PlanPrinceton

Community Plan, Local Coastal Program,
and Zoning Regulations Update

Existing Conditions Report

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1 Introduction

1.1 Project Purpose and Report Contents

San Mateo County is preparing an update of the General Plan, Zoning Regulations, and Local Coastal Program for the greater Princeton area. The planning process, known as Plan Princeton, will take place over several phases involving research, community collaboration, the development of policy alternatives, and the drafting of updated land use policies and ordinances. Objectives of the project include establishing a community vision and crafting the appropriate implementation tools to achieve that vision.

Plan Princeton was undertaken for a number of reasons. The County's recent Midcoast Local Coastal Program Update project highlighted the need to re-evaluate land use policy for the Princeton area to address issues specific to its community and geographic setting. Additionally, recent development project appeals have also underscored the need to provide clear direction for property owners and residents, especially related to airport compatibility, site coverage limits, height and setback allowances, and shoreline protection. Other considerations relevant to the Princeton community include ensuring that development enhances community character and identity, supporting the working waterfront, providing benefits and amenities for residents, enhancing coastal access, and protecting coastal resources.

This Existing Conditions Report summarizes the background information, long-term trends, and opportunities and constraints associated with the Study Area based on existing conditions and available data. It also identifies key factors that will affect decision-making during the planning process. As the project progresses, the assessments presented in this document will serve to facilitate community input on planning issues, inform the preparation of land use alternatives, and guide the amendment of the County's land use instruments for this area. It relies heavily on maps and figures to illustrate the physical and regulatory conditions that affect local development, and covers the following subject areas:

- Land Use and Urban Design
- Fishing, Boating, and Visitor Needs
- Environmental Resources
- Natural Hazards and Shoreline Erosion
- Coastal Access, Parking, and Circulation
- Infrastructure, Public Services and Facilities

1.2 Regional Setting

Princeton is an unincorporated community located in mid-coastal San Mateo County. It is bordered by the city of Half Moon Bay to the south, the communities of Moss Beach and El Granada to the north and southeast, and rural County land to the east. Princeton is located west of Highway 1. It is connected to the region by California State Route 1, or Highway 1, which links the area to the city of San Francisco roughly 25 miles north. Half Moon Bay Airport lies adjacent to the community, and offers another regional connection through its general aviation facilities. To the east are the Santa Cruz Mountains, containing open space that includes the Rancho Corral de Tierra portion of the Golden Gate National Recreation Area. To the west are the northern terminus of Half Moon Bay and the shores of the Pacific Ocean. The regional setting is depicted in Figure 1-1.

The Princeton Planning Update Study Area (Study Area) is located in a portion of San Mateo County known as the Midcoast, which also encompasses the unincorporated communities of Montara, Moss Beach, and El Granada. The Study Area falls entirely within San Mateo County's segment of the California Coastal Zone.

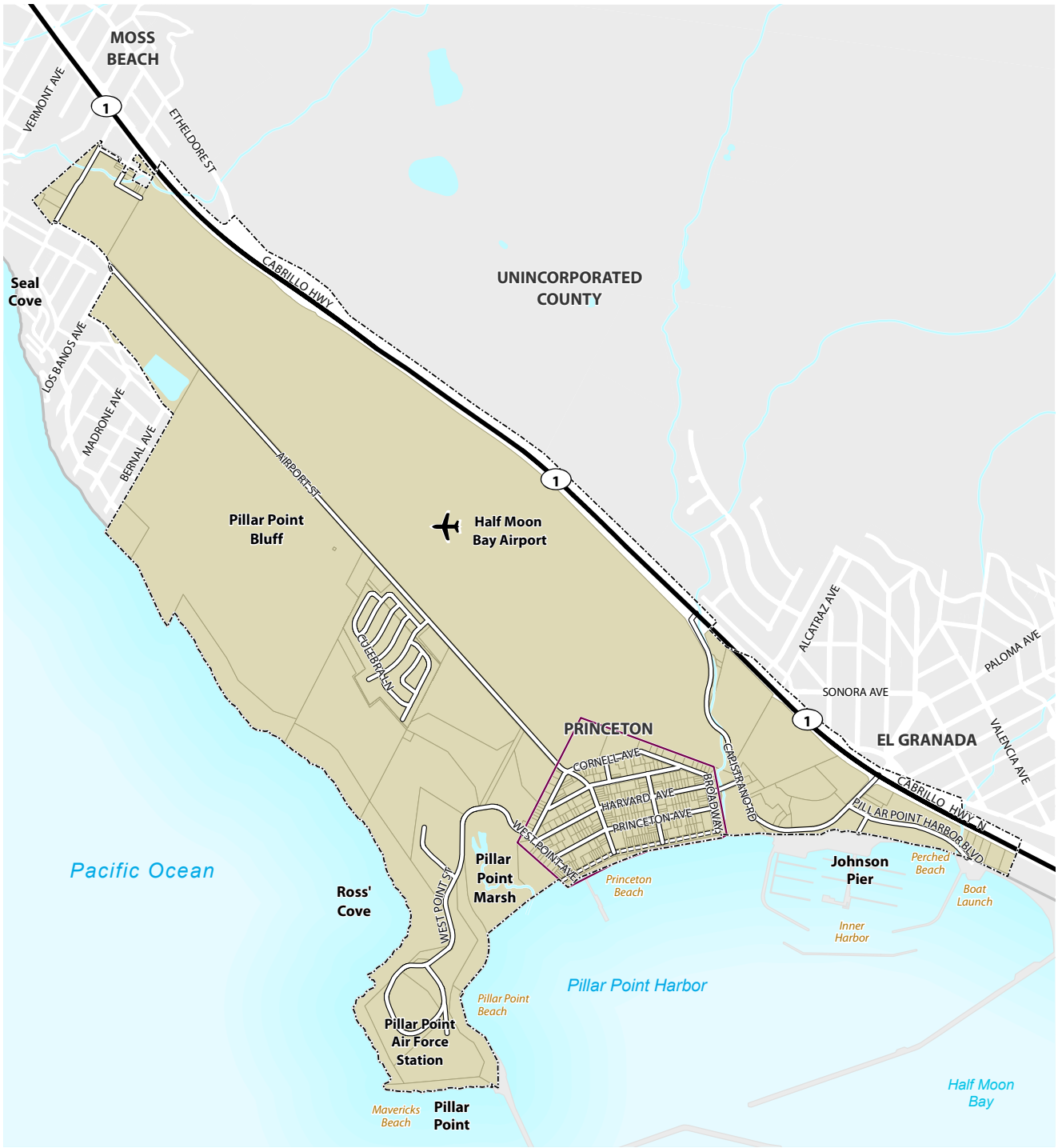
1.3 Study Area

The Study Area covers 849 acres between Highway 1 and the Pacific coast. Its northwestern boundary borders the developed communities of Moss Beach and Seal Cove, and includes the northern portions of the Half Moon Bay Airport property and several Moss Beach residences covered either by the Airport Overlay (AO) zoning district or the Noise Insulation and Avigation Easement (NIAE) area. Its southeastern boundary borders the community of El Granada and Half Moon Bay city limits. The Study Area is depicted in Figure 1-2.

Within the Study Area is the 58-acre commercial and industrial waterfront community of Princeton, one of the few working waterfronts remaining on California's Central Coast that support fishing, boating, and marine-related industries. The Study Area contains a number of other Midcoast landmarks,

Figure 1-1: Regional Setting

Figure 1-2: Study Area



including the Half Moon Bay Airport, the Pillar Point Air Force Station, the Pillar Ridge Manufactured Home Community, Pillar Point Bluff and its trails, Pillar Point Marsh, portions of the Fitzgerald Marine Reserve, and the waterfront commercial area along Capistrano Road. The Study Area does not include Pillar Point Harbor or Johnson Pier, which fall under the jurisdiction of the San Mateo County Harbor District. As of the 2010 Census, the Study Area had a population of 959 residents, most of whom are located in the Pillar Ridge community.

Subdivision and settlement in the Study Area began in the early 1900s as the Ocean Shore Railroad opened a line between San Francisco and Half Moon Bay. Original plans for Princeton envisioned a residential resort town that never developed. The fishing industry emerged in the area in the 1930s and 1940s, and development of Princeton's fishing infrastructure followed. Upon construction of a public pier and breakwater in the 1960s, local development began to include more marine-related and commercial recreation uses.[1] Other development milestones include the appearance of Half Moon Bay Airport, originally constructed for military use in 1942 and acquired by the County in 1947,[2] and the opening of the Pillar Ridge Manufactured Home Park—one of the Planning Area's major residential locations—in 1963.[3] Today, the community still shows much of this historical legacy, with subdivided coastside parcels; a mix of industrial, commercial, and residential uses along the waterfront; and an operating general aviation airport.

In the 1980s, the Princeton community and other Midcoast communities participated in local area studies and the development of a community vision and land use plan. Since then, major planning efforts in the area have included the development of regulations allowing caretaker's quarters in the Waterfront (W) zoning district, ongoing trails and recreation needs assessments, proposals for an extension of the California Coastal Trail, the Highway 1 Safety and Mobility Study, a shoreline study and improvement project, and Half Moon Bay Airport compatibility planning.

1 Department of Environmental Management, Planning and Development Division, San Mateo County, California. Princeton Area Study: Revised Background Report. August, 1986.

2 General Aviation Airports, Department of Public Works, San Mateo County, California. Online: http://www.co.sanmateo.ca.us/portal/site/publicworks/menuitem.a4bfacf14e50a00d82439054d17332a0/?vgnextoid=9a6c4b3a4b71f110VgnVCM1000001d37230aRCRD. Accessed October, 2013.

3 Ketcham, Lisa and Deb Wong. History of the Pillar Ridge Manufactured Home Community. Online: http://www.pillarridge.com/history.html. Accessed October, 2013.

1.4 Key Findings

Land Use and Urban Design

The Study Area is located within the Coastal Zone and must maintain California Coastal Act consistency by prioritizing coastal-dependent and coastal-related uses, maintain and enhance coastal access and recreation opportunities, protect coastal resources, and preserve visual resources and community character.

Three-quarters of the Study Area is in public ownership. The County's Half Moon Bay Airport represents the largest portion of this, but most of the remaining public land is preserved open space. Natural resource preservation and recreation are both supported at the Study Area's three regional parks: James V. Fitzgerald Marine Reserve, Pillar Point Marsh, and Pillar Point Bluff.

The Study Area prioritizes coastal-dependent and coastal-related uses, and in the attempt to create and maintain a "working waterfront" environment, has narrowly defined allowed uses for marine-related trades and services. However, because many of the existing land uses in the shoreline area are storage-based or vacant, the effectiveness of these current limitations in promoting a diversity of coastal-dependent and marine-related uses may require review.

The Half Moon Bay Airport presents compliance challenges for new development, mainly in the form of ground-level safety standards that limit allowable land use and intensity. The airport safety zones identified in the draft Airport Land Use Compatibility Plan (ALUCP) update (2012) allow for slightly higher occupancies than the current Airport Overlay. However, the safety zones identified in the draft ALUCP cover a much larger portion of the Study Area, largely prohibiting new residential development and restricting occupancy levels.

The presence of industrial uses can pose challenges for the area's environmental quality, due to the large footprints associated with industrial structures and any odors or noises associated with normal industrial activity. The area's development standards address these issues through setback requirements, height limitations, and site coverage limitations. However, one source of incompatibility in this respect is the M-1 (Light Industrial) district, currently located along Airport Street, which allows buildings up to 75 feet high.

Aside from the 75-foot height limit allowed in the M-1 district, current development standards generally support small-scale development one to three stories in height.. Current standards also require development to be set back between 0 and 20 feet from side property lines (Waterfront District, Planned Agricultural District, respectively) and between 0 and 50 feet from the front and rear property lines (Limited Highway Frontage District, Planned Agricultural District, respectively). These height and setback standards should be evaluated to address transition areas between development type and intensity, such as residential and industrial uses, and to preserve views to and along the coast.

The Princeton area has a history of code compliance, nuisance, and public health and safety issues. Recent efforts to address these issues have produced tangible results. Public health and safety issues are addressed proactively and the County works toward immediate resolution. Code violations are addressed on a case-by-case basis as they are reported or as new development is proposed.

There are currently nine active development projects on a combined 19 acres in the Study Area. If they were all to be approved and completed, these projects would bring 275,000 square feet of industrial and commercial space and 60 housing units. However, only three of these projects totaling under half an acre of land have been approved.

Fishing, Boating, and Visitor Needs

Commercial Fishing, Seafood Processing, and Distribution

Though the California commercial fishing industry overall does not appear to have growth potential, and seafood wholesaling and processing is typically attracted to centralized locations in major metropolitan areas, there are opportunities for Princeton. In particular, Princeton may benefit from growing consumer interest in local and sustainable seafood. With its proximity to population centers, along with its existing commercial fishing activity and potential for more landings (e.g., squid), Princeton could attract niche processors and wholesalers who focus on locally-caught seafood. There may be opportunities for local fishermen to grow their direct-to-consumer sales. While direct-to-consumer sales do occur today, additional marketing and potentially supporting facilities (e.g., cold storage or retail space) might increase direct sales.

Additional supportive infrastructure (e.g., a boat haul-out facility and better connections between the Pillar Point pier and Princeton's industrial area) might generate marginal economic benefits to the working waterfront. However, the cost of such infrastructure may be a limiting factor for implementation. For example, a 2007 study of the potential operation and financial feasibility of a boat haul-out facility at Pillar Point Harbor, conducted by the San Mateo County Harbor District, concluded that the estimated low net operating income from either a Do-it-Yourself or Full Service boat haul-out facility would most likely prevent a private contractor from making the relatively large capital investment necessary to construct and develop. Alternatively, a Do-it-Yourself or Full Service boat haul-out facility would not generate sufficient fees to cover debt service payments or the minimum internal rate of return on investment for the San Mateo County Harbor District to construct and operate itself. Furthermore, it does not appear that a lack of infrastructure is a major impediment to growth in commercial fishing and seafood processing. Fundamental natural resource constraints and market conditions are the primary limiting conditions.

It is unlikely that the entirety of the industrial area of Princeton would ever be needed to satisfy land use demand from seafood and related industrial uses. A wide variety of industrial uses have been and will continue to be drawn to Princeton because it is the only industrially-zoned land between Pacifica and Half Moon Bay. In some cases, industrial space users such as metal workers may serve both maritime and non-maritime clientele.

Tourism

Tourism is experiencing a strong return from the recent recession and given the successes of tourism-driven projects in Princeton, the area is well-positioned to further develop its visitor-serving economy, including continued expansion of lodging, retail, and recreation activities and land uses.

While sightseeing, beach recreation, and shopping/dining are the most common recreational activities occurring in and around Princeton, Pillar Point Harbor facilities support a significant amount of recreational boating, including sport fishing, charter boat cruises, boat trips from the Pillar Point Small Craft Launch Ramp, and boat trips supported by the berthing facilities and moorings within Pillar Point Harbor.

Typically, sport fishing boats are trailered in to launch at the Harbor District. These boating trips are largely associated with sport fishing and usage trends correlate to a great degree with fishing conditions. In total, the Harbor District reports that there were about 7,740 launches in 2013, higher than in 2011 or 2012. Recreational boaters also take advantage of the berths at Pillar Point Harbor. According to the Harbor District, about50 percent of berths are now occupied by recreational boats. Available data concerning the occupancy of Pillar Point Harbor berths reveals that in general occupancy has been trending up in recent years.

Anecdotal information from the Half Moon Bay Airport suggests that there is significant "fly-in activity" that generates visits to Princeton businesses, including restaurants, shops, and Johnson Pier. The FAA estimates that the airport supports 40,000 to 60,000 runway uses (i.e., takeoffs and landings) per year, a portion of which represent business and recreation users.

Agriculture

Agricultural lands within the Study Area contribute to the rural character of the area and bolster tourism and farm sales regionally through farm-related events and farmers markets, but agriculture is unlikely to be a major contributor to land use demand.

Environmental Constraints and Opportunities

Natural Resources

The Study Area consists of numerous undeveloped natural habitat areas that support special-status species and that are considered Environmentally Sensitive Habitat Areas (ESHAs) by the California Coastal Commission or sensitive habitats by the California Department of Fish and Wildlife (CDFW). ESHA designation typically requires strictly limiting potential uses, establishing buffer zones, and other measures. Preparation of the Planning Update presents opportunities to define and delineate ESHAs, incorporate protection and restoration measures for natural resources within both undeveloped and developed areas, continue to foster a sense of community ownership and responsibility related to sensitive habitats and protected species, and provide managed public access within areas possessing ecological importance.

Water Quality

The Study Area lacks stormwater treatment facilities. New development must comply with a number of stormwater pollution prevention requirements, both for long-term reduction of stormwater pollutants leaving the site and short term control of storm water pollution during construction. Due to the age of many current developments in the Study Area, very few sites have implemented stormwater treatment on-site.

Visual Resources

The visual environment of the Study Area is an important component of the local residents' and visitors' experience and enjoyment. The primary issues to consider regarding preservation of visual quality in the Study Area are:

- Protection of visual resources such as the harbor, Pillar Point, and the surrounding hills; and
- Maintaining the character-defining qualities of the community such as the eclectic development of the Princeton waterfront-industrial area, surrounding agricultural areas, and the harbor.

Protection of public views will require consideration of potential development at community gateways, critical undeveloped parcels, and of redevelopment of parcels, particularly along the streets that currently have harbor views.

The existing community aesthetic is the product of decades of development subject to evolving planning and design policy and standards. A key to preserving the existing visual character will be to implement definite criteria and guidelines for development that do not result in a homogeneous, contrived appearance.

Cultural Resources

Over 75 percent of the Study Area has been previously subject to cultural resources study. The Study Area is considered to have high cultural resources sensitivity due to the presence of several important archaeological and historical resources. The proposed planning update by itself will not result in direct impacts to any known cultural resources. However, future development does have the potential to result in impacts to cultural resources. In the future, if avoidance is not feasible, in order to minimize and/or mitigate potential impacts to any of the identified cultural resources in this document, additional study may be necessary.

Natural Hazards and Shoreline Erosion

Geology and Seismicity

Geologic hazards present within the Study Area include erosion, soil expansion, and significant faults that can cause ground shaking and ground failure, which pose some constraints to development. These hazards can largely be addressed by compliance with existing building codes and regulations. It's been documented with the County that both the west and east faces of Pillar Point Bluff are sliding. The Pillar Ridge Manufactured Home community has suffered damage from landslide in 2006, 1998, and earlier. Other geologic hazards such as subsidence and naturally-occurring asbestos are considered low-risk within the Study Area.

Hydrology

Hydrologic conditions including flood zones and coastal hazards (i.e., sea level rise, wave runup, bluff erosion) and localized flooding limit development or result in the need for stormwater management and control. Development should generally be located outside the 100-year flood hazard zone as currently required. Performance-based setbacks from flood hazard zones may be evaluated for incorporation into the Planning Update to also address biological resource and water quality issues as necesssary.

Shoreline Protection

The Princeton shoreline has been armored with concrete rubble and rocks that were randomly dumped, and most shoreline protective devices are un-permitted and/or un-engineered structures, which have provided effective and ineffective shoreline protection to individual lots. If shoreline protection plans are not implemented, it is expected that little to no beach will remain. A number of alternatives have been developed to provide protection for the Princeton shoreline and incorporate public access to and along the coast.

Higher total water levels and a greater degree of shoreline erosion are expected to occur with sea level rise. The Coastal Commission's draft Sea-Level Rise Policy Guidance document (2013) recommends that local governments use sea level rise projection ranges from the National Research Council's 2012 report Sea Level Rise for the Coasts of California, Oregon and Washington for local coastal planning and coastal development permitting decisions. Depending on greenhouse gas emissions and other factors, this report projects that sea level will rise between 1.56 and 11.76 inches by 2030 and between 4.68 to 24 inches by 2050, from the year 2000 baseline, along the California Coast south of Cape Mendocino.

Coastal Access, Parking, and Circulation

Coastal Access

There are a number of access points along the coastline in Princeton, though some of the unimproved points may pose challenges that prevent wider public access to the sea.

Riprap and steep grade changes present an obstacle for persons who are less mobile. Many planning documents that address coastal access recommend improvements such as stairways and ramps to ensure greater accessibility. Moreover, shoreline processes such as high tides reduce accessibility to and along the beach. Coastal access should be considered an important component of any comprehensive shoreline management plan produced for the area. As stated above under Shoreline Protection, alternatives have been developed to provide protection for the Princeton shoreline and incorporate public access to and along the coast.

The Coastal Trail also encounters a number of obstacles within the Study Area. Road conditions such as the lack of sidewalks, unpaved shoulders, and the presence of abandoned vehicles force trail users into situations where they might conflict with automobile traffic. Better signage and improved trail identity and linkages are additional opportunities to improve the trail experience.

Parking

Parking supply is limited on weekends and in cases of large events such as the Mavericks Invitational. Lack of information, distance between parking lots and visitor destination points, and other inefficiencies may prevent drivers from taking advantage of available parking supply.

In many parts of the Study Area, it can be difficult to determine whether a given parking lot or on-street parking space is available for public use. Within Princeton, this confusion arises from a difficulty in distinguishing between the public right-of-way and private property. Improved signage is a potential solution that could direct drivers to available parking and signal whether there

are any restrictions on parking. Other improvements to parking management may also reduce inefficiencies and improve the utilization of available parking spaces.

Circulation

Major concerns for traffic circulation include congestion along Highway 1 during major events and weekends and a lack of signage near the airport. The highway may also benefit from the addition of medians or roundabouts to improve aesthetics and safety, and manage vehicle speeds.

There is a lack of support facilities for both pedestrians and cyclists. For pedestrians, this means a lack of sidewalks or well-defined areas conducive to safe travel, particularly on higher-volume roads such as Highway 1, Airport Street, and West Point Avenue, where pedestrians would be exposed to high speed traffic. Marked street crossings are also lacking for both pedestrians and cyclists, and along many streets limited visibility may leave them vulnerable to vehicular traffic. For cyclists, the lack of alternative routes and parking facilities increase the difficulty of bicycle travel. There are opportunities for improving facilities and connectivity for non-motorized transportation within the Study Area to improve safety and the flow of traffic.

Parking on West Point Avenue (west of Stanford Avenue) is not permitted. However, on weekends when the Pillar Point parking lot is full, cars park on the shoulder of the road restricting emergency vehicle and pedestrian access. To reduce the potential for conflicts between cars and pedestrians and to ensure adequate emergency vehicle access, "no parking" regulations should be enforced. During high demand periods this will impact recreational users as they will have to park farther from the Pillar Point lot and walk greater distances to access the Pillar Point trail. West Point Avenue west of Stanford Avenue is not within the County's road maintenance system and therefore, enforcement would have to be performed by federal regulators as the California Highway Patrol or Sheriff's Department does not have jurisdiction.

The Study Area's one bus route faces challenges of long headways and few amenities for transit riders. Together, these make it difficult for people to choose public transit as a primary mode of travel.

Infrastructure, Public Services and Facilities

Water System

The water distribution system for the North portion of the Study Area is owned and operated by Montara Water and Sanitary District (MWSD). The water distribution system for the southern portion of the Study Area, specifically Princeton, is owned and operated by Coastside County Water District (CCWD).

New public water service connections in MWSD must be consistent with the MWSD Public Works Plan (Coastal Commission PWP No. 2-06-006-A1, approved in December 2013). As described in the MWSD Public Works Plan, MWSD has 128,000 gallons per day available to be utilized for new service connections, beyond those connections existing as of December 11, 2013. 80,959 gallons per day is currently required to be reserved for priority uses defined by the Local Coastal Plan (LCP). 47,041 gallons per day are available for non-priority uses, including residential, commercial and industrial uses, as well as for conversion of private residential wells within the MWSD Service Area.

CCWD currently serves approximately 304 parcels within the Study Area; 99 parcels with installed connections and 24 parcels with uninstalled connections. The remaining parcels do not have connections, either installed or uninstalled.

Within the CCWD service area, there are approximately 238 water service connections available. 209 of these are held by CCWD (i.e. "unsold"). These unsold water service connections (5/8" size) are reserved for priority uses defined by the LCP. The remaining 29 available water service connections are uninstalled water service connections owned by individual property owners. 10.5 of these uninstalled water service connections are reserved for priority uses and 18.5 are uninstalled non-priority water service connections. The 29 uninstalled water service connections can be sold or transferred by the current owner to new development. Because there are no unsold non-priority water service connections, new non-priority developments must trade or purchase water service connections from existing owners, not from CCWD. Future expansion of the water supply system to support growth in excess of the existing development level in the CCWD service area shall not be approved unless the regional transportation system, specifically Highways 1 and 92, is improved to provide adequate levels of service.

Storm Drain System

The current storm drain system lacks sufficient conveyance facilities. The Study Area is currently served primarily by overland flow through streets and gutters. Settlement has created depressed areas in these gutters with no release point, creating a barrier to flow and resulting in lack of conveyance capacity. To increase the existing storm drain system capacity, general retrofits should include upsizing existing storm drain pipes, adding storm drain lines parallel to existing ditches, and reconstructing ditches to increase capacity. Some of these upgrades would be on non-County-maintained roads. There has not been a great willingness among local property owners to be assessed for drainage improvements.

Sanitary Sewer System

The current sanitary sewer system within the Princeton Study Area contains conveyance limitations. The Intertie Pipeline System that conveys wastewater from both MWSD and GSD to the Sewer Authority Mid-Coastside (SAM) Treatment Plant has had capacity issues during heavy rain periods in the past.

The MWSD sewer system is largely built-out and the existing pipe conditions should be assessed by the District. This will help identify locations causing capacity issues due to pipe diameter, sags, blockages, and roots. The district is continually assessing the current and future capacity requirements for its collection system; especially downstream portions near existing pump stations.

The Granada Sanitary District has performed a sanitary sewer monitoring program that identified inflow and infiltration at locations in its collection system. Part of the proposed mitigation measures for these locations include better mapping of the district's collection system followed by field verification of the locations and elevations to identify capacity issues.

Dry Utility System

The existing dry utility system (which includes all utilities not related to sanitation or water resources) has adequate capacity for current demands. It is assumed that the current facilities are sufficient to serve the Study Area and that these private utility providers will upgrade their facilities as needed to accommodate all future developments.

Public Services and Facilities

The Moss Beach Sheriff Substation provides adequate facilities to maintain the existing level of service and can accommodate limited future growth. Similarly, existing Coastside Fire Protection District facilities are adequate to maintain a sufficient level of service for future population growth within and near the Study Area, provided that upgrades are completed at the El Granada and Point Montara stations.

The Cabrillo School District's schools have adequate classroom space to serve students, but elementary school facilities require modernization.

There are no libraries located within the Study Area; however, the Half Moon Bay Library serves residents of the Study Area. The Library, in partnership with the County, the City of Half Moon Bay, and Friends of Half Moon Bay Library, has been working on a proposed new facility located at the current site to meet service needs and respond to future growth in the regional area.

Currently, there are no community centers located within the Study Area. The nearest community center, the Ted Adcock Community Center, is located in the City of Half Moon Bay. Facilities located within the Study Area that also provide meeting space include the Half Moon Bay Yacht Club, the Pillar Ridge Clubhouse, and Oceano Hotel and Spa.

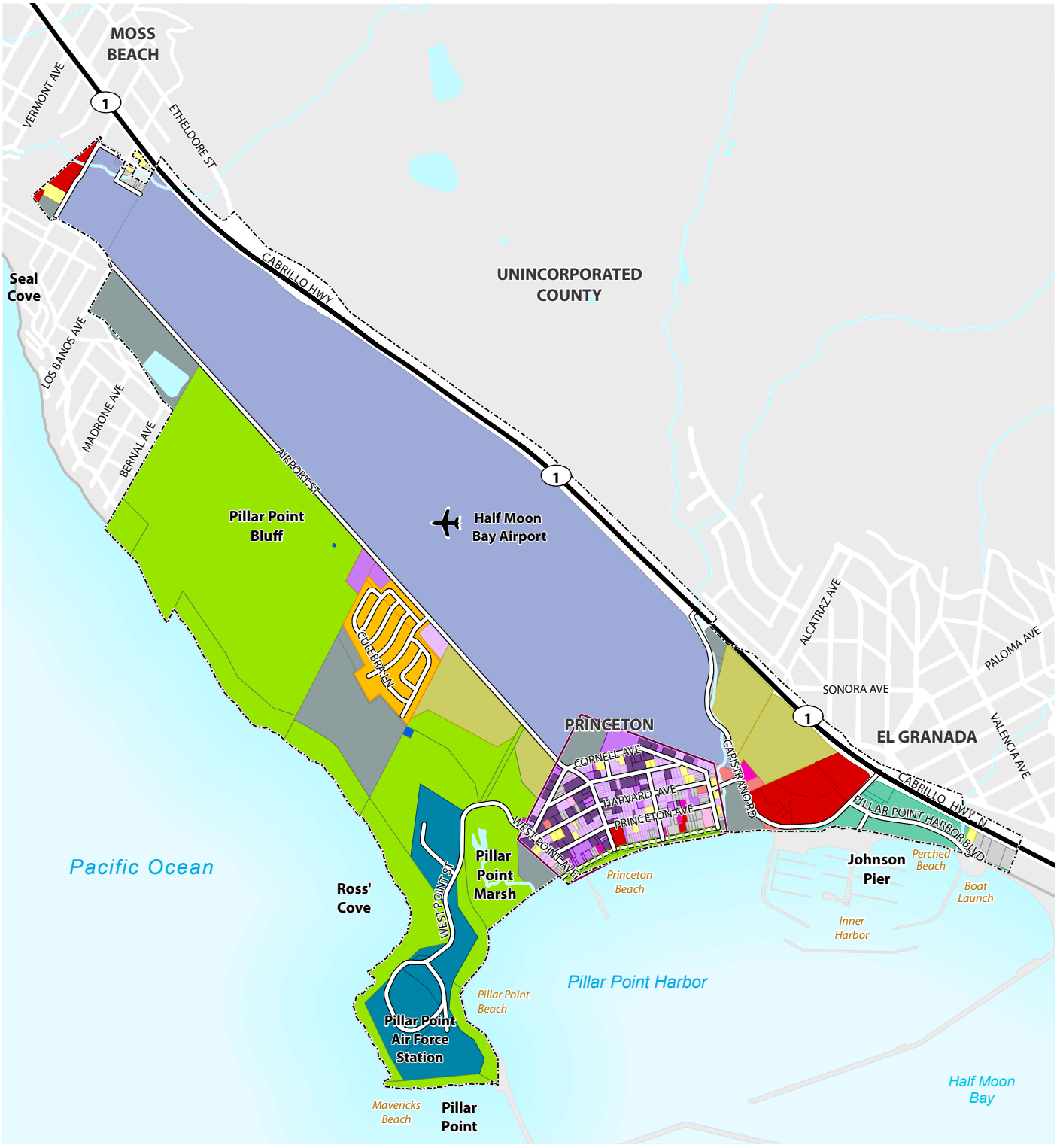
2 Land Use and Urban Design

This chapter documents the existing land use, urban form, and regulatory setting of the Princeton Planning Update Study Area (Study Area) in order to provide an understanding of development opportunities and constraints from the perspectives of regulatory compliance and land use compatibility. It describes the Study Area's land use pattern and distribution, its recreational open space system, the character of existing development, local policies and regulations that apply to development, current projects, and opportunity sites.

2.1 Existing Land Use

Surveying the current land use pattern allows for an assessment of existing assets within the Study Area. It also allows for the identification of vacant and underutilized sites in order to determine opportunities for future development. Figure 2-1 shows existing land use within the Study Area based on field study, aerial photography, and parcel data obtained from the County Assessor. Table 2-1 summarizes land uses and acreages.

Figure 2-1: Existing Land Use



Existing Land Use

- Agriculture
- Single Family Residential
- Mobilehome Park
- Commercial
- Commercial including Lodging/Conference
- Mixed Uses
- Office
- Storage Yard
- Industrial
- Warehouse
- Airport
- Federal
- Parks/Open Space
- Marina/Recreation
- Utilities
- Undeveloped
- Vacant
- Princeton Waterfront/Industrial Area
- Princeton Study Area Boundary

Source: San Mateo County Planning & Building Department, 2013; Dyett & Bhatia, 2013.

0 625 1,250 2,500 Feet

TABLE 2–1: EXISTING LAND USE SUMMARY

LAND USE	ACRES	PERCENT OF STUDY AREA
Agriculture	45	5%
Airport[1]	310	37%
Commercial	17	2%
Federal	41	5%
Industrial	6	1%
Harbor/Recreation	13	2%
Mixed Uses	3	0.30%
Mobile Home Park	22	3%
Office	1	0.10%
Parks/Open Space	222	26%
Single Family Residential	7	1%
Storage Yard	11	1%
Utilities	0.2	0.03%
Vacant	56	7%
Warehouse	12	1%
ROW/Streets	83	10%
TOTAL LAND IN STUDY AREA	**849**	**100%**

1 Approximately 150 acres of the land on airport property is currently in agricultural use.

2. Values have been rounded to the nearest whole number, with the exception of those less than 1.

Source: Dyett & Bhatia, 2013.

Land Use Pattern

The Study Area can be generally divided into four separate areas that exhibit distinct land use characteristics. The area's industrial, warehouse, and storage uses, which together constitute 3 percent of the overall acreage, are concentrated primarily at the Princeton waterfront between the airport and Pillar Point Harbor. The waterfront area itself is largely characterized by these three uses, though some commercial and single-family residential uses and vacant land can be found there as well.

East of Broadway, along Capistrano Road and Johnson Pier, is an area characterized by commercial and recreational uses. The majority of the Study Area's visitor-serving and retail businesses are located there, including dining, lodging, and a shopping center.

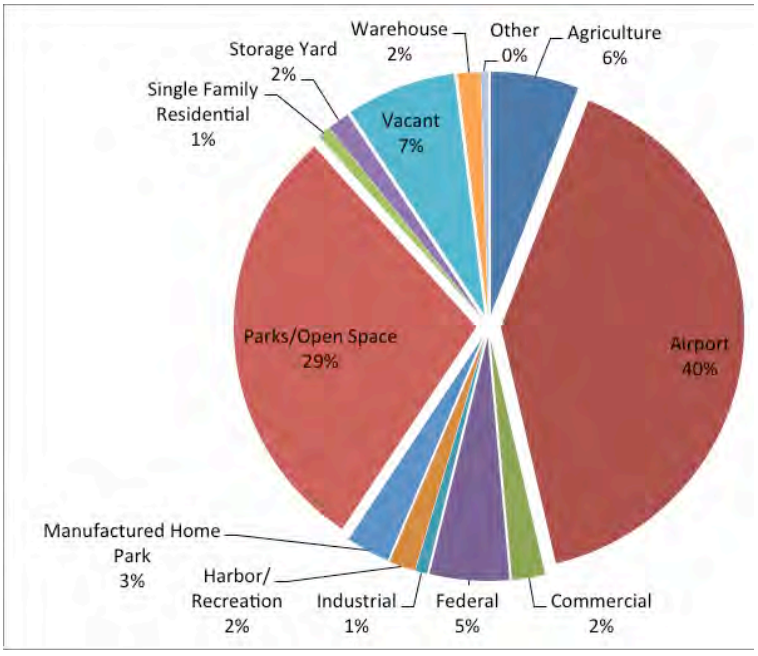
The area west of Airport Street is primarily open space, with the exception of the Pillar Ridge Manufactured Home Community and agriculture southeast of the community (the 'Big Wave' property).

The Half Moon Bay Airport property constitutes over a third of the land in the Study Area. The property is almost entirely used for airport purposes except for portions of the property (approximately 150 acres) that are leased for agricultural purposes and are in active cultivation. These portions of the airport property, along with two parcels on the west side of Airport Street, south of the Pillar Ridge Manufactured Home community, and two parcels on the east side of Capistrano Road represent all of the actively cultivated agricultural land within the Study Area.

Land Use Distribution

Apart from the airport, parks and open space is the most prominent land use in the Study Area, accounting for 26 percent of the total area. Agriculture and federal uses each account for 5 percent of the total area. However, considering the additional cultivated land located on airport property increases the coverage of agricultural land to 23 percent of the Study Area. Commercial and harbor/recreational uses each make up about 2 percent of the Study Area. Residential uses together make up 4 percent of the Study Area, with the mobile home park representing 3 percent and single-family residential representing 1 percent. Besides the manufactured home park, much of the single-family residential is nonconforming. Caretaker units associated with commercial or industrial land uses are classified according to the primary land use. Vacant land constitutes 7 percent of the Study Area. The remaining land uses each make up 1 percent or less of the Study Area. Chart 2-1 describes the land use distribution.

Chart 2-1: Distribution of Existing Land Use in Study Area



Notes:

1. This chart does not include rights-of-way or streets in its calculations.
2. "Other" includes Mixed Uses, Office, and Utilities.

With this land use distribution, the overall character of the Study Area is one of low-density, low-intensity development: the most dominant land uses incorporate large amounts of agricultural or open space, while higher-intensity uses have clustered together in areas like the Princeton waterfront and along Capistrano Road.

Public Land Ownership

Much of the Princeton Study Area—a total of 570 acres, or 75 percent—is in public ownership. Another 26 acres of land does not have an owner identified in available data, and is located along the coast west of Pillar Point Bluff. By far the greatest amount of public land (506 acres) is owned by the County, including the Half Moon Bay Airport as well as Pillar Point Bluff and Pillar Point Marsh. Other public land holders include the Federal government (40 acres at Pillar Point Air Force Station) and the San Mateo County Harbor District (22 acres within the Study Area and another 27 acres of the Marina and Johnson Pier just outside the Study Area).

Parks and Open Space

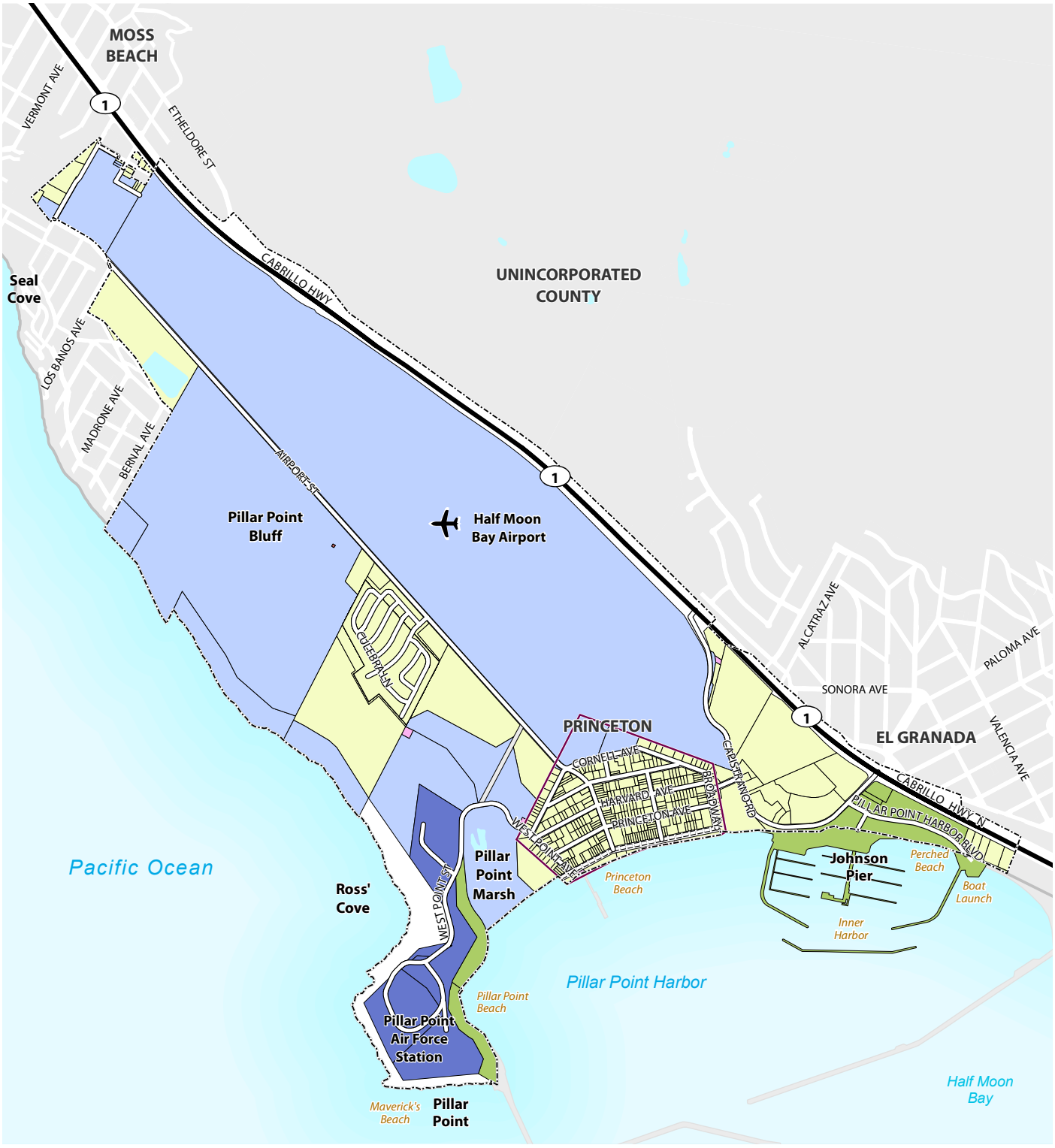
There are 12 park and recreation facilities located in the San Mateo Midcoast area, which extends from Montara to Miramar. Nine parks are regional parks, two are connector parks, and two are recreation facilities attached to schools. Public parks and recreation facilities are owned and operated by the California Department of Parks and Recreation (CA Parks), the San Mateo County Parks Department (County Parks), San Mateo County Harbor District, Cabrillo

TABLE 2–2: PARKS AND RECREATION FACILITIES INVENTORY

PARK OR RECREATION FACILITY NAME	STUDY AREA?	ACREAGE	OWNER
Regional Park			
Moss Beach Park	No	0.5	County Parks
McNee Ranch State Park	No	715.0	CA Parks
Graywhale Cove State Beach	No	3.0	CA Parks
Montara State Beach	No	69.0	CA Parks
James V. Fitzgerald Marine Reserve	Yes	45.0	County Parks
El Granada/Vallejo and Miramar Beaches	No	9.0	HMB
Pillar Point Marsh	Yes	41.0	County Parks
Pillar Point Bluff	Yes	140.0	County Parks
Quarry Park	No	40.0	County Parks
Connector Parks			
Mirada Surf East and West	No	49.0	County Parks
School Facility			
Farrallone View School	No	8.8	CUSD
El Granada School	No	5.4	CUSD

Sources: San Mateo County Department of Parks, 2013; Mid-Coast Recreational Needs Assessment, 2002.

Figure 2-2: Public Land Ownership



Ownership

- San Mateo County
- San Mateo County Harbor District
- Coastside County Water District
- Granada Sanitary District
- United States of America
- Private
- Princeton Waterfront/Industrial Area
- Princeton Study Area Boundary

Source: San Mateo County Planning & Building Department, 2013; Dyett & Bhatia, 2013.

0 625 1,250 2,500 Feet

Figure 2-3: Parks and Recreation Facilities

Source: C/CAG, 2011; GGNRA, 2011; Midcoast Parks & Recreation Committee, 2010; San Mateo County, 2010 and 2012; Dyett & Bhatia, 2013.

Unified School District (CUSD), and the City of Half Moon Bay (HMB). Park and recreation facilities located within the Midcoast area are listed in Table 2-2 and Figure 2-3 maps their location.

Three regional parks are located within the Study Area—James V. Fitzgerald Marine Reserve, Pillar Point Marsh, and Pillar Point Bluff. The Fitzgerald Marine reserve is the largest park within the Study Area and provides a picnic area and trails that lead down to the beach and reef. Where recreational use is facilitated, parks agencies are committed to being good stewards of natural communities. There are currently no parks within the Study Area that provide "active" recreational opportunities such as ball fields and playgrounds.

Recreation Programs

The City of Half Moon Bay is the only public recreation program provider on the Midcoast. Most recreation programs operate from the Ted Adcock Community Center in the City of Half Moon Bay and are geared toward a wide range of groups from youths through adults and seniors. The City also operates the outdoor pool located at the high school for general public use. The City of Pacifica also has a comprehensive park and recreation program. However, participation by Midcoast residents in Pacifica recreation programs is relatively small, due in large part to the distance and difficult drive up the coast.

Trails

Various trails are located within the Study Area, including the Jean Lauer Trial, Mirada Surf Coastal Trail, the Fitzgerald Coastal Trail, and the Fitzgerald Bluff Trail. There are also plans to complete the Midcoast Coastal Trail that will extend from Half Moon Bay to Devil's Slide. The trail has been completed over much of the central shoreline of Half Moon Bay in projects undertaken on by California State Parks and the City of Half Moon Bay. The California Coastal Trail, including existing and proposed segments and improvements, is discussed in detail in Section 6.5, Coastal Access. Table 2-3 below identifies existing trails within the Study Area.

TABLE 2–3: EXISTING TRAILS

TRAIL	LENGTH (MILES)
Jean Lauer Trail	1.4
Mirada Surf Coastal Trail	0.5
Fitzgerald Coastal Trail	0.3
Fitzgerald Bluff Trail	0.8

Source: San Mateo County Department of Parks, 2013.

Deficiencies and Planned Improvements

In general, the Study Area lacks recreational facilities such as ball fields and playgrounds. Additionally, according to County Parks Staff, the Study Area also has inadequate trail corridors and lacks bike and pedestrian connections to surrounding communities. In 2010, San Mateo County Local Agency Formation Commission (LAFCo) prepared a Municipal Service Review for the unincorporated portion of the San Mateo Midcoast. The review documented only four acres of developed parkland within the Midcoast area. LAFCo estimated that the area should have had approximately 67 to 111 acres of developed parkland, based on the existing population and park standards in similar communities. When compared to other cities and towns in San Mateo County, the Midcoast area did not compare favorably. A Mid-Coast Recreational Needs Assessment that was prepared in 2002 for the San Mateo County Parks and Recreation Division also identified the need for a community center that would provide recreational programs for residents that live in the unincorporated Midcoast area.

The San Mateo County Parks Department has identified various parks and trail improvements for Midcoast facilities, including:

- Development of a coastal trail from Princeton to Pacifica (See also Section 6.5, Coastal Access)
- Fitzgerald Marine Reserve Coastal Trail from Cypress to North Lake Street
- Fitzgerald Marine Reserve parking lot improvement project at California and North Lake Street
- Mirada Surf Coastal Trail Phase III improvements
- Future Coastal Trail and vertical beach access improvements within the Highway 1 right-of-way
- Moss Beach playground restroom
- Devils Slide Trail improvement
- Green Valley Trail improvement
- Restoration plan for San Vicente Creek

The San Mateo County Comprehensive Bicycle and Pedestrian Plan (CBBP), from 2011, details proposed improvements to the Countywide Bikeway Network, which includes trails and roadways in the Study Area. The Highway 1 / Coastal Trail / Parallel Trail project, described in the plan, is a key pedestrian and bicycle project that would improve access to and from Princeton, and provide key recreational opportunities in western San Mateo County. Planned improvements include bicycle and pedestrian facilities where few currently exist, including multi-use paths along the east side of Highway 1 and along Airport Street. The Coastal Trail is part of a larger statewide effort to provide a network of public trails along the entire California coastline.

The Midcoast Parks and Recreation Committee's 2010 report on the California Coastal Trail identifies a number of improvements in the Study Area. These include creating a separate pedestrian path along the south side of West Point Avenue adjacent to Pillar Point Marsh; improving beach access at the four stub street ends near Princeton's shoreline; creating a sidewalk or multi-use trail along Prospect Way, and improving access to Capistrano Beach; and improving the Coastal Trail along the Inner Harbor (Perched) Beach. Trails and coastal access are discussed further in Chapter 6.

Lastly, in January 2014, the San Mateo County Local Agency Formation Commission (LAFCo) voted to approve Granada Sanitary District's application to reorganize into a Community Services District for the purpose of adding park and recreation services to their existing wastewater and solid waste services. Final approval of the reorganization is subject to voter approval at the June 3, 2014 election.The Princeton Plan updates may include policies for new park land or improvements to recreational facilities. For facilities not managed by the San Mateo County Parks Department, these policies would be recommendations to be carried out by the responsible agency.

2.2 Urban Form

As noted above, the Study Area consists primarily of open space and low-intensity development, with three more densely-built areas at Capistrano Road, the Princeton waterfront, and the Pillar Ridge Manufactured Home Community. Capistrano Road and the Princeton waterfront are the Study Area's two main activity centers, and each exhibits distinct characters and aesthetics.

Gateway

The main gateway into the Study Area is the intersection between Highway 1 and Capistrano Road at the southern end of the airport property. From there, Capistrano Road links incoming traffic to the Study Area's coastal commercial development along the eastern portion of the harbor, and to Prospect Way, which leads to the Princeton waterfront. Airport Street, which runs parallel to Highway 1, offers an alternative entrance to the waterfront area from Moss Beach via Cypress Avenue and Airport Street.

Capistrano Road Coastside Commercial

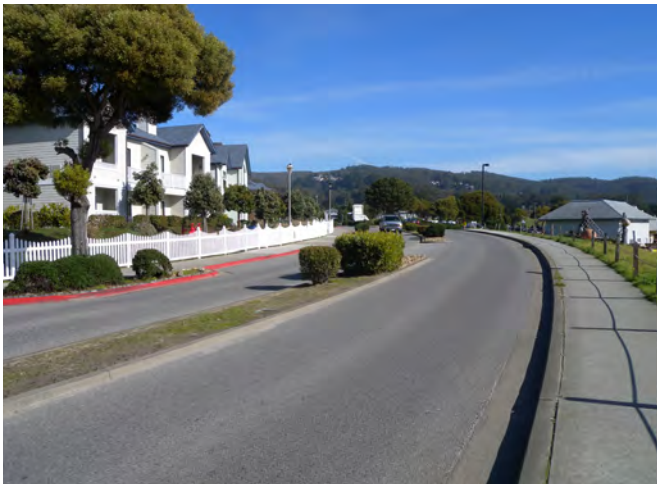
South of Prospect Way on Capistrano Road, development is composed mainly of commercial uses such as visitor-serving retail, dining, lodging, and recreation, arranged along a corridor. Parcel sizes are larger than those at the industrial waterfront and are irregularly shaped. They generally accommodate side yards, customer parking, and landscaping along the sidewalk. Businesses make use of visible street-front signage, and some dining establishments place

Capistrano Road is a corridor of commercial businesses, including restaurants that make use of outdoor seating.

Businesses along this corridor generally provide patron parking.

Visitor lodging along Capistrano Road represent the corridor's tallest building heights.

Capistrano Road is lined with landscaped sidewalks equipped with street lights, benches, and other pedestrian amenities.



A length of Capistrano Road is divided by a vegetated median.

outdoor seating along the sidewalk. Near Prospect Way, buildings are generally single-story structures. Farther east, the Pillar Point Inn and Oceano Hotel rise to two and three stories respectively.

South of Prospect Way, Capistrano Road has sidewalks on both sides of the street, each fitted with street lighting, some smaller trees, and occasional benches and picnic tables. Beginning at the harbor, planted medians separate the two directions of traffic on Capistrano Road until it reaches a second intersection with Highway 1.

Industrial Waterfront

The Princeton industrial waterfront is arranged in a grid of 12 roughly rectangular blocks within a pentagonal area. This is the only industrially zoned land between Pacifica and Half Moon Bay. Three of the blocks front the harbor. Parcels in this area are generally regular in shape and size, with most parcels originally measuring around 2,500 and 3,500 square feet. Most developed parcels can be classified as containing an industrial structure, a residential structure, or open storage.

Many parcels, particularly on the western blocks, have been combined to accommodate larger industrial building footprints. The presence of these buildings gives the western blocks a strong industrial character. Throughout this area, the industrial buildings are designed to be monolithic with small yards and setbacks and simple corrugated facades. In some cases, setbacks and yards are extremely reduced. Parking for industrial structures is frequently located in the front setback.

The central and eastern blocks retain their small lot sizes, and are largely unbuilt. Instead of permanent structures, many of these lots are occupied by fenced open storage for boats and other gear. Other open lots are used to store vehicles.

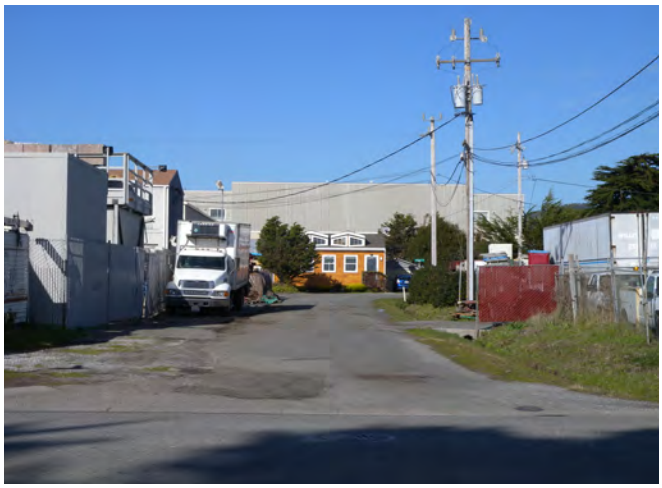
There are some residential structures in this area, and most are detached single-family homes, varying between one and two stories. These residences are nonconforming uses, meaning that while they may have been built in conformance with the rules and regulations in place at the time of construction, new residential structures would not be allowed today. Most homes are in good condition and their yards are landscaped and maintained. They tend to be fenced or buffered from the street and from adjacent lots.

A small number of sites have recently been developed with caretaker/business uses in a narrow, two-story contemporary design with an emphasized second story. Architecturally, these represent a departure from the more traditional designs used by other residential and commercial buildings in the Study Area. Caretakers' quarters differ from traditional residential uses as they are only allowed as an accessory use to a business or use that requires continuous monitoring or attention. Caretaker units are specifically allowed within the

Industrial buildings have larger footprints with flat, expansive walls. Yards and setbacks are used for parking and are often minimal.




Fenced open lots are used to store vehicles, boats, and other gear but have no permanent structures.



Single-family residential homes are interspersed among the area's industrial and storage uses, often on lots adjacent to these other uses.

Some more contemporary architecture can be found among the industrial and residential sites.

An example of mixed use development in the Study Area.

Not all streets are paved.

Newly paved streets are lined with concrete swales.

Waterfront (W) zoning district and are limited in size to 35 percent or 750 square feet of the building's floor area. The W zoning regulations also limits the total number of caretaker units to 25 percent of the developed parcels in the district.

Streets in this part of the Study Area have no sidewalks or street-lighting and are punctuated by power lines. Not all streets are paved, and informal on-street parking often lines the right-of-way. Some streets, including Harvard Avenue and portions of Princeton Avenue were recently repaved and fitted with concrete drainage swales on either side.

Community Design Manual

Design review in the Study Area is guided by the San Mateo County Community Design Manual. The Manual was first published in 1976 to provide guidelines for the evaluation of development projects within the Design Review (DR) zoning district. The manual seeks to encourage design that is orderly, safe, and aesthetically pleasing, and includes chapters on site design, exterior appearance, and standards for non-residential development. Design Review is conducted by County staff and approved by the decision making body for any project associated planning permits. Projects that involve a residential component require review and approval or recommendation by the Coastside Design Review Committee at a public design review hearing.. Generally, the design guidelines advocate minimal disturbance of the natural landscape in terms of both landforms and vegetation; preservation of scenic corridors and vistas; and building and site designs that complement the surrounding development through color, scale, and structural shape.

2.3 Local Plans

San Mateo County General Plan

The Study Area is included in the San Mateo County General Plan, which was adopted in 1986. The General Plan establishes policies to guide County decision-makers in matters related to land use, development, and resource management. It is divided into the following issue areas: Vegetative, Water, Fish, and Wildlife Resources; Soil Resources; Mineral Resources; Visual Quality; Historical and Archaeological Resources; Park and Recreation Resources; General Land Use; Urban Land Use; Rural Land Use; Water Supply; Wastewater; Transportation; Solid Waste; Natural Hazards; and Man-Made Hazards. The General Plan's Housing Element is a separate document, with its most recent update adopted in 2012.

The General Plan also incorporates a number of area plans that establish more specific policies for different geographic segments of the county. The Study Area and the other Midcoast communities are covered by the Montara-Moss Beach-El Granada Community Plan.

General Plan Land Use Goals and Designations

The General Plan contains three sets of land use policies to direct the distribution and intensity of future development in the county: the General Land Use Policies chapter establishes guidelines applicable to all land use decisions within the county, while the Urban and Rural Land Use chapters add more specificity for each of the two categories.

Goals and objectives in the General Land Use chapter support the designation of land uses to ensure efficient and cost-effective provision of public infrastructure and services, strengthen local economies, protect natural resources, ensure minimal energy demand and efficient consumption, minimize danger from hazards, manage the cost and efficiency of providing public services, and achieve the development of coherent land use patterns.

Urban Land Use policies seek to provide a mix of compatible residential and commercial uses while ensuring that there is a place for industrial uses and their economic opportunities. It defines objectives for Urban Communities—areas containing a mix of densities and uses—focused on maintaining a balance and diversity of land uses and strong local character; as well as those for Urban Neighborhoods—areas primarily devoted to residential uses—focused on developing residential character and ensuring a commercial mix sufficient to balance the costs of residential infrastructure provision. The Study Area is considered part of the Montara-Moss-Beach-El Granada Urban Community.

Rural Land Use policies seek to concentrate development in clusters to encourage the overall conservation of natural resources and open space. These policies cover the County's rural lands, service centers, and residential subdivisions, which do not include the Study Area.

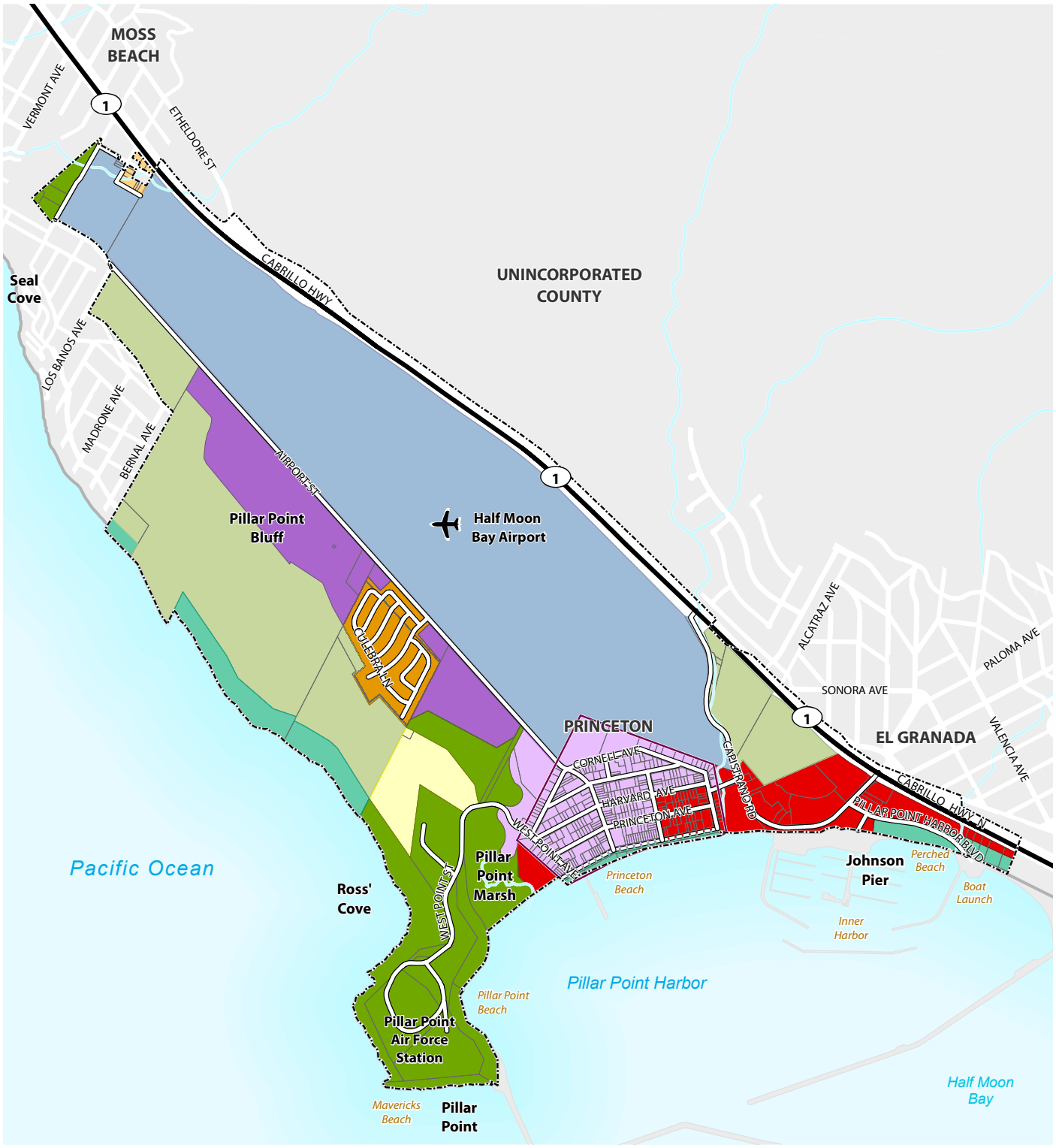
Land Use Designations

The 1986 San Mateo County General Plan identifies the following Urban Land Use designations. These are shown in Figure 2-4 and summarized in Table 2-4.

Agriculture

This designation applies to lands currently under agricultural cultivation or in use for the grazing of livestock, lands suitable for agriculture or which contain soils with agricultural capability (including prime agricultural land), or ancillary lands which may not be suitable for agriculture but which may be strategically located to protect agricultural lands from the encroachment of incompatible land uses. Other uses which may occur in this designation include open space compatible and low density residential uses. This designation currently applies to a substantial amount of land on Pillar Point Bluff, as well as a small portion of land between Capistrano Road and Highway 1 in the southeast portion of the Study Area.

Figure 2-4: Existing General Plan Land Use



General Plan Land Use

- Agriculture
- Very Low Density Residential
- Medium Density Residential
- Medium High Density Residential
- Coastside Commercial Recreation
- General Industrial -Zone W
- General Industrial
- Airport
- Open Space
- Public Recreation
- Princeton Waterfront/Industrial Area
- Princeton Study Area Boundary

Source: San Mateo County Planning & Building Department, 2013; Dyett & Bhatia, 2013.

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TABLE 2–4: GENERAL PLAN LAND USE SUMMARY

LAND USE DESIGNATION	ACRES	PERCENTAGE OF STUDY AREA
Agriculture	151	19%
Airport	312	40%
Coastside Commercial Recreation	43	6%
General Industrial	55	7%
General Industrial – Zone W	54	7%
Medium Density Residential	2	0.2%
Medium High Density Residential	23	3%
Open Space	101	13%
Public Recreation	28	4%
Very Low Density Residential	17	2%
TOTAL IN STUDY AREA	**787**	**100%**

Values have been rounded to the nearest whole number, except for those less than 1.

Sources: San Mateo County Planning and Building Department, 2013; Dyett & Bhatia, 2013.

Residential

VERY LOW DENSITY RESIDENTIAL

Very low density residential is characterized by a density of 0 to 0.2 dwelling units per acre, with one parcel per 40 to 160 acres. This designation was intended for locations where the presence of natural resources or hazards prohibits higher intensities of development, such as hillsides with steep slopes or areas adjacent to sensitive habitats. Within the Study Area, this designation applies to a single parcel of County-owned marshland located just north of Pillar Point.

MEDIUM DENSITY RESIDENTIAL

This residential designation allows 6.1 to 8.7 dwelling units per acre, with a minimum parcel size of 5,000 square feet. The General Plan locates this designation in areas where adequate public services and facilities and major transportation corridors already exist. Within the Study Area, this designation comprises a small cluster of developed parcels in the northern-most corner along Pine and Oak Streets.

MEDIUM HIGH DENSITY RESIDENTIAL

Medium High Density Residential areas allow for densities from 8.8 to 17.4 dwelling units per acre, with no minimum parcel size. This designation is intended for locations along transportation corridors and served by adequate public services and facilities, near employment centers, and on large parcels on the outskirts of single-family neighborhoods. They are also intended to be adjacent to or in conjunction with commercial land uses. This designation only applies to two parcels within the Study Area, which are occupied entirely by the Pillar Ridge Manufactured Home Community, to the west of the airport.

Coastside Commercial Recreation

The Coastside Commercial Recreation designation is intended for locations where there is demand for commercial recreation services, and where a variety of these uses can be concentrated. Allowable uses include trade and distribution uses such as retail, and services such as commercial amusement, restaurants, and visitor lodging. Mixed use residential is also allowed. Other locational criteria include proximity to major transportation routes and convenient automobile, transit, pedestrian, and/or bicycle access; ability to provide parking facilities; and the existence of a natural or man-made setting, such as a harbor, that attracts visitors. This designation covers a portion of the Princeton waterfront including two eastern blocks of Princeton Avenue and the marshland west of West Point Avenue, as well as the area surrounding Johnson Pier and Capistrano Road near El Granada.

General Industrial

This designation is intended for locations accessible to housing opportunities, where sufficient existing or potential urban services are available, and near to major transportation facilities. Allowable uses include light industrial, manufacturing, or research and development uses. The General Industrial designation applies to areas west of Airport Street surrounding the Pillar Ridge Manufactured Home Community, and in the Princeton waterfront area.

Airport

The airport designation is intended for existing airports and adjoining airport land. It covers the entire Half Moon Bay Airport property.

Open Space

The Open Space designation is located in areas where natural resources are in need of protection or where there is managed production of resources, and in areas appropriate for outdoor recreation. It is also applied to areas where natural or man-made hazards may pose a risk to public health and safety.

Public Recreation

This designation is intended for parcels owned and managed by a public park and recreation agency. This designation is applied along the Princeton waterfront and in the Fitzgerald Marine Reserve.

Montara-Moss Beach-El Granada Community Plan

In 1978, the San Mateo County Planning Commission and Board of Supervisors adopted the Montara-Moss Beach-El Granada Community Plan to guide development in the Midcoast region. The community vision presented in the plan prioritizes low growth, where new development occurs as urban infill and natural resources are preserved to the maximum degree. The plan concentrates

commercial development in three "centers," including one at Pillar Point Harbor, to create focal points and direct visitor traffic away from residential areas. It also directs industrial development towards the land west of Half Moon Bay Airport, where high noise levels preclude other forms of development. The airport itself was intended to continue at the existing level of operations, and the harbor was slated to be expanded in order to accommodate recreational boaters and commercial fishing. The plan also emphasized the goal of preserving the community's small town character, to be implemented through the general application of the Design Review zoning district.

San Mateo County Midcoast Local Coastal Program

The Coastal Act and Local Coastal Programs

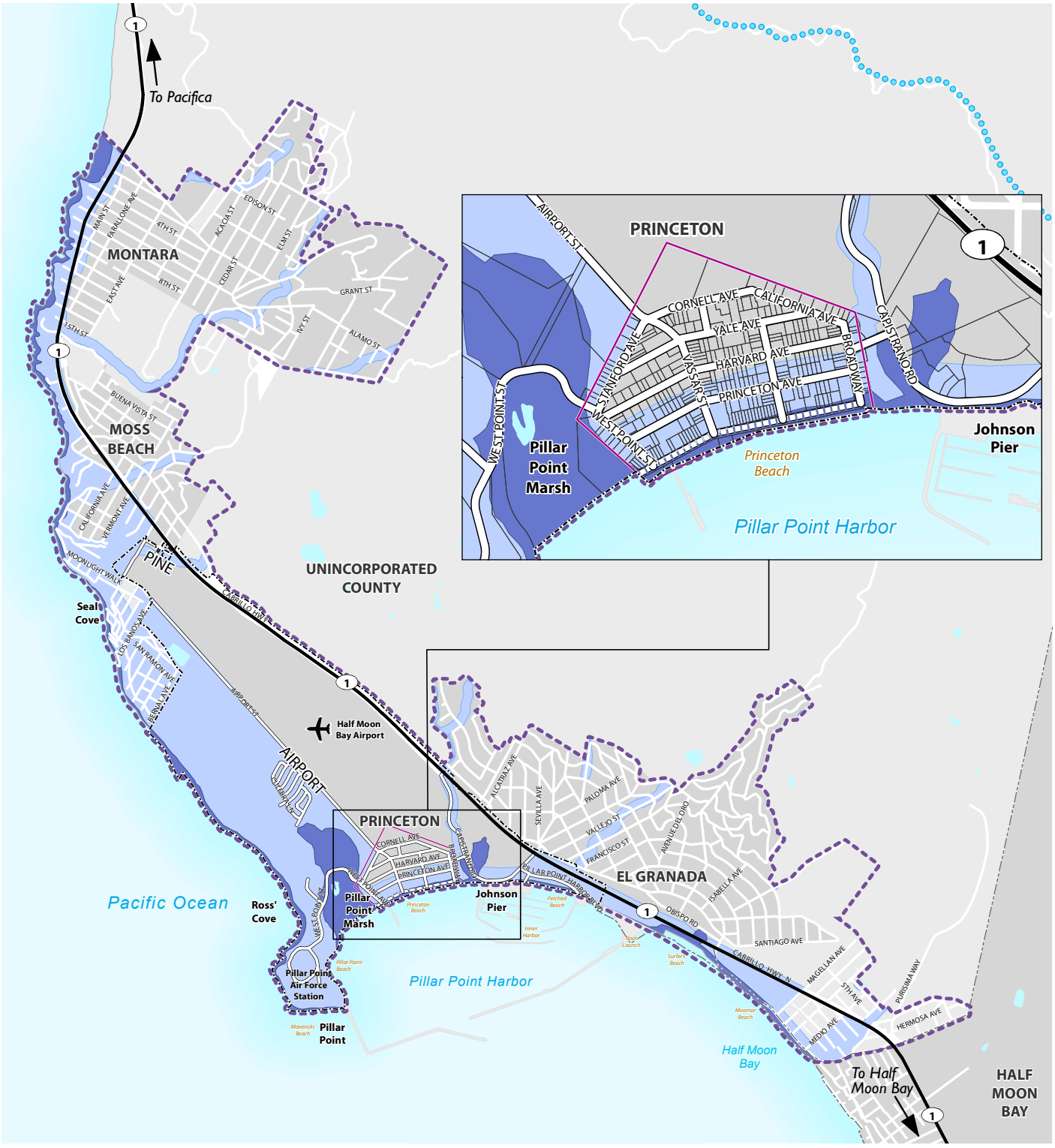
The California Coastal Act, passed in 1976, is legislation that seeks to protect and enhance the unique characteristics and resources of the coast for public, economic, and ecological benefit. It regulates land use and development within the California Coastal Zone, which generally extends from the State's seaward limit of jurisdiction to 1,000 yards inland of the mean high tide line; it may, however, extend farther in significant habitats or recreational areas and less in urbanized areas. Coastal Act policies are focused on the goals of protecting and enhancing the Coastal Zone's environment, conserving its resources, maximizing public access and recreational opportunities within the Coastal Zone in balance with conservation needs and private property rights, ensuring that coastal-dependent and coastal-related development is prioritized within the Coastal Zone, and ensuring that coordinated planning for mutually beneficial uses is taking place at the state and local levels. With few exceptions, any new development taking place within the Coastal Zone must obtain a Coastal Development Permit from the California Coastal Commission, or a local government with a certified Local Coastal Program (LCP).

An LCP consists of two components. The first is a land use plan that establishes a long range vision for the community and specifies the kinds, locations, and intensities of allowable land uses; applicable resource protection and development policies; and, where necessary, a listing of implementing actions to achieve the vision and implement the objectives of the Coastal Act. The second component is an implementation program, typically a set of zoning amendments, that detail requirements for the development of individual properties.

Midcoast Local Coastal Program

San Mateo County's LCP was first certified in 1980, and covered the portion of the Coastal Zone located in unincorporated areas of the county. In 1999, the County initiated a project to comprehensively update the LCP for the Midcoast area, from the community of Montara south to El Granada. The intent behind the update was to review and revise land use policies for the Midcoast area in

Figure 2-5: Coastal Zone



Coastal Zone Boundary*
Midcoast LCP Update Area
CCC Permit Jurisdiction
CCC Appeals Jurisdiction
Princeton Waterfront/Industrial Area
Princeton Study Area Boundary

(*All of the Princeton Planning Area is in the California Coastal Zone.)

Source: San Mateo County Planning & Building Department, 2013; Dyett & Bhatia, 2013.

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order improve their consistency with the Coastal Act and avoid future permit appeals, while developing a more current foundation of baseline information about the existing community. The process took place over the next seven years, and involved community workshops, the development of policy alternatives, and public hearings. The update accomplished a number of goals, including identifying constraints on existing public services, establishing criteria for siting new development, updating buildout information for the Midcoast, and supporting the enhancement of the Coastal Trail. The County submitted the updated LCP to the Coastal Commission in 2006 and was asked to make a number of modifications. The County submitted a revised version in 2011, which the Coastal Commission certified on August 8, 2012. Figure 2-5 shows the area covered by the Midcoast LCP, including the areas belonging to the Coastal Commission's permit and appeal jurisdictions.

San Mateo County Energy Efficiency Climate Action Plan

The Energy Efficiency Climate Action Plan (EECAP), approved in 2013, aims to demonstrate San Mateo County's commitment to reducing greenhouse gas (GHG) emissions. This plan features strategies to reduce county-wide energy use, promote more efficient transportation strategies and land use patterns, and spur growth in local energy efficiency industries. Creating the EECAP was a collaborative process that involved participation of residents, business interests, County staff, and key stakeholders. The EECAP identifies General Plan amendments needed in order to integrate relevant strategies into the County's General Plan.

Code Enforcement

The Princeton area has a history of code compliance, nuisance, and public health and safety issues such as squatters, illegal uses and development, dumping, and excess garbage and waste. Recent efforts to address these issues, including a task force consisting of various county enforcement agencies, have produced tangible results. Code violations are addressed on a case-by-case basis as they are reported or as new development is proposed. The approval of new development is typically includes rectifying existing violations. Public health and safety issues are addressed proactively and the County works toward immediate resolution.

2.4 Half Moon Bay Airport Compatibility

Airport Land Use Compatibility

Through the State Aeronautics Act, the State of California requires every county that contains a public airport to develop and comply with an airport land use compatibility plan (ALUCP) with a 20-year planning horizon. The purpose of an ALUCP is to protect public health, safety, and welfare by providing for the orderly growth and land use development of the area surrounding the airport. ALUCP policies generally set controls on land use and development standards that ensure safe and efficient airport and flight operations and minimize the public's exposure to excessive noise and safety hazards within the airport's vicinity. An ALUCP does not designate land uses, but instead establishes criteria to encourage the development of compatible land uses. It also has no ability to alter existing non-conforming uses; the focus is on future development.

The body responsible for creating and carrying out the ALUCP is each respective county's Airport Land Use Commission (ALUC), composed of representatives from the county, cities within the county, the public, aviation experts, and public officers. Upon adoption of an ALUCP, every local agency whose general plan jurisdiction covers land included in the ALUCP must ensure consistency between the two documents, subject to the review and approval of the ALUC. The City/County Association of Governments of San Mateo County (C/CAG) serves as the ALUC for San Mateo County and is responsible for maintaining the Half Moon Bay Airport ALUCP.

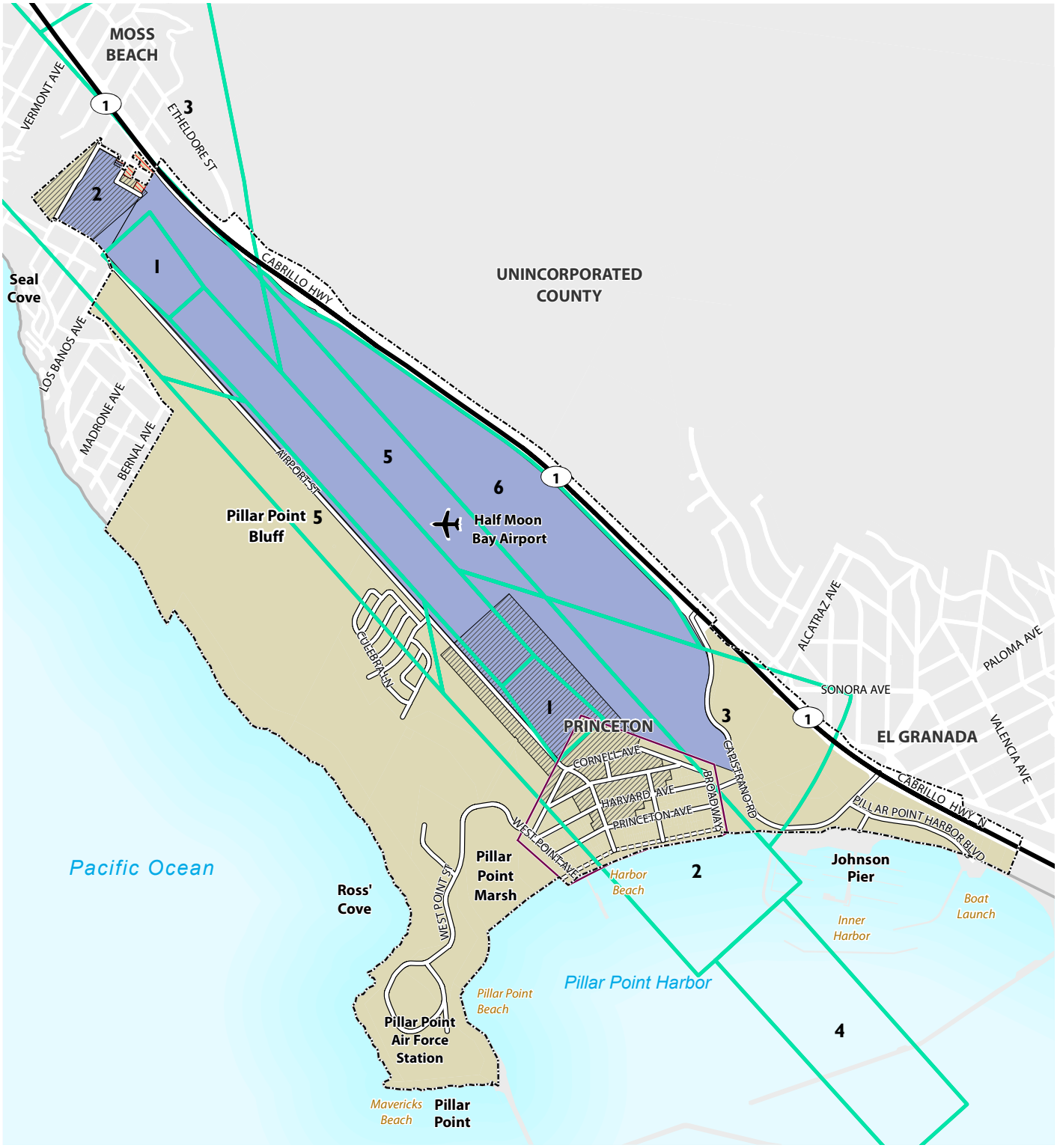
Half Moon Bay ALUCP

The current adopted version dates to 1996 and is part of the San Mateo County Comprehensive Airport Land Use Plan. An update to the Half Moon Bay ALUCP is currently being developed, with a draft of the final plan released in August 2013. The draft will be reviewed by stakeholders on the Planning Advisory Team and C/CAG, and will receive a public hearing before a final version may be adopted. The Half Moon Bay ALUCP covers all areas within the airport's designated Airport Influence Area (AIA), as shown in Figure 2-6. Policies within the ALUCP establish zones and criteria for three issue areas: noise, safety, and airspace protection.

Noise

These policies seek to prevent the development of noise-sensitive land uses on areas that are exposed to high levels of noise from regular airport operations. These areas are defined by airport noise contours, which radiate in decreasing intensity from the runway. Based on current contours presented in the 2013 ALUCP update, the highest noise levels—of 75 and 70 Community Noise

Figure 2-6: Airport Compatibility



Draft Safety Zones
Zone 1 - Runway Protection
Zone 2 - Inner Approach/Departure
Zone 3 - Inner Turning
Zone 4 - Outer Approach/Departure
Zone 5 - Sideline
Zone 6 - Airport Property

Airport Overlay Zone
NIAE Overlay Zone
Princeton Waterfront/Industrial Area
Existing Airport Property
Princeton Study Area Boundary

Note: All of the study area is within the Airport Influence Area.

Source: San Mateo County Planning & Building Department, 2013; C/CGAG, 2013; Dyett & Bhatia, 2013.

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Equivalent Levels (CNEL)—are generally confined to airport property, though the 65 and 60 CNEL contours extend into the community.

The 2013 Draft ALUCP indicates criteria for uses that are compatible, conditionally compatible, or not compatible within each noise contour. The area within the 71-75 CNEL range is most limited in terms of compatible land uses, prohibiting all but industrial and agricultural uses. Within the 65-70 CNEL range, most commercial uses may also be considered compatible conditional upon meeting interior noise standards. Visitor and transient lodgings are not compatible within this range. Within the 60-64 CNEL range, commercial uses are considered compatible; visitor and transient lodging, indoor institutional facilities, indoor recreational facilities, and most residential uses are conditionally compatible. In all of the above ranges, outdoor recreation, outdoor amphitheaters, and mobile home parks are prohibited.

Any residential construction taking place within the 60 CNEL contour must grant an avigation easement to San Mateo County before a building permit will be granted. An avigation easement provides for aircraft use of airspace above the grantor's property and allows that the property may be subject to noise, vibration, discomfort, and any consequent reduction in market value from aircraft operations. The easement also protects the County from liability associated with aircraft operations. Avigation easements are also required pursuant to the Midcoast Local Coastal Program (LCP) and the S-17/NIAE (Noise Impact Avigation Easement) combining district described in the zoning section.

Safety

The ALUCP establishes safety compatibility criteria to protect both the safety of persons on the ground and that of aircraft occupants, corresponding to seven safety zones. These criteria set limitations on maximum density, intensity, and allowable land uses within each safety zone, and list requirements for the percentage of each zone that must be maintained as open land. The two zones with the highest accident risk level, and thus most restrictive criteria, are the Runway Protection Zone (RPZ) and Inner Approach/Departure Zone (IADZ). Due to its coverage, the IADZ is the zone that would have the greatest influence on future development in the Study Area.

Runway Protection Zone

The RPZ prohibits all uses and structures not related to airport operations. This zone covers two areas to the north and south of the runway, and is confined to airport property and two small portions of Airport Street.

Inner Approach/Departure Zone

The IADZ extends north and south from the runway and covers the majority of the Princeton industrial and waterfront area. Updated draft compatibility criteria for this zone limit residential densities to one unit per 10 acres, though

exceptions may be made for infill in developed areas. Current development patterns, averaging three units per 10 acres, exceed this limit.

Intensity, including any employees, customers, or visitors who may be on the property at any given time, is also limited in this zone. Non-residential intensity within the IADZ is limited to 60 persons per acre, calculated on a per-parcel basis. For the common parcel sizes within this zone, measuring 3,500 or 2,500 square feet, this equates to five and four persons per parcel, respectively. This is slightly less restrictive than the current intensity limit of three persons per parcel imposed by the Airport Overlay zoning district.

Additional criteria for the IADZ prohibits a number of sensitive and outdoor land uses, but are compatible with a number of uses allowed by existing Coastside Commercial Recreation, M-1, and W zoning for the area. It does preclude such uses as residential uses, uses that pose a chemical or fire hazard, childcare and schools, hospitals and nursing homes, and outdoor gathering spaces and athletic parks. However, low-intensity manufacturing and warehousing, retail, food service, clubhouses, and hostelries would be considered compatible.

Inner Turning Zone

The ITZ extends northeast and southeast from the runway and covers a large portion of the Coastside Commercial Recreation zoned area within the Study Area. This area currently in not within the Airport Overlay zone and is not subject to any airport related limitations on use or intensity. However, pursuant to the updated Half Moon Bay ALUCP, this area would be subject to compatibility criteria affecting the allowable types of uses and intensity. Compatibility criteria for this zone limit residential densities to one unit per two acres, though exceptions may be made for infill in developed areas.

Intensity, including any employees, customers, or visitors who may be on the property at any given time, is also limited in this zone. Non-residential intensity within the ITZ is limited to 100 persons per acre, calculated on a per-parcel basis. For the common parcel sizes within this zone, measuring 3,500 or 2,500 square feet, this equates to eight and six persons per parcel, respectively. This is less restrictive than the current intensity limit of three persons per parcel imposed by the Airport Overlay zoning district.

Additional criteria for the ITZ prohibits a number of sensitive and outdoor land uses, but are compatible with a number of uses allowed by existing CCR, M-1, and W zoning for the area. It does preclude such uses as residential uses, uses that pose a chemical or fire hazard, childcare and schools, hospitals and nursing homes, and outdoor gathering spaces and athletic parks. However, low-intensity manufacturing and warehousing, retail, food service, clubhouses, and hostelries would be considered compatible as long as they meet the intensity criteria described above.

Airspace Protection

In order to prevent the construction of hazards to aircraft in flight, the ALUCP establishes height limitations for structures, trees, and other objects. Any proposed development that would exceed these heights would require approval from the ALUC (C/CAG). If the development is found to constitute a hazard, it would be denied all local agency development permits. Limits are described in Table 2-5.

These limitations, along with other restrictions as provided by the ALUCP, aim to ensure that all land uses and proposed development is compatible with the use of the airport. By implementing the compatibility criteria for height, safety, and noise, as described above, the ALUCP seeks to ensure maximum compatibility of the development of the area surrounding the airport.

TABLE 2–5: AIRSPACE PROTECTION HEIGHT LIMITS

SAFETY ZONE	HEIGHT LIMIT TRIGGERING ALUC REVIEW (FEET ABOVE GROUND LEVEL)
Runway Protection Zone	All development
Inner Approach/Departure Zone	35
Inner Turning Zone	70
Outer Approach/Departure Zone	70
Airport Property Zone	35
Sideline Safety Zone	35
Airport Influence Area	100

Source: Half Moon Bay Airport ALUCP Update Draft Final, 2013.

2.5 Zoning, the Airport Overlay, and Other Combining Districts

The San Mateo County Zoning Ordinance is the main regulatory tool used to implement the policies established in the General Plan and Local Coastal Program. Its main purposes are to guide and control future growth and development within the county, protect the character and social and economic stability of the county, protect public health and safety, and prevent overcrowding and congestion through the regulation of land use and built structures. The Ordinance consists of a zoning map, which defines the locations of each zoning district, and a zoning code that details the requirements for each district. The current edition of the Ordinance is updated through September 2012.

The Ordinance establishes 34 underlying districts, of which seven are within the Study Area. In addition to these are 42 combining districts that are applied in combination with the underlying districts and with one another in order to provide additional regulation for specific localities. There are 6 combining districts present within the Study Area. Figure 2-7 shows the location of zoning districts in the Study Area, and Table 2-6 summarizes their distribution.

Zoning Districts

Coastside Commercial Recreation (CCR)

The CCR district is intended for commercial areas oriented towards meeting the service and recreational needs of visitors, boat users, and Coastside residents. The district contains provisions to ensure active public use with pedestrian-oriented design and intimate human scale, and seeks to provide safe and efficient parking for automobiles. All CCR districts are combined with the Design Review district, and all development must comply with the design guidelines and criteria of both the Community Design Manual and the Visual Resources and Special Communities component of the Midcoast LCP.

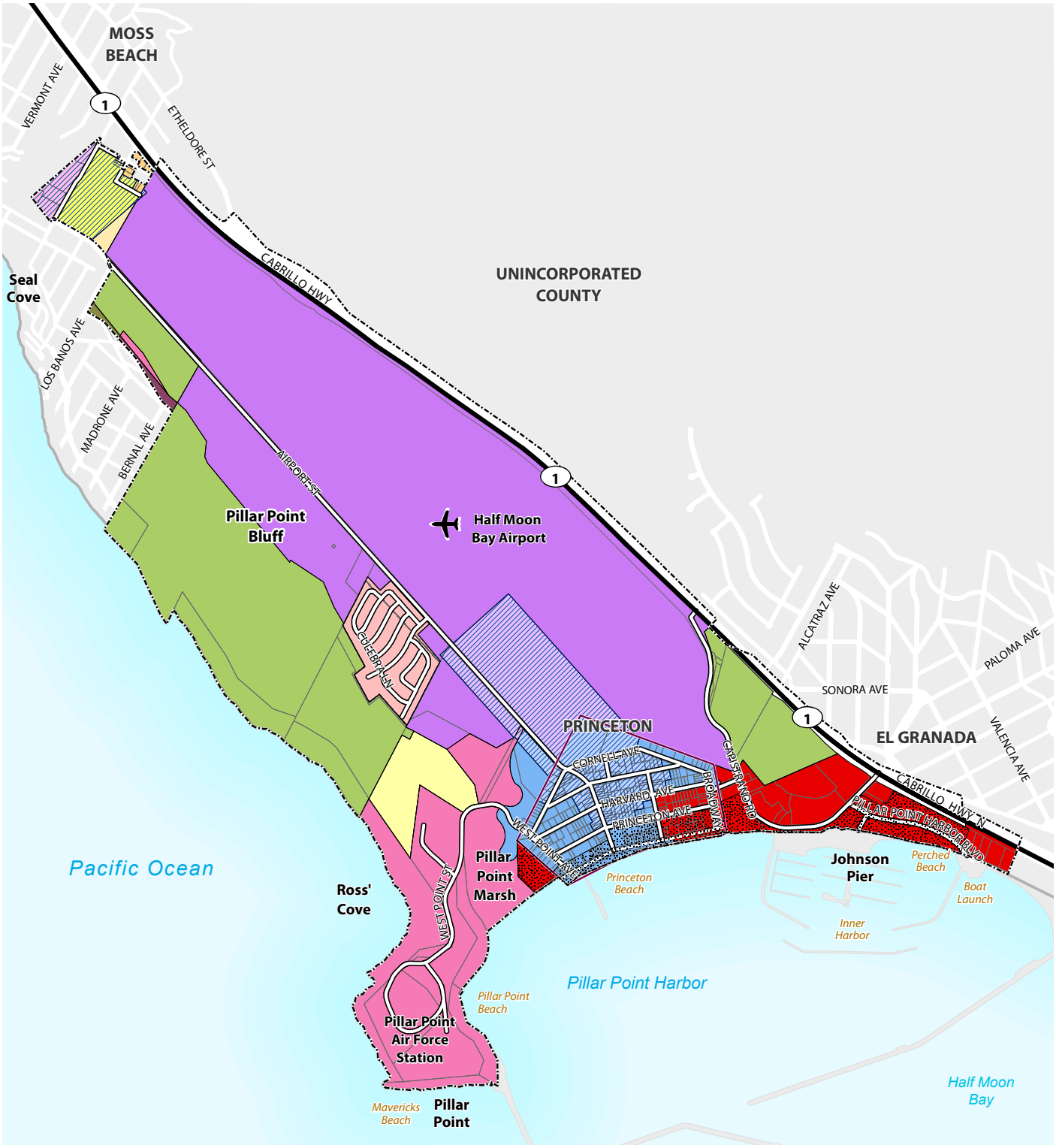
The district differentiates between Shoreline Areas (shown in Figure 2-7), which includes parcels adjacent to the shoreline, and Inland Areas when considering allowable uses. Uses are more restricted in Shoreline Areas, out of an interest in reserving limited waterfront space for primarily recreational, marine-related, or visitor-serving uses, and preventing the contamination of coastal resources. Marine-related recreation, hostelries, coastside restaurants, ATMs, marine-related trades and services, mixed use multi-family dwellings, and parks are all allowed in the Shoreline Area with use permits; bars, retail, rental and repair establishments, motor vehicle-related trades and services, solid waste recycling, and parking are prohibited. All of the above listed uses would be allowed with a use permit in the Inland Areas.

Heights in this district are limited to 36 feet in the area west of Denniston Creek, and 28 feet in the area east of Denniston Creek. Lot coverage is limited to 50 percent of the building site. The district requires side yard setbacks of a minimum of five feet on each side and a combined total of 15 feet. Impervious surface area for surfaces less than 18 inches in height is limited to 10 percent of the parcel area.

Light Industrial (M-1)

The M-1 district allows for a range of limited industrial and manufacturing uses, provided that they do not produce significant amounts of odor, dust, smoke, gas, noise, or vibration. These uses include the sale or rental of equipment, boat building, vehicle storage or rental, carpentry, warehousing, and the manufacture or assembly of various products. The district was amended as part of the Midcoast LCP Update to limit impervious surface area for surfaces less than 18 inches in height and winter grading activities within the Coastal Zone. The maximum allowable height in the M-1 district is 75 feet. Furthermore, the district requires side yard setbacks of a minimum of 3 feet on sides that border "R" (Residential) District properties and a rear yard setback of 6 feet for rear yards that border "R" District properties.

Figure 2-7: Existing Zoning



Existing Zoning

- CCR/DR/CD
- H-1/DR/CD
- M-1/AO/DR/CD
- M-1/DR/CD
- PAD/DR/CD
- PAD/DR/GH/CD
- R-1/S-105/DR/GH/CD
- R-1/S-13/DR/CD
- R-1/S-17/AO/DR/CD
- R-1/S-17/DR/CD
- R-1/S-17/DR/CD/NIAE
- RM-CZ/AO/DR/CD
- RM-CZ/DR/CD
- RM-CZ/DR/GH/CD
- W/AO/DR/CD
- W/DR/CD
- Airport Overlay Zone
- Shoreline Area
- Princeton Waterfront/Industrial Area
- Princeton Study Area Boundary

Note: See Table 2-6 for zoning district names.

Source: San Mateo County Planning & Building Department, 2013; Dyett & Bhatia, 2013.

0 625 1,250 2,500 Feet

TABLE 2–6: PRINCETON ZONING DISTRICTS SUMMARY

	ACRES	PERCENTAGE OF STUDY AREA
Underlying Districts		
Coastside Commercial Recreation (CCR)	52	6%
Light Industrial (M-1)	405	48%
Limited Highway Frontage (H-1)	22	3%
One-Family Residential (R-1)	44	5%
Planned Agricultural District (PAD)	167	20%
Resource Management - Coastal Zone (RM-CZ)	100	12%
Waterfront (W)	57	7%
Combining Districts		
Airport Overlay (AO)	79	9%
Coastal Development (CD)	846	100%
Design Review (DR)	846	100%
Geologic Hazard (GH)	2	0.2%
S-13 District	17	2%
S-17 District	27	3%
S-17/ Noise Impact Avigation Easement (NIAE)	1	0.1%
Combined Districts		
CCR/DR/CD	52	6%
H-1/DR/CD	22	3%
M-1/AO/DR/CD	37	4%
M-1/DR/CD	368	43%
PAD/DR/CD	166	20%
PAD/DR/GH/CD	1	0%
R-1/S-13/DR/CD	17	2%
R-1/S-17/AO/DR/CD	11	1%
R-1/S-17/DR/CD	15	2%
R-1/S-17/DR/CD/NIAE	1	0%
RM-CZ/AO/DR/CD	5	1%
RM-CZ/DR/CD	94	11%
RM-CZ/DR/GH/CD	1	0%
W/AO/DR/CD	26	3%
W/DR/CD	31	4%
SUBTOTAL	**846**	**100%**
Additional in ROW	2	0.2%
TOTAL LAND IN STUDY AREA	**848**	**100%**

Source: San Mateo County Planning and Building Department, 2013.

Limited Highway Frontage (H-1)

The H-1 district allows only crop and tree farming and truck gardening by right, with additional uses allowed by use permit. These uses include one-, two-, and multi-family dwellings, visitor lodging, mobile home parks, restaurants, retail, nurseries and greenhouses, and offices. Within the Study Area, this district is applied to the two parcels containing the Pillar Ridge Manufactured Home Community. Furthermore, the district requires side yard setbacks of a minimum of five feet on each side and a rear yard setback of twenty feet.

One-Family Residential (R-1)

The R-1 district is the county's low- to medium-density single-family residential zone. It allows one-family dwellings, public parks and playgrounds, crop and tree farming and truck gardening, home occupations, small collection facilities for recyclable materials, large residential day care facilities, and accessory buildings and uses such as those for pets and domestic poultry. Churches, schools, libraries, fire stations, golf courses, clubs, nurseries, and greenhouses may be allowed with a use permit.

Planned Agricultural District (PAD)

The PAD was designed for the purpose of preserving agricultural land for existing and potential agricultural cultivation, and minimizing conflicts between agricultural and non-agricultural land uses. The district seeks to establish boundaries and buffers between urban and rural areas, and sets criteria for the conversion of agricultural lands. It also regulates both the division of prime agricultural lands and the expansion of public services and facilities to minimize the negative impacts that these activities may have on the viability of agricultural operations. The PAD conforms to the Coastal Act goal of preserving agricultural land as an important resource, and specifically references design, development, and performance considerations from the LCP.

The district allows a limited range of uses for prime and non-prime agricultural lands, and establishes a Planned Agricultural Permit system and permitting criteria to admit more urbanized uses. Allowable uses on prime agricultural lands are limited to those directly related to soil-dependent agricultural practices. Non-prime agricultural land allows a more expansive range of agricultural uses, including dairies and non-soil-dependent greenhouses and nurseries. Minimum setback requirements in the PAD district are distinguished by the type of development proposed. Agricultural development requires a minimum front yard setback of 30 feet, with side and rear yard setbacks of 20 feet. Non-agricultural development requires a minimum front yard setback of 50 feet, with side and rear yard setbacks of 20 feet.

Resource Management-Coastal Zone RM-CZ

The Resource Management districts implement the open space and conservation objectives of the County's General Plan. All development within the RM-CZ district requires a Development Review Permit and compliance with

the California Environmental Quality Act. RM-CZ regulations carry district-specific development review criteria focusing on the preservation of environmental quality, utilization of environmentally sensitive site design and utility provision, protection of water resources, protection of cultural resources, and avoidance of hazard exposure.

Permitted uses are low density and intensity, including soil-dependent and non-soil-dependent agriculture, residences, and public recreation. Additional uses, such as visitor lodging, public safety facilities, aquaculture, and research, are allowed with a use permit. Other productive or extractive uses, such as timber harvesting, oil exploration, or quarry extraction are allowed subject to their respective permits. Any land divisions within the RM-CZ district require the conveyance of a conservation easement and covenant that gives a portion of land over to open space uses in perpetuity. Furthermore, the minimum setback requirements are 50 feet for the front yard and 20 feet for sides and rear yards.

Waterfront (W)

The W district serves to create and maintain a "working waterfront" environment where marine-related trades and services can benefit from proximity to the ocean and supporting businesses and infrastructure. Regulations for this zone seek to protect the continued viability of these uses by ensuring a compatible mix of recreational, resource management, and waste management uses while restricting conflicting land uses. They also regulate architectural and site design in order to enhance the visual character of the working waterfront area.

Like the CCR district, the W district differentiates between Shoreline and Inland areas when considering allowable uses, with the limited Shoreline Area under greater restrictions. Allowable uses in the Shoreline Area are limited to marine-related trades and services (such as supply stores and sale of freshly caught fish) marine-related clubs and institutions, aquaculture, linear parks and trails, and small solid waste collection facilities. Additional uses are allowed with a use permit, including boat building and repair, boat launching and docking, marine research, and parks and marine-related recreation. Inland Areas also allow indoor low- to moderate-impact manufacturing and storage, and parking facilities by right; and outdoor manufacturing and storage with a use permit. Furthermore, there are no setback requirements in the W district.

The W district also permits caretaker's quarters as an accessory use to allow for on-site housing for the property owner or an employee in cases where a business or use requires continuous monitoring or attention. Caretaker units must be located within the building of the primary use on the property, and may not exceed 35 percent or 750 square feet of the building's floor area. The total number of caretaker units in the W district is limited to 25 percent of the developed parcels in the district.

Combining Districts

Airport Overlay (AO)

The specifications of the AO district are intended to limit the concentration of people exposed to aircraft-related hazards at the end of airport runways. The AO district prohibits residential uses and all uses that would have more than three persons occupying the site at any time. It is applied to 79 acres of land at the northern and southern ends of the Half Moon Bay Airport property, and extends into the Princeton waterfront where it covers several blocks of the W district. It also covers a portion of an M-1 site west of Airport Street, several R-1 zoned parcels on and north of the airport property, and portions of RM-CZ-zoned parcels northwest of Cypress Avenue. The current boundaries of the district correspond to the Approach Protection Zone and Runway Protection Zone identified in the 1996 San Mateo County Comprehensive Airport Land Use Plan.

Coastal Development (CD)

The CD district applies to the portions of the County's Coastal Zone, and thus covers all of the Study Area. Projects within the CD district require Coastal Development Permit approval.

Design Review (DR)

All properties contained within the DR district are subject to design review for all new exterior construction, grading or land clearing, or tree cutting that requires a building, grading, or tree cutting permit. Standards exist for neighborhood definition and character, site planning and structure placement, architectural form and materials selection, landscaping, and lighting and noise. They aim to minimize impacts such as noise and light pollution, habitat disturbance, surface runoff, and landform alteration, while seeking to preserve views and an appropriate sense of scale. Projects that include a residential component are subject to Design Review before the Coastside Design Review Committee at a public hearing; otherwise, for projects that do not include a residential component, design review is conducted by Planning staff or by the applicable decision maker for any associated planning permits.

Geologic Hazards (GH)

The GH district regulates development in geologically hazardous areas. Each GH district, designated based on the findings of a geotechnical investigation and report, establishes its own site-specific set of development standards according to its unique geologic conditions. These standards affect the building permit process, where a building permit may only be approved if the project has met the standards for the GH district. The Study Area includes a portion of GH District 1 (Seal Cove Area), located west of Airport Street. Potential hazards in this district are associated with the Seal Cove Fault system.

"S" Districts

S districts regulate development standards for designated areas. These standards specify minimum building site dimensions, minimum lot area, required yards, maximum heights, and maximum coverage for all development within the district. There are two S district designations within the Study Area, S-13 and S-17. Standards for the S-17 district are described below and standards for the S-13 district are summarized in Table 2-7.

The S-17 district is specified for single-family residential districts in the Midcoast. Standards for this district differentiate between structures 16 feet in height or less and those over 16 feet, and between structures constructed on slopes of up to 30 percent and those on slopes 30 percent or greater. These standards also include impervious surface area less than 18 inches in height, plate heights for garages on downhill slopes, daylight plane or façade articulation, and winter grading. The district allows for exceptions to setback and impervious surface restrictions pending design review (by staff unless there is a residential component). In a portion of the S-17 district, the NIAE (Noise Insulation Avigation Easement) also applies. This allows that the property may be subject to noise, vibration, discomfort, and any consequent reduction in market value from aircraft operations.

TABLE 2–7: S-13 DISTRICT DEVELOPMENT STANDARDS

MINIMUM BUILDING SITE		MINIMUM LOT AREA PER DWELLING UNIT	MINIMUM YARDS REQUIRED			MAXIMUM HEIGHT PERMITTED		MAXIMUM COVERAGE PERMITTED
AVERAGE WIDTH	MINIMUM AREA		FRONT	SIDE	REAR	STORIES	FEET	
250 ft.	5 ac.	5 ac.	50 ft.	20 ft.	20 ft.	3	36 ft.	10%

Source: San Mateo County Zoning Regulations, 2012.

2.6 Existing Permit Requirements and Procedures

Permit requirements and procedures are summarized below. All required planning permits for a project are processed concurrently under one planning case. The decision maker is the highest decision making authority required for any of the planning permits being requested. In an attempt to streamline application processing, the Community Development Director has the discretion to elevate a project to the next decision maker for controversial projects where an appeal is expected.

Coastal Development Permits

All development as defined by the County's Local Coastal Program (LCP) Policy 1.2, located within the Coastal Zone, including the Plan Princeton Study Area, requires a Coastal Development Permit (CDP) unless exempted under Section 6328.5 of the County Zoning Regulations. Depending on the proposed use and location of development in the Princeton Study Area, and other required planning permits, a CDP may be approved by the Community Development Director of the County Planning and Building Department (i.e. not subject to a public hearing) or by the County's Zoning Hearing Officer, Planning Commission, or Board of Supervisors at a public hearing. A decision rendered by the Community Development Director or Zoning Hearing Officer are appealable to the Planning Commission and a decision rendered by the Planning Commission is appealable to the Board of Supervisors. Projects that meet any one of the criteria below are further appealable to the California Coastal Commission, upon the exhaustion of local appeal:

- Projects between the sea and the first through public road paralleling the sea or within 300 feet of the inland extent of any beach or of the mean high tide line of the sea where there is no beach, whichever is the greater distance.
- Projects in County jurisdiction located on tidelands, submerged lands, public trust lands, within 100 feet of any wetland, estuary, stream or within 300 feet of the top of the seaward face of any coastal bluff.
- Any project involving development which is not a principal permitted use in the underlying zone, as defined in Section 6328.3(q) of the County Zoning Regulations.

The processing timeframe for a CDP can be between 3-6 months (approximate, including the required 10-business day appeal period following the local decision) depending on the project scope, decision making authority (i.e. public hearing versus non-public hearing), other necessary planning permits required for the proposed development, and whether the project is appealed.

Use Permits

In addition to the Coastal Development Permit process, a Use Permit may be required for development within the Princeton Study Area depending on the proposed use and location of development, and zoning district. Most commonly, a Use Permit is required in the Coastside Commercial Recreation (CCR) zoning district for all new construction or the alteration of, addition to, or change in occupancy or use of a legal structure in existence prior to adoption of the CCR zoning regulations; certain uses within the Waterfront (W) zoning district; and all uses permitted in the underlying zoning district in the Airport Overlay (A-O) district.

A Use Permit must be approved by the County's Zoning Hearing Officer, Planning Commission, or Board of Supervisors at a public hearing. A decision rendered by the Zoning Hearing Officer is appealable to the Planning Commission and a decision rendered by the Planning Commission is appealable to the Board of Supervisors. The processing timeframe for a Use Permit can be between 4-6 months (approximate, including the required 10-business day appeal period following a decision).

Design Review

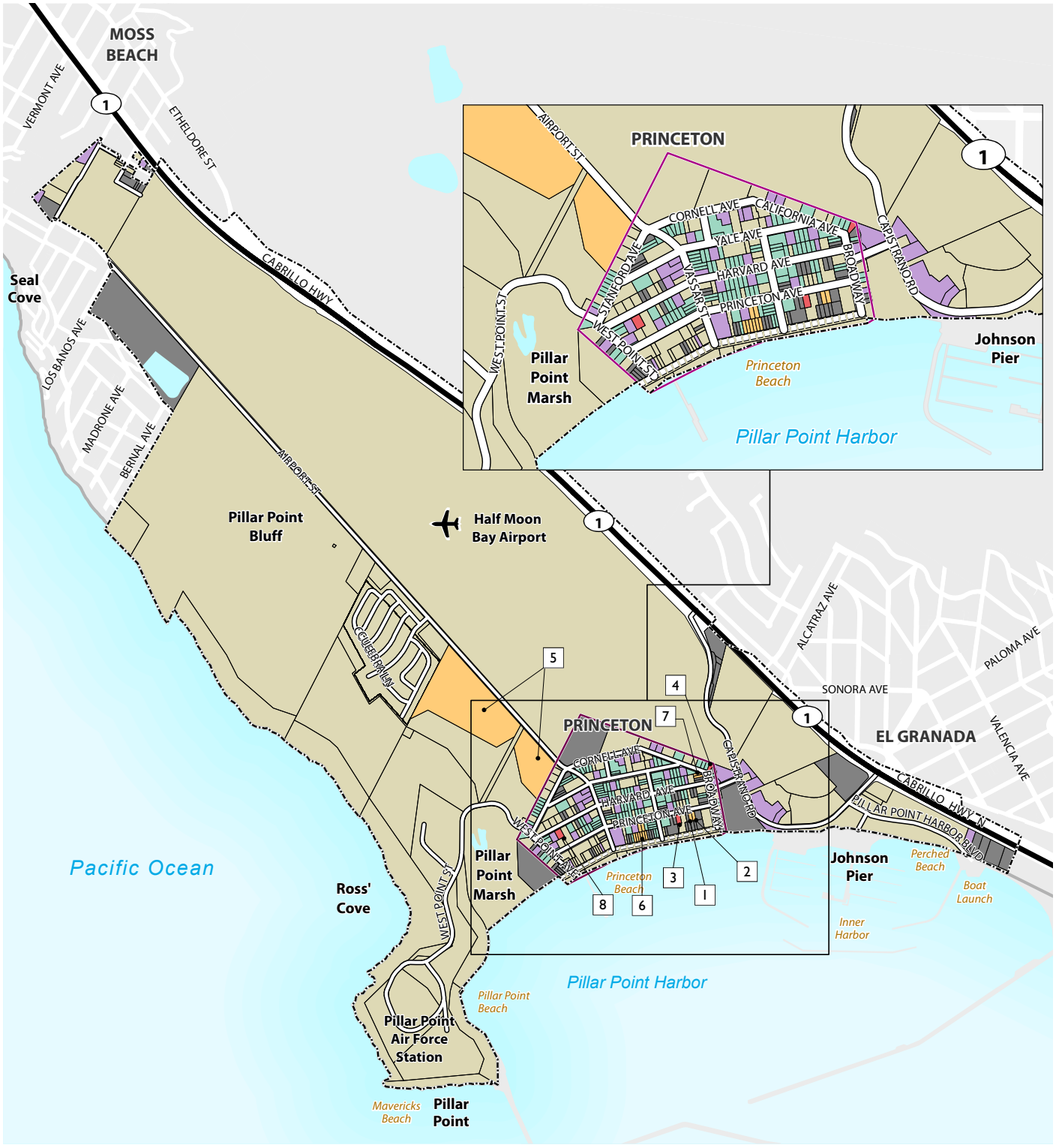
Design Review is applied to properties in the Waterfront (W), Light Industrial (M-1), Coastside Commercial Recreation (CCR), Planned Agricultural District (PAD), Resource Management-Coastal Zone (RM-CZ), Limited Highway Frontage (H-1), and Single-Family Residential (R-1) zoning districts of the Study Area. However, pursuant to the County's current Design Review Regulations, only projects with a residential component require design review approval (or recommendation) be granted by the Coastside Design Review Committee at a public design review hearing. Projects that do not include a residential component (i.e. only commercial, only industrial) are subject to design review approval by the Community Development Director, Zoning Hearing Officer, Planning Commission, or Board of Supervisors, depending on the level of review required by any other associated planning permit (e.g. Coastal Development Permit, Use Permit). Furthermore, the Coastside Design Review Committee must provide a recommendation at a public design review hearing for projects with a residential component that involve other permits requiring Zoning Hearing Officer, Planning Commission, or Board of Supervisor approval. The processing timeframe for a project to go before the Coastside Design Review Committee is approximately 2 months.

2.7 Development Projects

There are currently nine active development projects located within the Study Area. These are in various stages of the development process—some are still under planning review, while others have been approved and are under construction. Concerns raised with these and other recent projects include airport compatibility, site coverage limits, height and setback allowances, and shoreline protection. Project locations are shown in Figure 2-8 and project statuses are summarized in Table 2-8.

Projects 1 and 2 are mixed use developments that were initially approved by the County's Zoning Hearing Officer before being appealed to the Coastal Commission in 2009. The appeal issues raised to the California Coastal Commission for these two projects include non-compliance with the Shoreline Access Component of the County's Local Coastal Program (LCP) and State Coastal Act for vertical and lateral beach access; non-compliance with the

Figure 2-8: Development Projects and Opportunity Sites



- Approved Development Projects
- Under Review Projects
- Undeveloped Properties
- Underutilized Properties
- Open Lots/Fenced or Unfenced Open Storage Yards
- Princeton Waterfront/Industrial Area
- Princeton Study Area Boundary

Source: San Mateo County Planning & Building Department, 2013; Dyett & Bhatia, 2013.

0 625 1,250 2,500 Feet

TABLE 2–8: ACTIVE DEVELOPMENT PROJECT STATUSES, APRIL 2014

#	OWNER/APPLICANT	PROPOSED LAND USE	STATUS
1	Herring/Worley	Mixed Use (Commercial/Residential)	Appeal to CCC, pending
2	Johnson/Herring	Mixed Use (Commercial/Residential)	Appeal to CCC, pending
3	Kissick	Commercial	Approved, Under Construction
4	Strathdee/Stebbins	Mixed Use (Industrial/Office)	Approved, Under Construction
5	Big Wave Office Park and Wellness Center	Mixed Use (Office/Commercial/ Residential)	Denied by CCC, Revised North Parcel Alternative under review by County
6	Herring/Foss	Industrial	Planning Review
7	Freeman	Mixed Use (Waterfront/Design Review/ Costal Development)	Approved, Under Construction
8	Repetto	Mixed Use (Industrial/Office)	Approved by Planning

Source: San Mateo County Planning and Building Department, 2013.

Visual Resources Component of the County's LCP and Coastside Design Review Standards citing public views from the shoreline and sea level rise were not considered by the County and that the projects failed to consist of designs, sizes, and shapes that were consistent with surrounding development; and that the proposed uses are not permitted or compatible with the intent of the Coastside Commercial Recreation zoning district.

Projects 3, 4, and 7 have already been approved and are under construction. These include the Kissick three-story commercial building (which includes office space, parking and storage, and a vacation rental unit), the Strathdee/ Stebbins two-story warehouse and office building, and the Freeman two-story storage building. Together, these projects will add 8,162.5 square feet of commercial, industrial, and office development to the Study Area.

Project 6, Herring/Foss, is currently undergoing the planning review process. The proposal involves eight parcels along Princeton Avenue and the shoreline. The developer has proposed merging four of the smaller parcels into two larger parcels to accommodate six industrial buildings intended for fish processing operations, industrial warehousing, and parking. This project has been inactive since January 2013.

The Big Wave project (5), encompassing a 225,000 square foot office and industrial complex and a wellness center housing 57 affordable housing units for developmentally disabled adults over 2 parcels, was approved by the San Mateo County Planning Commission in 2010, a decision upheld by the Board of Supervisors in March 2011. The project was subsequently appealed to the Coastal Commission on a number of grounds, including the site's location near the environmentally sensitive Pillar Point Marsh, its exposure to natural hazards, and its expected impact on coastal views and local traffic and infrastructure provision. In 2012, the Coastal Commission denied the project's Coastal Development

Permit due to inconsistencies with the LCP. A revised project scope that reduces the project size by condensing the project onto the northern parcel, referred to as the North Parcel Alternative, has since been submitted to the County and is under review. The North Parcel Alternative consists of a 162,000 sq. ft. office and industrial complex (including a wellness center) and a 57 bedroom housing complex for developmentally disabled adults.

Project 8, Repetto, has received planning approval in 2012; however, a building permit for construction has not yet been submitted to the County. The approved project consists of the construction of a new 5,820 square foot two-story warehouse and office building.

Table 2-9 summarizes the development density and intensity of these projects.

TABLE 2–9: ACTIVE DEVELOPMENT PROJECTS SUMMARY, APRIL 2014

#	DESCRIPTION	LAND USE	GROSS ACRES	NON-RESIDENTIAL BUILDING (SQ FT)	FAR	HOUSING UNITS	DENSITY (DU/GROSS ACRE)
1	Herring/Worley	Mixed Use (Commercial/Residential)	0.08	1,622	0.5	2	24.9
2	Johnson/Herring	Mixed Use (Commercial/Residential)	0.08	2,374	0.7	1	12.4
3	Kissick	Commercial	0.11	3,425	0.7	NA	NA
4	Strathdee/ Stebbins	Mixed Use (Industrial/ Office)	0.09	1,981	0.5	NA	NA
5	Big Wave Office Park and Wellness Center	Mixed Use (Office/ Commercial/Residential)	14.88	162,000	0.3	57	3.8
6	Herring/Foss	Industrial	0.51	17,127	0.8	NA	NA
7	Freeman	Mixed Use (Waterfront/ Design Review/Coastal Development)	0.14	2,756	0.5	NA	NA
8	Repetto	Mixed Use (Industrial/ Office)	0.16	5,820	0.8	NA	NA
	TOTAL		**16.05**	**197,105**	**0.3**	**60**	**3.9**
	TOTAL APPROVED AND UNDER CONSTRUCTION		**.34**	**8,162**	**0.6**	**NA**	**NA**

Source: San Mateo County Planning and Building Department, 2014.

2.8 Opportunity Sites

Opportunity sites are sites that could accommodate new development within the planning horizon. Within the Study Area, these may be identified by mapping undeveloped and underutilized land, using the County Assessor's data, field study, and review of aerial photography. Underutilized land is defined here as land where the assessed land value is greater than the assessed value of existing permanent improvements on the land. Open storage yards were also mapped, as a separate category, because no permanent improvements have been constructed on these parcels. Figure 2-8 illustrates the area's opportunity sites in terms of these land uses, and Table 2-10 provides a summary of attributes.

The majority of these individual sites are located within the Princeton waterfront area, which contains 53 vacant or undeveloped parcels (8.2 acres), 32 underutilized parcels (5.2 acres), and 115 parcels (10.6 acres) currently used for open storage. A number of these properties are located in the shoreline area, though they can be found on every block.

Outside of the industrial waterfront, vacant or undeveloped sites can be found at the intersection of Highway 1 and Capistrano road between the airport and agricultural fields, at the eastern end of the Study Area adjacent to the boat

TABLE 2–10: POTENTIAL OPPORTUNITY SITES

LAND USE[1]	ACRES	PERCENT OF TYPE	PERCENT OF TOTAL
Vacant	**38.0**	**100%**	**65%**
Agriculture	17.6	46%	30%
Airport[2]	0.1	0%	0%
Coastside Commercial Recreation	11.2	29%	19%
General Industrial	6.2	16%	11%
Medium Density Residential	1.0	3%	2%
Open Space	1.8	5%	3%
Public Recreation	0.1	0%	0%
Underutilized	**10.2**	**100%**	**17%**
Coastside Commercial Recreation	4.1	41%	7%
General Industrial	5.0	49%	9%
Medium Density Residential	0.2	2%	0%
Open Space	0.9	9%	1%
Open Storage	**10.6**	**100%**	**18%**
Coastside Commercial Recreation	1.2	12%	2%
Waterfront Industrial	9.4	88%	16%
TOTAL OPPORTUNITY SITES	**58.8**	**100%**	**100%**

1 Land uses correspond to current General Plan designations.

2 This parcel, located on the southwest corner of Oak Avenue and Marine Boulevard in the far north of the Planning Area, is designated as Airport, but is privately owned and not part of Airport property.

Sources: San Mateo County Planning and Building Department, 2013; Dyett & Bhatia, 2013.

launch and Sam's Chowder House, and north of the airport property. Additional vacant or undeveloped sites are found at Prospect Way, adjoining Pillar Point Marsh, and along Airport Street, though these may be constrained by environmental factors, such as sensitive habitat or geologic hazards, associated with each site. Agricultural land and conserved open space are not included in this analysis.

Most underutilized sites are also located within the industrial waterfront, though there are also a number located along Capistrano Road. The majority of these are occupied by existing businesses, though one is currently a parking lot.

2.9 Opportunities and Constraints

Future planning efforts in this community will require interfacing with the area's regulatory and physical settings in terms of both compliance and compatibility.

Consistency with the California Coastal Act

The Study Area is located within the Coastal Zone and as such must maintain California Coastal Act consistency by prioritizing coastal-dependent and coastal-related uses, maintain and enhance coastal access and recreation opportunities, protect coastal resources, and preserve visual resources and community character. As discussed in later chapters, the Study Area contains sensitive marine and inland habitats; shoreline accessways in regular use and in need of improvement; shoreline erosion and protection challenges; a highly valued viewshed; active agricultural land; and noted coastal hazards, including tsunami inundation and flood zones, erosive slopes, and a recorded fault line. These present constraints for new development in terms of allowable locations; design and performance standards for new structures; and mitigation considerations for property owners and developers, who may need to convey access easements or restore sensitive habitats.

Airport Compatibility

The Half Moon Bay Airport presents additional compliance challenges for new development in the Study Area, mainly in the form of ground-level safety standards that limit allowable occupancies in the urbanized waterfront. Since 1980, these standards have been enforced through the County's AO district, which sets a limit of three persons allowed on any site at any given time. However, the AO district itself is premised on outdated conditions—the safety zones that were used to define the AO have since been re-evaluated in subsequent updates of the Airport Layout Plan, and are currently in the process of being updated. The updated IADZ and its safety criteria are based on current conditions, and pose a similar challenge. While the IADZ may allow for slightly

higher occupancies, the higher occupancies still do not allow a number of visitor-serving uses such as restaurants. Additionally, the updated IADZ and the ITZ covers a significantly larger portion of the developed area of Princeton, including the CCR district. It also severely limits the potential for new development or expansion of existing uses.

Minimizing Land Use Conflicts and Setting Appropriate Development Standards

Compatibility issues in the Study Area concern the appropriateness of land uses based on the intensity of the use, its impacts on the environment and neighboring uses as associated with daily activity, and its impacts as associated with its built form. These concerns are especially relevant in the Princeton waterfront area and in the areas west of Airport Street.

The presence of a waterfront industrial district allows for the establishment of coastal-dependent uses that are important to the function of the working harbor. However, the presence of industrial uses can pose challenges for the area's environmental quality, due to the large footprints associated with industrial structures and any odors or noises associated with normal industrial activity. Development standards attached to the area's zoning districts are the main regulatory tools used to address these potential impacts. They control the amount of impervious surface that new development introduces to the area, and consequently, the amount of runoff that could potentially reach the harbor and other sensitive sites. In the W zoning district, standards also protect the rights of industrial uses to generate reasonable amounts of odor and noise. These standards may be reviewed for their effectiveness in addressing potential land use incompatibilities, as well as potential impacts on the existing residential and commercial uses already located in this area

The area's development standards play an important role in mitigating potential land use conflicts by determining the spaces that industrial uses reserve for side yards and setbacks in order to protect views, promote air circulation, and provide more pleasant pedestrian experiences. However, potential incompatibilities exist where allowable minimum setbacks conflict with nearby land uses and view protection goals. The M-1 district, in particular, allows development with no setbacks, except where it requires 3-foot side and 6-foot rear setbacks for lots bordering a residential zone. This is problematic due to the adjacency of M-1 districts to the Pillar Ridge Manufactured home park and the open spaces on Pillar Point Bluff.

The Study Area is also sensitive to maximum building heights, particularly along the waterfront and near residential uses. One source of incompatibility in this respect is the M-1 district, currently located along Airport Street, which allows buildings up to 75 feet high. Such heights in that area would likely create a conflict with both the airport and the mobile home community. These heights

could also negatively impact views to the sea from Highway 1, the airport property, Pillar Point Bluff, and the Princeton waterfront, as well as views inland from the ocean towards the mountains.

The M-1 district notwithstanding, existing development standards generally support small-scale development of structures one to three stories in height, with setbacks ranging between 5 to 20 feet for side yards and 20 to 50 feet in the front and rear. However, these height and setback standards should be evaluated to consider their effectiveness in addressing transition areas between different development types and intensities, particularly between residential and industrial uses, as well as in terms of preserving views along the coast.

As stated above, the Study Area is within the Coastal Zone where coastal-dependent and coastal-related uses are prioritized. Additionally, in the attempt to create and maintain a "working waterfront" environment, the W district narrowly defines allowed uses to marine-related trades and services. However, because many of the existing land uses in the shoreline area are storage-based or vacant, the effectiveness of these current limitations in promoting a diversity of coastal-dependent and marine-related uses may require review.

3 Fishing, Boating, and Visitor Needs

This chapter evaluates the primary economic and market conditions affecting growth potential and land use planning in the Princeton Planning Update Study Area (Study Area). It focuses on commercial fishing and related maritime uses as well as tourism and hotel uses.

3.1 Commercial Fishing, Seafood Processing, and Distribution

Princeton is the second most significant commercial fishing port in the Bay Area after San Francisco, and has a long history of commercial fishing and seafood processing. The Romeo Packing Company site, formerly a sardine cannery, dates back to the 1940s. In 1948 the US Congress selected Pillar Point as a location for a major harbor. [1]Though it took decades to fully develop, today the San Mateo County Harbor District manages a protected commercial port at Pillar Point. With the presence of the port facility, commercial/industrial uses developed over time in Princeton. While the productivity of commercial fishing has declined dramatically in recent decades due to fish stock depletion, fisheries regulations, international competition, and other factors, commercial fishing activities and associated maritime land uses such as fish processing remain in Princeton. To assess the potential for future development of maritime-related land uses, this section provides an overview of commercial fishing, seafood processing, and distribution trends in California and the region.

1 San Mateo County Harbor District, Pillar Point Harbor Master Plan (1991).

Commercial Fishing

California

The commercial fishing industry in California has changed dramatically in recent decades. Since 1970, commercial landings (i.e., catch) in California have fallen by about 50 percent. In constant dollars, the value of the landings is down nearly 70 percent. The factors underlying these changes are complex and include, but are not limited to:

- Regulatory restrictions on fishing;
- Globalization of trade;
- Evolving US consumer preferences for seafood; and
- Industrialized supply chain networks and technology advancements.

Chart 3-1 presents trends in California commercial landings since 1970, including pounds landed and total ex-vessel value.[2] With some fisheries recovering from past overfishing and certain niche seafood products gaining market acceptance, total California fish landings appear to have stabilized around 400 million pounds per year. Today's regulatory landscape for commercial fishing and the historic catch trends suggest that the industry is unlikely to grow dramatically.

The California catch is well distributed across the state. After Santa Barbara and Los Angeles, the San Francisco region (including Princeton) ranked as the third most valuable commercial fishing area in California in 2011. While there are greater landings in terms of poundage in Monterey, the value of the fish landed there was less. Chart 3-2 illustrates the landings by pounds and value for the top fishing ports in California.

Fisheries Regulation

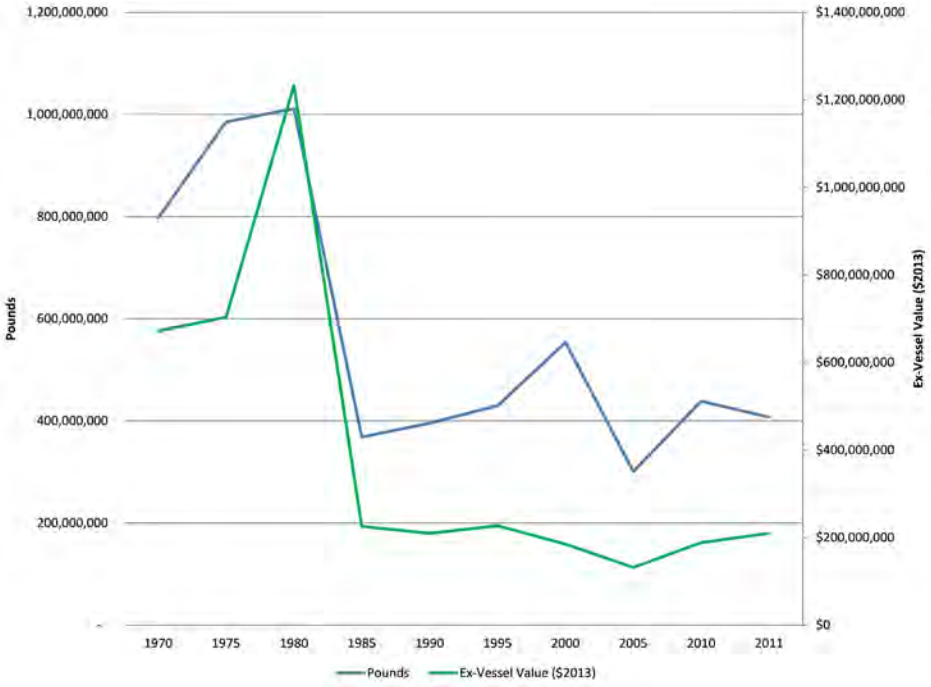
US regulation of commercial fishing increased markedly in the 1970s with the federal government's passage of the **Fishery Conservation and Management Act of 1976.** The Act established regional councils charged with development of Fishery Management Plans. Today, the regional councils recommend regulatory policies related to commercial fishing, including catch limits, constraints on fishing gear, and other restrictions. The Act gives the US Secretary of Commerce power to implement fishery management plans and recommendations received from the regional councils.

California created the **Marine Life Management Act in 1998**. This legislation empowered the Department of Fish and Wildlife to pursue sustainability of marine resources. Specifically, the Act required a new system of marine protected areas (MPAs), re-focusing marine management on ecosystems. Regulations can include quotas, gear restrictions, limited seasons, and reductions in the numbers of runs fished.

The Fishery Conservation and Management Act and Marine Life Management Act are complemented by other federal and state laws, including the Endangered Species Act, the Coastal Zone Management Act, and the National Marine Sanctuaries Act.

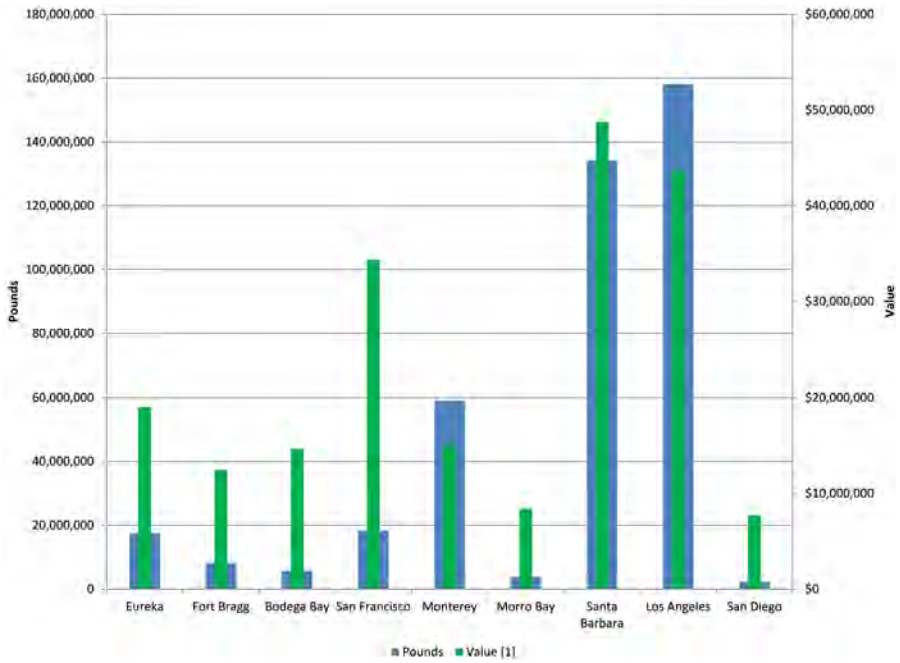
2 Value is computed from prices paid to fishermen. The values reported are only for those landings where a price was listed.

CHART 3-1: CALIFORNIA LANDINGS BY POUNDS AND EX-VESSEL VALUE ($2013)



Sources: Department of Fish and Wildlife and Economic & Planning Systems, Inc.

CHART 3-2: TOP CALIFORNIA FISHING PORTS IN 2011



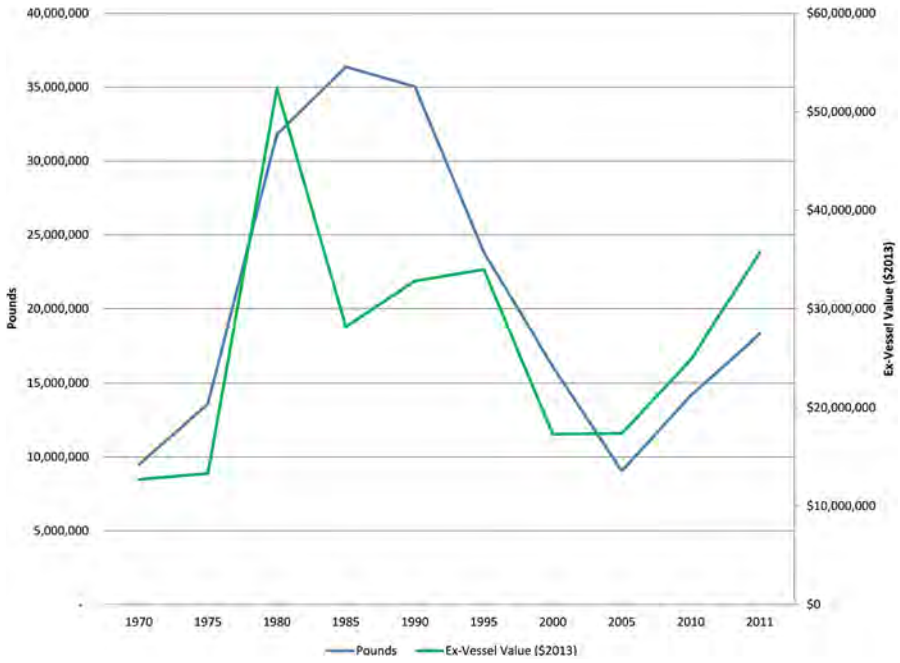
Sources: Department of Fish and Wildlife and Economic & Planning Systems, Inc.

Bay Area

Commercial fishing trends in the Bay Area are somewhat similar to trends statewide. The Bay Area has seen commercial fish landings and value decline dramatically in recent decades. The current real value of landings is above 1970 levels but over 30 percent lower than the real value peak achieved in the early 1980s. Data from recent years reveal an upswing trend but the historic trend shows dramatic variation over time. See Chart 3-3.

San Francisco is the most significant commercial fishing port in the Bay Area, followed by Princeton. Princeton has surpassed San Francisco as the top port at times, though only as an emergency backup. When the 1989 Loma Prieta earthquake damaged San Francisco's commercial fishing infrastructure, Princeton briefly enjoyed higher landings due to displaced fishermen landing their catch at Pillar Point. During this time, the number of wholesalers based in San Francisco dropped from 17 to nine.[3] When San Francisco reopened an updated Pier 45 in 1995, landings shifted back to San Francisco. Chart 3-4 and Chart 3-5 present trends in Bay Area commercial landings and real ex-vessel value, respectively.

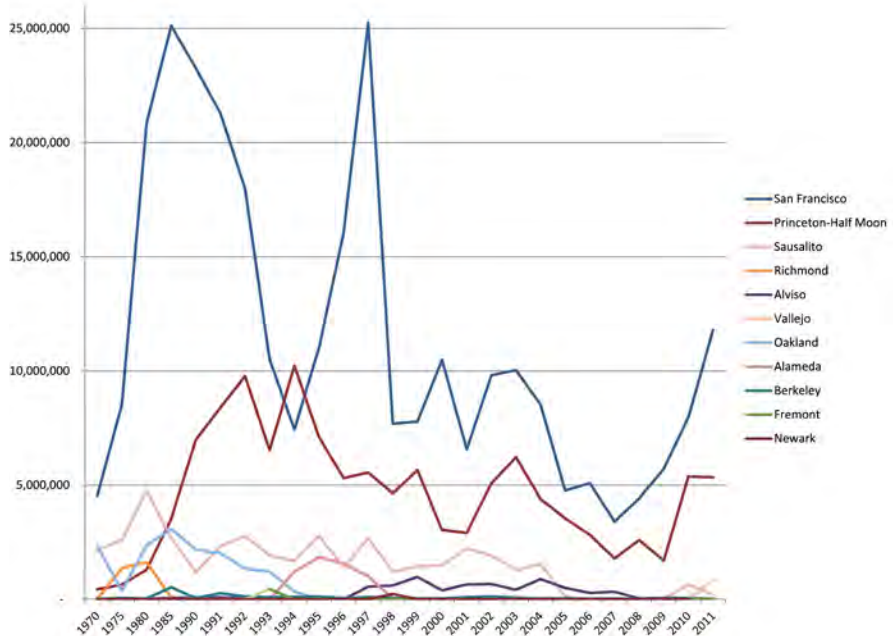
CHART 3-3: BAY AREA LANDINGS BY POUNDS AND VALUE ($2013)



Sources: Department of Fish and Wildlife and Economic & Planning Systems, Inc.

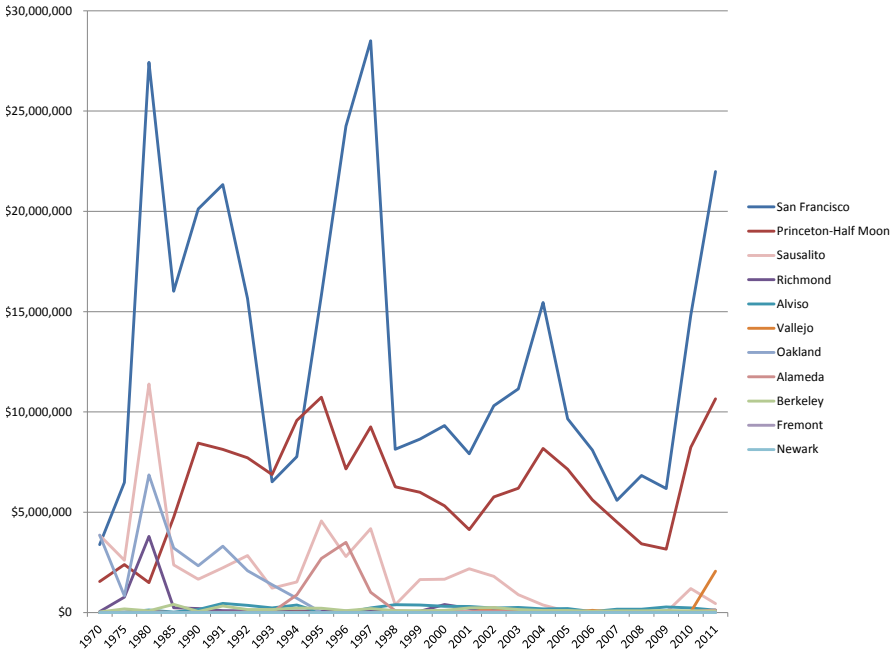
3 John King, "Pier 45 Puts the Fish back in Fisherman's Wharf" (San Francisco Chronicle, September 9, 1996).

CHART 3-4: TOTAL POUNDS OF LANDINGS BY PORT IN BAY AREA



Sources: Department of Fish and Wildlife and Economic & Planning Systems, Inc.

CHART 3-5: TOTAL EX-VESSEL VALUE OF LANDINGS BY PORT IN BAY AREA (2013$)



Sources: Department of Fish and Wildlife and Economic & Planning Systems, Inc.

Commercial fishing boats berthed at Pillar Point Harbor

Princeton

The commercial fish landings in Princeton are currently dominated by crab. While Dungeness crab is one of the oldest commercial fisheries in California and has been regulated since 1895, it has become more of a commercial focus in recent years. Four of the five statewide record-setting seasons occurred between 2001 and 2011.[4] In 2011, Dungeness crab accounted for over 80 percent of ex-vessel value in Princeton, as shown in Table 3-1. Other valuable species in Princeton include sablefish and Chinook salmon. Local fishermen have indicated that squid could be a growth opportunity in Princeton. In 2011, commercial fishermen landed about 1.4 million pounds of squid in Princeton, but at $0.25 per pound the total value of landings was only about $350,000.

Examining historic landing by fish type, Princeton, consistent with the history of California fisheries, exhibits variation in catch over time. Rockfish was at the top of the list, by weight, in 1980 and 1990, though salmon landings were worth more in those years. As recently as 2000, salmon was the number one catch by weight and value in Princeton. However, the salmon fishery has weakened and regulations have become more restrictive, and crab has become the top grossing catch. Table 3-2 presents snapshots over time of commercial fish landings in Princeton, as compared with San Francisco.[5]

TABLE 3–1: TOP FIVE FISHERIES BY VALUE IN 2011

RANK	SPECIES	POUNDS	VALUE	$ / LB	% TOTAL POUNDS	% TOTAL VALUE
Princeton						
1	Crab, Dungeness	3,412,663	$8,338,694	$2.44	64%	81%
2	Sablefish	158,791	$560,346	$3.53	3%	5%
3	Salmon, Chinook	57,925	$390,420	$6.74	1%	4%
4	Squid, market	1,408,943	$352,700	$0.25	26%	3%
5	Halibut, California	61,301	$272,427	$4.44	1%	3%
San Francisco						
1	Crab, Dungeness	6,318,080	$15,315,998	$2.42	54%	72%
2	Swordfish	617,901	$2,076,957	$3.36	5%	10%
3	Herring, Pacific - roe	3,453,089	$859,819	$0.25	29%	4%
4	Tuna, albacore	451,165	$847,107	$1.88	4%	4%
5	Sablefish	208,651	$733,303	$3.51	2%	3%

Sources: Department of Fish and Wildlife and Economic & Planning Systems, Inc.

4 California Department of Fish and Wildlife, Status of the Fisheries Report an Update Through 2011 (2013). https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=65489&inline=true.

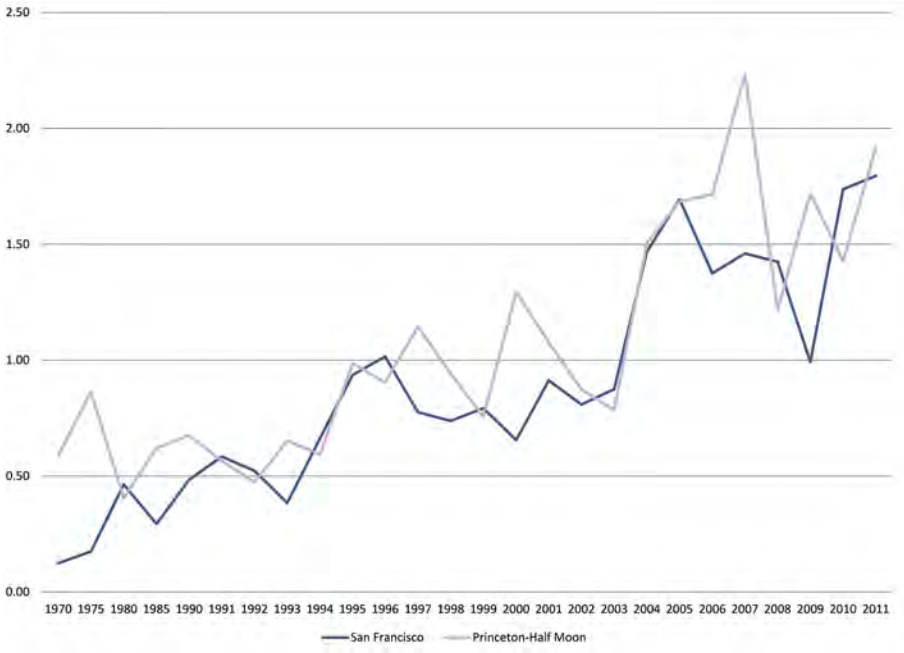
5 This analysis focuses primarily on fish landings and ex-vessel value, rather than employment. Jobs data for fishermen (who are mobile and commonly organized as sole proprietors) are unreliable. Further, data for localized unincorporated geographic areas were not available. The fish landings and their associated value provide the best understanding of the underlying economic trends in the commercial fishing industry in Princeton.

TABLE 3–2: TOP THREE FISHERIES BY YEAR (1970-2011)

YEAR	BY POUND	BY VALUE
Princeton		
1970	Salmon, Crab, Abalone	Salmon, Crab Abalone
1980	Rockfish, Salmon, Crab	Salmon, Crab, Abalone
1990	Rockfish, Sanddab, Salmon	Salmon, Abalone, Rockfish
2000	Salmon, Sanddab, Crab	Salmon, Crab, Halibut
2010	Crab, Squid, Sablefish	Crab, Squid, Sablefish
2011	Crab, Squid, Sablefish	Crab, Sablefish, Salmon
San Francisco		
1970	Sole, Crab, Rockfish	Sole, Crab, Salmon
1980	Herring, Rockfish, Sole	Herring, Salmon, Rockfish
1990	Herring, Rockfish, Anchovy	Herring, Salmon, Rockfish
2000	Herring, Salmon, Sanddab	Herring, Salmon, Crab
2010	Crab, Sole, Swordfish	Crab, Swordfish, Halibut
2011	Crab, Herring, Swordfish	Crab, Swordfish, Herring

Sources: Department of Fish and Wildlife and Economic & Planning Systems, Inc.

CHART 3-6: DOLLARS PER POUND BY PORT (2013$)



Sources: Department of Fish and Wildlife and Economic & Planning Systems, Inc.

Customer purchasing fish at Pillar Point Pier

Despite differences in the catch, since 1970 the per-pound value of fish landed in Princeton has kept pace with the trend in San Francisco. In fact, the per-pound value of fish landed in Princeton commonly exceeds the per-pound value of landings in San Francisco.

The San Mateo County Harbor District supports the commercial fishing industry in Princeton by maintaining a protected harbor and providing berthing, emergency services, a commercial buying center, and other facilities (ice-making facilities, a fuel dock, pump-out facilities, etc.). The Harbor District licenses three wholesale seafood businesses to operate on the pier.[6] The District also allows direct-to-consumer sales (off the boat). To support these retail sales, the Harbor District has set up a phone number that customers can use to learn what fish are available on any given day.

Seafood Processing and Distribution

The seafood processing and wholesale seafood industries in California have generally evolved from companies dependent on the local catch to intermediaries in a globalized seafood supply chain. While seafood consumption in the US has grown at an average annual rate of 1.6 percent from 1970 to 2011, US fish landings have not kept up. Today, suppliers source over 90 percent of seafood consumed in the US from outside the country.[7] Commonly, seafood is flown in and trucked to major consumer markets. For major processors and wholesalers, it is no longer necessary to be located near the ocean. However, some small-scale niche businesses still focus on native fish, and for those businesses, proximity to a working harbor and strong relationships with fishermen are critical.

California

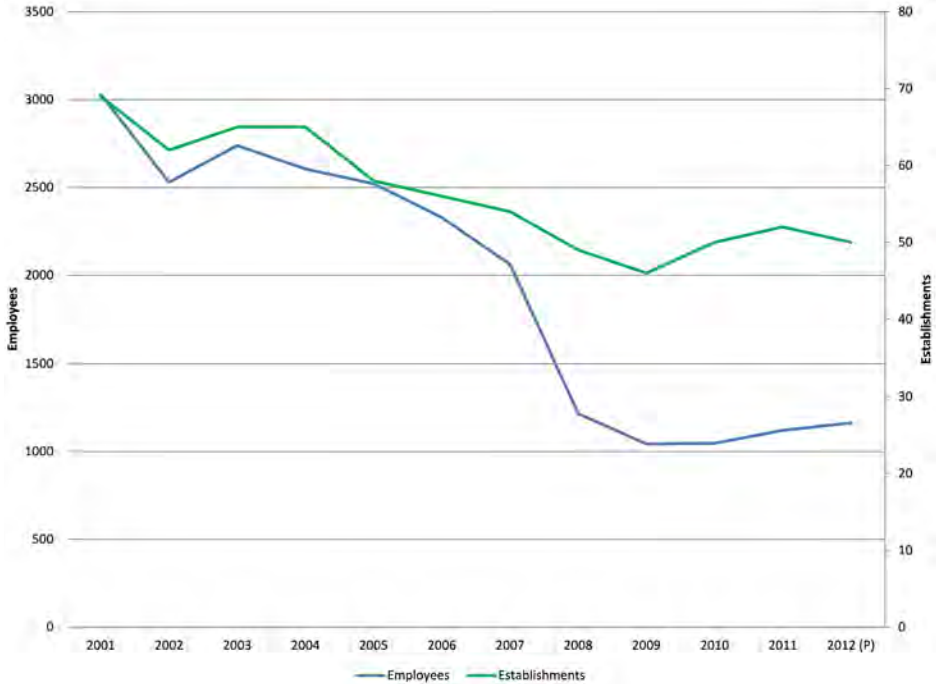
Seafood processing has generally followed the decline in local commercial fisheries landings, likely because much of the seafood arriving in California is pre-processed. The Bureau of Labor Statistics (BLS) provides data on the number of establishments and employees in California that work in the Seafood Product Preparation and Packaging industry. These data show a 28 percent decline in the number of establishments from 2001 to 2012, and a 62 percent decline in the number of employees. Chart 3-7 presents the number of seafood product preparation and packaging establishments and employees in California from 2001 to 2012.

Over the same time period, the California wholesale seafood industry has grown along with increased demand for seafood. BLS data reveal that the number of Fish and Seafood Wholesalers in California increased by 15 percent between 2001 and 2012. However, likely due to technology investments and other efficiency measures, employment in this industry has fallen back to early-2000s levels (the data reveal a 2 percent decrease in the number of employees

6 San Mateo County Harbor District, Pillar Point Harbor Facilities and Services http://www.smharbor.com/pillarpoint/ppservices.htm.

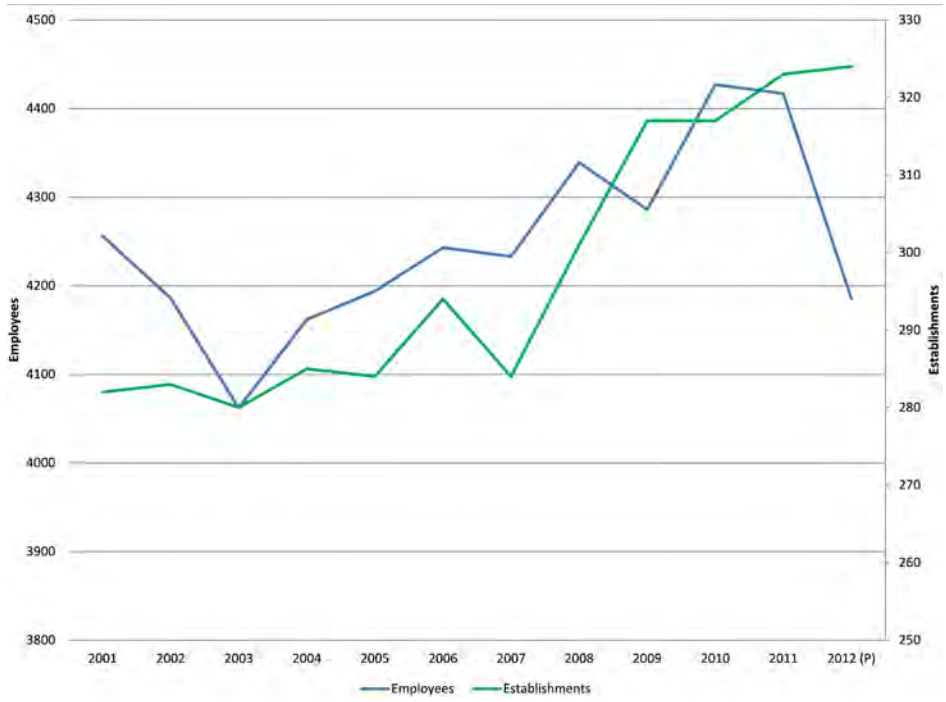
7 NOAA Fish Watch.,"Outside the U.S." http://www.fishwatch.gov/farmed_seafood/outside_the_us.htm.

CHART 3-7: CALIFORNIA SEAFOOD PRODUCT PREPARATION AND PACKAGING (2001-2012)

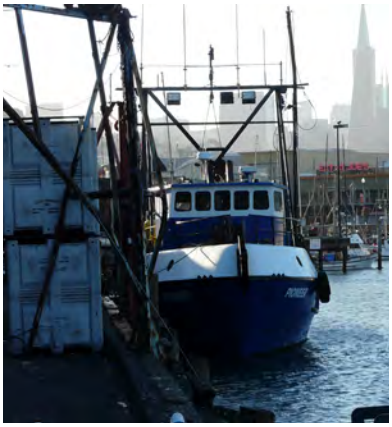


Sources: Bureau of Labor Statistics and Economic & Planning Systems, Inc.

CHART 3-8: CALIFORNIA FISH AND SEAFOOD MERCHANT WHOLESALERS



Sources: Bureau of Labor Statistics and Economic & Planning Systems, Inc.



Commercial fishing boat at Pier 45 in San Francisco

from 2001 to 2012). Chart 3-8 shows the number of fish and seafood merchant wholesalers in California from 2001 to 2012.

Bay Area

The San Francisco Port is the most significant commercial fishing port in the Bay Area. When the City and County of San Francisco assumed responsibility for the port in the late 1950s, it was in poor condition. San Francisco created a Port Commission which expanded cargo terminals and improved a number of piers (Piers 94-96 and Pier 80). When the Embarcadero highway came down, high-value visitor-serving uses were anticipated on the Northern Waterfront. However, in 1990 voters passed Proposition H, which banned the Port from developing new hotels along the waterfront. In response, the Port Commission created the 27-member Waterfront Planning Advisory Board and worked with stakeholders to create a new Waterfront Land Use Plan, finalized in 1997. The Plan increased the potential of commercial fishing and seafood business in San Francisco by designating maritime areas. Currently, the San Francisco commercial fishing and seafood industries are largely consolidated at Pier 45, near the Hyde Street Harbor where commercial fishing boats are berthed.

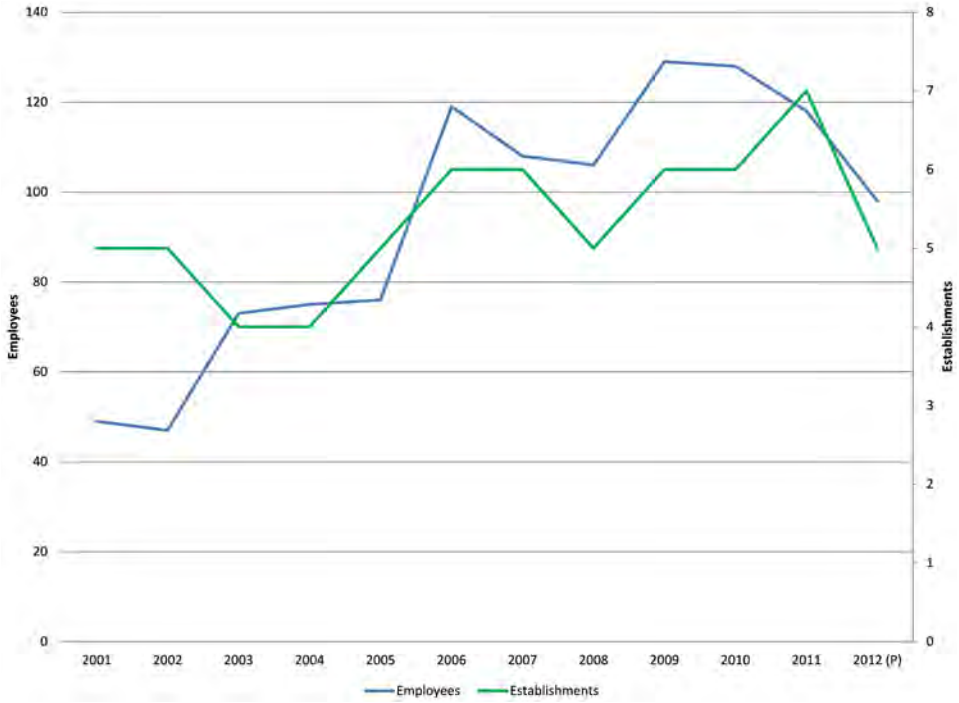
The trends in fish processing in San Francisco differ from the statewide picture. In San Francisco, the seafood processing industry has been growing, adding a significant number of employees over the past decade. The number of employees working in Seafood Product Preparation and Packaging in San Francisco has doubled since 2001 (see Chart 3-9). San Francisco's success is largely attributable to its central location within one of the largest and most affluent metropolitan areas in the US. Further, the city is well-connected to developed supply networks, including international airports and the interstate highway system. Fish are brought in from around the world, as well as trucked in from other ports along the Pacific coast. Another major growth factor is that the Port of San Francisco has invested heavily in Pier 45 and has made space there available to seafood businesses at low cost, which has attracted the region's major processors and distributors.

The Port of San Francisco renovated the Pier 45 facility in the mid-1990s, after the Loma Prieta earthquake crippled the old pier in 1989. In support of revitalizing the fishing and seafood industries in San Francisco, the federal government contributed $7.6 million toward the repair of Pier 45.[8] With this major re-investment, Pier 45 was transformed into the "most modern fish facility on the West Coast."[9] The updated Pier includes an industrial ice machine, cold storage units, and showers. With low rental rates for tenant businesses, Pier 45 is an attractive location for a variety of seafood business, including those that buy from local fishermen at the pier and others that deal exclusively in fish coming from other sources.

8 John King, "Pier 45 Puts the Fish back in Fisherman's Wharf" (San Francisco Chronicle, September 9, 1996).

9 Quote by Bob Miller (the president of the Crab Boat Owners Association, representing the fishing fleet). John King, "Pier 45 Puts the Fish back in Fisherman's Wharf" (San Francisco Chronicle, September 9, 1996).

CHART 3-9: SAN FRANCISCO COUNTY SEAFOOD PRODUCT PREPARATION AND PACKAGING



Sources: Bureau of Labor Statistics and Economic & Planning Systems, Inc..

Princeton

Though Princeton was initially planned in 1908 as a seaside resort and was planned for residential uses through the 1940s, the growth in commercial fishing during the 1930s and 1940s and development of a protected harbor supported commercial maritime-related development. Romeo Packing Company, a sardine cannery which now operates as a fertilizer producer, dates back to the 1940s. In 1948, the US Congress selected Pillar Point as a location for a major harbor.[10] By the late 1950s, the federal government had begun construction on a breakwater to establish a protected harbor at Princeton. In the 1960s, San Mateo County built a pier and other facilities to support commercial and recreational marine activities. At one time there was a private boat haul-out and active boatyard uses in Princeton. Warehousing and the development of dry and open storage facilities occurred in the 1970s.[11] Today, the industrial area of Princeton exhibits a diverse mix of uses, including maritime-related activities. Commercial real estate data indicate that Princeton currently offers over 300,000 square feet of industrial space, about 60 percent of the rentable building area found in the Coastside region, including coastal San Mateo County areas of Pacifica and Half Moon Bay.[12]

10 San Mateo County Harbor District, Pillar Point Harbor Master Plan (1991).

11 Princeton Area Study Revised Background Report (August 1986).

12 CoStar Group Commercial Real Estate Data

In the 1930s and 1940s, sardine products constituted a major source of revenue for the US commercial fishing industry, making up around 25 percent of total landings by weight.[13] Princeton's commercial fishing industry thrived during this time and was home to two canneries, Romeo Packing Company and Princeton Packers. At the height of the sardine fishery in 1945, fishermen landed 2 million pounds of fish in Princeton, mostly sardines.[14] In the late 1940s, the collapse of the sardine industry forced the canneries in Princeton to close. Princeton Packer's sold their property[15] to an automobile dealer and Romeo's transitioned into a fish-based fertilizer production plant. Later, as the fertilizer industry changed, the Romeo Packing Company moved away from fish-based products.[16]

While Pillar Point remains a significant harbor for commercial fish landings in the Bay Area, there are only two fish processors left in Princeton. Exclusive Fresh, Inc. opened in 1986 as a wholesale-only business serving the region. Today, Exclusive Fresh has 40 employees and 15 delivery trucks serving markets and restaurants in the Bay Area and beyond.[17]

General food manufacturing in San Mateo County has also declined in recent years, with 29 percent fewer businesses in 2012 than in 2001 (see Chart 3-10). And while there are no new processing or wholesale seafood businesses in Princeton, there is one notable project application for Princeton. TwoXSea, a San Francisco-based company, has proposed a seafood processing and wholesale facility in Princeton. An early version of the project was approved by the Zoning Hearing Officer but was later appealed to the Planning Commission. A new plan was resubmitted in August of 2012 and is currently being considering by the Planning Commission.

13 California Department of Fish and Wildlife, Status of the Fisheries Report an Update Through 2011 (2013). https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=65489&inline=true.

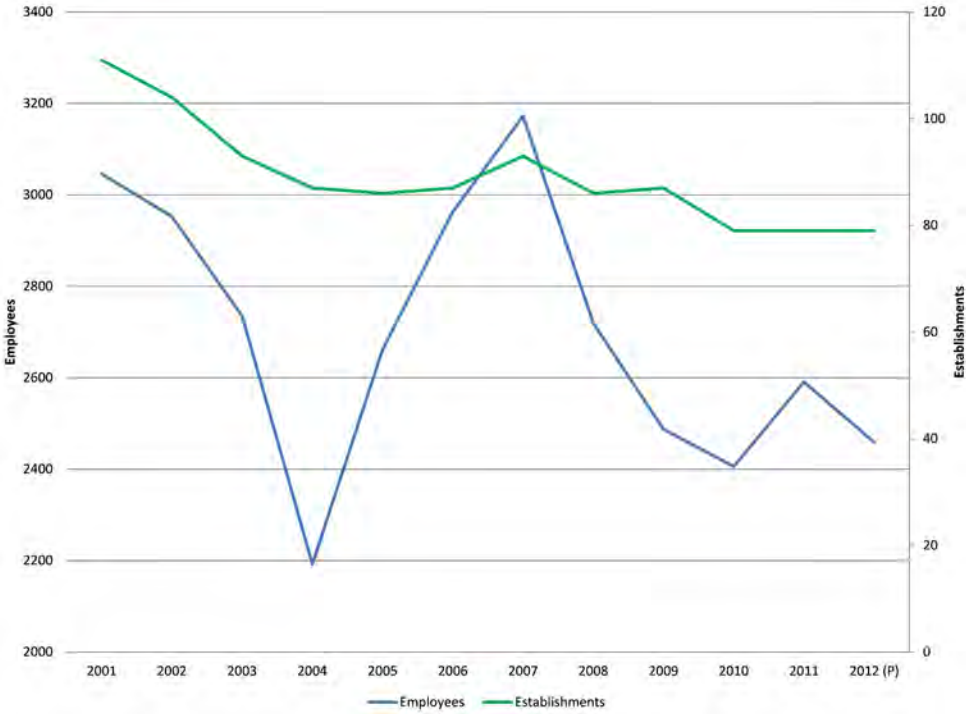
14 W.L. Scofield, State of California Department of Fish and Game Marine Fisheries Branch, Fish Bulletin No. 96: California Fishing Ports,"Princeton-By-The-Sea" (1954). http://www.oac.cdlib.org/view?docId=kt667nb1cg;NAAN=13030&doc.view=frames&chunk.id=d0e2765&toc.id=0&brand=oac4.

15 "Princeton Packers Property is Sold" (San Mateo Times, November 10, 1955). http://newspaperarchive.com/san-mateo-times/1955-11-10/page-16.

16 Romeo Packing Co., "About Us." http://www.romeopacking.com/aboutus.htm.

17 Exclusive Fresh, Inc., "About Us." http://www.exclusivefresh.com/about.html.

CHART 3-10: SAN MATEO COUNTY FOOD MANUFACTURING



Sources: Bureau of Labor Statistics and Economic & Planning Systems, Inc.

Opportunities and Constraints

Due to the decline of the commercial fishing industry in California over the last several decades, seafood-related business expansion is unlikely to be a major economic driver in Princeton going forward, although there may be some opportunities for small-scale, local-serving specialty seafood projects or ventures.

California's commercial fishing industry grew rapidly in the first half of the 20th Century, initially focused on sardines and later sustained by tuna, and today California's commercial fishermen seek a variety of marketable fish. Since 1970, however, commercial fish landings in California have fallen by about 50 percent and by nearly 70 percent in terms of market value (in constant dollars). After a precipitous decline during the early 1980s, California's fisheries appear to have stabilized to some degree. In the Bay Area, the current real value of landings is above 1970 levels but about 30 percent lower than the peak achieved in the early 1980s.

Pillar Point Harbor in Princeton is the second most significant commercial fishing port in the Bay Area, with over $10 million in landings in 2011. Nonetheless, commercial fishing is a narrow-margin business that is continually struggling to remain profitable. Princeton remains a viable commercial fishing port primarily because of the strength of the crab fishery. In addition, the San Mateo County Harbor District supports commercial fishing through facilities at Johnson Pier. The Harbor District also promotes direct-to-consumer sales at Pillar Point, which allows fishermen to get top dollar for specialty fish such as wild salmon.

While demand for seafood continues to grow, imported seafood also continues to gain market share. San Francisco has benefitted to some degree from globalization, enjoying increased employment in seafood processing and distribution, largely because the City is centrally located in the Bay Area, well-connected to supply networks (airports, interstate highways), and fishing-business friendly, with low rents offered by the Port Commission. There is a growing seafood product niche that focuses on local and sustainable seafood products. For businesses focused on seafood sourced directly from local fishermen, Princeton may be an attractive location. A current project proposal for a locally-sourced seafood processing facility in Princeton supports this notion.

Although the California commercial fishing industry overall does not appear to have growth potential, and though seafood wholesaling and processing is typically attracted to centralized locations in major metropolitan areas, there are opportunities for Princeton. Princeton is the second most significant commercial fishing port in the Bay Area with 87 percent of Bay Area landings by pound, excluding San Francisco.[18] With its proximity to Silicon Valley, the South Bay and points south, such as Santa Cruz, along with its existing commercial fishing activity and potential for more landings (e.g., squid), Princeton could attract regional, niche processors and wholesalers.

Interviews conducted as part of this study indicate that additional supportive infrastructure in Princeton might help bolster local commercial fishing and processing. Recommendations for public investment include a boat haul-out facility for commercial fishermen and better working waterfront connections between the Pillar Point pier and Princeton's industrial area (e.g., a lane for fork-lifts moving product between the pier and processing/storage/distribution facilities). While such improvements might generate marginal economic benefits to the working waterfront, it does not appear that a lack of infrastructure in Princeton is a major impediment to growth in commercial fishing and seafood processing. Fundamental natural resource constraints and market conditions are the primary limiting conditions. However, if it is determined that specific infrastructure improvements are desirable, then benefits and costs, funding alternatives, and physical feasibility factors should be considered in detail. The San Mateo County Harbor District commissioned a study of the potential operation and financial feasibility of a boat haul-out facility at Pillar Point Harbor. Released in 2007, the study found that "a private contractor could not be expected to make the relatively large capital investments necessary to construct and develop either a do-it-yourself or full service haul-out facility" and that the "San Mateo County Harbor District would be required to provide most or all of the funds required to develop a do-it-yourself or full service haul-out facility." The study determined that a District constructed haul-out facility would not generate sufficient fees to cover debt service payments, and the rate of return on the investment would be less than the District's minimum of 5%.

18 California Department of Fish and Wildlife (2010).

Research also suggests that there may be opportunities for local fishermen to grow their direct-to-consumer sales. While direct-to-consumer sales do occur today, additional marketing and potentially supporting facilities (e.g., cold storage or retail space) might increase direct sales. One industry expert suggests that supporting facilities might be managed by a commercial fishing cooperative. For example, in San Francisco, the recently-established San Francisco Community Fishing Association (SFCFA) gives local fishermen the opportunity to sell their catch directly to wholesale fish processors, restaurants, grocery stores, and fish cooperatives. In the future, SFCFA plans to open a retail store at Fisherman's Wharf to sell its members' catch directly to Bay Area consumers. A similar cooperative might contribute to the sustainability of small-scale commercial fishing businesses in Princeton.

Even with new or improved infrastructure, facilities, and business organizations, research clearly indicates that the opportunity for growth in the seafood industry in Princeton is modest. While the area is attractive to some highly-specialized businesses, major seafood processors and distributors are likely to continue to favor San Francisco and other locations that are well positioned relative to supply chain networks.

Princeton land use opportunities related to the seafood industry are likely to be unique and cannot be forecasted as historical market trends do not reveal any sustained pattern of growth. However, it is unlikely that the entirety of the industrial area of Princeton would ever be needed to satisfy land use demand from seafood and related industrial uses. Some niche seafood uses may be attracted to Princeton, particularly local and regional serving, high-value operations. In addition, a wide variety of other industrial uses will continue to be drawn to Princeton, in most cases because it is the only industrially-zoned land between Pacifica and Half Moon Bay (see Figure 2-3 to see the extent of industrial zoning in the Study Area). In some cases, industrial space users, such as metal workers for example, may locate in Princeton to serve both maritime-related and non-maritime clients.

As discussed in the next section, the opportunities for economic growth in Princeton are primarily related to the tourism sector. To the degree that local commercial fishing and seafood businesses can harness the spending power of visitors to Princeton, there may be additional potential for growth. For example, it may be possible to increase the visibility of Princeton as a working waterfront through the introduction of a high-profile institutional use. An educational museum or research center might raise public awareness of working waterfront activities and serve as a visitor attraction. Market support for an institutional use of this nature depends on the focus of the institution, visitor orientation, programming, amenities, marketing, and other factors, though as discussed in the next section, broad tourism trends are favorable for new visitor-oriented uses.

3.2 Tourism

The Coastside region of San Mateo County, including the City of Half Moon Bay and surrounding unincorporated communities, is a popular recreation and tourism destination for day and overnight, leisure, and business visitors. The Half Moon Bay Coastside Chamber of Commerce and Visitors' Bureau estimates that there were nearly 3.8 million visits to the region in 2012, with over 60 percent coming from Northern California. Coastal San Mateo County also is a common stop for domestic and international visitors traveling California's famed State Route 1 Pacific Coast Highway.

The Coastside region is host to a variety of events each year, from weddings and conferences to special events such as the Pumpkin Festival, Mavericks Invitational international surf competition, and the Dream Machines show. Even with the significant tourism present in the Coastside region today, a Sunset Magazine article recently suggested that "the San Mateo stretch of Highway 1 is its most underrated. Unjustly." If growth can be accommodated in Princeton, there is great market potential to add to the tourism economy there.

The Coastside region offers visitors a variety of recreational activities, including:

- Beach recreation and surfing
- Boating, fishing, whale watching
- Hiking, walking, sightseeing
- Spas and yoga

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Princeton is home to the Mavericks Invitational international surf competition.

- Golf
- Farm Visits and Farmers Markets
- Horseback riding
- Dining
- Shopping
- Music, theater, events

In the Study Area, hotels, restaurants, and shops proximate to the working harbor draw tourists to the area. In addition, there are a number of on-the-water recreation activities that originate from the Pillar Point Harbor in Princeton, including boating, fishing, and sightseeing tours. While most visitors to Princeton arrive by automobile, the area is also accessible by boat via the Pillar Point Harbor and by plane via the Half Moon Bay Airport.

Pillar Point Recreational Boating

While sightseeing, beach recreation, and shopping/dining are the most common recreational activities occurring in and around Princeton, Pillar Point Harbor facilities support a significant amount of recreational boating. The recreational boating activity around Princeton includes motorized and non-motorized outings. Motorized boating, which is largely focused on sport fishing pursuits, includes charter boat cruises, boat trips from the Pillar Point Small Craft Launch Ramp, and boat trips supported by the berthing facilities and moorings within the Pillar Point Harbor.

Frequently, boats are trailered in to launch at the Harbor District ramp located to the east of Johnson Pier. These boating trips are largely associated with sport fishing and usage trends correlate to a great degree with fishing conditions. The Harbor District's launch revenue data reveal significant variation in launch activity month to month, and year to year. For example, in August 2013 there were nearly 750 launches in July and over 1,100 launches in August, while during February there were almost none. In total, the Harbor District reports that there were about 7,740 launches in 2013, higher than in 2011 or 2012.[19]

Recreational boaters also take advantage of the berths at Pillar Point Harbor. According to the Harbor District, a greater share of the berths is occupied by recreational boats today, about 50 percent now, versus about 40 percent in the past.[20] Available data concerning the occupancy of Pillar Point Harbor berths reveals that in general occupancy has been trending up in recent years. Historically, the harbor had been 100 percent occupied. However, with the closure of California's commercial and recreational salmon fishery in 2008 and 2009, harbor occupancy declined. Data from 2011 through 2013 show that occupancy

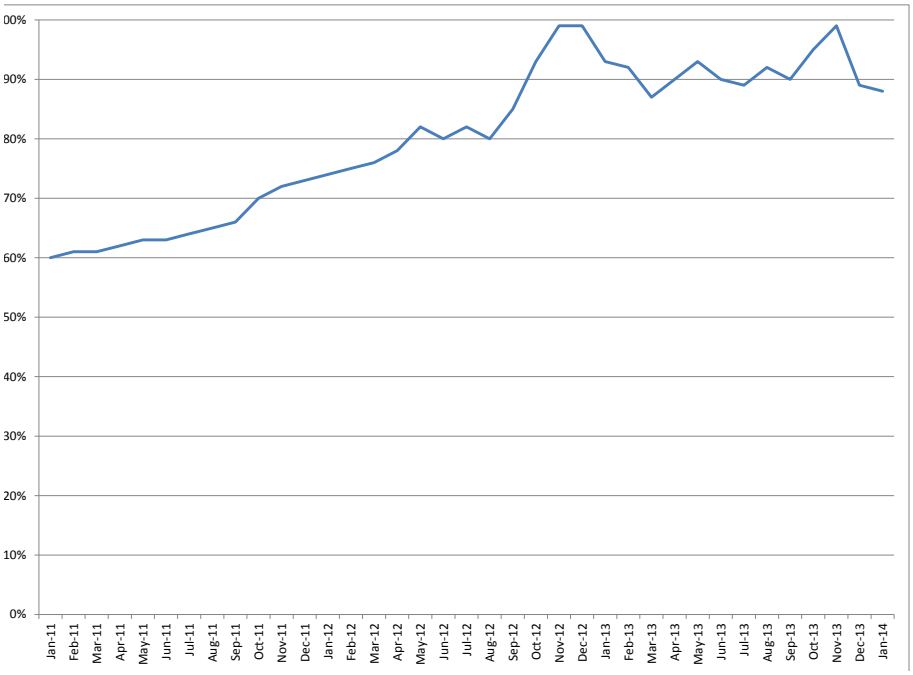
19 Personal communication with SMCHD staff.

20 Personal communication with SMCHD staff.

has recovered, from about 60 percent in January 2011 to almost 90 percent in January 2014.

Non-motorized boating originating at Pillar Point includes sailing, sea kayaking, and paddle boarding. These activities are supported by a number of local entities, including two boat rental companies and the Half Moon Bay Yacht Club. These entities provide a variety of services including boat rentals, classes, and guided tours.

CHART 3-11: HARBOR BOAT SLIP OCCUPANCY



Source: San Mateo County Harbor District.

Half Moon Bay Airport

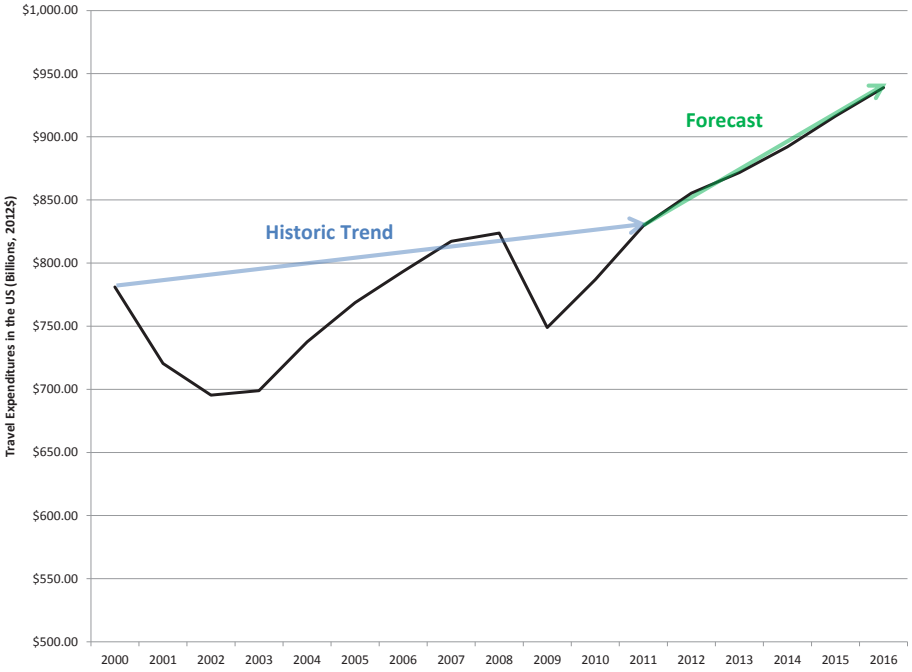
Anecdotal information from the Half Moon Bay Airport suggests that the Airport is increasingly a "destination airport" for recreational aviation. There is significant "fly-in activity" that generates visits to Princeton businesses, including restaurants, shops, and Johnson Pier. The FAA estimates that the airport supports 40,000 to 60,000 runway uses (i.e., takeoffs and landings) per year, including air ambulance/medevac, law enforcement/homeland security, Coast Guard, business, and recreation operations.[21] Business and recreation uses include charter operations and private flights. The airport offers transient aircraft parking (i.e., tie downs) for visiting planes. Planned investments onsite at the airport include a camping area and bicycles for visitor use.

21 Personal Communication with Half Moon Bay Airport staff.

Travel Expenditure Trends

Along with stabilizing economic growth in the US and world economy, the US travel industry has steadily rebounded from a cyclical low in 2009. Spending in the US by domestic and international travelers reached over $800 billion in 2011. The US Travel Association projects that US tourism growth is sustainable. With annual real spending growth of over 5 percent from 2009 to 2011 and recent and future annual growth forecasted to be 2 to 3 percent, the US Travel Association forecast indicates that travel expenditures in the US could reach nearly $940 billion (2012$) by 2016, a real increase of roughly 13 percent over 2011 (see Chart 3-12).

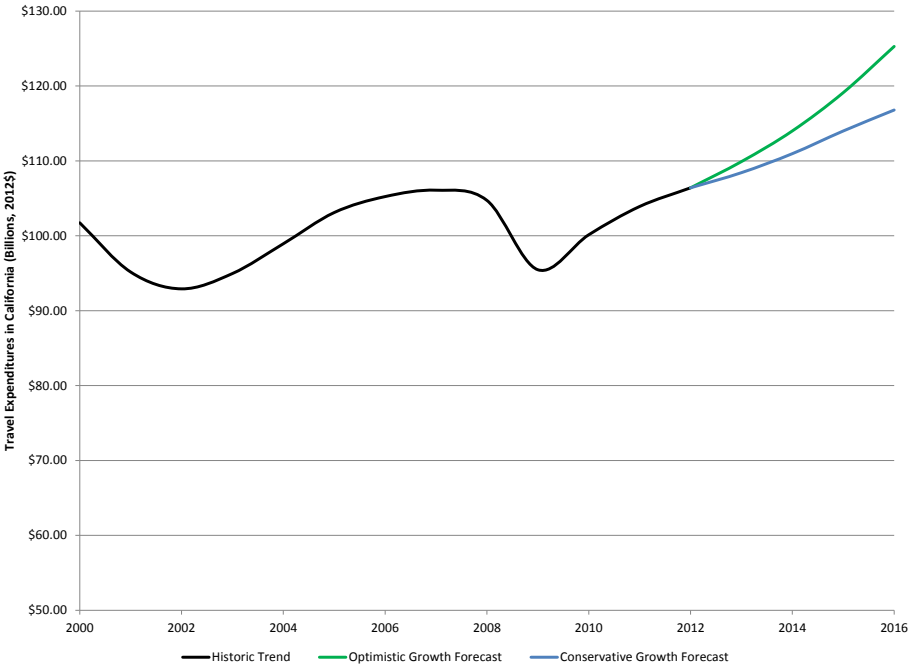
CHART 3-12: US TRAVEL EXPENDITURE TREND AND FORECAST (2012$)



Source: US Travel Association.

In California, the travel industry has also grown from the spending lows of the recent recession, though real estimates of 2012 travel spending are only slightly above 2007. Travel spending in California was about $104 billion (2012$) in 2011. If travel spending in the state keeps pace with the US Travel Association forecast for the US, expenditures could rise to about $117 billion (2012$) by 2016, a 13 percent real increase over 2011. However, a more optimistic forecast by Tourism Economics (conducted for Visit California) indicates that tourism spending could grow even faster, to approximately $125 billion (2012$) by 2016, roughly 20 percent growth in real spending over 2011 (see Chart 3-13).

CHART 3-13: CALIFORNIA TRAVEL EXPENDITURE TREND AND FORECAST



Sources: Dean Runyan Associates; Tourism Economics; USTA; and Economic & Planning Systems, Inc.

In San Mateo County, travel expenditures have trended similarly to the state overall, with the county as a whole capturing about 3 percent of total California travel spending. Travel expenditures in San Mateo County were about $2.9 billion in 2011. If the county tourism spending continues to keep pace with statewide tourism growth, total travel expenditures could grow by as much as $600 million (2012$) annually by 2016, over 2011 spending levels.

Hospitality

Consistent with the trends in travel spending, the hotel industry in the San Francisco Bay Area and Coastside hospitality market has rebounded from the recent recession and appears to be poised for growth.[22] Both occupancy and average daily room rates in 2012 are higher than in 2007, within the Coastside market and broader region.

Market Trends and Characteristics

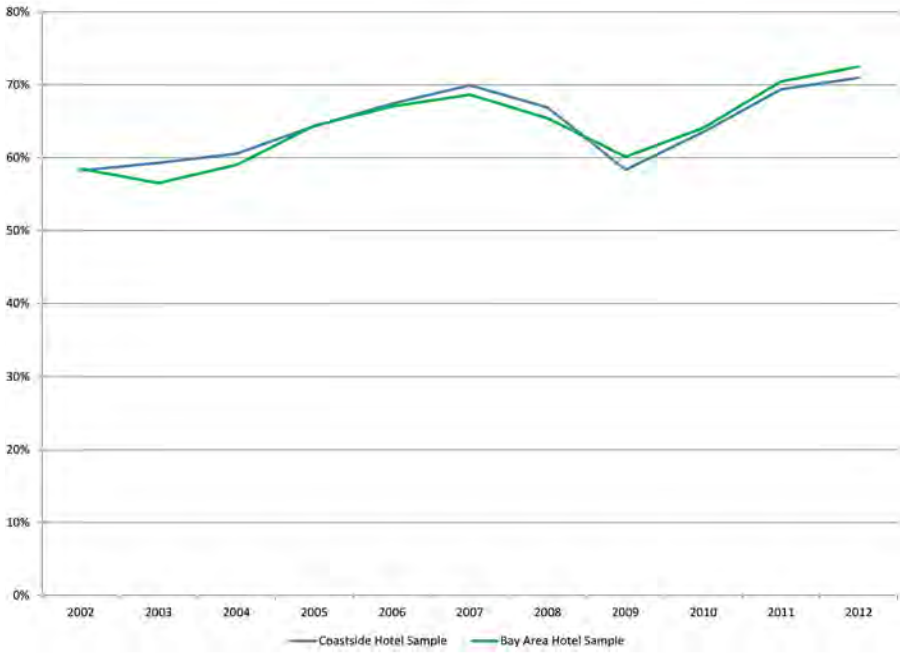
EPS analyzed data from a sample of hotels from the Coastside hospitality market (including Pacifica) and the Bay Area overall. The data included major lodging establishments but do not capture smaller accommodations such as inns, bed and breakfasts, or vacation rentals. The sample provides adequate data

22 The Coastside Hospitality Market was defined for the purposes of this study, based on market characteristics and data availability. The Coastside Market analyzed here includes the City of Pacifica. Data sample limitations related to confidential business information prevent analysis of a more localized market area.

for analysis of market trends and characteristics, despite the lack of smaller-scale visitor accommodations.[23]

The occupancy rate in the Coastside market area is now over 70 percent, well above the average of 64 percent observed between 2002 and 2012, and just above the cyclical high in occupancy reached in 2007. The overall trend in the broader Bay Area market is very similar, with the annual occupancy rate in 2012 reaching about 72 percent (see Chart 3-14).[24]

CHART 3-14: HOTEL OCCUPANCY TRENDS IN THE COASTSIDE HOSPITALITY MARKET AREA AND SAN FRANCISCO BAY AREA



Sources: Smith Travel Research and Economic & Planning Systems, Inc.

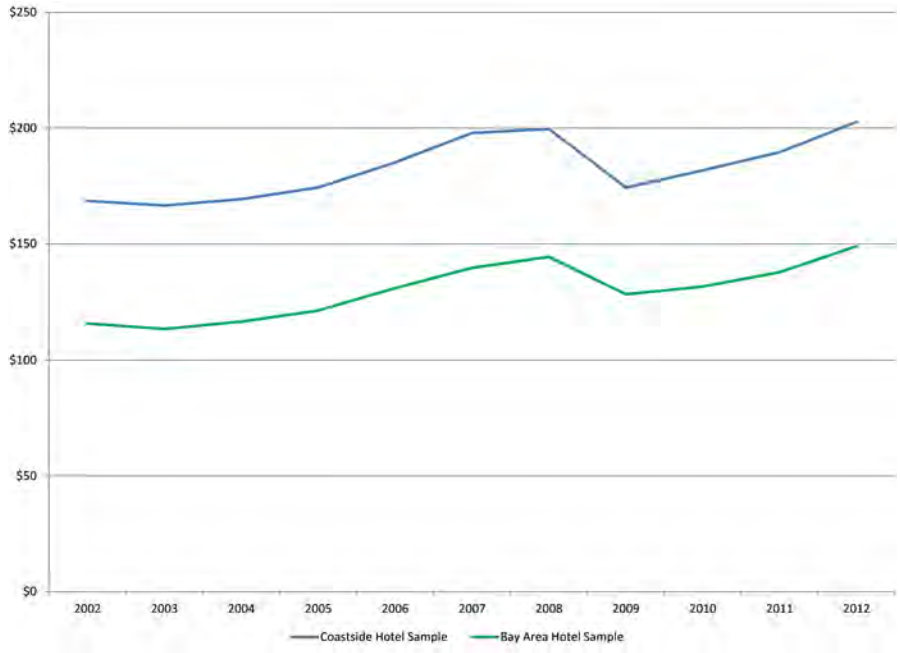
The trending of the average daily room rate is also positive for the hotel industry Coastside and across the Bay Area. Available data reveal that room rates locally and throughout the metro area have exceeded 2008 highs (unadjusted for inflation). The average daily room rate for the Coastside market area was over $200 in 2012 (see Chart 3-15).

The relatively high average daily room rate of over $200 in the Coastside market area reflects hotel product orientation that is somewhat more upscale and tourist-oriented than the broader Bay Area market. About 22 percent of the rooms in the Coastside market area are considered "luxury," versus about 12 percent in the larger Bay Area market, while only 17 percent of rooms in the Coastside market are rated "economy class," as compared with roughly 34 percent in the Bay Area.

23 Data concerning vacation rental homes were not available for this study.

24 Stabilized occupancy of 70 percent is generally considered strong by hospitality industry professionals.

CHART 3-15: HOTEL ROOM RATES COASTSIDE AND IN THE SAN FRANCISCO BAY AREA



Sources: Smith Travel Research and Economic & Planning Systems, Inc.

Coastside Region and Princeton

The Half Moon Bay Chamber of Commerce and Visitors' Bureau estimates that there are over 900 rooms in lodging establishments in the Coastside region, about 112 of which are in Princeton (and about 600 of which are in the City of Half Moon Bay). The hotel data sample reveals that the Coastside rooms are relatively high-quality compared to the metro market, but still well distributed across the price scale, with roughly 1/5th economy, 2/5ths midscale, 1/5th upscale, and 1/5th luxury class rooms. The 112 rooms in Princeton, just over 10 percent of the Coastside market, are within two primary lodging establishments, Oceano (which includes the Pillar Point Inn) and the Inn at Mavericks.

The Oceano Hotel and Spa is a 95-room luxury hotel that opened in 2008. Located on Pillar Point Harbor, Oceano offers views of the coast from private balconies. The hotel commonly hosts weddings and other events, with facilities that include a "Wedding Garden" and a 4,400 square-foot ballroom. For business groups, Oceano includes five function rooms and over 8,000 square feet of meeting space (capacity for up to 350 people). There is also a restaurant/bar, day spa, and 1,400 square-foot fitness center located within the hotel. Adjacent to the hotel are the Shops at Harbor Village, an enclosed retail center with 25 boutique-style storefronts. The Pillar Point Inn is an 11-room lodging establishment next door that is run as an extension of the Oceano Hotel.

The Inn at Mavericks is a six-room lodging establishment with a beachfront patio, rooms with designated water-facing yards (pet friendly), and balconies

Oceano Hotel in Princeton

The Inn at Mavericks

with views. The nearby Mavericks Lodge and Event Center, under the same ownership as the Inn, offers over 2,000 square feet of flexible open space for meetings and special events.

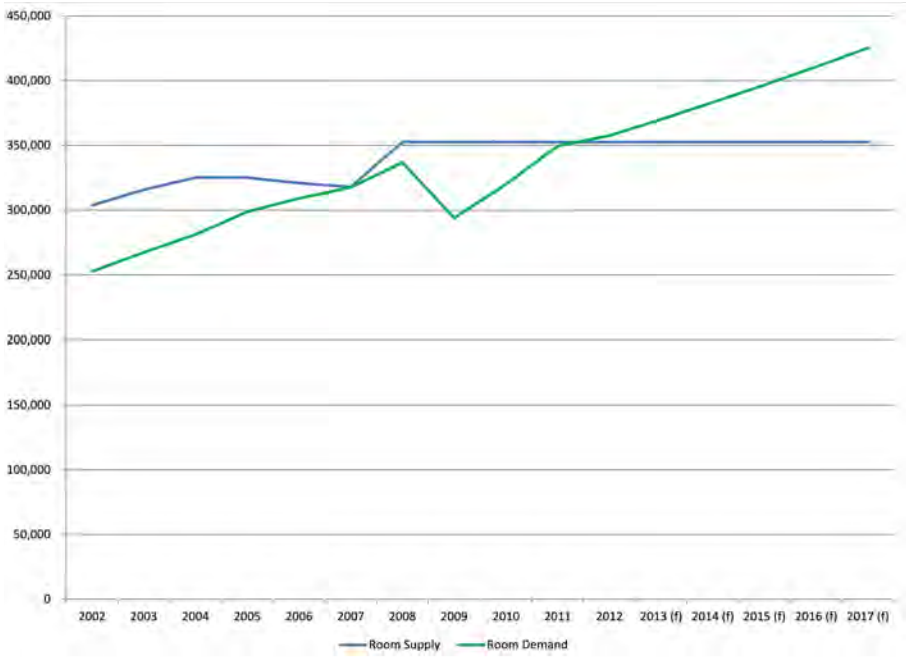
Hotel Demand Outlook

Based on historic hotel performance trends and generally consistent with forecasts for domestic and California travel spending, this analysis provides a planning-level projection of hotel demand in the Coastside market area. The projection is an estimate of market-supportable hotel room nights in the Coastside market area from 2013 to 2017. Chart 3-16 presents the number of room nights that could be added to the market without negatively affecting the occupancy performance of existing hotel properties (i.e., 70 percent occupancy is sustained[25]). The analysis estimates the Coastside Market Area could add nearly 73,000 room nights by 2017. The Market Area forecast reflects 3.5 percent annual room night growth, consistent with the historical trend. Under this forecast, demand for roughly 200 new rooms would be achieved by 2017.

The projected hotel room growth could occur anywhere within the Coastside market area, though Princeton is particularly well positioned for hotel rooms given the waterfront location, success of Oceano and the Inn at Mavericks, and the concentration of retail, restaurants, and recreational activities there. New hotel rooms could be supplied through multiple smaller lodging facilities or one large establishment.

25 Stabilized occupancy of 70 percent is generally considered strong by hospitality industry professionals. Historical occupancy cycles for a market area provide an indication of the stabilized occupancy level in the market. In this market, 11 years of data indicate average occupancy of 64 percent. However, due to the severity of the 2008-09 economic recession, this analysis conservatively assumes that an occupancy rate above 70 percent likely would result in unaccommodated demand.

CHART 3-16: ROOM NIGHT DEMAND ESTIMATE



Sources: Smith Travel Research and Economic & Planning Systems, Inc.

Retail

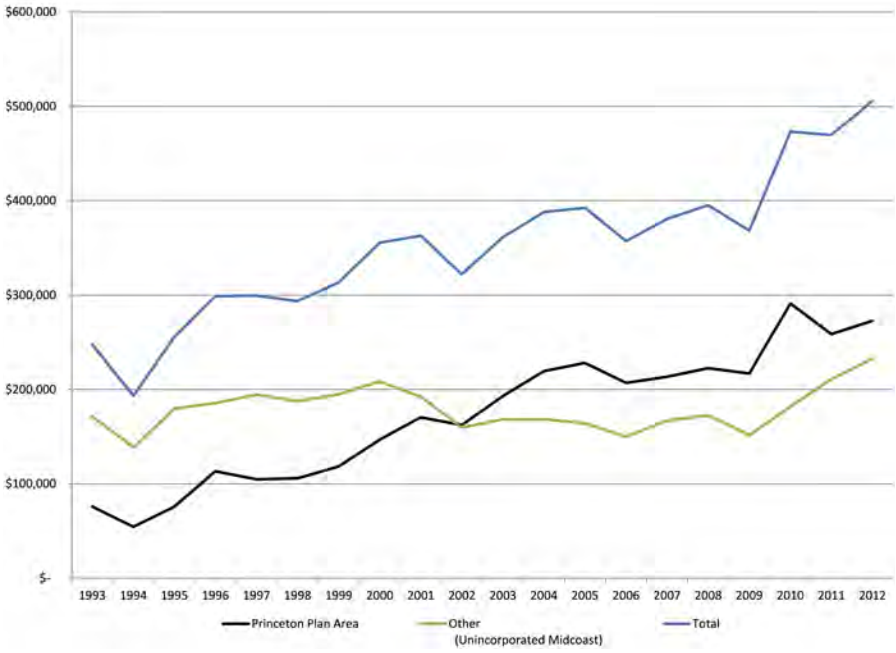
Princeton currently supports an appealing mix of retail and restaurant uses. In general, the retail and restaurants are targeted at the visitor market, though some specialty shops likely appeal to locals as well. Shopping and dining is found along Capistrano Road; at Harbor Village, an indoor shopping center adjacent to the Oceano Hotel; and at Johnson Pier (just outside of the Study Area).

The Shoppes at Harbor Village

To evaluate retail land use performance in Princeton and the Coastside region, this study analyzed retail sales tax revenue trends based on data obtained from San Mateo County (see Chart 3-17). The data reveal that Princeton has led the sales growth in the unincorporated Midcoast region (between Pacifica and Half Moon Bay) in recent decades. Real retail sales in Princeton increased at an average annual rate of about 7 percent between 1993 and 2012. By comparison, retail sales in the rest of San Mateo County's unincorporated Highway 1 corridor grew by about 2 percent in real terms. Anecdotal accounts indicate that Princeton has, in recent years, achieved a strong and growing "center of gravity" for tourism, with new lodging, restaurants, shopping, and recreation offerings.

With more hotel rooms and increased levels of visitation to the Coastside region, market demand for retail, restaurant, and recreation uses will grow. Princeton has established itself as a worthwhile stop for coastal visitors and recent retail sales growth has been very healthy. This strongly positive trend suggests that retail in Princeton is viable and that there is momentum for additional retail sales if tourism trends increase in demand from current levels.

CHART 3-17: COASTAL SAN MATEO COUNTY SALES TAX REVENUE TREND (2013$)



Sources: San Mateo County; HdL; and Economic & Planning Systems, Inc.

Opportunities and Constraints

With tourism enjoying a strong comeback from the recent recession, and given the successes of tourism-driven projects in Princeton, the area is well-positioned to further develop its visitor-serving economy, including continued expansion of lodging, retail, and recreation activities and land uses.

The Coastside region of San Mateo County attracts visitors from throughout Northern California and also serves as a common stop for domestic and international visitors traveling California's State Route 1. With ocean views and direct access to the waterfront, Princeton is a competitive location for new investments in hospitality, retail, and recreation business ventures.

Overall, Princeton is well-positioned to enjoy new investment in hospitality, retail, and recreation businesses and a number of indicators suggest it has become an important tourism focal point in the Coastside region. Today, there are over 900 rooms in lodging establishments in the Coastside region, about 112 of which are in Princeton. Coastside lodging consists of relatively high-quality, leisure-oriented establishments, and some newer business-appropriate accommodations.

Looking forward, travel spending in the Coastside region could grow by 13 to 20 percent over five years, consistent with broader forecasts. With this growth generating additional demand for overnight visits, the Coastside market area could support 200 new rooms by 2017, some or all of which might be located in Princeton. Along with new rooms, retail, restaurant, and recreation opportunities will also increase with visitation and travel spending.

Public investments, including new and improved access to the waterfront and "placemaking" features, as well as additional parking for visitors could increase the potential of the Princeton tourism economy in the future.[26] In Princeton, more public spaces and walking routes that connect people to the waterfront would be appealing to out-of-town visitors, as well as locals, potentially elevating the visitor experience and generating increased length of stay, repeat visits, and new visitors. For instance, while the California Coastal Trail runs through Princeton, it is not well developed. Improving this trail—as is planned for the long-term—is one potential strategy that would provide a better linkage between Princeton's tourism businesses and the coastline (e.g., the West Shoreline Trail and Pillar Point). Also, stakeholders frequently mention that parking can be a constraint in the Princeton during peak times. To the degree that potential visitors to Princeton are deterred by parking limitations, increased or improved parking facilities might support additional growth in the tourism economy.

A new institutional use in Princeton also could contribute to growth of the tourism economy. For example, an educational museum or research center could serve as a visitor attraction and cultural anchor in Princeton. While local

26 Placemaking involves the planning, design, and management of public spaces to support the cultural, economic, and environmental factors that define a place.

leaders have expressed interest in this type of use, the market support for such a concept is difficult to assess without detailed information related to market orientation, programming, facilities, and other parameters. In most cases, institutional facilities are not exclusively market-supported, and require financial support from outside sources. Thus the economic feasibility, including one-time development costs and on-going operations, would need to be carefully considered.

A potential policy consideration for the Princeton Plan Update is whether visitor-serving uses might be allowed within the industrial area of Princeton. As evidenced by this analysis, the potential for economic development through increased tourism is greater than through commercial fishing and related activities. If some level of visitor-serving use is acceptable in the industrial area of Princeton, economic development potential would be increased. In contemplating this policy change, it is important to recognize that hospitality uses benefit greatly from physical connections and views to the waterfront. If more tourism uses are to be allowed, it makes good economic sense to provide for those uses at strategic sites proximate to the waterfront.

3.3 Agriculture

The total value of agricultural production in San Mateo County was $140 million in 2012 and while significant, value is down from more than $180 million in 2004 (see Chart 3-18 and Table 3-3).[27] At $137 million, production value in 2011 was the lowest in a decade. Over the past 10 years, floral and nursery products and vegetable crops have decreased in value by $47 million in San Mateo County. However, the value of field crops, fruit and nut crops, forest products, and livestock and apiary products has increased by nearly $3.9 million over this period, offsetting losses slightly.

The economic importance of agriculture exceeds its production value. In the Coastside region, agriculture is an integral part of the landscape and culture. Residents and visitors to the region enjoy the open space and locally-grown food and farm products offered by local agriculture. Some farms welcome visitors, and the annual Pumpkin Festival is the Coastside region's biggest event. In addition, smaller events such as Farm Day and Tour des Fleurs connect residents and visitors with local agriculture.

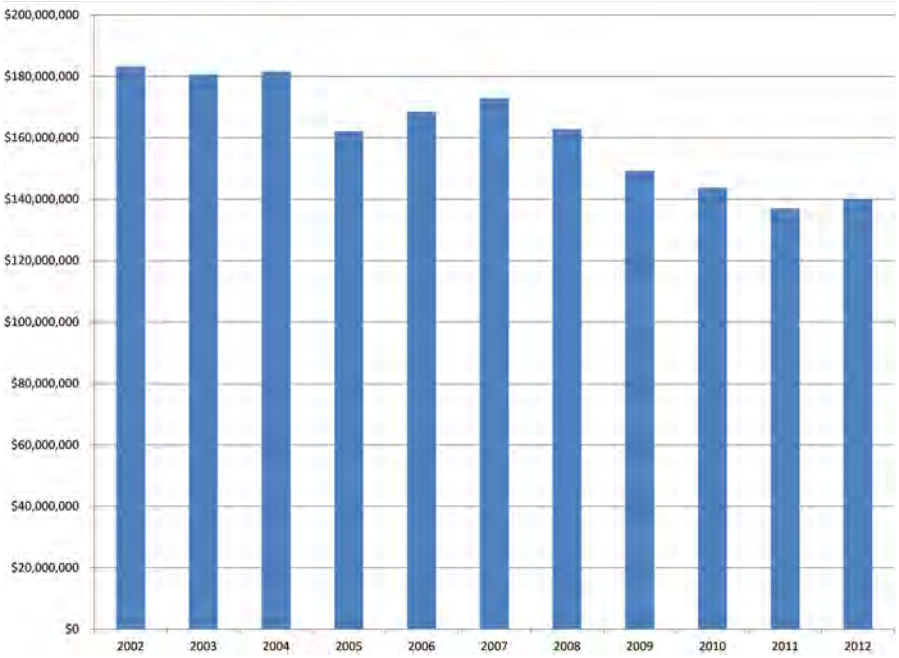
In the Study Area, the County General Plan designates about 20 percent (approximately 150 acres) of the Princeton Study Area for agricultural land uses. However, much of this agricultural land is within the County-owned Pillar Point Bluff section of the Fitzgerald Marine Reserve (developed with hiking trails, including the well-known Jean Lauer Trail portion of the California Coastal Trail). According to existing use data provided by the County,

27 While detailed data on agricultural production value is only available at the County-wide level, anecdotal evidence suggests that the Coastside region of San Mateo County accounts for the bulk of agricultural activity.

agricultural uses occur on less than 5 percent of the land in the Study Area. Though slightly inconsistent with the County's existing use data, a review of aerial photography also indicates that a modest amount of farming occurs in the Study Area, namely between Highway 1 and Capistrano Road and around the Half Moon Bay Airport, including on the airport property as well as land south of the Pillar Ridge residential area.

While agriculture is not likely to be an economic driver or growth industry for Princeton, continued farmland conservation and local food production activities benefit the region through aesthetic, cultural, and economic contributions that benefit residents, local businesses, and visitors.

CHART 3-18: SAN MATEO COUNTY AGRICULTURAL PRODUCTION VALUE



Source: San Mateo County Department of Agriculture & Weights and Measures.

TABLE 3–3: AGRICULTURAL VALUE BY COMMODITY (IN THOUSANDS, 2002-2012)

			CHANGE	
AGRICULTURAL COMMODITY	2002	2012	VALUE	PERCENT
Floral And Nursery Crops	$144,035	$113,844	($30,191)	-21%
Vegetable Crops	$34,170	$17,385	($16,785)	-49%
Field Crops	$778	$933	$155	20%
Fruit And Nut Crops	$1,131	$1,764	$633	56%
Livestock	$1,580	$2,459	$879	56%
Apiary Products	$278	$1,668	$1,390	500%
Forest Products	$1,176	$1,979	$803	68%
TOTAL	**$183,148**	**$140,032**	**($43,116)**	**-24%**

Source: San Mateo County Department of Agriculture & Weights and Measures.

Opportunities and Constraints

Agricultural lands within the Princeton Study Area contribute to the rural character of the area and bolster tourism and farm sales regionally, through farm-related events and farmers markets, but agriculture is unlikely to be a major contributor to land use demand in the Study Area.

In the Coastside region, agriculture is an integral part of the landscape and culture. Residents and visitors to the region enjoy the open space and bounty of the land. Some farms welcome visitors and the annual Pumpkin Festival is the Coastside region's biggest event. In addition, smaller events such as Farm Day and Tour des Fleurs connect residents and visitors with local agriculture. While agriculture may not be an economic driver or a growth industry for Princeton, continued farmland conservation and local food production activities benefit the region through aesthetic, cultural, and economic contributions that benefit residents, local businesses, and visitors.

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4 Environmental Resources

This chapter provides a comprehensive review of the biological, scenic, cultural, and water quality resources in the Princeton Planning Update Study Area (Study Area). Relevant background, policies, constraints, and opportunities are presented.

4.1 Natural Resources

The Study Area contains a diverse mixture of plant communities and habitat types adapted to the coastal zone, topography and soils, and historical uses of the region.

Regional Setting

The Half Moon Bay Airport occupies a large portion of the Study Area, and includes agricultural, non-native grassland, ruderal (i.e. disturbed), and developed habitats. Between the airport and the Pacific Ocean to the west, developed, agricultural, coastal scrub, wetland, riparian (i.e. on banks of natural watercourses), and coastal bluff habitats are present. The County of San Mateo Department of Parks manages Pillar Point Bluff, an approximately 140-acre bluff-top open space area with trails and views of Pillar Point Harbor, agricultural lands, and the Fitzgerald Marine Reserve. The majority of commercial and residential development in the Study Area lies south of the Half Moon Bay airport, between Cornell Avenue and Pillar Point Harbor, and along the waterfront. Agricultural row crops are present north and east of commercial development associated with Pillar Point Harbor, and Pillar Point Marsh and the Pillar Point Air Force Station lie to the southwest (refer to Figure 4-1). Wetland and riparian habitats and recorded occurrences of special-status plant and animal species are primarily located along Denniston Creek and in the southwestern portion of the Study Area near Pillar Point Marsh (refer to Figure 4-2).

The mild Mediterranean climate of the area and coastal influence produce summer temperatures averaging 52 to 65 degrees Fahrenheit (°F), winter temperatures averaging 43 to 58 °F, and annual precipitation averaging 26 inches. Fog and onshore wind from the northwest are common throughout the year along the San Mateo coastline. The Natural Resources Conservation Service Web Soil Survey depicts dominant soils in the Study Area as consisting of Denison loams, sandy loams and clay loams, Elkhorn sandy loams, and Miramar sandy loams.

Local Coastal Plan Sensitive Habitats

The protection of natural resources within San Mateo County is addressed by several policies recently adopted as part of the Midcoast Local Coastal Program (LCP) Update within the Sensitive Habitats Component of the LCP. Policy 7.1 of the LCP General Policies defines sensitive habitats as "any area in which plant or animal life or their habitats are either rare or especially valuable and any area which meets one of the following criteria: (1) habitats containing or supporting "rare and endangered" species as defined by the State Fish and Game Commission, (2) all perennial and intermittent streams and their tributaries, (3) coastal tide lands and marshes, (4) coastal and offshore areas containing breeding or nesting sites and coastal areas used by migratory and resident water-associated birds for resting areas and feeding, (5) areas used for scientific study and research concerning fish and wildlife, (6) lakes and ponds and adjacent shore habitat, (7) existing game and wildlife refuges and reserves, and (8) sand dunes." LCP Policy 7.2 states to "designate sensitive habitats as including but not limited to, those shown on the Sensitive Habitats Map for the Coastal Zone." Based on the Sensitive Habitats Map presented in the County of San Mateo General Plan (delineations are shown in Figure 4-2), the following Sensitive Habitats are present within the Study Area:

- Fitzgerald Marine Reserve (Marine and Estuarine Habitat, Wildlife Refuges, Reserves, and Scientific Study Area)
- Pillar Point Marsh (Wetlands)
- Denniston Creek, San Vicente Creek (Riparian Corridor)

The map also identifies Rare, Endangered, or Unique Species locations:

- Pillar Point (Mammals)
- Pillar Point Marsh (Birds, Reptiles and Amphibians)
- Northwestern inland extend of Study Area (Reptiles and Amphibians)

The Princeton Plan Updates will need to address ensure protection of these habitats, including consideration of potential habitat impacts caused by sea level rise.

Figure 4-1: Habitat Map

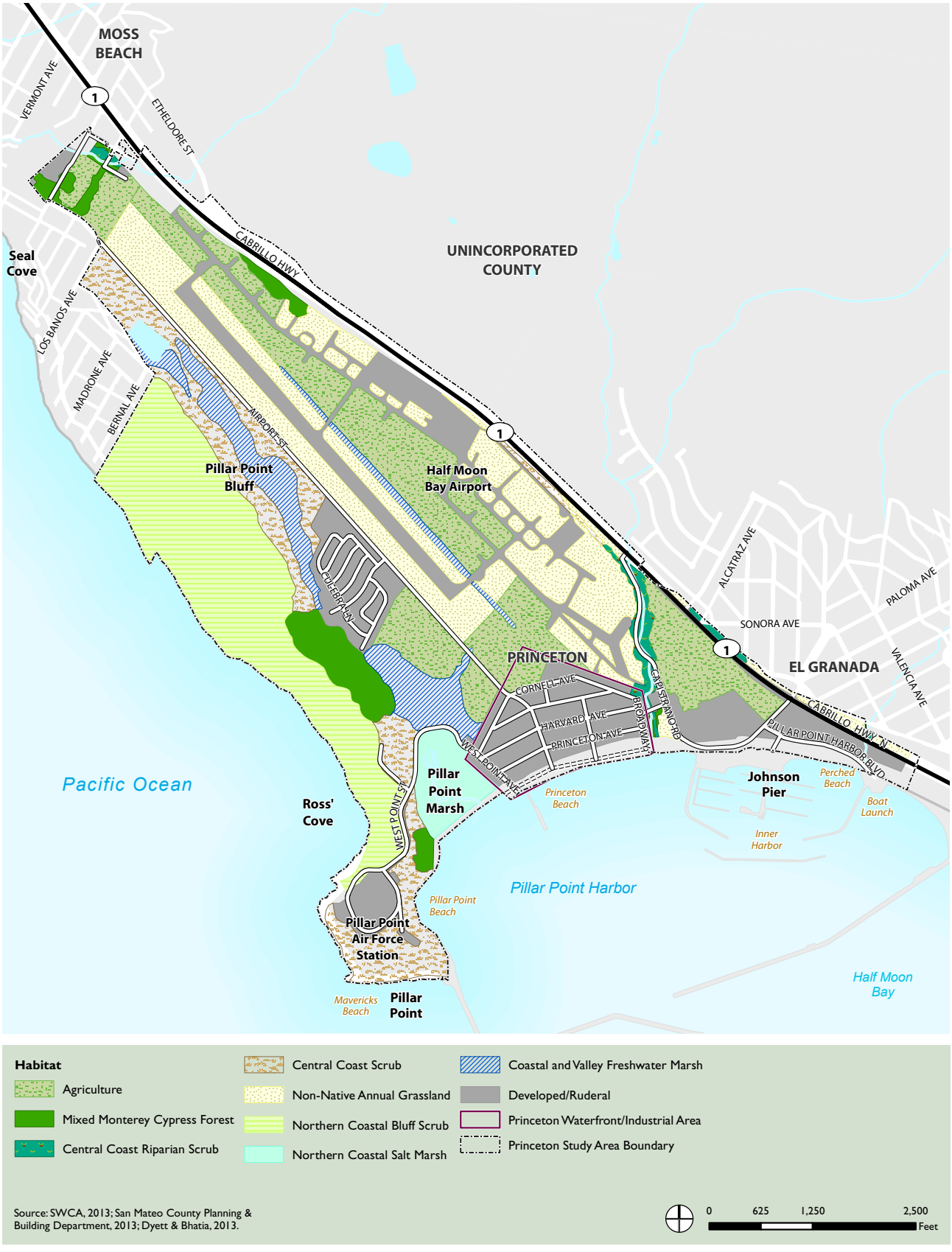
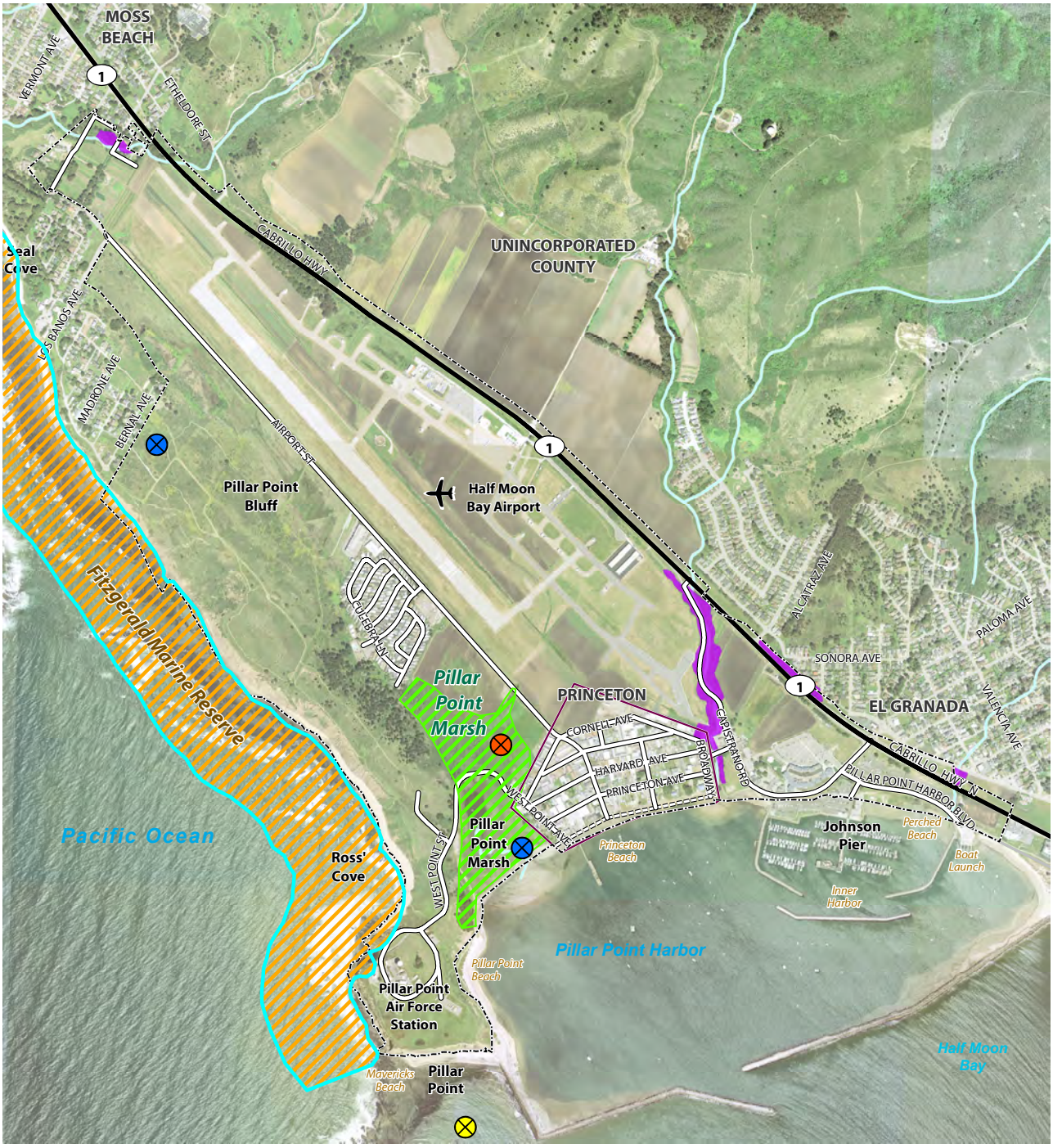


Figure 4-2: Local Coastal Plan Sensitive Habitats



Rare, Endangered or Unique Species

- Birds
- Mammals
- Reptiles and Amphibians

Mapped Sensitive Habitats

- Marine and Estuarine Habitat, Wildlife Refuges, Reserves, and Scientific Study Area
- Wetlands
- Riparian Corridor

- Princeton Waterfront/Industrial Area
- Princeton Study Area Boundary

Source: SWCA, 2013; San Mateo County Planning & Building Department, 2013; Dyett & Bhatia, 2013.

0 625 1,250 2,500 Feet

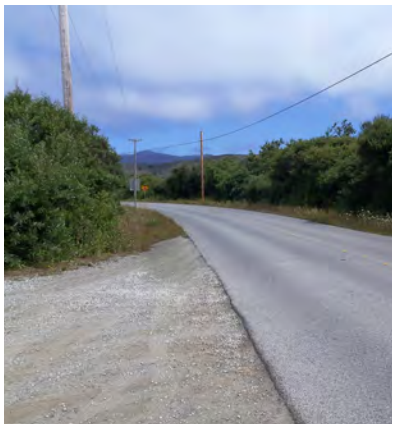
Vegetative Habitat Types

The following three habitat types considered sensitive by the California Department of Fish and Wildlife (CDFW) are present in the Study Area: central coast riparian scrub, coastal and valley freshwater marsh, and northern coastal salt marsh. Habitats considered Environmentally Sensitive Habitat Areas (ESHAs) by the California Coastal Commission (CCC) and San Mateo County through the LCP include, but are not limited to, riparian corridors, wetlands, marine habitats, sand dunes, sea cliffs, areas that support communities of wild strawberry (*Fragaria vesca*), and habitats supporting rare, endangered, and unique species. ESHAs in the Study Area include wetlands west of Airport Street, riparian areas surrounding Denniston and San Vicente Creeks, coastal bluff scrub areas supporting wild strawberry, fresh and salt water portions of Pillar Point Marsh, and sea cliffs along Pillar Point Bluff. Habitat types present in the Study Area are discussed in the following paragraphs. General habitat boundaries are shown on Figure 4-1.

Agriculture

Cultivated irrigated and non-irrigated agricultural fields are present along Highway 1 near Denniston Creek, on the Half Moon Bay Airport property, and between Cypress Avenue and the airport. Crops observed at the time of the field survey include assorted flower and vegetable crops. Agricultural areas are regularly highly disturbed by discing or plowing soil and other field preparation, planting and raising crops, and harvest operations. The edges of cultivated fields tend to support ruderal vegetation along disturbed margins of farm roads and in fallow areas that are left unplanted. Wildlife observed in agricultural habitat within the Study Area include white-tailed kite (*Elanus leucurus*), common snipe (*Gallinago gallinago*), northern harrier (*Circus cyaneus*), loggerhead shrike (*Lanius ludovicianus*), blue heron (*Ardea herodias*), great egret (*Ardea alba*), American kestrel (*Falco sparverius*), killdeer (*Charadrius vociferus*), European starling (*Sturnus vulgaris*), and Brewer's blackbird

Agricultural field near airport



Riparian scrub in Denniston Creek on Capistrano Road (top) and Riparian scrub in Denniston Creek (bottom)

(*Euphagus cyanocephalus*). White-tailed kite is a State of California Fully Protected raptor species and northern harrier and loggerhead shrike are California Species of Special Concern (SSC). All of these species are protected by the Migratory Bird Treaty Act (MBTA) of 1918.

Central Coast Riparian Scrub

Central coast riparian scrub communities typically occur adjacent to existing flowing stream channels, along seasonally-flooded arroyos, or in depressional areas located close to ground water. This community consists of dense thickets dominated by willows (*Salix* spp.). The understory of central coast riparian scrub can vary from sparse to dense and typically includes poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), and a variety of introduced species. Central coast riparian scrub occurs in drainage ditches on the Half Moon Bay Airport property, in the drainage that flows from the Airport under Airport Street and into Pillar Point Marsh, in the freshwater portion of Pillar Point Marsh, and along Denniston and San Vicente creeks. Riparian scrub in the Study Area is dominated by arroyo willow (*Salix lasiolepis*) and Sitka willow (*Salix sitchensis*), with common understory species including coyote brush, blackberry, and California sagebrush.

Riparian scrub can support a wide diversity of wildlife due to the availability of important features such as nesting sites, close proximity to water, escape and thermal cover, food, and dispersal corridors. Common animal species that utilize riparian habitat include but are not limited to striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginianus*), common garter snake (*Thamnophis sirtalis*) and various bird species. Special-status species known to utilize riparian scrub and to occur in the Study Area and surrounding vicinity include California red-legged frog (*Rana draytonii*), central California coast steelhead (*Oncorhynchus mykiss*), San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*), and saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*). Central coast riparian scrub is an ESHA, and this habitat is considered sensitive by the CDFW, and may be subject to the jurisdiction of the CDFW as waters of the State. Central coast riparian scrub in Denniston Creek has been designated as critical habitat for central California coast steelhead.

Coastal and Valley Freshwater Marsh

Freshwater marsh is typically associated with natural and man-made ponds, intermittent and perennial creeks and drainages, wetlands, and roadside ditches within or surrounded by other plant communities. The dominant emergent plant species typically observed in freshwater marsh communities are bulrush (*Scirpus* spp.), broad-leaved cattail (*Typha latifolia*), and rushes (*Juncus* spp.). This habitat supports a variety of wildlife species, especially birds and amphibians, which utilize the emergent vegetation for cover. Special-status species such as California red-legged frog and San Francisco garter snake may utilize this

habitat for foraging and cover. In the Study Area, freshwater marsh is located in drainage ditches on the Half Moon Bay Airport, in the drainage that flows from the airport under Airport Street and into Pillar Point Marsh, in two historic agricultural stock ponds west of Airport Street, in wetlands west of Airport Street, and in the freshwater portion of Pillar Point Marsh. Coastal and valley freshwater marsh is considered an ESHA by the CCC, and a sensitive habitat by CDFW, and may be subject to the jurisdiction of the United States Army Corps of Engineers (USACE) as waters of the U.S.

Hydrophytic plant species observed in freshwater marsh habitat in the Study Area include brown-headed rush (*Juncus phaeocephalus*), American bulrush (*Scirpus americanus*), water cress (*Rorippa nasturtium-aquaticum*), water speedwell (*Veronica anagallis aquaticum*), horsetail (*Equisetum telemateia*), Harding grass (*Phalaris aqautica*), bird's foot trefoil (*Lotus corniculatus*), tall flat-sedge (*Cyperus eragrostis*), common three-square (*Scirpus patens*), cinquefoil (*Potentilla anserina* ssp. *pacifica*), curly dock (*Rumex crispus*), and bur-reed (*Sparganium eurycarpum* ssp. *eurycarpum*).

Developed / Ruderal

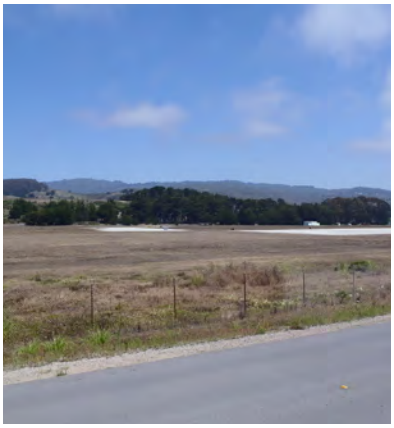
Developed / ruderal habitat is found in regularly and highly disturbed areas such as road margins, agricultural access roads, and adjacent to urban development. Plant species found within this habitat type are typically ornamental species or introduced Mediterranean species that exhibit clinging seeds, adhesive stems, and rough leaves that assist their invasion and rapid colonization of disturbed lands. The wildlife habitat values provided by this community are dependent on the level of on-going disturbance and the types of plants present.

Ruderal species are plant species that are first to grow in disturbed areas. Ruderal species observed in the Study Area include brome grasses (*Bromus* spp.), Italian ryegrass (*Lolium multiflorum*), rattail fescue, slender oats (*Avena barbata*), bur-clover (*Medicago polymorpha*), radish (*Raphanus sativa*), black mustard (*Brassica nigra*), sweet fennel (*Foeniculum vulgare*), Italian thistle, rancher's fireweed (*Amsinckia menziesii* var. *intermedia*), yellow star-thistle (*Centaurea solstitialis*), burclover, spring vetch (*Vicia americana*), velvet grass (*Holcus lanatus*), sour clover (*Melilotus indica*), bristly ox-tongue, sheep-sorrel (*Rumex acetosella*), common plantain (*Plantago lanceolata*), bindweed (*Convolvulus arvensis*), short-pod mustard (*Hirschfeldia incana*), and numerous ornamental species.

Mixed Monterey Cypress Forest

Mixed Monterey cypress forest is a moderately dense forest that occurs in rocky, granitic soils of coastal headlands and bluffs. Native stands of Monterey cypress (*Cupressus macrocarpa*) are only found in two locations in Monterey County, but the species has been widely planted and naturalized throughout coastal California. In the Study Area, mixed Monterey cypress forest contains individuals

Pedestrian bridge over wetland (top); Old agricultural basin / wetland (middle); and Ruderal open field adjacent to Prospect Way (bottom)



Mixed Monterey Cypress forest near Half Moon Bay Airport (top); Night heron rookery (middle); Pillar Point Marsh (bottom)

that have been planted as windbreaks or ornamental trees, or that have naturalized, and commonly includes intermixed blue gum eucalyptus (*Eucalyptus globulus*) and Monterey pine (*Pinus radiata*). Mixed Monterey cypress forest is present along the eastern border of the Study Area within the Half Moon Bay Airport, along the northern edge of the Study Area near Cypress Avenue, and along the eastern slope of Pillar Point Bluff. This community provides nesting and roosting opportunities for various avian and bat species, and under certain conditions, monarch butterfly (*Danaus plexippus*), though no colonies of monarch butterfly were observed within the Study Area and no roosts are known to occur in the area. Red-tailed hawks (*Buteo jamaicensis*), white-tailed kites, American kestrels, and northern harriers were observed flying in the vicinity of mixed Monterey cypress forest during the surveys. Owl pellets (owl species unknown) were observed in the understory of Monterey cypress trees, and black-crowned night herons (*Nycticorax nycticorax*) were observed roosting in a grove near Pillar Point Marsh.

Northern Coastal Salt Marsh

Northern coastal salt marsh consists of low-growing, highly productive salt-tolerant hydrophytes that form moderate to dense cover. Most plant species in this community are active in summer and dormant in winter. Northern coastal salt marsh is found along sheltered inland margins of bays, lagoons, and estuaries, and is subject to regular inundation by tidal flows of salt water for at least portions of the year. Three-square (*Scirpus pungens*), Pacific potentilla (*Potentilla anserina* ssp. *pacifica*), and saltgrass (*Distichlis spicata*) are common plants observed in these areas. Rallid birds (rails, gallinules, and coots) and scolopacid birds (sandpipers and phalaropes) frequent coastal salt marsh areas. In the Study Area, northern coastal salt marsh is found in Pillar Point Marsh and along the margins of Pillar Point Harbor. Coastal marsh milk-vetch, a California Native Plant Society (CNPS) Rank 1B.2 species (plants rare, threatened, or endangered in California and elsewhere), is known to occur in Pillar Point Marsh. This habitat type is considered an ESHA by the CCC, a sensitive habitat by CDFW, and may be subject to the jurisdiction of the USACE as waters of the U.S.

Central (Lucian) Coastal Scrub

Central coastal scrub consists of dense low evergreen shrubs and herbs. It occurs along the Pacific Coast on the ocean side of the Santa Lucia range between Monterey and Point Conception, usually below the altitude of 2,000 feet. Central coastal scrub communities support shrubs that are 1 to 2 meters tall, typically characterized by species such as coyote brush (*Baccharis pilularis*), California sagebrush (*Artemisia californica*), buckwheat (*Eriogonum* spp.), and sage (*Salvia* spp.). It is typically found on exposed south-facing slopes with shallow, rocky soils.

Central coastal scrub habitat is present west of Airport Street and on Pillar Point Bluff, and in thin bands between the Half Moon Bay Airport and Highway 1. Plants observed in central coastal scrub in the Study Area include coyote brush, yarrow (*Achillea millefolium*), California sagebrush, pampas grass, and coffeeberry (*Rhamnus californicus*). Wildlife observed in this habitat include white-tailed kite (*Elanus* leucurus), bushtit (*Psaltriparus minimus*), California towhee (*Pipilo crissalis*), spotted towhee (*Pipilo maculatus*), and western fence lizard (*Sceloporus occidentalis*). White-tailed kite is a fully-protected species in California. Central coastal scrub may provide suitable nesting habitat for avian species protected by the MBTA.

Northern Coastal Bluff Scrub

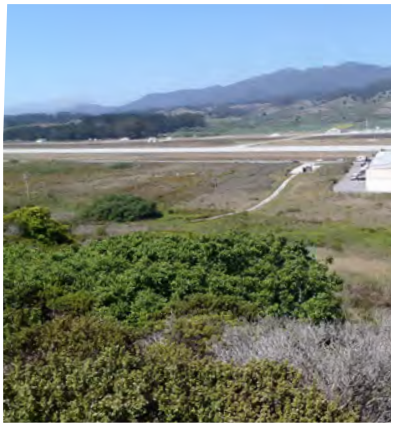
Northern coastal bluff scrub occurs in areas exposed to nearly constant wind with high salt content on rocky or poorly-developed soils. Low-growing, often dwarf shrubs, herbaceous perennials, and annuals are common. Northern coastal bluff scrub in the Study Area occurs on Pillar Point Bluff on west-facing gentle slopes and terraces. Vegetation is composed of low-growing, generally native species such as coyote brush, lizard tail (*Eriophyllum staechadifolium*), poison oak, varicolor lupine (*Lupinus variicolor*), blackberry, seaside daisy (*Erigeron glaucus*), wild strawberry, and coast buckwheat (*Eriogonum latifolium*). Northern coastal bluff scrub provides habitat opportunities similar to central coastal scrub as described above, with the exception that constant winds and higher salt content from close ocean proximity may make this habitat less favorable for nesting, roosting, and shelter than more protected areas farther from the shore.

Non-native Annual Grassland

Non-native annual grasslands are composed of a dense to sparse cover of annual grasses, and are typically occupied by numerous species of annual forbs, especially in years of favorable rainfall. Non-native annual grassland is often found on flat to gently rolling terrain with deep, fine-grained soils that are moist during the winter rainy season and dry during summer and fall. Non-native annual grassland occurs primarily on the Half Moon Bay Airport property and on a parcel at the corner of Prospect Way and Capistrano Road within the Study Area. Common plant species observed include ripgut brome (*Bromus diandrus*), wild oats (*Avena fatua*), rattail fescue (*Vulpia myuros*), poison hemlock (*Conium maculatum*), Italian thistle (*Carduus pycnocephalus*), perennial mustard (*Hirschfeldia incana*), tocolote (*Centaurea melitensis*), horseweed (*Conyza canadensis*), and bristly ox-tongue (*Picris echioides*).

This community provides foraging habitat for a variety of wildlife species. Raptors, such as red-tailed hawk, white-tailed kite, and American kestrel often forage in annual grasslands, while species such as western meadowlark (*Sturnella neglecta*) may use these areas for nesting. Small mammals such as mice (*Peromyscus* spp.), voles (*Microtus* spp.), and pocket gopher (*Thomomys*

Pillar Point Harbor Shoreline (top); Central Coastal scrub habitat (middle); and Northern Coastal bluff scrub (bottom)



Non-native annual grassland near Half Moon Bay Airport (top); Sensitive habitat and trail near mobile home park and Airport Street (middle); Tidal marsh near boat ramp (bottom)

spp.) often forage or burrow in annual grasslands and provide a prey base for raptors. Reptiles commonly found within these areas include western fence lizard and gopher snake (*Pituophis melanoleucus*).

Sensitive Biological Resources

Sensitive biological resources include ESHAs, sensitive habitats including jurisdictional wetlands and waters, special-status plants, and special-status wildlife species. Sensitive biological resources that currently exist or have been documented in the Study Area are discussed below.

Environmentally Sensitive Habitat Areas

Habitats containing sensitive plant or animal species, or dominated by wetland / riparian plants or native grasses are regulated by the CCC as ESHAs as defined in the California Coastal Act of 1976.

The California Coastal Act defines ESHAs as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments." Unique plant habitats, rare and endangered plant and animal habitats, wetlands, coastal streams, rocky points, sea cliffs, intertidal areas, and kelp beds are typically considered ESHAs. Based on this definition, areas containing wild strawberry, riparian areas associated with Denniston and San Vicente creeks, all wetlands, sea cliffs, and California Natural Diversity Database (CNDDB)-listed sensitive natural communities that occur in the Study Area qualify as ESHAs.

ESHA designations are often based on the presence of rare plants, animals and/or habitats, or on areas that support populations of rare, sensitive, or especially valuable species or habitats, and whether the habitat or species meeting these conditions is easily disturbed or degraded by human activities and developments. Section 30240(a) of the Coastal Act restricts development within ESHA to only those uses that are dependent on the resource, and requires that ESHA be protected against significant disruption of habitat values. It also requires that areas adjacent to ESHA and parks and recreation areas be sited and designed to prevent degradation of those areas and to be compatible with the continuance of those habitat and recreation areas. ESHA designation typically requires strictly limiting potential uses, establishing buffer zones, and other measures.

Jurisdictional Wetlands and Waters

Denniston and San Vicente creeks convey storm flows to the mean high tide line, support sporadic wetland or riparian vegetation, and contain surface water or saturated soils for some portion of a typical year. Based on these characteristics, these drainages are coastal wetlands and ESHAs under the California Coastal Act. Impacts to these features are subject to review by the CCC and CDFW.

Perennial streams with definable ordinary high water marks (OHWM) that support wetland hydrology and contain wetland vegetation and soils constitute waters of the U.S., and are subject to USACE and CDFW jurisdiction. Any adjacent wetland areas outside the defined stream channels are also likely jurisdictional Waters of the US. Numerous wetland features are present in the Study Area, including expansive wetlands between Airport Street and the eastern slope of Pillar Point Bluff, and fresh and salt water portions of Pillar Point Marsh.

Sensitive Natural Communities

The CDFW maintains a list that ranks natural communities by their rarity or threat. The CNDDB identifies these communities as sensitive natural communities and applies a Global and State ranking to them. Central coast riparian scrub, coastal and valley and freshwater marsh, and northern coastal salt marsh occur in the Study Area and are included in the special communities list. These communities are considered to be ESHAs under the California Coastal Act, and impacts are typically addressed under CEQA.

Critical Habitat Designations

Critical habitat designations are geographic units that support primary habitat constituent elements for federally listed species. Of the federally protected animal species that have documented occurrences within or near the Study Area, only the central California coast steelhead has designated critical habitat within the Study Area, located in Denniston Creek. While there have been documented sightings of California red-legged frog in the vicinity of Pillar Point Marsh, its critical habitat is located just east of, but not within, the Study Area. The presence of critical habitat may require additional biological surveys and development of specific avoidance and minimization measures during planning of future development. Such additional biological surveys would be conducted on a project specific-level.

Central California Coast Steelhead

Critical habitat for the central California coast steelhead is within the Study Area in Denniston Creek, and is part of the critical habitat unit defined as San Mateo Hydrologic Unit 2202. Though critical habitat has been designated in Denniston creek up to approximately the dam at the Denniston Creek Reservoir, there are barriers to upstream passage in the lower reach of the creek where a perched culvert flows under Prospect Way approximately 300 feet upstream of the mouth of the creek. As such, steelhead may not be able to reach the upper portions of this critical habitat, particularly when water levels in the creek are low.

Wetland habitat east of the Half Moon Bay Airport (top); Pillar Point Wetlands Salt Marsh Habitat protection sign (middle); Perched culvert in Denniston Creek (bottom)

Special-status Plant Species

The CNDDB record search identified 19 sensitive plant species that have known occurrences within 5 miles of the Study Area. Known species occurrences as mapped by the CNDDB are shown on Figure 4-3, and a complete list of CNDDB species is included in Table 4-1. The species list includes the federally and state-endangered Hickman's cinquefoil (*Potentilla hickmanii*). The other species are included in CNPS Ranks 1, 2, and 3. One CNPS-ranked species, the coastal marsh milk-vetch (CNPS Rank 1B.2), has been recorded within the Study Area in Pillar Point Marsh.

Special-status Animal Species

The CNDDB records search identified seven special-status wildlife species that have known occurrences within 5 miles of the Study Area. Recorded species occurrences as mapped by the CNDDB are shown on Figure 4-3, and a complete list of CNDDB species is included in Table 4-1 below. The species list includes the following federally protected species that may occur in the Study Area: central California coast steelhead, California red-legged frog, and San Francisco garter snake. Additionally, it includes the saltmarsh common yellowthroat, a California SSC.

The CNDDB list did not include the San Francisco dusky-footed woodrat or the loggerhead shrike, two California SSC. However, there are known occurrences of California red-legged frog near Pillar Point Marsh and woodrat nests were observed within central coast riparian scrub along Denniston Creek and are known to exist within the mixed cypress forest and coastal scrub on Pillar Point Bluff. Furthermore, a and a loggerhead shrike was observed near agricultural habitat on the Half Moon Bay Airport. The CNDDB list also did not include the federally threatened and SSC western snowy plover (*Charadrius alexandrinus nivosus*), which is known to nest on sandy beaches in the vicinity of the Study Area. In addition to the loggerhead shrike and western snowy plover, wetland, forested, and grassland habitats of the Study Area are likely to contain numerous bird species subject to protection under the Migratory Bird Treaty Act.

TABLE 4–1: CNDDB-LISTED SPECIAL-STATUS PLANT AND ANIMAL SPECIES OCCURRENCES WITHIN 5 MILES OF THE STUDY AREA

SCIENTIFIC NAME	COMMON NAME	NUMBER OF OCCURRENCES LISTED	FEDERAL LISTING STATUS	STATE / CDFW STATUS	STATE RANK	RARE PLANT RANKING
Fauna						
Callophrys mossii bayensis	San Bruno elfin butterfly	3	Endangered	None	S1	n/a
Danaus plexippus	monarch butterfly	6	None	None	S3	n/a
Geothlypis trichas sinuosa	saltmarsh common yellowthroat	3	None	SSC	S2	n/a
Oncorhynchus mykiss irideus	steelhead - central California coast DPS	3	Threatened	None	S2	n/a
Rana draytonii	California red-legged frog	12	Threatened	SSC	S2S3	n/a
Taxidea taxus	American badger	1	None	SSC	S4	n/a
Thamnophis sirtalis tetrataenia	San Francisco garter snake	13	Endangered	Endangered, FP	S2	n/a
Flora						
Allium peninsulare var. franciscanum	Franciscan onion	1	None	None	S2.2	1B.2
Arctostaphylos montaraensis	Montara manzanita	3	None	None	S2.2	1B.2
Arctostaphylos regismontana	Kings Mountain manzanita	1	None	None	S2.2	1B.2
Astragalus pycnostachyus var. pycnostachyus	coastal marsh milk-vetch	1	None	None	S2.2	1B.2
Cirsium andrewsii	Franciscan thistle	2	None	None	S2.2	1B.2
Collinsia multicolor	San Francisco collinsia	2	None	None	S2.2	1B.2
Dirca occidentalis	western leatherwood	2	None	None	S2S3	1B.2
Fritillaria liliacea	fragrant fritillary	1	None	None	S2	1B.2
Grindelia hirsutula var. maritima	San Francisco gumplant	1	None	None	S1	3.2
Horkelia cuneata var. sericea	Kellogg's horkelia	1	None	None	S2?	1B.1
Leptosiphon croceus	coast yellow leptosiphon	2	None	None	S1	1B.1
Leptosiphon rosaceus	rose leptosiphon	2	None	None	S1	1B.1
Malacothamnus aboriginum	Indian Valley bush-mallow	1	None	None	S2	1B.2
Malacothamnus davidsonii	Davidson's bush-mallow	1	None	None	S2	1B.2
Malacothamnus hallii	Hall's bush-mallow	1	None	None	S2	1B.2
Monolopia gracilens	woodland woollythreads	1	None	None	S2S2	1B.2
Polemonium carneum	Oregon polemonium	1	None	None	S1	2.2
Potentilla hickmanii	Hickman's cinquefoil	2	Endangered	Endangered	S1	1B.1

TABLE 4–1: CNDDB-LISTED SPECIAL-STATUS PLANT AND ANIMAL SPECIES OCCURRENCES WITHIN 5 MILES OF THE STUDY AREA

SCIENTIFIC NAME	COMMON NAME	NUMBER OF OCCURRENCES LISTED	FEDERAL LISTING STATUS	STATE / CDFW STATUS	STATE RANK	RARE PLANT RANKING
Silene verecunda ssp. verecunda	San Francisco campion	1	None	None	S2.2	1B.2
CDFW Sensitive Natural Communities						
n/a	Northern Coastal Salt Marsh	1	None	None	S3.2	
n/a	Northern Maritime Chaparral	2	None	None	S1.2	

California Department of Fish and Wildlife:

SSC= California Species of Special Concern

FP- Fully Protected

California Native Plant Society Rare Plant Ranking Key:

List 1B = rare, threatened, or endangered in California and elsewhere.

List 2 = rare, threatened, or endangered in California, but more common elsewhere.

List 3 = plants that about which more information is needed.List 4 = a watch list plants of limited distribution.

Threat Code:

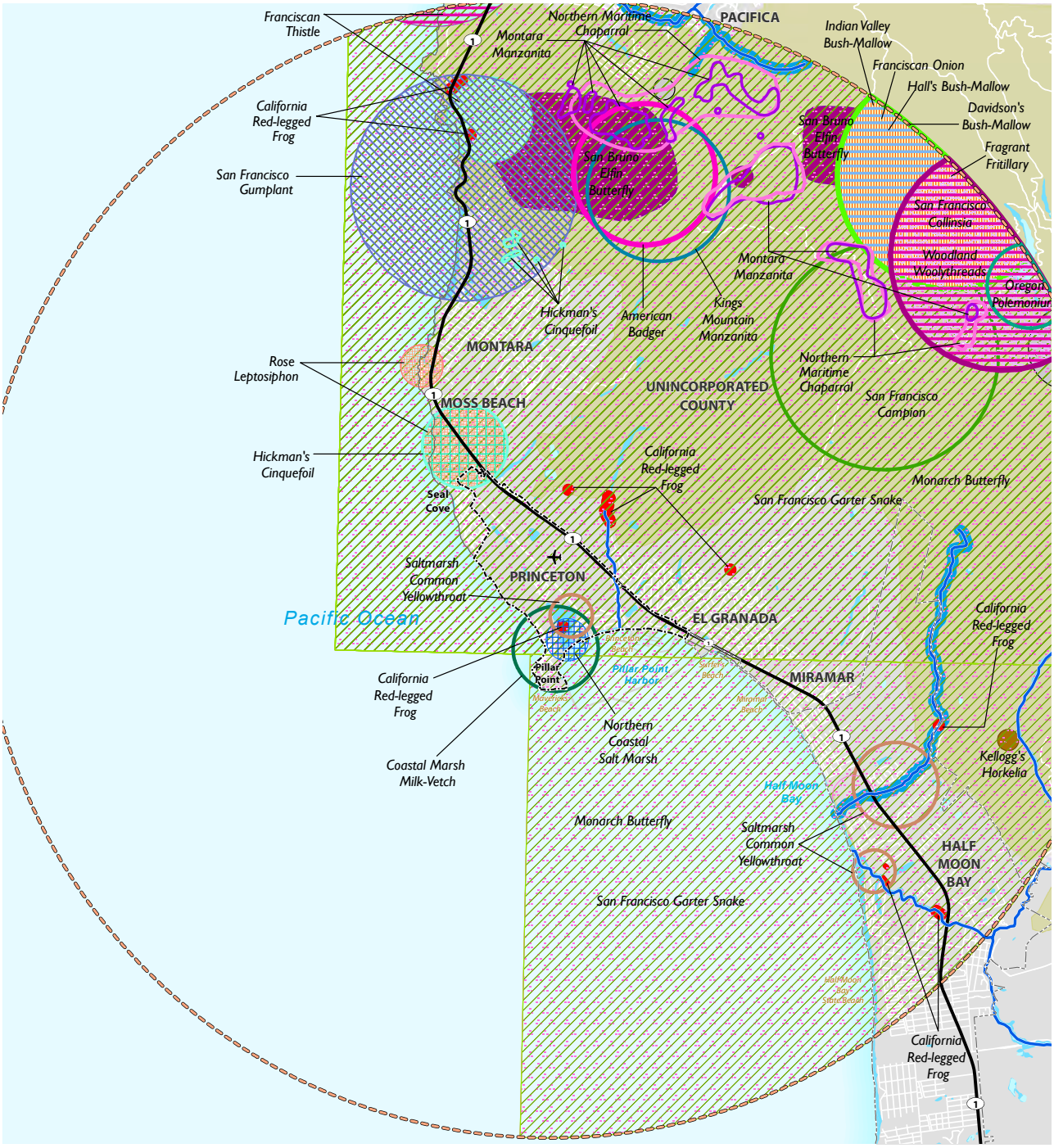
.1 = Seriously endangered I California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2 = Fairly endangered in California (20-80% occurrences threatened)

.3 = Not very endangered I California (<20% of occurrences threatened or no current threats known)

Source: California Natural Diversity Databse, 2013.

Figure 4-3: Sensitive Resources Map



CNDDB Species
- American Badger
- Franciscan Onion
- Davidson's Bush-Mallow
- Fragrant Fritillary
- Hall's Bush-Mallow
- Indian Valley Bush-Mallow
- Kings Mountain Manzanita
- Montara Manzanita
- Northern Coastal Salt Marsh
- Northern Maritime Chaparral
- Oregon Polemonium
- San Francisco Campion
- San Francisco Collinsia
- San Francisco Gumplant
- Coastal Marsh Milk-Vetch
- Saltmarsh Common Yellowthroat
- Monarch Butterfly
- Rose Leptosiphon
- Hickman's Cinquefoil
- Woodland Woollythreads
- San Francisco Garter Snake
- Kellogg's Horkelia
- California Red-Legged Frog
- Franciscan Thistle
- Coast Yellow Leptosiphon
- Steelhead - Central California Coast DPS
- Western Leatherwood
- San Bruno Elfin Butterfly

USFWS Critical Habitat
- USFWS Critical Habitat
- California Red-legged Frog
- Wetlands
- Study Area Boundary
- 5 mile Radius

Source: CNDDB, 2013; SWCA, 2013; San Mateo County Planning & Building Department, 2013; Dyett & Bhatia, 2013.

0 2,650 5,300 10,600 Feet

Opportunities and Constraints

The Study Area consists of numerous undeveloped natural habitat areas, including Pillar Point Bluff, Pillar Point Marsh, Denniston Creek, San Vicente Creek, and shoreline areas along Pillar Point Harbor, that support special-status species and that are considered ESHAs by the CCC or sensitive habitats by the CDFW. Development in these areas would require focused biological studies, consideration of potential biological impacts, and development of appropriate avoidance and minimization measures and mitigation during environmental review. Development projects in these areas will face a variety of time and scheduling constraints, including permit issuance timeframes from agencies such as USACE, CCC, CDFW, and the Regional Water Quality Control Board, specific construction windows required to minimize impacts to sensitive species, and seasonal survey requirements for sensitive species. Biological monitoring may also be required for work in sensitive habitat areas.

Preparation of the Planning Update presents opportunities to define and delineate ESHAs, incorporate protection and restoration measures for natural resources within both undeveloped and developed areas, continue to foster a sense of community ownership and responsibility related to sensitive habitats and protected species, and provide managed public access within areas possessing ecological importance.

Table 4-2 provides a summary of general biological constraints, based on habitat types, their jurisdictional status, and expected special-status species associations. A discussion of opportunities and constraints for specific habitat types follows.

General Development In and Near Sensitive Habitat

Location of new development in previously-disturbed areas or those with low biological habitat value could minimize the potential for biological impacts, and could significantly reduce survey and permit requirements and any associated avoidance or mitigation costs. Development in undeveloped areas will have increased potential for biological impacts and associated avoidance and mitigation costs, and potential for significant additional time constraints due to biological survey and permit requirements.

Agricultural Habitat

In the northern portion of the Study Area, agricultural habitats are present on and just north of the Half Moon Bay Airport. These areas have limited biological constraints, due largely to the frequent levels of human activity and disturbance that occur in association with soil preparation, planting, growing, and harvesting crops. Grasslands and wooded areas on the airport provide foraging and nesting opportunities for avian species, but airport operations and noise associated with aircraft may limit the value of these areas for some species. Drainage

TABLE 4–2: HABITATS AND SPECIAL-STATUS SPECIES CONSTRAINTS SUMMARY

HABITAT TYPE	GENERAL CONSTRAINTS	SPECIAL-STATUS SPECIES
Agriculture	• Provides foraging habitat for migratory birds and raptors	• Northern harrier • White-tailed kite • Loggerhead shrike • Migratory birds/raptors
Central Coast Riparian Scrub	• Considered Wetlands / Waters of the U.S. and State • Regulated by USFWS, CDFW, and CCC • Contains critical habitat for central California coast steelhead • Aquatic species habitat • May be frequented by migratory songbirds • Agency permits required	• California red-legged frog • Central California coast steelhead • Saltmarsh common yel-lowthroat • San Francisco garter snake • San Francisco dusky-footed woodrat • Migratory birds/raptors
Coastal and Valley Freshwater Marsh	• Considered Wetlands / Waters of the U.S. and State • Regulated by USFWS, CDFW, and CCC • Aquatic species habitat • Provides foraging habitat for migratory birds • Agency permits required	• California red-legged frog • Northern harrier • Saltmarsh common yel-lowthroat • San Francisco garter snake • San Francisco dusky-footed woodrat • Migratory birds/raptors
Developed/ Ruderal	• Trees may support roosting or nesting migratory birds and raptors	• Migratory birds/raptors
Mixed Monterey Cypress Forest	• Trees may support roosting or nesting migratory birds and raptors	• Migratory birds/raptors • San francisco dusky-footed woodrat
Northern Coastal Salt Marsh	• Considered Wetlands / Waters of the U.S. and State • Regulated by USFWS, CDFW, and CCC • Provides foraging habitat for migratory waterfowl and shorebirds • Agency permits required	• Coastal marsh milk-vetch • Northern harrier • Migratory birds/raptors
Coastal Scrub (Includes central coastal scrub and northern coastal bluff scrub)	• Coastal bluffs considered ESHA by CCC • Potential for sensitive plant species • Potential for nesting birds	• Migratory birds/raptors • Wild strawberry
Non-native Annual Grassland	• Raptor and other migratory bird foraging habitat. • Bat foraging habitat	• Loggerhead shrike • Migratory birds/raptors. • Pallid and other bat spe-cies.

Species associations are based on presence of suitable habitat and known occurrences listed in the CNDDB. Many other species, including migratory birds have potential to occur in the Study Area on a periodic basis.

Source: SWCA, 2013.

ditches on the airport property provide marginal aquatic and upland habitat for California red-legged frog, though it is unlikely that suitable breeding habitat is present at the airport due to regular vegetation maintenance and low water levels in these ditches during all but the wettest times of the year. Wetland Habitats

West of Airport Street between the Half Moon Bay Airport and Pillar Point Bluff, wetlands are present in two historic agricultural basins and also within central coastal scrub habitat. Dense emergent vegetation and standing water is present in the agricultural basins during much of each year that could provide suitable breeding habitat for California red-legged frog or for avian species that nest in dense brush. The wetlands along Airport Street flow to the southeast and eventually into Pillar Point Marsh via a natural and concrete-lined drainage. These wetlands provide suitable habitat for a variety of nesting birds and sensitive species, including California red-legged frog.

Agricultural land, grassland, and forest near Half Moon Bay Airport (top); Wetland / agricultural pond west of Half Moon Bay Airport (middle); Cypress forest near mobile home park (bottom)

Mixed Monterey Cypress Forest

Mixed Monterey cypress forest exists along the eastern slope of Pillar Point Bluff behind the Pillar Ridge Manufactured home park, north of the Half Moon Bay Airport, and near Pillar Point Marsh. This forested area is heavily dominated by Monterey pines. These areas provide foraging, roosting, and nesting opportunities for numerous avian and bat species.

Pillar Point Marsh

Fresh and salt water portions of Pillar Point Marsh provide foraging and breeding opportunities for numerous avian species including common saltmarsh yellowthroat, and for California red-legged frog. Special-status plant species including coastal marsh milk-vetch (*Astragalus pycnostachyus* var. *pycnostachyus*) are known to occur in Pillar Point Marsh. A parcel specific study would be required for the 3.13 acre property under private ownership located adjacent (eastside) of the County-owned parcel that is encumbered by Pillar Point Marsh in order to determine any extent of the marsh encumbering the private property.

Pillar Point Bluff includes a variety of habitat types that provide foraging, shelter, and nesting/breeding opportunities for several special-status species that have potential to occur in the Study Area. Two ponds have been constructed on the bluff in an effort to provide breeding habitat for California red-legged frog. Large swathes of wild strawberry are present along the bluff, particularly in the southern section, and these areas are considered ESHAs.

Developed Areas

Residential and commercial development is present along Airport Street between the Jean Lauer Trail parking lot and agricultural fields located north of Pillar Point Marsh where the Big Wave project is proposed. These developed and agricultural areas have limited biological value due to regular disturbance and high levels of human activity.

East of Pillar Point Marsh and south of the Half Moon Bay Airport, residential, light industrial, and commercial development is present that stretches to the southern extent of the Study Area. Except for any identified biological habitats, including wetlands on the Big Wave parcels, these developed areas have limited habitat value due to regular levels of human activity, though trees in the area may provide nesting opportunities for avian species or roosting opportunities for bat species. Denniston Creek flows through this developed area, and contains critical habitat for central California coast steelhead.

Pillar Point Marsh (top left); Pillar Point (top right); Big Wave property (bottom left); Mature trees in developed Princeton (bottom right)

4.2 Water Quality

Storm drain service throughout the Study Area is provided by the County of San Mateo along the County's maintained road system, and by minor drain systems on private properties. Projects within the Study Area, including storm drain improvements, require hydrological review and hydraulic design approval from the County of San Mateo. Stormwater treatment and the storm drain system are also discussed in Chapter 7, Infrastructure, Public Services and Facilities.

Stormwater Regulations

The County has prepared a Stormwater Management Plan to comply with the National Pollutant Discharge Elimination System (NPDES) Permit Program. Projects that would disturb areas larger than one acre are required to obtain a stormwater permit from the County, and prepare and implement a stormwater quality plan pursuant to specified requirements. Projects are required to include the installation and maintenance of long-term quality control measures in addition to measures in force during construction. There are additional site design requirements in force for small projects (greater than 2,500 square feet but less than 10,000 square feet) and detached single-family homes (greater than 2,500 square feet of impervious surface). These standards include dispersion of runoff into landscape, and use of permeable surfaces. All regulated development—including auto service, retail gas, uncovered parking lots, development or redevelopment including 5,000 or more square feet, and road projects creating 10,000 square feet or more of contiguous road surface—is required to implement Low Impact Development (LID) techniques.

In addition, any new developments in the Study Area must comply with the Minimum Stormwater Pollution Prevention Requirements listed in Appendix 1.A of the Midcoast Local Coastal Program Policies, June 2013. These requirements include, but are not limited to:

- Preventing the flow of liquid building materials and wastes onto impervious surfaces and into storm drains and waterways.
- Reduce the amount of impervious surface areas, and use permeable pavement where feasible.
- Provide for ongoing operation and maintenance of installed stormwater treatment measures.
- Development of parking lots shall incorporate BMPs to minimize runoff of oil, grease, car battery acid, coolant, gasoline, sediments, trash, and other pollutants to receiving waters.

Existing Conditions

The water quality of Pillar Point Harbor is chronically so poor that the State Water Resources Control Board listed the location as impaired by coliform bacteria on the 303(d) list submitted to the United States Environmental Protection Agency. The San Mateo County Resource Conservation District (RCD) directed a study to identify the sources of bacteria in Pillar Point Harbor and to develop a plan to address them. The monitoring study was presented to the public in June 2013. During this study, water was sampled at selected locations around Pillar Point Harbor and in upstream areas and tested for the presence and abundance of bacteria that occur with fecal pollution, and bacteria samples were genetically tested to determine their original host source. The study concluded that Capistrano Beach has higher fecal indicator bacteria than other beaches and is the highest in the wet season; canine fecal bacteria is significant but not the primary fecal source at Capistrano Beach, rather canine fecal bacteria is introduced at Capistrano Beach from freshwater inflows rather than other nearby beaches; humans are not a major source of fecal contamination in Pillar Point Harbor; and bovine is the primary fecal pollution source at Deer Creek, which outfalls on the north side of the boat ramp at Pillar Point Harbor. Since identifying sources of fecal pollution in Pillar Point Harbor, opportunities for remediation are being developed. This plan will include a timeline for implementing the proposed methods to achieve water quality objectives and the parties responsible, as well as a monitoring plan and performance measures to track implementation of the projects. The overall vision of this project is to reduce the number of days that the beaches are posted or closed.

Opportunities and Constraints

The Study Area lacks stormwater treatment facilities. New development must comply with a number of stormwater pollution prevention requirements, both for long-term reduction of stormwater pollutants leaving each site and short-term control of storm water pollution during construction. Due to the age of many current developments in the Study Area, very few sites have implemented stormwater treatment on-site.

Potential stormwater pollutant sources include but are not limited to loading docks, food service areas, refuse areas, outdoor processes and storage facilities, vehicle cleaning areas also used for repair or maintenance, fuel dispensing, and equipment washing. New stormwater treatment measures would help to reduce pollutants in stormwater and/or erosive flows.

4.3 Visual Resources

This section defines the existing visual attributes and identifies constraints and opportunities associated with the Study Area. Specific features which provide scenic value or challenges are inventoried and analyzed. Defining the fundamental visual issues will help to maximize the area's potential with the fewest impacts to existing visual resources.

Study Area Setting

The Study Area is approximately two square miles in size. It extends approximately two miles along the coast, and approximately one mile inland. The Study Area is defined to a great extent by the geography of Pillar Point. The topography is generally flat through the mid portion of the Study Area as it stretches to the harbor. The coastal foothills rise up past the eastern side of Highway 1 and provide a visual backdrop for much of the Study Area. Pillar Point Bluff parallels the coast along the northwest side of the Study Area. As seen from some inland portions of the Study Area, the bluff defines the western horizon and tends to limit direct views of the ocean. The landform of Pillar Point Bluff drops off dramatically to the ocean along its western face. Overall, the Study Area has a moderately vegetated appearance. Mature trees are seen throughout the nearby hills and ridges, which help visually screen a certain amount of the surrounding development. The Denniston Creek riparian corridor provides a green swath as it winds through the Study Area to the harbor.

Highway 1 is the primary transportation route through the Study Area. As expected, much of the commercial and visitor–serving businesses are found along the highway. Highway 1 in this area is mostly a two-lane facility. Occasional traffic signals, left-turn lanes, merge lanes and driveways are part of the highway environment. Bicycle lanes are also along the roadside. During the busy tourist months as well as the morning and evening "rush hour" slow-moving cars, trucks, and trailers lining of portions the highway contribute to the overall visual setting.

The visual character of the Study Area is influenced by the agricultural land use within and surrounding the community. Row crops and tilled fields are visible along Highway 1 north of Capistrano Road, as well as along Airport Street and surrounding the Princeton area.

The Half Moon Bay Airport constitutes approximately one-third of the Study Area. The airport is most noticeable from viewpoints on Highway 1 north of Capistrano Road, and from Airport Street which parallels the runway to the west. The airport is a rural area facility and includes one runway, hangars, various taxiways, tie-down areas, and storage and maintenance yards. The buildings associated with the airport are generally older construction single-story structures, predominately found along the eastern side of the runway, adjacent to Highway 1. Lattice communication towers, lighting poles and security fencing are seen at various locations throughout the airport.

Airport Street parallels the airport runway to the west and provides access from the Seal Cove area just north of the Study Area to the community of Princeton. In addition to the airport lands, open space, light industrial and service commercial development are seen adjacent to the roadway. The Pillar Ridge Manufactured home community is located approximately 0.3 miles north of Princeton, between Airport Street and the Pillar Point Bluff natural area.

Natural and recreational lands are important contributors to the visual identity of the Study Area. West of Princeton, Pillar Point Harbor and Pillar Point provide easy access to the scenic coastline. Pillar Point Bluff, extending north from Pillar Point, is a defining natural reference point for much of the Study Area and offers panoramic vistas of the generally rural context of the region. The Pillar Point Air Force Station is prominently located on Pillar Point and is recognizable by its large, elevated, spherical radar.

Princeton is the largest community within the Study Area. Princeton includes two distinct areas; the harbor area and the waterfront/industrial area to the west. While the harbor is not within the Study Area, it is described here as it is part of the visual character setting. The Pillar Point Harbor includes a full-service harbor serving both commercial and recreational boating uses. The harbor includes piers, boat docks, launch ramps and winches, commercial loading, supplies and other facilities. The Harbormaster office as well as a few restaurants and retail shops are part of the harbor area. Extensive parking lots for automobiles and boat trailers ring the harbor. Adjacent to the harbor to the north along Capistrano Road is the commercial retail center of Princeton. This area is visually dominated by a large hotel complex and the Harbor Village shopping development on the inland side of the roadway. Several smaller-scale restaurants and shops are also seen in the immediate area.

Immediately west of the commercial retail center, Denniston Creek finds its way through town and flows into the harbor. West of Dennison Creek is the waterfront/industrial area of Princeton. This area has a long history of providing services to the commercial fishing industry, including dry storage, repair, fabrication, warehousing, and other related facilities. This area, although primarily industrial, includes non-conforming scattered single and multi-family residences. The non-conforming residential development is seen in a variety of forms ranging from older wood-sided porch houses to mid-century modern apartments, to more current Mediterranean-style structures. The industrial development is often characterized by metal, utilitarian-type buildings. These properties are often associated with some sort of security fencing, visible storage or stockpile areas, and several parked or stored vehicles. The waterfront/industrial area of Princeton is relatively compact in form, with a clearly-defined perimeter abutting the surrounding open space and agricultural lands. Overall, the inter-mixed industrial and residential uses in such a compact area adjacent to the harbor create a unique community visual character. The primary entry points to Princeton are Capistrano Road off of Highway 1 (Capistrano Road connects to Highway 1 near the harbor, loops through the eastern side of

Princeton, and continues north to reconnect with Highway 1 near the airport) and Airport Street along the western side of the airport.

Local Policies

The protection of visual resources within San Mateo County is addressed by several policies recently adopted as part of the MidCoast LCP Update (2013) within the Visual Resources Component of the LCP. Policies address protecting views and scenic resources related to landforms, vegetative forms, structural and community features, and scenic roads and corridors. Specifically for the Princeton waterfront/industrial area, commercial buildings are to be designed to reflect the nautical character of the harbor setting, be of wood or shingle siding, use natural or sea colors, and use pitched roofs. Industrial development is to employ architectural detailing, subdued colors, textured building materials, and landscaping to add visual interest and soften the harsh lines of standard or stock building forms normally used in industrial districts.

The entire Study Area outside of the Princeton waterfront/industrial area is designated as a County Scenic Corridor in the General Plan.

Visual Character Zones

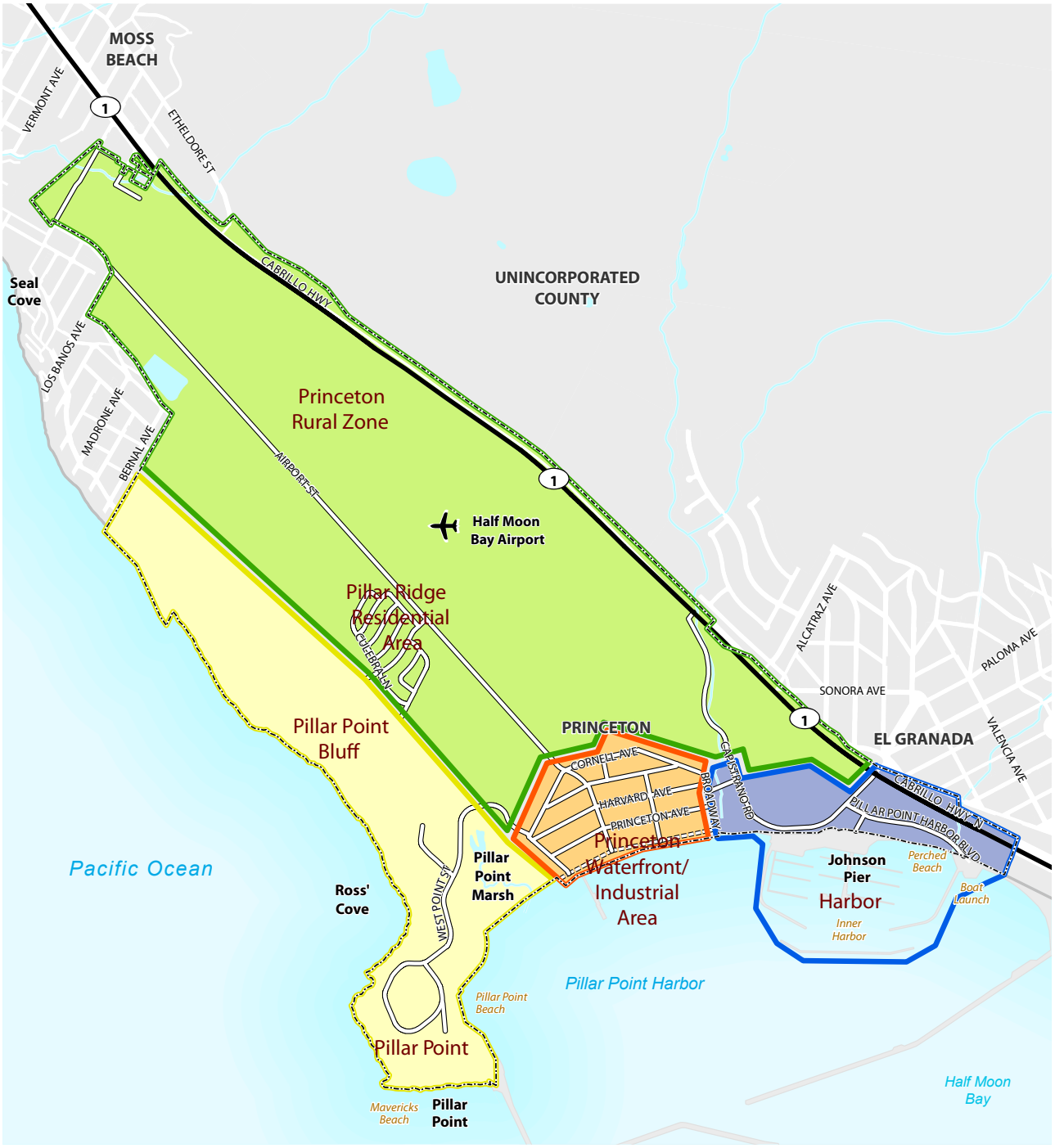
The existing visual quality of the Princeton Study Area is a product of a number of aesthetic attributes and factors. The visual character of the Study Area combined with scenic vistas results in a generally high-quality viewing experience. The Study Area has four somewhat distinct visual character zones (refer to Figure 4-4), described as follows:

Harbor Zone

The area is visually dominated by the characteristics of the harbor and its related development, including the hotels and restaurants along Capistrano Road.

View of the harbor marina from Capistrano Road

Figure 4-4: Visual Character Zone



This area is the most visually intense, due in part to the hundreds of boats, the vehicles, and pedestrian activity seen in the vicinity. The harbor area creates a strong visual identity and is memorable due in part to viewer expectations related to the coastal experience. These factors result in a generally high visual quality as seen from portions of Highway 1, Capistrano Road and other roads, paths, and public areas in the vicinity. As seen from some viewpoints, distant views of the ocean and hills are subordinate to the iconic visual identity of the harbor zone. This area extends south along the harbor, where multi-use paths and the highway itself add to the visual context. With the exception of the hotel complex development, most of the buildings and facilities within the harbor zone are consistent with the pedestrian-scale design and character of the predominately rural regional setting.

Princeton Waterfront/Industrial Area

This built area is also densely developed, although it has a markedly different visual character than the harbor zone. The visual quality of the Princeton waterfront/industrial area is based primarily on its authentic, working-neighborhood character.

The eclectic mix of industrial maritime uses and varied nonconforming residential dwellings is a major contributor to the aesthetic of the community. The Princeton waterfront/industrial area has an informal, somewhat cluttered appearance consistent with its historic use. Because of existing development, views to the surrounding hills and other visual resources can be limited from certain viewing areas within this zone. Views of the harbor are available along the axes of West Point Avenue, Vassar Avenue, Columbia Avenue, and Broadway, which run perpendicular to the shoreline. Where these streets terminate at the harbor's edge, views open up and reveal the coastal panorama. These street-ends are popular public access and viewing locations.

A street scene in the Princeton waterfront / industrial area

Rural Zone North of the Princeton Community

As seen from Highway 1 and Airport Street, the Princeton Study Area has a distinctly rural visual character north of the Princeton community. Throughout this area, residential and commercial development is limited. Although the airport is easily visible, it does not dominate the view, and its scale and development style are consistent with the rural and agricultural context.

Throughout this northern portion of the Study Area, views of agriculture are also an important feature. Typical views in this zone often include agriculture, open space, or minimal development in the fore and mid-ground, with the hills or ridgeline rising up in the distance. The Pillar Ridge Manufactured home neighborhood and the commercial area along Airport Street are also part of this zone. This sub-area, although presenting a built element into the viewshed, is not inconsistent with typical rural development patterns seen throughout the coast.

The view along southbound Highway 1 north of Princeton

The view of Pillar Ridge Manufactured Home neighborhood and commercial area along Airport Street

Pillar Point and Pillar Point Bluff Zone

This zone includes the more natural and topographically diverse portions of the Study Area. The visually prominent Pillar Point and Pillar Point Bluff are important features of this area.

Also included are the undeveloped beach and Pillar Point Marsh west of the Princeton waterfront/industrial area. These highly popular recreation areas afford a substantial amount of visual access to the ocean, coastline, harbor, hills, and communities within the Study Area and beyond. The unique visual character of this zone is increased by its proximity to native eco-systems and natural resources.

Pillar Ridge as seen from southbound Airport Street

View of Pillar Point landform

Viewshed Inventory

The availability of views to visual resources in and around the Study Area is varied and dependent on a number of factors, including topography, intervening development and vegetation, viewing distance and duration, and atmospheric conditions. From many viewpoints within the Study Area, multiple visual resources can be seen at the same time. This section analyzes the general availability of views as experienced from specific public viewpoints, areas, or corridors. Based in part on this viewshed inventory, opportunities and challenges related to preserving, enhancing, and creating views can be identified.

Views from the Highway 1 Corridor

Highway 1 is the primary transportation route through the Study Area. Travelling in the northbound direction, the Study Area first becomes visible near Medio Street, approximately 0.8 miles south of the Study Area. Continuing north, Pillar Point, Pillar Point Bluff, the harbor, and the Princeton community can be seen in the distance, up to a point where a roadside bluff along Vallejo Beach rises up and blocks much of the view. Visibility of the harbor area remains blocked by landform until a section of the highway near the intersection of Coronado Street. Upon entering the Study Area from the south, views to the harbor are again blocked by an earthen berm and scattered vegetation between the highway and the launch ramp parking area. Considering the proximity of Highway 1, views to the harbor in the northbound direction are substantially limited. Northbound views to the harbor open up again just south of the Capistrano Road intersection.

At the Highway 1 / Capistrano Road intersection, visitor-serving businesses including the Harbor Village development and the hotel complex become more noticeable to the southwest. A portion of Pillar Point Bluff can be seen in the distance. Businesses and residences inland from the highway are also part of the view at this location. Northbound views of the harbor end at Capistrano Road where Highway 1 continues north.

North of Capistrano Road, the area's agricultural character becomes evident. Once past the roadside landscaping, views of the coastal foothills and Pillar Point Bluff can be easily seen as a backdrop for open space and agricultural fields. The airport is visible to the west along this section of the highway. Continuing north, the viewshed maintains this visual character until passing the large roadside trees south of Cypress Avenue and leaving the Study Area.

Traveling on Highway 1 in the southbound direction, the agricultural lands, inland hills, and Pillar Point Bluff are all important visual features, up to a point near the northern intersection of Capistrano Road, where roadside vegetation begins to screen distant views.

In this area, the hotel complex and shopping development along Capistrano Road are the most visually dominant features of the Princeton community. The harbor itself does not become visible until a location approximately 250 feet north of the southern Capistrano intersection. At that point, views to the harbor, and breakwater can be seen across an existing vacant parcel northwest of the intersection.

Continuing south, the harbor remains partially visible for another approximately 800 feet until the roadside berm again blocks views to the west.

Critical views along Highway 1 include:

- The harbor, and Pillar Point as seen from near the southern intersection of Capistrano Road. Highway 1 in this area and Capistrano Road as it approaches the community serve as community gateways.
- The agricultural land and open space north of the northern intersection of Capistrano Road.
- The coastal foothills to the east.

View northwest from Highway 1; the harbor is just beyond this berm.

View from the intersection of Highway 1 and Capistrano Road near the harbor

Agricultural uses are seen along Highway 1 north of Princeton

The Half Moon Bay Airport entrance west of Highway 1

Agricultural fields and the coastal foothills as seen from southbound Highway 1

The first glimpse of the hotel and shopping development lining the harbor

View across the parcel at the northwest corner of Highway 1 and Capistrano Road

Views from the Harbor

Views from the public piers in the harbor include close-up views of the docks, boats, and boating activities.

In addition, these vantage points include views of the harbor parking areas, Highway 1, the waterfront, and related development. These views also reveal quality panoramas of the beaches, Pillar Point Harbor, Pillar Point and Pillar Point Bluff, as well as the distant scenic hillside backgrounds.

- Critical views from the harbor include:
- The surrounding harbor, beaches and ocean.
- Pillar Point and Pillar Point Bluff to the west.
- The coastal foothills to the east.

View of the harbor docks in the marina

Looking west from the marina toward Pillar Point

Views from the Princeton Commercial-Retail Area

Capistrano Road serves as the main access and a visual gateway from Highway 1 to the harbor area. Views from along this road include a substantial number of pedestrians as well as vehicles. The harbor dominate views from Capistrano Road to the south. Pillar Point can generally be seen in the distance, and the open ocean can be seen in the background.

Views to the north from this section of Capistrano Road are dominated by hotels, restaurants, and the Harbor Village shopping area.

Progressing west on Capistrano Road from Highway 1, the commercial retail development becomes less visually dominant, and the open harbor, shoreline, and Pillar Point are more easily seen. Where Capistrano Road turns back inland near

Prospect Way, a vacant waterfront parcel adjacent to Denniston Creek allows for quality public views of the harbor and Pillar Point. As Capistrano Road continues north to reconnect with Highway 1, the riparian vegetation of Denniston Creek gives way to views of the hillsides, agricultural land, and the airport.

Capistrano Road also serves as a visual gateway to the Princeton community for travelers headed in the southbound direction from the northern intersection with Highway 1. Agricultural land, open space, Denniston Creek, and a portion of the airport property are adjacent to the roadway in this area. As Capistrano Road approaches the Princeton community, views of the harbor become available. Currently, views across a vacant parcel at the corner of Capistrano Road and Prospect Way allow a high-quality public viewing opportunity of the harbor, shoreline, and Pillar Point in the distance.

The harbor view from Capistrano Road looking southwest

Hotel development dominates the view north of Capistrano Road near the harbor.

Pedestrian-scale development along eastbound Capistrano Road

Views of the harbor across the vacant parcel near Capistrano Road and Prospect Way

Critical views from the Princeton commercial-retail area include:

- The harbor, beaches, and ocean to the south as seen from Capistrano Road and Prospect Way. Capistrano Road as it approaches Princeton from the north is considered a community gateway.
- Pillar Point and Pillar Point Bluff to the west.
- The coastal foothills to the east.

Views from the Princeton Waterfront/Industrial Area

Many of the views from within the Princeton industrial area are somewhat limited to the immediate area due to intervening adjacent development. However, partial views of the inland hills, Pillar Point, and Pillar Point Bluff can be seen, particularly along the east-west oriented streets. In addition, views of the harbor are available along north-south oriented streets and from where those streets end at the harbor edge.

Along Princeton Avenue, which fronts the harbor, occasional views of the water can be seen between gaps in the existing development.

At the ends of West Point Avenue, Vassar Avenue, Columbia Avenue, and Broadway, quality views of the beach, harbor, the pier, and Pillar Point are available.

Critical views from the Princeton waterfront/industrial area include:

- The harbor, beaches, and ocean as seen from the axes and southern ends of West Point Avenue, Regent Street, Columbia Avenue, and Broadway.
- The harbor, and ocean as seen from the various points along Princeton Avenue.
- Pillar Point, Pillar Point Bluff, and the coastal foothills mostly as seen from east-west oriented streets.

The foothills seen in the distance from the Princeton industrial-residential area

View of harbor along the street axis in the Princeton industrial-residential area

A glimpse of the harbor between developments on Princeton Avenue

Harbor view from a southern street end in the Princeton industrial-residential area

Typical harbor view from a street end in the Princeton industrial-residential area

Pillar Point view from a street end in the Princeton industrial-residential area

Views from Airport Street

The view from the northern segment of Airport Street is somewhat similar to the views along the northern segment of Highway 1. From these vantage points, agriculture and open space play a substantial role in establishing visual character, and the airport is also easily seen. Along Airport Street, views of the coastal foothills and Pillar Point Bluff establish the visual limits to the east and west.

Approximately mid-way along Airport Street the Pillar Ridge Manufactured home area is part of the foreground to the west. This development partially obscures views of Pillar Point Bluff. Further to the south, Airport Street approaches the waterfront/industrial area of Princeton. Because of Princeton's compact form, little visual transition exists between the agricultural area and the community edge.

This southern end of Airport Street functions as a local road gateway to the Princeton community. This gateway entry point quickly places the viewer into the waterfront/industrial streets of the neighborhood.

Critical views along Airport Street include:

- Pillar Point and Pillar Point Bluff to the west. Airport Street as it approaches the community serves as a community gateway.
- The agricultural and open space north of the Princeton waterfront/industrial area.

Coastal foothills and Pillar Ridge as seen from southbound Airport Street

Approaching Princeton along Airport Street

Views from Westpoint Avenue

West Point Avenue connects the Princeton community to the western portion of the harbor and to the trailhead parking area for Pillar Point Beach and Pillar Point Bluff. This narrow road has no outlet and terminates at the Air Force facility approximately 0.3 miles west of town. Along the way, West Point Avenue offers high-quality views of Pillar Point Marsh, the harbor, Pillar Point, Pillar Point Bluff, and the hills to the east.

The roadway elevates slightly as it approaches Pillar Point, and from that location the view broadens to include more of the harbor and the surrounding community.

Since West Point Avenue is a dead-end road, it is not considered a true transportation-related gateway. It does serve as an important re-entry point that

Looking west from West Point Avenue toward Pillar Point

The view of Pillar Point Marsh and the Princeton community from eastbound West Point Avenue

reinforces the value of the visual interface between the Princeton community and the surrounding natural landscape.

Critical views from Westpoint Avenue include:

- The harbor, beaches and ocean to the south. Westpoint Avenue as it approaches Princeton from the west is considered a community gateway.
- Pillar Point and Pillar Point Bluff to the west.
- The coastal foothills to the east.
- Pillar Point Marsh from both east and westbound directions.

Views from Recreational Areas

The Study Area is a popular year-round recreation destination. Visitors and locals alike utilize the many recreational opportunities available in the area. The visual environment is often an important component of that recreational experience. Hiking trails, multi-use paths, bicycling, public beaches, boating, surfing, and other water sports provide expanded visual access to the Study Area's scenic environment.

Views from Hiking Trails

Much of the natural and open space within the Study Area includes formal and informal hiking trails. Trails on Pillar Point Bluff offer expansive, high-quality views of the Study Area as well as the surrounding region. From these elevated vantage points, the coastline and open ocean can be seen for miles. Inland views show the Study Area in its larger context, and the patterns of development and land use can be observed.

An alignment of the California Coastal Trail passes through the Study Area. The Coastal Trail runs along Airport Street, then enters the Princeton water-front/industrial areaalong West Point Avenue, connects to Princeton Avenue, then continues east through town, along the harbor and south along the bluff trail parallel to Highway 1. This trail alignment at some point along the way exposes the user to each of the visual resources and character zones identified in this section. The sensitivity to visual quality is high among this user group,

The sweeping vista looking south from Pillar Ridge

A popular hiking trail follows the western portion of the harbor around Pillar Point

considering their likely viewing expectations and the statewide importance of the trail.

Critical views along hiking trails include:

- The harbor, beaches, and ocean.
- Pillar Point and Pillar Point Bluff.
- The coastal foothills to the east.
- Pillar Point Marsh.
- Agricultural land and open space throughout the area.
- Land use patterns as seen in the distance from elevated viewpoints.

Views from the Beaches

The beach throughout the Study Area runs from the eastern landing of the outer breakwater to around the west side of Pillar Point. The sandy beach is interrupted for a short section at the harbor. Views from the beachfront are generally of high quality and include direct visual access to the harbor and ocean.

The specific visual resources seen from the beaches depend on the viewpoint orientation, proximity to the visual resource, the adjacent topography, and nearby land use. The scale and type of adjacent inland development greatly affects the quality and character of the view as seen from viewpoints on the beach. From the beach east of the harbor area, a panoramic overview of the harborarea, Pillar Point, and Pillar Point Bluff is seen. This view also includes the commercial retail area along Capistrano Road, as well as the Princeton waterfront/industrial-residentialarea. The beaches along the western portion of the harbor are less influenced by adjacent development, but generally offer more contextual views of the Princeton community and the coastal foothills to the east.

Critical views along the beaches include:

- The harbor, shoreline and ocean.
- Pillar Point and Pillar Point Bluff.
- The coastal foothills to the east.
- Pillar Point Marsh from the middle and western stretches of beach.

A beach scene in the Princeton community

The beach as it heads toward Pillar Point

Views from the Harbor

These views include vantage points on or near the water such as from boats, paddle and surfboards, and from the unrestricted sections of the breakwaters.

Obviously, the number and locations of potential viewpoints in the harbor is unlimited. However, regardless of the specific viewpoint, many views from the harbor share certain characteristics and qualities. Views from the water generally offer a unique perspective of the landform and the related development patterns. The viewing distance and openness can allow for a panoramic overview of the coastline. Visually contrasting elements in terms of scale, color, form, and other factors can be particularly noticeable when seen from these viewing perspectives.

Critical views from the harbor include:

- The surrounding harbor, beaches, coastline and ocean.
- Pillar Point and Pillar Point Bluff.
- The coastal foothills to the east.
- Pillar Point Marsh.
- Land use patterns as seen from distant viewpoints.

Panoramic views of the landscape can be seen from the harbor.

The community context is noticeable from many viewpoints on the water.

Existing Visual Resources

As an indicator of the overall scenic quality, the entire Study Area outside of the Princeton waterfront/industrial area is designated as a County Scenic Corridor, as shown on the San Mateo County General Plan Scenic Corridors map. Throughout the Study Area, several different visual resources can be identified that contribute most significantly to the area's overall scenic quality (refer to Figure 4-5). Although these visual resources often overlap and are experienced in the context of one another, they can be defined and assessed individually in terms of their intrinsic values.

Pillar Point Harbor

The harbor area provides an iconic visual definition for the Study Area and the surrounding region. Its proximity to Highway 1 increases its visual exposure and potential sensitivity to visual change. With the exception of portions of the

Picturesque view of boats in the harbor marina

Figure 4-5: Visual Resources

hotel complex development, views of the harbor area are fairly intact, meaning most visual elements are fairly consistent with what viewers would likely expect to see in this setting.

The harbor is a visual resource in terms of its direct scenic imagery as well as its contribution to the visual character of the area. Capistrano Road is considered a visual gateway to the community as it approaches the harbor from both the east and southbound directions.

Pacific Ocean

Views of the Pacific Ocean are a fundamental character-defining visual element for the Study Area and the California coastline. Although not visible from all locations within the Study Area, in those areas where it can be seen it substantially adds to the visual interest and quality of the view. Beaches

Where visible, the sandy shore along the harbor is a primary contributor to the visual composition of the coastal setting. Along the western portion toward Pillar Point, the beach is seen as part of the natural geographic landform. Closer to the harbor area, where beach-related activity is more noticeable, the overall visual quality of the beach remains high, as these activities contribute to a classic visual image of the California coast.

The Pacific Ocean to the southwest

The beach near the harbor marina

The beach along the western end of the harbor

Pillar Point Marsh

The Pillar Point Marsh near the western section of the harbor is considered a visual resource due to its contribution to the area's natural beauty, and because it provides a relatively close public viewing opportunity of a unique coastal ecosystem resource.

Denniston Creek

Denniston Creek is a perennial stream that runs from the coastal foothills through the Study Area to the ocean. In the Study Area, the creek has fairly dense riparian growth and surface water is not readily seen. The creek follows Capistrano Road, which is a community gateway, from the north and enters the harbor just east of Broadway. Views of the creek provide a connection with the natural landscape and add visual interest along highly visible public locations.

Pillar Point Marsh as seen from Pillar Ridge

Denniston Creek as it flows into the harbor

Old Romeo Pier West of the Marina

The wooden pier extending out from near the terminus of West Point Avenue is a valuable part of the harbor's visual character. The pier's rustic appearance in terms of materials and form adds a picturesque quality to the harbor setting. The pier is a scenic resource in terms of its direct imagery and its visual reinforcement of the community's maritime character.

The iconic pier seen from the adjacent beach

Surrounding Hills

As seen from much of the Study Area, Pillar Point Bluff and the coastal foothills east of Highway 1 create a scenic backdrop that contributes greatly to the overall visual quality. These mostly undeveloped hillsides and ridgelines underscore the rural and natural character seen in the Study Area and throughout much of the surrounding area. These visual resources provide context and visually frame many of the other scenic resources in the area.

The Pillar Ridge scenic backdrop as viewed from Highway 1

The coastal foothills frame views of the Princeton community and harbor

Pillar Point Landform

Similar to Pillar Point Bluff and the inland hills, Pillar Point provides a scenic backdrop to much of the Study Area. In addition, Pillar Point creates a unique landform as it juts out from the coastline to form the westernmost block of land defining the harbor. Because of its visual prominence, Pillar Point retains certain landmark characteristics. The scenic and memorable qualities of this dramatic landform make Pillar Point a visual resource for the Study Area and the region.

Pillar Point is seen as a regional landmark

Agricultural Land and Open Space

Views of agriculture lands and open space in and around the Study Area are valuable contributors to visual character and scenic quality. Farming operations and fields visible from public roads and trails help define the Study Area as having a rural history. The generally pastoral qualities of the surrounding open space and agricultural lands have an inherent scenic benefit which increases the visual quality of the area.

Agricultural fields and open space visible from the Princeton Study Area

Princeton Waterfront/Industrial Area

The Princeton waterfront/industrial area is a primary contributor to the historic working-town character of the Study Area. This zone provides a unique glimpse of a community that has survived much of the gentrification associated with the emergence of larger-scale tourist-serving developments along the coast. The eclectic combination of maritime-related businesses, boat and equipment storage, residences, and other varied uses has over time resulted in a multi-layered aesthetic character which defines the community. Airport Street and West Point Avenue serve as visual gateways to the community as they approach the Princeton waterfront/industrial area.

The Princeton waterfront/industrial area

Opportunities and Constraints

The visual environment of the Study Area is an important component of the local residents' and visitors' experience and enjoyment. In general, the Study Area offers opportunities for accommodating future development while protecting visual resources and maximizing aesthetic potential.

Because of the Study Area's proximity to numerous visual resources, many opportunities exist to maximize the visual experience for visitors and the surrounding community. Due to the Study Area's accessibility and its popularity as a tourist destination, challenges also present themselves in terms of allowing development while not degrading the very aesthetic qualities that make the area popular. Figure 4-6 shows potentially threatened critical views in the Princeton vicinity. To that end, the primary issues to consider regarding preservation of visual quality in the Study Area are:

- Protection of visual resources such as the harbor, Pillar Point, and the surrounding hills; and
- Maintaining the character-defining qualities of the community such as the eclectic development of the Princeton waterfront/industrial area, surrounding agricultural areas, and the harbor.

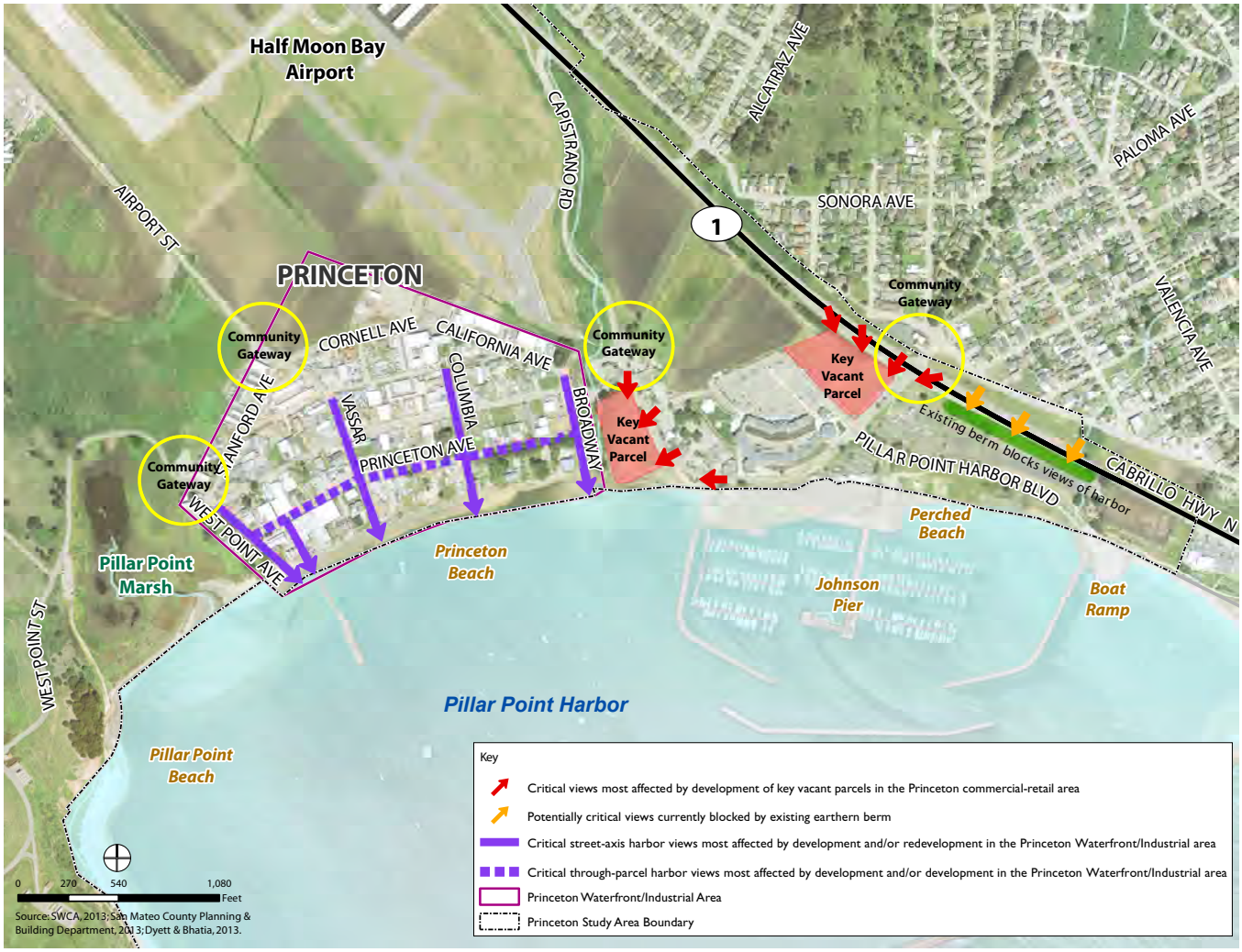
Protection of public views will require creative planning and considerations for potential development at community gateways and critical undeveloped parcels, and for redevelopment of parcels within the Princeton area–particularly along the streets that currently have harbor views.

Maintaining community character will be a challenge, considering that the existing aesthetic is the product of decades of development subject to evolving planning and design policy and standards. By first understanding how the community defines itself in terms of visual character, innovative methods can be established that allow for continued development. A key to preserving the area's existing visual character will be to implement definite criteria and guidelines for development that do not result in a homogeneous, contrived appearance. The Planning Update should give consideration to the following:

The development of existing vacant parcels and the redevelopment of other parcels will result in blocking or reducing views of visual resources in the Study Area. It may also result in an alteration of community character.

Although this constraint applies to parcels throughout the Study Area, it is particularly critical regarding two specific privately-owned parcels in the Princeton community (depicted below in Figure 4-6). Development of either of the following two currently vacant parcels could significantly affect high-quality views of visual resources, and could adversely impact the visual character as seen from community gateways.

Figure 4-6: Critical Viewing Areas with the Greatest Potential for Loss of Visual Quality



- The vacant parcel at the northwest corner of Highway 1 and the southern Capistrano Road intersection.
- The vacant parcel along Capistrano Road between Prospect Way and the harbor.

Viewshed-based development standards for the Study Area should be developed that prioritize view protection in critical public viewing areas such as gateways, along the axis of streets, and public gathering areas, and will need to be balanced with the development potential in the area.

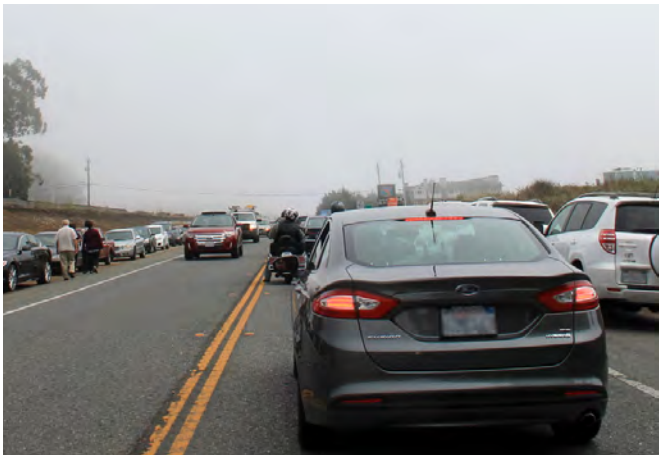
Development of this parcel at the corner of Capistrano Road and Highway 1 could dramatically alter the visual quality at this community gateway.

Development of this parcel along Capistrano Road between Prospect Way and the harbor could significantly alter the visual quality of this community gateway.

Development standards and design guidelines should express and promote the community's aesthetic identity that are consistent with the rural/ agricultural/ industrial visual character of the northern portion of the Study Area.

Large-scale hotel development along Capistrano Road should not be used to represent community character.

Increasing traffic volumes on Highway 1 may result in further congestion, more vehicles, and an associated reduction of visual quality for the area. During peak seasons, parked cars lining Highway 1 cause a reduction of visual quality for the study area.



Traffic congestion on Highway 1 through the Study Area

Parked cars line Highway 1 south of Capistrano Road.

Operational and other improvements can improve traffic flows and safety on Highway 1 and the surrounding local roadways. While Plan Princeton will not specifically address traffic needs along Highway 1, the County has recently initiated a separate Comprehensive Transportation Management Plan that is intended to proceed on a parallel track with Plan Princeton to address the cumulative traffic impacts along Highway 1, Highway 92, and other arterial roads on the San Mateo County Midcoast and in the City of Half Moon Bay.

The existing berm along the ocean side of Highway 1 near the marina launch ramp parking area blocks views of the harbor, the Princeton community, Pillar Point, and Pillar Ridge, substantially reducing visual access to character-defining visual resources.

The earthen berm blocks harbor views from northbound Highway 1.

Lowering the height of the berm would increase views of the harbor and Pillar Point while still partially screening visibility of the harbor parking lot. Selectively thinning or removing some of the existing trees along the southbound side of Highway 1 will increase views of the harbor and Pillar Point. To maintain a vegetated appearance, the area could be replanted with lower growing shrubs.

Overhead utilities along Highway 1 north of Capistrano Road add a degree of visual clutter and interfe with views of Pillar Ridge.

Undergrounding should be considered for the existing utilities along Highway 1 north of Capistrano Road within the Study Area.

Existing overhead utilities along Highway 1

4.4 Cultural Resources

This section discusses existing cultural resources within the Study Area, and identifies potential cultural resources constraints in the event of future development or changes in existing land use associated with the proposed Planning Update. The section is based upon existing information gathered and analyzed through a cultural resources records search, preliminary archival and literature review, and initial Native American scoping to assess the sensitivity of the Study Area for cultural resources.

Existing Conditions

Regional Setting

Ethnography

The Study Area is in a region historically occupied by the tribelets of the Costanoan linguistic group (Levy 1978). Descendants of Costanoan speakers prefer to be called by the name of the tribelet from which they are descended. When their heritage is mixed or the specifics have been lost over generations, they prefer the use of a native term, Ohlone, rather than the European-imposed term Costanoan ("coastal dwellers") (Margolin 1978). The rich resources of the ocean, bays, valleys, and mountains in the region provided Ohlone-speaking peoples with food and all their material needs (Levy 1978:491–492). The primary food staple was the acorn, supplemented by a great variety of animal and plant resources.

Prehistory

The Study Area lies in what generally is described as the San Francisco Bay Region, which is one of eight arbitrary organizational divisions of the state (Moratto 1984). This archaeological region includes all of today's San Mateo and Marin Counties, and western, northern, or southern portions of Alameda, Contra Costa, Napa, Santa Clara, Santa Cruz, Solano, and Sonoma Counties bordering the Bay Area (Moratto 1984). The prehistory of this region is divided into six periods: Early Holocene (Lower Archaic, cal 8000-3500 B.C), Early period (Middle Archaic, 3500 to 500 cal B.C.), Lower Middle period (Initial Upper Archaic, 500 cal B.C. to cal A.D. 430), Upper Middle period (Late Upper Archaic, cal A.D. 430 to 1050), Initial Late Period (Lower Emergent, cal A.D. 1050 to 1550), and Terminal Late Period (cal A.D. 1550 to 1776) (Milliken et al. 2007: 101, 114-118).

History

The Post-Contact history for the state of California generally is divided into three periods: the Spanish period (1769–1822), the Mexican period (1822–1848), and the American period (1848–present). Although there were brief visits by Spanish, Russian, and British explorers from 1529 to 1769, the beginning

of Spanish settlement in California occurred in 1769 with a settlement at San Diego and the first (Mission San Diego de Alcalá) of 21 missions established from 1769 to 1823. Word of Mexican victory after a decade of revolt against the Spanish crown reached California in 1822, marking the beginning of the Mexican period. This period was marked by an extensive era of land grants, most of which were in the interior of the state, and by exploration by American fur trappers west of the Sierra Nevada Mountains.

With the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican-American War, California became a territory of the United States. The Miramontez family established Rancho San Benito and built an adobe residence in present-day Half Moon Bay, which was said to have remained standing into the 1900s (Hoover et al. 2000). The community was originally called San Benito and later "Spanishtown," in part because of the influence of its founding Hispanic families. It was first platted in 1863. By the mid-late 1800s, stores, churches, and at least one saloon had been built (Hoover et al. 2000). The area was remote compared to other population centers; agriculture was the main source of local commerce. In the History of San Mateo County, California, Half Moon Bay was described as "one of the finest agricultural districts of [the] county, located upon what was formerly one of the largest and prettiest streams of the county" (Alley 1883:239). The developing port was renamed in honor of the bay's unique form in 1874 and a United States Post Office was established (as "Halfmoon" Bay). By 1905, the spelling was revised to the current three-word combination of Half Moon Bay.

Coastal Survey Charts in the second half of the 19th century depict "Whaleman's Harbor" approximately one mile north of Pillar Point. Records indicate that 1,000 barrels of rendered humpback blubber were produced here in 1861. In 1905 and 1906, the planned subdivision of Princeton-by-the-Sea was established by Frank Brophy. It began humbly, as a railroad depot simply referred to as Princeton. Development of the present-day layout began in the 1920s.

The United States entered World War II, and in 1942 the Half Moon Bay Airport was built by the Division of Highways, California Department of Public Works (now Caltrans), for use by the US Army Air Corps (Sebby 2010). When built, the facility had one runway on more than 100 acres of federal land. It was designed to be part of the coastal protection network, on alert against possible attack by Japanese aircraft during the war. The runway was lengthened soon after its construction by the Public Roads Administration. The Army Corps added a taxiway to connect the extended runway and also added "protective revetments, fuel storage and distribution systems, roadways, and administrative buildings" in 1943 (Sebby 2010).

The southern portion of the Study Area was once home to the Pillar Point Military Reservation (now the Pillar Point Air Force Station), which was established in 1940. The approximately 50-acre installation experienced varied use as a harbor defense post, artillery site, and as a missile tracking and radar station

over the second half of the 20th century. Currently, Pillar Point Air Force Station houses radar, command control, meteorological, and telemetry systems to support missile activity at Vandenberg Air Force Base. Today, much of this land is utilized as open space.

In general, aside from continued utilization and expansion of agriculture, the Study Area and surrounding communities have experienced residential and service-based growth during the latter half of the 20th century and the beginning of the 21st. Perhaps of note, is that immediately offshore of the Study Area, is the world-renowned Mavericks surf break, which has gained international notoriety in the surf and film industries.

Local Policies and Regulations

The protection of cultural resources within San Mateo County is influenced by policies and guidelines presented in both the General Plan and the Midcoast LCP. The General Plan (Chapter 5: Historic and Archaeological Resources) includes extensive discussion on the requirements for the protection of known cultural resources, and implementation of mitigation measures to minimize potential impacts to known and unknown resources. These are largely consistent with the policies and regulations set forth by CEQA and the Coastal Act.

The Midcoast LCP contains policies related to the protection and treatment of archaeological resources. There are also standards related to Structural and Community Features in the Visual Resources Component and Management Guidelines for Recreation and Visitor-Serving Facilities (Appendix 11.A) that provide guidance regarding the general protection of historic, archaeological, and paleontological resources. The LCP also identifies such resources as "fragile."

Study Area Setting

A records search revealed that the majority (over 75 percent) of the Study are has previously been subject to cultural resources study (i.e. pedestrian field survey). The following discussion is based on the results of the cultural resources records search, which identified 16 previously documented cultural resources within the Study Area (Table 4-3). Sensitive archaeological information is not for public dissemination. As such, archaeological site locations are not identified in this report.

Documented Archaeological Sites

P-41-000001 (CA-SMA-151). CA-SMA-151 is a prehistoric shell midden mound and lithic scatter with known human remains (Flint et al. 2005). This resource is listed in the National Register of Historic Places (NRHP). It has been subject to numerous cultural resources studies, with each subsequent update resulting in an expansion of the site boundaries. CA-SMA-151 is within an area currently zoned for Industrial land use.

P-41-000002 (CA-SMA-109/H). CA-SMA-109/H is a massive prehistoric lithic scatter that encompasses approximately 20 percent of the overall Study Area (Clark 2009). Located along the bluffs west of the Half Moon Bay Airport, the site has been subject to ranching and farming activities for over 100 years. A small historic component, comprised of the possible remnants of a whaling station, is located within the southern portion of the site.

Clark (2009) acknowledges that the site boundary should be considered an approximation due to extensive surface vegetation cover. CA-SMA-109/H is primarily within an area currently zoned for Agricultural and Open Space land use, with small portions of the site within Low Density Residential, Medium Density Residential, and General Industrial. The site has not been formally evaluated for inclusion in the either the NRHP or California Register of Historic Resources (CRHR).

P-41-000027 (CA-SMA-22). CA-SMA-22, known as the Princeton Mound, is described as a burial and habitation site. The site was originally documented in 1912. Jackson and Dietz (1970:15) describe CA-SMA-22 as "a large, classic shell mound…site is probably that from which the Indians who gave Portolà the 'black tortillas'." Limited archaeological excavations within CA-SMA-22 reveal a dense deposit with a varied artifact assemblage and multiple burial features (Phebus 1973). The site is an area currently zoned for Very Low Residential Land Use, and has not been formally evaluated for inclusion in the either the NRHP or CRHR.

P-41-000061 to 67 (CA-SMA-57 to 63). According to the Northwest Information Center (NWIC), CA-SMA-57 through CA-SMA-63 are identified as shell mounds recorded by Nels Nelson in the early 1900s. Nelson's shellmounds are commonly designated by Nelson's name followed by a number (e.g. Nelson 400). The documentation (i.e. site forms) provided by the NWIC contain no locational information or site constituent description. These resources were undoubtedly plotted on the NWIC basemaps based on a historical map produced by Nelson's studies of coastal California (Nelson 1909). Based on the high density of more recently documented prehistoric archaeological sites in the Study Area and the vicinity, it is reasonable to assume that the purported locations of CA-SMA-57 through CA-SMA-63 correspond to more recently assigned trinomials. In instances where the supporting documentation provided by the NWIC suggests or determines that a more recently documented site is, in actuality, one

of Nelson's Mounds (i.e. CA-SMA-56 through CA-SMA-64), that information is provided within the site's description and in Table 4-3.

P-41-000137 (CA-SMA-135). CA-SMA-135 is a prehistoric shell midden and associated lithic scatter with fire cracked rock and pitted stones (Clark 2009). Clark suggests that CA-SMA-135 is likely the actual resource location of CA-SMA-58 or -59 (aka Nelson 409 or 410). Jackson and Dietz (1970) suggest that CA-SMA-135 is, in fact, Nelson Mound 410. CA-SMA-135 is within an area zoned for Agricultural and General Industrial land use. The site has not been formally evaluated for inclusion in the either the NRHP or CRHR.

P-41-000138 (CA-SMA-136). CA-SMA-135 is a prehistoric shell midden and associated lithic scatter with fire cracked rock and pitted stones (Clark 2009). Clark suggests that CA-SMA-136 is likely the actual resource location of CA-SMA-58 or -59 (aka Nelson 409 or 410). Jackson and Dietz (1970) suggest that CA-SMA-136 is, in fact, Nelson Mound 409. CA-SMA-136 is within an area zoned for Agricultural, Medium High Density Residential, and General Industrial land use. The site has not been formally evaluated for inclusion in the either the NRHP or CRHR.

P-41-000139 (CA-SMA-137). CA-SMA-137 is a prehistoric shell midden and associated lithic scatter (Jackson and Dietz 1970). CA-SMA-137 is within an area zoned for Agricultural and Medium High Density Residential land use. The site has not been formally evaluated for inclusion in the either the NRHP or CRHR.

P-41-000203 (CA-SMA-203). CA-SMA-203 is a prehistoric shell midden and lithic scatter located on the banks of San Vicente Creek. The Study Area and Highway 1 bisect the site. The portion of the site within the Study Area is within Half Moon Bay Airport property. CA-SMA-203 has been determined eligible for inclusion in the NRHP (Chaloupka 1979).

P-41-000433 (CA-SMA-347). CA-SMA-347 is a low-density shell and lithic scatter located on the bluffs in the southern portion of the Study Area (Flint et al. 2005). This area is zoned as Open Space land use and is partly within the Pillar Point Air Force Station. Evaluative test excavations determined that CA-SMA-347 does not meet any of the significance criteria and is ineligible for listing in the NRHP and CRHR.

P-41-002239 (N/A). P-41-002239 is the remnants of a historic dairy farm (Clark 2009). Identified features include numerous foundations, wells, ponds, roads, and various wall segments. This large complex dates to at least 1892, when it first appears on topographic maps. P-41-002239 is within land currently zoned for Agricultural land use. The site has not been formally evaluated for inclusion in the either the NRHP or CRHR.

Built Environment Resources

The Princeton Hotel: P-41-000180 (CA-SMA-180). The Princeton Hotel is a NRHP and CRHR listed resource. The Hotel was constructed by Frank P. Brophy in 1908, who was also the champion and developer of the Princeton-by-the-Sea subdivision. The Hotel is considered significant for its architectural style and its association with the period of coastal expansion and connectivity, and for its role as a place of alleged activity associated with illegal exploits during the Prohibition era.

Other Potential Built Environment Resources. Given the historical development and importance of the region, it can be assumed that many of the historic-era (i.e. greater than 50 years) buildings and structures within the Study Area may in fact be considered historical resources or historic properties. These may include, but are not limited to, buildings associated with the Half Moon Bay Airport, the Pillar Point Air Force Station, and harbor improvements, and residences and various use buildings in the community of Princeton.

Shipwrecks. Although the Study Area does not include adjacent offshore waters, it should be noted that Half Moon Bay and the vicinity has an extended and fairly well-documented maritime history. Several known shipwrecks are located offshore in the general vicinity of the Study Area.

Opportunities and Constraints

The records and archival searches revealed the presence of 16 previously identified cultural resources within the Study Area. Of the identified resources, only one, CA-SMA-347 has been determined ineligible for listing in the NRHP and CRHR. Two resources (CA-SMA-151 and CA-SMA-180) are listed in the NRHP and CRHR, and a third (CA-SMA-203) is recommended as eligible for listing in the NRHP. Although not evaluated, the remaining cultural resources in the Study Area should be considered as potentially eligible for both the NRHP and CRHR until subject to further cultural resources study. In addition, the records search revealed that the majority (over 75 percent) of the Study Area has been previously subject to cultural resources study (i.e. pedestrian field survey).

The planning update by itself will not result in direct impacts to any known cultural resources. However, future development or changes in existing land use, as a result of the implementation of the planning update do have the potential to result in impacts to cultural resources. The Study Area is considered to have high cultural resources sensitivity due to the presence of several important archaeological and historical resources. In the future, if avoidance is not feasible, in order to minimize and/or mitigate potential impacts to any of the identified cultural resources in this document, additional study may be necessary. In all cases, the preferred method to mitigate impacts to significant cultural resources is avoidance. Implementation of the Update allows the County to review the location of documented cultural resource sites and initiate consultation with Native American tribal representatives.

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5 Natural Hazards and Shoreline Erosion

Natural hazards discussed in this chapter include geologic hazards such as bluff retreat, landslide, erosion and subsidence, seismic hazards such as faulting, groundshaking, tsunami, liquefaction, and other hazards including flooding and fire. Specific attention is given to shoreline erosion rates and related coastal access issues, as well as shoreline armoring.

5.1 Local Policies and Regulations

One of the most effective tools for avoidance of risk is the implementation of hazard avoidance and mitigation policies and standards in local land use plans. The County of San Mateo provides guidance for the identification, assessment, avoidance or mitigation of natural hazards through the Municipal Code and the Safety Element of the General Plan.

General Plan

Cities and counties in the State of California must adopt General Plans which regulate physical development. Natural hazards are addressed most commonly in the Safety Element of the General Plan, but may be addressed in other elements of the General Plan as well. General Plan policies include:

- Protection of Resources [1.1 et seq]
- Protect Soil Resources [2.1 et seq]
- Designate land uses…to minimize…natural…hazards [7.6]

Midcoast Local Coastal Program (LCP)

Cities and counties in the State of California must adopt General Plans which regulate physical development. Natural hazards are addressed most commonly in the Safety Element of the General Plan, but may be addressed in other elements of the General Plan as well. General Plan policies include:

- Protection of Resources [1.1 et seq]
- Protect Soil Resources [2.1 et seq]
- Designate land uses…to minimize…natural…hazards [7.6]

Midcoast Local Coastal Program (LCP)

In portions of the County within the Coastal Zone, the Local Coastal Plan provides policies and programs which address conformity with the Coastal Act, along with other land use goals. Policies and programs in this document related to natural hazards include, but are not limited to the following:

- Density Credits for parcels within a rift zone of an active fault , page 1.19
- Hazards Component beginning on page 9.1. Cross-references Section 6324.6, 6326.2, 6326.3 and 6326.4 of the Zoning Ordinance
- Requirements that all proposed development in Seismic Fault/Fracture areas prepare geologic reports by a certified engineering geologist
- Requirements that development in high fire risk areas be reviewed and conditioned by the County Fire Warden for proper building materials, access, brush clearing, and fire flow. [9.6]
- Permitting requirements that allow bluff top development only if design and setbacks are adequate to ensure stability and integrity for the economic life span of the project, and do not contribute to erosion or instability. These standards include specific requirements for stability evaluation reports, including wave action and seismic forces and prohibit land division or new structures that would require the need for bluff protection work. [9.8]
- Standards for floodplain development [9.9]
- Limits on shoreline development/new protective shoreline structures [9.11 through 9.17]

Zoning Regulations

Standards which address natural hazards are embodied in the following chapters of the San Mateo County Zoning Regulations:

- Chapter 19.5 Geologic Hazards District

- Chapter 20 Combining Districts, includes S-17, S-94, and S-105 – Midcoast
  - Chapter 20, Section 6300.2 [7], which provides limits on impervious surfaces to <10% with exceptions allowed, and [11], which places limits on winter grading.
- Chapter 20B Coastal Development District
  - Includes requirements for special permits for landform alteration, including coastal bluffs, wetlands or dunes or within 100 feet of the edge of a coastal bluff [Section 6328.5 (b)(4)].
- Chapter 35.5 Flood Hazard Areas

San Mateo County Department of Public Works

The Public Works Department is responsible for flood control infrastructure and drainage along County-maintained roads.

San Mateo County Harbor District

The San Mateo County Harbor District has jurisdiction over marine-related uses within the harbor. The Harbor District Master Plan identifies issues including beach erosion, and highlights the difficulties in trying to establish permanent beach features in this area.

Pillar Point Coastline (top) and Pillar Point Landslide Risk (bottom)

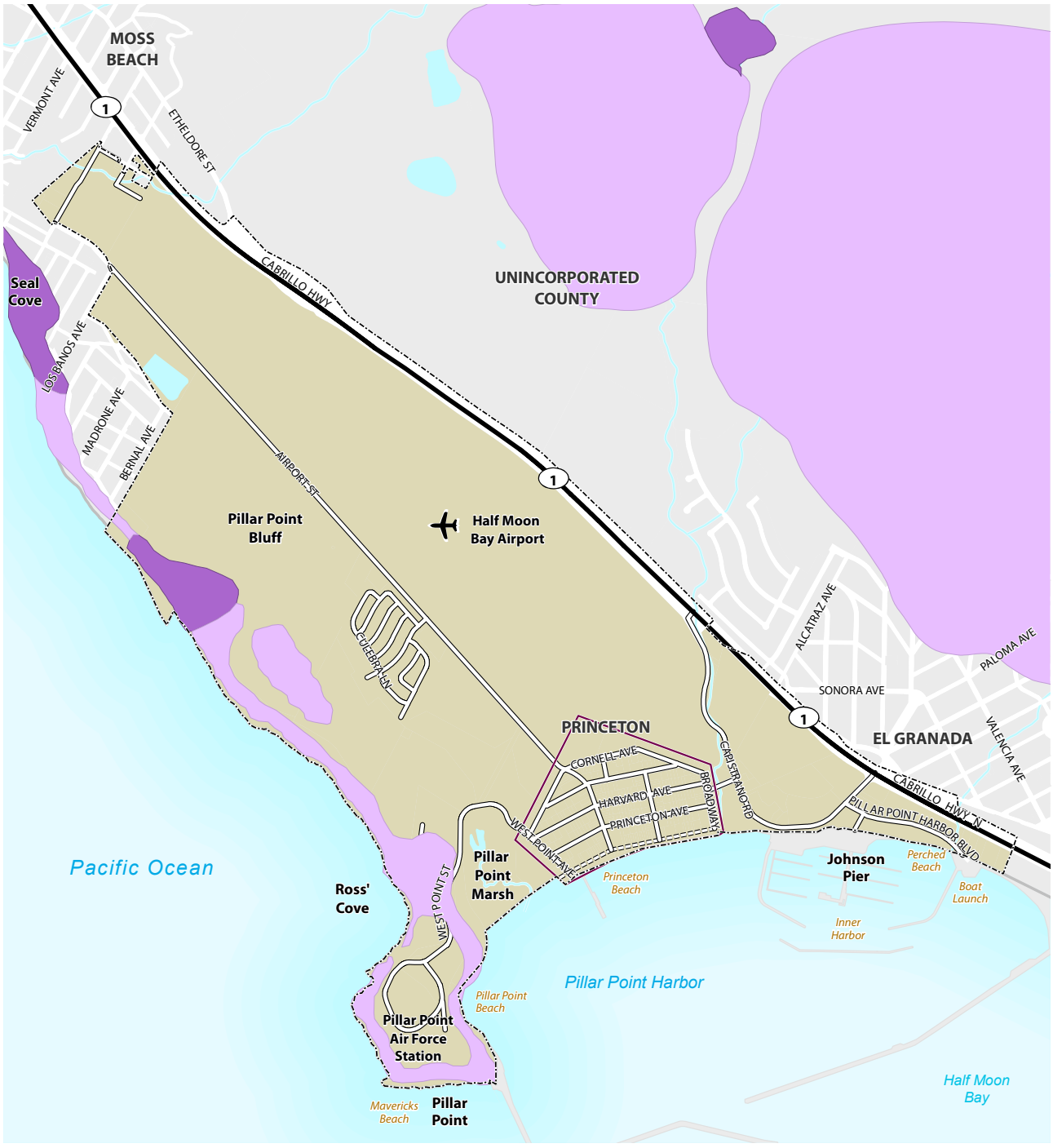
5.2 Geologic and Seismic Hazards

Geologic Hazards

Princeton is located on the Half Moon Bay coastal terrace. The terrace extends from Montara to Seal Rock, at varying widths between the ocean and the Santa Cruz mountain range. Elevations within the Study Area range from a high of approximately 145 feet above mean sea level at the western bluffs, to approximately 30 feet above mean sea level at the airport. The Study Area generally slopes downward in a southeasterly direction towards Pillar Point Marsh and the harbor. Prominent geologic features include Pillar Point, the shoreline, the south-facing harbor, and steep cliffs on the western edge.

The Study Area is underlain by a wide variety of soils, ranging from beach sand to clay loam and sandy loam. Most soils underlying the Study Area are derived from alluvial sources. The majority of the Study Area is underlain by Denison loam, which is considered deep and well-drained. The geology of the Study Area is defined to a large extent by the sea, the fault, and wetlands and waterways.

Figure 5-1: Landslide Risk



Landslides

The Study Area is mapped with localized landslide hazards along the western bluff and point, where topography is steep. In addition to the slope, the potential for landslides is also influenced by soil moisture content, vegetative cover, and the physical characteristics of the underlying geologic formations. Landslide potential is generally considered low for the Study Area, except in those portions of the planning area adjacent to coastal bluffs and shorelines (refer to Figure 5-1). Mitigation of landslide risk is achieved through proper evaluation of underlying site conditions, structural components, and avoidance of active landslide areas

Erosion and Sedimentation

Erosion is a natural process by which wind and water move across soils and break down existing features and structures. Human alteration of the natural environment can accelerate the pace of erosion, and/or create unnatural patterns of erosion. Accelerated erosion can cause instability in geologic structures, and water quality concerns in receiving waters. Erosion can be created through point sources, such as utility and industrial discharge points and mining and agricultural operations, or through non-point sources, such as impervious surfaces (paving and developed land uses), unpaved roads, and unsound grading or construction practices. In the photo to the right (top), erosion appears to be caused by informal shoreline access at the terminus of Columbia Avenue, and direct stormwater sheetflow from the paved or compacted streets towards the ocean.

Erosion at the Terminus of Columbia Avenue (top) and Shoreline Erosion along the West Shoreline Trail (bottom)

The Study Area consists of a relatively level plain, containing waterways and wetlands. The edges of the Study Area consist of coastal bluffs and sandy shoreline. There are different sources of and risks related to erosion in the edges and interior of the Study Area. At the fringes, sources of erosion are related to waves acting upon the steep bluff features. In the interior of the Study Area, sources of erosion include surface runoff and land management or development.

Soils in the Study Area are generally considered to have slight to moderate erosion potential, except for sand and gullied areas where erosion potential is considered very severe. Evidence of substantive erosion has been documented along the shoreline, from scour along the harbor to bluff erosion at the western edge. Continued erosion in these areas, in light of restrictions on new revetments and lack of coordinated action to address beach scour in the south, will impact plans for development and increase the potential for damage inland. Shoreline erosion, including erosion rates and shoreline protection issues and strategies is described in greater detail later in this section, under the "Shoreline Hazards" heading.

Subsidence

Subsidence occurs where water, gas, or other material is removed from intergranular spaces, resulting in compaction of soils. In extreme circumstances, this phenomenon can cause severe lowering of the soil surface, damaging

overlying structures and causing risks to life. Subsidence is most common in areas underlain by loose, compressible clay-rich soils, where water or oil are withdrawn in excessive amounts. The potential for subsidence in the Study Area is considered low.

Soil Expansion

The shrink-swell potential of soils, or expansion potential, denotes the amount the volume of a particular soil type will respond to the presence or lack of moisture. Expansion and contraction of soils over time can damage slabs, foundations, and structures if the site is not properly prepared, or if the slab or structure is not designed to withstand or accommodate such forces. Methods to address expansive soils include over-excavation and replacement or amendment of fill materials, moistening of fill materials, and special specifications for concrete materials and reinforcement. The expansion potential of soils underlying the Study Area varies, but is generally considered moderate to severe.

Naturally-Occurring Asbestos

Certain soil types, including soils associated with the Franciscan mélange, contain a naturally-occurring form of asbestos that can be dangerous when released into the environment. Soils underlying the Study Area are not considered sources of naturally-occurring asbestos.

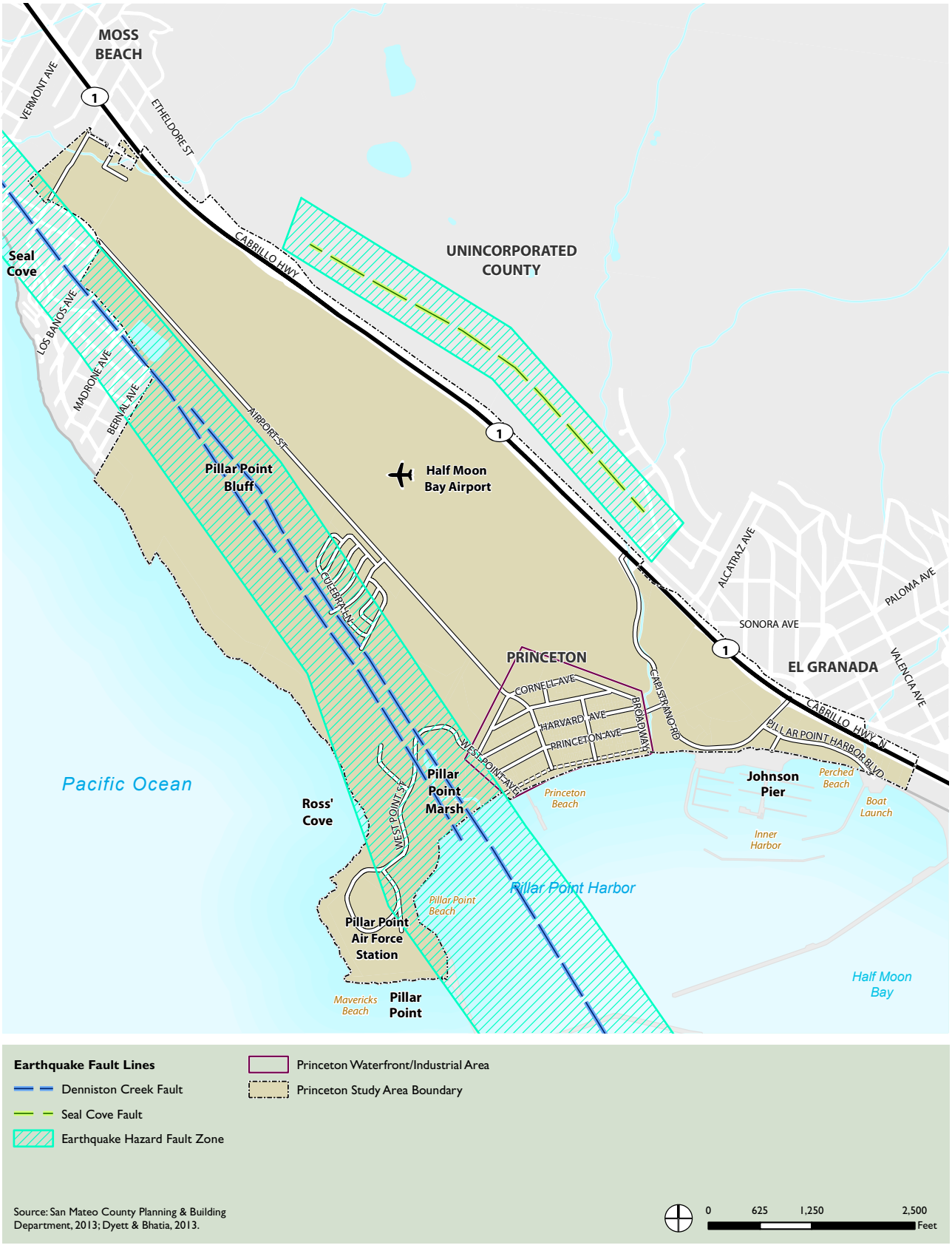
Seismic Hazards

There are several significant faults that could be the source of a seismic event in the Study Area. The extent of the effect depends in part on the source fault. The San Andreas Fault system is considered the most likely source of a major earthquake event in California's future; however, local faults of interest include the Seal Cove Fault (part of the San Gregorio Fault system), which crosses the Fitzgerald Marine Reserve and is generally mapped as trending northwest to southeast just inland from the western bluffs within the Study Area (see Figure 5-2). The San Gregorio Fault is a mapped Alquist-Priolo Special Studies Zone and is considered an active fault. Not much is understood about this fault system, since little of the fault is exposed onshore. However, it is considered active, with a potential earthquake moment magnitude of 7 or greater. Elevation offsets within the Study Area may be attributable to ongoing activity along this fault system. The edge of the fault comprises the linear ridge observed west of the Half Moon Bay Airport. Specific hazards associated with seismic events and features are discussed below.

Ground Shaking

Groundshaking potential throughout the Study Area is mapped as very strong to violent (based on a major event along the San Andreas Fault). An event of sufficient magnitude would damage even strong, modern buildings in the area.

Figure 5-2: Fault Hazard Map



Earthquake Fault Lines

- Denniston Creek Fault
- Seal Cove Fault
- Earthquake Hazard Fault Zone
- Princeton Waterfront/Industrial Area
- Princeton Study Area Boundary

Source: San Mateo County Planning & Building Department, 2013; Dyett & Bhatia, 2013.

0 625 1,250 2,500 Feet

Shoreline Development supported on piers (top), Pillar Point Marsh (middle), and existing slope protection and stability structures near Denniston Creek mouth (bottom)

Groundshaking associated with an event along the Seal Cove/San Gregorio Fault system would likewise have severe effects in the Study Area, particularly considering the location of the mapped fault trace.

Mitigation of groundshaking hazards have been largely addressed through improvements in portions of the applicable building codes that address structural requirements. Groundshaking can also be amplified in certain soil conditions; requirements for geotechnical study in areas of high risk ensure that structures are designed to withstand the design seismic event to the extent practicable. No measures can completely relieve life and property from risks associated with groundshaking.

Ground Failure

Settlement

Seismic settlement is the displacement of surface geologic structures associated with a seismic event. Settlement can cause unexpected changes in grade, interrupt utilities, and damage structures. The potential for seismic settlement has not been mapped for the Study Area; however, considering the alluvial nature of most soils within the Study Area, there is potential for seismic settlement.

Rupture

Areas overlying active faults are among those areas at risk of rupture during a seismic event. The potential for surface rupture associated with a seismic event along a particular fault depends on several factors, including the type of fault (lateral versus strike-slip), geology, and quake magnitude, type and duration. Portions of the Study Area overlying the mapped fault trace of the Seal Cove/San Gregorio Fault system are expected to be at increased risk of surface rupture. Development in areas overlying fault zones (generally mapped as within 50 feet of a fault trace) is generally discouraged. Contingencies for any infrastructure in these areas should be planned into initial design to avoid loss of services, including water services during an emergency.

Liquefaction

Liquefaction is the condition by which saturated soils lose cohesion during seismic events and settle, lose stability, or amplify the effects of groundshaking. Liquefaction is most associated with alluvium and other young soil types with high sand content. The potential for liquefaction in the Study Area is mapped as very low to high, depending on location. An area of high hazard is associated with Pillar Point Marsh. Areas proximate to the shoreline along Pillar Point Harbor are likewise expected to exhibit higher potential for liquefaction (see Figure 5-3).

Figure 5-3: Liquefaction Hazard Map

Source: SWCA, 2013; San Mateo County Planning & Building Department, 2013; Dyett & Bhatia, 2013.

Tsunami evacuation route sign at Cypress Avenue

Slope Failure

Seismic events can cause landslides, failure of slopes, and exacerbation of existing slope instability. The Study Area is generally level, except for the ridge along the western edge, and areas along the shoreline bordered by bluffs and revetments. New development in bluff and shoreline areas is required to observe setbacks outlined in the Midcoast LCP. Additional protections and siting considerations may be warranted to address additional risks of slope instability associated with seismic events.

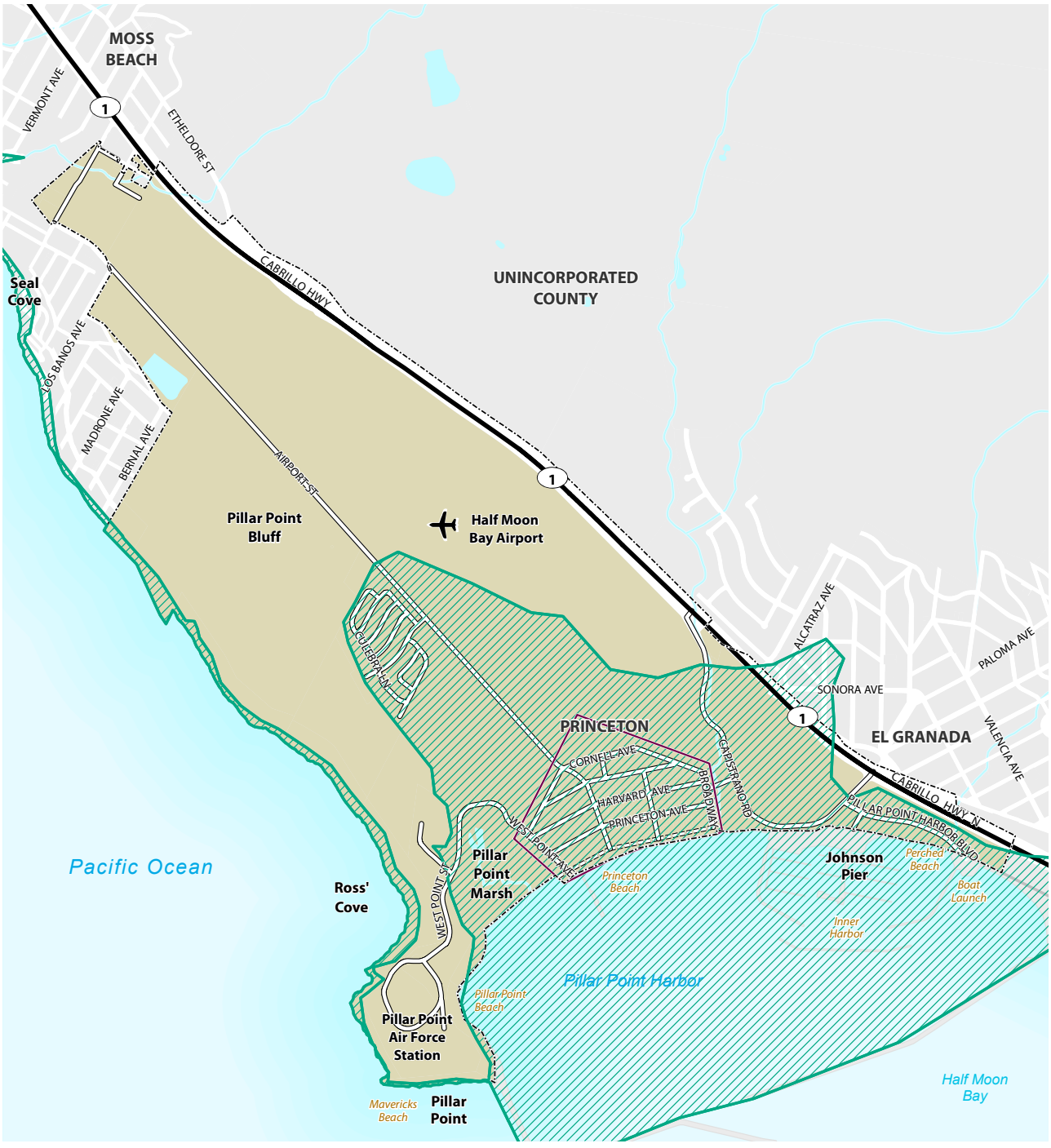
TSUNAMI

Tsunamis are long period waves produced by an underwater disturbance such as a volcanic eruption or an earthquake. Tsunami waves propagate across the deep ocean as very long waves of low amplitude. The tsunami waves can be significantly amplified by shoaling, diffraction, refraction, convergence, and resonance when they reach coastal areas. According to a 2007 grand jury report issued by the San Mateo County Civil Grand Jury regarding tsunami alert and evacuation preparedness on the San Mateo County coast, sub-oceanic earthquakes around the Pacific Basin, mainly in Alaska, Japan, Chili, and off the coast of Oregon and Washington are identified as the primary potential causes for a tsunami on the California coast.

On April 1, 1946, a tsunami hit the Princeton coastline with the highest tide documented at 14.8 feet. As documented through photos, the 1946 tsunami generated water and debris damage to the Princeton waterfront-industrial area. Both the San Gregorio fault, just off the San Mateo County Coast, or a major underground earthquake along one of the more distant subduction zones, such as the Cascadia Subduction Zone or Central Aleutians Subduction Zone, has the potential of causing a tsunami that could impact the Princeton coast. The San Mateo County Office of Emergency Services manages the County's tsunami evacuation and warning program for the Princeton area, which includes evacuation routing, posted evacuation route signs, and alert warning system.

The State of California has generated a tsunami inundation map for emergency & evacuation planning in a tsunami event, as shown in Figure 5-4. The inundation map indicates that the entire Princeton community is subject to tsunami hazard. It is noted that this map was created by combining inundation results from a number of source events affecting a given region. It does not represent inundation from a single scenario event. Mitigation of tsunami risk consists mainly of improved early warning systems, sufficient evacuation routes and information, and the prohibition of certain public facility uses, buildings containing certain quantities of explosive materials, and public assembly or educational facilities with an occupancy load greater than 300.

Figure 5-4: Tsunami Hazard Map



Tsunami Hazard Zone
Princeton Waterfront/Industrial Area
Princeton Study Area Boundary

Source: State of California, 2013; San Mateo County, 2013; SWCA, 2013; Dyett & Bhatia, 2013.

0 625 1,250 2,500 Feet

Denniston Creek mouth (top), shoreline exposed to coastal flooding (middle), and existing stormwater drainage ditch structures near Denniston Creek mouth (bottom)

Opportunities and Constraints

Review of pertinent maps and documents, and photo reconnaissance confirmed the presence of several geologic and other natural hazard constraints within the Study Area. However, it should be noted that areas of particular hazard, including Pillar Point Marsh, coastal bluffs, and areas overlying the existing Seal Cove fault trace, have been previously delineated and standards have been adopted that generally discourage development proximate to these areas.

Geologic hazards present within the Study Area pose some constraints to development. These hazards can largely be addressed by compliance with existing building codes and regulations, including the Geologic Hazards (GH) combining district discussed in Chapter 2 of this report.

5.3 Flood Hazards

Flood hazards have been mapped for the Study Area pursuant to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM). Specific hazards are outlined below.

Flood Hazard Zones

A 100-year flood hazard area is mapped for the Pillar Point Marsh and Denniston Creek (Figure 5-5). Existing regulations generally guide development outside the 100-year flood hazard zone. Planning for areas proximate to identified flood hazard zones should identify opportunities to increase site performance and reduce contributions to flood hazards.

Coastal Flooding

Storm events at sea can result in wave run-up on land. The potential for coastal flooding in the Study Area is shown in Figure 5-5. The areas most at risk include the fringe of the south-facing beaches and marsh in addition to the inland extent of Denniston Creek.

Localized Flooding

An incomplete stormwater infrastructure network has led to localized minor ponding of water within the Study Area. Efforts should be undertaken to connect and improve stormwater infrastructure, as well as on-site infiltration. Approximately four years ago, the Princeton area was included in an analysis of storm drainage issues on the Midcoast. This study demonstrated that while the Princeton area was subjected to some ponding, only the intersection of West Point Avenue and Stanford Avenue and the two short blocks of Stanford Avenue to the east were identified as subject to periodic localized flooding. Some areas in Princeton are subjected to localized ponding that would likely only be

Figure 5-5: Flood Hazard Zone Map

Flood Zone

- 100 Year Flood Hazard Zone
- 500 Year Flood Hazard Zone
- Coastal Flood Hazard Area
- Base Flood Plain

- Major Rivers/Streams
- Princeton Waterfront/Industrial Area
- Princeton Study Area Boundary

Source: SWCA, 2013; San Mateo County Planning & Building Department, 2013; Dyett & Bhatia, 2013.

0 625 1,250 2,500 Feet

considered as nuisance ponding. Some of this ponding occurs in non-County maintained areas. On the lower segment of Princeton Avenue, property owners had the opportunity to have surface improvements, including roadside swales constructed, and elected not to do so.

Opportunities and Constraints

Hydrologic conditions including flood zones and coastal hazards (i.e., sea level rise, wave runup, bluff erosion) and localized flooding limit development or result in the need for stormwater management and control. This provides an opportunity for the County to develop standards specific to the Study Area and limit future development in areas subject to natural hydrologic hazards. Development should generally be located outside the 100-year flood hazard zone (see existing regulations) and consider performance-based setbacks from flood hazard zones that also address biological resource and water quality issues.

5.4 Shoreline Hazards

Several studies have addressed bluff and shoreline erosion and retreat in the Study Area. The Princeton Shoreline Study (2001) covered Harbor District property generally associated with the south-facing beach at Pillar Point Harbor. The study concluded that little to no beach would remain if no action was taken to remedy the scour of sand in this location. The study recommended installations of revetments, or revetments along with beach sand enhancement. Much of the scour in this location is currently thought to be associated with the installation of breakwaters by the federal government. The US Army Corps of Engineers (USACE) has indicated some responsibility for scour conditions, and is studying baseline conditions at Surfer's Beach in Half Moon Bay to determine the best course of action.

Bluff erosion along the coastline can destabilize soils and damage property and infrastructure. Development in the vicinity of coastal bluffs is discouraged by existing land use regulations, which have established setbacks and strict performance standards for development proposed in these areas.

California Coastal Act

The Coastal Act provides specific standards for the consideration and approval of alterations to the natural shoreline, including revetments, seawalls, and similar methods employed to reduce bluff and shoreline erosion [Section 30235]. In general, the Coastal Act and the California Coastal Commission (CCC) discourage alteration to the natural shoreline unless it is "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."

The Shoreline

The Princeton Study Area shoreline is located in the north part of Half Moon Bay in San Mateo County. It extends for approximately 3.8 miles from Cypress Avenue in Moss Beach to the southern limit of Pillar Point Harbor. The reach consists of a diverse mix of elevated open space, low-lying wetlands, more densely developed parcels, a small craft harbor, uplands and shoreline. Figure 5-6 shows the nautical chart for Half Moon Bay that was published by the National Oceanic and Atmospheric Administration (NOAA). Figure 5-7 shows the enlarged scale for the project shoreline.

As shown in Figure 5-8, the project shoreline can generally be divided into five distinguished shoreline segments, which consists of the Pillar Point Bluffs, Pillar Point, Pillar Point Marsh, the Princeton shoreline and Pillar Point Harbor. The near vertical cliffs of the Pillar Point Bluffs and the Pillar Point headland define the open coast reach. The bluffs rise to over one hundred feet above sea level and back a narrow strip of sandy and rocky beach. Existing public access is limited to a few unimproved trails that traverse down the steep bluff face.

Within the more protected waters of Pillar Point Harbor, the shoreline transitions to a low-lying plateau that includes the small Pillar Point Marsh wetland, the more densely populated waterfront community of Princeton, and the lands of the inner Pillar Point Harbor. Development of private property has recently become more active and has encroached close to the erosion-prone water's edge (see Figure 5-9).

Oceanographic Conditions

Still Water Levels

Variations of the still water level along the California shoreline are primarily caused by astronomical tides. In addition, storm surge, wave setup, and El Niño also contribute to the local sea level variations.

Tides

The astronomic tide is the regular rise and fall of the ocean surface in response to the gravitational influence of the moon, the sun, and the Earth. The tides in the Princeton coastal water area are mixed and semi-diurnal. Two high and two low tides occur each lunar day, often of uneven amplitude, caused predominately by the gravitational attraction of the Moon and the Sun on the Earth. Moon-Sun orbital geometry also results in heightened high tides twice monthly (spring tides, near the times of the full and new moon). The tide characteristics (mean water levels averaged over an entire tidal datum epoch) at the San Francisco tide gauge (NOAA ID: 9414290), which was used as a reference for the Princeton shoreline, is listed in Table 5-1.

Figure 5-6: NOAA Nautical Chart for Half Moon Bay (Chart ID 18682)

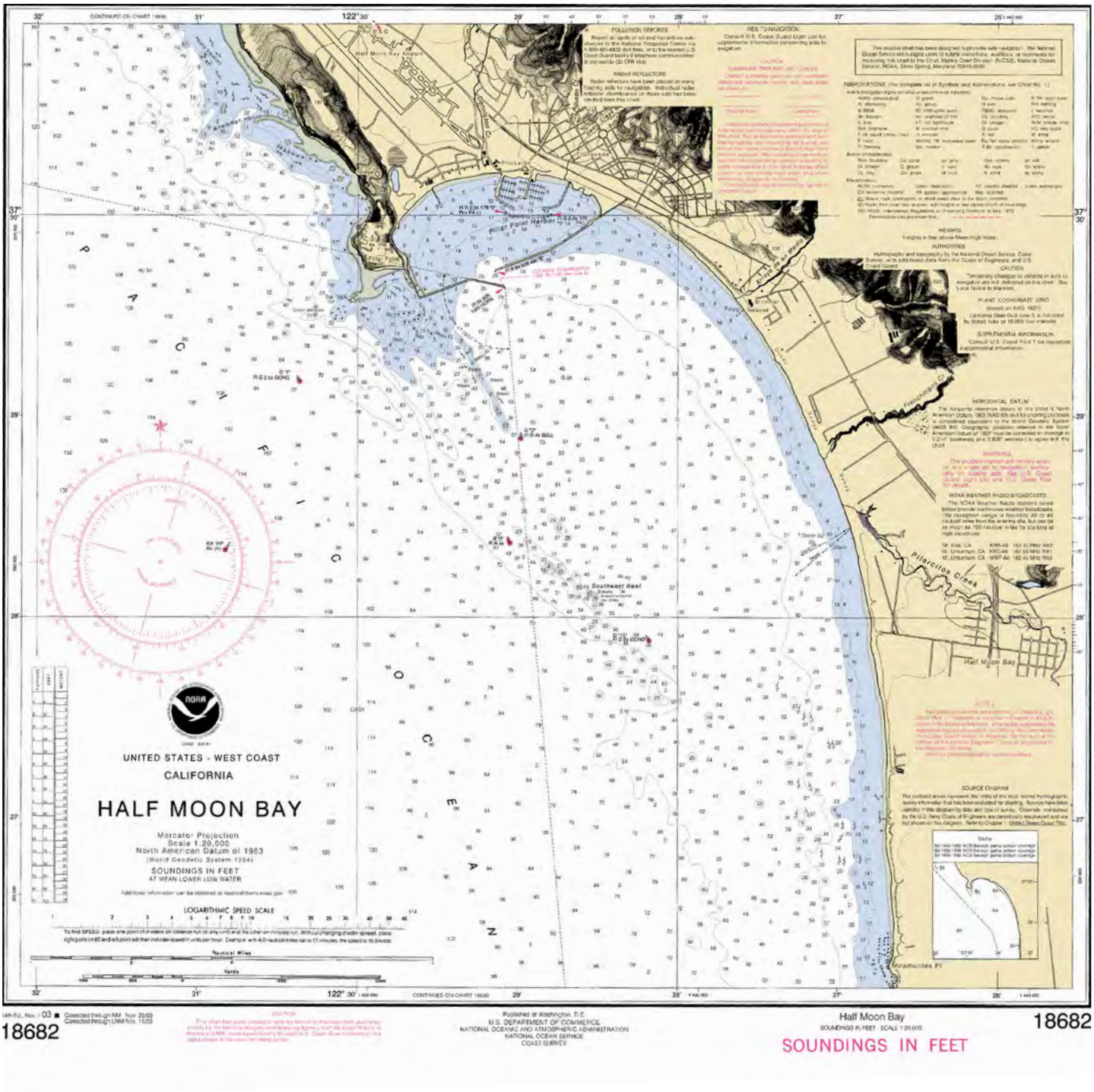


Figure 5-7: NOAA Nautical Chart Enlarged Scale for Project Site

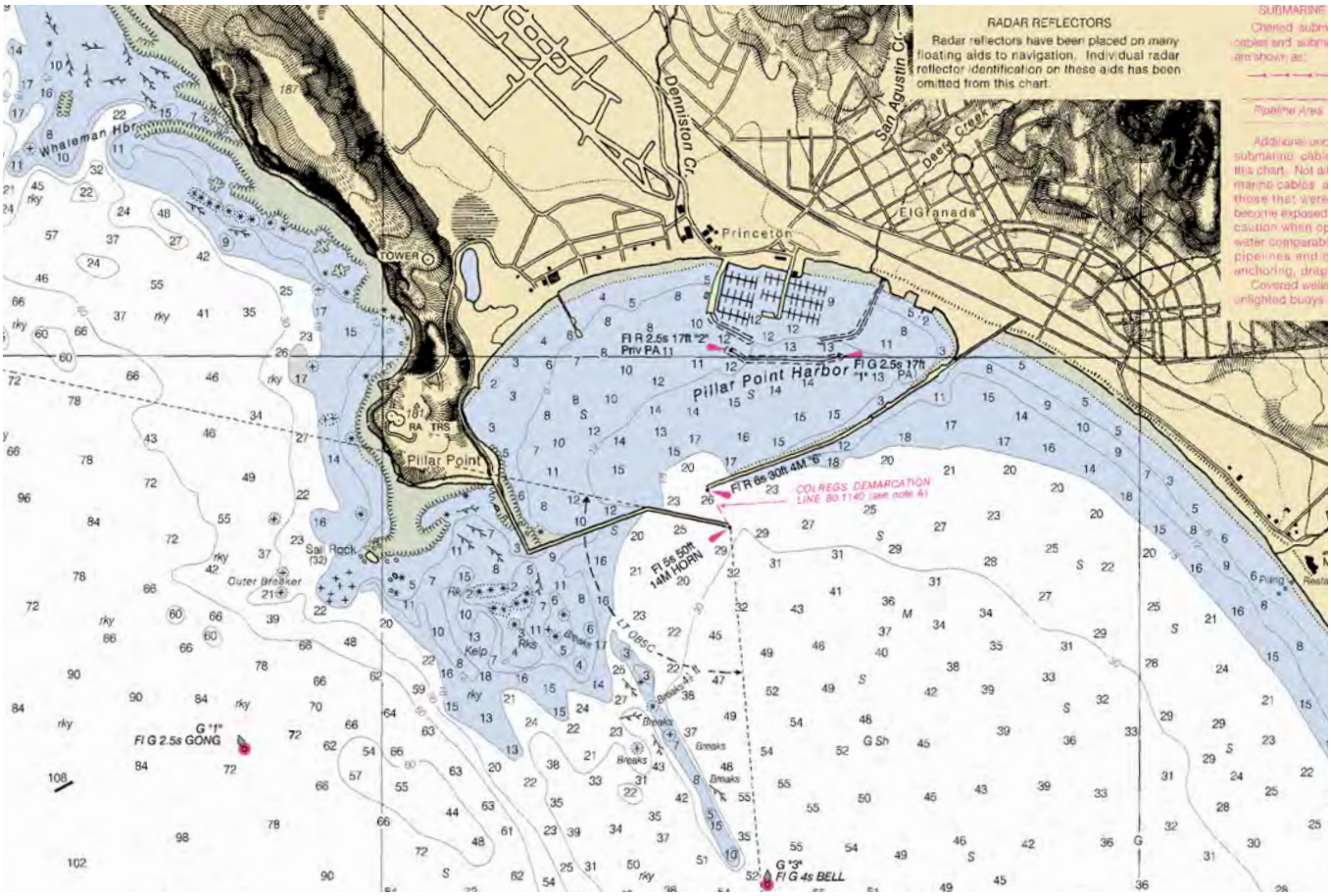
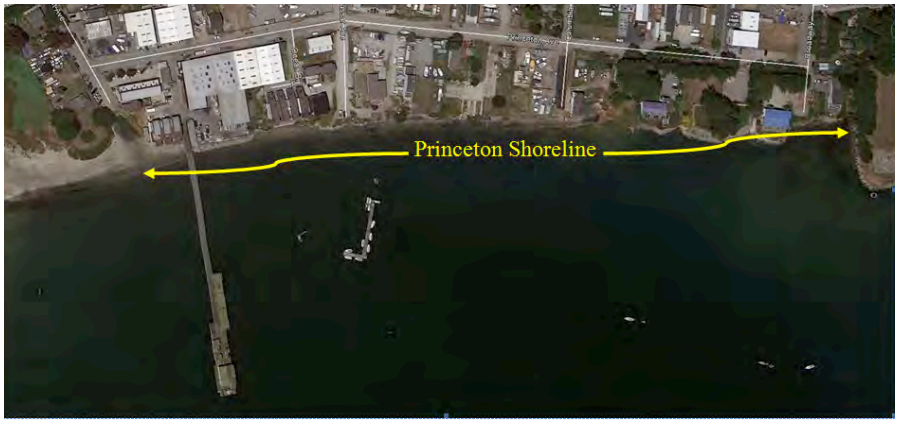


Figure 5-8: Shoreline Segments

The Study Area shoreline can generally be divided into five shoreline segments: Pillar the Point Bluffs, Pillar Point, Pillar Point Marsh, Princeton, and Pillar Point Harbor.

Figure 5-9: Shoreline Encroachment



In the Princeton area, development of private property has encroached close to the erosion-prone water's edge.

TABLE 5–1: TIDAL CHARACTERISTICS AT SAN FRANCISCO BAY (TIDAL EPOCH: 1983-2001)

DATUM	ELEVATION (FT, MLLW)	ELEVATION (FT, NAVD88)
Highest Measured Water Level (27 Jan 1983)	8.66	8.72
Mean Higher High Water (MHHW)	5.84	5.90
Mean High Water (MHW)	5.23	5.29
Mean Tide Level (MTL)	3.18	3.24
Mean Sea Level (MSL)	3.12	3.18
Mean Low Water (MLW)	1.13	1.19
Mean Lower Low Water (MLLW)	0.00	0.06
North America Vertical Datum- 1988 (NAVD88)*	-0.06	0.00
Lowest Measured Water Level (20 Jan 1988)	-2.88	-2.84

Source: http://tidesandcurrents.noaa.gov/data_menu.shtml?stn=9414290 San Francisco,CA&type=Bench Mark Data Sheets

Storm Surge

Storm surges are created when high winds, the Coriolis force, and low barometric pressures from coastal storms force sea water onto the shore. The storm surge is relatively small (less than 1 foot) along the California Coast when compared to the astronomical tidal fluctuations.

Wave Setup

Wave setup is the additional elevation of the water level due to the effects of transferring wave-related momentum to the surf zone. Depending on the local beach profile characteristics and the offshore wave condition, wave setup may vary from a small value to a few feet at the shoreline.

El Niño

El Niño can also elevate sea level along the California coast during winter months. El Niño is a band of anomalously warm ocean water temperatures that occasionally develops off the western coast of South America and can cause climatic changes across the Pacific Ocean. The 1983 El Niño, coincident with high astronomical tides and large waves, caused significant damage along the California coast.

Sea Level Rise

Sea level has been rising since the end of the last ice age. Based on current climate models and projections of green house gas emissions, it is expected that future sea level will rise at a greater rate than it has over the past hundred years.[1] The sea level rise (SLR) predictions from different agencies were reviewed and summarized in the following:

1 California Coastal Commission, Overview of Sea Level Rise and Some Implications for Coastal California. Prepared by the staff of the California Coastal Commission, June 1, 2001.

NOAA Historical Sea Level Rise Data

The NOAA Center for Operational Oceanographic Products and Services (CO-OPS) provides historic information and local mean sea level (MSL) trends for tidal stations operated by the NOAA National Ocean Service (NOS) in the US.[2],[3] Most US tide stations experienced a rise in local MSL during the 20th Century. The historical sea level rise values for the two NOAA tide stations closest to Princeton shoreline are: (1) 2.01 mm/year (0.66 feet in 100 years) for San Francisco based on monthly mean sea level data from 1897 to 2006, and (2) 1.34 mm/year (0.44 feet in 100 years) for Monterey based on data from 1973 to 2006.

California Coastal Commission (CCC)

The Coastal Commission's draft Sea-Level Rise Policy Guidance document (2013) is intended to help local governments address sea level rise in new and updated Local Coastal Programs (LCPs) and Coastal Development Permits according the Coastal Act policy. Currently, the Coastal Commission considers the National Research Council's 2012 report Sea Level Rise for the Coasts of California, Oregon and Washington to be the best available science on sea level rise in California. The Coastal Commission recommends that local governments use the projections provided in this report for all relevant local coastal planning and coastal development permitting decisions. The report breaks the California coast into two regions—north and south of Cape Mendocino—which are subject to different geological factors that may impact future sea levels. The report presents ranges of projected sea level change in the two regions for three different time horizons, as shown in the table below. The ranges reflect uncertainties in future greenhouse gas emissions (with the low end of the range based on a lower emissions scenario than the high end), future changes in the rate of ice sheet melt, and uncertainties related to the data.

For the Princeton Study Area and planning horizon, this would result in sea level rise projections in the range of 1.56 to 11.76 inches.

TABLE 5–2: NRC SEA LEVEL RISE PROJECTIONS FOR CALIFORNIA (NRC 2012)

TIME PERIOD	NORTH OF CAPE MENDOCINO[1]	SOUTH OF CAPE MENDOCINO
2000-2030	-4 to +23 cm (11.56 to 9 inches)	4 to 30 cm (1.56 to 11.76 inches)
2000-2050	-3 to +48 cm (-1.2 to 18.84 inches)	12 to 61 cm (4.68 to 24 inches)
2000-2100	10 to 143 cm (3.6 to 56.28 inches)	42 to 167 cm (16.56 to 65.76 inches)

1. Since portions of Humboldt Bay are experiencing subsidence, and thus differ from the regional uplift conditions, the projections for north of Cape Mendocino may not be appropriate for use within parts of Humboldt Bay. See Appendix B of the guidance document for additional discussion about vertical land movement and relative sea level rise.

2 NOAA, COOPS. Sea Level Variations of the United Sates 1854-1999. NOAA Technical Report NOS CO-OPS 36 (2001).

3 http://tidesandcurrents.noaa.gov/sltrends/index.shtml

National Research Council (NRC) And CO-CAT Guidance

The National Research Council (NRC) issued a report in June 2012[4] on sea level rise for the coasts of California, Oregon, and Washington. Based on the predictions of future SLR from this NRC (2012) report, the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT) developed a SLR guidance[5] to advise California on planning efforts. Using the range of SLR presented in the NRC (2012) report, CO-CAT selected SLR values based on agency and context-specific considerations of risk tolerance and adaptive capacity. The SLR predictions recommended by CO-CAT are listed in Table 5-3.

USACE Sea Level Rise Guidance

Three SLR scenarios are presented in the Corps' guidance Engineer Circular (EC) 1165-2-212.[6] The three SLR scenarios include: (1) the "low" SLR rate using the historic rate of sea level change, (2) the "intermediate" SLR rate using the modified NRC Curve I, and (3) the "high" rate using the modified NRC Curve III. Based on this guidance, SLR values for Princeton shoreline between year 2000 and years 2050 and 2100 are listed in Table 5-4.

TABLE 5–3: CO-CAT SEA LEVEL RISE PROJECTION USING 2000 AS THE BASELINE

TIME PERIOD	SOUTH OF CAPE MENDOCINO
2000-2030	0.13 to 0.98 ft
2000-2050	0.39 to 2.00 ft
2000-2100	1.38 to 5.49 ft

TABLE 5–4: SEA LEVEL RISES ESTIMATED WITH USACE GUIDANCE

SCENARIOS	2000-2050	2000-2100
Low Scenarios: Historic Rate	0.3 ft	0.7 ft
Intermediate Scenarios: Modified NRC-I	0.6 ft	1.6 ft
High Scenario: Modified NRC-III	1.5 ft	4.9 ft

4 National Research Council (NRC), Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future (2012). http://www.nap.edu/catalog.php?record_id=13389.

5 CO-CAT, "State of California Sea-Level Rise Guidance Document", March 2013 update.

6 USACE, EC 1165-2-212, Sea-Level Change Considerations for Civil Works Programs (October 2011).

Wave Climate

The project shoreline is exposed to ocean swell and local seas. The ocean swells are generated by storms propagating long distances over several days. The local seas are generated when winds blow over the local water body.

Winter Storm Swells

Large swells are generated by winter cyclones that produce high winds with a long fetch (the total distance that wind blows over the sea surface during the storm) directed from the central North Pacific to the US west coast. Swells generated far from the west coast tend to peak at relatively long periods (12 to 18 seconds). These winter storm swells have been responsible for most of the coastal damage along the Central California shoreline in the past. They also generate large waves in the famous Mavericks surf break, which is located just offshore of Pillar Point.

The natural promontory at Pillar Point and the west breakwater provides shelter for the Princeton shoreline from northwest through southwest wave approach directions. Therefore, the winter storm swells, which are incident from the northwest to west directions, will transmit negligible wave energy into the harbor, and thus have insignificant impact on the Princeton shoreline.

An on-going wave hydrodynamic study is being conducted by the USACE for the Half Moon Bay region.[7] The wave conditions for various locations (see Figure 5-10) inside Pillar Point Harbor and outside the outer breakwaters were computed. The predicted significant wave heights, wave periods, and directions are shown in Figure 5-10 for January to May 2010. The results indicate that the waves near the Princeton shoreline (Location 3) are negligible while the winter storm swells outside the breakwater (Location 1) have wave heights as high as 11 feet.

Summer Swells

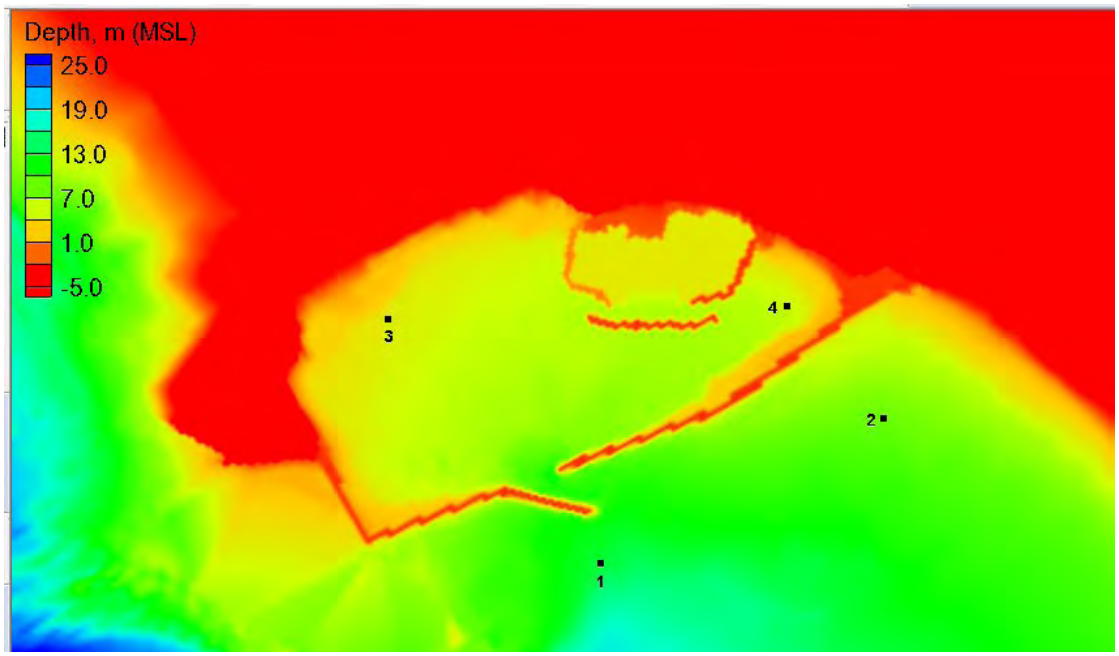
For the summer months, ocean swells are generated by large South Pacific storm systems traversing the ocean between south latitude 400 and 600 from Australia to South America. The approach directions to Central California range from about 2150 for storms near New Zealand to 1700 for South American storm systems. Wave heights in deep water are usually low–on the order of 1 to 3 feet. The periods range from 18 to 22 seconds.

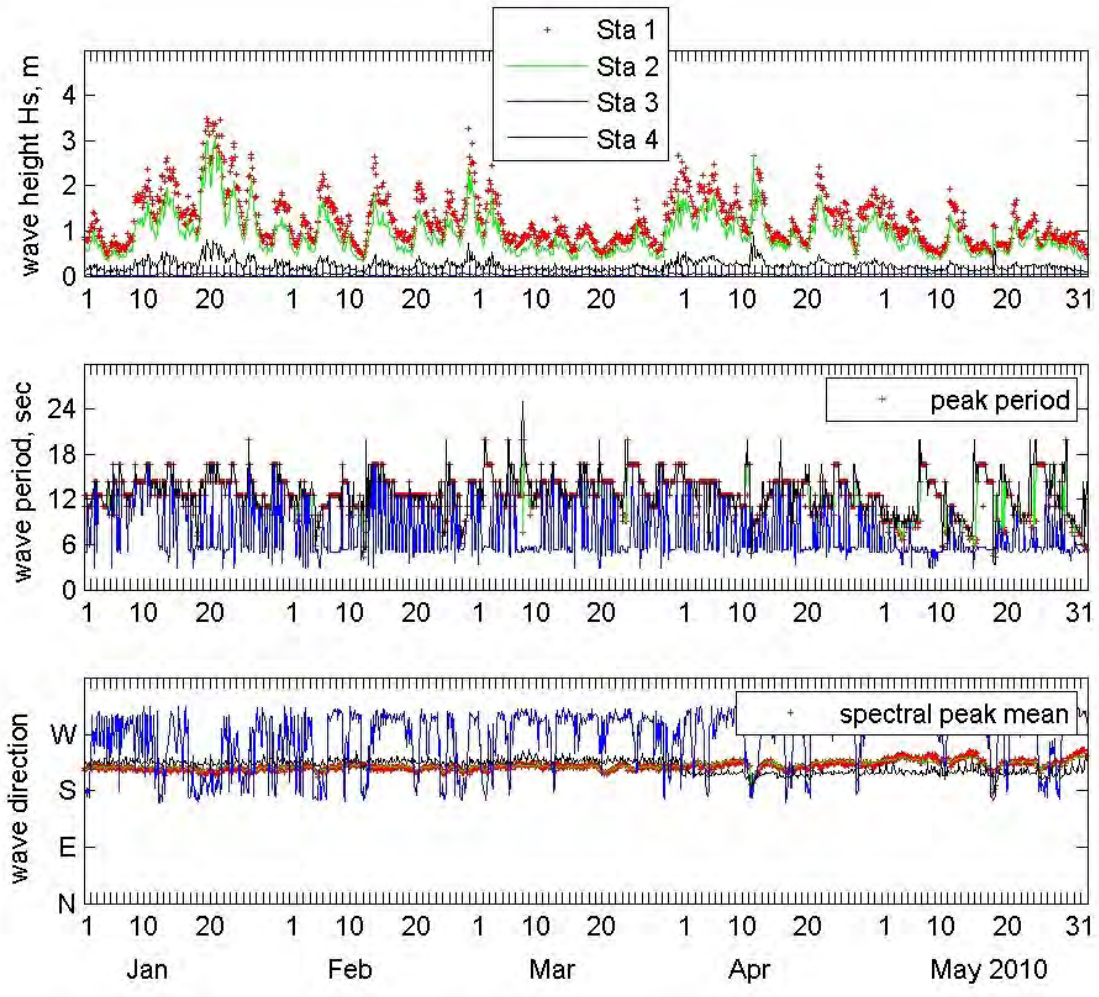
Based on the Moffat and Nichol's analysis, the wave diffraction coefficient at the entrance to Pillar Point Harbor is approximately 0.21 (wave height at the entrance is 0.21 times the offshore wave height) for a ocean swell incident from the south direction and with a wave period of 12 seconds.[8] However, wave

7 Lihwa Lin. Personal communication. US Army Corps of Engineers, Engineering Research Development Center (2013).

8 Moffatt & Nichol Engineers, "Shoreline Protection Feasibility Study for Princeton, Pillar Point" (2001).

Figure 5-10: MSL Depth and Model Output Locations in Pillar Point Harbor





heights along the Princeton shoreline will be different than the harbor entrance due to wave transformation within the harbor.

Local Seas

Local seas are generated along the Princeton shoreline as winds blow over the water body within Pillar Point Harbor. The prevailing winds are from the northwest direction and the prevailing wind speed is between 5 and 15 miles per hour (mph).[9] A highest 1-minute wind speed with a return period of 50 years was estimated to be 61 mph.[10] With a south fetch length of 0.6 miles, a local wind-wave was estimated to have a significant wave height of 1.7 feet, with a peak spectral period of 2 seconds.[11]

Based on the review by Noble Consultants, the winter ocean swells may have insignificant impact on the Princeton shoreline. However, the southerly summer ocean swells may have similar or smaller wave heights, but much longer wave periods, than the local seas generated by high winds blowing from the south direction. Therefore, the erosion that has occurred at the Princeton shoreline is most likely attributed to the local winds and the southerly summer swells.

HAPKE C. J. AND REID D., 2007

Localized landslide at Pillar Point

9 Moffatt & Nichol Engineers, "Shoreline Protection Feasibility Study for Princeton, Pillar Point" (2001).

10 Pacific Gas & Electric Company, Extreme Winds in Northern and Central California, Meteorology Services (1990).

11 Moffatt & Nichol Engineers, "Shoreline Protection Feasibility Study for Princeton, Pillar Point" (2001).

Morphologic Conditions

Coastal Cliff Retreat

The coastal shoreline consists of narrow, rocky beaches backed by steep sea cliffs with heights of more than 100 feet for the Pillar Point Bluffs region. Figure 5-11 shows the cliff retreat rates and spatial distribution of rates from Pacifica to Davenport in the south San Francisco region. The average cliff retreat rate for this south San Francisco region was estimated to be approximately 8 inches per year over the approximately 70-year period between the 1930s and 1988.[12] However, on the north side of Pillar Point, near the Mavericks surf break, the highest rate in this region—approximately 10.2 feet per year—was measured. The cliffs in this area are high and are composed of sands and gravels overlying mudstone. The high retreat rates are attributed to movement on deep-seated landslides along high-relief coastal slopes, on or near promontories and headlands.

Shoreline Conditions

The coastline geomorphology in the Study Area is variable, with linear beaches backed by dunes; steep cliffs with narrow fronting beaches; rocky coast with small pocket beaches; and steep, high-relief coast with no sandy shoreline. Seasonal changes in beach width is evident in the project shoreline. Winter beach profiles are typically more depleted than summer profiles. In general, sands are carried offshore beyond the surf zone in the winter and stored in a bar formation. During the summer months, the beach reforms and widens as sands from the offshore bar return. Offshore sand movement is induced by the stormy high waves during the winter months, while the reverse trend results from the low longer-period swells commonly observed in the summer.

Pillar Point Bluffs and Pillar Point

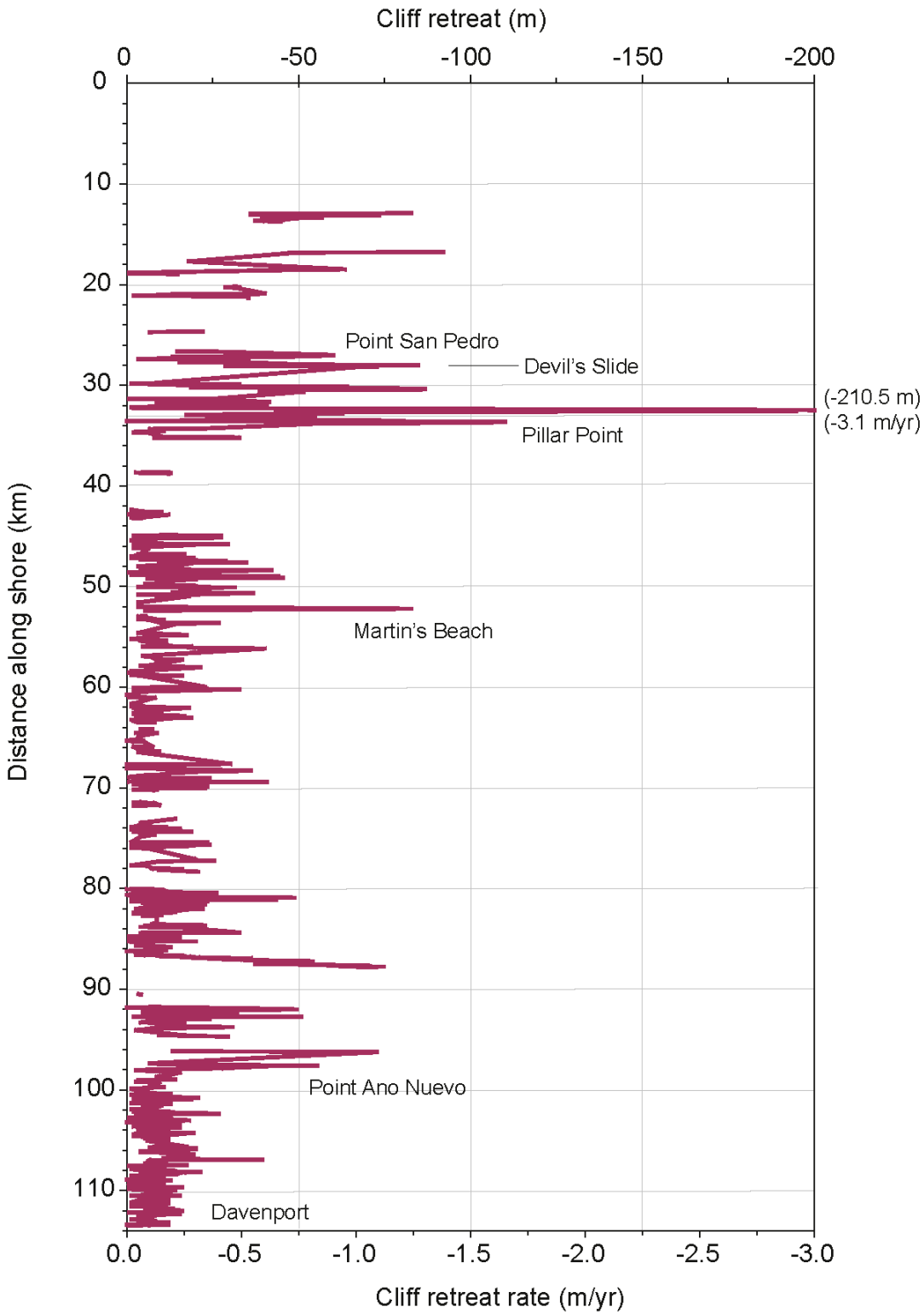
In the Pillar Point Bluffs and Pillar Point areas, the coastline consists of narrow beaches with a thin veneer of sand that is backed by high sea cliffs. The shoreline typically retreats as the cliff retreats. The shoreline in the Pillar Point Marsh area, which is along the West Trail, extending from the parking lot at Pillar Point Marsh to the west breakwater and Mavericks Beach, has experienced severe erosion from wave actions. The erosion is particularly evident in the northern portion of the trail path. The Harbor District has commissioned various studies to formulate alternatives to protect the trail path from erosion[13],[14].

12 C.J. Hapke and Reid D., "Historical Coastal Cliff Retreat along California Coast," USGS Open-File Report 2007-1133 (2007).

13 GHD, "Draft Condition Survey for West Trail", report for San Mateo County Harbor District Pillar Point Harbor, June 2012.

14 Coastal and Harbor Engineering, Draft Coastal Engineering Analysis, West Trail Shoreline Protection, Pillar Point Harbor, CA (2012).

Figure 5-11: Average Cliff Retreat Rates (1930s through 1980s)



Princeton Shoreline

The Princeton shoreline can generally be characterized as a narrow beach, backed by low sand dunes. The beach material is predominantly fine sand, with an average grain size between 0.10 mm and 0.15 mm. Previous studies and historical anecdotal observations indicate that the Princeton shoreline had been receding shoreward (i.e. the beach is eroding) prior to the construction of the outer breakwaters, as the shoreline adjusted to the prevailing swells and formed a bay-hook configuration.[15] After the construction of the outer breakwaters in 1959, the Princeton shoreline became exposed to waves that are locally wind-generated and transmitted through the harbor entrance. Because the Princeton shoreline is located within the protected Pillar Point Harbor, littoral and offshore material that once supplied sand to the beach is no longer available to the system. As a result, the erosion of the Princeton shoreline has increased since the construction of the outer breakwaters.

Based on aerial photos between 1969 and 2000, Moffat and Nichol estimated the shoreline erosion rate varying from 17 inches per year near Romeo Pier, 15 inches per year near Vassar Avenue, 12 inches per year between Vassar and Columbia, and 7 inches per year at Columbia Avenue.[16] The shoreline between Columbia Avenue and Broadway was anchored in the late 1980s by riprap. Little to no beach exists in this shoreline segment. It was estimated that this segment had eroded at approximately 45 inches per year (between 1968 and 1983) before the shoreline was anchored.

The major construction events at Pillar Point Harbor and historically observed beach conditions at Princeton are listed in Table 5-5[17].

TABLE 5–5: HISTORICAL CONSTRUCTION EVENTS AT PILLAR POINT HARBOR

CONSTRUCTION EVENT	DATE	PRINCETON SHORELINE CONDITION
Natural Conditions	Prior to 1959	Actively eroding
Two Outer Breakwaters Built	1959-1961	Increase in Erosion Rate
West Breakwater Extension Built	1966-1967	Similar to 1959-1961 rate
Three Inner Breakwaters Built	1982	Continued Erosion
West Breakwater Parapet Wall End Built	1996	Continued Erosion

15 Pillar Point Harbor District, "Northern Half Moon Bay Shoreline Improvement Project, Pillar Point Harbor, CA" (July 2009).

16 Moffatt & Nichol Engineers, "Shoreline Protection Feasibility Study for Princeton, Pillar Point" (2001).

17 USACE-SFD, "Draft Report of Initial Appraisal for Princeton Shoreline Improvement Project, Pillar Point Harbor, CA" (January 2006).

Shoreline within Pillar Point Harbor Inner Basin

The shoreline within the Pillar Point Harbor (inner basin) is relatively stable due to the sheltering effect provided by the inner and outer breakwaters from storm swells and due to the short wind fetch for local seas. Sedimentation has occurred in the boat launch ramp area, which severely limits the operation of the boat launch. A maintenance dredging operation was approved by the California Coastal Commission in June of 2013 to dredge 3,500 cubic yards (cy) of material in the boat launch ramp area and place it at the upland area at Perched Beach within the harbor; this dredging has been performed.

Fluvial Sediment Contribution

Three small creeks flow into the outer basin of Pillar Point Harbor. Deer Creek discharges on the north side of the boat launch ramp, Pillar Point Creek is the discharge outlet of the Pillar Point Marsh, and Denniston Creek discharges into the harbor east of Broadway. A massive delta can be observed at the mouth of Pillar Point Creek. A delta was also formed at the mouth of Denniston Creek, and this delta is visible at low to mid tides.[18] The formation of these deltas is an indication of the sediments that are carried down by these creeks to the ocean. The sediment delivery of these two creeks is unknown, but is expected to be limited due to their small drainage areas. The impact of the fluvial sediment delivery should be limited to the mouth areas of these creeks, and its impact to the overall Princeton shoreline may be limited.

Harbor Sedimentation

While the Princeton shoreline is eroding, sedimentation has occurred in the Pillar Point Harbor basin since the construction of the outer breakwaters in 1961. A comparison of two bathymetric surveys between 1994 and 2006 shows a moderate sedimentation within the entire harbor.[19] Table 5-6 lists the net volume change and the annual sediment shoaling rate in individual zones within the harbor basin. The boundaries of the designated zones are shown in Figure 5-12. The shoaling rates varied between -0.37 inches per year (erosion) near the opening between the outer breakwaters (Zone 1) and 2.72 inches per pear along the inner side of the east outer breakwater (Zone 4). The sediment shoaling rate in Zone 5, which is adjacent to the Princeton shoreline, was 0.02 inches per year, which is negligible.

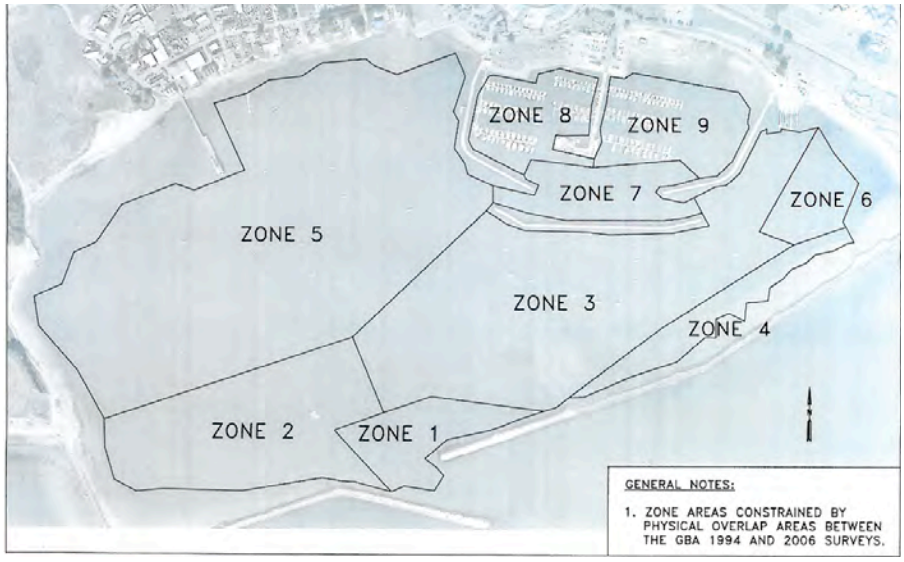
18 Moffatt & Nichol Engineers, "Shoreline Protection Feasibility Study for Princeton, Pillar Point" (2001).

19 GBA, "Summary Report Pillar Point Harbor Bathymetry Study & Outer Harbor Channel Design." Prepared for San Mateo County Harbor District (2007).

TABLE 5–6: SEDIMENTATION IN PILLAR POINT HARBOR BETWEEN 1994 AND 2006

		NET VOLUME CHANGE		
ZONE	AREA (SQ FT)	TOTAL (CY)	ANNUAL CHANGE (CY/YR)	ANNUAL SHOALING RATE (INCH/YR)
1	438,678	-5,946	-496	-0.37
2	1,415,032	31,098	2,592	0.59
3	2,821,752	33,874	2,823	0.32
4	378,133	38,108	3,176	2.72
5	4,593,020	4,195	350	0.02
6	299,189	1,383	115	0.12
7	470,330	4,386	366	0.25
8	478,723	4,937	411	0.28
9	596,135	2,625	219	0.12

Figure 5-12: Discretized Sedimentation and Erosion Zones



Pillar Point Creek outlet

Existing Shoreline Protection Devices

Many of the homeowners and commercial businesses along the Princeton shoreline have placed rip-rap, concrete rubble, or concrete seawalls to protect their property. Aerial photographs (shown below from west to east) were taken of the Princeton shoreline in 2010.[20] Photographs of shoreline protection devices taken by Noble Consultants on June 7, 2013 are shown on the following pages.

West Point to Vassar Avenue

The shoreline between West Point Avenue and Vassar Avenue (below, left) is armored with concrete rubble, riprap and concrete seawalls. The beach at high tides is narrow.

Vassar Avenue to Columbia Avenue

The shoreline protection devices in this segment vary from randomly placed concrete rubble to a concrete seawall at the boat yard. The beach width transits from a narrow beach at high tides near Vassar Avenue to almost none near Columbia Avenue (below, center).

Columbia Avenue to Broadway

The shoreline between Columbia Avenue and Broadway (below, right) was anchored by riprap that protrudes into the ocean. Little to no beach is visible, even at low tides.

Existing Princeton Shoreline Protection Devices (West Point Avenue to Vassar Avenue, left; Vassar Avenue to Columbia Avenue, middle; Columbia Avenue to Broadway, right)

20 California Coastal Records Project. http://www.californiacoastline.org.

Opportunities and Constraints

The Princeton shoreline has been armored with concrete rubble and rocks that were randomly dumped. Most of the shoreline protective devices are un-permitted and/or un-engineered structures, which have provided effective and ineffective shoreline protections to individual lots. The non-engineered riprap also requires maintenance to protect the shoreline from further retreat. If shoreline protection plans are not implemented, it is expected that eventually little to no beach will remain. A number of alternatives have been developed to provide protection for the Princeton shoreline and incorporate public access to and along the coast.

Two alternatives were developed in 2001 to provide shore protection for the entire Princeton shoreline, which also incorporated public access along the shoreline.[21] One alternative envisions a rock revetment being constructed to protect the existing shoreline. The other includes a revetment structure with a beach fill in front of the structure.

A conceptual coastal access improvement plan was approved by the County of San Mateo Board of Supervisors in 2002.[22] This plan will provide pedestrian access along the Princeton shoreline. The coastal access points at Vassar Avenue, Columbia Avenue, and Broadway are presently unavailable because of the un-engineered shore protection devices that have been installed at the end of these streets. Vassar Avenue is currently non a County-maintained roadway; improvements to coastal access at this street-end would require formal agreements defining upfront costs and long-term maintenance responsibilities.

A letter report was submitted to the California State Coastal Conservancy by Moffatt and Nichol in 2003.[23] Three alternatives were presented in this letter report, all of which incorporate shoreline improvement and pedestrian access to replace existing rip-rap. The three alternatives included: a groin anchored beach fill and revetment with boardwalk, a geotube anchored beach fill and revetment with boardwalk, and a seawall and revetment with landside public access path.

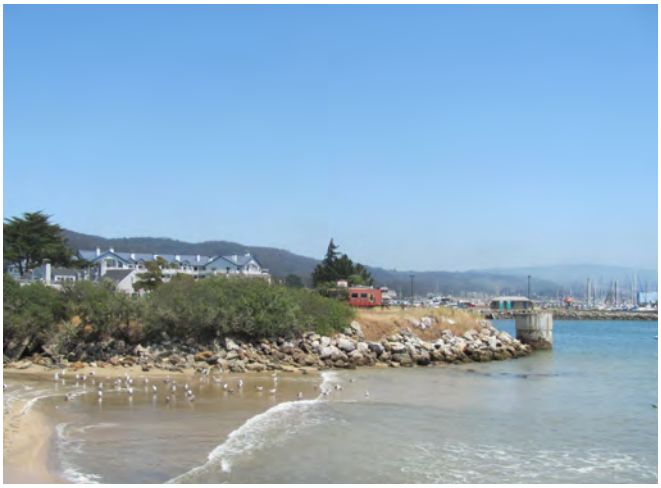
21 Moffatt & Nichol Engineers, "Shoreline Protection Feasibility Study for Princeton, Pillar Point" (2001).

22 Lisa Ketcham, Princeton Shoreline Erosion and Unpermitted Armoring (2012). Presentation on Midcoast Community Council (MCC) Meeting on April 25, 2012.

23 Moffatt and Nichol, Development of shoreline/Trail Alternatives, Princeton Shoreline Improvement Project. Letter report submitted to California State Coastal Conservancy. February 12, 2003.

Existing Princeton Shoreline with Protective Devices, July 2013



Existing Princeton Shoreline with Protective Devices, July 2013

5.5 Wildfire

Wildland-Urban Interface

The Study Area is generally mapped as at risk of wildfire due to the Wildland-Urban Interface. Fire protection in the Study Area is under the jurisdiction of CAL FIRE, operating as the Coastside Fire Protection District (CFPD). Particular areas of risk include areas adjacent to open space, and portions of the Study Area adjacent to Highway 1. The more rugged and undeveloped land east of the Highway is of particular concern for fire.

Based on discussions with CFPD staff,[24] fire flow is generally very good in the Princeton area, meeting standards for commercial and residential uses. Existing fire protection infrastructure, including headquarters, staff, and equipment, are considered sufficient; the headquarters in Half Moon Bay were built within the last 12 years, and the CFPD recently purchased all-new Type 1 fire engines. Constraints identified within the Study Area are therefore limited to those areas proximate to open space, and ongoing issues with proper fire protection in structures operating with non-conforming or undisclosed uses.

5.6 Hazardous Materials

SWCA staff queried the California Department of Toxic Substances Control (CDTSC) Envirostor database to identify clean-up sites, underground leaks/tanks, and other known hazardous materials within the study area. While the County's Certified Unified Program Agency (CUPA) and the County's Health Department were not directly contacted for this analysis, any records held by these agencies would be available in the state database. Two records were identified, one consisting of a survey only, with no materials found, and another consisting of 340 acres within the abandoned US Air Force Base with identified fuel contamination associated with surface operations and two underground storage tanks.[25] This site is considered active.

No contamination or clean-up sites are located on the Half Moon Bay Airport property; however, development proximate to the Half Moon Bay Airport will need to consider potential contamination (i.e., oils, fuels) in addition to other constraints associated with that land use.

There is anecdotal evidence of non-conforming uses and atypical waste or water disposal conditions in the Study Area. Plans should address ongoing issues with illegal land uses and associated impacts to stormwater.

24 John Riddell, Deputy Fire Marshal, personal communication (September 18, 2013).

25 CDTSC (2013).

6 Circulation, Parking, and Coastal Access

This chapter provides a comprehensive review of the current state of the Princeton Planning Update Study Area's (Study Area's) multi-modal transportation system by examining existing County policies, programs, and infrastructure related to streets, automobile use, public transportation, bike and pedestrian facilities, and parking. This chapter also explores current issues with respect to circulation, coastal access, and parking as well as areas of opportunity for improving upon the existing transportation network.

6.1 Motor vehicle

Roadways

The Study Area is primarily served by State Route 1, Capistrano Road, and Airport Street, collector streets, local streets, and access roads branch from these into neighborhoods, agricultural lands, and recreational areas. These facilities are characterized by a range of roadway conditions that are reflections of their diverse contextual land uses.

State Route 1 (Cabrillo Highway)

Princeton is connected to neighboring coastal cities and communities by State Route 1, also known and referred to in this report as Highway 1. The segment of Highway 1 within the Study Area is approximately 2.25 miles long and maintained by the California Department of Transportation (Caltrans) at a speed limit of 50 and 55 miles per hour. In 2011, the annual average daily traffic (AADT) volume of Highway 1 in the Study Area was 16,100 vehicles per day, measured at the southern terminus of Capistrano Road.[1]

From the northern edge of the Study Area at Marine Boulevard to the northern terminus of Capistrano Road, Highway 1 is a two-lane rural corridor that runs along open agricultural space due east and Half Moon Bay Airport due west. This 1.5-mile portion features a cross-section that remains fairly consistent at 40 feet wide including two 8-foot paved shoulders. This portion has three access points in the form of uncontrolled T-intersections including one to the airport and two to agricultural service roads. These intersections have low visibility to drivers, which, when coupled with the land uses and low population of pedestrians and cyclists, leads to higher vehicular speeds and minimal expectation of slowing or stopping by drivers.

The remaining portion of Highway 1 in the Study Area stretches 0.75 miles from the northern terminus of Capistrano Road to slightly beyond its southern terminus. Here the highway transitions to an increasingly urban context, serving the neighborhoods and waterfronts of Princeton, Pillar Point, and El Granada. The proximity of residential areas and tourist destinations to the highway lends it to greater non-motorized traffic, though it is more suitable for bicycles than pedestrians due to the long distances between access points and general lack of pedestrian facilities.

Highway 1 at the Capistrano Road northern terminus and Coral Reef Avenue are uncontrolled T-intersections that directly link the highway to the residential areas of Princeton and El Granada, respectively. Highway 1 and the Capistrano Road southern terminus form the only signalized intersection in the Study Area, where the highway widens to 104 feet of pavement, from two lanes to six with paved shoulders and a median. This is a major nexus linking Highway 1 with primary destinations including Princeton, the Pillar Ridge Manufactured Home Community, Pillar Point Harbor and scenic areas, and El Granada

Capistrano Road

Capistrano Road is a two-lane collector road that loops through the commercial and waterfront areas of Princeton and Pillar Point Harbor, with a central connection to businesses located just west of Prospect Way. Both ends intersect with Highway 1.

1 State of California Department of Transportation, Traffic Operations Division (2012).

North of Prospect Way, Capistrano Road is surrounded by airport property and agricultural land. This section is devoid of pedestrian and bicycle facilities and trip destinations, serving primarily as a vehicular link to the highway.

South of Prospect Way, the road features numerous access points to lodging, restaurants and businesses, the waterfront, and parking areas. This portion of Capistrano Road has sidewalks on both sides of the street, intermittent raised medians and curb extensions, and several marked crosswalks. These factors contribute to generally lower vehicle speeds.

Airport Street

Airport Street is a two-lane collector road in the north-south direction. It connects the Pillar Ridge Manufactured Home Community northward towards Moss Beach and southward to the Princeton shoreline (at Vassar Avenue). Despite running parallel to it, Airport Street does not provide any access to the Half Moon Bay Airport. The majority of Airport Street has an unfinished gravel shoulder on its eastern side and a grassy swale on its western side, with the exception of a sidewalk in the vicinity of Pillar Ridge. Airport Street is also part of the California Coastal Trail.

Other Local Streets

Most other roadways in the Princeton area are two-lane minor connector or access roads. Examples of minor connector streets include Prospect Way, Broadway Avenue, Harvard Avenue, Stanford/Cornell/California Avenue, La Granada Street, and Cypress Avenue. Access roads include West Point Avenue, connecting Princeton to Pillar Point and the Pillar Point Air Force Station, and a service road connecting Airport Street to the Jean Lauer Trailhead. Furthermore, Cypress Avenue and Prospect Way are the only access points to the Princeton waterfront-industrial area and to Airport Street.

Level of Service

Standards

Intersection level of service (LOS) is a quantitative performance measure of traffic flow through an intersection under peak hour conditions. LOS A means that the intersection experiences relatively free flow with minimal delay, while LOS F represents highly congested conditions with considerable delay.

LOS standards are established by the Local Coastal Program (LCP) under the County of San Mateo. As of June 2013, section 2.43 of the LCP states:

> *"In assessing the need for road expansion, consider Service Level D acceptable during commuter peak periods and Service Level E acceptable during recreation peak periods."*

Existing Intersection Levels of Service

In 2007, a traffic study of the area was conducted in relation to a proposed development on Airport Street between Princeton and the Pillar Ridge Manufactured Home Community. This study analyzed the LOS of several key intersections that fall within the Study Area. These include the following:

- Capistrano Road and Highway 1
- Capistrano Road and Prospect Way
- Broadway Avenue and Prospect Way
- Airport Street and Stanford/Cornell Avenue
- Airport Street and La Granada Avenue

The LOS standards set forth by the LCP have remained unchanged from the time of the study to the current edition.[2] The study found that none of these intersections exceeded the LOS threshold. Capistrano Road and Highway 1 had an acceptable average LOS C, and the remaining intersections had acceptable average LOS A.[3]

LOS information for intersections with Highway 1 within the Study Area was only available for the intersection of Capistrano Road and Highway 1. No segment LOS data was available to be included in this report.

County Maintained Roadways

While the majority of roadways within Princeton are maintained by the County of San Mateo, there are a few roadways that are not under the jurisdiction of the County. As such, they are not maintained by the County. Figure 6-1 identifies which roads within Princeton are County roads and which are not.

Roads that are not part of the County-maintained roadway system may be added if property owners submit a petition requesting inclusion into the County system and agree to participate in a future assessment district to improve the road to County standards, representing over 50% of the road frontage for the affected project area. The acceptance of a road into the County maintenance system is discretionary, and the Department of Public Works (DPW) will not recommend the road for acceptance unless minimum area standards are met. In addition, the following criteria must also be met:

- The length of the road must be at least one or more blocks;
- At least 50% of the road frontage for the affected project area is developed with main buildings supporting the principal permitted use for the parcels;

2 County of San Mateo, Planning and Building Department (1998).

3 Hexagon Transportation Consultants (2007).

Figure 6-1: County Roadway Network

- The existing road consists of a minimum of 16-foot wide gravel and oil or asphalt paved travel way and one foot wide shoulders on each side, with drainage swales or channels;
- The road is contiguous with an existing County maintained road or State highway.

Opportunities and Constraints

According to conversations with local residents and stakeholders, there is significant traffic congestion along Highway 1 during major events and on some weekends with good weather. This congestion was not measured by the level of service analyses that have been conducted in the area, as these analyses are intended to address peak hour weekday conditions. Community members and stakeholders have also noted that school-related traffic contributes to congestion on weekday mornings and afternoons, a problem that has worsened recently as school bus services have been reduced due to lack of funding. While the Princeton Study Area may not be contributing substantially to this problem, access is affected by it.

The Princeton community is not well-identified along Highway 1; signage is limited, and information about attractions is lacking. There is currently a lack of road signs on Highway 1 to alert drivers that they are nearing the airport. The only existing signage is the commercial sign at the entrance to the airport, which may not provide drivers who are not familiar with the area enough notice to exit the highway.

Medians are a potential tool that could be used along portions of Highway 1 to manage vehicle access, simplify turning movements, improve pedestrian crossing safety, and enhance the aesthetics of the highway.

Earlier studies, such as the Midcoast Mobility Study (Phase 1 in 2010 and Phase 2 in 2012), have suggested that roundabouts along Highway 1 might be useful tools to handle motor vehicle traffic, improve safety, manage speeds, and provide gateways into the communities along the highway, including Princeton.

6.2 Bicycle and Pedestrian

Relevant Planning Documents

The 2000 San Mateo County Comprehensive Bicycle Route Plan identified a 231-mile network of east-west and north-south bicycle routes of countywide significance. Fifteen were identified as key projects. One of the key projects identified in this document is the Coastside Bikeway Projects, of which one component is to extend the Coastside Trail north and south from Half Moon Bay to provide a paved multi-use or commuter trail for recreational cycling and

an alternative to using busy Highway 1. Since 2000, portions of a multi-use path, the Naomi Partridge Trail, have been completed along Highway 1 in Half Moon Bay.

The 2011 San Mateo County Comprehensive Bicycle and Pedestrian Plan (CBPP) is an update of the 2000 plan and also includes a pedestrian component, which was not part the 2000 plan. The CBPP identifies bikeway projects needed to complete the Countywide Bikeway Network (CBN). The CBN is derived from the network identified in the 2000 San Mateo County Comprehensive Bicycle Route Plan. Many of the projects included in the 2000 Plan are included in the CBPP, but it has been updated to reflect projects that have been completed since 2000, as well as new needs that have been identified. Relevant projects are discussed in the section below, titled Planned Bicycle and Pedestrian Facilities. In addition to identifying key future projects, the CBPP provides recommendations on wayfinding signage and where to locate bicycle parking.

Additionally, the 2010 Highway 1 Midcoast Mobility Study includes a bicycle and pedestrian component that identifies opportunities for an off-highway route system for pedestrian and bicyclists to improve connectivity between Midcoast communities and connect key destinations. Improvements to the route system could include separated bicycle or multi-modal trails; improved low speed, low traffic streets for shared bicycle and motor vehicle use; striped on-street bike lanes; and added or enhanced sidewalks.

Sidewalks and marked crosswalks are provided along Capistrano Road (top). The industrial area either lacks or has substandard sidewalks (bottom).

Exsisting Bicycle and Pedestrian Facilities

Pedestrian Facilities

Princeton's pedestrian facilities are relatively well developed along Capistrano Road between Prospect Way and Highway 1, with sidewalks provided on both sides of the street and marked crosswalks with signs. The sidewalks along this portion of Capistrano Road are 5 feet wide and are often congested with restaurant patrons and harbor and beach visitors.

In the industrial area bounded by Broadway, Princeton Avenue, Cornell Avenue and West Point Avenue, the streets lack sidewalks or have substandard sidewalk facilities, such as lack of pavement or uneven pavement, that force pedestrians out into the street.

In their current state, portions of Capistrano Road, Airport Street, and West Point Avenue are relatively inhospitable to pedestrians due to the lack of sidewalks, higher traffic speeds, and the lack of designated pedestrian crossings. West Point Avenue west of Stanford Avenue in particular is heavily trafficked by pedestrians and cyclists as it provides a direct connection to the Pillar Point beach and marsh areas. Due to the narrow width of the road and lack of a shoulder, pedestrians often walk in the roadway. The lack of sidewalks in these locations is the result of a lack of support from the community at the time

that Princeton's community standards were developed (the 1990s). While the specific reasons for the community's lack of support in the 1990's is unknown, often times the lack of community support for sidewalks can be due to the public's perception that narrower roads enhance the rural appeal of small unincorporated communities, sidewalks often require the removal of trees and personal use of space in front of a person's property. It is possible that there may still not be enough support in the present for additional sidewalk infrastructure as part of a coastal route through the community.

Bicycle Facilities

The largely flat terrain and compact nature of Princeton make it an ideal place for bicycling. However, there is currently a lack of designated bicycle facilities within Princeton, as well as north-south connections to surrounding communities. Described below are primary routes used by cyclists.

Highway 1

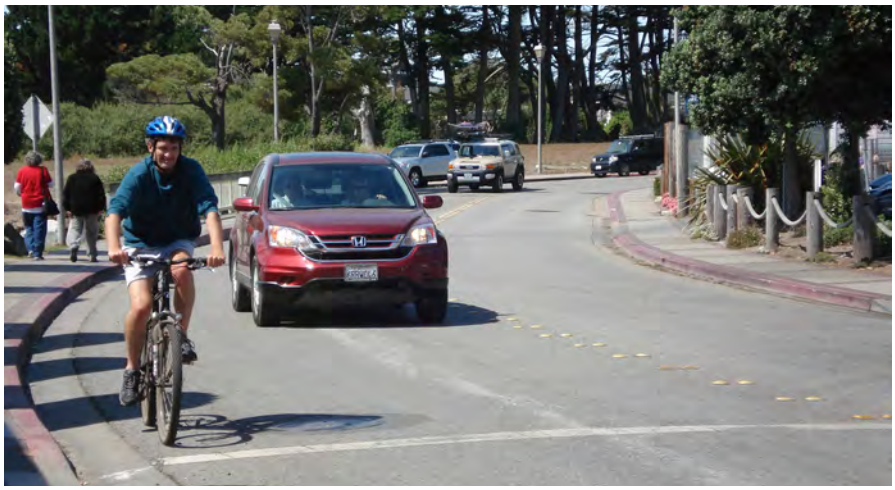
Bicyclists use Highway 1 as it provides the only direct and continuous north-south intercommunity route on the Midcoast. Highway 1 has wide paved shoulders (typically 8 feet) in the Study Area, but there are no designated bicycle facilities.

Capistrano Road

The portion of Capistrano Road adjacent to the harbor is a designated bike route. However, bicyclists often use the sidewalk in the community's commercial area due to the busy, narrow street and lack of bike lanes.

Airport Street

Between Harvard Avenue and Cypress Avenue, Airport Street (identified by signs as part of the California Coastal Trail) provides bicyclists an alternative



A portion of Capistrano Road is a designated bike route.

to Highway 1. The relatively low traffic volumes and 35 mph speed limit make it so that some cyclists are comfortable using this street. However, the narrow roadway may be uncomfortable for some bicyclists, and the long, straight nature of this street likely results in vehicle speeds higher than the speed limit.

California Coastal Trail

Existing portions of the California Coastal Trail run in a north-south direction west of Highway 1 and provide access for both pedestrians and bicyclists. The trail is currently paved and separated from the highway between the City of Half Moon Bay and Pillar Point Harbor. It transitions to an on-street route through Princeton, and then follows Airport Street to Seal Cove in Moss Beach. For additional information on the California Coastal Trail, refer to the section on coastal access.

Planned Bicycle and Pedestrian Facilities

The Highway 1 / Coastal Trail / Parallel Trail project is a key pedestrian and bicycle project identified in the CBPP that falls within Princeton's boundaries and would improve access to and from Princeton. The Highway 1 corridor—including the Parallel Trail, which runs adjacent to Highway 1, and the Coastal Trail, which is located adjacent to the Coast—provides key recreational and commuting opportunities for the coastal communities in the western part of San Mateo County. Improvements along this corridor will provide bicycle and pedestrian facilities where few currently exist, and serve the low-income population, agricultural workers, and transit riders who are already biking and walking along this corridor. The proposed Parallel Trail would travel along Highway 1 from Montara to Half Moon Bay, and would consist of Class I Bike Paths, Class II Bike Lanes, and Class III Bike Routes (Class III routes are marked for bicycle use in a shared lane with automobiles). The Coastal Trail is part of a larger statewide effort to provide a network of public trails along the entire California coastline.

Planned pedestrian improvements will generally consist of new walking pathways along Highway 1 and new or enhanced crossing opportunities. Design treatments in the mid-coast section between Pacifica and Half Moon Bay will follow the guidelines set forth in the Highway 1 Safety and Mobility Improvement Study, which identifies barriers to multimodal travel on the corridor and proposes context-sensitive design standards.

In addition, the CBPP identifies Airport Street as a proposed location for a multi-use path. Existing and proposed bicycle facilities are shown in Figure 6-2.

Figure 6-2: Existing and Planned Bicycle Facilities

Opportunities and Constraints

The Highway 1 corridor serves as the main north-south connector for cyclists and pedestrians. Highway 1 lacks sidewalks or consistent, well-defined shoulder space in areas where pedestrians need to walk along the roadway or where bicyclists use the roadway, including the stretch within the Study Area boundaries. These deficiencies make it difficult to walk or bike between Princeton and nearby communities and coastal amenities–particularly north of Princeton, as the Coastal Trail provides an alternative to the south. The area also lacks easily recognizable, direct alternative walking and biking routes off of the highway that link destinations. In addition, pedestrian access along the Highway 1 corridor is limited by infrequent crossing opportunities, heavy traffic volumes, high vehicle speeds, and unimproved pedestrian facilities. There are no stop controls or treatments at uncontrolled locations to help pedestrians and bicyclists safely cross the highway. Highway traffic speed also poses challenges, particularly at uncontrolled crossing locations, and there are few visual cues or physical treatments to remind drivers to be aware of cross traffic.

Within Princeton, there is a lack of pedestrian facilities—for example, sidewalks along Capistrano Road, Airport Street, and West Point Avenue—making it difficult for residents or visitors to safely walk between various destinations (such as the harbor and the entry point to Pillar Point just off of West Point Avenue), particularly given the higher traffic speeds on these streets. West Point Avenue provides a direct connection to the Pillar Point beach and marsh areas. However, the existing roadway is narrow, with no shoulders; has a steep drop-off on both sides; and much of it is closely lined with thick marsh willows, creating a long blind curve. As a result, pedestrians have to walk in the road, hugging the edge of the pavement when cars come by.

The industrial area bounded by Broadway, Princeton Avenue, Cornell Avenue, and West Point Avenue currently lacks sidewalks or has substandard sidewalk facilities, such as lack of pavement or uneven pavement, that require pedestrians to walk in the street. The feasibility of adding sidewalks to a portion of the industrial area of Princeton should be explored, particularly along Princeton Avenue, which is part of the Coastal Trail network. However, there may not be support within the community for financing additional sidewalk infrastructure.

The development of the planned Parallel Trail will provide pedestrians and cyclists with designated walking and biking facilities that are separated from Highway 1, and provide direct connections to destinations north and south of Princeton. Additionally, the CBPP proposes bicycle facilities that will help create a more complete bicycle network within Princeton by connecting the existing bike route on Capistrano Road with a bike lane on Airport Street connecting to Moss Beach.

Lastly, there is a lack of bicycle parking at recreational destinations. The addition of bicycle parking at major destinations such as Johnson Pier, Capistrano Beach, and Pillar Point can provide cyclists with more secure places to store their bikes, and can help encourage cycling.

Existing transit service is provided by the San Mateo County Transit District (top) and Bus stop in the Study Area (bottom)

6.3 Transit

Existing transit service to the Study Area is provided by the San Mateo County Transit District, which is the administrator of SamTrans, its regional bus service, and RediCoast, a paratransit subsidiary of MV Transportation.

Fixed Route Transit Service

This section describes existing fixed route services operating in or near the Study Area. These routes, along with their fare information, are depicted in Figure 6-3.

SamTrans Route 17

Route 17 is a coastal community service bus that runs seven days a week, connecting Princeton to Pacifica (Linda Mar Shopping Center), Montara, Moss Beach, El Granada, Half Moon Bay, and Pescadero. Route 17 operates along Cypress Avenue, Airport Street, and Capistrano Road in the Study Area, every day of the week, between 5:30 AM and 9:30 PM. This line has 60-minute headways during weekdays, which increase to up to 2 hours on weekends. Patrons can transfer to/from Route 294 in Half Moon Bay for trips to/from eastern urban San Mateo County.[4]SamTrans Route 294

Route 294 is a regional bus that connects San Mateo and Half Moon Bay. It is a vital link to the Hillsdale Caltrain station in San Mateo and the rest of the Bay Area. Route 294 terminates in Half Moon Bay at the corner of Main Street and Kelly Avenue, which is the transfer point with Route 17. This line operates seven days a week between 5:30 AM and 9:00 PM, with approximately 90-minute headways on weekdays and 2 hours on weekends.[5]

Dial-a-Ride

Limited, demand-responsive transit services are available to the public residing within the Study Area under certain conditions of eligibility.

RediCoast

RediCoast is a paratransit service managed by the San Mateo County Transit District as the coastal complement to Redi-Wheels on the bay side of the county. The service is provided under the Americans with Disabilities Act of 1990 (ADA).

RediCoast provides curb-to-curb transportation for disabled citizens living between Devil's Slide and the border of Santa Cruz County, including Princeton, Moss Beach, El Granada, and several other coastal communities. Travel outside of these areas is possible through arrangement with respective paratransit providers (e.g. Redi-Wheels for eastern San Mateo County, Outreach for Santa

4 SamTrans (2013).

5 SamTrans (2013).

Figure 6-3: Existing Fixed Route Transit Services

Source: San Mateo County Planning & Building Department, 2013; MTC, 2013; Dyett & Bhatia, 2013.

Clara County, etc.). RediCoast operates weekdays between 6:30 AM and 8:00 PM, and weekends and holidays between 8:00 AM and 5:00 PM. As of 2013, the cost for a one-way trip is $3.75.

- Disabled citizens qualify for RediCoast services if any of the following conditions are met:
- The person is unable to meet the physical, visual, or communicatory requirements to safely and efficiently complete their trip using a fixed-route bus; or
- The bus service is not accessible to the person; or
- The person cannot independently travel from their home to the bus stop.

Personal attendants are allowed to ride free with proper certification and notice, and other companions are allowed to ride on a space-available basis with fare payment and prior notice.

Opportunities and Constraints

Princeton is directly served by one bus route (with transfers to another route in Half Moon Bay for trips to eastern urban San Mateo County), which has headways of 60 minutes on weekdays and 2 hours on weekends, making it difficult to use public transportation as a primary mode of travel for all types of trips. Transit providers have indicated that it is difficult to justify increased service in the absence of more transit users. Opportunities for park-and- ride shuttle services throughout the Princeton Study Area and perhaps the greater Midcoast community should be reviewed as a potential alternative mode of transit.

There is currently a lack of amenities such as benches, shelters, and trash cans at existing transit stops for transit riders. Additional transit service and bus stop improvements to provide amenities such as benches and bus shelters could serve to increase transit ridership.

Every transit stop should be viewed as an opportunity to provide an enhanced pedestrian crossing, since transit users will typically need to cross the street at either the beginning or the end of their trips.

6.4 Parking

On-Street parking

Throughout the Study Area, on-street parking is free and without time restrictions. Along Capistrano Road, public on-street parking is clearly identified. In other areas of Princeton, such as the industrial area bounded by Broadway, Princeton Avenue, Cornell Avenue, and West Point Avenue, many of the streets do not have curbs. Some private property owners have placed unofficial signs stating "No Parking," making it difficult for drivers to discern between public and private parking areas.

No parking is allowed along West Point Avenue between Stanford Avenue and Pillar Point, Airport Street (except the area adjacent to Pillar Ridge Manufactured Home Community), and Capistrano Road north of Prospect Street. However, on weekends when the Pillar Point parking lot is full, cars park on the shoulder of the West Point Avenue, restricting emergency vehicle and pedestrian access.

Off-Street Parking

Parking Supply and Demand

There are a number of private and public off-street parking facilities located near the coastline. Table 6-1 shows the parking supply by off-street parking facility and whether the facility is open to the public or for private use. All parking facilities in and around the harbor were included in the parking inventory, as well as the public lots serving the Pillar Point Beach; and the Jean Lauer Trailhead. and an overflow parking lot on West Point Avenue, north of its intersection with Stanford Avenue. Lastly, while the Half Moon Bay Yacht Club's parking is private, they do allow the public to use their parking when the club is closed; this lot was also included in the inventory. There are a total of 1,528 parking spaces in the facilities described in Table 6-1. Of the total number of off-street parking spaces, 477 are public spaces, 639 are private spaces, and 412 are reserved spaces. The location of the various parking facilities are shown in Figure 6-4 and are described in more detail below.

Parking in the Study Area

TABLE 6–1: OFF-STREET PARKING INVENTORY

LOT NAME	LOT ID	PUBLIC				PRIVATE			RESERVED				TOTAL
		Standard	*Disabled*	*Trailer*	***Total***	*Standard*	*Disabled*	***Total***	*Standard*	*Disabled*	*Trailer*	***Total***	
Harbor (A)	1	215	5	12	**232**	0	0	**0**	90	1	0	**91**	**322**
Harbor (B)	2	52	0	0	**52**	0	0	**0**	0	0	0	**0**	**52**
Harbor (C)	3	0	0	0	**0**	0	0	**0**	105	2	40	**147**	**147**
Boat Launch & Trailer	4	0	0	0	**0**	0	0	**0**	61	4	70	**135**	**135**
Harbor Commercial Fishermen	5	0	0	0	**0**	0	0	**0**	38	2	2	**40**	**40**
Pier	6	20	0	0	**20**	0	0	**0**	0	0	0	**0**	**20**
Launching Facility	7	18	0	0	**18**	0	0	**0**	0	0	0	**0**	**18**
Harbor Village	8	90	0	0	**90**	389	9	**398**	0	0	0	**0**	**488**
Pillar Point Inn	9	0	0	0	**0**	11	1	**12**	0	0	0	**0**	**12**
Barbara's Fish Trap	10	0	0	0	**0**	35	2	**37**	0	0	0	**0**	**37**
Half Moon Bay Brewing Co. (SE)	11	0	0	0	**0**	38	5	**43**	0	0	0	**0**	**43**
Half Moon Bay Brewing Co. (NW)	12	0	0	0	**0**	50	0	**50**	0	0	0	**0**	**50**
Half Moon Bay Yacht Club	13	0	0	0	**0**	10	4	**14**	0	0	0	**0**	**14**
Nasturtium	14	0	0	0	**0**	12	0	**12**	0	0	0	**0**	**12**
American Legion	15	0	0	0	**0**	25	2	**27**	0	0	0	**0**	**27**
Mezza Luna	16	0	0	0	**0**	35	2	**37**	0	0	0	**0**	**37**
Café Capistrano	17	0	0	0	**0**	8	1	**9**	0	0	0	**0**	**9**
Pillar Point Rec. Area	18	34	1	0	**35**	0	0	**0**	0	0	0	**0**	**35**
Jean Lauer Trailhead	19	9	1	0	**10**	0	0	**0**	0	0	0	**0**	**10**
West Point Ave Overflow	20	20	0	0	20	0	0	0	0	0	0	0	20
TOTAL		**458**	**7**	**12**	**477**	**613**	**26**	**639**	**294**	**8**	**110**	**412**	**1,528**

Figure 6-4: Parking Lot Locations

Parking lots for restaurant customers (top) and Parking at Pillar Point Harbor (bottom)

Parking lots located along Capistrano Road between Prospect Way and Highway 1 are typically private lots for restaurant customers or hotel guests. However, recreational visitors may also be using them. These lots are free and do not have time restrictions. See Table 6-1 for more information on the number of spaces in these lots.

At Pillar Point Harbor, there is both public parking as well as permit parking. Each boater tenant with a slip is entitled to one vehicle space in the permit section in Lot A. This arrangement is a condition of the Harbor District's loan contracts with the Division of Boating and Waterways (formerly the Department of Boating and Waterways). Public parking is available free of charge in Lot A and Lot B, which also provide customer parking for Mavericks Surf Shop, Half Moon Bay Sportfishing and Tackle Shop, and Ketch Joanne's Restaurant and Harbor Bar. The commercial lot is reserved for commercial fishermen. The boat launch and trailer lot is reserved for boaters who use the launch ramp. Their launch fee includes the right to use the lot to park their vehicle and boat trailer, and they can either purchase a yearly launch permit or a daily launch permit at the pay-and-display station located at the boat launch. Lot C also requires a permit. Persons using the harbor for boating purposes can purchase a permit for Lot C from the harbor office. Both of these facilities were constructed with money from the Division of Boating and Waterways.

The Harbor Village parking lot located behind the Oceano Hotel has both public and private parking. The approval of the project required a minimum of 398 parking spaces for the development itself, plus an additional 90 parking spaces for public/beach access parking during certain hours of the day. There are 338 spaces located in the surface lot, with additional parking located in an underground parking facility. There is currently no signage indicating that any of the parking spaces located in the surface lot are designated for public beach users or if they cannot be used by beach users.

The Half Moon Bay Yacht Club (HYMBC) has a small supply of parking associated with its property, located inside the fence of the property as well as on Vassar Avenue and Princeton Avenue. The public uses parking located along Vassar Avenue and Princeton Avenue before the club opens. For large HMBYC events, "parking advisors" are required to direct and monitor parking around the intersection of Vassar Avenue and Princeton Avenue to ensure that access is not blocked for neighboring properties along Princeton Avenue. The Yacht Club allows various groups in the community to use the club for meetings. Therefore, on some weekdays or nights all of the parking around the club is full for the duration of the event.

The Pillar Point lot is a small unpaved lot next to Pillar Point Marsh at the west end of West Point Avenue, where it enters the Air Force Tracking Station. This lot can accommodate 35 vehicles. Additionally, there is a small unpaved lot on the east end of West Point Avenue, north of its intersection with Stanford Avenue that is estimated to accommodate 20 vehicles. There is also a small unpaved lot at the Jean Lauer Trailhead located off of Airport Street, which can accommodate 10 vehicles.

TABLE 6–2: OFF-STREET PARKING REQUIREMENTS

LAND USE	PARKING REQUIREMENT
Dwellings	1 space for each dwelling unit having 0 or 1 bedroom 2 spaces for each dwelling unit having 2 or more bedrooms
Apartments	1 space for each dwelling unit having 0 or studio apartment 1.2 spaces for each dwelling unit having 1 bedroom 1.5 spaces for each dwelling unit having 2 bedrooms 2 spaces for each dwelling unit having 3 or more bedrooms Plus 1 additional uncovered guest parking space for each 5 units
Hotels	1 space for each 4 guest bedrooms
Medical or Dental Clinics, Banks, Business Offices, Professional Offices	1 space for each 200 sq. ft. of floor area
Restaurants and Bars	1 space for each 3 seats or stools
Warehouses	1 space for each 2 employees on largest shift

Source: San Mateo County Zoning Regulations, 2012.

Discussions with numerous stakeholders found that during the week there is typically sufficient supply to meet demand and many lots are less than 50% occupied. However, in the summer, which is salmon season; on weekends; and during special events such as the Mavericks surf contest and the Dream Machine event, parking nears or is at 100 percent occupancy by late morning or midday.

San Mateo County Parking Requirements

For new development, off-street parking requirements are set by the County of San Mateo Zoning Regulations. Table 6-2 shows the amount of required parking for land use types that are found in Princeton.

Other relevant San Mateo County parking requirements for new development are listed below.

Other relevant San Mateo County parking requirements for new development are listed below.

Change in Use – Additions and Enlargement

Section 6118(e) establishes the conditions for requiring additional parking spaces accompanying changes in a site's land use or intensity. Whenever in any building there is a change in use, or increase in floor area, or in the number of employees or other unit measurements specified hereinafter to indicate the number of required off-street parking spaces and such change or increase creates a need for an increase of more than 10 percent in the number of off-street parking spaces as determined by the tables in this Chapter, additional off-street parking spaces shall be provided on the basis of the increased requirements of the new use, or on the basis of the total increase in floor area or in the number of employees, or in other unit of measurement; provided, however, that in case a change in use creates a need for an increase of less than 5 off-street parking spaces, no additional parking facilities shall be required.

Mixed Occupancies and Uses Not Specified

Section 6118(f) establishes standards for mixed and unspecified uses. In the case of a use not specifically mentioned in paragraph (b) of this section, the requirements for off-street parking facilities for a use which is so mentioned and to which said use is similar shall apply. In the case of mixed uses, the total requirements for off-street parking facilities shall be the sum of the requirements for the various uses computed separately. Off-street parking facilities for one use shall not be considered as providing required parking facilities for any other use except as hereinafter specified for joint use.[6]

Local Coastal Program Parking Polices

LCP policies require that a portion of parking spaces in new parking facilities be set aside for beach users. According to Section 10.22, new commercial or industrial parking facilities of 10 or more spaces within a quarter-mile radius of an established shoreline access area shall designate and post 20 percent of the total spaces for beach user parking between 10:00 a.m. and 4:00 p.m. In addition, bus and secure bicycle parking must be provided in parking facilities.

Opportunities and Constraints

Within the Harbor District, it can be somewhat unclear, particularly for a first time visitor, which off-street spaces are available for public use. Within the industrial area of Princeton, due to the lack of curbs, it can be difficult to determine which areas are within the public right-of-way and which are private property. Lastly, while a portion of the spaces in the Harbor Village Lot are required to be set aside for beach users, this is not clear due to a lack of signage stating which spaces are for beach users.

Signage is a relatively-low cost solution to better inform visitors of where they can park and if there are any parking restrictions. Signage should also be added to the Harbor Village Lot notifying drivers that public parking is available for beach users.

Parking supply is limited on weekends and during events such as the Mavericks Invitational or Dream Machine. Furthermore, consideration should be given to how far a person will walk from a parking lot to their actual destination point and whether there are a sufficient number of parking spaces near these destination points within the Princeton Study Area to accommodate the volume of people these points attract.

The permit parking systems for the Pillar Point Harbor parking lots likely result in inefficiencies in parking. For example, the 258 spaces in the Boat Launch and Trailer lot can only be used by vehicles that have launched boats. Likewise, many of the spaces in Harbor Lots A and C are restricted to permit parking for either people with boat slips or commercial fishermen. The peak demands for these

6 San Mateo County Zoning Regulations, 2012.

users may not coincide with peak demand for other users. Due to the varying permit systems and funding sources, it may be difficult or infeasible to change how these parking lots are managed. However, by doing so, the existing parking lots could likely be used more efficiently.

6.5 Coastal Access

The following section describes the relevant policies governing coastal access, primary access points to the coast, the California Coastal Trail, coastal recreational areas and facilities that support coastal access.

Regulations Governing Coastal Access

California Coastal Act

Enacted by the State Legislature in 1976, the California Coastal Act is the primary law that governs the permitting decisions of the California Coastal Commission. The Act outlines, among other things, standards for development within the Coastal Zone. Listed below are the sections of the Act that relate to circulation and coastal access.

Section 30211 Development not to interfere with access

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Section 30212 New development projects

Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.

Section 30212.5 Public facilities; distribution

Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.

Section 30252 Maintenance and enhancement of public access

The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing non automobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.

Section 30253 Minimization of adverse impacts

New development shall do all of the following:

- Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
- Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.
- Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.
- Minimize energy consumption and vehicle miles traveled.
- Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.

Section 30254 Public works facilities

New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation,

commercial recreation, and visitor-serving land uses shall not be precluded by other development.

County of San Mateo Local Coastal Program (LCP) Policies

In 1980, the County Board of Supervisors and the California Coastal Commission approved San Mateo County's LCP. In April 1981, the County assumed responsibility for implementing the State Coastal Act in the unincorporated area of San Mateo County, including issuance of Coastal Development Permits.

All development in the Coastal Zone requires either a Coastal Development Permit or an exemption from Coastal Development Permit requirements. For a permit to be issued, the development must comply with the policies of the LCP and those ordinances adopted to implement the LCP. The most recent edition of the LCP contains amendments approved through August 8, 2012. Listed below are the sections of the LCP that relate to circulation and coastal access.

10.1 Permit Conditions for Shoreline Access

Require some provision for shoreline access as a condition of granting development permits for any public or private development permits (except as exempted by Policy 10.2) between the sea and the nearest road. The type of provision, the location of the access and the amount and type of improvements required shall be consistent with the policies of this component.

10.22 Parking

- New commercial or industrial parking facilities of ten or more spaces within 1/4-mile radius of an established shoreline access area shall designate and post 20% of the total spaces for beach user parking between 10:00 a.m. and 4:00 p.m.
- Provide bus and secure bicycle parking in parking facilities.

10.30 Requirement of Minimum Access as a Condition of Granting Development Permits

- Require the provision of shoreline access for any private or public development between the sea and the nearest public road.
- Base the level of improvement and development of access support facilities at a site on the Location Criteria and Development Standards Policies and the Site Specific Recommendations contained in Table 10.6.
- Base the responsibility and requirements of the property owner for the provision of this access on: (1) the size and type of development, (2) the benefit to the developer, (3) the priority given to the type of development under the Coastal Act, and (4) the impact of the development, particularly the burden the proposed development would place on the public right of access to and use of the shoreline.

California Coastal Trail

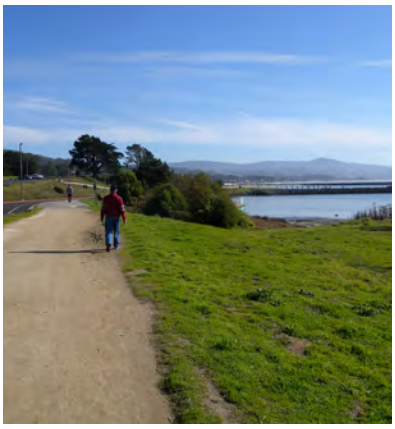
The vision for the California Coastal Trail (CCT) is a continuous interconnected public trail system along the California coastline. It is designed to foster appreciation and stewardship of the scenic and natural resources of the coast and serves to implement aspects of Coastal Act policies promoting non-motorized transportation. The CCT system is to be located on a variety of terrain, including the beach, bluff edge, hillsides providing scenic vantage points, and within the highway right-of-way. It may take many forms, including informal footpaths, paved sidewalks, and separated bicycle paths. When no other alternative exists, it sometimes connects along the shoulder of the road. While primarily for pedestrians, the CCT also accommodates a variety of additional user groups, such as bicyclists, wheelchair users, equestrians, and others as opportunities allow. The CCT consists of one or more parallel alignments. It is intended that the CCT system shall be designed and implemented to achieve the following goals and objectives:

- Provide a continuous walking and hiking trail as close to the ocean as possible;
- Provide maximum access for a variety of non-motorized uses by utilizing parallel trail segments where feasible;
- Maximize connections to existing and proposed local trail systems;
- Ensure that the trail has connections to trailheads, parking areas, transit stops, inland trail segments, etc. at reasonable intervals;
- Maximize ocean views and scenic coastal vistas; and
- Provide an educational experience where feasible through interpretive programs, kiosks, and other facilities.

Existing portions of the California Coastal Trail run in a north-south direction west of Highway 1. Most of the trail between the City of Half Moon Bay and Pillar Point Harbor is paved and separated from the highway, though some portions are unpaved and/or run along the highway. It transitions to an on-street route through Princeton along Princeton Avenue, West Point Avenue, and Stanford Avenue, and then follows Airport Street to Seal Cove in Moss Beach.

Existing and proposed segments of the California Coastal Trail are shown in Figure 6-5.

Figure 6-5: Existing and Planned Segments of the California Coastal Trail



The Coastal Trail alignment coastal side of the road (top) and beach area at Capistrano Road (bottom)

Existing Coastal Access Points and Opportunities for Improvements

Existing and proposed coastal access points are shown in Figure 6-6. A description of each access point is provided below. It should be noted that there currently does not appear to be insufficient access points or overcrowding at coastal areas within Princeton. On the other hand, several of the access points are hidden and lack stairways or improved paths to the beach or shoreline.

Existing Coastal Access Points

There are a number of points along the coastline in Princeton where the public can access coastal resources. Some of these access points are more developed in terms of facilities such as stairways and paths. It should also be noted that much of the beach along Pillar Point Harbor is inaccessible during high tide as the beach area is submerged.

Pillar Point Harbor

Pillar Point Harbor is a protected harbor used by the commercial fishing industry, sport fishermen, and pleasure boaters. The Harbor has 369 berths and an inner and outer breakwater. Within the Harbor District, Johnson Pier is open to both the general public and commercial fishermen, and there is a public boat launch facility.

The multi-use paved portion of the Coastal Trail connecting Princeton to Half Moon Bay intersects with the boat launch and then runs along the coastal side of the two-lane access roadway that connects the boat launch with Capistrano Road. The paved trail turns into a narrower dirt path around the entrance to the boat launch parking lot. The dirt path then veers away from the roadway towards Johnson Pier continuing between the parking lot and the riprap waterfront.

Beach Area at Capistrano Road

Along the portion of Capistrano Road that directly abuts the coastline is a small beach area. The beach at this section is walkable except at the highest tides, but its use as an alternate walking route is limited by rip-rap, particularly at the northern end. At the northern end, there is an existing set of stairs that connects the sidewalk along Capistrano Road to the informal pathway along the open parcel abutting the coastline. However, the stairway does not extend all the way to the beach, and instead terminates at the rip-rap. Thus, in order to access the beach at the northern end, one must climb over the rip-rap. The southern end of the beach can be accessed directly from Capistrano Road via a dirt path.

Broadway

Broadway is a narrow street without curbs or sidewalks that runs from Prospect Way to the coastline. The end of Broadway terminates at a rip-rap stabilized bluff overlooking the outer harbor at Pillar Point. At the terminus of Broadway there is a dirt area that can accommodate several parked cars.

Broadway's 70-foot right-of-way is owned and maintained by the County of San Mateo. There is a lateral easement on Ronald Mickelsen's property "located on the subject property seawall from the base of the existing rip-rap to the south property line." This easement is unsuitable for development because it is under water at high tide. As a condition of a permit issued to the landowner, the landowner agreed to pay the County a fee of $10,000 for the construction of public coastal access in the Princeton area. These funds are expected to be directed to this purpose either at this site or at another suitable site selected in the project area. Refer to the "Mickelsen Agreement." [7]

A detailed study of coastal access points completed in 2002 ("Five Coastal Sites") recommends a concrete beach access stairway over the rip-rap at the southern end of Broadway, which could be incorporated into the revetment structure recommended by the Harbor District's 2001 shoreline protection feasibility study.

Vassar Avenue

Vassar Avenue is an existing public right-of-way. The unpaved road leads to rip-rap along the shoreline which must be maneuvered over to gain coastal access from Princeton Avenue to the shoreline. The County of San Mateo owns a 50-foot right-of-way along Vassar Avenue. However, it is not a County-maintained road and there are no plans for the maintenance of Vassar Avenue. The lateral easement extends inland 25 feet from the mean high tide line. The easement falls within the Ocean Boulevard right-of-way and does not overlap the subject property. There is currently no formal parking area for beach users.

The terminus of Broadway Avenue

7 Coastal Access Improvement Plan, Five Coastal Sites_Broadway (2002).

The terminus of West Point Avenue (top) and the Pillar Point parking lot (bottom).

However, there is room along and at the end of the dirt road for several parked cars.

Half Moon Bay Yacht Club

The Half Moon Bay Yacht Club is located along the coastline between Vassar Avenue and Princeton Avenue. The Yacht Club holds title to a parcel on the other side of the Ocean Boulevard right-of-way, extending approximately 60 feet out into the water. There is a boat ramp located on the beach in front of the Yacht Club that is surrounded by rip-rap on both sides.

The Yacht Club allows the public to cross its property in order to use its ramp, as the ramp is currently the only break in the rip-rap which provides a safer and accessible way for those with mobility limitations to access the beach and Vassar Avenue. The Yacht Club allows public access to the kayak portage as well. The Yacht Club estimates that there are over 100 non-members using the ramp weekly. Thus far, public usage of the ramp has been manageable. However, usage has been increasing steadily over time, and as such the Yacht Club does not envision the current public access arrangement as permanent. Instead, it suggests that a beach ramp accessible to disabled users be constructed, starting at the end of Vassar Avenue and proceeding across and down in front of the Yacht Club to the beach.

West Point Avenue

West Point Avenue currently provides the only vehicular access to the Pillar Point parking lot, which provides access to the marsh area and beach. West Point Avenue terminates at the coastline, which provides direct access to the beach. There is room for several cars to park perpendicularly on the portion of West Point Avenue between Princeton Avenue and the coastline. It is possible to walk along the beach to Pillar Point even at high tide from the West Point Avenue terminus.

Pillar Point Parking Lot

The Pillar Point parking lot is an unpaved lot next to Pillar Point Marsh at the end of West Point Avenue where it enters the Air Force Tracking Station. This lot serves as the trailhead for the West Shoreline Access Trail, which follows the edge of the marsh to the outer harbor beach, then follows the shoreline to the west breakwater and Mavericks Beach. Across West Point Avenue from the parking lot, there is gated access to Pillar Point Bluff, with informal trails leading to Ross's Cove and the Jean Lauer section of the California Coastal Trail.

Figure 6-6: Existing and Proposed Coastal Access Points

Coastal Trail or Trail Connection

- Paved Trail
- Unpaved Trail
- On-Street
- Existing Access to Shoreline
- Proposed New Coastal Access
- P Existing Parking
- *(#) Number of Public Parking Spaces*
- *(#) Number of Reserved Parking Spaces*
- P Potential Recreational Parking
- Princeton Study Area Boundary

Source: Nelson\Nygaard, 2013; San Mateo County Planning & Building Department, 2013; Dyett & Bhatia, 2013.

0 625 1,250 2,500 Feet

Jean Lauer Trailhead Parking Lot

The Jean Lauer Trailhead is located off of Airport Street near the Pillar Ridge residential community. A small, unpaved parking lot with room for 10 vehicles is located at the trailhead. From this trailhead, recreational visitors can connect to the California Coastal Trail.

Potential Opportunity Access Points

Columbia Avenue

Currently, beach access at the coastal terminus of Columbia Avenue is hindered by rip-rap. Improving access (which would require construction and maintenance agreements) at this point would result in the most beach-walking benefit, as the two blocks between West Point and Columbia are walkable except at high tide. Thus, Coastal Trail users would have an alternate beach route between Pillar Point and Columbia except at each day's highest tide.

Ownership of Property Abutting the Shoreline

The properties abutting the shoreline and beaches within Princeton are a mixture of publicly and privately owned lands. According to the LCP, Pillar Point and the lands south and east of Pillar Point are both publicly and privately owned, as are properties directly abutting the coastline between West Point Avenue and Columbia Avenue. The properties adjacent to the beach at Broadway are both public and private, and the property adjacent to Denniston Creek Beach is private. The area surrounding Johnson Pier and the harbor is public.

Given that ownership of property directly abutting the shoreline and beaches within Princeton shifts between public and private ownership, there is a likelihood that prescriptive rights (evidence of public use of private lands for coastal access or recreation) exist, particularly along the beach area between Broadway and West Point Avenue.

No new encroachments on public beaches or accessways (e.g. illegal "No Parking" signs or illegal barriers, private accessory development or landscaping on beaches) were identified. However, there are some areas where "No Parking" signs have been posted, but it is not clear if the parking areas are completely on private property or if they are partially located within the public right-of-way.

Proposed Access Improvemements

Described below are proposed coastal improvements that have been identified in relevant planning documents.

Coastal Access Improvement Plan/Five Coastal Sites 2002

Proposed improvements identified in the Coastal Access Improvement Plan/ Five Coastal Sites 2002 document, approved by the San Mateo County Board of

Supervisors, include improving access at Broadway by constructing a concrete beach access stairway over the rip-rap at the southern end of the street. In addition, two "Coastal Access" signs and "No Parking "signs are proposed.

This report also recommends constructing a ramp from the southern terminus of Vassar Avenue to the beach (which would require construction and maintenance agreements), with low shrubs and ground cover surrounding the ramp, and new rip-rap to stabilize the access. Two "Coastal Access" signs are also proposed. Directional signs to the accessway are proposed. The coastal access improvements outlined in this plan have not been implemented, but are proposed actions for the restoration of shoreline access in Princeton.

Local Coastal Program Policies

The LCP identifies priorities for the expenditure of public funds. In the Midcoast region, the acquisition and improvement of the partially privately-owned trail from the Pillar Point Radar Station Road to the Fitzgerald Marine Reserve beach north of Pillar Point is identified as the second-highest priority project for this region. In 2011, the Peninsula Open Space Trust (POST) acquired the Pillar Point Bluff area. With funding from the California Coastal Conservancy, POST created the Jean Lauer Trail. On August 9, 2011, POST transferred 140 acres of the Pillar Point Bluff to San Mateo County Parks for inclusion in the Fitzgerald Marine Reserve.

The third-highest priority project applies to the south and east sides of Pillar Point, and falls under the category of "acquisition and improvement of privately owned trails and shoreline destinations which are adjacent to and would expand the size of existing publicly owned shoreline destinations."

The LCP identifies site-specific recommendations as well. Recommendations for destinations within Princeton are listed below.

- Beach and Bluff North of the Pillar Point Radar Station
  - Acquire and improve the access trail from the Radar Station Road to the beach as shown in the County Parks and Recreation Development Concept Plan.
  - Develop a trail along the bluff linking to the beach trail and leading north to Moss Beach.
  - A special consideration is also noted that the trail to the beach is the first priority for improvement and that the bluff trail could be developed later.
- Princeton Beaches
  - Improve the beach at Denniston Creek to protect the mouth of the creek and the riparian habitat. Prior to the completion of improvements, sign the access, requesting the public not to intrude into the sensitive areas.

  - Develop small parking areas for beach access on vacant lots in Princeton.
  - Access should be kept open and eventually improved to and along the beach between West Point Avenue and Columbia Avenue at Broadway Avenue.
  - A trail should connect the Princeton beaches to the Fitzgerald Marine Reserve.
- Johnson Pier and Beach
  - Establish parking for bicycles and disabled users.
  - Implement the access improvements in the harbor required by the Coastal Commission.

California Coastal Trail San Mateo County Midcoast Pillar Point to Mirada Surf[8]

The California Coastal Trail San Mateo County Midcoast Pillar Point to Mirada Surf Trails Team – Midcoast Parks and Recreation Committee Final Report, completed in March, 2010, identifies the following opportunities to improve coastal access.

- Pillar Point Parking Lot
  - Improve lot and signage.
  - Upgrade to vault toilet.
- Pillar Point Marsh:
  - Cut back willows on the south side of West Point Avenue to improve visibility; they will require regular maintenance.
  - Create a separate pedestrian trail along the roadway.
  - Add signage or a map to indicate the alternate beach route.
- Capistrano Beach
  - Improve access to beach at both ends.
  - Consider the feasibility of bypassing this section with a boardwalk, attaching to the seawall at the roadway (to minimize beach impact), then bending behind Barbara's Fishtrap and across to the harbor sidewalk. This concept would be dependent on obtaining an easement for the north terminus at the Capistrano corner lot.

8 California Coastal Trail San Mateo County Midcoast Pillar Point to Mirada Surf Trails Team – Midcoast Parks and Recreation Committee Final Report March 23, 2010

- Harbor District
  - Consult with the Harbor District about the possibility of eliminating up to eight parallel parking spaces along the outside edge of the lot to allow for the placement of the multi-use Coastal Trail there. Alternatively, could a formal pedestrian trail be created via the existing narrow informal trail route, with bicycle access provided via the parking lot?
- Denniston Creek & Capistrano/Prospect corner lot
  - On Prospect Way at the creek culvert, alleviate bottleneck by widening the sidewalk and reducing parking cutout. Paint the curb red on either side of parking cutout.
  - On Prospect Way west of the creek, create a uniform sidewalk or multiuse trail extending to Broadway, separated from the street and parking.
  - If development of the lot is proposed, seek to obtain a multi-use trail easement. A 10-foot wide trail easement exists along the creek, but there is none at harbor edge. A 20-foot wide trail easement exists across the mouth of Denniston Creek.
  - If stairs to the beach are built at the end of Broadway, consider constructing stairs to the beach at the junction of creek trail easements.
  - If appropriate trail easements are obtained, consider the feasibility of a bridge across the mouth of Denniston Creek connecting the foot of Broadway to the corner lot.

Shoreline Support and Recreational Facilities

There are several support facilities in Princeton that promote access to the coast and shoreline recreational areas. These include parking lots for visitors accessing the coastline or Coastal Trail, recreational facilities like the boat launch and Johnson Pier, and public beaches along Pillar Point Harbor. These facilities are described in Table 6-3, and their locations are shown in Figure 6-7. For more information on parking facilities, please refer to the parking section.

TABLE 6–3: SHORELINE SUPPORT AND RECREATIONAL FACILITIES

FACILITY DESCRIPTION	STATUS
Harbor District • Parking lots • Johnson Pier • Boat Launch • Beach at Capistrano Avenue	Public and Private
Oceano Hotel Parking Lot	Public and Private
Pillar Point Parking Lot	Public
Pillar Point Harbor Beaches	Public
Parking lot serving the Coastal Trail along Airport Street	Public
Half Moon Bay Yacht Club	Private
Restaurants and Commercial Services along Capistrano Road	Public
West Point Avenue Overflow Parking Lot at Stanford Avenue	Public

Source: Nelson\Nygaard, 2013.

Opportunities and Constraints

There are several existing access points that require visitors to climb over rip-rap in order reach the beach, making it difficult for less mobile persons to access beach areas. All of the planning documents reviewed recommended improving existing or constructing new access facilities such as stairways and ramps to ensure that persons with a wide range of mobility levels can access the beach. Ideal locations for new stairways or ramps include Broadway, Columbia Avenue, Vassar Avenue and the north end of Capistrano Beach.

Just east of West Point Avenue at Romeo Pier, an extensive section of recent unpermitted rip-rap on the beach blocks passage even when the beach further east is still above the tide line. Recommendations regarding shoreline erosion management are included in Chapter 6, Natural Hazards and Shoreline Erosion. Consideration of opportunities for coastal access should be incorporated into a comprehensive shoreline management plan.

Currently, portions of the coastal trail run along streets that do not have sidewalks, such as Princeton Avenue and West Point Avenue. Unpaved shoulders are often blocked by parked, stored, or abandoned vehicles, forcing pedestrians to walk in the roadway and increasing the potential for conflict between cars and pedestrians.

Where the Coastal Trail is routed along streets and there is currently not a separate walkway, consideration should be given to improving pedestrian facilities. If it is not possible to construct a walkway within the public right-of-way, additional signage alerting drivers of increased pedestrian traffic or the designation of a

Figure 6-7: Shoreline Support Facilities

portion of the paved surface as a pedestrian path are options to consider. There is also an opportunity to strengthen trail identity and linkage between different route segments. For example, Cypress Avenue and Airport Street provide a fairly direct alternative route to the highway from Moss Beach to Pillar Point Harbor, with no substantial topographic constraints and few driveways or intersections that would pose conflicts between vehicles and trail users.

7 Infrastructure, Public Services and Facilities

This chapter documents the existing utility infrastructure and public services throughout the Princeton Study Area (Study Area), identifies key issues relevant to the Princeton Planning Update, and provides context for examining development opportunities and constraints. The primary focus is on the water, storm drain, and sanitary sewer facilities that serve the Study Area. Information regarding dry utilities, including electric, gas, and telecommunications, and public services, including policy, fire, and emergency response, schools, libraries and community centers, airports, and waste management is also included.

7.1 Water System

Existing Potable Water Infrastructure

The water distribution system for the northern portion of the Study Area is owned and operated by Montara Water and Sanitary District (MWSD). MWSD's water supply sources include Montara Creek and Denniston Creek. Water is delivered to the system through the Alta Vista Water Treatment Plant north of Montara, as well as from nine groundwater well locations. The water distribution system consists of three water storage tanks, which have a combined

capacity of 662,000 gallons, and over 3.4 miles of distribution pipelines ranging from 2- to 16-inch mains.[1]

The water distribution system for the southern portion of the Study Area, specifically Princeton, is owned and operated by Coastside County Water District (CCWD). CCWD's water supply sources include Pilarcitos Lake, Upper Crystal Springs Reservoir, Pilarcitos Well Field and Denniston Creek. The primary water supply source is purchased from the SFPUC (Pilarcitos Lake and Upper Crystal Springs Reservoir). Other supplies (about 10 percent in 2010) comprise Infiltration Well water from the District's Pilarcitos well field, and surface water and groundwater from the District's Denniston Project. Water is delivered to the system through one of two treatment plants: the Denniston Water Treatment Plant near Half Moon Bay Airport and the Nunes Water Treatment Plant in Half Moon Bay. The water distribution system consists of 11 treated water storage tanks, which have a combined storage capacity of 8.1 million gallons, and over 100 miles of transmission and distribution pipelines.[2] The portion of the system within the Study Area consists of a network of 4- through 10-inch mains, which are currently plastic material. District boundaries are shown in Figure 7-1.

Both MWSD and CCWD have water capacity reserved for priority land uses defined by the Coastal Act and Midcoast Local Coastal Program (LCP). The reserved water capacity amounts are included in Table 2.17 of the Midcoast LCP Policies, June 2013, which is reproduced here in Table 7-1. Based on original buildout estimates from 1980 (Table 1.1 of the LCP), MWSD has approximately 82,480 gallons/day for Phase 1 (year 2000) and 61,126 to 76,814 gallons/day for full buildout. CCWD has approximately 369,716 gallons/day allocated for priority uses for Phase 1 (year 2000) and 490,404 to 532,036 gallons/day allocated for priority uses at full buildout.

MWSD currently serves over 1,600 residential and 30 commercial connections for a maximum daily demand of over 473,000 gallons per day (gpd).[3] Based on the MWSD Public Works Plan, December 2013, MWSD has 128,000 gallons per day available to be utilized for new service connections, beyond those connections existing as of December 11, 2013. 80,959 gallons per day is currently required to be reserved for priority uses, as described above. 47,041 gallons per day are available for non-priority uses.

CCWD currently serves approximately 304 parcels within the Princeton Study Area, 99 with installed connections and 24 with uninstalled connections, according to data received from CCWD in September 2013. The remaining parcels do not have connections. As shown in Table 7-2, there are approximately 10.5 equivalent existing uninstalled priority water service connections and 18.5 uninstalled non-priority water service connections owned by parcels in the

1 SRT Consultants, "Montara Water and Sanitary District Water System Master Plan" (December 2011).

2 Coastside County Water District website, "Distribution" (2013).

3 SRT Consultants, "Montara Water and Sanitary District Water System Master Plan" (December 2011).

Figure 7-1: Water Service Providers

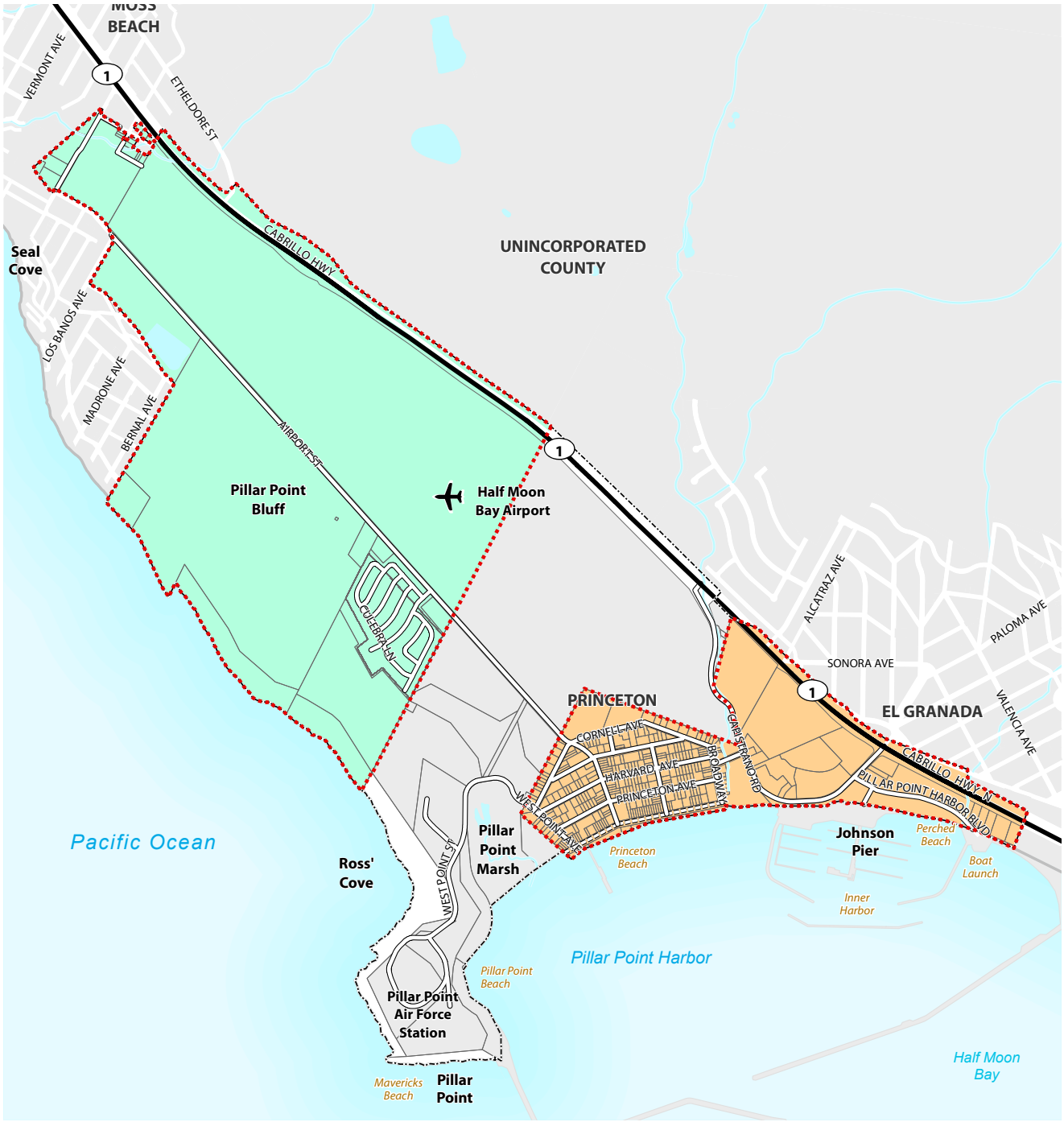


TABLE 7–1: AMOUNT OF WATER CAPACITY TO BE RESERVED FOR PRIORITY LAND USES[1]

ALLOCATION OF RESERVED CAPACITY TO PRIORITY LAND USES	PHASE 1		BUILDOUT	
	UNITS	GALLONS/DAY	UNITS	GALLONS/DAY
Montara Water and Sewer District (Montara/Moss Beach)				
Coastal Act Priorities				
Marine-Related Industrial	–	–	–	–
Commercial Recreation	.57 acres	1,100	.82 acres	1,230
Public Recreation	282 persons	3,200	408 persons	4,080
Floriculture		13,800		10,000
Essential Public Services[2]				5,000
Local Coastal Program Priorities				
Specific Developments on Designated Sites Containing Affordable Housing	148	64,380	148	35,816 to 51,504
Other Affordable Housing			20	5,000
Total Water Capacity for Priority Land Uses		**82,480**		**61,126 to 76,814**
Percent of Total Water Capacity for Priority Land Uses		10.6%		5.4 to 9.2%
Percent of Buildout Allowed by Phase		50 to 69%		100%
TOTAL WATER CAPACITY		**778, 800**		**836,300 TO 1,128,700**
Coastside County Water District (County Jurisdiction)				
Coastal Act Priorities				
Marine-Related Industrial	22.85 acres	55,770	29.29 acres	71,870
Commercial Recreation	33.15 acres	61,630	42.50 acres	79,395
Public Recreation	248 persons	2,900	318 persons	3,700
Floriculture		179,400		220,000
Essential Public Services[2]		7,700		14,135
Local Coastal Program Priorities[4]				
Specific Developments on Designated Sites Containing Affordable Housing	104	39,936	322	77,924 to 112,056
Other Affordable Housing[5]			20	5,000
Consolidated Lots in Miramar	55	20,900	70	16,900 to 24,400
Historic Structures[3]	1	1,480	1	1,480
Total Water Capacity for Priority Land Uses		**369,716**		**490,404 to 532,036**
Percent of Total Water Capacity for Priority Land Uses		29.4%		30.4 to 41.8%
Percent of Buildout Allowed by Phase		59 to 78%		100%
TOTAL WATER CAPACITY		**1,257,000**		**1,273,600 to 1,611,600**

TABLE 7–1: AMOUNT OF WATER CAPACITY TO BE RESERVED FOR PRIORITY LAND USES[1]

NOTES:

1 Capacity shall be reserved for additional priority land use development when service provider develops new supplies to serve new connections on vacant lands. Does not include existing, developed priority land uses at time of LCP adoption.

2 Essential public services include the following uses: Emergency Facilities, Correctional Facilities, Transportation Facilities (public), Utility Facilities, Hospitals, Skilled Nursing Facilities, Intermediate Care Facilities, Libraries, Community Centers, Elementary and Secondary Schools, Institutional Day Care Facilities for Children (Day Care Centers as defined by State law), Adults and the Elderly, Institutional Full-Time Care Facilities for Children and Adults, Institutional Shared Housing Facilities for the Elderly and One-Family Dwellings with Failed Domestic Wells. These services must be provided by a public agency or private non-profit or government-funded (partially or fully) purveyor to be considered an essential public service. The reserve capacity allocated to these priority uses may not be shared by any associated, non-priority use and must be forfeited when the priority use is discontinued. 12,710 gallons/day are reserved for One-Family Dwellings with Failed Domestic Wells. This reservation is allocated as follows: Coastside County Water District - 7,710 gallons/day (30 units) Montara Water and Sanitary District - 5,000 gallons/day (20 units)

3 In order to qualify for priority, historic structures must meet the criteria contained under LCP Policy 2.31c(6).

4 Where development of new public water facilities can accommodate only a limited amount of new connections on vacant land, adequate capacity for Coastal Act priority uses shall be reserved before reserving capacity for Local Coastal Program priority uses.

5 Affordable means as defined by Section 6102.48.6 of the certified zoning regulations, and subject to income and cost/rent restrictions for the life of the development.

Source: San Mateo County Midcoast LCP, 2013.

Study Area that could be sold or transferred to new developments. CCWD has 209 unsold priority water service connections (5/8" size). However, there are no unsold non-priority water service connections. New non-priority developments must trade or purchase water service connections from existing owners, rather than from CCWD. In the late 1990's, under a program to reallocate a portion of the capacity reserved for priority land uses to non-priority uses, some property owners relinquished the right to purchase any priority water service connections for 10 years or until additional water supply capacity was developed, whichever occurs later.

CCWD's baseline per capita water use in 2010 was 128 gallons per capita per day (gpcd) according to the 2010 Urban Water Management Plan Update. In order to comply with the Water Conservation Act of 2009, CCWD's target per capita water use is 120 gpcd by 2020. The water demand in 2010 was approximately 2,265 acre-feet per year (afy) and is projected to reach 3,149 afy by 2035. The district is currently entitled to purchase approximately 2,455 afy from the SFPUC. This entitlement will not be increased before 2018 and, because availability of additional water from SFPUC after 2018 is uncertain, the district assumes for planning purposes that this supply will not be increased.

Existing Recycled Water System

There is currently no recycled water system that serves the Study Area. In the MWSD 2000 Water System Master Plan Update, recycled water was deemed a non-feasible short-term solution to meet water demand since there were minimal large irrigation customers using potable water at the time.

The nearest potential recycled water producer is the Sewer Authority Mid-Coastside (SAM) Treatment Plant, which is approximately 3 miles south of the Study Area along Highway 1. However, in order to produce recycled water, it

TABLE 7–2: PRINCETON STUDY AREA UNINSTALLED CCWD WATER SERVICE CONNECTIONS

APN	ADDRESS	UNINSTALLED SERVICE CONNECTION	# OF CONNECTIONS	SIZE	EQUIVALENT	PRIORITY	NON-PRIORITY
047013310		x	1	5/8"	1	1	0
047016330	Stanford Ave Princeton	x	1	3/4"	1.5	0	1.5
047016340		x	1	5/8"	1	0	1
047016350		x	1	5/8"	1	0	1
047016360		x	1	5/8"	1	0	1
047021100		x	1	5/8"	1	1	0
047021200		x	1	1"	2.5	1.5	1
047022070		x	1	3/4"	1.5	1.5	0
047023120		x	1	5/8"	1	0	1
047023130		*Shares connection with APN 047-023-120					
047023220		x	1	5/8"	1	0	1
047023380		x	1	1"	2.5	2.5	0
047024180		x	1	5/8"	1	1	0
047024190		*Shares connection with APN 047-024-180					
047032060	111 Stanford Ave El Granada	x	1	5/8"	1	0	1
047032210		x	1	5/8"	1	0	1
047033100		x	1	5/8"	1	0	1
047033160		x	1	5/8"	1	1	0
047035330	287 Harvard Ave El Granada	x	1	1"	2.5	0	2.5
047035430		x	1	3/4"	1.5	0	1.5
047036420		x	1	5/8"	1	0	1
047036440		x	1	5/8"	1	0	1
047036470		x	1	5/8"	1	0	1
047036510	222 Harvard Ave El Granada	x	1	5/8"	1	1	0
047037080		x	1	5/8"	1	0	1
047037130		*Shares connection with APN 047-037-080					
047037460		x	1	5/8"	1	0	1

TABLE 7–3: PRINCETON STUDY AREA INSTALLED CCWD WATER SERVICE CONNECTIONS

APN	ADDRESS
047011090	171 Stanford Ave
047011180	151 Stanford Ave
047011270	169 Stanford Ave
047011280	
047013150	178 Cornell Ave
047013370	205 Yale Ave
047013380	207 Yale Ave
047014160	158 California Ave
047014230	178 California Ave
047014310	202 California Ave
047014320	154 California Ave
047015020	235 Yale Ave
047015080	
047015170	263 Yale Ave
047015320	218 Cornell Ave
047015400	241 Yale Ave
047015410	226000 Cornell St
047015420	230 Cornell Ave
047015430	121 California Ave
047015440	141 California Ave
047015460	267 Yale Ave
047016250	201 Airport St
047021130	401 Prospect Way
047021140	459 Prospect Way
047021190	130 California Ave
047021200	
047022090	371 Harvard Ave
047022130	323 Harvard Ave
047022250	131 California Ave
047022330	369 Harvard Ave
047023190	355 Princeton Ave
047023200	347 Princeton Ave
047023210	339 Princeton Ave
047023350	371 Princeton Ave
047023420	313 Princeton Ave
047023450	155 Broadway
047024030	
047024040	
047024090	Princeton Ave
047024240	100 Columbia Ave

TABLE 7–3: PRINCETON STUDY AREA INSTALLED CCWD WATER SERVICE CONNECTIONS

APN	ADDRESS
047024440	346 Princeton Ave
047025010	126 Broadway
047025040	114 Broadway
047031120	179 Harvard Ave
047031200	175 Harvard Ave
047031210	175 Airport St
047031230	183 Harvard Ave
047031290	110 Stanford Ave
047031300	103 Harvard Ave
047031310	117 Harvard Ave
047031340	
047031390	150 Yale Ave
047032060	111 Stanford Ave
047032110	179 West Point Ave
047032160	115 West Point Ave
047032350	199 West Point Ave
047033070	48 Harvard Ave
047033180	
047033230	155 Princeton Ave
047033290	162 West Point Ave
047033300	168 West Point Ave
047033350	147 Princeton Ave
047033370	110 Harvard Ave
047033380	123 Princeton Ave
047033450	190 Harvard Ave
047034060	190 Princeton Ave
047034080	111 Vassar
047034170	152 West Point Ave
047034190	102 Princeton Ave
047034200	123 Ocean Blvd
047034210	127 Ocean Blvd
047034220	131 Ocean Blvd
047034230	171 Ocean Blvd
047034240	175 Ocean Blvd
047034250	179 Ocean Blvd
047034260	183 Ocean Blvd
047034330	106 Princeton Ave
047034350	101 Vassar Ave
047035210	231 Harvard Ave
047035340	279 Harvard Ave

TABLE 7–3: PRINCETON STUDY AREA INSTALLED CCWD WATER SERVICE CONNECTIONS

APN	ADDRESS
047035350	175 Columbia Ave
047035360	258 Yale Ave
047035370	218 Yale Ave
047035380	207 Harvard Ave
047035390	230 Yale Ave
047036010	152 Harvard Ave
047036140	
047036220	249 Princeton Ave
047036490	147 Columbia Ave
047036510	222 Harvard Ave
047036520	279 Princeton Ave
047036560	201 Princeton Ave
047036570	203 Princeton Ave
047037050	246 Princeton Ave
047037060	
047037090	131 Columbia Ave
047037300	230 Princeton Ave
047037520	214 Princeton Ave

would need costly infrastructure improvements to upgrade from secondary to tertiary treatment. CCWD has shown interest in reaching an agreement with SAM to produce and distribute recycled water, but does not have a current recycled water master plan at this time.[4]

Opportunities and Constraints

System Deficiency of Potable Water

MWSD issued a Water System Master Plan in 2011 to address the current and future water demands in the district in order to create a baseline for the Capital Improvements Program. The required volume of storage for MWSD's existing water system included operational, emergency, and fire-fighting demand. The analysis resulted in a current storage deficit of over 333,000 gallons in 2010 and an anticipated deficit of over 575,000 gallons by 2020.

As described in the Midcoast LCP, new public water service connections in MWSD must be consistent with the MWSD Public Works Plan (Coastal Commission PWP No. 2-06-006). The most recent amendment to the Public Works Plan was approved by the Coastal Commission in December 2013. As described in the MWSD Public Works Plan, any increase in water supply or distribution capacity to provide additional service connections must be reviewed by the Coastal Commission. The Commission would then evaluate the proposed increase to see if it increased capacity in the water system is matched with adequate capacity of other area infrastructure, including but not limited to the need for adequate transportation levels of service on Highways 1 and 92. Based on information provided by Montara Water and Sanitary District, MWSD does not allow the trading of existing water service connections, nor does MWSD issue any new connections without a planning agency's approval. MWSD provides water and sewer service to all developments within its boundary that receives a building permit from San Mateo County.

In April 2011, CCWD adopted a Water Shortage Contingency Plan providing a response plan in the event of prolonged drought, water supply shortages, or emergency outages. During normal year comparison, CCWD's water supplies are adequate to meet projected demands. CCWD currently has an ongoing pipeline replacement program to replace sections of old and damaged pipelines throughout the Study Area with new ductile iron pipelines to reduce leaks and minimize losses throughout the system.[5]

Currently, CCWD has 209 unsold priority water service connections (5/8" size) and zero unsold non-priority water service connections. New non-priority developments must trade or purchase water service connections from existing owners, not from CCWD. New development that relies upon water from CCWD must be consistent with the Coastal Development Permit (CDP)

4 West Yost Associates. "Coastside County Water District 2010 Urban Water Management Plan Update." June 2011.

5 West Yost Associates, "2010 Urban Water Management Plan Update" (June 2011).

for the El Granada Pipeline Project (Coastal Commission CDP A-2-SMC-99-063; A-1-HMB-99-020). This requirement is also included in the Midcoast LCP. As described in the El Granada Pipeline Project CDP, future expansion of the water supply system to support growth in excess of the existing development level shall not be approved unless the regional transportation system, specifically Highways 1 and 92, is improved to provide adequate levels of service.

Emergency Storage Deficiency

The MWSD estimates a deficit in water supply by approximately 2027 and a water storage deficit of over 575,000 gallons by 2020.

Potential Water System Improvements

Despite the existing system deficiencies listed above, both water districts in the Study Area have considered several options to reduce existing water use through conservation and to increase water supply sources. These include, but are not limited to the following:

- Implementation of Best Management Practices (residential water surveys, plumbing retrofit, system water audits, etc.), high efficiency toilet rebate programs, lawn replacement programs and residential audits.
- Development of a Groundwater Management Plan to identify the yield that may be safely taken, as suggested in the Midcoast Groundwater Study, Phase III, conducted in 2010 for San Mateo County.[6]
- Seawater desalination as a long-term option for water supply; however, at this time the districts have concluded that water desalination would not be cost-effective.
- New well fields, well field improvements, creek diversion structures, pump stations, pipelines, and expansions to water treatment plants.

7.2 Storm Drain System

Stormwater Regulations

Storm drain service throughout the Study Area is provided by the County of San Mateo. Projects within the Study Area, including storm drain improvements, require hydrological review and hydraulic design approval from the County of San Mateo. As discussed in Section 4.2, Water Quality, any new development in the Study Area must comply with the County's Stormwater Management Plan and the Minimum Stormwater Pollution Prevention Requirements listed in Appendix 1.A of the Midcoast LCP.

Projects that create and/or replace one acre or more of impervious surface (pavement, concrete, buildings) and increase impervious surface over

6 Balance Hydrologics, Inc., "Midcoast Groundwater Study Phase III, San Mateo County, California," June 2010.

Storm drain pipe

pre-project conditions must incorporate measures to slow and reduce the amount of runoff to minimize disruption to the area's natural hydrology. Potential measures include maximizing infiltration, and designing improvements that control stormwater release.

The western portion of the Princeton Study Area drains to the ocean and the James V. Fitzgerald Area of Special Biological Significance (Fitzgerald ASBS). Located within this ASBS is the Fitzgerald Marine Reserve.[7] The County is currently working on a project to reduce pollution to the Fitzgerald ASBS.

Existing Storm Drain Infrastructure

The Princeton Study Area is currently served primarily by flow along street gutters, swales, and ditches, and by portions of Deer Creek, Denniston Creek, and San Vicente Creek. Typical of semi-rural areas, some of the existing roadside ditches cross under driveways with pipes. There is also an existing network of storm drain lines consisting of reinforced concrete pipe (RCP) located along Capistrano Road between Prospect Way and Highway 1. The County's Storm Drainage Maps indicate that flow generally travels from north to south along Airport Street and continues to flow along streets in the Princeton waterfront industrial area until it drains into the ocean.

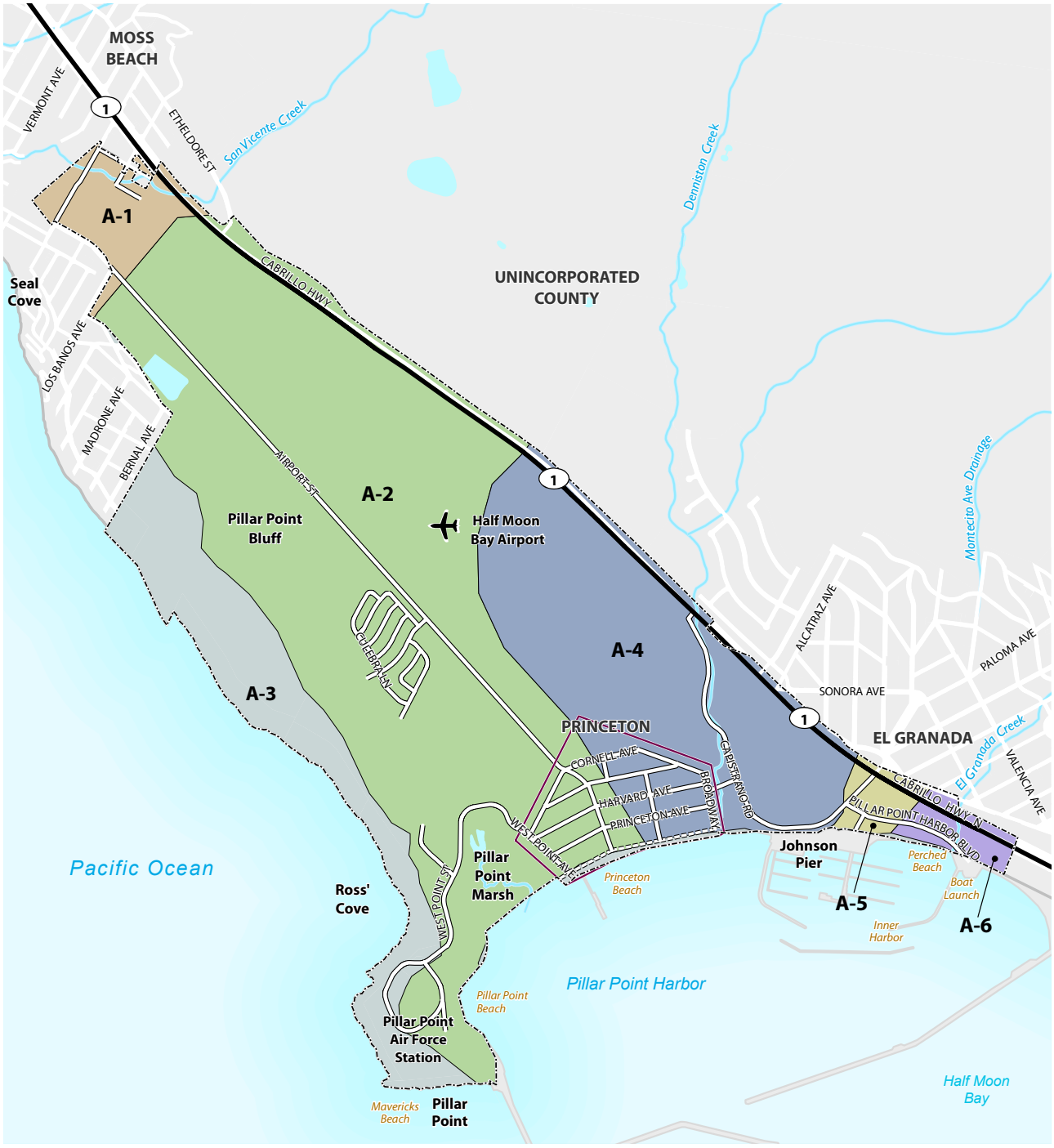
Existing Drainage Areas

To identify existing drainage areas and watersheds in the Princeton Study Area, this analysis utilized geographic information compiled by the County, along with supplemental field surveys. There are six existing drainage areas within the Princeton Study Area, shown on Figure 7-2:

- A-1 –Northern-most portion of Princeton that drains to San Vicente Creek and discharges to the ocean south of Lake Street.
- A-2 – The majority of the area along Airport Street that drains to Pillar Point Marsh and discharges to the Pillar Point Harbor south of West Point Avenue.
- A-3 – The area along the western portion of Princeton that drains directly to the ocean.
- A-4 – Southern portion of airport and the area along Capistrano Road that drains to Denniston Creek and discharges to the Pillar Point Harbor east of Broadway.
- A-5 – Western portion of Pillar Point Harbor parking lot area that discharges to the Pillar Point Harbor at Johnson Pier.
- A-6 – Eastern-most portion of Princeton that drains to Deer Creek and discharges to the Pillar Point Harbor east of Johnson Pier.

7 California Coastal Commission, "Nonpoint Source Watershed Assessment: James Fitzgerald Marine Reserve Critical Coastal Area" (December 2008).

Figure 7-2: Storm Drainage Areas



Stormwater Treatment

Potential stormwater pollutant sources include, but are not limited, to loading docks, food service areas, refuse areas, outdoor processes and storage facilities, vehicle cleaning areas also used for repair or maintenance, fuel dispensing, and equipment washing. New stormwater treatment measures would help to reduce pollutants in stormwater and/or reduce erosive flows.

The County currently manages ditches to optimize flow capacity (i.e., to allow the greatest amount of water to flow through). Allowing for increased vegetation growth and/or installing dams within ditches would trap trash and sediments. Ths would prevent pollutants from flowing downstream to the ocean and the Fitzgerald ASBS, or to Pillar Point Harbor, but may also lead to increased future maintenance costs associated with clearing sediment. Stormwater treatment areas are typically sized to accommodate a storm event of 0.2 inches of rainfall per hour, per the San Mateo Countywide Water Pollution Prevention Program. However, the areas that discharge to the Fitzgerald ASBS should use a storm event of 0.3 inches of rainfall per hour to size stormwater treatment areas.

System Capacity and Deficiencies

The current storm drain system lacks sufficient conveyance facilities (such as swales, ditches, gutters or pipes). The Study Area is currently served primarily by overland flow through streets and gutters. Settlement has created depressed areas in these gutters with no release point which creates a barrier to flow, resulting in lack of conveyance capacity.

The Study Area also lacks stormwater treatment facilities. New development must comply with a number of stormwater pollution prevention requirements, both for long-term reduction of stormwater pollutants leaving the site and short term control of storm water pollution during construction. Due to the age of many current developments in the Study Area, very few sites have implemented stormwater treatment on-site.

Localized ponding areas were observed and appear to be a result of where settlement has created depressed areas with no release point or where sediment deposition has created a barrier to flow. To increase the existing storm drain system capacity, general retrofits should include upsizing existing storm drain pipes, adding storm drain lines parallel to existing ditches, and reconstructing ditches to increase capacity.

7.3 Sanitary Sewer System

Sanitary sewer service is provided by Montara Water and Sanitary District (MWSD) and Granada Sanitary District (GSD) for transporting sewage flows, and Sewer Authority Mid-Coastside (SAM) for treating and disposing the sewage. SAM is a public agency providing wastewater treatment services to MWSD, GSD, and Half Moon Bay under a joint powers agreement. Each member agency of SAM is allotted maximum capacity rights for Peak Wet Weather Flow (PWWF), Average Dry Weather Flow (ADWF), Biochemical Oxygen Demand (BOD) and Suspended Solids. These allocations correspond to the sewer treatment capacity and the sewer transmission capacity.

The analysis of sewer system conditions and potential improvements relies on different sewage generation rates since both MWSD and GSD have jurisdiction over different portions of the Study Area, as shown in figure 7-3. Thus, the sewer system analysis will use MWSD rates for the sections in MWSD's jurisdiction and GSD rates for the sections in GSD's jurisdiction.

All three member agencies charge sewer fees based on Hundred Cubic Feet (HCF) of water used and the wastewater influent "strength factor." However, each agency's rates differ due to various factors such as incorporating the cost of infrastructure improvements.

Existing Sanitary Sewer Infrastructure

MWSD's existing sanitary sewer system consists of approximately 25 miles of sewer lines and 13 lift stations. GSD's existing sanitary sewer system includes approximately 33 miles of sewer line and approximately 1,500 feet of force main running along Highway 1.

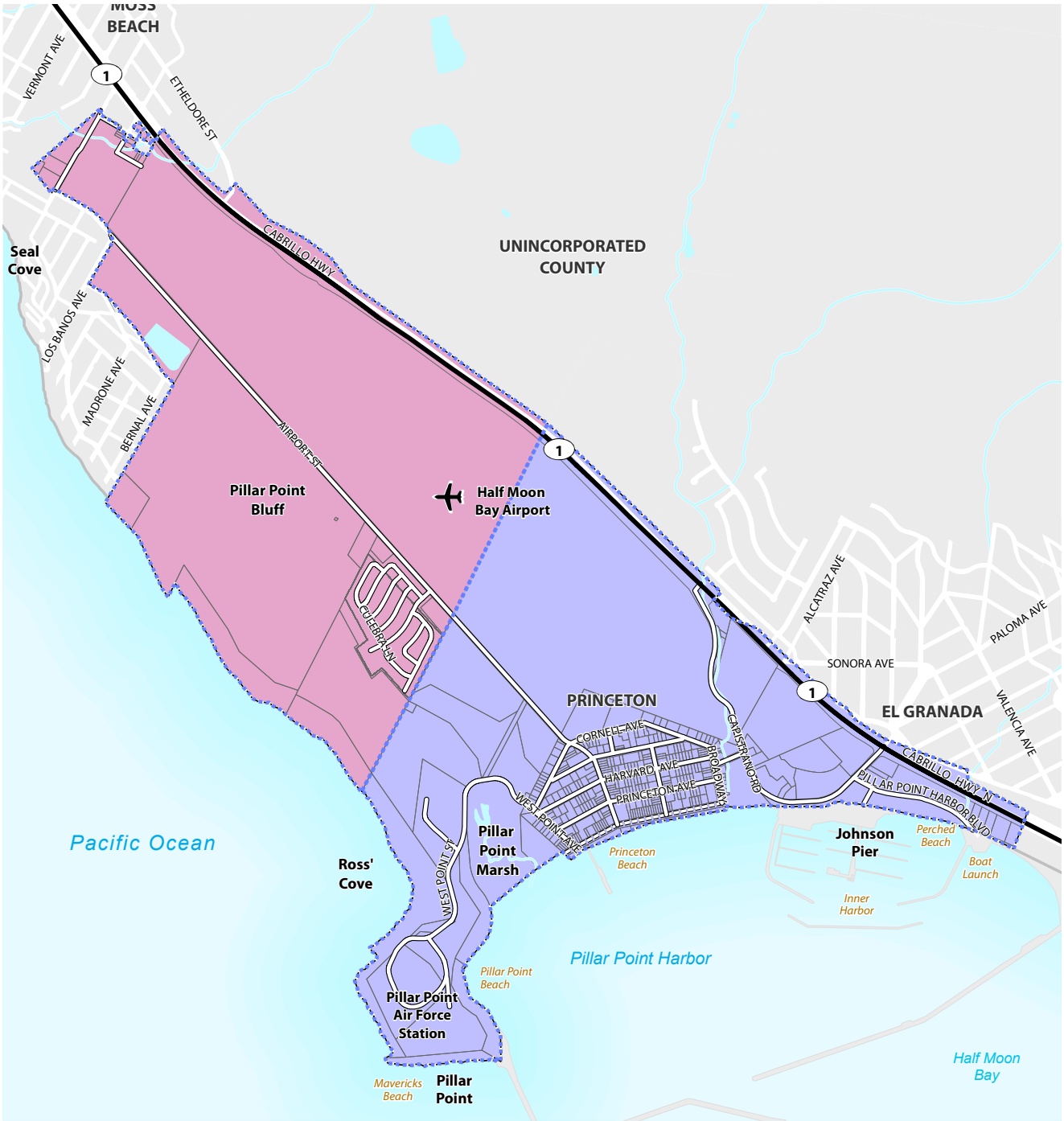
The SAM owns and operates an 8-mile stretch of transmission main, also known as the Intertie Pipeline System (IPS). Four main lift stations are used to connect to the three member agencies' sewer distribution systems of the SAM Treatment Plant. Approximately 1.8 miles of the IPS are gravity mains, while the remaining portion is force main.

Existing Sewage Treatment Capacity

Both MWSD and GSD have sewage treatment capacity reserved for priority land uses defined by the Coastal Act and Local Coastal Program. The reserved sewage treatment capacity amounts are included in Table 2.7 of the Midcoast LCP, which is reproduced here as Table 7-4. Based on original buildout estimates from 1980 (Table 1.1 of the Local Coastal Program), MWSD has approximately 400,000 gallons/day for Phase 1 (year 2000) and 580,090 to 794,080 gallons/day at full buildout. GSD has approximately 600,000 gallons/day for Phase 1 (year 2000) and 762,475 to 1,009,765 gallons/day for full buildout.

Storm drain lid (top); drainage culvert (middle); ponding area with collected trash (bottom)

Figure 7-3: Sanitary Sewer Providers



Sanitary Sewer Service Providers

- Granada Sanitary District
- Montara Sanitary and Water District
- Princeton Waterfront/Industrial Area
- Princeton Study Area Boundary

Source: BKF, 2013; San Mateo County Planning & Building Department, 2013; Dyett & Bhatia, 2013.

0 625 1,250 2,500 Feet

TABLE 7–4: SEWAGE TREATMENT CAPACITY TO BE RESERVED FOR PRIORITY LAND USES[1]

ALLOCATION OF RESERVED CAPACITY TO PRIORITY LAND USES	PHASE 1		BUILDOUT	
	UNITS	GALLONS/DAY	UNITS	GALLONS/DAY
Montara Sanitary District				
Coastal Act Priorities				
Marine-Related Industrial	-	-	-	-
Commercial Recreation	.56 acres	840	.82 acres	1,230
Public Recreation	282 persons	2,820	408 persons	4,080
Local Coastal Program Priorities				
Specific Developments on Designated Sites Containing Affordable Housing	148	32,708	365	66,430 to 94,900
Total Sewage Treatment Capacity for Priority Land Uses		**36,368**		**71,740 to 100,210**
Percent of Total Sewage Treatment Capacity for Priority Land Uses		9.1%		9.0 to 17.3%
Percent of Buildout Allowed by Phase		50 to 69%		100%
TOTAL SEWAGE CAPACITY		**400,000**		**580,090 to 794,080**
Granada Sanitary District				
Coastal Act Priorities				
Marine-Related Industrial	22.85 acres	45,700	29.29 acres	58,580
Commercial Recreation	33.15 acres	49,725	42.50 acres	63,750
Public Recreation	248 persons	2,480	318 persons	3,180
Essential Public Services[2]		3,800		5,125
Local Coastal Program Priorities				
Specific Developments on Designated Sites Containing Affordable Housing	104	22,984	104	18,928 to 27,040
Consolidated Lots in Miramar	55	12,155	704	12,240 to 18,200
Total Sewage Treatment Capacity for Priority Land Uses		**136,844**		**162,303 to 175,875**
Percent of Total Sewage Treatment Capacity for Priority Land Uses		22.8%		16.5 to 22.5%
Percent of Buildout Allowed by Phase		59 to 78%		100%
TOTAL SEWAGE CAPACITY		**600,000**		**762,475 to 1,009,765**

NOTES:

1 Capacity reserved for additional priority land use development. Does not include existing, developed priority land uses at time of LCP adoption.

2 Essential public services include the following uses: Emergency Facilities, Correctional Facilities, Transportation Facilities (public), Utility Facilities, Hospitals, Skilled Nursing Facilities, Intermediate Care Facilities, Libraries, Community Centers, Elementary and Secondary Schools, Institutional Day Care Facilities for Children (Day Care Centers as defined by State law), Adults and the Elderly, Institutional Full-Time Care Facilities for Children and Adults, and Institutional Shared Housing Facilities for the Elderly. These services must be provided by a public agency or private non-profit or government-funded (partially or fully) purveyor to be considered an essential public service. The reserve capacity allocated to these priority uses may not be shared by any associated, non-priority use and must be forfeited when the priority use is discontinued

Existing SAM Treatment Plant – Treatment Capacity

The capacity at the wastewater treatment plant is 4.0 MGD (millions of gallons per day) in Average Dry Weather Flow (ADWF). Currently, the ADWF is 1.7 MGD. Biochemical Oxygen Demand (BOD) and Suspended Solids are the parameters used to evaluate the treatment capacity required at the SAM treatment plant. For any development project proposed in the Study Area, the average daily flow would be based on the net increase produced by the site redevelopment and adjusted for BOD and suspended solids.

Opportunities and Challenges

System Capacity and Deficiencies

The current sanitary sewer system in the Study Area has conveyance limitations. SAM, MWSD, and GSD have an ongoing capacity management program to address hydraulic capacity issues within their district limits. The Intertie Pipeline System that conveys wastewater from both districts to the SAM Treatment Plant has had capacity issues during heavy rain periods in the past.

The MWSD sewer system is largely built-out and the existing pipe conditions should be assessed by the district. This will help identify locations causing capacity issues due to pipe diameter, sags, blockages, and roots. The district is continually assessing the current and future capacity requirements for its collection system; especially downstream portions near existing pump stations.

The GSD has performed a sanitary sewer monitoring program that identified inflow and infiltration at locations in the district's collection systemProposed mitigation measures for these locations include better mapping of the district's collection system, followed by field verification of the locations and elevations to identify capacity issues. GSD has a capital improvements program to replace older clay sewers (circa 1920) and sewers in known problem areas.

7.4 Dry Utility System

There are existing dry utilities including electric, gas, and telecommunication located within the Study Area. Service for these dry utilities is provided by different companies and the distribution systems consist of both overhead and underground utility lines.

Electric

The electrical power distribution system in the Study Area is owned and operated by Pacific Gas & Electric Company (PG&E). This electrical power grid consists of both overhead and underground electrical lines located predominantly in the public street rights-of-way and easements.

Gas

The natural gas distribution system in the Study Area is also owned and operated by PG&E and consists of a pipe network which lies predominantly beneath the traveled roadway in the public street rights-of-way.

Telecommunication

The telecommunication distribution system in the Study Area provides various services such as telephone service, cable TV, etc. The service providers include Comcast, AT&T, etc.

Opportunities and Challenges

System Capacity and Deficiencies

The existing dry utility system has adequate capacity for current demands. It is assumed that the current facilities are sufficient to serve the Study Area and that these private utility providers will upgrade their facilities as needed to accommodate all future developments.

7.5 Public Services and Facilities

The Study Area relies on San Mateo County or special districts to provide many of its utility and public safety services. Law enforcement is provided by the San Mateo County Sheriff. Fire safety is provided by the Coastside Fire Protection District. Schools are operated by the Cabrillo Unified School District, which operates two elementary schools in the area, Farallone View and La Granada. San Mateo County Library operates libraries in Pacifica and Half Moon Bay and Granada Sanitary District provides solid waste service through contract with Recology of the Coast.

Police, Fire and Emergency Response

Police

Services and Responsibilities

San Mateo County Sheriff's Office Patrol Bureau provides law enforcement in the Study Area. The Patrol Bureau comprises the Headquarters Patrol that serves Bayside communities, the Coastside Patrol that serves coastal communities, and the Sheriff's Motorcycle Unit. The Patrol Bureau provides general law enforcement services to unincorporated areas throughout the County in addition to full police services to various cities, including the City of Half Moon Bay.

The Coastside Patrol Bureau serves the midcoast communities of Montara, Moss Beach, El Granada, Princeton, the City of Half Moon Bay (contract), and the south coast communities of La Honda, Pescadero, Loma Mar, and unincorporated rural areas. The North Coast Substation, located at 500 California Street in Moss Beach is the largest law enforcement facility on the San Mateo County coast and is responsible for law enforcement activities for over 60 percent of San Mateo County. Figure 7-4 maps the location of the Moss Beach Substation.

The North Coast Substation is staffed with 24 deputy sheriffs and four Sergeants. There are eight sworn patrol officers assigned law enforcement duties on the north coast, which include the Study Area as well as the communities of Montara, Moss Beach, Miramar and El Granada, the Pillar Point Harbor, and other rural unincorporated areas. Current staffing for the North Coast Substation is summarized in Table 7-5.

Service Standards

The San Mateo County Sheriff's Office does not maintain service ratio and response time standards for the Midcoast. However, according to the Sheriff's Office, traffic is a major issue along the San Mateo County coast, which has limited thoroughfares and detour options. Future growth could further impact the ability of emergency personnel to respond in a safe and timely manner to emergencies or disasters.

Current Unmet Facility Needs

According to the Sheriff's Office, the North Coast Substation provides adequate facilities to maintain the existing level of service and can accommodate limited future growth.

TABLE 7–5: SAN MATEO COUNTY SHERIFF'S OFFICE (NORTH COAST SUBSTATION)

PERSONNEL	NUMBER
Sworn Officers	
Deputy Sheriffs	24
Sergeants	4
Investigation Officers	1
Non-Sworn Support Personnel	
Administration	1
Support Services	2
Community Service Officers	1
TOTAL PAID EMPLOYEES	**33**

Source: San Mateo County Sheriff's Office, 2013.

Figure 7-4: Public Safety and Services

Source: San Mateo County Planning & Building Department, 2013; Dyett & Bhatia, 2013.

Fire and Emergency Response

The Coastside Fire Protection District (CFPD) provides fire protection services in the Study Area, as well as for the City of Half Moon Bay and communities of Montara, Moss Beach, El Granada, and Miramar, and surrounding unincorporated areas. CFPD first came into existence in 1879 as the Half Moon Bay Volunteer Fire Department, commonly known as "Hose Company No. 1." In October 2007, the Half Moon Bay Fire Protection District and Montara Fire Protection District were consolidated to form CFPD, which protects approximately 50 square miles along the San Mateo County coast and a population of approximately 30,000. CFPD is staffed with 20 paid firefighter positions and 23 volunteer firefighter positions. All stations are staffed with one fire captain and two fire apparatus engineers, one of which is a paramedic to provide advanced life support services. Firefighters work a three-day, 72-hour shift. Table 7-6 summarizes paid personnel at the district

CFPD operates three fire stations: Station 40 located in downtown Half Moon Bay, Station 41 in El Granada and Station 44 in Moss Beach. CFPD's district headquarters are located at 1191 Main Street in Half Moon Bay. Each station is equipped with two fire engines (at Station 41, one of fire engines is a ladder truck). In addition to traditional fire service, CFPD also provides advanced life support, cliff rescue, water rescue, confined space rescue, and vehicle and residential lock-out assistance. Figure 7-4 maps the location of fire stations near the Study Area.

Service Standards

CFPD maintains minimum or target response time standards for fire and emergency service calls. For urban areas, the standard is seven minutes, for rural areas it is 12 minutes, and for remote areas it is 22 minutes. It is unclear if CFPD is currently meeting response time standards, as data on average response time for fire and emergency calls were not available.

TABLE 7–6: COASTSIDE FIRE PROTECTION DISTRICT PERSONNEL

PERSONNEL	NUMBER
Fire Chief	1
Assistant Fire Chief	1
Battalion Chiefs	3
Deputy Fire Marshals	2
Training Division Captain	1
Administrative Support	2
Mechanic	1
Fire Captains	3
Fire Apparatus Engineers	6
TOTAL PAID EMPLOYEES	**20**

Source: Coastside Fire Protection District, 2013.

ISO RATING

Fire districts are rated by the ISO Public Protection Classification (PPC) program. The program uses the Fire Suppression Rating Schedule (FSRS), which comprises a long list of elements a community may use to fight fires effectively. Each element is given a point score. Using the point scores and various formulas, ISO derives a PPC rating. On a scale of 1 (exemplary fire protection) to 10 (not meeting minimum criteria) CFPD scored a 4.

Current Unmet Facility Needs

According to CFPD, existing facilities are adequate to maintain a sufficient level of service for future population growth within and near the Study Area, provided that upgrades are completed at the El Granada and Point Montara stations. Both stations have been slated for replacement due to age and operational obsolescence. Existing stations can only support one three-person crew with inadequate fleet storage space. The proposed new stations will be large enough to support two, three-person companies in order to address potential emergency service impacts over the next twenty-five years.

Schools

Existing Facilities and Planned Improvements

Cabrillo Unified School District (CUSD) provides public education for kindergarten through twelfth grade to Study Area residents. The district boundary encompasses 135 square miles and extends from Montara in the north to San Gregorio in the south. CUSD operates four elementary schools (two that serve the Study Area), one intermediate school, one high school, a continuation school, and an adult education program. Altogether, more than 3,300 students attend public schools in the District. Public schools, enrollment, and capacity for each school are detailed in Table 7-7; Figure 7-4 shows Wilkinson School in the El Granada community—the closest school to the Study Area.

According to CUSD, the Adult Education program is currently being shifted to community colleges, and will no longer be operated by the school district in the 2015-16 school year.

Three community colleges make up the San Mateo County College District: Cañada College in Redwood City, College of San Mateo in San Mateo, and Skyline College in San Bruno. Cañada College currently serves approximately 6,300 students. College of San Mateo, located 14 miles east of the Study Area in the San Mateo hills, currently serves approximately 10,000 day, evening, and weekend students. Skyline College, located at 3300 College Drive in San Bruno, 13 miles north of the Study Area, currently serves more than 10,000 students.

Planned Improvements

As shown in Table 7-7, CUSD schools have adequate classroom space to serve students. However, school facilities require modernization. In 2013 WLC Architects, Inc. assessed each of the district's sites. WLC Architects Inc. estimated that approximately $91 million is needed to modernize the district's schools. The majority (68 percent) of the need was for elementary schools, which were found to be in need of comprehensive modernizations.[8]

Parks

Twelve park and recreation facilities are located in the larger Midcoast area, which extends from Montara to Miramar. Of these, three regional parks are located within the Study Area: James V. Fitzgerald Marine Reserve, Pillar Point Marsh, and Pillar Point Bluff. There are currently no parks within the Study Area that provide active recreational opportunities such as ball fields and playgrounds. Parks and open space are presented in more detail in Chapter 2.

Libraries and Community Centers

Libraries

There are no libraries located in the Study Area; however, San Mateo County Library operates 12 library branches throughout San Mateo County, including one in Half Moon Bay and two in Pacifica. The Half Moon Bay Library serves

8 Cabrillo Unified School District, 2013 Facilities Master Plan, accessed at http://www.cabrillousd-masterplan.com

TABLE 7–7: EXISTING SCHOOLS IN THE CABRILLO UNIFIED SCHOOL DISTRICT

SCHOOL	SERVES STUDY AREA?	ENROLLMENT FROM STUDY AREA 2012-13	TOTAL ENROLLMENT 2012-13	TOTAL CAPACITY	PERCENT UNDERUTILIZED
Elementary Schools (K-5)					
Alvin Hatch Elementary School	No	1	606	650	-7%
Farallone View Elementary School	Yes	3	378	500	-24%
El Granada Elementary School	Yes	0	512	580	-12%
Kings Mountain Elementary School	No	0	75	75	0%
Intermediate Schools (6-8)					
Cunha Intermediate School	Yes	4	733	900	-19%
High Schools					
Half Moon Bay High School (9-12)	Yes	4	965	1,200	-20%
Special Programs					
Pilarcitos High School (Continuation)	No	0	40	40	0%
Adult Education	No		25	50	-50%
TOTAL		**12**	**3,334**	**3,995**	**-17%**

Source: Cabrillo Unified School District, 2013; California Department of Education, 2013

residents of the City of Half Moon Bay and the Study Area, as well as other surrounding unincorporated areas. Since the library's opening more than 30 years ago, the population served has grown from 4,320 to over 29,000, with 42 percent living in the City of Half Moon Bay and 58 percent living in the surrounding unincorporated areas.

The San Mateo County Library offers an array of library services including books, periodicals, newspapers, and information in multiple languages, as well as access to computers and the Internet, online databases, music, videos, business resources, and educational research. The website or "eBranch" provides access to a wealth of information and is accessible in each branch library or from a resident's personal computer at home, work, or school.

The San Mateo County Library also offers a broad range of programs for children, teens, and adults, including author readings, lectures, films, exhibits, dance and musical performances. Outreach services include a book mobile service that visits the Pillar Ridge Manufactured Home community within the Princeton Study Area every other Wednesday afternoon, book club readings provided to incarcerated youth and programs offered in settings such as schools, low-income clinics and shelters. Educational programming includes homework help assistance, computer training, and literacy services for children, families and adults.[9]

During the 2012-13 Fiscal Year more than 180,000 people visited the Half Moon Bay Library and more than 25,000 participated in library sponsored programs.

Deficiencies and Planned Improvements

According to San Mateo County Library staff, the Half Moon Bay Library does not currently meet service needs and is not poised to respond to the Coastside's future growth. Therefore, the Library, in partnership with the County, the City of Half Moon Bay, and Friends of Half Moon Bay Library, has been working on a proposed new facility to be located at the current site.

Community Centers

Currently, there are no community centers in the Study Area. The nearest community center, the Ted Adcock Community Center, is located at 535 Kelly Avenue in Half Moon Bay. A variety of recreation and senior programs operate out of the community center. Additionally, the community center provides meeting and assembly space for groups ranging in size from 20 to 428.

Facilities located in the Study Area that provide meeting space include the Half Moon Bay Yacht Club, the Pillar Ridge Clubhouse, and the Oceano Hotel and Spa. Facilities at the Half Moon Bay Yacht Club include a 1,600 square foot multi-use room. The Pillar Ridge Clubhouse contains a large meeting hall, billiards, and exercise room in a 5,500 square foot community building; however, is limited to use by residents of the Pillar Ridge Manufactured Home

9 San Mateo County Library, 2013.

community and their guests.. The Oceano Hotel has 8,000 square feet of meeting and event space that can accommodate up to 350 people.

Medical Facilties

Seton Coastside Hospital is located just north of the Princeton Planning Area, on Marine Bouelvard in Moss Beach, just north of the Princeton Planning Area (see Figure 7-4). The hospital, founded in 1970, was integrated with the Seton Medical Center in the 1990s. The hospital provides medical and nursing care, with 116 inpatient beds and the only 24-hour standby Emergency Department between Daly City and Santa Cruz. The hospital specializes in physical, occupational and speech therapies, radiology/mammography, and laboratory services.

Airports

The Half Moon Bay Airport is located adjacent to Highway 1 and covers an area of 325 acres within the Study Area. The airport was constructed in 1942 by the California State Highway Department for the US Army. In 1947, following the end of World War II, San Mateo County acquired the airport, which now serves as an important business, transportation and emergency service asset to the community.

The Half Moon Bay Airport is home to approximately 80 aircraft and several aviation related businesses. The airport provides an important source of education and training for pilots, mechanics, and airport employees. The airport also provides a variety of emergency service and response functions including air-ambulance and medevac flights, law enforcement and homeland security patrols, and Coast Guard sea-rescue operations, and serves as a disaster relief staging site for airlifting emergency supplies in the event that roads are closed during a disaster or emergency.

The 3-0 (Three-Zero) Café is located in the terminal building adjacent to transient parking and is open for breakfast and lunch. Additionally, the Airport leases approximately 140 acres for dry farming and 10 acres for flower farming, located on the northeast edge of the airport property in the Non-Aviation Related Development Area. Agricultural leases are month to month. According to Airport staff, the Federal Aviation Administration is unlikely to allow future on-airport agricultural leases.

In 2012, total annual operations were 46,832 flights, which are expected to increase to 59,500 annual flights by 2032. Based on existing and projected capacity and demand, peak aircraft parking and runways design capacity are sufficient. An update to the airport land use compatibility plan (ALUCP) for the Half Moon Bay Airport is currently underway. See Section 2.3 for further discussion of the Half Moon Bay ALUCP and land use compatibility.

Waste Management

In 1989, Assembly Bill 939, known as the Integrated Waste Management Act, was passed in response to an increase in waste stream and the decrease in landfill capacity. AB 939 required jurisdictions to meet solid waste diversion goals of 25 percent by 1995 and 50 percent by 2000. In 2009, AB 737 amended the Integrated Waste Management Act to require CalRecycle to adopt programs to increase statewide diversion to 75 percent by 2020. AB 737 also addresses recycling in the largely underserved commercial sector.

The Granada Sanitary District (GSD) provides water, wastewater, and solid waste services to customers in El Granada, Princeton, Miramar, and the northern portion of Half Moon Bay. GSD currently contracts with Recology of the Coast for solid waste services; consequently, Recology is directly responsible for waste stream diversion compliance within the Study Area.

Recology of the Coast provides recycling, composting, and garbage services to single-family and multi-family homes as well as commercial customers in El Granada, Pillar Point, Princeton, Miramar, Montara, Moss Beach, and Pacifica. Recology distributes split containers for residential trash and recycling, and green waste containers for residential green waste and compostable materials. Recology also actively encourages commercial recycling and provides different sizes and types of carts, bins and debris boxes to commercial customers. Trash and recycling are collected every week, and green waste is collected every other week.

Opportunities and Challenges

Police, Fire, and Emergency Services

While there are no police or fire stations in the Study Area, the largest police facility on the coastside is located just to the north in Moss Beach, and there are fire stations in both Moss Beach and Montara. However, traffic and the lack of alternative travel routes are challenges for emergency response. In addition, the fire stations serving the Study Area are both slated for replacement, which will improve their abaility to support adequate personnel and equipment.

Schools, Parks, Libraries and Community Centers

The Study Area does not contain a school, an active-use park, a library, or a community center. While these are notable deficiencies, the Study Area is primarily an industrial and commercial area with a relatively small number of residents to serve. The Princeton Plan Updates may identify sites and/or strategies for community park space or a community center. Children in the Study Area may attend nearby schools, which are in need of modernization. The nearest library, in Half Moon Bay, is not adequate to serve the surrounding population, and plans are underway to replace the facility on its current site.

Other Facilities

The Half Moon Bay Airport is located in the Study Area, providing benefits to the local economy as well as emergency response and law enforcement functions. The Midcoast's only medical facility, the Seton Coastside Hospital, is located nearby in Moss Beach. These facilities are both assets to the Study Area.

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