

RESOLUTION NO. 2024-23

A RESOLUTION OF THE PLANNING COMMISSION RECOMMENDING THE CITY COUNCIL ADOPT THE REVISED DRAFT COASTAL HAZARDS AND SEA LEVEL RISE AMENDMENTS TO THE IMPLEMENTATION AND LAND USE PLANS OF THE 1982 LOCAL COASTAL PROGRAM (LCP). THE PROPOSED AMENDMENTS ARE NOT SUBJECT TO ENVIRONMENTAL REVIEW PER PUBLIC RESOURCES CODE (PRC), DIVISION 13, § 21080.9, AND § 15251 OF THE CEQA GUIDELINES.

WHEREAS, with funding through grants from the California Coastal Commission, the City entered into a Professional Services Agreement with EMC Planning and Integral Consulting to prepare Coastal Hazard and Sea Level Rise (Hazards) amendments to the City's 1982 Local Coastal Program (LCP);

WHEREAS, using the most current available climate science and modeling tools, mapping programs, and community and stakeholder outreach efforts, the consultant team and City staff prepared an *Existing Conditions and SLR Adaptation Report* and a *Social Vulnerability Assessment* which helped inform the creation of draft policies and standards for the Land Use Plan (LUP) (Exhibit A1), Implementation Plan (IP) (Exhibit A2), Definitions (Exhibit A3), and Appendices (Exhibit A4), respectively;

WHEREAS, a draft version of the Hazards amendments to the LUP and IP were presented to the Planning Commission on December 14, 2023. Such amendments included potential use of shoreline protective devices under specific circumstances, as is allowed under the Coastal Act. The Commission adopted Resolution 2023-20 forwarding a recommendation of approval of those Hazards amendments to the City Council;

WHEREAS, since December 2023, staff, consultants, and the City's executive team weighed this approach against the City's overarching vision for the shoreline which emphasizes managed retreat and nature-based protection measures instead of installing "hard armoring" devices such as seawalls and revetments. Staff discussed this potential change in policy with stakeholder land owners within the hazards zones who did not discourage this change in approach;

WHEREAS, staff and consultants have spent the last year revising draft policies in the IP and LUP, consulting with Coastal Commission staff, and developing the *REVISED* draft Hazards amendments to the IP and LUP now before the Commission. The *REVISED* draft Hazards amendments now seek to prohibit hard shoreline protection devices in all cases in favor of managed retreat and nature-based shoreline protective strategies as the City's policy in terms of addressing coastal hazards;

WHEREAS, these *REVISED* draft documents have been available for public review on the City's website since October 15, 2024;

WHEREAS, if adopted by the City Council and certified by the Coastal Commission, the *REVISED* policies and standards will put Marina at the forefront of statewide planning for coastal hazards and sea level rise without relying on traditional hard structures that are known to hinder natural beach processes;

WHEREAS, the findings and conclusions made by the Planning Commission in this resolution are based upon the oral and written evidence presented as well as the entirety of the administrative record for the proposed amendment, which is incorporated herein by this reference. The findings are not based solely on the information provided in this resolution;

WHEREAS, the Planning Commission finds the proposed amendments not subject to environmental review per Public Resources Code (PRC), Division 13, § 21080.9, and § 15251 of the CEQA Guidelines.

NOW, THEREFORE BE IT RESOLVED by the Planning Commission of the City of Marina, that it hereby recommends the City Council adopt the *REVISED* draft LCP amendment to include Coastal Hazards and Sea Level Rise policies and implementation measures to the 2000 LCP and direct staff to submit the final amendment documents to the CCC for final certification; and

BE IT FURTHER RESOLVED, the draft Appendix 2 of the LUP shall be amended to include the additional proposed definitions as referenced herein as **Appendix B**.

PASSED AND ADOPTED by the Planning Commission of the City of Marina at a regular meeting duly held on the 14th of November, 2024, by the following vote:

AYES, BOARD MEMBERS: RANA, WALTON, WOODSON, ST. JOHN, JACOBSEN

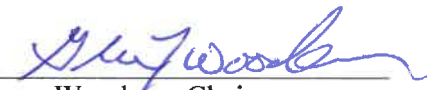
NOES, BOARD MEMBERS: NONE

ABSENT, BOARD MEMBERS: CHENG, BARON

ABSTAIN, BOARD MEMBERS: NONE

ATTEST:



Guido Persicone, CDD Director

Glenn Woodson, Chair

CITY OF MARINA LOCAL COASTAL PROGRAM

COASTAL HAZARDS AND SEA LEVEL RISE

LAND USE PLAN

Revised November 2024



Prepared by
EMC Planning Group Inc.
Integral Consulting, Inc.

CITY OF MARINA LOCAL COASTAL PROGRAM LAND USE PLAN

**COASTAL HAZARDS AND
SEA LEVEL RISE**

PREPARED FOR

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Revised November 2024

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1.0 Coastal Hazards and Sea Level Rise

1.1 Background

The City of Marina is a unique place in California. Presently, the City faces some of the highest rates of erosion in California, and yet, it has not placed any shore-parallel coastal armoring. With the unique dune topography, inland distance to development, and soon to be reduced erosion rates from the cessation of sand mining, the City of Marina faces minimal exposure to most coastal hazards and sea level rise.

~~The following are key findings identified as a result of analyses in the City of Marina 2023 Existing Conditions and Sea Level Rise Adaptation Report (Appendix 1):~~

- ~~■ Coastal dune erosion hazards are the biggest threat to the City of Marina even with up to 5 feet of sea level rise. The primary impact from this erosion is to open space and dune habitats with temporary impacts to beaches and during storm events;~~
- One sewer pump station, one visitor serving resort, one inactive groundwater supply well, an inactive water treatment facility, district offices for the Marina Coast Water District, and the coastal access and associated parking lot at Marina State Beach are the key vulnerabilities in the City to projected coastal erosion;
- With 5 feet of sea level rise and a 1% annual chance wave event, there is a chance that additional areas near the Reservation Road underpass in the City could be temporarily impacted by wave run-up induced flooding;
- The pending cessation of sand mining and subsequent projected reduction in future erosion and hydraulic connectivity has substantially reduced the potential long terms impacts of sea level rise and coastal hazards to the City;
- There are no projected impacts to any residential land uses from erosion even with up to 5 feet of sea level rise; and

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, an diverse population of plants and wildlife including threatened and endangered species) in perpetuity to support a local economy and community identify based on coastal tourism, low impact and affordable recreation, and natural habitats.

City of Marina Vision Statement October 2019

- The City of Marina currently has no coastal armoring, which allows for the continuation of natural coastal and dune processes and maintenance of beach width over time.

Natural dune erosion from large storm waves is the primary hazard challenging the Marina shoreline. *Figure 1-1, Coastal Hazard Dune Erosion area*, shows the areas of potential hazards related to projected Sea Level Rise. Dune erosion, however, is a natural process that creates and maintains beaches through time even in the face of sea level rise. As identified in the Existing Conditions and Sea Level Rise Adaptation Report, the goal of any adaptation policy or project in Marina should focus on reducing erosion rates, while allowing natural erosion and shoreline fluctuations to maintain beaches. This Coastal Hazards and Sea Level Rise chapter of the Land Use Plan contains policies ~~to respond to, and to address, coastal hazards in the City's planning and permitting process.~~ Definitions used in this chapter are provided in ~~Appendix 2.~~ [City of Marina.](#)

Summary of Public Participation and Outreach

As part of the Coastal Hazards and Sea Level Rise update to the City's Local Coastal Program (LCP), the City of Marina developed a robust public outreach program in line with the Coastal Act's declaration that the public has the right to fully participate in coastal planning.

The public outreach program spanned a series of 5 years, beginning in 2018 and included a community questionnaire, community comment forum, individual stakeholder meetings, and a series of joint Planning Commission and City Council study sessions/public workshops. To ensure that stakeholders, interested citizens and agencies were aware of the update process and public meetings, City staff:

- Established email notification lists and identified key links to community cross sections to facilitate information flow and participation; and
- Generated and maintained a web page with background documents, meeting schedules, meeting agendas and summaries, frequently asked questions, and other information.

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

City of Marina Vision Statement October 2019

City staff and their LCP consultants met with individual stakeholders on July 29, 2019, February 1, 2023, February 21, 2023 and February 23, 2023. Identified stakeholders included the California Department of Parks and Recreation (CPPR), Marina Coast Water District (MCWD), the Sanctuary Beach Resort, Ohlone Costanoan Esselen Nation (OCEN), and the Monterey Peninsula Regional Parks Department (MPRPD). The City hosted four public workshops during the update process with focus topics that included: sea level rise and coastal hazards background on March 26, 2019,

vision and goals on June 13, 2019, adaptation alternatives on September 12, 2019, and the Draft LCP policy development and implementation on January 28, 2020.

Coastal Act Policies

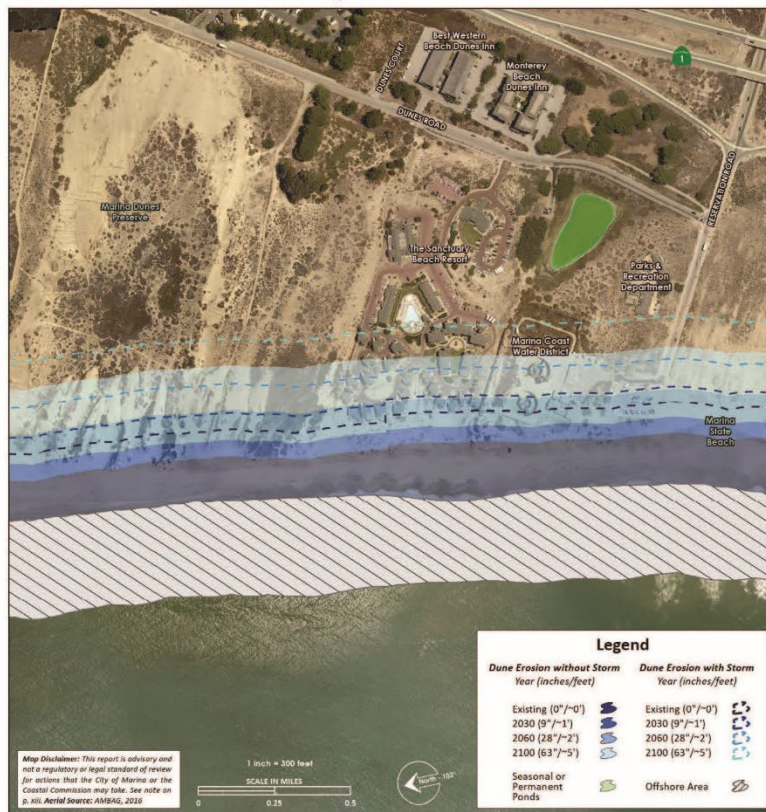
Various parts of the California Coastal Act (Coastal Act) support policies in the LCP Land Use Plan that address climate change, sea level rise and coastal hazards. The California Coastal Commission Sea Level Rise Policy Guidance (California Coastal Commission updated 2018) provides four guiding principles, many derived directly from the requirements of the Coastal Act, that can be used as a framework by which sea level rise planning can be assessed:

- The use of best available science to guide decisions (Coastal Act Sections 30006.5; 30335.5);
- Minimization of coastal hazards through planning and development standards (Coastal Act Sections 30253; 30235; 30001, 30001.5);
- Maximization of protection of public access, recreation, public views and other coastal resources (Coastal Act Chapter 3 policies);
- Maximization of agency coordination and public participation (Coastal Act Chapter 5 policies); and
- Limiting the use of shoreline protective devices (Coastal Act Section 30235).

Refer to *Appendix 3, Coastal Act Sea Level Rise and Coastal Hazards Policies* for a listing of Coastal Act policies that may inform interpretation of Marina's Land Use Plan.

Figure 1-1 Coastal Hazard Dune Erosion area

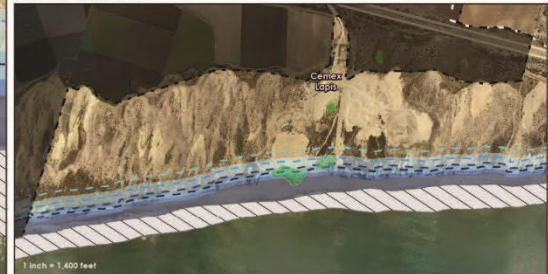
Central Marina - Dune Erosion Comparison



South Marina



North Marina



Note: Figure 1-1 maps projected Long Term and Storm Induced Coastal Erosion with 5 Feet of Sea Level Rise and Considering the Cessation of Sand Mining

2.0 General Plan and Other Policies

2.1 General Plan

The City's 2000 General Plan and 1982 LCP contain some guidance as to community values and what is important in the face of coastal hazards and sea level rise. Relevant policies within these two documents are presented below:

General Plan Vision Statement

Marina desires to grow and mature, along with its image, from a small town, primarily bedroom community, to become a small city which is diversified, vibrant and mostly self-sufficient. The City can and will accomplish this by achieving both the necessary level and diversity of jobs, economic activity, public services, housing, civic life (including culture and recreation), and parks and open space.

General Plan Goals

The following General Plan goals are relevant to the focused LCP update and are included here as background information:

Community Goals Section 1.18

Goal 2: Community development which avoids or minimizes to the greatest extent possible the consumption or degradation of non-renewable natural resources including natural habitats, water, energy, and prime agricultural land.

Goal 13: Ample opportunities for outdoor recreation for all residents, both within their immediate neighborhoods, elsewhere in the city, and in the immediate environs.

Local Coastal Program

The following policies in the 1982 LCP are relevant to the focused LCP update and are included here as background information:

Policy 2

To provide beach access and recreational opportunities consistent with public safety and with the protection of the rights of the general public and of private property owners.

Policy 3

To provide beach access in conjunction with the new development where it is compatible with public safety, military security and natural resources protection; and does not duplicate similar access nearby.

Policy 8

To prohibit further degradation of the beach environment and conserve its unique qualities.

3.0 Land Use Plan Policies – Coastal Hazards

3.1 Coastal Hazards

~~The following proposed policies address coastal hazards in the City of Marina.~~

HAZ-1

The Marina Coastal Zone is an irreplaceable resource and its protection and preservation as a natural living shoreline with connections between the ocean, beaches and dunes is a matter of great public importance.

It is the intent of the Local Coastal Program that the City responds to climate change impacts, and adapts to coastal hazard risks in a way that protects and preserves its unique natural coastline, valued coastal resources and valuable coastal dune habitats, and ensures public safety and welfare.

A history of proactive planning has avoided the construction of any shoreline protective devices. It is the intent of the Local Coastal Program to ensure that no shoreline protective devices are utilized for new or existing development, ~~unless the development or use is coastal dependent~~. Furthermore, community stated preferences to expand coastal access opportunities, reduce the industrial uses of the coastal zone and maintain natural viewsheds of the coast, dunes, and ocean ~~should~~shall be considered in all development proposals.

HAZ-2

The City shall continue to gather and develop information on the potential effects of sea level rise and coastal hazards on Marina's shoreline, including identifying the most vulnerable areas, structures, facilities, and resources.

Project-specific coastal hazards assessments, as well as updates and amendments to the LCP, shall use the best available science, including estimates of expected sea level rise rates, elevations, and potential resultant impacts. The information gathered shall address multiple future time horizons (e.g., 2050, 2100) that span the applicable planning horizon or multiple sea level rise elevation scenarios, as appropriate and feasible.

HAZ-3

The City of Marina is recognized as a Tsunami Ready City. The City shall identify a warning system and procedures for protection of life and property in coastal areas that are subject to storm and tsunami ~~hazard~~hazards, including informing visitors to the shoreline and oceanfront

hotels of the potential danger of large waves. New development in Marina's coastal zone shall provide evacuation information and preparedness planning as necessary to warn of the potential tsunami risks along the shoreline.

HAZ-4

Development shall be sited and designed to minimize risks to life and property and assure stability and structural integrity over the life of the development; and shall avoid shoreline protection devices ~~with the exception of coastal dependent uses addressed in Policy HAZ-6.~~

HAZ-5

Development ~~in areas of coastal hazards~~ shall not create nor contribute significantly to erosion, [dune recession](#), geologic instability, or destruction of the site or surrounding area; shall not substantially alter natural landforms; and shall not adversely alter local shoreline sand supply.

HAZ-6

Shoreline protection devices, including revetments, breakwaters, groins, seawalls, and other such construction that alters natural shoreline processes shall ~~only not~~ be allowed ~~to protect coastal dependent uses. When required to serve coastal dependent uses, shoreline protection devices shall be sited to avoid sensitive resources, if feasible, and mitigate adverse impacts on all coastal resources, including possible payment of in-lieu fees.~~ [in the City of Marina.](#)

HAZ-7

~~Shoreline~~[In lieu of shoreline](#) protective devices ~~shall be discouraged on Marina's coastline. Such protective devices shall only be permitted if no other less environmentally damaging alternative is available,~~ [all other alternatives to address and abate any coastal hazards threats shall be identified, including nature based or green infrastructure approaches to addressing erosion](#) including avoidance, restoration of the sand supply, [dune restoration, living shorelines, opportunistic beach nourishment, nature-based adaptation approaches,](#) and planned retreat: [/relocation away from the identified threat. Horizontal levees may be considered for use around existing wetlands and stormwater basins to protect precipitation induced floodwaters.](#)

HAZ-8

Development ~~proposed in potential coastal hazard areas~~ shall be ~~evaluated~~[screened](#) for potential coastal hazards at the site, based on all readily available science. If the initial evaluation determines that the proposed development may be subject to coastal hazards over its lifetime, [including if it is located within the Coastal Hazard Dune Erosion area \(Figure 1-1\).](#), the following is required:

- ~~Identification of hazard avoidance strategies that have been prioritized and reflected in the development proposal including, but not limited to, consideration of additional building heights to reduce footprints, consistent with LCP visual resource and ESHA policies;~~
- ~~Preparation of~~ Coastal Hazards Report, identifying the specific hazard threats facing the proposed development, including erosion, dune recession and wave uprush, and identification of the specific siting and design techniques to avoid such threats over the development's life. All such analysis shall be based on a site-specific hazards report by a qualified geologist/engineer/geomorphologist, the purpose of which is to ensure that such development considers such risk and adapts the project (e.g. changed building heights with larger setbacks) to avoid hazards so that it can be built and maintained in a manner consistent with the City's coastal hazards policies and with the greatest protection of coastal resources for the life of the development;
- A real estate disclosure and deed restriction shall be recorded against the property that identifies the property is located in an area subject to coastal hazards risks, that acknowledges it's the responsibility of the property owner to assume all risk and liabilities associated with such hazards risks, prohibits any shoreline armoring, acknowledges that the City may not be able to guarantee access and infrastructure, that the boundary between public and private land may shift with rising seas and that development approval does not permit any development to be located on public trust lands, along with any other site and project specific recommendations from the project's hazards report.
- Development, including redevelopment, may be subject to bonding or in-lieu fees, including through payment of fees to the City prior to construction, to provide funding for remediation and/or removal of any nuisance conditions in the future due to coastal hazard impacts.
- ~~Development will assume all risk and liabilities associated with coastal hazards and acknowledge that in the future the City may not always be able to guarantee access and infrastructure; and~~
- ~~Unless the development is coastal dependent, the Coastal Development Permit shall include a condition of approval stating that the development is prohibited from using a shoreline protective device during its lifetime.~~

HAZ-9

As a response to coastal hazard, ~~threats, and in lieu of armoring, the Applicant for any development or redevelopment shall prepare a Coastal Hazards Response Plan that identifies the ways in which the development will respond to and address such threats. This may include relocation~~ and, notwithstanding other dune ESHA protection policies, the City shall work with State Parks to pursue measures to relocate the existing public parking and restroom structures at the present

location of the Marina State Beach Parking Lot to a site outside of the projected erosion hazards zone ~~to areas closer inland, nearer State Route 1 and consolidated with other facilities, so as to minimize impact and ensure continued public coastal access and recreation utility. Any activities associated with this project that may result in impacts to ESHA shall be mitigated at a minimum 2:1 ratio, and restoration of the site to dune/beach habitats.~~

HAZ-10

Planned and existing shoreline access points (including Marina State Beach, the Marina Dunes Preserve, and the Sanctuary Beach Resort) shall be sited, designed, and maintained as to minimize impacts to dune vegetation and avoid contributing to dune erosion, and relocated inland in response to coastal hazards. All new shoreline access points shall be located and constructed in such a way as to accommodate retreat in the future.

HAZ-11

~~New development shall not be allowed within the Coastal Hazard Dune Erosion area (Figure 1-1). Coastal access points and coastal trails shall be allowed as an exception in these areas as long as they comply with all other policies in this section.~~

HAZ-12

The Coastal Hazard Dune Erosion area map shall be updated approximately every 10 years based on the best available science and monitoring data which is particularly important due to the cessation of sand mining at the CEMEX site (former Lone Star site) which is anticipated to reduce erosion rates and dune recession.

HAZ-13

The City of Marina shall pursue grant funding from the State Coastal Conservancy and other agencies for funding to monitor relocation triggers for development that is located within the Coastal Hazard Dune Erosion area (Figure 1-1).

HAZ-14

Siting and design of new development adjacent to dunes shall take into account the extent of landward migration of the foredunes that can be anticipated over the anticipated duration of the development. This landward migration shall be determined based upon historic dune erosion, storm damage, anticipated sea level rise, and foreseeable changes in sand supply.

HAZ-15

~~The City shall encourage the use of soft or natural methods, such as dune restoration beach/sand nourishment, living shorelines, horizontal levees, and other “green” infrastructure to address hazards.~~

HAZ-16

The City of Marina shall support managed retreat, where feasible and appropriate, including by actions such as acquiring inland properties ~~to be zoned and maintained as open space,~~ facilitating land swaps, and/or working with adjacent landowners.

HAZ-~~17~~-15

~~A real estate disclosure for coastal hazards and sea level rise should be attached to any parcel potentially subject to coastal hazards including but not limited to those identified within the Coastal Hazard Dune Erosion area (Figure 1-1). Such a disclosure should include information about known or potential hazards and LCP policies that would apply to the parcel.~~

HAZ-18

~~Proposed~~ Pre-Coastal Act, proposed redevelopment and existing development threatened by Coastal Hazards, as identified in the 2023 Existing Conditions and Sea Level Rise Adaptation Report, shall prepare a Coastal Hazards Response Plan (CHRP) which identifies triggers and steps for relocation and response to such hazards. Proposed development or redevelopment in the Coastal Hazards Zone will be subject to in-lieu fees prior to construction to provide funding for remediation and/or removal of any nuisance conditions due to the development.

HAZ-~~19~~-16

~~Property owners shall acknowledge that the boundary between public and private land may shift with rising seas and that development approval does not permit any development to be located on public trust lands. The City is encouraged to conduct periodic surveys of the mean high tide line and, where accessible, the dune crest to monitor a development's location relative to public trust lands.~~

HAZ-20

The City of Marina faces a greater burden from environmental stressors than the surrounding cities on the Monterey Bay Peninsula. The City shall: avoid the siting of facilities in areas subject to coastal hazards and areas vulnerable to seawater intrusion; prioritize the cleanup or relocation of existing facilities in areas subject to coastal hazards; and work to advance buffering measures like wetland and vernal pool restoration that enhance ecosystem services and minimize pollutant loads in groundwater supplies.

Additional Definitions:

Existing Development: An “existing development” means any structure or development lawfully in existence post January 1, 1977 and currently existing within the coastal zone.

Pre- Coastal Act Development: A “Pre-Coastal Act development” means a structure or development lawfully in existence prior to the effective date of the Coastal Act (January 1, 1977) that has not been redeveloped since.

Shoreline Protective Device:

Structures along the shoreline that are used to protect development against coastal hazards, including but not limited to seawalls, revetments, gunite, sheet piles, breakwaters, groins, bluff retention devices, retaining walls, and pier/caisson foundation and/or wall systems.

Redevelopment

A structure shall be considered redeveloped, whereby the structure is no longer considered an existing structure and instead the entire structure and all development on the site must be made to conform with all applicable LCP policies, when such development consists of:

- (1) Alteration (including interior and/or exterior remodeling and renovations, demolition or partial demolition, etc.) of 50% or more of the major structural components (including exterior walls, floor and roof structure, and foundation) of such development.
- (2) Additions and alterations to such development that lead to more than a 50% increase in floor area for the development.

Changes to floor area and individual major structural components are measured cumulatively over time from January 1, 1977.

Coastal Hazards: Including but not limited to, episodic and long-term shoreline retreat, dune recession and coastal erosion, high seas, ocean waves, storms, tsunamis, coastal flooding, landslides, bluff and geologic instability, and the interaction of same, and all as impacted by sea level rise.

Development: As used in these policies, "development" is synonymous with "new development" and shall include construction of entirely new structures (whereby the policies apply to the entire new structure), additions to existing structures (whereby the policies apply only to the addition itself), and redevelopment (whereby the entire structure shall be considered new development subject to all applicable coastal hazards policies).

Exhibit A2

Draft Implementation Plan (IP)

CITY OF MARINA LOCAL COASTAL PROGRAM

COASTAL HAZARDS AND SEA LEVEL RISE IMPLEMENTATION PLAN

Revised November 2024



**Prepared by
EMC Planning Group Inc.
Integral Consulting, Inc.**

CITY OF MARINA LOCAL COASTAL PROGRAM IMPLEMENTATION PLAN

**COASTAL HAZARDS AND
SEA LEVEL RISE**

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Revised November 2024



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Coastal Hazards and Sea Level Rise Implementation Plan

Coastal Hazards and Sea Level Rise

Purpose

In order to protect and preserve Marina's natural coastline and valued coastal resources, to ensure public safety and welfare from coastal hazards, to maintain consistency with the LCP's Land Use plan (LUP), and to ensure no shoreline protective devices are utilized in the future, ~~with the exception of coastal dependent uses~~ (HAZ-~~6-4, 6~~), development shall conform to all applicable Land Use Plan Coastal Hazards and Sea Level Rise policies and the following requirements (HAZ-1):

I. Coastal Hazard Evaluation Updates

- A. The City shall review the existing coastal hazards sea level rise vulnerability assessment at least every ten years after certification of the LCP. The evaluation shall summarize the current state of the science on the potential rates and effects of sea level rise and coastal hazards on Marina's shoreline, including a review of the Monterey tide gauge, changes in topography, erosion rates following cessation of the CEMEX sand mine and any more recent coastal hazard modeling that may identify vulnerable areas, structures, facilities, and resources, with a focus on sensitive coastal resource areas. The review evaluation will result in a determination as to whether there is a need to modify policies or implementation in order to better address the impacts of sea level rise and other coastal hazards, particularly those related to coastal erosion. It will also identify current status of measurable triggers, including those identified in Appendix 1, and those listed below such as the distance of the dune crest to existing development. Updates to the LCP, including through any vulnerability assessment, shall use the best available science for estimates of expected sea level rise and potential resultant impacts. This

evaluation should consider new data, models and information but should determine the best available science based on expertise. (HAZ-2,11)

II. II-Regional Considerations

A. Within two years of certification of the Coastal Hazards and Sea Level Rise update of the LCP, the City of Marina shall update the *City of Marina Tsunami Incident Response Plan* to clearly identify a warning system and procedures for protection of life and property in coastal areas

~~A.~~ that are subject to storm and tsunami hazards, including means of informing visitors to the shoreline and oceanfront hotels of the potential danger of large waves and evacuation routes. (HAZ-3)¹.

~~B. B.~~ The City shall work with the Marina Coast Water District to identify appropriate strategies to avoid coastal hazards impacts, including from dune erosion hazards ~~and support their efforts to pursue options for repurposing the Marina Coast Water District's, at the~~ former wastewater treatment plant. ~~Strategies should include the following:-~~

~~1.~~ Such strategies shall be identified as part of a coastal hazards response plan that identifies existing threats and proposes ways to address such threats without ~~Reliance on~~ shoreline protective devices ~~shall only be allowed if hazard avoidance or nature-based solutions are not feasible.~~ (HAZ-~~7-6, 7, 9, 15~~).

1. ~~2.~~ Nature-based adaptation strategies, including opportunistic beach nourishment, living shorelines, ~~cobble berms~~, and driftwood dune enhancement shall be considered in response to erosion events- (HAZ-~~15-7~~).

2. Removal and site reuse and/or restoration of the two wastewater holding tanks shall be identified, with timing, funding, and other implementation specifics identified. Preference would be to provide additional public access and/or recreational amenities(HAZ-9).

~~C. C.~~ The City shall work with State Parks to ~~consider~~evaluate and pursue relocation options such as grants or State recreation bond measures, integrate a Coastal Hazards Response Plan into an update of the Marina State Beach Master Plan ~~and~~ to relocate ~~the~~ existing State Parks ~~parking~~

¹ Last certified Tsunami Incidence Response Plan was certified on July 18, 2023. NWS/NOAA TsunamiReady and StormReady certifications each have a 2-yr lifespan

~~and restroom structures and infrastructure at the present location to~~
~~a~~facilities to an identified landward site outside of the projected erosion hazard zones. The site should be one not designated for dune restoration and shall be consistent with LUP hazard avoidance requirements. (HAZ-~~9~~6, 7, 9, 10, 13, 14, 15).

~~D.~~ D. Planned and existing shoreline access points must be sited, designed, maintained, and relocated as necessary to minimize impacts to dune vegetation from human impacts, runoff, and wind erosion and avoid contributing to dune erosion. (HAZ-10, 13)

~~E.~~ E. The City shall consider updating land use designations and zoning maps to plan for managed retreat and maintaining passive recreation and open space. (HAZ-~~16~~14)

~~F.~~ F. Beach nourishment is encouraged using sand from the Monterey Bay Opportunistic Beach Nourishment program in areas identified as erosion hotspots. (HAZ-~~15~~7)

~~G.~~ G. The City of Marina shall identify a number of receiver sites to participate and complete an environmental review document to participate in the Monterey Bay Opportunistic Beach Nourishment Program. (HAZ-~~15~~7)

~~H.~~ H. The concepts of a rolling or ambulatory easement(s) and movable boardwalks which adapt to sea level rise and coastal erosion will be explored and incorporated, where feasible, into a Coastal Trail system in Marina. (HAZ-~~14~~16)

~~I.~~ I. Future public works projects shall prioritize enhancing coastal trail connections and walkability from neighborhoods to Coastal Access points, with an emphasis on providing Coastal Access to disadvantaged communities. (HAZ ~~14~~16)

III. ~~III.~~ Development Considerations

- A. ~~Existing or new~~ Any redevelopment, or proposed development in areas subject to tsunami hazards shall prepare a tsunami preparedness plan that describes evacuation procedures, evacuation route signage, and other protocols for addressing a potential tsunami event. ~~Within five years of certification of the Coastal Hazards and Sea Level Rise update of the LCP, the~~

~~City shall adopt an ordinance or resolution requiring existing development to prepare such a plan.~~ (HAZ-3)

- B. Development shall be sited and designed to avoid hazards, minimize risks to life and property and assure stability and structural integrity over the life of the development. (HAZ-4, 5, 8)
- C. Development shall not create or contribute significantly to erosion, geologic instability, substantially alter natural landforms, negatively impact the surf ecosystem or adversely alter local shoreline sand supply. Adverse alterations to sand supply may include, but are not limited to, accelerated erosion, loss of sand beach area through physical encroachment, obstruction of new beach formation in areas where the bluff/shoreline would have otherwise naturally eroded, or increase the loss of sand-generating bluff/shoreline sediments that would have entered the sand supply system absent the development. In cases where local shoreline sand supply is adversely affected from development, mitigation for beach loss is required, including possible payment of in lieu fees. (HAZ-5, 8, 15)
- D. ~~If a shoreline protective device is required to protect coastal dependent development~~In areas subject to coastal hazards, a deed restriction shall be added as a condition of approval for proposed development or redevelopment that requires the property owner to ~~maintain the~~recognize that no future shoreline protective ~~device and remove the structure should it fail~~devices are allowed. (HAZ-~~6~~6, 8, 13)
- E. At the time of application for a Coastal Development Permit (CDP) for new development which is located in an area subject to Coastal Hazards ~~should~~, the developer shall prepare a Coastal Hazards Response Plan to: (HAZ-~~18~~15)
1. The Report shall be prepared by a qualified geologist/engineer/geomorphologist to ensure that such responses are implementable and conducted in a manner consistent with the City's LCP policies with the greatest protection of coastal resources
 2. Identify monitoring means and methods, and specific triggers to implement each phase of hazard response including the lead times for each phase of implementation.
 3. ~~4-~~Identify ~~preferred~~all alternatives considered to avoid coastal hazards or reduce erosion, dune recession, or relocation alternatives; ~~and~~

4. Identify timelines for implementation of the plan including triggers as well as permit requirements from each agency, authority, any environmental review requirements, and time estimates for permit approvals
5. Alternatives that include living shoreline elements or sand nourishment should note what types, and volumes of material would be required and a brief description and map of the project, construction equipment
6. Alternatives that include removal and/or relocation should identify where the development will be relocated to, including debris disposal locations and any concerns about hazardous materials.
7. ~~2. Identify triggers for~~ Describe the site restoration, reuse following the relocation.
8. Identify costs, permits, funding mechanisms and environmental review requirements associated with each phase of the coastal hazard response and estimates for implementation lead time.
9. A statement acknowledging the landowners responsibility for the removal, clean up, any damages to coastal resources, and site reuse or restoration.

F. Shoreline protective devices are prohibited in the Marina coastal zone;
~~unless required to protect coastal dependent uses with no other feasible alternatives.~~ (HAZ-6).

G. As a condition of approval for the issuance of all Coastal Development Permits for any development that at some point during its lifetime may be subject to coastal hazards, the Applicant shall record a deed restriction against the properties involved in the application that acknowledges the property and development may be subject to coastal hazards, that access to the development may be affected, and that waives any right that may exist to construct ~~such~~ shoreline protective devices, ~~unless such development is considered coastal dependent development and no other adaptation strategies are feasible~~. It shall also acknowledge that the boundary between public land (tidelands) and private land may shift with rising seas, that the Coastal Development Permit approval does not permit encroachment onto public trust land, that any future encroachment must be removed unless the Coastal Commission determines that the encroachment is legally permissible pursuant to the Coastal Act and authorizes it to remain, and that any future encroachment would also be subject to the State Lands Commission's (or other trustee agency's) leasing approval. (HAZ-8)

H. Property owners in the future facing coastal erosion agree to remove threatened development and restore affected areas, if necessary, subject to the requirements to prepare a ~~removal and restoration plan~~Coastal Hazard Response Plan. This, or similar language, shall be included ~~in a waiver and~~ as conditions of approval, including waiving any responsibility of the City to maintain any property, access, or structures at risk to coastal hazards. (HAZ-8, 15)

I. ~~H.~~ New development or redevelopment will assume all risk and liabilities related to coastal hazards and acknowledge that the City will not guarantee future access and infrastructure to hazard impacted areas, including as identified in the Coastal Hazard Dune Erosion area (Figure 1-1 of the LUP). (HAZ-8), 15). For those permitted, in the Hazard Zone, then a Coastal Hazard Response Plan shall be required and a bond posted within the first 3 years of construction to pay for the implementation of the Coastal Hazard Response Plan.

~~I. Repair and maintenance, renovations, activities and safety improvements that do not result in an addition to, or enlargement or expansion of, the object of such repair or maintenance activities shall not require a coastal development permit with the exception of those classes of repair and maintenance that involve a risk of a significant adverse environmental impact as identified in Marina Municipal Code Section 17.43.070 Exemptions (D).~~

~~J. Any existing structures that are substantially destroyed by fire, earthquake, tsunami or other natural disaster may be reconstructed substantially as it was prior to such destruction as identified in Marina Municipal Code Section 17.43.070 Exemptions (G) subject to current building standards and including 75-year erosion setbacks that consider sea level rise.~~

IV. Applications Applications for All Development Potentially Subject to Coastal Hazards

The following shall be required for any application for development within the City of Marina Coastal Hazard Dune Erosion area, as identified in Figure 1-1 of the LUP:

- A. **Initial Coastal Hazards Assessment.** The applicant shall request an initial site assessment screening from the City, paid through their application fee, so that City staff may determine whether the site may be subject to coastal hazards over its lifetime (generally over at least the next 75 years).

The screening shall include a review of CDPs issued, or applied for, at the subject site and immediate vicinity; and be based on all readily available information and the best available science including technical reports, resource maps, aerial photographs, site inspections, and presence in the Coastal Hazard

Dune Erosion area (Figure 1-1 of the LUP). Maps can be used as a resource for identification of coastal hazard areas; however, absence of mapping cannot alone be considered absence of hazards, and local site conditions must be examined at the time of coastal permit application using the best available science and topography [\(HAZ-2, 8\)](#).

If such development is not mapped within the Coastal Hazards Dune Erosion Area (Figure 1-1 of the LUP) and is not identified as being subject to coastal hazards over its lifetime (the next 75 years) then no Coastal Hazards Report is required. (HAZ-8)

- B. **Coastal Hazards Report.** Where the initial site assessment reveals that the proposed development is within the Coastal Hazard Dune Erosion area (Figure 1-1 of the LUP), and/or otherwise may be subject to coastal hazards over the next 75 years, a site-specific Coastal Hazards Report (Report) shall be prepared. The Report shall at a minimum provide for the following:

1. **Report Purpose.** The Report shall be prepared by a qualified geologist/engineer/geomorphologist to ensure that such development can be built and maintained in a manner consistent with the City's coastal hazards policies and with the greatest protection of coastal resources for the life of the development, including no future construction of shoreline protective devices. (HAZ-8)

The Report shall use the best available science to identify the potential impacts of erosion, episodic and long-term shoreline retreat and coastal erosion, groundwater rise, flooding, storm waves, tsunamis, landslides, bluff and geologic instability, and the interaction of same, and all as impacted by sea level rise over the life of the development. The information gathered should address multiple future [sea level rise elevations and](#) time horizons (e.g., 2050, 2100) that span the expected life of the development ~~or multiple sea level rise elevation scenarios~~, as appropriate and ~~feasible~~ [consistent with the most recent State guidance](#). The Report shall recommend any ~~mitigation~~ [adaptation](#) measures or modifications to the project that are needed to ensure that the project [avoids coastal hazards, and](#) is consistent with all applicable Land Use Plan Coastal Hazards and Sea Level Rise policies. (HAZ-2)

2. **Report Content.** The Report shall, at a minimum, contain the following sections:

1. ~~a.~~ Summary;
2. ~~b.~~ Geology of the Project Area;
3. ~~c.~~ Wave, Tide, and Current Trends of Sea Level Rise;
4. ~~d.~~ Erosion Trends and Storm Impacts in and around the Project Area;
5. ~~e.~~ Seasonal Beach Profiles and Trends;
6. ~~f.~~ Existing and Future Projections of Impacts from Coastal Hazards on the Proposed Project;
7. ~~g.~~ Potential Adaptation or Mitigation Strategies to Avoid Coastal Hazard Impacts;
8. ~~h.~~ Description of Strategies that Have Been Identified and Prioritized to Avoid or Minimize Coastal Hazard Impacts;
9. ~~i.~~ Secondary Adaptation Impacts (discussion of any potential secondary or adjacent impacts of adaptation strategies on ESHA, adjacent properties or coastal resources);
10. ~~j.~~ Conclusions and Recommendations;
11. ~~k.~~ Coordination with Other Agencies, Groups, or Consultants;
12. ~~l.~~ Report Preparer's Qualifications; and,
13. ~~m.~~ References.

3. **Coastal Hazards Analysis.** The Report shall, at a minimum, address existing conditions, near-term (3 to 5 years) conditions, and future ~~time horizons (e.g.,~~ sea level rise elevations (e.g., 1, 2, 3, 4, feet with approximate timing of impacts (2050, 2100)) spanning the expected life of the development or multiple sea level rise elevation scenarios based on the latest State Guidance (currently CCC and OPC ~~2018~~-2024) using the data for the nearby Monterey Tide Gage(HAZ-2)

1. ~~a.~~ Regional and local geologic setting, including topography, geomorphology, natural landforms, soil/rock types, ~~thickness of soil or depth to bedrock~~, and other relevant properties such as erosion potential.
2. ~~b.~~ Information about potential coastal hazards at the site, including normal and maximum tide elevations, wave conditions (including maximum expected wave height, storm surge and

frequency/magnitude of wave/tidal surge), total water level elevation (including storm wave runup from a 100- year event during an El Niño and spring high tide, and potential erosion that could occur from long-term sea level rise and extreme storm related erosion).

3. ~~e.~~ Long-term average annual erosion rates.
4. ~~d.~~ Recession of the dune crest associated with a one percent annual chance total water level and associated episodic or rapid erosion, based on recent observations from the project site or nearby areas of comparable geology.
5. ~~e.~~ Alterations to landforms, or local shoreline sand supply caused by the development. (HAZ-5)
6. ~~f.~~ Ground and surface water conditions and variations, including hydrologic changes caused by the development (e.g., introduction of sewage effluent and irrigation water to the groundwater system, [issues associated with desalination, if any,](#) and alterations in surface drainage) as well as potential changes to extent and duration of elevated groundwater daylighting.
7. ~~g.~~ Existing conditions, expectations for the near-term (five (5) years) changes to the site, considering current erosion rates and related conditions (including wave and storm conditions), changes to the erosion and geomorphology from the cessation of the CEMEX sand mining, and projections of longer-term changes from sea level rise.
8. ~~h.~~ Effect of the proposed development (including siting and design of structures, septic system, landscaping, drainage, and grading) and impacts of construction activity on the stability of the site and the adjacent area.

- 4. Mitigation of Coastal Hazards Analysis.** The Report shall include a detailed analysis of strategies incorporated into the project, and any feasible alternative options, to avoid identified erosion/site stability hazards and [impacts to](#) ESHA. Strategies include, but are not limited to, consideration of [opportunistic beach nourishment, living shorelines,](#) additional building heights to reduce footprint, consistent with LCP visual resource and ESHA policies, and construction of suitable foundations that allow for structures to be relocated. (HAZ-8)

At minimum the analysis shall include the following:

1. ~~a-~~ Evaluation of alternatives that avoid hazards for proposed development, and/or relocation of any threatened structures; technical feasibility and an estimate of expected costs to be borne by the property owner to relocate; partial removal of threatened elements, with a clear analysis and estimate of how this would be accomplished; and site drainage controls and native plant revegetation.
2. ~~b-~~ A combination of different proposed development alternatives should be considered to avoid identified erosion/site stability hazards when appropriate (e.g., use of erosion resistant vegetation, surface water controls, periodic sand nourishment, or the use of incremental adaptation responses tied to identified triggers, such as erosion measures or specific storm event impact).
3. ~~c-~~ Identification of potential mitigation measures to address identified coastal resource impacts in each case.

V. ~~V.~~ Shoreline Monitoring

- A. ~~The City of Marina~~ following entities shall ~~monitor~~ be responsible for monitoring the following areas along ~~it's~~ the shoreline to determine whether adaptation triggers have been met. ~~(HAZ-13)~~ and report these monitoring results annually to the City (HAZ- 9,12,13). There are two adaptation triggers identified for each of the vulnerable properties. The first is a trigger to produce a Coastal Hazard Response Plan. The second trigger requires implementation of the plan or face penalties. Penalties could include fines, red tagging and/or cease and desist orders. These triggers and conditions shall apply to, at a minimum (or as otherwise identified in any CDP condition):
1. **State Parks parking lot and restrooms.** Erosion of dune crest to within ~~5~~10 feet of the parking lot or 30 feet of the restroom.
 2. **Marina Coast Water District.** Erosion of dune crest to within ~~40 feet~~20 feet of the MCWD office buildings.
 3. **Sanctuary Beach Resort.** Erosion of the dune crest within ~~25 feet~~40 feet of the first row of ocean-facing buildings at the Sanctuary Beach Resort.

4. **Water supply infrastructure.** Exposure of any portion of any water supply infrastructure for more than 4 weeks.

B. Monitoring shall occur once per year and following storm events (HAZ -12, 13).

1. Annual reporting at a minimum shall be completed in the spring and reported to the City including a brief description of any erosion events, number of High Surf Warnings from the National Weather Service and the current position and changes in specific distances identified in the triggers above since the previous year. This should also document any management actions taken to respond to coastal hazard issues.
2. ~~B. Visual~~ Monitoring shall occur once per year or will be required following any ~~major erosion event consisting of~~ high surf warning issued by the National Weather Service for Southern Monterey Bay Zone and/or following a storm wave event greater than a 10% annual chance storm (10- year wave event). (HAZ 13)

- C. Once the identified triggers have been met, adaptation planning to place opportunistic sand and plan for relocation should begin before projected damages are realized. (HAZ ~~18-7, 15~~)

Exhibit A3

Draft Hazards Definitions

Additional Definitions:

(Note: the draft definitions in blue font (below) have been added since the 12/14/23 Planning Commission meeting. They are specific to the Coastal Hazards/SLR amendments, and are intended to supplement existing definitions in the 1982 LCP. If approved, they could be incorporated into the larger comprehensive LCP update currently underway)

Existing Development: An “existing development” means any structure or development lawfully in existence post January 1, 1977, and currently existing within the coastal zone. (Added by PC, 12/14/23)

Pre-Coastal Act Development: A “Pre-Coastal Act development” means a structure or development lawfully in existence prior to the effective date of the Coastal Act (January 1, 1977) that has not been redeveloped since.

Shoreline Protective Device: Structures along the shoreline that are used to protect development against coastal hazards, including but not limited to seawalls, revetments, gunite, sheet piles, breakwaters, groins, bluff retention devices, retaining walls, and pier/caisson foundation and/or wall systems.

Redevelopment: A structure shall be considered redeveloped, whereby the structure is no longer considered an existing structure and instead the entire structure and all development on the site must be made to conform with all applicable LCP policies, when such development consists of:

- (1) Alteration (including interior and/or exterior remodeling and renovations, demolition or partial demolition, etc.) of 50% or more of the major structural components (including exterior walls, floor and roof structure, and foundation) of such development.
- (2) Additions and alterations to such development that lead to more than a 50% increase in floor area for the development.

Changes to floor area and individual major structural components are measured cumulatively over time from January 1, 1977.

Coastal Hazards: Including but not limited to, episodic and long-term shoreline retreat, dune recession and coastal erosion, high seas, ocean waves, storms, tsunamis, coastal flooding, landslides, bluff and geologic instability, and the interaction of same, and all as impacted by sea level rise.

Development: As used in these policies, "development" is synonymous with "new development" and shall include construction of entirely new structures (whereby the policies apply to the entire new structure), additions to existing structures (whereby the policies apply only to the addition itself), and redevelopment (whereby the entire structure shall be considered new development subject to all applicable coastal hazards policies).

Exhibit A4

LUP Appendices (Unchanged since Dec. 2023):

<https://www.cityofmarina.org/DocumentCenter/View/14973/LUP-Appendices-11-14-24?bidId=>

A hard copy of this document is on file:

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