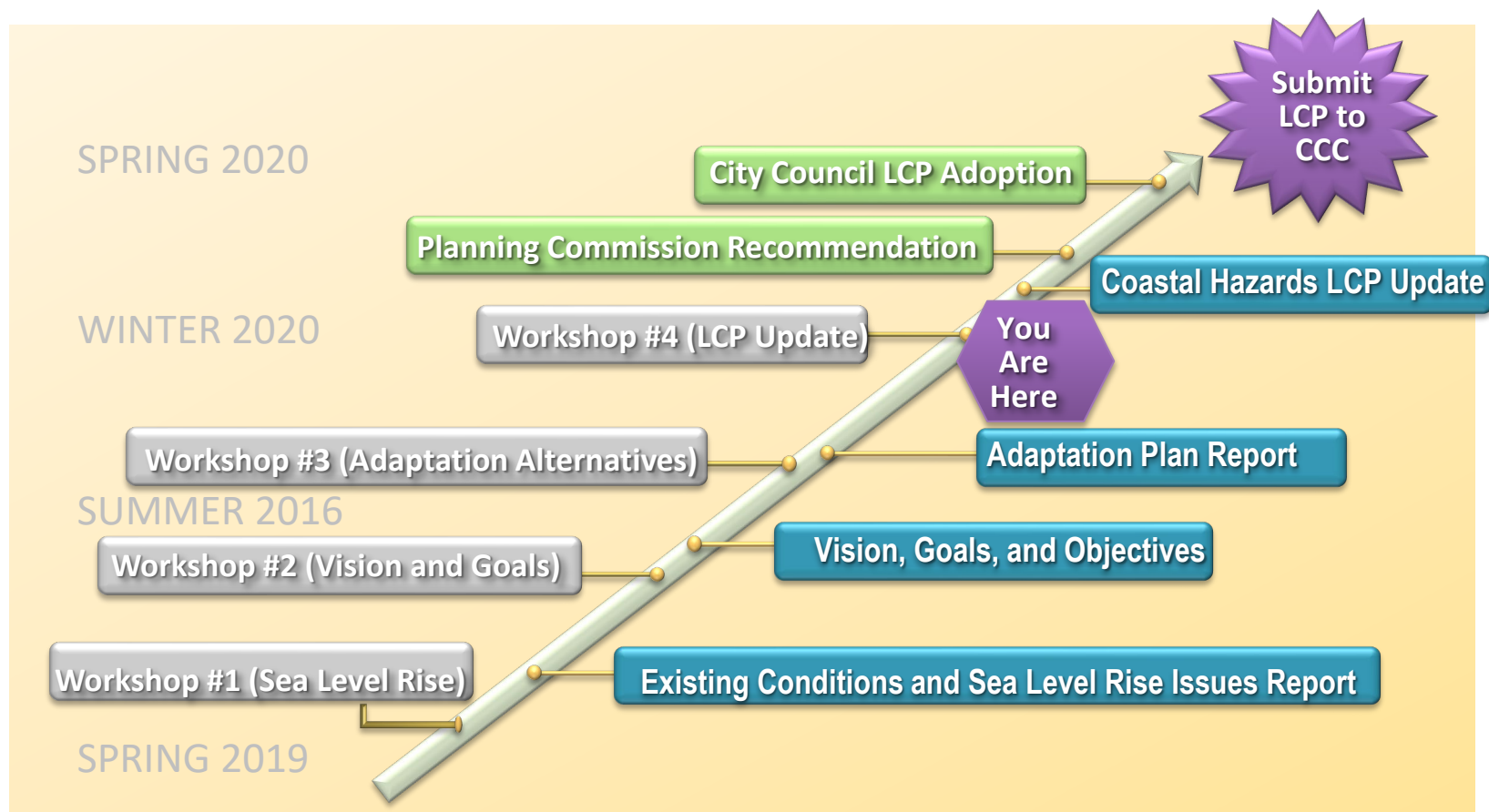
- CCC requires that new or updated LCPs prepare for SLR
- Current LCP does not consider sea level rise impacts or provide adaptation policies

2017 – Grant from California Coastal Commission - \$85,685

- Focused update to LCP – Requirements:
 - Public outreach
 - Workshops, webpage, and other communications
 - Identification of coastal hazards associated with sea-level rise
 - Vulnerability and risk assessment
 - Adaptation report



Local Coastal Plan Focused Update Timeline



Opportunities for Participation

Workshops



Website <https://www.cityofmarina.org/888/Local-Coastal-Land-Use-Plan-Update>

- Public Comment Forum
- Frequently Asked Questions
- Project Schedule
- Documents
- Calendar of Public Meetings
- Community Questionnaire



Contact

Christy Hopper, Planning Services Manager

211 Hillcrest Avenue

Marina, CA 93933

chopper@cityofmarina.org

(831) 884-1238 – direct



Stakeholder Outreach 7/29/2019

California State Parks
Sanctuary Beach Resort
Marina Coast Water District



Workshops

- Workshop #1 – 3/26/2019
 - Introduce planning effort
 - Review draft results of background report
- Workshop #2 - 6/13/2019
 - Revisions to Existing Conditions and Vulnerability Assessment
 - Visions and Goals

Workshop #3 – 9/12/2019

- Refined Vision and Goals
- Adaptation Plan Alternatives



Workshop #4

- Review Policy Development
- Discuss Opportunistic Sand Use Program
- Introduce Draft Local Coastal Land Use and Implementation Plan Amendments
 - Draft coastal hazards, sea level rise and implementation strategies
- Take public, Planning Commission and City Council comments

Following workshop –

Incorporate Coastal Commission comments as appropriate

Draft amendments refined for adoption hearings (Planning Commission and City Council)



Refined Vision Statements

VISION: The City of Marina is a vibrant, sustainable coastal town and is committed to protecting and preserving its unique natural coastline and its other valued coastal resources (including accessible beaches, visual quality, groundwater, beach and dune habitat, and diverse population of plants and wildlife) into perpetuity to support a local economy and community identity based on coastal tourism, recreation, and natural habitats.

VISION: Marina is a leader in improving coastal resiliency, responding to climate change impacts, and adapting to sea level level rise and identified coastal hazard risks in a way that protects both its coastal resources and public safety and welfare.



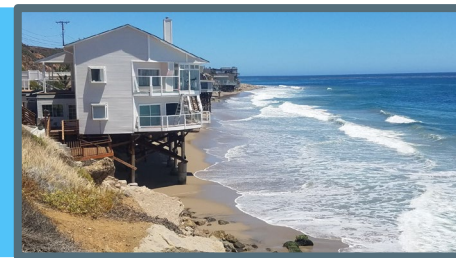
Adaptation

Goal to reduce erosion rates and not allow coastal armoring



Do Nothing

Accommodate



Hybrid



Protect

Managed
Retreat



Project vs Policy Approaches

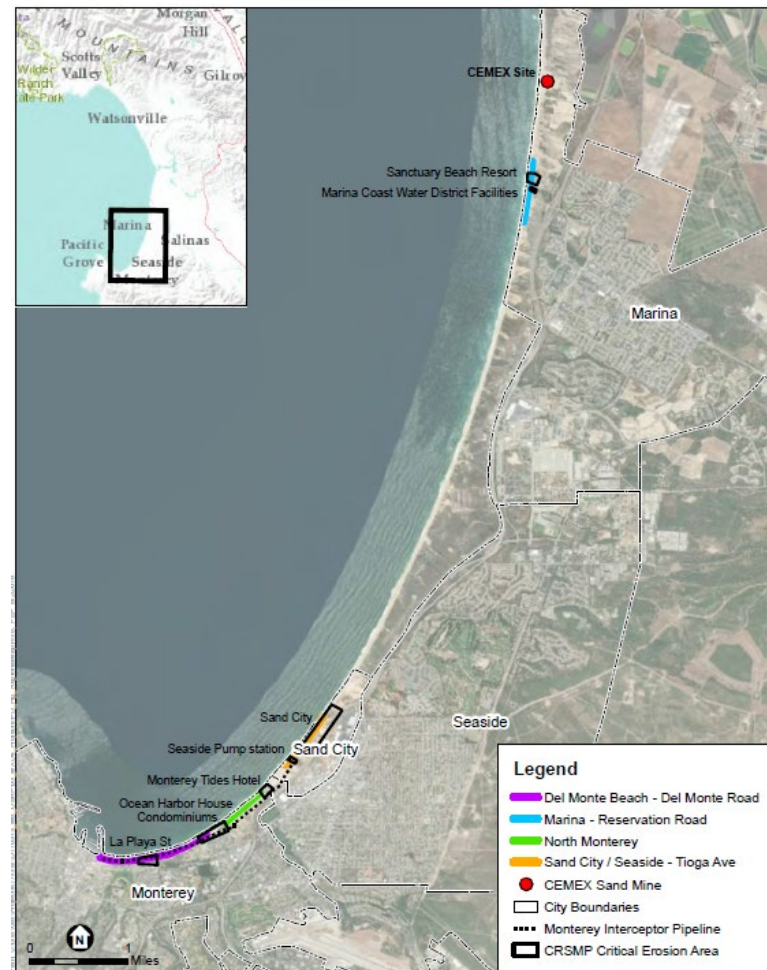


Opportunistic Sand Use Program

Program to facilitate placement of clean beach sand to offset sand losses (e.g. from sand mining)

Potential sources include inland development, flood control projects and harbor dredging

Regional program best addresses erosion by stockpiling clean beach compatible sediments to be placed at specific locations of concern



<https://ceqanet.opr.ca.gov/2019029005>



Opportunistic Sand Use Program

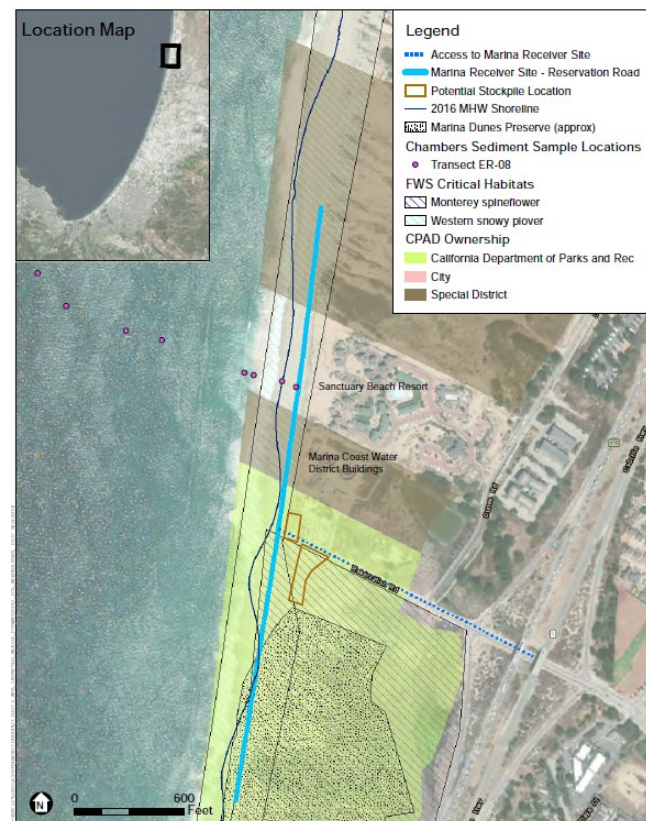
City of Monterey led the regional Program and environmental document (MND) and includes:

- Sediment grain size characterization
- Habitat concerns and impacts
- Air Quality and GHG analysis
- Construction methods and estimated costs

City of Marina would have to certify environmental document and develop its own or adopt the program

Designating specific locations

- Current placement sites are Reservation Road and CEMEX
- Could identify another stockpile site – e.g. CEMEX
- Could specify timing for species or habitat concerns



SOURCE: ESRI, ESA, Chambers, FWS, CPAD

Monterey Bay Opportunistic Beach Nourishment Project - 170313

Figure 10
Marina Receiver Site

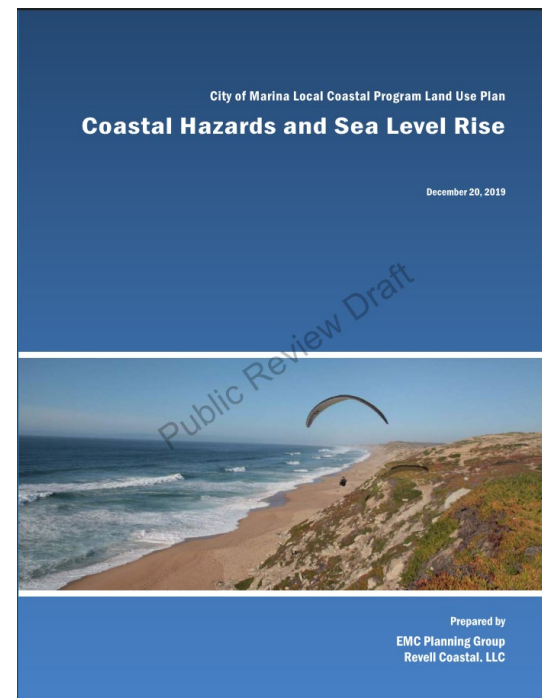


<https://ceqanet.opr.ca.gov/2019029005>



Land Use Plan - Coastal Hazards and Sea Level Rise

- Prepared with input from:
 - Citizens
 - Planning Commission
 - City Council
 - Stakeholders
 - Coastal Commission Staff
 - Charles Lester, Former Director, Coastal Commission

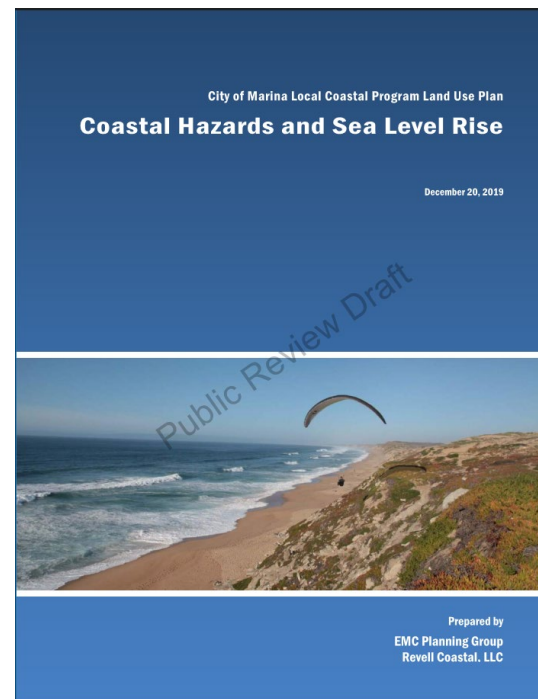


Land Use Plan - Coastal Hazards and Sea Level Rise

- Background
- Summary of Public Participation and Outreach
- Coastal Act Policies
- General Plan and Other Policies
- Land Use Plan Policies – Coastal Hazards

Implementation Plan

- How to implement LUP policies



Land Use Plan Policies – Coastal Hazards

- HAZ-1 –
 - Marina coastal zone irreplaceable resource
 - Preservation as natural living shoreline with connections between ocean, beaches and dunes a matter of great public importance
 - City response to climate change impacts – adapt to coastal hazard risks in a way that protects and preserves unique natural coastline and valued coastal resources – ensures public safety and welfare
 - No shoreline protection devices to be utilized (i.e. seawalls)



Land Use Plan Policies – Coastal Hazards

- HAZ-2 –
 - City shall continue to gather and develop information on effects of sea level rise and coastal hazards
 - Project-specific hazard assessments and updates to LCP to use the best available science
 - Information gathered shall address multiple future time horizons or multiple sea level rise elevation scenarios, as appropriate



Land Use Plan Policies – Coastal Hazards

- HAZ-3 –
 - City is a Tsunami Ready City
 - City shall identify a warning system and procedures – protection of life and property
 - New development shall require evacuation information and preparedness planning

- HAZ-4 –
 - Development shall be sited and designed to minimize risks to live and property
 - Development shall avoid future shoreline protection devices



Land Use Plan Policies – Coastal Hazards

- HAZ-5 –
 - Development
 - Shall not create or contribute significantly to erosion, geologic instability, or destruction of the site
 - Shall not substantially alter natural landforms
 - Shall not adversely alter local shoreline sand supply
 - Shall not use shoreline protection devices
- HAZ-6 –
 - Development shall not use shoreline protection devices at any point during the development's life



Land Use Plan Policies – Coastal Hazards

- HAZ-7 –
 - If proposed development may be subject to coastal hazards, the following is required:
 - Identification of hazard avoidance strategies - i.e. City consideration of additional building height to reduce building footprint, consistent with LCP visual resources and environmentally sensitive habitat area (ESHA) policies
 - Preparation of site-specific hazards report
 - Acknowledgment and assumption of all risk – City may not always be able to guarantee access and infrastructure



Land Use Plan Policies – Coastal Hazards

- HAZ-8 –
 - City shall encourage removal and restoration of Marina Coast Water District former wastewater treatment plant
- HAZ-9 –
 - City shall work with State Parks to pursue relocation of existing public parking and restroom outside of projected erosion hazard zone
- HAZ-10 –
 - Planned and existing coastal access points shall minimize impacts to dune vegetation and avoid contributing to dunes erosion



Implementation Plan – Coastal Hazards

Updates

- Coastal hazard evaluation update – Every 10 years after certification

Regional

- Within 2 years of certification – update *City of Marina Tsunami Incident Response Plan*
- Work with Marina Coast Water District to identify adaptation strategies to avoid dune erosion and support removal of wastewater treatment facility
- Work with State Parks to consider and pursue relocation of parking and restroom structures
- Planned and existing coastal access points designed, sited, maintained and relocated as necessary – minimize impacts



Implementation Plan – Coastal Hazards

Development

- Development subject to tsunami hazards – prepare preparedness plan
 - Within 2 years of certification – City adopt an ordinance requiring this plan
- Development sites and designed to minimize risks to life and property – assure structural integrity over life of development
- Development shall not create or significantly contribute to erosion, geologic instability, alteration of natural landforms or adversely alter local shoreline sand supply



Implementation Plan – Coastal Hazards

Development (Cont.)

- Shoreline protection devices prohibited
- Condition of Approval for Coastal Development Permits – Require deed restriction that acknowledges:
 - Assumption of risk – development may be affected by coastal hazards
 - Access to site may be affected
 - Shoreline protection devices prohibited
 - Agree to remove development threatened in the future and restore affected areas



Implementation Plan – Coastal Hazards Development (Cont.)

- New development assumes all risk and liabilities
- Repair and maintenance, renovations, safety improvements do not require Coastal Development Permit – unless a significant adverse environmental impact identified
- Existing structure destroyed by natural disaster can be reconstructed – including 50 year erosion setbacks

Required Reports – All Development in Coastal Zone

- Initial Coastal Hazards Assessment
- Coastal Hazards Report/Analysis and Mitigations



Next Steps and Schedule

Additional Community Input Opportunities

- Winter 2020

Coastal Hazards Update/Local Coastal Program Update

- Draft LCP Planning Commission/Council Winter 2020
- Final LCP (LCP submittal to Coastal Commission) Spring 2020



Questions?

"The winds, the sea, and the moving tides are what they are. If there is wonder and beauty and majesty in them, science will discover these qualities... If there is poetry in my book about the sea, it is not because I deliberately put it there, but because no one could write truthfully about the sea and leave out the poetry."

—Rachel Carson

David Revell

Revellcoastal@gmail.com

Polaris Kinison Brown

Kinisonbrown@emcplanning.com



Extra Slides



Opportunistic Sand Use Program

City of Monterey led Program and environmental document

Concept to allow stockpiling of clean beach compatible sediments to be placed to offset erosion.

Sand sources include inland development, flood control projects and harbor dredging

City of Marina would have to certify environmental document and adopt the program

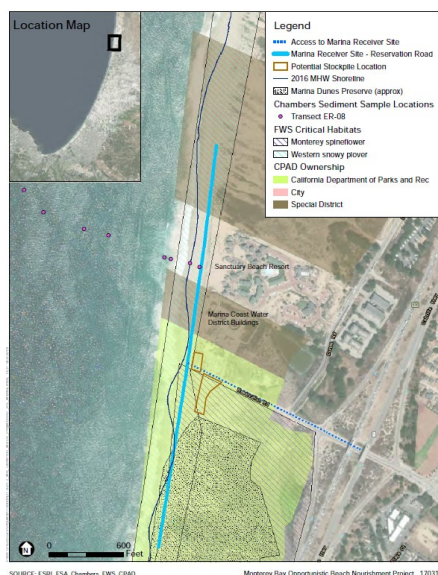


Figure 10
Marina Receiver Site

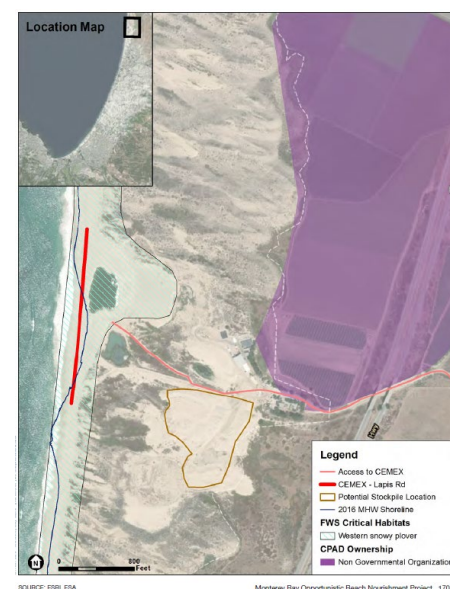


Figure 13
CEMEX Receiver Site

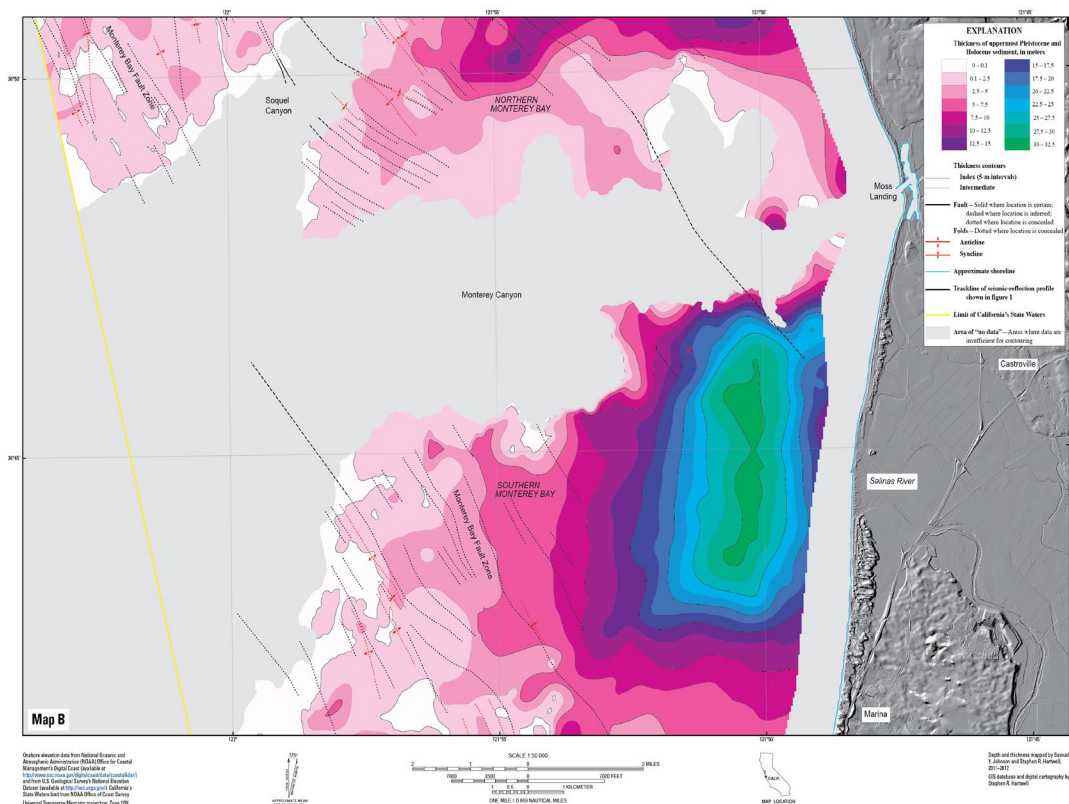
<https://ceqanet.opr.ca.gov/2019029005>



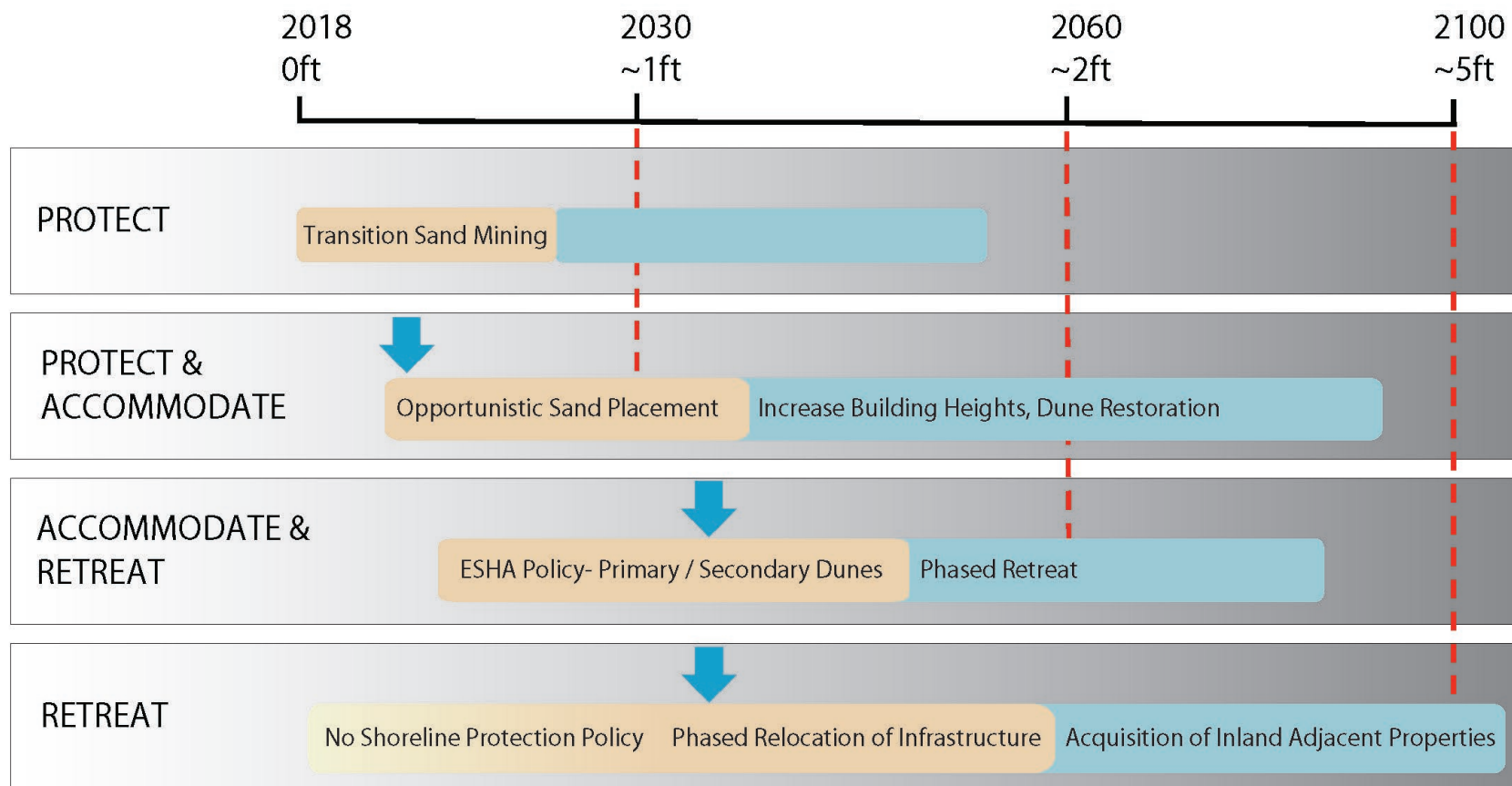
Large Scale Nourishment

Not likely feasible given MBNMS Sanctuary regulations (and others)

High cost and repetitive placements required



Potential Adaptation Pathway Timeline



Implementation

Variety of different mechanisms

Tied to triggers

Regional Sediment Management Plans

Capital Improvement Plan

Local Hazard Mitigation Plans

Park Master Plans

Shoreline Management Plans

Local Coastal Program



Financial vehicles

Transient Occupancy tax (dedicated %)

Infrastructure rate payer increases

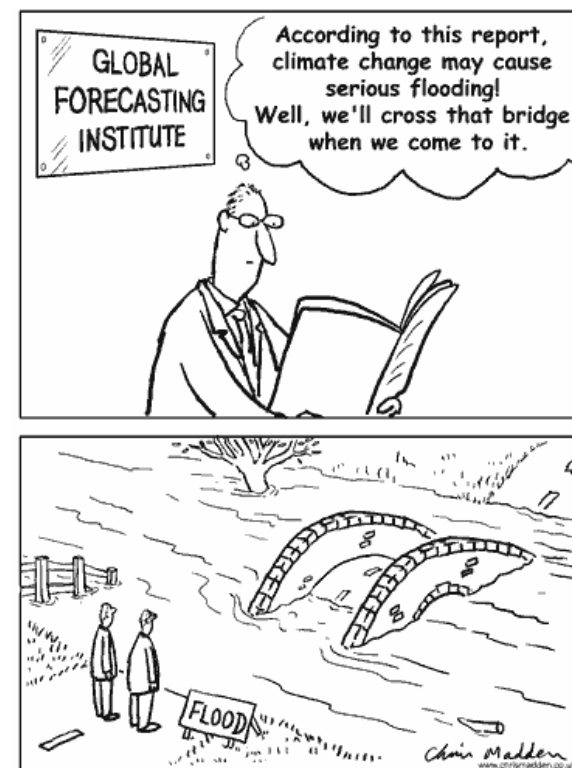
Sales Tax increase

Local Hazard Mitigation Projects (FEMA)

Fees – Sand mitigation, recreational loss fee, placement loss of beach (rent)

Green Infrastructure Bonds

Grant programs (SCC, Caltrans, CCC, USFWS, CDFW, OPC, etc)



Marina Local Coastal Program Update Draft Vision and Goals



*Articulate the Community's
Preferred Future*

Inform Development of SLR Policies

Polaris Kinison Brown, MS
EMC Planning Group
kinisonbrown@emcplanning.com



Questions

- Define Coastal Resources
 - *Natural resources which are of environmental, social, economic, and educational importance to the public.*
 - *Manmade resources of cultural, historic, economic, and educational importance to the public.”*
 - *.. (important to) both to the quality of life for people and to the maintenance of a healthy and productive natural environment.*
 - *Identifiable and geographically bounded land and water areas within the coastal zone.*
- Format
 - *Coastal Commission is currently moving towards standardization of format*



Inputs

- Technical Analysis
 - *2019 City of Marina Existing Conditions and Sea Level Rise Issues Report*
- Vision and Goals Adopted by the City
 - *LCP Policy 8. To prohibit further degradation of the beach environment and conserve its unique qualities*
- Community Input
 - Workshops
 - Communications/Questionnaire
 - Stakeholder Meetings
- State Law
 - California Coastal Act
 - Coastal Commission Guidance



Refined Vision Statements

VISION: The City of Marina is a vibrant, sustainable coastal town and is committed to protecting and preserving its unique natural coastline and its other valued coastal resources (including accessible beaches, visual quality, groundwater, beach and dune habitat, and diverse population of plants and wildlife) into perpetuity to support a local economy and community identity based on coastal tourism, recreation, and natural habitats.

VISION: Marina is a leader in improving coastal resiliency, responding to climate change impacts, and adapting to sea level level rise and identified coastal hazard risks in a way that protects both its coastal resources and public safety and welfare.



Refined Goals and Strategies

- **GOAL:** Planning and development within the coastal zone is guided by science.

Strategy: *Develop policies that require the use of the best available science to determine locally relevant and context-specific sea level rise projections for all stages of planning, project design, and permitting reviews.*



Refined Goals and Strategies

- **GOAL:** Marina's natural coastline and other coastal resources are protected and preserved.

Strategy: *Develop policies and implementation to reduce coastal erosion rates.*

Strategy: *Ban shoreline protective devices in favor of beach replenishment processes.*

Strategy: *Prioritize protection and preservation of habitat connectivity between the ocean and the dunes.*

.



Refined Goals and Strategies

- **GOAL:** Marina's natural coastline and other coastal resources are protected and preserved.

Strategy: *Collaboratively work to relocate and accommodate existing land uses that may be impacted by coastal erosion or flooding.*

Strategy: *Collaboratively work to allow natural erosion and shoreline fluctuations to maintain City and State beaches.*

Strategy: *Collaboratively work with regional partners across Southern Monterey Bay, in particular State Parks and the Marina Coast Water District, to ensure that any impacts to sediment supply or facility upgrades consider sea level rise and the City's beaches.*



Marina State Beach

City should coordinate and support State Parks approach which includes:

Stormwater and public access management

Identify relocation site for restroom and parking lot –
Likely near the old restroom location or the Parks storage facility

Implemented through an updated Park Master Plan

Trigger – when dune crest gets within a set distance of the parking lot, monitored visually with tape measure following large wave events



EMC PLANNING GROUP INC.
A LAND USE PLANNING & DESIGN FIRM

Marina Coast Water District

Former wastewater treatment plant decommissioned in 1990s

Former desal test well and expired CSLC permit

Current use of site is for district offices

MCWD currently working on master plans for water supply, wastewater and recycled water

City should participate in current master planning efforts

Support a remediation/removal/relocation plan

Develop remediation/removal plan



Sanctuary Beach Resort

Two management companies, Timeshare and Hotel

Additional infill development potential (6 more buildings)

Currently, no armoring condition as part of the permit

Potentially the City could:

Work with the landowner to allow for infill development in fragmented dune habitat (currently ESHA) with relaxed height restrictions

Identify suitable non hazardous /ESHA location to meet approved development plan



EMC PLANNING GROUP INC.
A LAND USE PLANNING & DESIGN FIRM



Key Vulnerability Findings

Dune erosion is the biggest threat to the City of Marina which may impact ~50 acres of dunes, a beach water supply well, 4 buildings at Marina Coast Water District, and portions of the Marina State Beach parking lot.

Without any adaptation:

~1 foot of SLR –erosion could affect buildings at the Sanctuary Beach Resort, and Marina State Beach restroom and co located pump station

~2 feet of SLR –erosion could affect the entire parking lot at Marina State Beach, as well as access roads to Sanctuary Beach Resort and MCWD.

~5 feet of SLR – erosion could affect 150 acres of habitat 26 buildings at the Sanctuary Beach Resort, and all of the Marina Coast Water District facility.



EMC PLANNING GROUP INC.
A LAND USE PLANNING & DESIGN FIRM



Positive Findings

Reduction of erosion rates from cessation of sand mining expected to reduce the risk of SLR impacts to the City

No projected erosion impacts to any residential, mixed use or commercial land uses

Currently the City has no coastal armoring



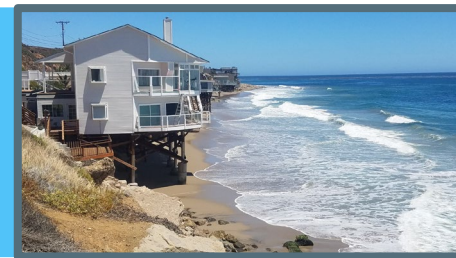
Adaptation

Goal to reduce erosion rates and not allow coastal armoring



Do Nothing

Accommodate



Hybrid



Protect

Managed
Retreat



Project vs Policy Approaches



Secondary Impacts

2002

Construction Costs

Seawalls destroy beaches and views

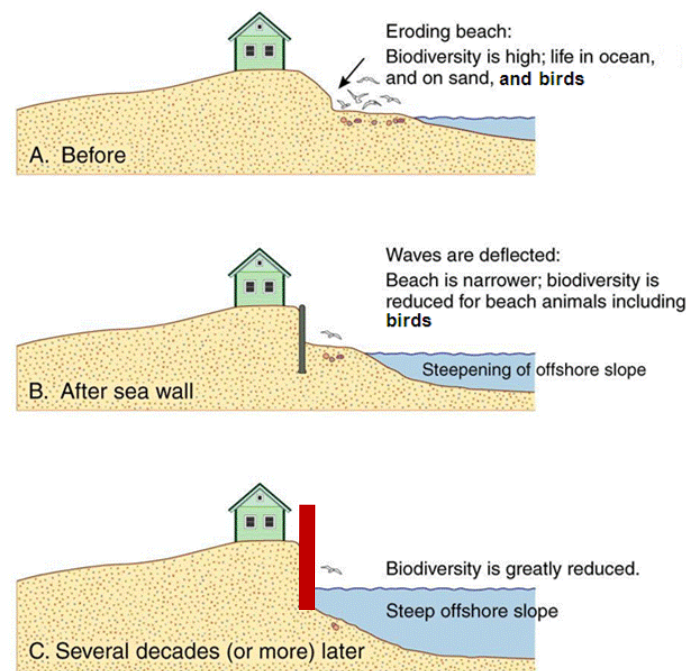
Escalating Maintenance Costs

Ecology

Recreation

Views

Aesthetics



Source: Pilkey, O.H. and Dixon, K. L. 1996
(modified) *The Corps and the Shore*. Island Press, Washington, D.C.

Triggers

- By sea level rise elevation
- By rate of sea level rise
- By time
- By exposure
- By damages
- By beach width
- By proximity of dune crest



Map Disclaimer: This report is advisory and not a regulatory or legal standard of review. For actions that the City of Marina or the Coastal Commission may take. See note in Table XX. Aerial Source: AMBAG, 2016

1 inch = 300 feet

SCALE IN MILES

0 0.25 0.5

North

Legend

Dune Erosion
Year (inches/feet)

Existing (0"/0')	[Blue wavy line]	City Boundary	[Green dashed line]
2030 (9"/-1')	[Light blue wavy line]	Coastal Zone Boundary	[Blue dashed line]
2060 (28"/-2')	[Medium blue wavy line]	Highway	[Yellow line]
2100 (63"/-3')	[Dark blue wavy line]	Seasonal or Permanent Ponds	[Green wavy line]

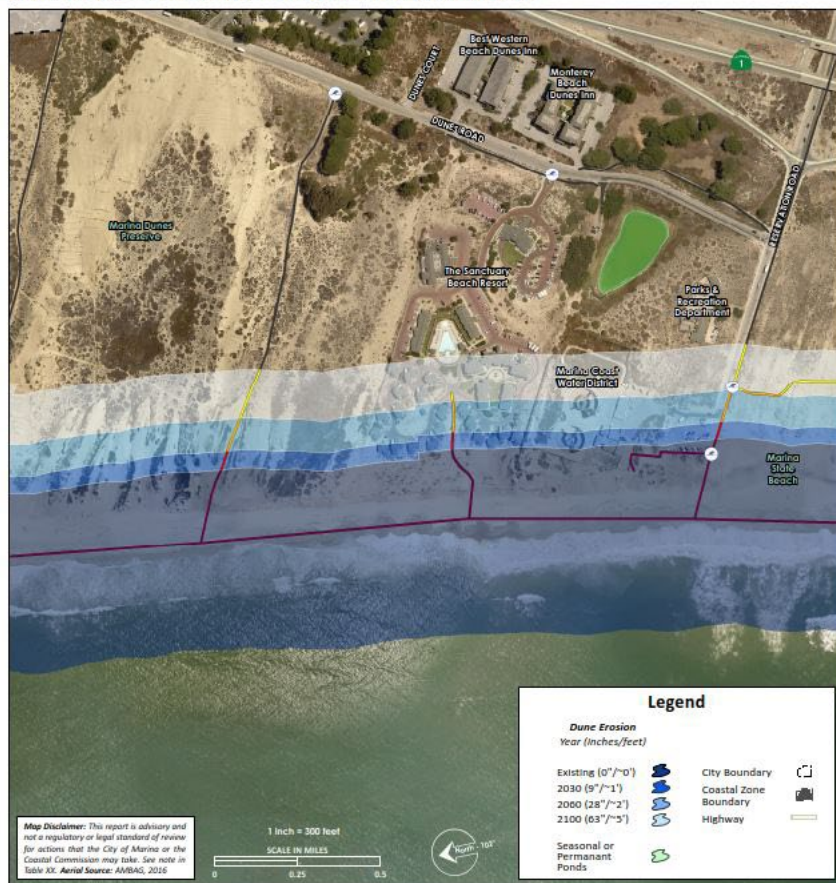
Structures	Parcels	Parkland
 0" (Existing)	 Affected Parcels	 Parkland
 9" (2030)		
 28" (2000)		
 63" (2100)		

With 5' of SLR, 22 parcels and 32 structures on 275 acres may be exposed to coastal erosion.



Coastal Recreation

Central Marina Dune Erosion. Trails & Coastal Access



South Marina Dunes



North Marina Dunes



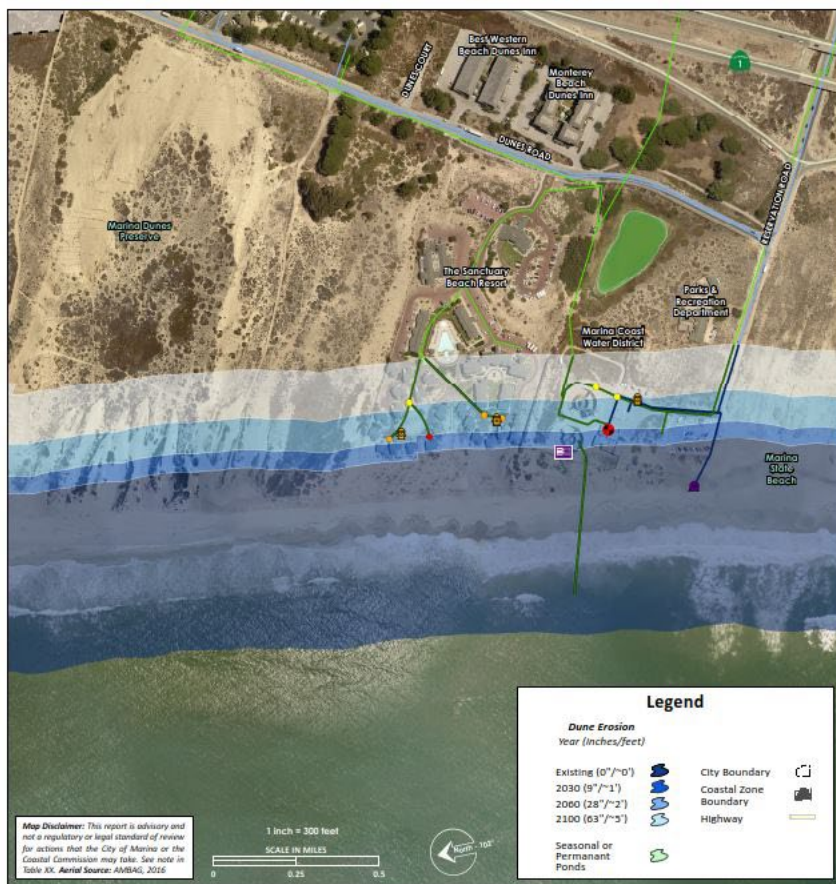
Coastal Access – Currently, all beach accesses are vulnerable to erosion & flooding during large wave events. With 5' of SLR, 2.72 miles of trail may be exposed to coastal erosion.



EMC PLANNING GROUP INC.
A LAND USE PLANNING & DESIGN FIRM

Wastewater and Water Supply

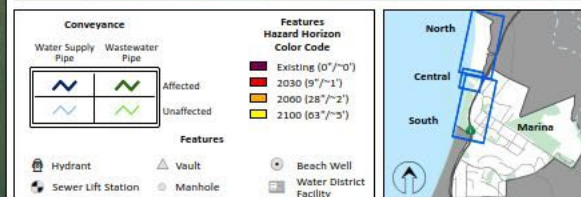
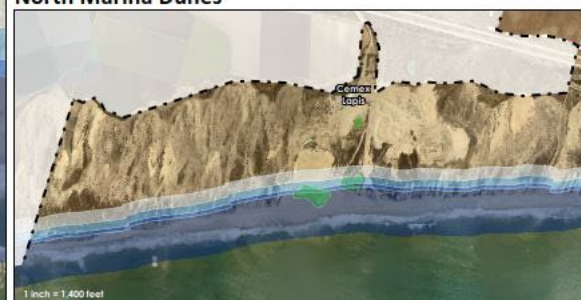
Central Marina Dune Erosion. Wastewater and Water Supply



South Marina Dunes



North Marina Dunes

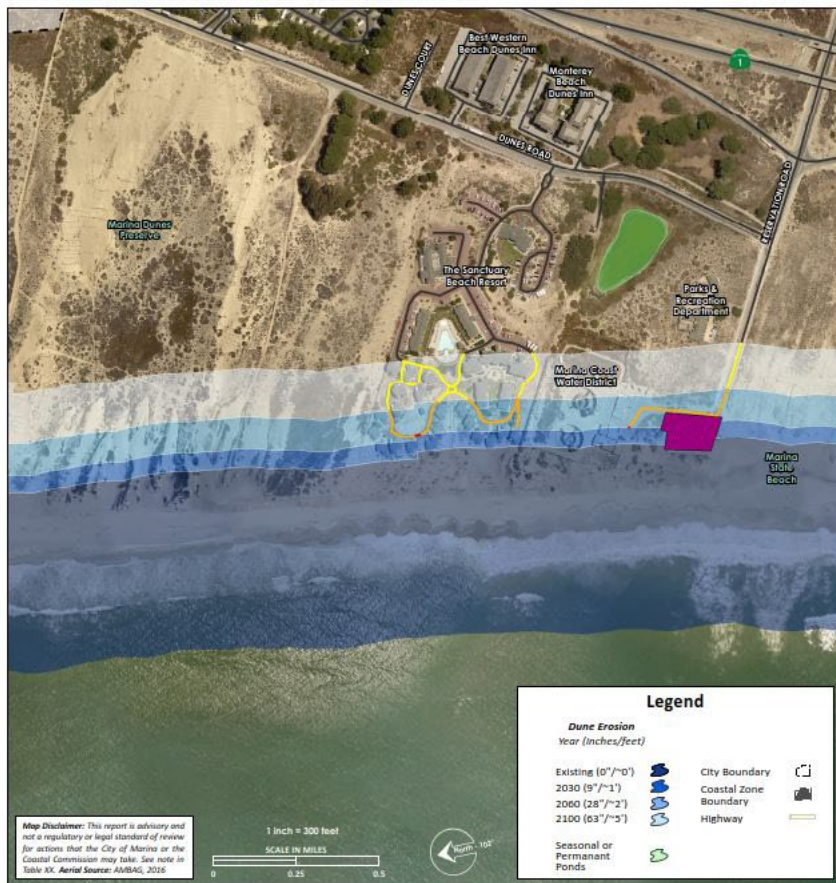


Currently, the waste water districts buildings are vulnerable to coastal erosion, including a supply well. A pump station co-located with the bathroom at the Marina State Beach may also be exposed with 1' of SLR



Roads and Parking

Central Marina Dune Erosion. Roads & Parking



South Marina Dunes



North Marina Dunes



Roads and Parking – With 5' of SLR, .5 miles of road are affected, and the entire Marina State Beach parking lot (at 1.5 acres) may be vulnerable to coastal erosion.



Dune Habitats

Hazard	Acres of Dune Erosion
Existing Vulneraries	49.6
2030	16.3
2060	32.4
2100	88.9
Cumulative Total	154.1



Photo Brad Damitz

Special Status and Notable Dune Species of Concern:

Plants:

Sand Gilia

Monterey Spineflower

Yadon's Wallflower

Animals:

Smith's Blue Butterfly

Salinas Kangaroo Rat

Globose Dune Beetle

Black Legless Lizard

Western Snowy Plover



Other Climate Hazards

From latest downscaled California Climate Model – Biz as usual – medium pop. growth

By 2100

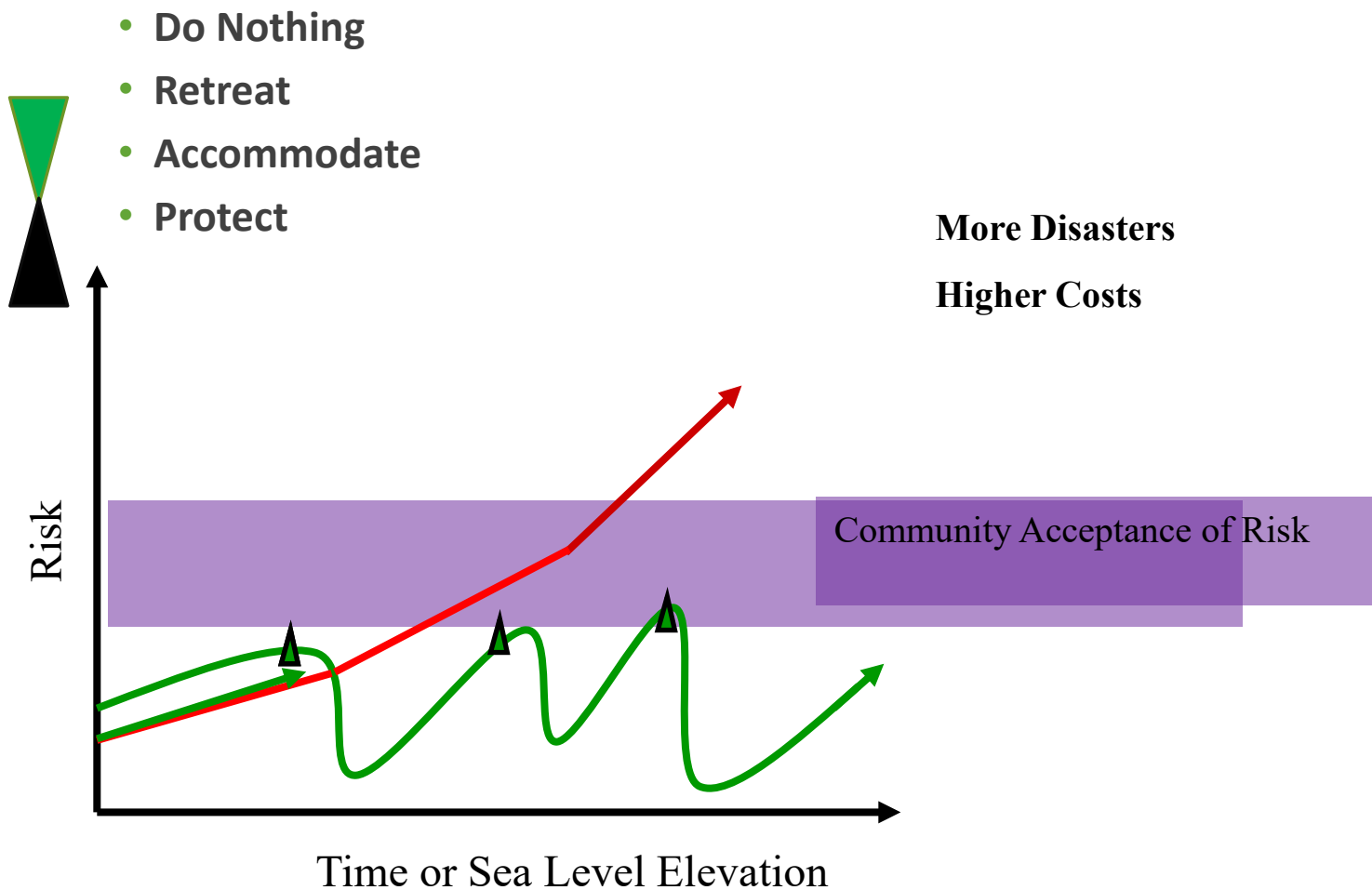
- Increases in Maximum and Minimum Temps
- Increase in number of Extreme Heat days (high of 90° or above) from an average of 4 (now), to 18 by 2090
- Increase in annual Precipitation by 19% but expected to occur in more infrequent and intense rain events

Interpretation – increase in length of droughts and extreme heat that will further stress habitats and “natural disasters”

Category	Threshold	Units	Observed Historical Record (1961-1990)	2030	2060	2090
Extreme Heat	>89.3°F	days	4	6	10	18
Temperature	Average Maximum	°F	67.1	69.6	71.9	74.4
Temperature	Average Minimum	°F	47.0	49.6	51.8	54.7
Precipitation	Annual Total	inches	13.0	14.5	14.4	16.0
Wildfire	Annual average	hectares	33.2	31.8	32.5	31.5



What is Adaptation?



Opposing Viewpoints on Adaptation

What if...?



How much
does it cost?

Beach front homeowners ask what will my house be worth in 30 years?

Beach communities ask what will my beach look like in 30 years?

Can't we make everyone happy?





The City can't adapt to climate change alone... the Counties, Caltrans, Marina Coast Water District, State Parks, AMBAG, must all be partners.



EMC PLANNING GROUP INC.
A LAND USE PLANNING & DESIGN FIRM



Implementation

Variety of different mechanisms

Tied to triggers

Regional Sediment Management Plans

Capital Improvement Plan

Local Hazard Mitigation Plans

Park Master Plans

Shoreline Management Plans

Local Coastal Program

