

A Closer Look at Local Coastal Programs: A Case Study of the North Central Coast

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“The mission of the Coastal Commission is to protect, conserve, restore, and enhance environmental and human-based resources of the California coast and ocean for environmentally sustainable and prudent use by current and future generations.”



Figure 1: North Central Coast

INTRODUCTION

The California Coastal Commission (CCC) divided the California Coast into six districts. The districts are the North Coast, North Central Coast, South Central Coast, South Coast, Central Coast, and San Diego Coast. Our study area is depicted in Figure 1. Our project examines seven Local Coastal Programs (LCPs) of the North Central Coast region. We chose to study the North Central Coast for two reasons. First, the district office for the North Central Coast is located in San Francisco which is near Stanford. This enabled us to visit the district office to obtain documents easily. Second, the North Central Coast district has copies of all of the LCPs for the jurisdictions in the district. Other districts did not have accessible records of all LCPs in the district.

Our goal for the project is to examine potential variations among the seven LCPs in the North Central Coast District. These local jurisdictions as shown in Figure 1 are Sonoma County, Marin County, The City and County of San Francisco, Daly City, The City of Pacifica, The City of Half Moon Bay, and San Mateo County. The Coastal Act provides strict instructions about the content of the LCPs. Our project explores whether the LCP's of these coastal jurisdictions aligned with the Coastal Act, and studies the degree of influence that the Coastal Act has on LCPs.

The California coast has long played an integral role in the lives of Californians. The State Constitution recognizes coastal access as a right of every California citizen. Californians are accustomed not only to coastal access but also to coastal dependent activities and lifestyles. There is a tension, however, between the entitlement that Californians often feel towards the coast and the state's attempts to regulate land use in the coastal zone.

The CCC yields some regulatory control to local governments by granting them permit authority when they have an LCP. The CCC must approve the LCPs and all amendments to them, and the residents of each jurisdiction of the coastal zone can be involved in the planning and drafting of their jurisdiction's LCP. The LCP program itself enables a compromise between the state's desire to regulate activities in the coast and the people's rights to the coast. Our research seeks to elucidate how much autonomy the LCP program gives to local jurisdictions and their people to make their own decisions about the coastal zone.

We found that despite the Coastal Act's unquestionable influence on the LCPs in the North Central Coast, that each coastal jurisdiction has some flexibility in establishing its own priorities. The Coastal Act dictates a set of priorities yet it is up to the local jurisdictions to craft policies that reflect those priorities. Through the organization of the LCPs and the level of detail in the LCPs it becomes clear that different jurisdiction emphasize different Coastal Act priorities. These differences in the LCPS in turn ensure that local demands are met. We also found that there is a great deal of variation in how the jurisdictions handle coastal hazards. Through GIS analysis, we find that despite the similarities in physical geographies, agencies adopt different approaches to handle these natural hazards. The inconsistencies in hazard protection and preparedness can potentially be dangerous and result in severe damages to properties and injuries.

The California Coastal Commission

The California Coastal Commission was created after the passage of Proposition 20 in 1972. The voter initiative was passed with 55.2% yes vote and was interpreted as a symbol for growing public desire to combat an increasingly privatised coastline.

The CCC presides over a coastal zone that extends offshore for three miles, and is larger than the state of Rhode Island. The Commission is responsible for protecting coastal resources and

focuses on shoreline public access and recreation, lower cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, development design, power plants, ports, and public works.¹ The Commission also focuses on preserving coastal land for public usage and ensuring that development along the coast prioritises public access.

Since its establishment the Commission's funding has declined by 26 per cent from \$22.1 million in 1980 (\$13.5 million in then-current dollars) to \$16.3 million in 2010, with full-time staff decreasing from 212 in 1980 to 125 in 2010.

Overtime, many of the permitting activities are transferred to the local level through the Local Coastal Program. The Californian coast has 92 individual LCP's that work to tailor the Coastal Act to the needs of the local community.

Recently the Coastal Commission has released an updated Land Use Plan and an updated Land Implementation plan. These new documents are more specific than the language of the founding Coastal Act. With a greater emphasis on combating the threat of climate change, the updated Coastal Act has expanded its scope to address new environmental threats to the Californian Coast.

Description of Data

The documents that we used for this project came directly from the CCC. We visited the CCC to discuss the available LCPs and documentation of amendments to LCP. The CCC provided us with their most recent copies of the LCPs and their revisions and amendments. In many cases, the local governments have copies of their LCP available on the website. However, these copies are often not certified or updated. The copies may not contain all the amendments that have been certified. We rely on the documents provided by the CCC as our primary data source.

LCP are often comprised of multiple components including a land use plan, implementation plan, and zoning ordinances. For the purposes of this project, we focus primarily on the land use plans. The land use plans are the documents that describe the priorities of the local government and specify multiple land designations and priorities. These plans allow us to assess the needs of a jurisdiction and its competing priorities. Other components such as the implementation plan specify the detailed process for landowners to apply for permits, appeal permits, and the criteria that the agency would use for granting permits. We focus on the land use

¹ <http://www.coastal.ca.gov/whoware.html>

plans since our goal is to understand and compare the priorities of different local jurisdictions rather than contrasting the execution of every local government's permitting process.

We analyzed seven land use plans for this project. There was a range in the length of documents. The jurisdictions and the length of their land use plan (LUP) are listed below:

Daly City - 89 pages

Half Moon Bay - 248 pages

Pacifica - 126 pages

San Mateo County - 260 pages

Sonoma County - 195 pages

Marin County - 145 pages

City/County of San Francisco - 20 pages

Comparison of Seven LCPs

To simplify the comparison across LCPs we chose five different domains on which to compare them. We chose these domains based on the Coastal Act and the organization of the LCPs we read. The domains are public access, environment, recreation, development, and natural hazards.

For each of the seven LCPs we give a brief overview of the LCP highlighting the articulated priorities of the LCP. Then we discuss the specific LCP's policies in each of those 5 categories. At the end of this report, we provide a brief chart to summarize the key comparisons.

SONOMA

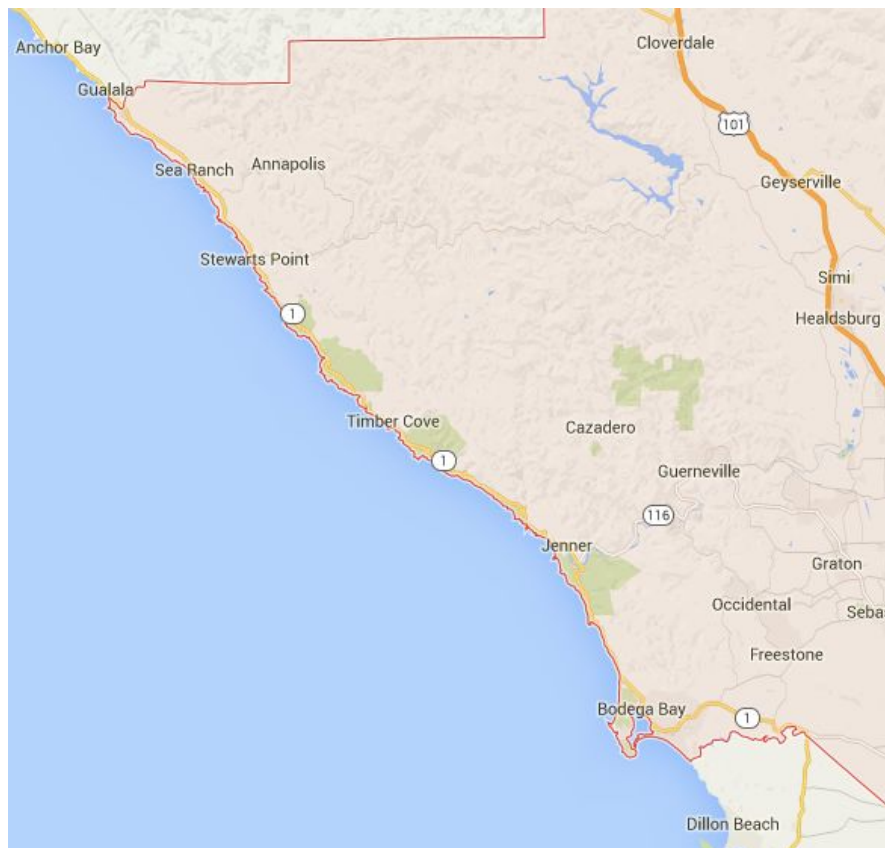


Figure 2: Sonoma County Coast. County boundary shown in pink.

Sonoma County Overview

The Sonoma Coast is bisected by the Russian River, forming a North and South coastal sections - each with their own specific set of land use needs (see fig.2).

The Sonoma LCP is 195 pages long and is comprised of six sections: Historic Resources, Environment, Resources, Recreation, Harbour, and Development.

The Historic Resources section is four pages covering the Historic Preservation Ordinance and the Historic Resources Inventory. The Environment section covers Environmental Resources and Environmental Hazards and is 20 pages long. The Resources section is 14 pages and looks at Resource Plan and Procedure, Zoning Guidelines, and Timber Preserves. The Recreation section is extensive and spans 51 pages, ranging over Shoreline Access, Recreation Facilities, and Visitor Serving Facilities. The Harbour section looks at Dock, Berthing and Related Facilities, Recreational Boating, and Dredging and Filling over 7 pages. The Development Section is 70 pages long and spans Housing, Public Services, Transportation, Visual Resources and Land use.

The county prioritises agriculture, forestry and coastal dependant recreation in rural, undeveloped land. In already developed areas, the County has chosen to focus on coastal dependant recreation. This is followed by water dependant public recreation, coastal or non-water dependant public recreation, low cost visitor serving commercial recreation, high cost visitor serving commercial recreation and moderately priced housing. Lowest on the priority list of land use is private residential, general industrial or commercial development and high priced housing.² In its stated priorities, Sonoma County has indicated that it is committed to preserving the coast for the public at large.

Sonoma County has strict guidelines on land usage, in particular the LCP repeatedly indicates that development is secondary to the preservation of the Coastal Environment. The county severely limits development that may disrupt the scenic corridor of the coast or that may harm environmentally sensitive habitat areas.³ Urban development is limited to urban areas to allow rural land to be used for agriculture or to remain undeveloped. The county also seeks to create more affordable housing through zoning and incentives to developers.⁴ This ethos also

² Sonoma County Land Use Plan pg 4 (see table), pg 93 “Long range protection of coastal agriculture, forestry, commercial and recreational fishing, and enhancement of tourism and recreation are the Coastal Plan priorities.”

³ Sonoma County Land Use Plan pg 20, “No development will be allowed in Conservation areas unless an environmental study determines that no adverse effects would occur.”

⁴ Sonoma County Land Use Plan pg 130 “A Density Bonus project...further encourage the development of affordable housing.”

extends to the dredging of the coastal land and offshore oil production: the feasibility of both is subject to their environmental impacts.⁵

More broadly Sonoma County has demonstrated a focus on sustainable development. The county emphasises the construction of bike lanes⁶ as well as low impact tourist facilities such as camp sites⁷, that balance recreation with the environment. To further encourage hikers and cyclists the County is keen on making more trails including a coastal trail to connect public and private recreation areas and access trails with communities and commercial services, whilst giving them reduced rates.⁸ The County also includes plans to maximise all public usages by expanding all parks and improving private access. The county seeks to educate its residents about the coast by encouraging the use of the upland area of Stillwater Cove County Park as a suitable area for educational facilities concerning coastal grassland or prairie.⁹

Public Access

One of the main aspects of Sonoma's LUP is to increase their affordable housing provisions seeking to encourage development of housing for low income households. This program specifies the ratio to be 1-4 dwelling units per acre in low density residential zone, and 5-8 dwelling units per acre areas in medium density residential zone.¹⁰ Further the County seeks to establish an Housing Opportunity Program in order to further encourage the development of affordable housing.

the Sonoma LUP makes an effort to increase public access to the coast by increasing coastal amenities. The LUP mandates that parking lots should be located within one and a half miles of the trail head. Further the LUP notes that accessways and shoreline destinations must have safe trails, restrooms, parking areas, and trash receptacles.

Environment

Sonoma's LUP gives a highly specific and detailed notation of different areas and their specific environmental needs. The County demonstrates a clear prioritisation of the environment

⁵ Sonoma County Land Use Plan pg 194-195, "O.C.S. development and location of facilities would have significant effects on the community of Bodega Bay and its economy. Onshore facilities would require physical, political, economic, and institutional expansion that would require a change in the County policy of not supporting offshore exploration and production."

"Within the coastal zone, it is clear that onshore facilities for offshore oil and gas are inappropriate due to a number of constraints."

⁶ Sonoma County Land Use Plan pg 100, "Increased bicycle use in the coastal zone can be strongly encouraged by giving high priority to the construction of special bike lanes and the provision of bike storage racks at coastal designations."

⁷ Sonoma County Land Use Plan pg 90, "More camping and picnic areas."

⁸ Sonoma County Land Use Plan pg 107

⁹ Sonoma County Land Use Plan pg 32

¹⁰ Sonoma County Land Use Plan pg 128-130

requiring that all potential access points be evaluated for sensitive resources such as wildlife habitat, rare or endangered plants, archaeological sites and other biological resources. Accessways that have sensitive resources were eliminated from the access plan. Some accessways have been eliminated from the Access Plan to protect sensitive resources.¹¹

The County generally prohibits the development of groins, breakwaters, piers, seawalls, pipelines or other structures in the rocky intertidal areas. These structures can alter natural shoreline processes, thus the County permits them in other resource areas only when required to serve coastal- dependent uses or to protect existing structures or public beaches in danger from erosion and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. (See Fig¹² Similarly the County prohibits diking or filling of seasonal wetlands for the purpose of conversion to agriculture or to accommodate development of any kind. It also does not allow dredging and filling in tide flat areas, except under special conditions delineated in the Coastal Act.

This protection extends to designated sites of rare or endangered plants. The County requires that prior to any development in or adjacent to designated sites, precise botanical surveys must be conducted to determine the distribution of any rare or endangered plants.¹³

The County has a more compromising stance that attempts to reasonably balance public use with the natural environment. For instance the LUP calls for the identification of wildlife nesting and breeding habitats of rare or sensitive plants or animals for the publicly owned dune areas and a temporary restriction of access to these areas during identified breeding and nesting seasons. Further it calls for the construction of roads, buildings, and other structural improvements to fit the natural topography so as not to impede the view shed. It also recommends the periodic closure of portions of the tide flats on the west side of the harbor to shellfish harvesting. This means that public access is sustainable without damaging the local environment and ecosystems.

Development

Sonoma County's LUP indicates that sustainable development is a County priority. The LUP's development policies allows for limited visitor or commercial development consistent with land use designations and zoning. The LUP requires that expansion be subject to strict design controls to preserve the area's scenic character by locating and designing development to fit the setting and to be subordinate to the pre-existing character of the site.

The desire for sustainable development also extends to recreational boating usage by restricting total marina development shall be restricted to a possible maximum of 700 berths in

¹¹ Sonoma County Land Use Plan pg 63

¹² Sonoma County Land Use Plan pg 30

¹³ Sonoma County Land Use Plan pg 32

conjunction with the Phase II Land Use Plan for Bodega Bay. The County has preempted the possible desire for further expansion beyond the first 300 new berths in Phase, allowing for them only after three conditions have been met: first, a review of the harbor operations, with special emphasis on whether activities not dependent upon a harbor location can be relocated to preclude or minimize the need for additional dredging and filling; second, a determination of whether adequate appropriate locations for dredge spoils disposal exist and whether other environmental constraints can be successfully observed in the utilization of such sites; and third, an assessment of the adequacy of the fisheries resources to support the additional pressure anticipated to result from such expansion, performed in conjunction with appropriate management agencies, demonstrates that the resources are adequate and would not be expected to be harmed by such increased effort.¹⁴ This same ethos is extended through the County's Coastal Zone Design Guidelines that have extensive stipulations regarding height of buildings, fences, material and colours, streets, pedestrian access, setbacks and garages.¹⁵

The County also seeks to protect its archaeological or paleontological resources from the potential harms of development. On August 21st 1975 a special Historic District (HD) Combining Zone was established. The Historic District Zone protects structures, sites and areas that are reminders of past eras, events and persons important in local, state, or national history, or which provide significant examples of architectural styles of the past, or which are unique and irreplaceable assets to the County and its communities. Four Coastal Communities are proposed for such districting.¹⁶

The Sonoma County Coastal Plan does not contain land use recommendations that encourage industrial or energy development in the coastal zone. This is because the desire to ensure long range protection of coastal agriculture forestry, commercial and recreational fishing, and enhancement of tourism and recreation are the Coastal Plan priorities. The County has found that no suitable sites exist within the coastal zone for industrial onshore oil and gas support facilities. The County instead hopes to promote a high level of agricultural and forestry management practices which protect environmental values to help insure the long term use and conservation of coastal resources.

Recreation

The desire of the Coastal act to increase recreational boating opportunities is not a top priority in Sonoma County when compared to public access. However the County does encourage more boat rentals and has indicated a desire for additional recreational boating

¹⁴ Sonoma County Land Use Plan pg 122

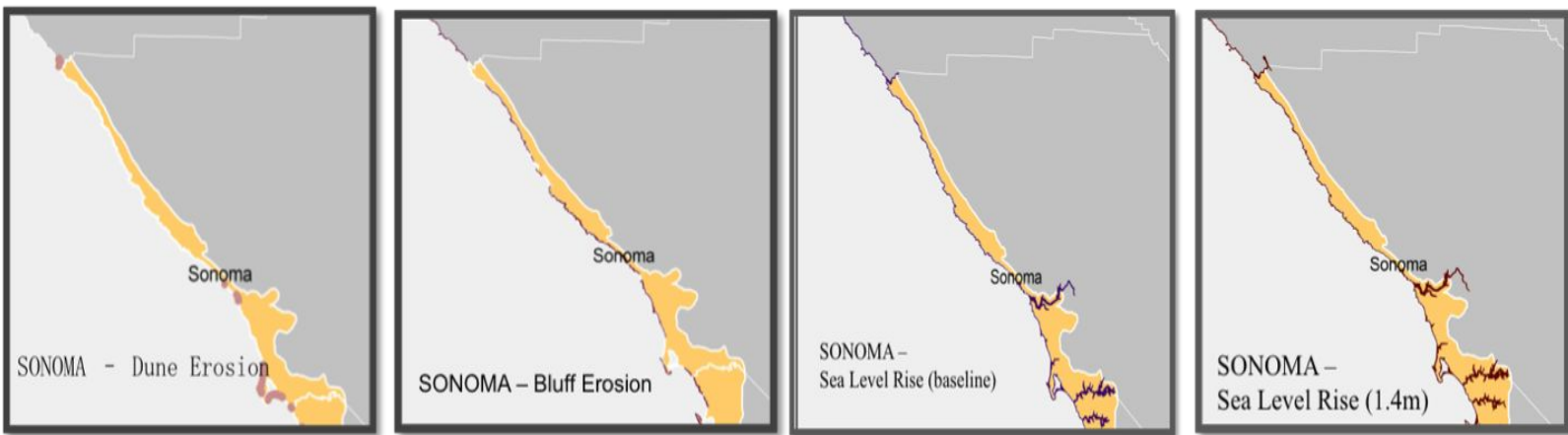
¹⁵ Sonoma County Land Use Plan pg 180-181

¹⁶ Sonoma County Land Use Plan pg 6

facilities. The County has some interest in aquaculture and notes that a continuation of salmon-rearing program in the pond should be considered.

Hazard

Sonoma County primarily uses preventative measures to deal with hazards and risk. The County



Figures 3 - 9: A visualization of the hazards faced by Sonoma Coast.

prohibits construction of structures within 100 feet of the top of any embankment, natural or man-made which defines a channel, except where flood hazard has been found to be remote in review by the Sonoma County Water Agency. Further they request that grading and construction should be done in such a manner as to minimize: (a) ponding or accumulation of stormwater not necessary for silt control, or groundwater recharge enhancement, (b) alterations to the natural drainage system, and (c) siltation of adjacent or downstream water courses.

New dwellings are prohibited within designated Tsunami Hazard Zones. The County takes setback seriously and does not allow development within 100 feet of a bluff edge or within

any area designated unstable to marginally stable on Hazards maps. This condition is only waived when a registered engineering geologist reviews and approves all grading, site preparation, drainage, leachfield and foundation plans of any proposed building and determines there will be no significant impacts.

The County is also forward thinking in the manner in which it deals with hazards, calling for a plan to developed in anticipation of a major earthquake generated along the San Andreas fault zone.

MARIN COUNTY

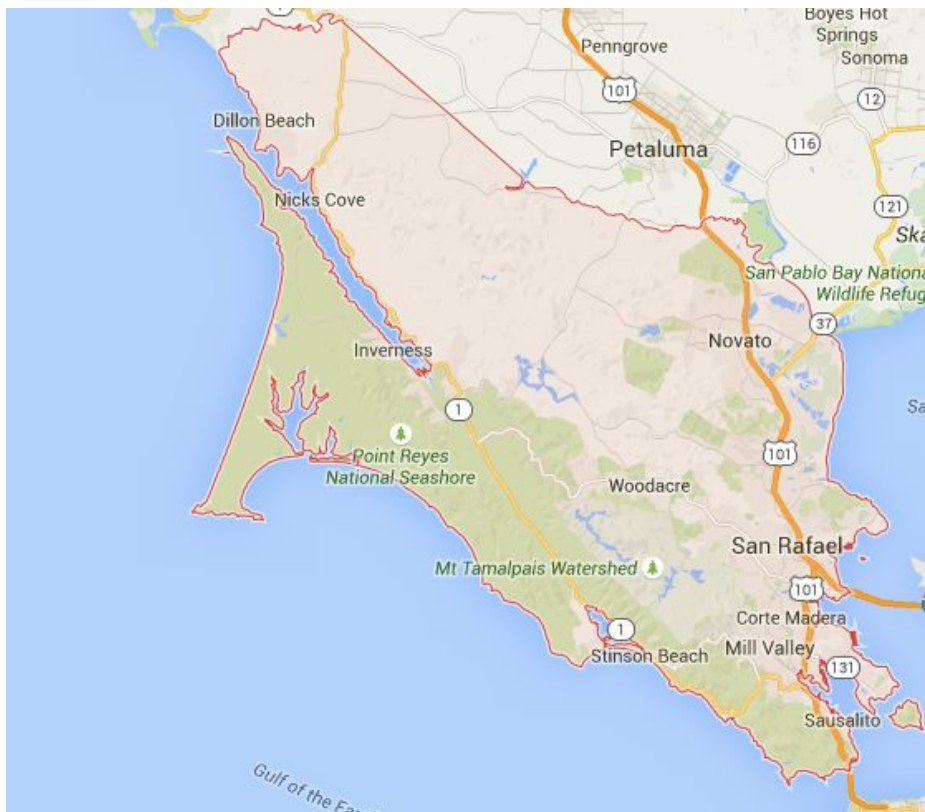


Figure 10: Marin County. County boundary shown in pink.

Marin County Overview

The Marin county Coastal Area is largely surrounded by federal, state and county parks, and contains several small villages, agriculture and mariculture areas scattered residences, bed-and-breakfast inns, and significant amounts of open space.¹⁷ Marin county's Coastal Zone also contains extensive ecosystems from tidal marshes, freshwater wetlands, stream corridors, to upland forests, chaparral, and grasslands.

¹⁷ Marin County LCP pg 3

The Marin County LCP is divided into three main sections: Natural Systems and Agriculture, Built Environment, and Socioeconomic. The LCP spends 36 pages discussing Natural Systems and Agriculture covering Agriculture, Biological Resources, Environmental Hazards, Mariculture and Water Resources. The Built Environment section covers 44 pages and discusses Community Design, Community Development - including Community Specific Policies, Energy, Housing, public Facilities and Services and Transportation. The last section, Socioeconomic, spans 14 pages and covers Historical and Archaeological Resources, Public Coastal Access and Parks, Recreation and Visitor Serving Uses.

Marin County notes that their Natural systems are vulnerable to development and construction and so has attempted through its LCP's to include strong policies to protect the environment from threats posed by new development.¹⁸ In particular the County views Coastal Agriculture as crucial to its economy, and as such seeks LCP policies that will protect its long term viability.¹⁹ As it stands Marin County's water resources have already been tarnished with pollutants such as oil, grease and heavy metals are also present in the Coastal Zone watersheds, with the capability to affect agriculture.²⁰ Consequently the County's attempting by addressing all phases of development.²¹ The County dislikes the use of shoreline protective devices, noting that they can have negative impacts on the coast,²² despite this the County has numerous Hazard and Risk protective policies within their LCP.

The County seeks to facilitate movement around the coastal zone, seeing public transportation as an efficient mover of people and an augments of community character.²³ The LCP both encourages the procurement of new trails, roadways or paths, as well as the expansion of trails and bikeways on National Park Service lands.²⁴

Public Access

Marin County's LUP addresses all aspects of public access, from transport to recreational opportunities to housing and accommodation. The County looks at a variety of transportation methods, and includes policies that pertain to cyclists, drivers and pedestrians. Policy C-TR-4 Expansion of Bicycle and Pedestrian Access looks to expand bicycle and pedestrian facilities and access in and between neighborhoods, employment centers, shopping areas, schools, public

¹⁸ Marin County LCP pg 11

¹⁹ Marin County LCP pg 13

²⁰ Marin County LCP pg 55

²¹ Marin County LCP pg 56

²² Marin County LCP pg 39

²³ Marin County LCP pg 111

²⁴ Marin County LCP pg 112

lands, and recreational sites. C-TR-5 Bicycle and Pedestrian Network. Similarly C-TR-6, C-TR-7, and C-TR-8 look at creating new facilities for bikers and pedestrians including bike storage facilities and the expansion of the Countywide Trail System. C-PA-18 seeks to increase Parking and Support Facilities at Public Coastal Accessways. The County supports the California-wide California Coastal Trail initiative with C-PK-14 which seeks to appropriately align Marin County with the California Coastal Trail and support completion of the California Coastal Trail system through Marin County. Policy C-TR-10 demonstrates a desire to ensure that Public Transportation is adequate and affordable.

Marin County has also made an effort to create lower cost visitor and recreational facilities in the Coastal Zone. Policy C-HS-3 is an Affordable Housing Requirement, whilst C-HS-4 ensures Retention of Small Lot Zoning. C-HS-6 regulates Short-Term Rental of Primary or Second Units to allow homeowners to lease their second units. C-PK-7 seeks lower Cost Recreational Facilities to maximise the ability of the public to use recreational facilities. Further policy C-PK-6 supports Bed and Breakfast Inns in the Coastal Zone as a means of providing visitor accommodations, while minimizing their impacts on surrounding communities.

Environment

Marin County demonstrates a clear care for its coastal environment through its LCP policies. The County is dedicated to the protection of its wildlife and ecosystems. Policy C-BIO-2 grants protection to Environmentally Sensitive Areas (ESHA) whilst C-BIO-3 provides ESHA Buffers of a minimum of 100 feet in width, in a natural condition along the periphery of all wetlands. C-BIO-4 Protect Major Vegetation and C-BIO-7 Coastal Dunes. Prohibit development in coastal dunes to preserve dune formations, vegetation, and wildlife habitats. The County views Wetlands as productive wildlife habitats and water filtering and storage areas, using policy C-BIO-14 to protect wetlands against significant disruption. The County extends this care to its animal habitats with C-BIO-1 prohibiting the alteration or removal of groves of trees that provide colonial nesting and roosting habitat for monarch butterflies or other wildlife, except where the trees pose a threat to life or property.

The County focuses a large aspect of their environmental concerns upon marine life and marine resources.

C-BIO-23 calls for the maintenance, enhancement, and, where feasible, restoration of marine resources. and provides special protection to areas and species of special biological or economic significance.

C-BIO-26 indicates the County's prioritisation of the environment over development and construction, requiring that the impacts from diversion projects, especially on the two major tributaries to Tomales Bay, Walker and Lagunitas Creeks, be fully studied through the CEQA and coastal permit process before they are permitted to proceed and in all cases, require

mitigation and enhancement measures to ensure that coastal resources influenced by freshwater inflows are not significantly damaged.

This is reflected in the County's Diking, Filling, Draining and Dredging policies with policy C-BIO-21 Wetland Impact Mitigation requiring that any dike and fill development permitted in wetlands include mitigation measures that at a minimum covers, either acquisition of required areas of equal or greater biological productivity or opening up equivalent areas to tidal action; provided, however, that if no appropriate restoration site is available, an in-lieu fee sufficient to provide an area of equivalent productive value or surface areas shall be dedicated to an appropriate public agency, or such replacement site shall be purchased before the dike or fill development may proceed.

Development

The Marin County LCP demonstrates a prioritisation of public access over development. This is particularly evident in policy C-CD-9 and C-CD-14. The former require public access to new piers or similar recreational or commercial structures unless it can be demonstrated that such access would significantly interfere with commercial fishing or similar operations on the pier or be hazardous to public safety. The latter ensures the existence of visitor-serving enterprises, particularly those which offer and provide places of overnight accommodation, shall remain available to any prospective guests

The County also indicates a focus on environmentally sensitive development. Developments required to be proximate to existing roads and new developments needing no new road construction or improvements resulting in significant impacts on agriculture, natural topography, major vegetation, or significant natural visual qualities of the site. All new structural development must be clustered within existing developed areas (p26) under policy C-CD-2 Location of New Development to ensure minimal adverse impacts, either individually or cumulatively, on environmental and natural resources, including coastal resources. protect archaeological or paleontological resources

The LCP also protects archaeological and paleontological resources when development projects that might affect them are proposed, by requiring development applications to be reviewed for potential impacts to archaeological and paleontological resources. If potential impacts are found during the review, the LCP requires their avoidance through means such as re-siting the proposed development. When construction activity is allowed at archaeologically sensitive sites, the LCP requires that such activities be carefully monitored and any mitigation measures be properly implemented in the event that archaeological resources are discovered during construction. (126) Policies C-HAR-1 Maintenance of Information on Archaeological and Paleontological Resources, C-HAR-2 Potential Impacts of Development on Archaeological and

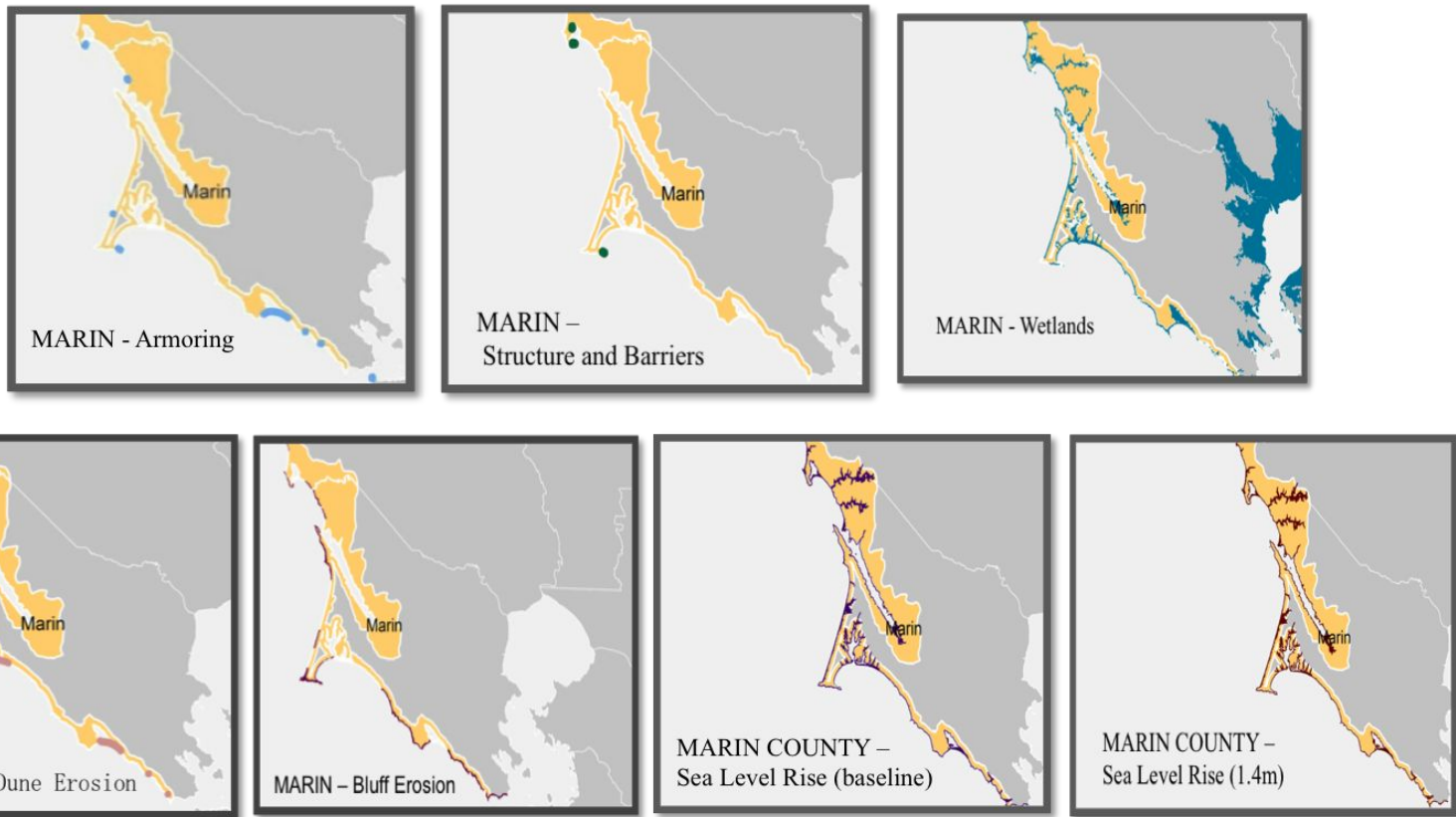
Paleontological Resources and C-HAR-3 Monitoring of Construction on Archaeological Sites by Appropriate Experts are reflective of this intent.

As an intensely agricultural County, Marin makes numerous provisions to help support the development of agriculture in the coastal zone with provisions for intergenerational homes (Policy C-AG-5). The LCP recognizes that farmworker housing is an integral part of many agricultural operations (Programs C-AG-2.b) This LCP's policies would will help support such agricultural diversification, including making it easier for small scale direct to consumer sales (Program C-AG-2.e) The LUP introduces Agricultural Production Zone (C-APZ), and policies to protect agricultural land, such as C-AG-1 which maintains parcels large enough to sustain agricultural production and C-AG-2 that preserves land that is suitable for intensive agricultural productivity and ensure its principle use is agricultural. It stipulates that development in C-APZ zones must be designed and constructed to preserve agricultural lands and to be consistent with all applicable standards and requirements of the LCP. Lastly policy C-AG-10 Marin Agricultural Land Trust (MALT) and Other Methods of Preserving Agriculture. Support the objectives of the Marin Agricultural Land Trust (MALT) to protect agricultural lands through the transfer, purchase, or donation of development rights or agricultural conservation easements on agricultural lands.

Recreation

Marin County seeks to use its LCP to facilitate opportunities for Coastal Recreation. Compared to other concerns the increase of recreation opportunities is not seen as a high of a priority. However the LUP seeks to provide high priority for development of visitor- serving and commercial recreational facilities designed to enhance public opportunities for lower-cost coastal recreation. Further the County seeks to increase coastal dependant recreation opporutnity with policy C-PK-15 which supports and protects commercial fishing and recreational boating on Tomales Bay, C-PK-16 which sets standards for New Boating Facilities and C-CD-8 Shoreline Structures and Piers which limits the location of piers and other recreational or commercial structures to sites located within existing developed areas or parks.

Hazard



Figures 11- 17: A visualization of hazards faced by the Marin Coast.

Marin County has an active coastline, with numerous hazards and risks associated with developing along the coast. The County has extensive rules and guidelines intended to minimize risk and damage to the coast. The County sees its risk assessment in the same long-term view it regards its environmental protections under. The County requires that new development during its economic life (100 years) is safe from, and does not contribute to, geologic or other hazards for a period of at least 100 years. (C-EH-1) It also attempts to avoid the future need for shoreline protective devices with policy C-EH-5 extending a similar 100 year expectation that the stability and structural integrity of bluff top developments will be set sufficiently far back from the coast so as not to need any shoreline protective devices for at least 100 years. The County has made it clear that it wants to avoid the use of shoreline protective devices along the Marin County Coast in policy C-EH-13 which states that the County will ‘(d)iscourage shoreline protective devices (i.e., shoreline armoring) in the Coastal Zone, including encouraging their removal and site restoration where feasible, due to their coastal resource impacts (including visual impacts, obstruction of public access, interference with natural shoreline processes and water circulation, and effects on marine habitats and water quality).’

The LCP notes the need for proper drainage of blufftop parcels, policy C-EH-6 requires that surface and subsurface drainage associated with development of any kind shall not contribute to the erosion of the bluff face or the stability of the bluff itself. This requirement also stands for developments that have a high potential for generating pollutants (High Impact Projects) - policy C-WR-14 'Design Standards for High-Impact Projects' requires that such projects incorporate treatment control.

The LUP also includes flood planning with policy C-EH-22 which attempts to tackle the problem of Sea Level Rise and Marin's Coast. The policy seeks out the best available and most recent scientific information with respect to the effects of long-range sea level rise to be considered in the preparation of findings and recommendations for all geologic, geotechnical, hydrologic and engineering investigations, including the coastal hazards analysis. The County also seeks to mitigate possible impacts of sea level rise on Highway 1 through policy C-TR-3 which suggests consultation with the California Department of Transportation to protect access to the coast and to minimize possible impacts.

The County also takes the problem of erosion seriously. Program C-EH-22.b places the onus on the County to seek funds for a study to identify threats of bluff shoreline retreat, including bluff retreat, taking into account accelerated sea level rise. It also works to protect its shoreline sand supply and prevent dune erosion. C-EH-18 regards the re-establishment of dunes in conjunction with shoreline protective devices. In doing so the County additionally requires that any permit granted to construct a shoreline protective device shall include the re-establishment of the former dune contour and appearance, where feasible to minimise visual and sand transport shoreline sand supply impacts. The County also attempts to use preventative measures to plan in advance for the possible of emergency shoreline protection needs, encouraging property owners subject to ocean-front erosion hazards to develop responses to such hazards prior to emergency conditions. Additionally through Policy C-EH-20 the County will introduce joint program development where contiguous properties are subject to generally similar erosion hazards.

SAN FRANCISCO

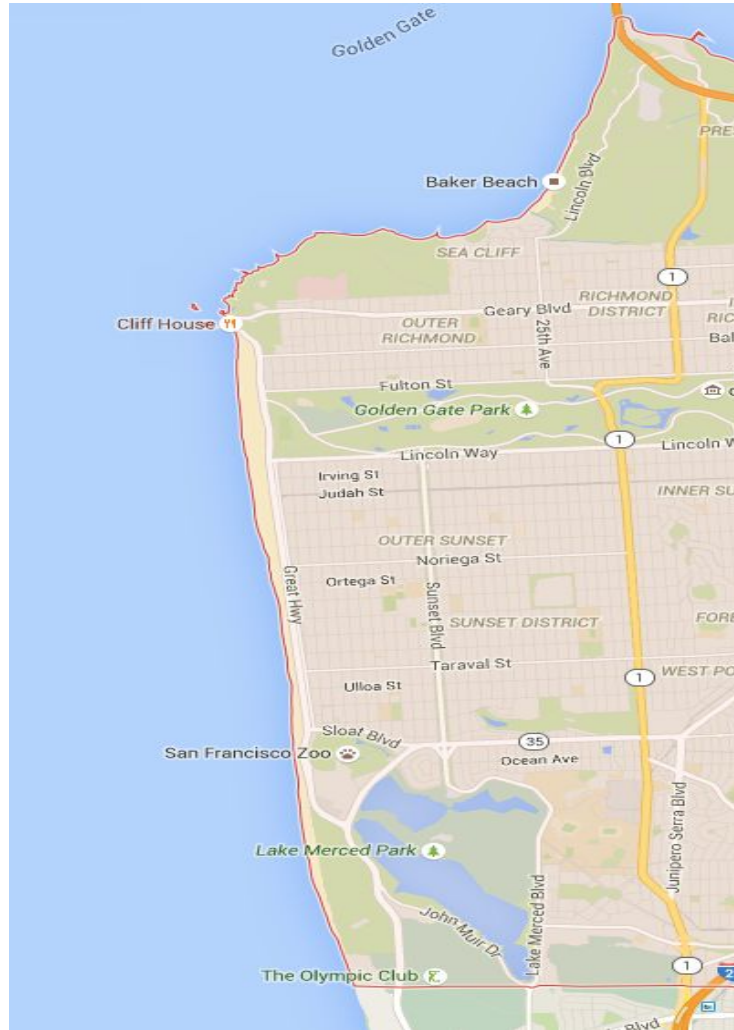


Figure 18: City and County of San Francisco Coast. Boundary shown in pink.

San Francisco Overview

The San Francisco Coastal Zone is six miles long and largely under public ownership - with only 14% of the Coastal Zone is privately owned. The plan is concerned with enhancing existing features as most of the coastal zone is already developed.

The San Francisco LCP is incorporated under the City's Master Plan, as an area plan under the Western Shoreline PPlan. At 14 pages long it is significantly shorter than most LCP's - this may be due to the existence of the San Francisco Bay Conservation and Development Commission which also has jurisdiction over the Bay Area. The LCP covers the Western Shoreline and gives a generalised plan for transportation, followed by site-specific land use policies. The LCP looks at the Great Highway, Golden Gate Park, The Zoo, Lake Merced, Ocean Beach, Sutro Heights

Park, Cliff House-Sutro Baths, Fort Funston, Olympic Country Club and Richmond and Sunset Residential Neighbourhoods.

The LCP emphasises the importance of Public Access and mostly concerns itself with improving facilities to enhance public access.²⁵ The Land Use Plan mentions updating Beach Chalets, keeping beaches clean and improving recreational access to Golden Gate park.

The Land Use Plan places great importance on transport hoping to increase transit options, biking options and driving options. In particular the Land Use Plan focuses on enhancing cyclist use of the Coastal Zone through the creation of recreational trails for biking, the extension of existing bike trails and bike exclusive lanes.²⁶ Further the Land Use Plan seeks to create new parking lots in order to increase the parking spaces available to Coastal Zone visitors. The City has innovative ideas to balance the needs of public use by creating multi-use car parks that can be used for recreational purposes in off-peak hours.²⁷

There is minimal mention of Environmental protection within the Land Use Plan. The Land Use plan indicates attempts to offset potentially hazardous environmental problems such as the stability of the Westerly Bluffs and the Ocean beach Sand Dunes. The plan also indicates a desire to extend the seawall further south to Sloat Boulevard. However despite these overtures there is little policy regarding the protection of habitats and ecosystems within the coastal zone.

Public Access

With only 14% of the San Francisco Coastal Zone privately owned, the public has significant access to the coast. The San Francisco Land Use Plan outlines several policies that both maintain and enhance public access. Each site specific land use plan where appropriate, emphasises its commitment to public access.

The LCP fulfills the Coastal Act's requirement to enhance public access, by suggesting the rehabilitation of the beach chalet for increased visitor use at Golden Gate park,²⁸ provide a landscaped bridge from Ocean Beach to Golden Gate Park²⁹ and to provide permanent parking³⁰ at Ocean Beach. Further it states that it will maintain and improve the physical condition of the Esplanade³¹ and provide a new trail system up the south slope of Sutro Heights Park, to improve

²⁵ San Francisco Land Use Plan, pg 10, "Enhance the enjoyment of visitors to Ocean Beach by providing convenient visitor-oriented facilities."

²⁶ San Francisco Land Use Plan, pg 7

²⁷ San Francisco Land Use Plan, pg 6-7

²⁸ San Francisco Land Use Plan pg 7

²⁹ San Francisco Land Use Plan pg 7

³⁰ San Francisco Land Use Plan pg 7

³¹ San Francisco Land Use Plan pg 11

access between Sutro heights park and Golden Gate Park. The plan has a focus on improving transportation systems across the coastal zone to facilitate greater public access.

Environment

The San Francisco LUP only infrequently mentions the environment. The LUP notes the long term reforestation plan for Golden Gate Park.³² It also prohibits activities that threaten the quality of Lake Merced's water and its role as a backup reservoir. Additionally the LUP mentions the conservation of the natural environment and ecology of Fort Funston.³³

Development

The LUP contains minimal provisions for development - in part because there is very little coastal land available for development. Mostly when development is mentioned it is in context of a recreational purpose, or allowing for commercial recreation uses if public ownership is maintained.³⁴ The Plan seeks to develop Cliff House/ Sutro Bath area as a nature-oriented shoreline park. The Plan also seeks to protect undeveloped land such as in Sutro Heights where the LUP stipulates that the hillside remain undeveloped to protect the hilltop landform and mountain views.³⁵

The San Francisco LUP also mentions housing and a desire to increase the amount of housing units³⁶ whilst also preserving the scale of residential and commercial development along the coastal area. This suggests a balance of interests in order to maintain the coastline whilst dealing with increasing housing and development pressures.

Recreation

The plan mentions little about coastal dependant recreation but does discuss recreation in a broader sense. The Land Use Plan stipulates continued maintenance and enhancement of the recreational use of an Francisco's Ocean Beach shoreline.³⁷ Similarly it mentions that the Masterplan for Golden Gate Park will include specific policies for the improvement of recreational access in the western portion of the park.³⁸

³² San Francisco Land Use Plan pg 7

³³ San Francisco Land Use Plan pg 12

³⁴ San Francisco Land Use Plan pg 11

³⁵ San Francisco Land Use Plan pg 11

³⁶ San Francisco Land Use Plan pg 13

³⁷ San Francisco Land Use Plan pg 11

³⁸ San Francisco Land Use Plan pg 7

Hazard



Figures 19 -25: A visualization of the hazards faced by the City and County of San Francisco coast

As a busy coast, San Francisco Bay must ensure that it protects coastal users from potential hazards. It also must ensure that it manages potential hazards by acting in advance of danger. Much of the threat the Bay is the erosion of dunes and bluffs. Consequently the LUP states that it will improve and stabilise the sand dunes to control erosion,³⁹ as well as protect the stability of the westerly bluffs by consolidating informal trails⁴⁰ and protect the natural bluffs below Sutro heights park.⁴¹

³⁹ San Francisco Land Use Plan pg 10

⁴⁰ San Francisco Land Use Plan pg 13

⁴¹ San Francisco Land Use Plan pg 11

DALY CITY

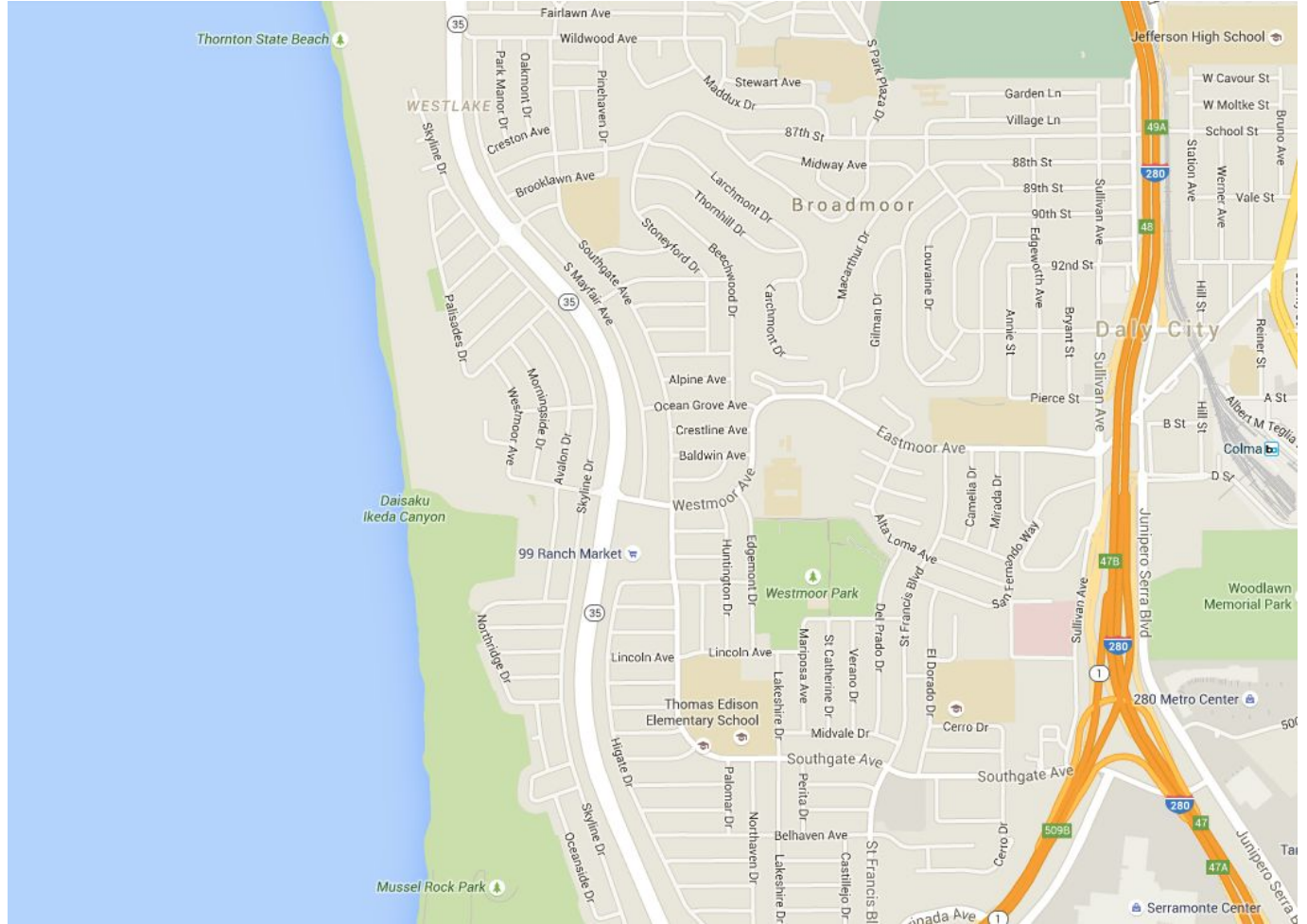


Figure 26: Map of the Daly City Coast, featuring the three beach access points: Thornton State Beach, Mussel Rock Park and Daisaku Ikeda Canyon

Daly City Overview

The Daly City LCP was certified by the California Coastal Commission (CCC) in March of 1984. This version of the LCP was the most recent version we could obtain from the CCC. The first part of the LCP is an introduction which explains the Coastal Act and the history of development in Daly City. Next, there is a section in which the land use and zoning designations are defined. The rest of the LCP discusses and explains LCP policies. There are seven different topics that are addressed individually. These topics are: public access, recreation and visitor-serving facilities, housing, environmentally sensitive habitat areas, hazard areas, new development, and energy facilities. For each of these topics there is first a subsection that gives the background information on that topic for Daly City, lists the applicable coastal act policies, and gives the Daly City's LCP goals for that topic. After each topic is addressed there is a separate section of the LCP in which the specific policies for each topic are given. When a policy

is listed, it also states which goal that policy fulfills. Finally, at the end of the LCP there is a separate public access component.

The Daly City LCP does not list any overall priorities or goals but rather discusses its priorities and goals for each topic. As such, there is no explicit statement of what Daly City's LCP prioritizes the most. The only statement in the LCP that compares between topics is in the recreation section which states that public coastal access is important because of the recreational opportunities it creates. However, there is no statement as to whether recreation is more important than any of the other topics such as the environment. The LCP document is 89 pages which is short when compared with other LCPs.

Public Access

Daly City has very limited public access to the beach because of severe geophysical hazards. There are only two points, Westridge and Westmoor Avenues, where there is vehicular access into the coastal zone neighborhoods. It is not feasible to increase vehicular access so the only solution is to increase signage of these areas. There is also limited public transit service to the coastal zone. However, this may change if demand increases when the three current development projects are completed.

For bikes and pedestrians there is no path or trail (other than the road), but there are plans to develop a separate bike path. There is only one point, Thornton State Beach which is shown in figure 26, where it is possible to safely access the beach. However, two other points, Mussel Rock Park and Daisaku Ikeda Canyon (also shown in figure 26), are being developed as access points. No other vertical access to the beach is safe because of the unstable bluffs. Once the two other beach access points are completed, there should be lateral access connecting the three access points. There should also be adequate parking near each of the three beach access points. However, Daly City does not want to have too much parking so that people will still be incentivized to use public transportation. Finally, specific bluff tops are designed to be used as viewpoints for coastal views.

Environment

Before the Coastal Act and the Daly City LCP there was very little done to protect the coastal environment. As such, much of the natural landscape was altered and plant and animal habitats in the area were damaged. There is evidence that some plant and animal habitats are re-establishing in the region, but measures have to be taken to protect the reestablishing species. The Daly City LCP requires that every five years the city commission a biological inventory of the plant and animal life in the area. Part of the report should track any changes in animal and plant habitats since the last inventory. Additionally, the LCP requires buffer zones around sensitive habitat areas and limits the recreational uses of those areas to activities that will not damage the habitats (such as education). Any development close to sensitive habitats must be

reviewed for its impacts on cliff and bluff stability and vegetation. Finally, access to the cliffs and bluffs is prohibited except in areas designated as access points or viewing points.

There was a landfill at Mussel Rock Park and there is the possibility of energy recovery from the methane gas produced by the landfill. The City will determine the best way of dissipating the gas based on its test well sites. Recreational and habitat resources are not to be harmed by the gas dissipation and/or collection process and there are to be measures taken to mitigate any impacts or damage.

Development

At the time that the LCP was approved, most of the developable land in Daly City was already in use. There were 17 acres of land safe for development. Half of that land is privately owned and the other half is owned by Caltrans. Additionally, in the lands above Mussel Rock, archaeological artifacts were found.

All new development needs to be approved by the City to ensure that the interests of nearby residents are addressed. Recreational land uses are preserved and enhanced. Further, both privately and state owned parcels on the blufftop overlooking Thornton State Beach are to be used for recreation and visitor-serving uses. The state will also request to acquire the property south of Thornton State Beach for the purpose of developing more lateral access along the beach. Development on any vacant blufftop properties is prohibited unless it can be demonstrated that it is safe to develop. Development will also be prohibited on the sites where archeological artifacts were found. Finally, any properties that are vacant because development was previously removed for safety issues should not be redeveloped.

In addition to discussions of new development, there is also a separate housing component in the Daly City LCP. The housing component has two main goals. The first is to establish provisions for providing low and moderate income housing in the coastal zone. The second is to protect homes in the coastal zone by monitoring geophysical hazards and providing necessary assistance.

Recreation

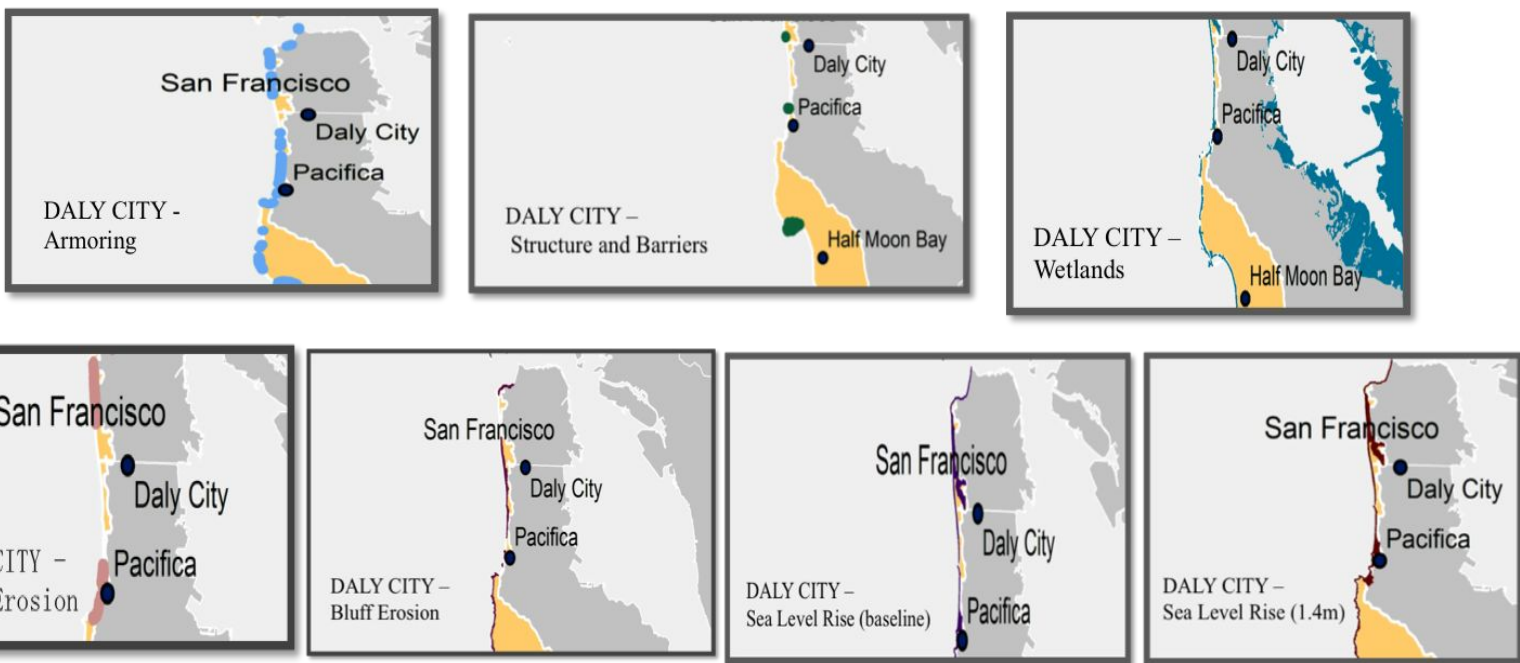
The only language in the Daly City LCP that expresses any kind of ranking between the different topics discussed appears in the recreation and visitor-serving facilities section. Here it says, “the real purpose in the goal of maximizing public access to the beach is to maximize public recreation opportunities in the coastal zone”⁴². This indicates that while public access is important, Daly City views public access as a necessary gateway to recreational activities. There are some limitations to recreation in the coastal zone including hazards, existing development, and the need to protect sensitive habitat. At the time the LCP was written the only developed

⁴² page 26

beachfront access point was Thornton State Beach. In addition to providing coastal access this property also facilitates many recreational outlets such as picnicking and nature walks.

The LCP seeks to expand on the available recreational opportunities in the coastal zone. First, there are plans to develop more recreational opportunities at Thornton State Beach. There are plans to develop bike paths, pedestrian paths, hiking only trails, and maintaining the existing horse stables. The development plans however still prioritize the protection of coastal resources and also prescribe policies to prevent overuse and damage to the area. A second project described in the LCP is the plan to revitalize Longview, Northridge, and Palisades Parks by adding tables, benches, fences that do not block the oceans views, and adult exercise equipment. There is also land designated in the LCP for recreational purposes including horse stables. Additionally, there are plans to develop Mussel Rock Park and Daisaku Iskeda Canyon as well as a San Andres Fault visitor’s center.

Hazard



Figures 27-33: A visualization of hazards faced by the Daly City coast.

The coastal zone in Daly City is constituted by large stretches of sea cliffs. The cliffs overtime have become unstable and are very vulnerable to erosion and landslides (see figure 31 which depicts bluff erosion. Erosion and landslides happen periodically and have resulted in the removal of sixteen homes in the coastal zone. The City has considered slope stabilizing structures but these are unlikely to increase safety of the area dramatically and are quite expensive. Thus, the City prescribes three policies in its LCP to handle erosion and landslides. First, the City will limit the use of open spaces to designated beach areas, the accessible canyons, developed hiking trails, and developed vertical access points. They will post signs at important

locations warning of the hazards. Second, the City will remove any of the inactive storm drains since these contribute to erosions. Finally, the City will protect the vegetation on the bluffs since this vegetation helps to stabilize them.

PACIFICA

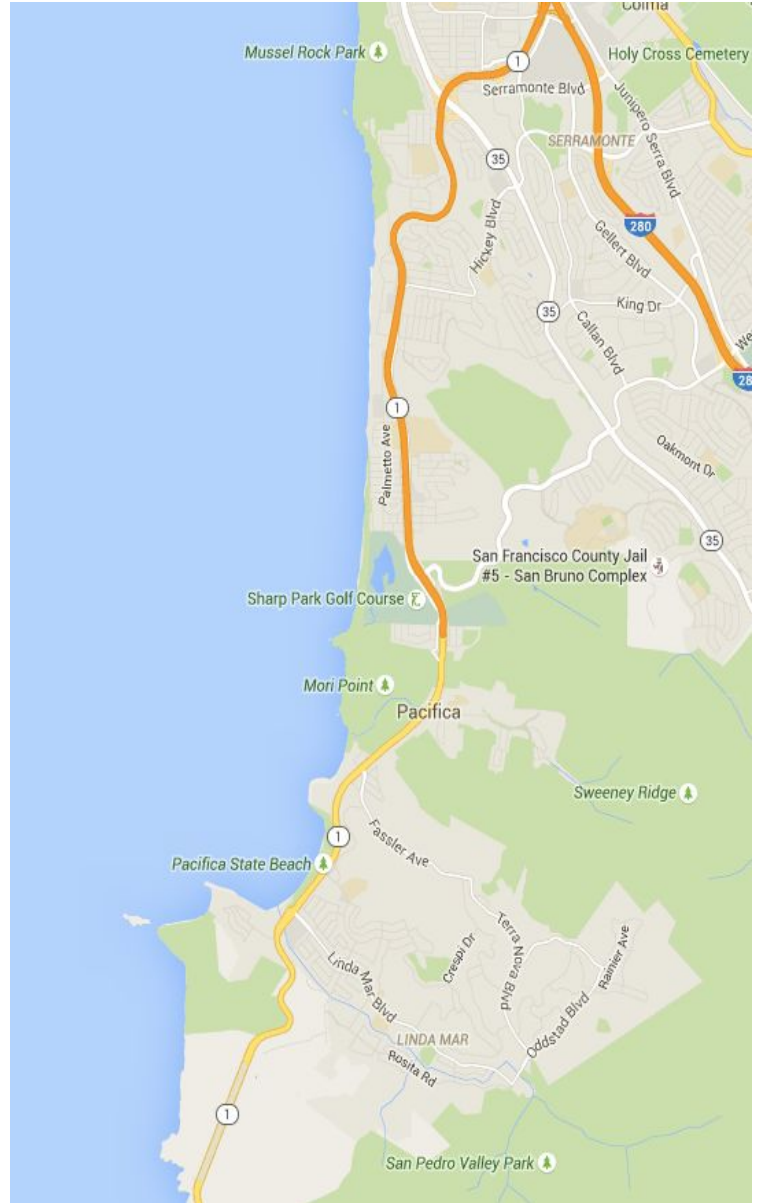
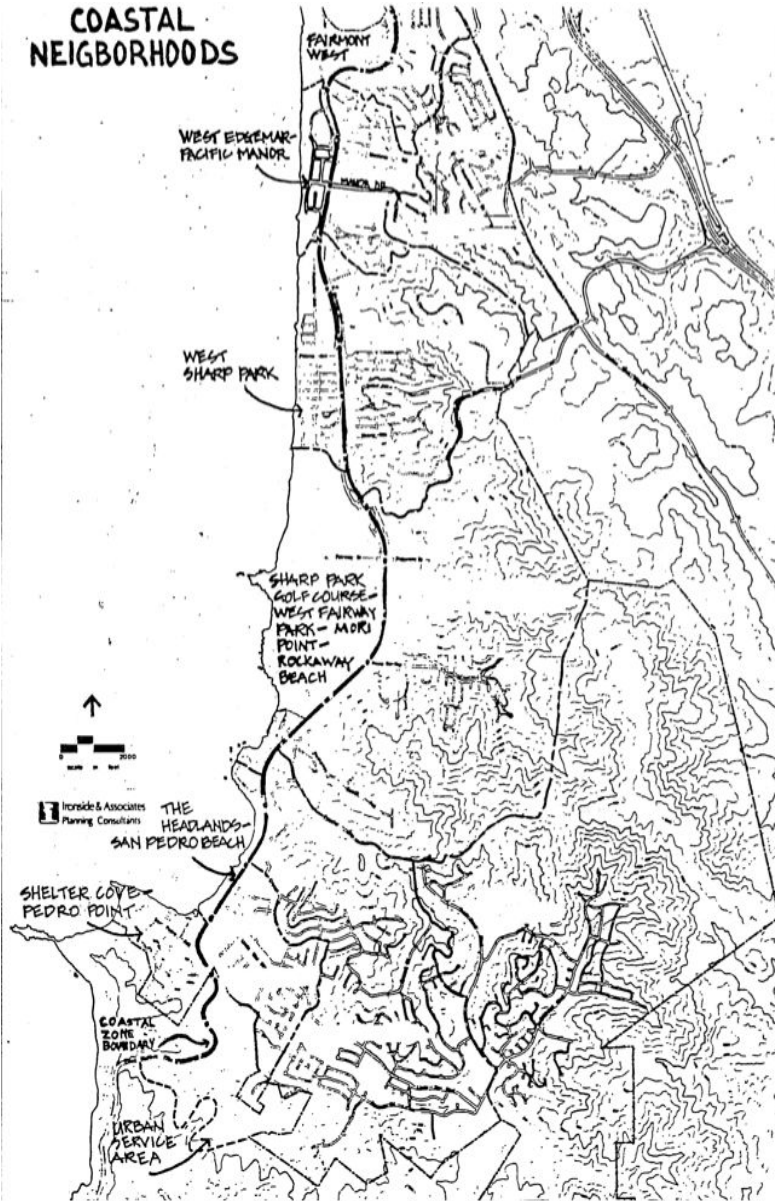


Figure 34 and figure 35: The coastal neighborhoods of Pacifica

Pacifica overview

The City of Pacifica Local Coastal Program (LCP) was certified by the California Coastal Commission (CCC) in 1980. The LCP was reprinted in 1989 and again in 1992 in order to include all of the amendments to date⁴³. The coastal zone in Pacifica is from the edge of Highway 1 to the sea⁴⁴. The Land Use Plan (LUP) of the LCP is organized in the following way. First, it directly quotes the relevant coastal act policies. Next, it defines the land use designations that it plans to use. Third, it describes the land use designation for each of the six neighborhoods that make up Pacifica. It also includes a separate access component that documents each individual access point to the beach. Finally, it concludes the plan with general guiding principles for making future decisions.

When compared with other LCPs, one of the most unique features of the City of Pacifica Land Use Plan (LUP) is that its land use designation section is organized by neighborhood. There are a six coastal neighborhoods discussed in the plan. The City of Pacifica states that, “the varied types of development of each coastal neighborhood and their geographic relationships are an inherent and vital part of the character of the City. Thus, the intent of the Local Coastal Land Use Plan will designate land uses and intensities which are suitable to the unique circumstances of each coastal neighborhood”⁴⁵. The City of Pacifica intends for the LUP as a whole to meet coastal act policies while recognizing that each of it’s neighborhoods has different characteristics and therefore need different land use designations.

The six neighborhoods (labeled in figure 34) of Pacifica are Fairmont West, West Edgemar-Pacific Manor, West Sharp Park, Rockaway Beach, Headlands-San Pedro Beach, and Pedro Point -Shelter Cove. The Fairmont West, West Edgemar-Pacific Manor, and West Sharp Park neighborhoods are all primarily residential and house mostly low and moderate income people. Rockaway Beach has some residences, some commercial development, and some visitor-oriented development. Headlands-San Pedro Beach is undeveloped and scenic. Finally, Pedro Point-Shelter Cove has residences and commercial development for visitors and residents.

The City of Pacifica LUP describes the current composition of each neighborhood and identifies the problem areas for each neighborhood as well as undeveloped parcels of land. The LUP identifies any major problems that a particular parcel in the neighborhood is facing and proposes policies to alleviate the problem. For each undeveloped parcel of land, the LUP gives and justifies a land use designation. The LUP gives specific mandates for each area of each neighborhood rather than general policies. For example, the LUP discusses how a particular shopping center in West Edgemar-Pacific Manor, called the Pacific Manor Shopping Center, should be managed rather than making recommendations that apply to all shopping centers in Pacifica.

⁴³ City of Pacifica Local Coastal Land Use Plan, 1992 page 1

⁴⁴ page 20

⁴⁵ page 20

Geologic stability and bluff erosion are major concerns in the LUP. This is evidenced by the fact that each separate neighborhood's subsection of the LUP gives a description of the geologic stability concerns of that particular neighborhood. There is great overlap in the stability issues faced by the neighborhoods. While the coastal act also instructs LCPs to have policies on other kinds of hazards such as flooding, are not specifically addressed. Further, the conclusion of the LUP is a list of planning principles that should be used for future decisions and there is an extensive discussion of the planning recommendations concerning geologic stability⁴⁶.

The City of Pacifica's LUP displays a commitment to providing affordable housing and increasing commercial activity in the city. Pacifica claims to have the highest concentration of low and very low income housing in the coastal zone. Pacifica also plans to continue to protect low income housing in the coastal zone.⁴⁷ The guiding planning principles explain that low income housing is important to Pacifica and that it should be protected.⁴⁸ Pacifica also intends to increase commercial activity in the area. The planning principles section of the LUP says, "There is a critical need to strengthen commercial activity in the City"⁴⁹. It goes on to say, "The planning objective is to provide as many opportunities for commercial activity as possible".

Public Access

Pacifica's Land Use Plan (LUP) has a component devoted to coastal access. In this section, there is a summary of each of Pacifica's twenty-one public access points. For each access point, there is a 1-2 page description of the access point with a map and important information about the access point. The information listed is the location, ownership, beach use, topography, public safety summary, summary of existing access, existing parking, land use, local roadway access, mass transit access, trail access, and recommendations for the access area.

The twenty-one access points discussed in the access components are places along the coast that people use to access the beach. There is often not a staircase or paved trail to the beach. In some cases, the access points discussed in the access component require that anyone planning on using the access point, climb down bluff faces or steep trails. Thus, some of the access points are developed and prioritized by the City and the more hazardous (on eroding bluffs) access points are not. Out of the twenty-one access points discussed in the access component, fifteen of the access points are either currently developed or are planned to be developed. The remaining six access points will not be obstructed but will also not be improved or signed. People will be encouraged to use and directed to the developed public access points. Throughout the coastal zone, but especially in areas where vertical access cannot be provided for safety reasons, Pacifica will maintain and continue to develop its coastal trail as an alternative to direct beach access.

⁴⁶ page 112-113

⁴⁷ page 119

⁴⁸ page 118-119

⁴⁹ page 117

In addition to providing as many public access points as is safe⁵⁰, Pacifica is also working on more effectively labeling their public access points. Pacifica's LUP states that it will create a "uniform beach access and parking signing program"⁵¹. Pacifica also plans to increase the number of parking spaces in areas that require more parking. Finally, Pacifica is working to improve the roads to its access points when work is necessary and requests that more of its access points be accessible through public transportation.

Finally, in addition to beach access, Pacifica recognizes the importance of preserving access to the coastal views. The LUP says, "the public views of Pacifica are an integral part of the current and future character of the coastline"⁵². The main goal regarding preservation of views is to preserve views of the coast from public roads and public viewing points.⁵³ To achieve this goal there are a collection of policies that ensure that new development cannot block views of the coast.

Environment

The City of Pacifica has two wetland areas. There is Sharp Park lagoon and marsh as well as brackish marsh. Sharp Park lagoon and marsh is a known habitat of the endangered San Francisco garter snake and brackish marsh is believed to also be a habitat to the endangered snake. The City of Pacifica LUP discusses the protection of these areas. The City plans to work with the State Department of Fish and Game to manage and restore the habitat and ensure the survival of the garter snake. They are also taking measures such as requiring the approval of biologists before any changes in the use of habitat area are approved. Additionally, a buffer zone around the habitat area should be established and land uses in and around the buffer zone will be limited as well. Any recreational use of the wetlands will be regulated to minimize any disruption to the habitat area. Further, development near wetlands and creeks is also regulated to minimize disruption to habitat areas as well as damage to the vegetation in creeks and wetlands.

Another environmental consideration in the LUP concerns preserving landforms of significance. There are three prominent landforms in Pacifica. The City of Pacifica believes that, "these promontories, overlain with fragile coastal scrub vegetation, visually represent the nature of the shoreline and the coastal character of Pacifica"⁵⁴. The three landforms are Mori Point, The Headlands, and Point San Pedro. Due to the significance of these landforms to the City, there are a separate set of guidelines for development that would impact these landforms. There are many different policies but the policies are aimed at preserving the scenic quality of the landforms and protecting the vegetation. These goals are achieved by policies that ban development when it

⁵⁰ page 72

⁵¹ page 71

⁵² page 114

⁵³ page 114

⁵⁴ page 113

interferes with the views of the landforms and by policies that prohibit interference with the native vegetation.⁵⁵

In addition to concern about vegetation on prominent landforms, there is also protections for vegetation growing along the coastline. According to the LUP, “except for the rocky outcroppings and developed areas, Pacifica’s coastline is covered with vegetation which has little resistance to human trampling”⁵⁶. There are three general policy prescriptions to prevent the destruction of the delicate coastal vegetation. Trails and accessways that go through coastal vegetation should be well marked and designed to minimize harm to vegetation off the trail, the vegetation on steep slopes is to be left undisturbed, and vehicles of any kind are prohibited from areas covered with coastal vegetation.

Finally, Pacifica has regulations concerning the use of shoreline protection and drainage structures. In general, shoreline structures are not recommended. However, there are some areas in Pacifica where shoreline protection could be necessary for protecting major beach access or highly sensitive habitats⁵⁷. In cases where a protective structure may be necessary, the area will be reviewed by an expert who will determine whether the structure is necessary and determine mitigation measure if there are harmful impacts of the structure. For example, the City should attempt to minimize the alteration of the natural migration of sand on shorelines.⁵⁸

Development

One of Pacifica’s development goals concerns maintaining the character of each of its six coastal neighborhoods. They are concerned with protecting the scale and design of each community. The LUP says, “the primary thrust of the conclusions for protection of community scale is to control intensification and protect the unique qualities and contributions of some of the existing neighborhoods”⁵⁹. Some of the policies that achieve this goal include, a policy that small old homes should be preserved and when replaced they should be of the same density and scale, a policy that commercial development expansions and intensifications should be consistent with the existing developments, and a policy that requires design review of all new development along the shoreline.

Pacifica also hopes to increase their visitor-serving commercial activities⁶⁰. The City’s LUP gives visitor-serving commercial development priority over general commercial development. Priority for waterfront sites also goes to development with visitor-serving uses.

⁵⁵ page 113

⁵⁶ page 114

⁵⁷ page 115

⁵⁸ page 115

⁵⁹ page 115

⁶⁰ page 117

Because Pacifica does not have a steady stream of visitors year round, visitor-serving development should also meet the needs of the locals.⁶¹

Finally, the Pacifica LUP contains a housing element. The housing element describes their goals for low-income housing and for maintaining mixed income neighborhoods. Although the coastal act no longer requires that jurisdictions provide low income housing in the coastal zone, the City of Pacifica has not amended their LUP to reflect this change.

Recreation

Pacifica's LUP does not have a specific section that discusses recreation. However, there are recreational opportunities and priorities woven into other sections of the LUP. For example, when discussing priorities for development, land used for visitor-serving recreation has priority over other kinds of development. Additionally, in the access component, the primary recreational use of each beach at each access point is described (eg running, jogging, biking, surfing, etc). The access component also includes details on the biking and jogging trails available in Pacifica. There are also fishing access points in Sharp Park State Beach. Finally, the LUP designates Rockaway Quarry as a potential place for a marina. If it is determined to be a suitable and safe location, Pacifica will have marina based recreational opportunities as well.

Hazard



Figures 36-42: A visualization the hazards faced by the Pacifica coast.

⁶¹ page 117-118

Pacifica faces challenges of geological stability. There is great shoreline and cliff erosion, there have been landslides, and there have been other geotechnical issues. In particular, places with slopes greater than 35% are the most vulnerable. Thus, before any new development is allowed on bluff tops or on steep land, a registered geologist must prepare a geological report. This report should examine the stability of the parcel, the needed setback from the blufftop to protect the structure and the bluff, and specific recommendations for building the structure in the safest way possible. Development should not be allowed on bluff faces or slopes greater than 35% unless that is the only buildable part of the parcel.⁶² Figure 40 depicts the bluff erosion faced by Pacifica.

HALF MOON BAY

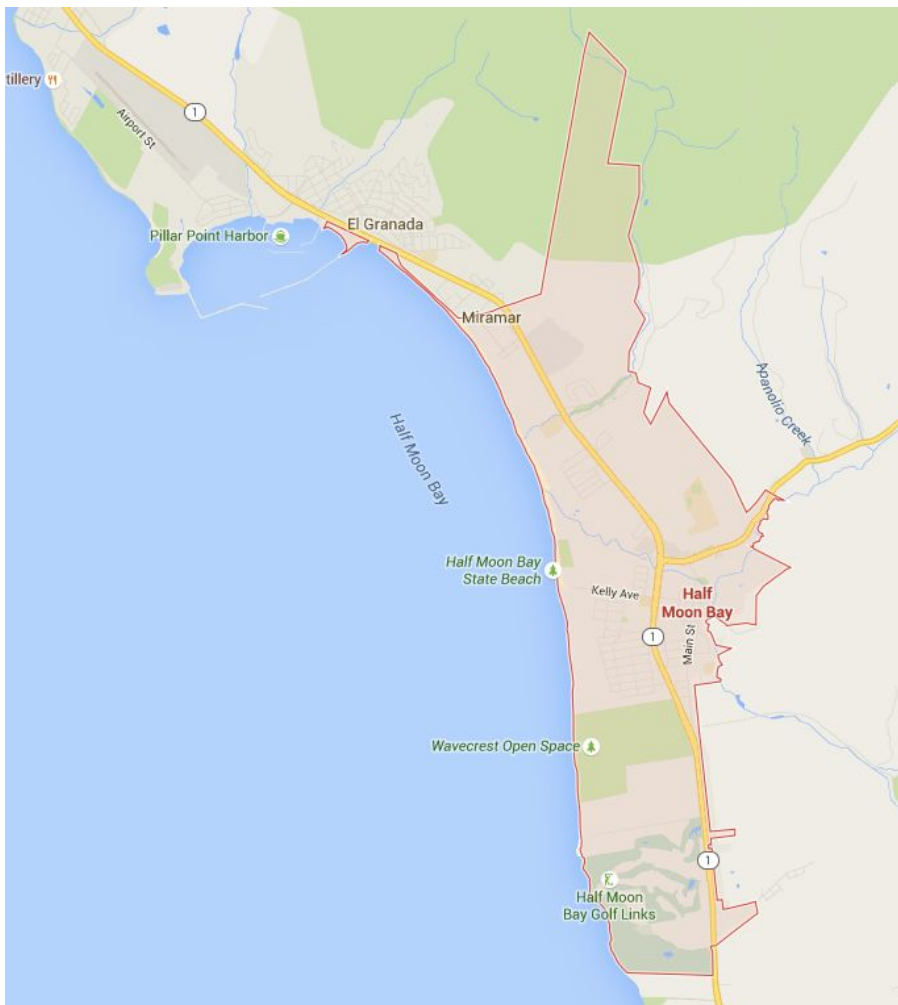


Figure 43: The City of Half Moon Bay. City boundary shown in pink.

Half Moon Bay Overview

The City of Half Moon Bay's Land Use Plan (LUP) was last reprinted and certified by the California Coastal Commission (CCC) in 1993. We obtained our copy of the document from the CCC. Although the City of Half Moon Bay is located within San Mateo County, the City has their own LCP which is separate from the LCP of the county. The only overlap is that the Half Moon Bay LCP uses the San Mateo County LCP's sensitive habitat component. Since the entirety of Half Moon Bay is within the coastal zone, the City's LCP also doubles as its general plan. This means in addition to meeting all of the criteria for an LCP it also meets the criteria for a general plan.

The LUP establishes the "three issues of primary significance"⁶³. These are what Half Moon Bay considers to be their three most important planning issues. First, they need to designate enough sites to meet the city's existed unmet and projected housing needs. Second, they plan to concentrate development in the City where development is feasible and concentrate on other Coastal Act goals such as agriculture and open space in the unincorporated areas of San Mateo County coastside. Third, they need to limit future population growth to 3% per year.⁶⁴

In addition to its stated issues of significance, the LUP also lists twelve basic findings. The basic findings are the City's conclusions about what the City needs and what is feasible to accomplish. These findings provide the basis for the policies prescribed later in the LCP. Some of the findings include that "Half Moon Bay is an urban area suitable for residential, commercial, and industrial development"⁶⁵, "there is no agricultural production in the City other than floriculture/horticulture that has any economic significance"⁶⁶, "there presently exists an unmet need for additional land for visitor-serving recreational facilities"⁶⁷, and "the use of land within the City for the food production of food crops is not feasible". Other of the basic findings concern needs for housing, needs for a golf course and equestrian facilities, and establishing a variety of things for which the city does not have current or expected demand⁶⁸.

The basic findings establish what is and is not feasible for the City of Half Moon Bay. For example, based on these findings, it is not feasible for Half Moon Bay to be a center for agriculture. However, the coastal act requires the provision of lands for agricultural uses. To deal with this issue, the LUP situates itself in the context of the whole county of San Mateo. Half Moon Bay may have its own LCP, but it's LUP suggests that not all kinds of land use are feasible in this small rural area and instead they can balance out the rural and agricultural unincorporated

⁶³ page 24

⁶⁴ page 24

⁶⁵ page 25

⁶⁶ page 25

⁶⁷ page 26

⁶⁸ page 25-26

areas of San Mateo County. They suggest that the region as a whole has to be in compliance with the coastal act rather than every single city.

After its introduction, explanation of its issues of significance and basic findings, the LUP presents its policies. The LUP policies are divided by topic. The topics included are coastal access and recreation, environmentally sensitive habitat areas and water resources, hazards, housing, archaeological and paleontological resources, visual resources, agriculture, development, and public works. Each section for each topic begins with a list of the applicable coastal act policies, describes the current findings on the topic, and then presents specific policies. The LUP is 248 pages which makes it one of the larger and more detail oriented LUPs when compared with others.

Coastal Access

The coastal access section of the LUP summarizes that people are able to reach the beach and use the shoreline for a variety of recreational purposes. However, there are a number of issues for access which are identified in the LUP. The access roads from Highway to the shore are unimproved and poorly signed. Traffic is also bad on these roads during peak times. As a solution, more signs are needed, more traffic controls are needed, and many of the roads need improvements. Outside of Half Moon Bay State beach (shown in figure 43) there are not developed access points. Instead, people create their own paths which exacerbates dune and bluff erosion. As such, more vertical access is needed. There is also a greater need for parking which can be met through easements and the conversion of public lands to parking facilities. Finally, the City of Half Moon Bay realizes that it cannot afford to create and maintain new access points and therefore will require offers of dedication from private developments near the coast.

Environment

The sensitive habitat component in the Half Moon Bay LUP draws heavily on the sensitive habitat component in the San Mateo County LUP. There is an extensive catalog and description of every animal and plant found in San Mateo County. The LUP designates certain lands as sensitive habitats and has special policies for their protection such as policies that ban or severely limit development on and adjacent to sensitive habitats. The LUP devotes separate space to discussing five different kinds of sensitive habitats. They are concerned with riparian corridors, sand dunes, sea cliffs, rare and endangered species, and unique species. For each of these five categories they have separate provisions and policies. Additionally, the LUP recognizes that public funding for environmental restoration may be limited. As such, it recommends the following criteria for the allocation of funds, “(1) biological and scientific significance of the habitat, (2) degree of endangerment from development or other activities, and (3) accessibility for educational and scientific uses and vulnerability to overuse”⁶⁹.

⁶⁹ page 74

Development

The development section of the LUP focuses on balancing different kinds of development within the City. The City recognizes that the coastal act prioritizes a number of different land uses but also recognizes that Half Moon Bay is the only urban hub in the coastal zone. As such, if more of its land is designated at a higher density for commercial and residential activity the San Mateo coastside as a whole would still be in compliance with the coastal act. In particular, a large section of the LUP is spent justifying that agriculture is not a feasible or viable use of land in the City but that the City's urban nature can be balanced with the unincorporated coastside rural nature. The development section also describes all of the current projects that are underway or approved as well as possible alternatives to those projects. It includes policies for clustering development near other development as well as policies for limiting the growth of the city. A big focus of the section is also placed on regulating the densities allowed in each area of the city.

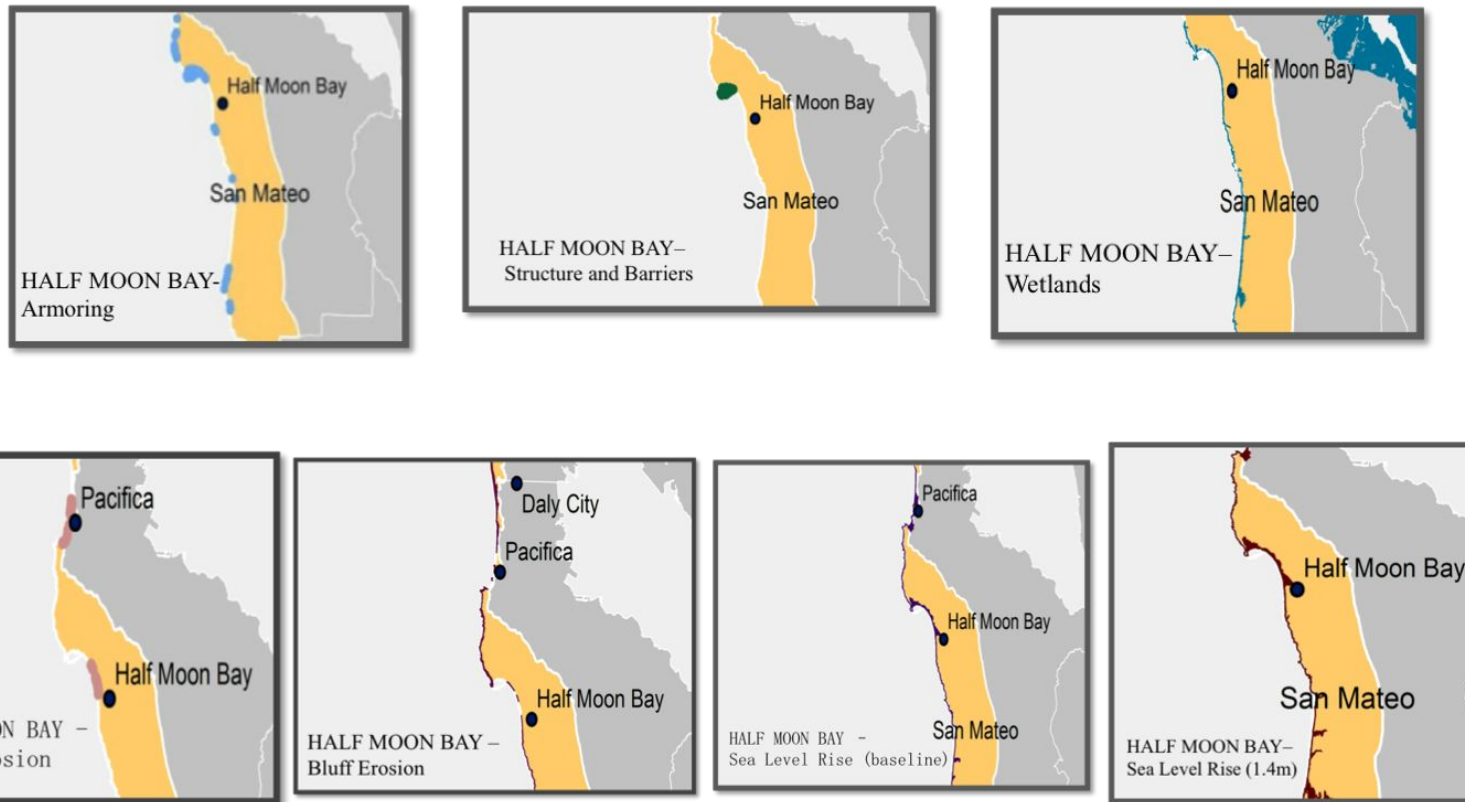
In addition to general development goals, there are also regulations concerning development and archaeological and paleontological resources. There are policies that require the city to affirmatively seek funds to conduct a survey of potential archeological sites. An archaeological survey is required for any development on one or more acres of land as well as before an excavation based project.

The last development project addressed are public works projects. Public works include water supply, sewage facilities, and transportation. All three of these services are discussed in depth and each has its own regulating policies. The capacity of these developments should be limited to serve the needs of development described in the LUP but not to exceed those needs. Each utility is required to monitor its own annual usage and report to the government so that the City can make an informed decision about future development.

Recreation

Access to the coast provides one of the many recreational outlets in Half Moon Bay. The studies that were consulted when the LUP was written find that there are already adequate visitor-serving recreational facilities in Half Moon Bay. There is a need however for additional facilities for walk-in and recreational vehicle campsites. There is also an increased need for equestrian facilities and golf courses. For recreation for residents there is a program to create a new park and a community center/recreation facility. Land is also dedicated to meeting the future recreational needs of residents. There are policies in the access and recreation section that describe the implementation of each of these goals..

Hazard



Figures 44-50: A visualization of the hazards faced by the City of Half Moon Bay coast.

The City of Half Moon Bay recognizes flooding (shown in figures 49 and 50), cliff retreat (shown in figure 48), landslides and tsunami as potential hazards in the region. It prescribes a variety of policies to mitigate and minimize any dangers. Some of these policies try to control seacliff erosions and include policies that seawall and cliff retaining structures are only allowed to protect existing structures (see figures 44 and 45 for a depiction of coastal armoring and coastal structures and barriers). Any construction that alters the natural shoreline is only allowed when it is necessary to protect existing structures, required to protect coastal-dependent uses, or when it protects beaches from erosion. There are also policies aimed at protection of the bluffs such as policies that require the planting of coastal vegetation to stabilize the bluffs and policies that prohibit development and use of the bluffs except in designated access areas. There are a further set of policies that engage geotechnical hazard issues and flooding.

SAN MATEO COUNTY

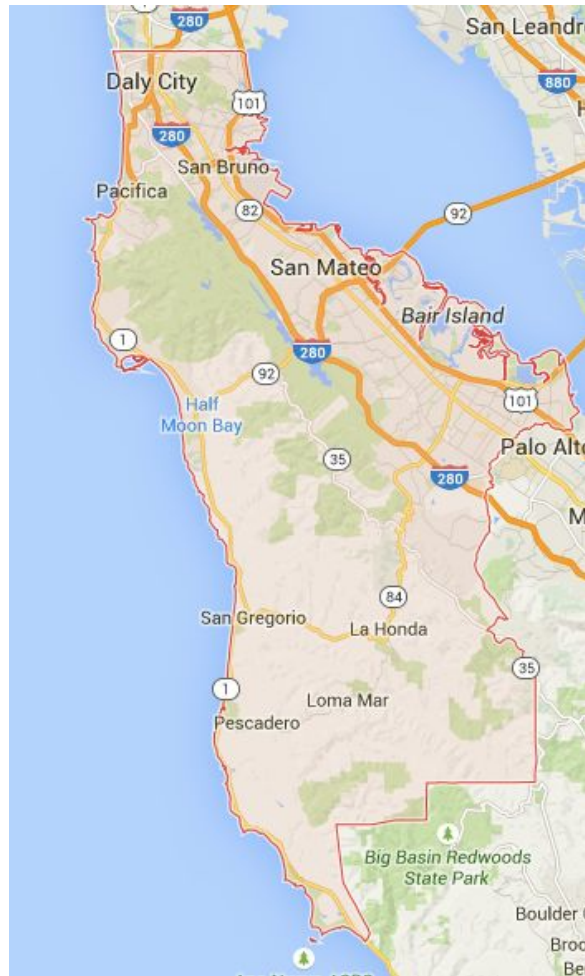


Figure 50: The City of San Mateo. City boundary shown in pink.

San Mateo County Overview

The San Mateo County LCP was first approved by the California Coastal Commission (CCC) in 1980. It has been amended since that time and all of the amendments through August 2012 are incorporated into the copy of the LCP that we received from the CCC. This copy of the LCP was reprinted in 2013. The San Mateo County Land Use Plan (LUP) has a straightforward organization. It begins with a section that summarizes the amendment history in tables. After that, there are eleven sections and each section lists the policies for a topic. The eleven topics discussed are locating and planning new development, public works, housing, energy, agriculture, aquaculture, sensitive habitats, visual resources, hazards, shoreline access, recreation/visitor serving facilities, and commercial fishing/recreational boating. There is no introduction about the coastal act or statement of the priorities of the County. There is also not a

description in each topic specific section about goals in that topic. Each section is a list of policies.

Coastal Access

There are a total of 50 policies written in the 22 pages of the shoreline access component. There are clusters of policies that deal with similar issues however. There is a cluster of policies about setting up coastal access in different locations. For example, there are different policies for establishing coastal access in agricultural areas, sensitive habitat areas, residential areas, commercial and industrial areas, as well as military areas. Public safety is also a concern for developing access points and San Mateo will only develop access points in places that have been thoroughly vetted for safety issues. If a location is not deemed safe for public access, all trails will be closed and development will not be allowed in that area. In these cases, bluff top access should be provided as a substitute.

Another cluster of policies is about who is responsible for expanding and improving trails, creating and maintaining access points, and ensuring adequate parking is provided. The LUP indicates that the County will require commercial and industrial developers who develop near the shoreline to take responsibility for these access issues as a condition for approving the development project. There are also clusters of policies about specific topics. For example, there are specific guidelines about the California Coastal Trail and about signing and publicizing access. This summary is not comprehensive of all 50 policies but captures the themes and main clusters of policies.

This LUP also has a section dedicated to the access and maintenance of visual resources. There are 34 policies in the 11 page section on visual resources. These policies are designed to protect the visual beauty of the coastal zone from development. There are policies to protect natural land forms such as beaches, sand dunes, cliffs and bluffs, waterways, and skylines. There are also policies to protect vegetative features. Additionally, there separate guidelines for development in rural and urban community areas so that rural and urban areas retain their distinct visual characters.

Environment

There are a total of 54 policies in the 14 page sensitive habitats section of the LUP. A general policy that relates to many kinds of sensitive habitats is that land use and development on sensitive habitat areas is prohibited when it has an adverse impact on the habitat area. Lands adjacent to sensitive habitat areas must be sited and designed to prevent adverse impacts to the habitat area. Also as a general guideline, the County provides a list of criteria for allocating its limited funds. The criteria are, “(1) biological and scientific significance of the habitat, (2)

degree of endangerment from development or other activities, and (3) accessibility for educational and scientific uses and vulnerability to overuse”⁷⁰.

After these general policies there are seven clusters of policies. The policy clusters are riparian corridors, wetlands, marine habitats, sand dunes, sea cliffs, rare/endangered species, and unique species. Each subsection defines its topic and provides policies for managing that area. For some of these subsections, there is also a list of policies for a specific location. For example, in the wetlands section there are separate policies for the management of Pillar Point Marsh and Pescadero Marsh.

Development

There are 36 policies in the 15 page locating and planning new development section. This section outlines policies for a variety of different kinds of new development. There are separate policies for development in rural areas, urban areas, growth management, monitoring the watershed, protecting and archaeological/paleontological resources. Many of the policies are concerned with mitigating the impact that new development may have on water quality, sensitive habitats, land structure and other considerations.

There are also separate sections that discuss specific types of development. There are 10 pages and 30 policies that detail how the County should protect and maintain its affordable housing in the coastal zone. There is also 25 pages and 59 policies detailing the development requirements and conditions of public works projects such as water supply, sewage, and transit. There are 9 pages and 42 policies about the development and cultivation of energy sources such as oil and gas wells, pipelines and transmission lines, power plants, and alternative energy. Finally, there are separate sections for agriculture and aquaculture that provide the standards for both of those kinds of development. There are 33 policies in the 13 page section on agriculture and 10 policies in the two page section on aquaculture.

Recreation

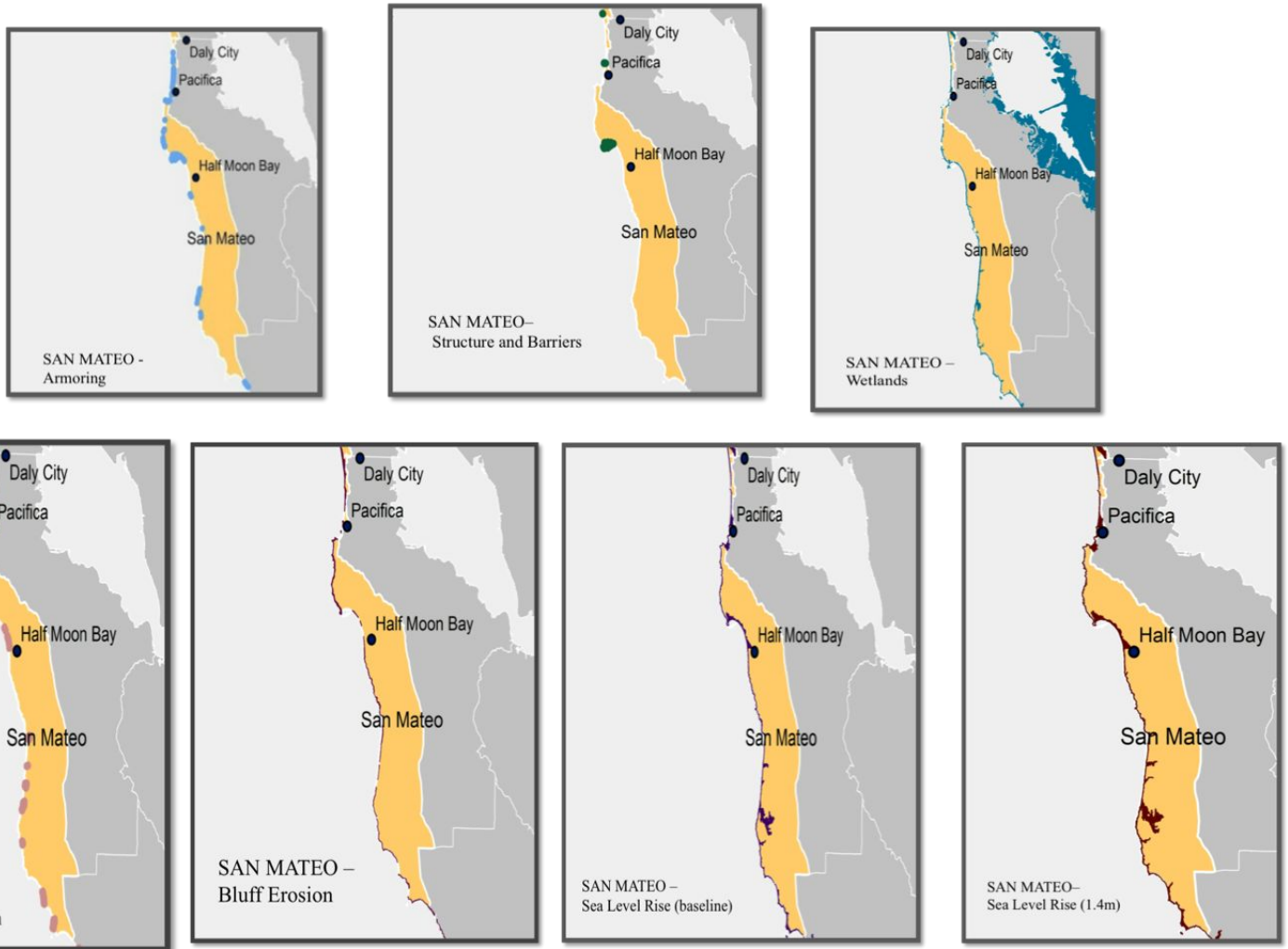
There are a variety of types of recreation in San Mateo County. The LUP has a Recreation/Visitor-Serving component with 33 policies on 17 pages. Some of the main policies include that visitor-serving recreation has priority over all other types of development except for coastal-dependent industry and agriculture. San Mateo County also would like to concentrate their visitor-serving recreational facilities in the midcoast. There are provisions for trails throughout the coastal zone, adequate signs, and adequate parking. There are also policies that obligate the County to provide some low or no coast recreational facilities and encourage the development of low coast hotels.

There is also a specific section of the LUP devoted to Commercial Fishing and Recreational Boating. This section has 5 policies and is two pages long. Those 5 policies reserve

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the eastern Pillar Point harbor as a priority location for recreational boating and commercial fishing. Within one-half mile of the Pillar Point Harbor area development related to recreational boating and commercial fishing should be encouraged above all other kinds of development.

Hazard



Figures 52-58: A visualization of the hazards faced by the County of San Mateo coast.

There are 18 policies in the 5 page section devoted to hazards. The County of San Mateo is concerned and therefore has policies dealing with multiple kinds of hazards. They have regulations for development on bluff tops (bluff erosion shown in figure 56), in the floodplains (projected flood risks are shown in figures 57 and 58), and along the shoreline. Further, they require that a geologist review all building and grading permits in hazardous areas to evaluate all

potential issues. An interesting component of their policies is that they are all guidelines/conditions for development in hazardous areas. There is no discussion of mitigating hazards or preparing for hazards independent of building in those areas.

Below is a matrix that summarizes our comparisons between the seven LCPs discussed in this report.

SUMMARY TABLE

| Criteria | Evaluation Standards (no mention or not applicable also options) | Pacifica | Daly City | San Mateo | Half Moon Bay | Sonoma | San Francisco | Marin |
|-----------------------------------------------------|---------------------------------------------------------------------|----------------|------------|----------------|----------------|-----------------|---------------|------------|
| Public Access | | | | | | | | |
| Affordable Housing | yes/no | yes | yes | yes | no | yes | yes | yes |
| Vertical Access | frequent, infrequent, none | frequent | infrequent | frequent | infrequent | yes | no mention | yes |
| Lateral Access | frequent, infrequent, none | no mention | infrequent | frequent | infrequent | yes | no mention | yes |
| Public Transit to Shore | yes, some, none | some | some | yes | no | some | yes | some |
| Bike Paths and/or Trails | yes/no | yes | yes | yes | yes | yes | yes | yes |
| Pedestrian Paths and/or Trails | yes/no | yes | yes | yes | yes | yes | yes | yes |
| Hiking Paths and/or Trails | yes/no | no mention | yes | yes | yes | yes | yes | yes |
| Parking | sufficient, some, none | sufficient | some | sufficient | sufficient | some | yes | yes |
| City builds accessways | yes/no | yes | no mention | no | no | no mention | no mention | No mention |
| Developers build accessways | yes/no | yes | no mention | yes | yes | no mention | no mention | No mention |
| Accessways responsibility not specified | yes/no | no | no mention | no | no | yes | yes | yes |
| Signs Marking Access | yes/no | yes | yes | yes | yes | yes | no mention | yes |
| Preserves views | yes/no | yes | yes | yes | yes | yes | yes | yes |
| | | | | | | | | |
| Hazard | | | | | | | | |
| Issues of concern | yes/no | | | | | | | |
| Bluff erosion | | yes | yes | yes | yes | yes | yes | yes |
| Dune erosion | | no | no | no mention | no | yes | yes | yes |
| Earthquake | | no | no | yes | no | yes | no mention | yes |
| Tsunami | | no | no | no mention | yes | yes | no mention | yes |
| Flood | | no | no | yes | yes | yes | no mention | yes |
| Landslides | | yes | yes | no mention | yes | yes | no mention | yes |
| Policies | | | | | | | | |
| Manages hazards for development | | yes | yes | yes | yes | yes | yes | yes |
| Proactive measure to manage hazard | | no | yes | no | yes | yes | yes | yes |
| Requires geologic/hazard report before development | | yes | no mention | yes | yes | no | no mention | no mention |
| Require hazard analysis on adjacent lands | | no | no mention | no | no | yes | no mention | no mention |
| | | | | | | | | |
| Environment | | | | | | | | |
| Kinds of Habitat | yes/no | | | | | | | |
| Riparian Corridors | | yes | no mention | yes | yes | yes | no | yes |
| Sand Dunes | | no | no mention | yes | yes | yes | yes | yes |
| Sea Cliffs | | yes | yes | yes | yes | yes | no | no |
| Wetlands | | yes | no mention | yes | no | yes | no | yes |
| Coastal Vegetation | | yes | yes | yes | yes | yes | no | yes |
| Rare and Endangered Species | | no | no mention | yes | yes | yes | no | yes |
| Unique Species | | no | no mention | yes | yes | no | no | yes |
| | | | | | | | | |
| Policies | | | | | | | | |
| Keeps catalog of all plants and animals | yes/no | no | yes | yes | yes | no | no mention | No mention |
| Has designation for sensitive habitat area (SHA) | yes/no | yes | yes | yes | yes | yes | no mention | yes |
| Development in sensitive habitat area | unrestricted, restricted, none | restricted | restricted | restricted | restricted | restricted/none | no mention | restricted |
| Biologic report required for development in SHA | yes/no | yes | no mention | yes | yes | yes | no mention | No mention |
| Shoreline protective devices | unrestricted, restricted, none | restricted | no mention | restricted | restricted | restricted | no mention | restricted |
| Cliff/beach access through undeveloped paths | prohibited, not encouraged, indifferent | not encouraged | prohibited | not encouraged | not encouraged | N/A | no mention | No mention |
| Development adjacent to SHA mitigation measures | yes/no | yes | no mention | yes | yes | yes | no mention | Restricted |
| Policies that mitigate environmental harms | yes/no | yes | yes | yes | yes | yes | yes | yes |
| Policies that aim at restoring the environment | yes/no | no | yes | no | no | yes | yes | yes |
| | | | | | | | | |
| Recreation | yes/no | | | | | | | |
| Has coastal-dependent recreation | yes/no | yes | yes | yes | yes | some | yes | yes |
| Has visitor-serving recreation | yes/no | yes | yes | yes | yes | yes | yes | yes |
| Has recreation for local residents | yes/no | yes | yes | yes | yes | yes | yes | yes |
| Has parks | yes/no | yes | yes | yes | yes | yes | yes | yes |
| Has equestrian facilities | yes/no | no | yes | yes | yes | yes | yes | yes |
| Has golf course | yes/no | no | no | yes | yes | yes | yes | no |
| Has recreational fishing opportunities | yes/no | no | no | yes | no | yes | no | yes |
| Has recreational boating opportunities | yes/no | no | no | yes | no | yes | yes | yes |
| Low cost facilities are encouraged | yes/no | yes | no mention | yes | no mention | yes | somewhat | yes |
| | | | | | | | | |
| Development | | | | | | | | |
| Protects of archeological/paleontological artifacts | yes/no | no | yes | yes | yes | yes | no | yes |
| Has density regulations for development | yes/no | yes | no mention | yes | yes | yes | yes | yes |
| Has public works regulations | yes/no | no | no | yes | yes | yes | no | yes |
| Encourages clustered development | yes/no | yes | no mention | yes | yes | yes | N/A | yes |
| Encourages consistency with existing development | yes/no | yes | no mention | yes | yes | yes | yes | no mention |
| Standards for development of energy plants | yes/no | no | yes | yes | no | No | no mention | no mention |
| Provisions for aquacultural development | yes/no | no | no | yes | no | yes | no | yes |
| Provisions for agricultural development | yes/no | no | no mention | yes | yes | yes | no | yes |
| Recreational boating regulations | yes/no | no | no mention | yes | no | yes | no mention | yes |
| Coastal Zone Design Guidelines | yes/no | yes | no mention | yes | yes | yes | somewhat | yes |

CONCLUSION

The California Coast is remarkable for its almost ubiquitous public access and uninterrupted views. The commonalities amongst the LCP's of the North Central Coast are numerous as a result of all seven LCP's adhering to the stipulations of the Coastal Act. The Coastal Act itself appears monolithic. The Coastal Commission oversees all activities within the Coastal Zone and attempts to impose a uniform policy in the process. However in reality the LCP jurisdictions of the North Central Coast look markedly different - even within counties variation can be observed amongst the LCP's. Variation in LCP's occur on two levels: first, on the part of the document's organization and second, on the part of the document's actual manifestation in the appearance of the coast.

Over the course of our research both distinctions have become increasingly apparent. The variation in length of LCP's from 20 pages to over a 200 pages shows a difference in the level of detail and perceived importance of the LCP as a planning document. The internal organization of LCP's is also indicative of this with some jurisdictions dividing up their LCP to give it more specificity. Differences in the internal organization of the LCP are indicative of the time, effort, and financial resources that each area has invested in the LCP. The organization of the LCPs also reflects the components that each jurisdiction saw as integral to the character of the area. For example, Marin County devoted substantial time and a section of the LCP to agriculture while there is no specific section devoted to agriculture in the Daly City LCP. These differences are somewhat subtle because overall most LCPs mention and engage with every issue that they are required by the coastal act to discuss. It is then through the organization of the LCPs and the degree of detail of their policies that we can start to see differences between the LCPs.

These differences often are then translated into the visceral nature of the coast, with each area retaining its own character despite the overarching rules of the Coastal Commission. Thus, despite the possibility of the Coastal Act whitewashing local areas and their unique characteristics, we instead found that the Coastal Act is in fact a malleable document that more often than not, works with local governments to create a document that protects the interests of both local areas and the coast. Some examples of this include the fact that Pacifica's LCP and basis for compliance with the coastal act is organized around the idea that each of the neighborhoods of Pacifica has its own unique characteristics. While Pacifica as a whole complies with the coastal act, the City's LCP explains that each neighborhood of the City is allowed differing expressions of the coastal act and as such can adopt some but not all of the coastal act priorities.

Another prime example of this phenomena is the City of Half Moon Bay. The coastal act requires a prioritization of lands for agricultural use. However, Half Moon Bay sees itself as an urban rather than rural city and believes it can only sustain a minimal amount of agriculture. The LUP provides arguments for why other areas of the coast would be more desirable for agriculture than Half Moon Bay. On this basis, it concludes that allowing Half Moon Bay to remain mostly urban and have minimal agriculture would be important for the California coast as a whole to comply with the Coastal Act. Both the Pacifica and Half Moon Bay LCPs were certified and accepted by the CCC indicating that they accepted this logic.

One area where there was a surprising amount of difference was the way each LCP deals with hazards. An examination of maps of the North Central Coast overlaid with maps that highlight hazard areas indicates that the areas in the North Central Coast shares many similar geological hazards. All seven LCP jurisdictions are all almost equally threatened by bluff erosion and rising sea levels, and, with the exception of Daly City face dune erosion. Despite this, the LCP's are inconsistent with their mention of the hazards they face. Even though San Francisco's coast has substantial bluff erosion their LCP does not mention this threat, nor outline ways to deal with it. Dune erosion is omitted to an even greater degree with the threat absent from the LCP's of Daly City, San Mateo, Pacifica and Half Moon Bay. In particular Pacifica omission is worrisome given that a large proportion of its coast is subject to dune erosion.

The lack of consistent hazard coverage is further evidenced by the maps depicting coastal armoring, and structures and barriers. The Coast of Pacifica and San Francisco are almost entirely armored, this is compared to Sonoma, Marin and San Mateo where the coast is armored only in certain places, or to Daly City which has no armoring. Even less of the coast has any protective structures or barriers. Only Sonoma, and San Mateo County have even a fair amount of structures and barriers. San Francisco, Marin, and Pacifica have only a minimal amount of structures and barriers, with Daly City and Half Moon Bay having none at all. The entire North Central Coast is at significant flood risk, however Pacifica, Daly City and San Francisco have no mention of flooding of flood preventative measures in their LCP's.

Despite these shared problems it is clear that the LCP's of the North Central Coast only sporadically mention the problems, and even more rarely construct physical barriers to protect the coast. Further, some LCP areas mention hazards and don't take preventative measures, whilst others have some preventative measures but do not mention the hazards within their LCP's. This lack of consistency across the board can have significant policy consequences given the seriousness of the threats dune erosion, bluff erosion and flooding pose to the North Central Coast. While flexibility allowed by coastal act can be seen as a positive since it enables each jurisdiction to retain its own character, flexibility on the issue of hazard management has led to inconsistent and insufficient hazard protection.