APPENDIX C - TECHNICAL BACKGROUND REPORT

C-1: Introduction

1. Introduction

1.1 Introduction

The Hermosa Beach General Plan is a required document by the State of California. General plans provide community members and the City with a comprehensive strategy for changes in the built and social environment within the City's jurisdiction. The General Plan defines the community vision and goals, policies, objectives and implementation actions which provide guidance for a regulatory framework to advance the community's vision.

The Technical Background Report describes the existing settings in the City. The TBR provides a snapshot of conditions in the City, as a basis for assessing and measuring change proposed in the Hermosa Beach General Plan update. The Report is organized into the following sections:

1. Aesthetics
2. Agricultural Resources
3. Air Quality
4. Climate Change Mitigation and Adaptation
5. Biological Resources
6. Cultural Resources
7. Energy
8. Geology and Soils
9. Hazards and Hazardous Material
10. Hydrology and Water Quality
11. Land Use and Planning
12. Mineral Resources
13. Population and Housing
14. Noise (To be completed at a later date)
15. Public Services and Utilities, and Recreation
16. Transportation

The Hermosa Beach General Plan must include the subject matter required for the following seven state-required elements as well as the Coastal Land Use Plan, since a portion of the City is located within the Coastal Zone.

1. Land Use
2. Circulation
3. Housing
4. Conservation
5. Open Space
6. Noise
7. Safety
8. Coastal Land Use Plan

The City's current General Plan was last comprehensively updated in 1979, with the Coastal Land Use Plan being certified in 1980. The City's Housing Element was updated in 2013 and has been certified by the State Department of Housing and Community Development through 2021. It is the only element that must be updated in accordance with a schedule specified by State law. Otherwise, the data, analysis, goals, and policies in the current General Plan and have become outdated and ineffective in guiding development in the City.

1.2 Purpose of the Technical Background Report

The Technical Background Report provides a current snapshot of the existing conditions in the City by outlining the environmental setting, of the City and will be useful for the Hermosa Beach General Plan's Program Environmental Impact Report. An update of the existing conditions will allow the community and decision makers to identify changes the City has experienced since 1979. This comprehensive set of qualitative and quantitative facts, along with growth projections, community

vision and goals, will also help inform policy and the manner in which the Hermosa Beach General Plan will be organized.

1.3 Planning Area

The "Planning Area" for the Technical Background Report and Hermosa Beach General Plan contains all land within Hermosa Beach City boundaries. This land covers 979 acres of property that is privately and publically owned, and will be assessed in the Technical Background Report.

FIGURE 1.1: CITY OF HERMOSA BEACH PLANNING AREA

1.4 Organization of the Technical Background Report

Aesthetics: Defines the visual character of the City, view sheds, and aesthetics of the City as a resource.

Agricultural Resources: Identifies any agricultural property, or agricultural related land uses within the City.

Air Quality: Describes existing pollutants, odors, and toxic air contaminants in the atmosphere surrounding Hermosa Beach.

Climate Change Mitigation and Adaptation: Identifies and quantifies existing sources of greenhouse gas emissions in the City and identifies potential.

Biological Resources: Identifies plants, animals, or natural community habitats in the City, and identifies if any species is considered endangered, sensitive, or threatened.

Historic Resources: Provides data and location of culturally significant, or potentially culturally significant resources in the City.

Energy: Summarizes the energy sources used within Hermosa Beach including natural gas, electricity, and alternative energy sources.

Geology and Soils: Addresses existing geological conditions that include faults, landslides, liquefaction, and expansive soil.

Hazards and Hazardous Material: Identifies current environmental hazards in the City. Such hazards include any use, transportation, or disposal of hazardous materials, superfund sites, and exposures to toxic or hazardous materials.

Hydrology and Water Quality: Provides an overview of water supply, demand, and quality of water sources, and surface water in the City.

Land Use and Planning: Describes existing land uses in the City, including planned and built development, types of land uses, and associated plans, programs, and regulations that influence land use.

Mineral Resources: Identifies and describes any existing of mineral resources, including mining or use of mineral resources in the City.

Population and Housing: Provides an overview of current population, demographics, and housing statistics. This section includes a snapshot of current housing availability and potential gaps in housing stock.

Public Services, Utilities, and Recreation: Outlines the existing availability of public services and utilities in the City. Summarizes the recreational resources in the City.

Transportation: Describes physical and operational conditions of the circulation network within and connecting Hermosa Beach with the region, including roadways and circulation of people across all modes of transportation.

1.5 Chapter Organization

Each chapter is organized by and includes the following information:

- **Introduction:** Provides an overview of the section.
- **Environmental Setting:** Quantitative and qualitative data outlining the existing environment for each topic.
- **Regulatory Framework:** Any local, regional, state, or federal regulation that would impact each topic, along with a description of each law, ordinance, or regulation.

C-2: Aesthetics

2. Aesthetics

2.1 Introduction

This section identifies the existing aesthetic and visual resources in Hermosa Beach, the factors that affect visual resources, the regulations in place to protect visual resources, and key issues within the planning area to be addressed through the General Plan Update.

2.2 Environmental Setting

Scenic Vistas

The term "scenic vistas" is difficult to define because it is subjective and depends on individual preferences rather than objective data, and guidance for identifying scenic vistas is not considered within the California Environmental Quality Act (CEQA) or the California Coastal Act. As in many cities, Hermosa Beach does not currently have an adopted definition for scenic vistas but has mapped local scenic views from public properties or rights-of-way in the Coastal Land Use Plan (1981) (see Figure 2-2). In general, scenic vistas can be defined as viewpoints that provide expansive views of a highly valued landscape for the benefit of the general public.

View of the Pacific Ocean from Gould Avenue between Pacific Coast Highway and Ardmore Avenue

South-facing view of the Pacific Ocean and the Palos Verdes Peninsula from The Strand.

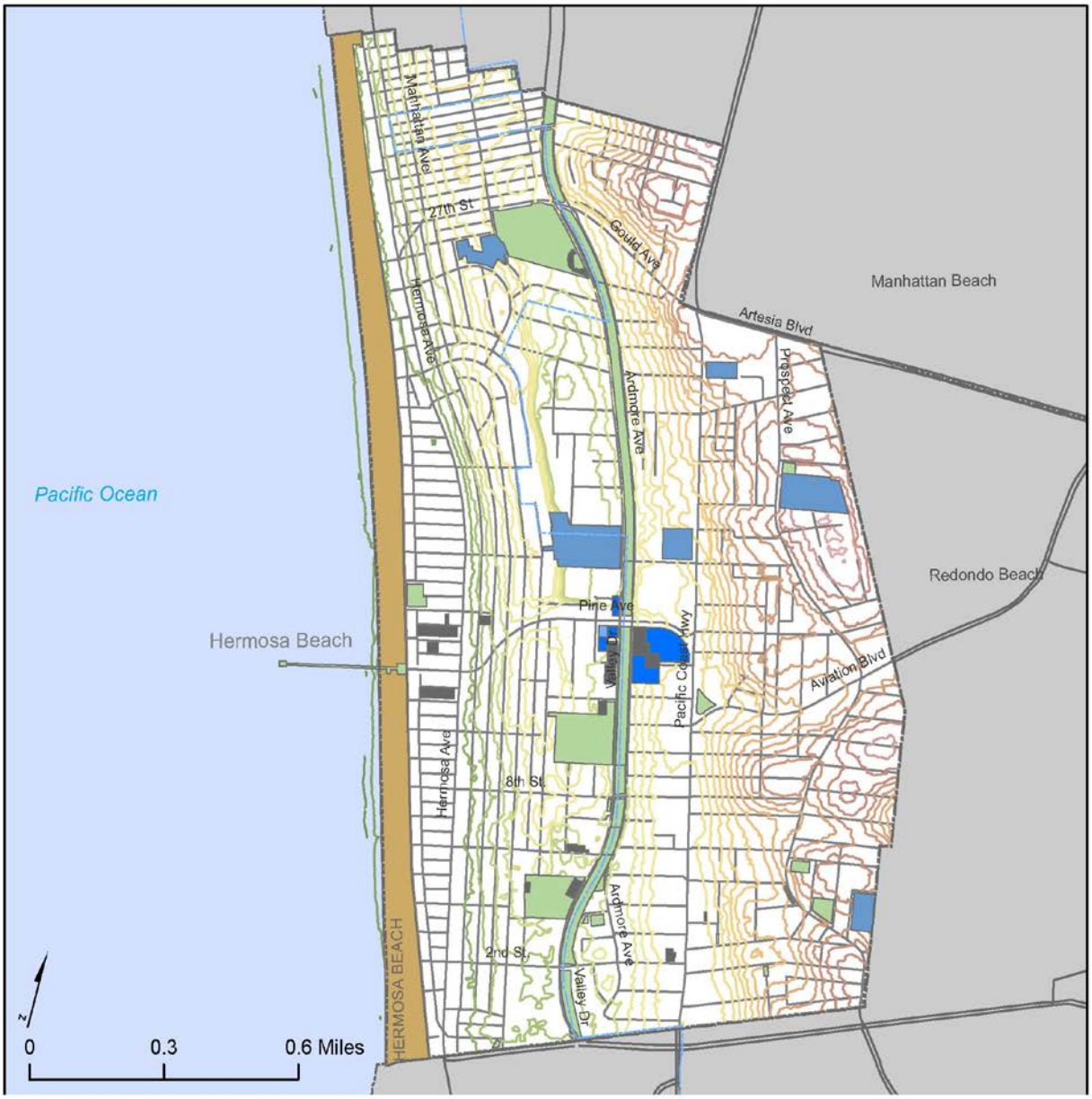
Scenic vistas within the planning area predominantly focus on the Pacific Ocean. On a clear day, views of the Palos Verdes Peninsula to the south, the Santa Monica Bay and Santa Monica Mountains to the north, and the Los Angeles Basin and San Gabriel Mountains to the east and inland can also be seen from various locations in Hermosa Beach. The most expansive and uninterrupted scenic vistas in Hermosa Beach are viewed from the beach or The Strand. Other scenic vistas can be best viewed from higher elevations within the planning area along Loma Drive, Pacific Coast Highway, and Prospect Avenue and other locations. While various locations throughout the planning area currently have scenic vistas, power lines, telephone poles, streetlights, and traffic signals obstruct these scenic views.

Natural topography rising from sea level to a maximum elevation of 244 feet on the eastern edge of the planning area (see Figure 2-1), orientation of the street network generally running parallel to the shoreline, and existing building heights of 35 feet or less currently maximize public access to these vistas.

The combination of building height restrictions and natural topography reaching an elevation of 140 feet within the Coastal Zone, and up to 244 feet along the eastern boundary of the planning area, provides an open westward view corridor toward the Pacific Ocean. The viewshed and primary viewpoints are concentrated at higher elevations and along east-west streets or alley corridors, as shown in Figure 2-2.

View of the Pacific Ocean with overhead power lines from Longfellow Avenue.

FIGURE 2.1: CONTOURS



Legend

City Boundary
HB_streets
Coastal Zone Boundary
Parking Lots

Public Space
Beach
Public Facility
Fire/Police
Park
School

Elevation in feet
2, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 244

City of Hermosa Beach General Plan Update 2035

Pepared by Raimi + Associates for the City of Hermosa Beach
Source: City of Hermosa Beach, Los Angeles County, November 2013

FIGURE 2.2: VIEWPOINTS – COASTAL LAND USE PLAN, 1981

Legend

- Viewpoints
- City Boundary

Public Space

- Beach
- Park
- School

City of Hermosa Beach General Plan Update 2035

Source: City of Hermosa Beach, Los Angeles County, November 2013

Scenic Resources

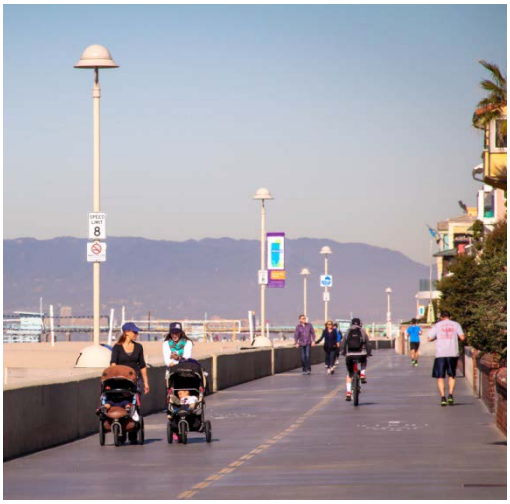
Scenic resources are natural or man-made features that are visually pleasing and contribute to the definition of a community or region. Scenic resources can include trees and landscaping, rock outcroppings, historic buildings, monuments, and public art. Scenic resources within the planning area include public parks and open space, such as the Hermosa Valley Greenbelt, the Beach/Strand, and the 20 City parks located throughout the planning area (City of Hermosa Beach 2014b). Predominant structures or monuments, such as the Hermosa Pier, or historic landmarks such as the Bijou Theatre, are also scenic resources that represent aspects of the city's history.

Landscaping, outdoor eating spaces, and streetscape features add to the pedestrian-oriented character of Pier Plaza in the Downtown District.

Visual Character

Visual character is descriptive and not evaluative, which means that the development traits described are neither good nor bad in and of themselves. Hermosa Beach has an eclectic and small beach-town character with a mix of architectural styles and scales within residential and commercial neighborhoods. The visual character of Hermosa Beach can be organized and described by several neighborhoods and commercial corridors, including:

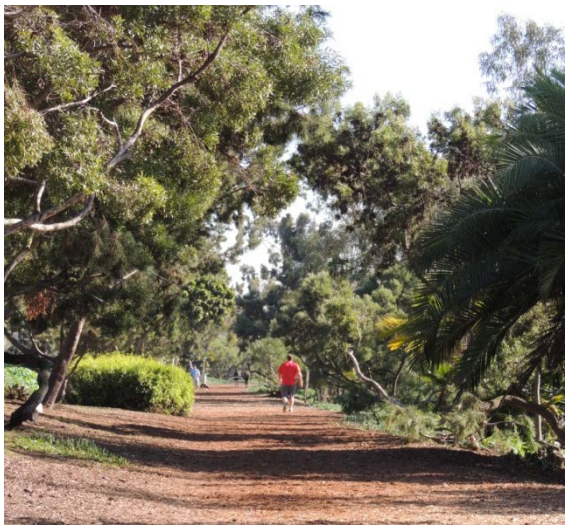
Downtown District—The Downtown District runs from Valley Drive to The Strand along Pier Avenue and along Hermosa Avenue between 8th and 14th Streets. It is predominantly characterized by commercial and visitor-serving uses, with some residential development. Street-oriented storefronts, trees and landscape spaces, recent streetscape improvements, and varying architectural styles that contribute to the visual character of this area.



North-facing view from The Strand.

The Strand (Marvin Braude Bike Trail, California Coastal Trail)—This paved oceanfront pedestrian and bike path runs the length of the planning area, from Herondo Avenue to 35th Street, and beyond, being a portion of the 22 mile trail running from Pacific Palisades to Torrance. To the west of the path, sandy beaches and the shoreline dominate the scenic views, while the frontages east of The Strand area are primarily characterized by one-, two-, and three-story residences, with nodes of commercial activity. These residences are designed and oriented to take advantage of the sweeping ocean views.

Hermosa Valley Greenbelt (Veterans Parkway)—The original Santa Fe Railway right-of-way was converted to a recreational use trail in the 1980s (Hermosa Beach Historical Society 2009). Today, this trail is known as the Greenbelt. It is one of the community's most highly used public spaces, second only to the beach and Strand. The landscaped trail runs parallel to Ardmore Avenue and Valley Drive, surrounded by trees, landscaping, and greenery, and continues into Manhattan Beach.



Lush landscaping and the jogging trail are the primary visual characteristics of the Hermosa Valley Greenbelt.

Light and Glare

Hermosa Beach contains various existing sources of light and glare, such as streetlights along roadways and in parking lots, illuminated signs, lighted recreation facilities, landscape lighting, and light emitted from the interiors of residential and nonresidential buildings. Buildings and structures with glass, metal, and polished exterior or roofing materials contribute to localized sources of glare, which can detract from or interfere with public enjoyment of scenic vistas.

Shade or Shadow

Prolonged periods of shade and shadowing can negatively affect the character of certain land uses. Shadow-sensitive uses generally include routinely usable outdoor spaces associated with residential, recreational, or institutional land uses; commercial uses, such as pedestrian-oriented outdoor spaces or restaurants with outdoor seating areas; nurseries; and existing solar collectors/panels.

Shadows are cast in a clockwise direction from west-northwest to east-northeast from approximately 7:00 a.m. to 4:00 p.m. depending on the time of the year. The spring equinox is March 20, summer solstice is June 21, autumn equinox is September 22, and winter solstice is December 21. The shortest shadows are cast during the summer solstice and grow increasingly longer until the winter solstice when they reach their maximum coverage lengths.

As most buildings in the planning area are less than 35 feet tall, the most common sources of prolonged shadows are from natural topographic features and, on a smaller scale, trees. Examples include shadows from the ridgeline along Loma Drive upon the Valley Drive or Greenbelt areas, or landscape features and trees.

2.3 Regulatory Setting

The following federal, state, and local plans, policies, regulations, and laws pertain to aesthetics in the planning area. They provide the regulatory framework for addressing all aspects of aesthetics and visual resources in Hermosa Beach.

Federal Plans, Policies, Regulations, and Laws

No federal plans, policies, regulations, or laws related to visual resources apply to the planning area.

State Plans, Policies, Regulations, and Laws

Caltrans Scenic Highway Program

The California Department of Transportation (Caltrans) Scenic Highway Program protects and enhances the natural scenic beauty of California's highways and corridors through special conservation treatment. Caltrans defines a scenic highway as any freeway, highway, road, or other public right-of-way that traverses an area of exceptional scenic quality. Caltrans designates a scenic highway by evaluating how much of the natural landscape a traveler sees and the extent to which visual intrusions degrade the scenic corridor. Although some portions of Pacific Coast Highway (State Route 1) in Los Angeles County are designated as a State Scenic Highway (Caltrans 2011), the portion of State Route 1 passing through the planning area is not designated.

California Coastal Act of 1976

The California Coastal Act of 1976 (Coastal Act) and the California Coastal Commission, the state's landmark coastal protection law and planning agency, were established by voter initiative in 1972 to plan for and regulate new development, and to protect public access to and along the shoreline. The Coastal Act considers scenic and visual qualities of coastal areas as a protected resource of public importance (California Coastal Commission 2013).

To ensure maximum public access to the coast and public recreation areas is provided, the Coastal Act directs each local government lying within the Coastal Zone to prepare a Local Coastal Program (LCP) consistent with Section 30501 of the Coastal Act, and in consultation with the Coastal Commission and with public participation.

The status of Hermosa Beach's LCP is described in the next section.

Until an LCP has been adopted by the local jurisdiction and certified compliant with the Coastal Act, the Coastal Commission retains permitting authority within the local jurisdiction. A coastal development permit (CDP) is required for development in the Coastal Zone that results in changes to the density or intensity of the use of land, changes in water use, and impacts to coastal access.

California Planning and Zoning Requirements

California Government Code Section 65302 establishes the authority for and scope of general plans prepared by local jurisdictions in California. This includes requirements for local jurisdictions to include specific elements and address certain issues associated with local land use decisions within a general plan. Aesthetics and scenic resources are typically addressed in the land use and open space elements of a general plan to ensure adequate protection or enhancement of visual resources in the context of development patterns and intensities and the natural qualities of a community.

Regional and Local Plans, Policies, Regulations, and Laws

City of Hermosa Beach General Plan

The adopted General Plan does not have policies on aesthetics or scenic qualities in Hermosa Beach.

City of Hermosa Beach Local Coastal Program (LCP)

The LCP consists of the Coastal Land Use Plan (General Plan-level policies and maps) and a Local Implementation Program (coastal zoning code, zoning maps, and implementing ordinances). The Hermosa Beach Coastal Land Use Plan (CLUP) component, originally adopted by the City and certified by the California Coastal Commission in 1981, addresses aesthetic considerations of development within the Coastal Zone. CLUP goals and objectives associated with coastal recreational access and development and design include protecting and enhancing coastal views and key viewpoints. The Local Implementation Program of the LCP has not yet been certified. Therefore, the City does not have a Local Coastal Program and the Coastal Commission retains authority to review and issue coastal development permits (CDPs) for development within the Coastal Zone. This General Plan update is intended to result in an adopted LCP.

City of Hermosa Beach Zoning Ordinance

The City of Hermosa Beach Zoning Ordinance (Title 17 Hermosa Beach Municipal Code) addresses the aesthetic considerations of development. The Zoning Ordinance sets development standards for parking, building heights, setbacks, density, lot coverage, open space requirements, and signs.

Other City Plans and Projects

City Council Strategic Plan

The City of Hermosa Beach City Council's 2014–2019 Strategic Plan (2014c) identifies the 2029 vision for Hermosa Beach and the actions the City will take to achieve or protect that vision. The Hermosa Beach Vision 2029 includes six principles, including the beach life style, eclectic downtown, and vibrant entry corridors.

Community Dialogue

The City of Hermosa Beach conducted a community dialogue (2014d) process to define core values and create a decision-making tool to enhance the effectiveness and efficiency of government operations, identify and optimize opportunities for residents and businesses to improve local quality of life, create a culture of innovation so that the city's challenges become its opportunities and the city's opportunities enhance the community brand, ensure the values and priorities of all residents and business owners are considered, and to deliver transparency to the decision-making process. One factor in the decision-making tool is whether a proposed action would have a quality of life impact, which includes the following questions associated with visual and aesthetic character:

- Does it acknowledge our cultural heritage?
- Is it an appropriate scale for Hermosa Beach?
- Is it aesthetically appropriate?
- Is it a complementary use of public and private space?

C-3: Agricultural Resources

3. Agricultural Resources

3.1 Introduction

This section identifies existing conditions, regulations, and key agricultural resource issues within the planning area. Although Hermosa Beach does not contain any agricultural land in the traditional sense, there are numerous opportunities to grow food locally through urban farming and community gardens.

3.2 Environmental Setting

Hermosa Beach is an urbanized community that is predominantly built out, with the exception of public and privately owned open spaces devoted to recreational, leisure, cultural, and aesthetic purposes.

Agricultural Land

According to the Farmland Mapping and Monitoring Program (FMMP), no Important Farmland is located in the planning area. In addition, no land in the planning area is under California Land Conservation Act of 1965 (Williamson Act) contracts or is zoned for agricultural use.

Community Gardens and Urban Farming

The planning area has one community garden located at the northeast corner of South Park, near the southern terminus of Cyprus Street. The garden is currently a demonstration garden with raised beds on an abandoned roller hockey rink. The site is currently transitioning to a larger community garden with a commitment of 20 percent of bed space for donation of food to community groups. In addition, the two elementary schools in Hermosa Beach each have a nutritional garden.

The City also provides gardening resources to local residents, including reduced cost composting bins and vermiculture (worm composting) bins, as well as free compost.

3.3 Regulatory Setting

The following federal, state, regional, and local plans, policies, regulations, and laws pertain to agricultural resources in the planning area.

Federal Plans, Policies, Regulations, and Laws

No federal plans, policies, regulations, or laws related to agricultural resources apply to the City of Hermosa Beach.

State Plans, Policies, Regulations, and Laws

Farmland Mapping and Monitoring Program

The California Department of Conservation, Division of Land Resource Protection, administers the FMMP. The program produces agricultural resource inventories and maps that rate agricultural lands based on soil quality, irrigation status, and land use within California. These ratings are used to help prioritize farmland conservation efforts. The inventories and maps are updated every two years and were last updated in 2012. The FMMP uses the term "Important Farmland" to describe parcels that are considered prime farmland, farmland of statewide importance, unique farmland, farmland of local importance, or grazing land, as defined by the California Department of Conservation. There is no Important Farmland in the planning area.

Williamson Act

The Williamson Act is an agricultural conservation tool. Under the Williamson Act, local governments can enter into contracts with private property owners to protect land for agricultural and open space purposes (California Department of Conservation 2012a). As of 2012, there are no Williamson Act contracts in the planning area (California Department of Conservation 2012b).

Urban Agriculture Incentive Zones Act (Assembly Bill 551)

The Urban Agriculture Incentive Zones Act (2013) authorizes, under certain conditions and until January 1, 2019, a city and a landowner to enter into a contract to restrict the use of vacant, unimproved, or otherwise blighted lands that is at least 0.10 acres, and not more than three acres, for small-scale production of agricultural crops where allowed by zoning.

Regional and Local Plans, Policies, Regulations, and Laws

Hermosa Beach Municipal Code

The Hermosa Beach Municipal Code includes the following provision for regulating agriculture and agriculture-related uses:

- Chapter 6.04 (Animals Generally) permits residences to have up to five fowl and/or keep bees on their property, pending an approved City of Hermosa Beach Non-Household Pet Application.

C-4: AIR QUALITY

04 Air Quality

4.1 Introduction

Hermosa Beach is a beachfront city located in the southeast region of Los Angeles County known as South Bay. The City is located within the South Coast Air Basin ("Air Basin"), which is shown in **Figure 4.1**, *South Coast Air Basin 2008 Emissions Inventory*. The Air Basin consists of Orange County, Los Angeles County (excluding the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside Counties, in addition to the San Gorgonio Pass area in Riverside County.

4.2 Environmental Setting

Topography, Climate, and Meteorology

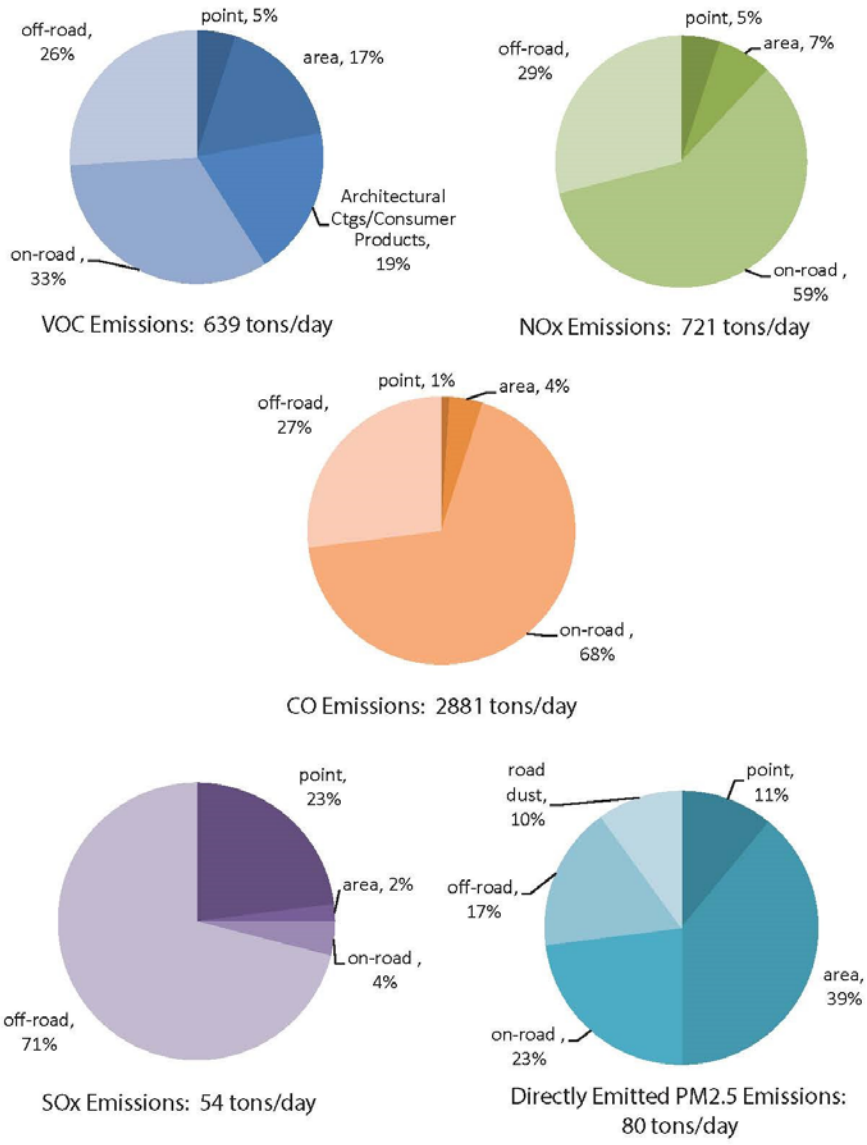
The South Coast Air Basin is an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The terrain and geographical location determine the distinctive climate of the Air Basin, as it is a coastal plain with connecting broad valleys and low hills.

The Air Basin lies in the semi-permanent high-pressure zone of the eastern Pacific Ocean. The usually mild climatological pattern is interrupted by periods of hot weather, winter storms, or Santa Ana winds. The extent and severity of pollutant concentrations in the Air Basin is a function of the area's natural physical characteristics (weather and topography) and man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and dispersion of pollutants throughout the Air Basin, making it an area of high pollution potential.

The Air Basin's meteorological conditions, in combination with regional topography, are conducive to the formation and retention of ozone ("O_3"), which is a secondary pollutant that forms through photochemical reactions in the atmosphere. Thus, the greatest air pollution impacts throughout the Air Basin typically occur from June through September. This condition is generally attributed to the emissions occurring in the Air Basin, light winds, and shallow vertical atmospheric mixing. These factors reduce the potential for pollutant dispersion causing elevated air pollutant levels. Pollutant concentrations in the Air Basin vary with location, season, and time of day. Concentrations of O_3, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Air Basin and adjacent desert.

The City of Hermosa Beach is located along the coast, which experiences greater atmospheric mixing due to the convergent interaction between air above land and ocean. As a result, the City would typically have better air quality conditions compared to more inland locations.

FIGURE 4.1: SOUTH COAST AIR BASIN 2008 EMISSIONS INVENTORY



Criteria Pollutants

Certain air pollutants have been designated as "criteria" air pollutants because they are common and widely distributed and are known to have adverse human health effects and/or cause adverse impacts to the environment either directly or through reactions with other pollutants. The following pollutants are regulated by the United States Environmental Protection Agency ("USEPA") at the national level and by the California Air Resources Board ("CARB") at the state level and are subject to ambient air quality standards adopted by USEPA and CARB. The current National Ambient Air Quality Standards ("NAAQS") and California Ambient Air Quality Standards ("CAAQS") for each of the monitored pollutants are summarized in **Table 4.1**, *Ambient Air Quality Standards*.

The South Coast Air Quality Management District ("SCAQMD") maintains a network of air quality monitoring stations located throughout the Air Basin to measure ambient pollutant concentrations. The monitoring station most representative of the City of Hermosa Beach is the Los Angeles - LAX Monitoring Station (Southwest Coastal LA County Receptor Area). Criteria pollutants monitored at this station include ozone ("O_3"), nitrogen dioxide ("NO_2"), carbon monoxide ("CO"), sulfur dioxide ("SO_2"), respirable particulate matter ("PM_{10}"), and lead. The nearest station that monitors the remaining criteria pollutant, fine particulate matter ("$PM_{2.5}$"), is the North Long Beach Monitoring Station (South Coastal LA County Receptor Area). The most recent data available from the SCAQMD for these monitoring stations are from years 2008 to 2012.[1] The pollutant concentration data for these years are summarized in **Table 4.2**, *Ambient Air Quality Data*. It should be noted that the closest SCAQMD monitoring stations are located at Los Angeles International Airport (LAX) and Long Beach near major sources of pollutants and are not representative of actual conditions within the City of Hermosa Beach. As shown in Table 2, ambient pollutant concentrations at these nearest monitoring stations occasionally exceed air quality standards for most criteria pollutants.

Due to the meteorological mixing that occurs almost daily within the Basin, local ambient air quality is affected by a combination of local sources and large regional sources of emissions. As the City does not contain any major sources of local air pollutants, air pollutant levels are affected most by large regional sources outside of the City limits.

[1] South Coast Air Quality Management District, Historical Data by Year, http://www.aqmd.gov/smog/historicaldata.htm. Accessed February 2014.

TABLE 4.1: AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	California Standards [a]		National Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e]	Secondary [c,f]	Method [g]
O_3	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.075 ppm (147 µg/m³)		
NO_2 [h]	1 Hour	0.18 ppm (338 µg/m³)	Gas Phase Chemi-luminescence	100 ppb (188 µg/m³)	None	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.030 ppm (56 µg/m³)		53 ppb (100 µg/m³)	Same as Primary Standard	
CO	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry NDIR)	35 ppm (40 mg/m³)	None	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10mg/m³)		9 ppm (10 mg/m³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	
SO_2 [i]	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	—	Ultraviolet Fluorescence ; Spectrophotometry (Pararosaniline Method)[9]
	3 Hour	—		—	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas) [i]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) [i]	—	
PM_{10}	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		
$PM_{2.5}$	24 Hour	No Separate State Standard		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³	15 µg/m³	
Lead [j,k]	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m³ (for certain areas)[k]	Same as Primary Standard	
	Rolling 3-Month Average[k]	--		0.15 µg/m³		
Visibility Reducing Particles [l]	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		**No Federal Standards**		
Sulfates	24 Hour	25 µg/m³	Ion			

TABLE 4.1: AMBIENT AIR QUALITY STANDARDS

Pollutant	Average Time	California Standards [a]		National Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e]	Secondary [c,f]	Method [g]
(SO_4)			Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride [j]	24 Hour	0.01 ppm (26 μg/m³)	Gas Chromatography			

[a] *California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.*

[b] *National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms/per cubic meter (μg/m³) is equal to or less than one. For $PM_{2.5}$, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.*

[c] *Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.*

[d] *Any equivalent procedure which can be shown to the satisfaction of the California Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.*

[e] *National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.*

[f] *National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.*

[g] *Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.*

[h] *To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb.*

[i] *On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated non-attainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.*

[j] *The California Air Resources Board has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.*

[k] *The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 μg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated non-attainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.*

[l] *In 1989, the California Air Resources Board converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.*

Source: California Air Resources Board, Ambient Air Quality Standards (6/4/13), http://www.arb.ca.gov/research/aaqs/aaqs2.pdf. Accessed February 2014.

Ozone

As seen in Table 4.2 for 2012, Hermosa Beach is located in an area of the Air Basin that is in attainment for ozone according to the federal 8-hour standard, but not for the more stringent state standards of both 1-hour and 8-hour periods.

Overview:

O_3 is a secondary pollutant formed by the chemical reaction of volatile organic compounds and nitrogen oxides ("NO_X") under certain meteorological conditions such as high temperature and stagnation episodes. Elevated levels of O_3 can cause irritation to lungs and breathing passages, coughing and pain in the chest and throat, thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower lung efficiency.

Trends:

During the 2008 to 2012 reporting period, the maximum 1-hour ozone concentration was recorded in 2012 at 0.106 ppm. During this year, the California standard of 0.09 ppm was exceeded once annually, the only exceedance in the 2008-2012 period. The 1-hour maximum concentration followed a neutral trend over the 5-year period only fluctuating between years an average of 0.015 ppm in either direction. The maximum eight-hour ozone concentration recorded during the reporting period was 0.075 ppm, reported in both 2008 and 2012. During the reporting period, the state 8-hour average standard of 0.070 ppm was exceeded three times in 2008, 2010, and 2012. The 8-hour maximum concentration experienced a downward trend with the exception of 2012. The federal ozone standards were never exceeded during the monitoring period.

Table 4.2: Ambient Air Quality Data

Pollutant/Standard	2008	2009	2010	2011	2012
O_3 (1-hour)					
Maximum Concentration (ppm)	0.086	0.077	0.089	0.078	0.106
Days > CAAQS (0.09 ppm)	0	0	0	0	1
O_3 (8-hour)					
Maximum Concentration (ppm)	0.075	0.070	0.070	0.067	0.075
4th High 8-hour Concentration (ppm)	0.065	0.061	0.059	0.062	0.059
Days > CAAQS (0.070 ppm)	1	0	1	0	1
Days > NAAQS (0.075 ppm)	0	0	0	0	0
NO_2 (1-hour)					
Maximum Concentration (ppm)	0. 0900	0.0800	0.0758	0.0976	0.0617
98th Percentile Concentration (ppm)	–	0.0700	0.0609	0.0648	0.0550
Days > CAAQS (0.18 ppm)	0	0	0	0	0
NO_2 (Annual)					
Annual Arithmetic Mean (0.030 ppm)	0.0143	0.0159	0.0121	0.0134	0.0104

Table 4.2: Ambient Air Quality Data

Pollutant/Standard	2008	2009	2010	2011	2012
CO (1-hour)					
Maximum Concentration (ppm)	4	3	3	–	–
Days > CAAQS (20 ppm)	0	0	0	–	–
Days > NAAQS (35 ppm)	0	0	0	–	–
CO (8-hour)					
Maximum Concentration (ppm)	2.5	2.2	2.2	1.8	2.5
Days > CAAQS (9.0 ppm)	0	0	0	0	0
Days > NAAQS (9 ppm)	0	0	0	0	0
SO_2 (1-hour)					
Maximum Concentration (ppm)	0.0200	0.0200	0.0259	0.0115	0.0049
99th Percentile Concentration (ppm)	–	–	–	0.0083	0.0047
Days > CAAQS (0.25 ppm)	0	0	0	0	0
Days > NAAQS (0.075 ppm)	0	0	0	0	0
SO_2 (24-hour)					
Maximum Concentration (ppm)	0.0050	0.0060	0.0035	–	–
Days > CAAQS (0.04 ppm)	0	0	0	–	–
Days > NAAQS (0.14 ppm)	0	0	0	–	–
PM_{10} (24-hour)					
Maximum Concentration ($\mu g/m^3$)	50	52	37	41	31
Samples > CAAQS (50 $\mu g/m^3$)	0	1 (1.7%)	0	0	0
Samples > NAAQS (150 $\mu g/m^3$)	0	0	0	0	0
PM_{10} (Annual)					
Annual Arithmetic Mean (20 $\mu g/m^3$)	25.6	25.4	20.6	21.7	19.8
$PM_{2.5}$ (24-hour)					
Maximum Concentration ($\mu g/m^3$)	57.2	63.0	35.0	39.7	49.8
98th Percentile Concentration ($\mu g/m^3$)	38.9	34.2	28.3	27.8	26.4
Samples > NAAQS (35 $\mu g/m^3$)	8 (2.3%)	6 (1.8%)	0	1 (0.3%)	4
$PM_{2.5}$ (Annual)					
Annual Arithmetic Mean (12 $\mu g/m^3$)	14.2	13.0	10.5	11.0	10.4
Lead					
Maximum 30-day average ($\mu g/m^3$)	0.01	0.01	0.01	0.005	–
Samples > CAAQS (1.5 $\mu g/m^3$)	0	0	0	0	–

Notes: ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter

Sources: South Coast Air Quality Management District, Historical Data by Year, http://www.aqmd.gov/smog/ historicaldata.htm. Accessed February 2014.

Nitrogen Dioxide ("NO_2")

Hermosa Beach is in a region of attainment for both the federal and state NO_2 standards of maximum concentration and annual arithmetic mean.

Overview:

NO_2 is a reddish-brown, highly reactive gas that is formed in the ambient air through the oxidation of nitric oxide ("NO") and is also a byproduct of fuel combustion. NO_X is primarily emitted in the form of NO, but quickly reacts in the atmosphere to form NO_2. NO_X is primarily a mixture of NO and NO_2; however, the ambient air quality standards apply only to NO_2 and not NO_X. Major sources of NO_X include power plants, large industrial facilities, and motor vehicles. NO_2 acts as an acute irritant and, in equal concentrations, is more injurious than NO.

Trends:

The highest 1-hour concentration of NO_2 was recorded at 0.0976 ppm in 2011. The highest annual arithmetic mean was 0.0159 ppm, recorded in reporting year 2009. The 1-hour maximum concentration followed a decreasing trend with the exception of 2011. Neither the California nor the National NO_2 standards were exceeded during the reporting period.

Carbon Monoxide ("CO")

Hermosa Beach is found in an area of attainment for both federal and California CO standards using either 1-hour or 8-hour concentrations.

Overview:

CO is a colorless, odorless gas primarily emitted from combustion processes and motor vehicles due to incomplete combustion of fuel. Motor vehicles operating at slow speeds are the primary source of CO. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. Inhalation of CO can cause nausea, dizziness, and headaches at moderate concentrations and can be fatal at high concentrations.

Trends:

The highest 1-hour CO concentration was 4 ppm, reported each year between 2008 and the highest 8-hour CO concentration was 2.5 ppm, reported in 2008 and 2011. The 1-hour maximum concentration followed a decreasing trend, as well as the 8-hour maximum concentration with the exception of 2012. Neither the California nor the National CO standards were exceeded during the 2008 to 2012 reporting period.

Sulfur Dioxide ("SO_2")

Hermosa Beach is within a zone of the Air Basin that is in attainment for both 1-hour and 24-hour SO_2 standards for both the corresponding NAAQS and CAAQS.

Overview:

Major sources of SO_2 include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters (particularly those sources that use high-sulfur-content fuel oils and coal). Emissions of SO_2 aggravate lung diseases such as bronchitis. SO_2 constricts the breathing passages in asthmatics and people involved in moderate to heavy exercise. SO_2 can potentially cause wheezing, shortness of breath, and coughing.

Trends:

The highest 1-hour concentration of SO_2 was 0.0259 ppm, recorded in 2010. The highest 24-hour concentration was 0.006 ppm recorded in 2009. The 1-hour maximum concentration experienced a downward trend with the exception of 2010 over the 5-year period. No exceedances of the California or National SO_2 standards were recorded during this reporting period.

Particulate Matter

Hermosa Beach has been in a non-attainment zone for both respirable particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$) according to the NAAQS and CAAQS of 24-hour maximum concentration and annual arithmetic mean.

Overview:

The human body naturally prevents the entry of larger particles into the body. However, small particles, with an aerodynamic diameter equal to or less than ten microns (i.e., PM_{10}) and even smaller particles with an aerodynamic diameter equal to or less than 2.5 microns (i.e., $PM_{2.5}$), can enter the body and are trapped in the nose, throat, and upper respiratory tract. These small particulates could potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM_{10} and $PM_{2.5}$. Lung impairment can persist for several weeks after exposure to high levels of particulate matter. Some types of particulates could become toxic after inhalation due to the presence of certain chemicals on or mixed with the particulates and the chemicals' reaction with internal body fluids.

Trends:

For PM_{10}, the highest recorded concentration during the period of 2008 to 2012 was 52 micrograms per cubic meter ($\mu g/m^3$), which was recorded in 2009. This is the only PM_{10} exceedance of the California 24-hour standard during the reporting period. The maximum PM_{10} concentration followed a neutral trend with an average variation of 7.75 $\mu g/m^3$ between years. The national PM_{10} standard was never exceeded during this period. PM_{10} is monitored every six days coincident to a national schedule; thus, PM_{10} exceedances are based on the number of days that sampling occurred. The maximum recorded arithmetic mean concentration of 25.6 $\mu g/m^3$ was recorded in 2008. Every year of the sampling period except 2012 was in exceedance of the California annual arithmetic mean standard of 20 $\mu g/m^3$.

For $PM_{2.5}$, the 24-hour maximum concentrations varied between 35 and 63 $\mu g/m^3$ between 2008 and 2012. During this period, the National standard was exceeded zero to eight times per year with the maximum number of exceedances occurring in 2008. The maximum $PM_{2.5}$ concentration

experienced a great deal of fluctuation from year to year with an average variation of 12.15 $\mu g/m^3$. The highest annual arithmetic mean was 14.2 $\mu g/m^3$, also recorded in 2008.

Lead

Hermosa Beach is in attainment for lead under the CAAQS maximum monthly average standard.

Overview:

Lead is emitted from industrial facilities and from the sanding or removal of old lead-based paint and from smelting or processing material containing lead, such as certain types of batteries. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

Trends:

The highest 30-day average concentration of lead was 0.01 $\mu g/m^3$ recorded every year except 2012, which is below the California 1.5 $\mu g/m^3$ standard. The maximum average monthly lead concentration followed a decreasing trend over the 5-year period. The data demonstrates that the area is currently in compliance with ambient air quality standards for lead, as no exceedances were recorded.

Other Pollutants

Volatile Organic Compounds ("VOCs")

VOCs are compounds comprised primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons as are evaporative emissions from consumer products and paints. VOCs themselves are not criteria pollutants; however, they contribute to O_3 formation.

Visibility Reducing Particles

The Basin is currently designated as "unclassified" with respect to the State standard for visibility reducing particles. Continuous monitoring is not currently performed within the Basin for this standard.

Hydrogen Sulfide

The Basin is currently designated as "unclassified" with respect to the State standard for hydrogen sulfide. The CARB does not perform or require ambient monitoring of this pollutant.

Vinyl Chloride

The Basin is currently designated as "unclassified" with respect to the State standard for vinyl chloride. In 1990, the CARB identified vinyl chloride as a toxic air contaminant and determined that it does not have an identifiable threshold. Therefore, the CARB does not perform or require ambient monitoring for this pollutant.

Inventory and Sources of Criteria Air Pollutant Emissions

The SCAQMD prepares emissions inventories for regulatory and State Implementation Plan (SIP) performance tracking as well as for the AQMP. These estimates include stationary sources (e.g., generators, boilers, industrial sources) and area sources (e.g., landscaping, consumer products, fugitive emissions), and transportation sources. The latest emissions inventory for the South Coast Air Basin was prepared in 2008 for the 2012 AQMP. A breakdown of emissions sources in the region are provided as Figure 1. Additional details of sources of criteria pollutant emissions are described in further detail below.

Stationary Sources

Stationary sources of criteria pollutants include commercial and light industrial uses. Such sources may include emergency backup generators, large boilers, and other point sources which require permitting from the SCAQMD. The land uses within the City of Hermosa Beach consist mainly of residential uses with some commercial and light industrial uses.[2] The commercial uses typically do not result in substantial emissions of air pollutants or toxic air contaminants. Based on a search of the SCAQMD Facility Information Detail (FIND) database, the city currently has 18 businesses or properties with an air emissions permit. [3] These businesses consist of gasoline stations, auto body shops, restaurants and dry cleaners which regularly emit pollutants during normal operations. Other intermittent sources of air pollutants include businesses which require emergency diesel generators such as supermarkets, telecommunications, and assisted living homes. Also, of these 18 air emissions permits within the City, no sources are subject to Federal Clean Air Act Title V requirements, which apply only to major sources of pollutants or hazardous air pollutants. As the City does not contain large manufacturing or industrial uses, most sources of criteria pollutants are considered minor.

Areawide Sources

Area sources of emissions include cleaning solvents, consumer products, architectural coatings (painting), fugitive dust, and construction related sources.

Transportation Sources

Transportation sources are typically the largest contributors to criteria pollutants within Southern California.[4] Such sources include passenger vehicles, trucks, buses, motorcycles, aircraft, trains and marine vessels (boats). As shown in Figure 4.1, the majority of pollutant emissions in the basin are attributable to mobile sources (off-road and on-road) such as the shipping ports (Long Beach and Los Angeles), Los Angeles International Airport (LAX), major freeways, and rail lines and rail yards. LAX is located approximately 5 miles north of the City, while the Ports of Long Beach and Los Angeles are located 10 miles south of the City. Port shipping lanes may also bring these emission sources closer to the City. Emissions from these sources are most likely the greatest contributor to air pollution within the City from a regional standpoint. Although the Ports and LAX currently have pollution reduction plans in place which will effectively reduce pollution within the region,

[2] http://www.hermosabch.org/index.aspx?page=5
[3] http://www.aqmd.gov/webappl/pubinfo/mapviewer.aspx
[4] South Coast Air Quality Management District, Air Quality Management Plan 2012, Chapter 3.

shipping emissions are currently not regulated at the local or state level. Within the City of Hermosa Beach, the major highway that passes through the city is the Pacific Coast Highway (PCH). The City also contains high volume arterial roadways such as Artesia Boulevard located along the northern boundary. Other sources of transportation emissions sources include mass transit buses operated by Beach Cities Transit and the Metropolitan Transit Authority (MTA) which mostly run on natural gas and other trucks travelling throughout the City.

In addition to mobile source, stationary sources may also contribute to air pollution within the City. Several refineries are located in Torrance, Carson, Wilmington and El Segundo which are several miles from the City. The AES power plant is located less than one mile south of the City, and other power plants including the Haynes and Scattergood stations and Long Beach Harbor Generating Station are also located several miles from the City. Although these sources have the potential to affect air pollution within the City, these sources are regulated by SCAQMD permitting process to minimize pollutant emissions and impacts to sensitive uses.

Toxic Air Contaminants

In addition to criteria pollutants, the SCAQMD periodically assesses levels of toxic air contaminants ("TAC") in the Air Basin. A TAC is defined by California Health and Safety Code Section 39655:

> *"Toxic air contaminant" means an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the federal act (42 U.S.C. Sec. 7412(b)) is a toxic air contaminant.*

Between April 2004 and March 2006, the SCAQMD conducted the Multiple Air Toxics Exposure Study ("MATES") III, which is a follow-up to previous two air toxics studies conducted in the Air Basin. The MATES III Final Report was issued in September 2008. The study, based on actual monitored data throughout the Air Basin, consisted of several elements. These included a monitoring program, an updated emissions inventory of TACs, and a modeling effort to characterize carcinogenic risk across the Air Basin from exposure to TACs. The study applied a 2-kilometer (1.24-mile) grid over the Air Basin and reported carcinogenic risk within each grid space (covering an area of 4 square kilometers or 1.54 square miles). The study concluded that the average of the modeled air toxics concentrations measured at each of the monitoring stations in the Air Basin equates to a background cancer risk of approximately 1,200 in 1,000,000 primarily due to diesel exhaust. Approximately 85 percent of the risk is attributed to diesel particulate emissions, approximately 10 percent to other toxics associated with mobile sources (including benzene, butadiene, and formaldehyde), and approximately 5 percent of all airborne carcinogenic risk is attributed to stationary sources (which include industries and other certain businesses, such as dry cleaners and chrome plating operations). The study also found lower ambient concentrations of most of the measured air toxics compared to the levels measured in the previous study conducted during 1998 and 1999. Specifically, benzene and 1,3-butadiene, pollutants generated mainly from

vehicles, were down 50 percent and 73 percent, respectively.[5] The reductions were attributed to air quality control regulations and improved emission control technologies.

As part of the MATES III, the SCAQMD prepared maps that show regional trends in estimated outdoor inhalation cancer risk from toxic emissions, as part of an ongoing effort to provide insight into relative risks. The maps represent the estimated number of potential cancers per million people associated with a lifetime of breathing air toxics (24 hours per day outdoors for 70 years). The three 2-kilometer (1.24-mile) grids that extend within the City are provided in **Figure 4.2**, *Background Inhalation Cancer Risk for Hermosa Beach and Surrounding Areas*. As shown, the potential cancers per million people for this area is within the 501-1200 range with an estimated minimum of 654 per million and maximum of 763 per million.[6] Generally, the risk from air toxics is lower near the coastline: it increases inland, with higher risks concentrated near large diesel sources (e.g., freeways, airports, and ports).

Sensitive Land Uses

Certain population groups, such as children, elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases), are considered more sensitive to the potential effects of air pollution than others. Sensitive land uses would include areas where these populations tend to spend a majority of their time, such as residential, recreational, and educational areas. The majority of City of Hermosa Beach consists of residential zoning, which are considered sensitive land uses for the purposes of air quality. Within Hermosa Beach, there are two primary schools, Hermosa Valley Middle School and Hermosa View Elementary School, both of which are also sensitive land uses. There are also several private schools as well as day care facilities, and a senior assisted living facility called Sunrise within the City that are also considered sensitive uses. In terms of recreational land uses, there are many public parks, the Greenbelt, Beach and Strand, and the Hermosa Beach Community Center with outdoor facilities.

Odors

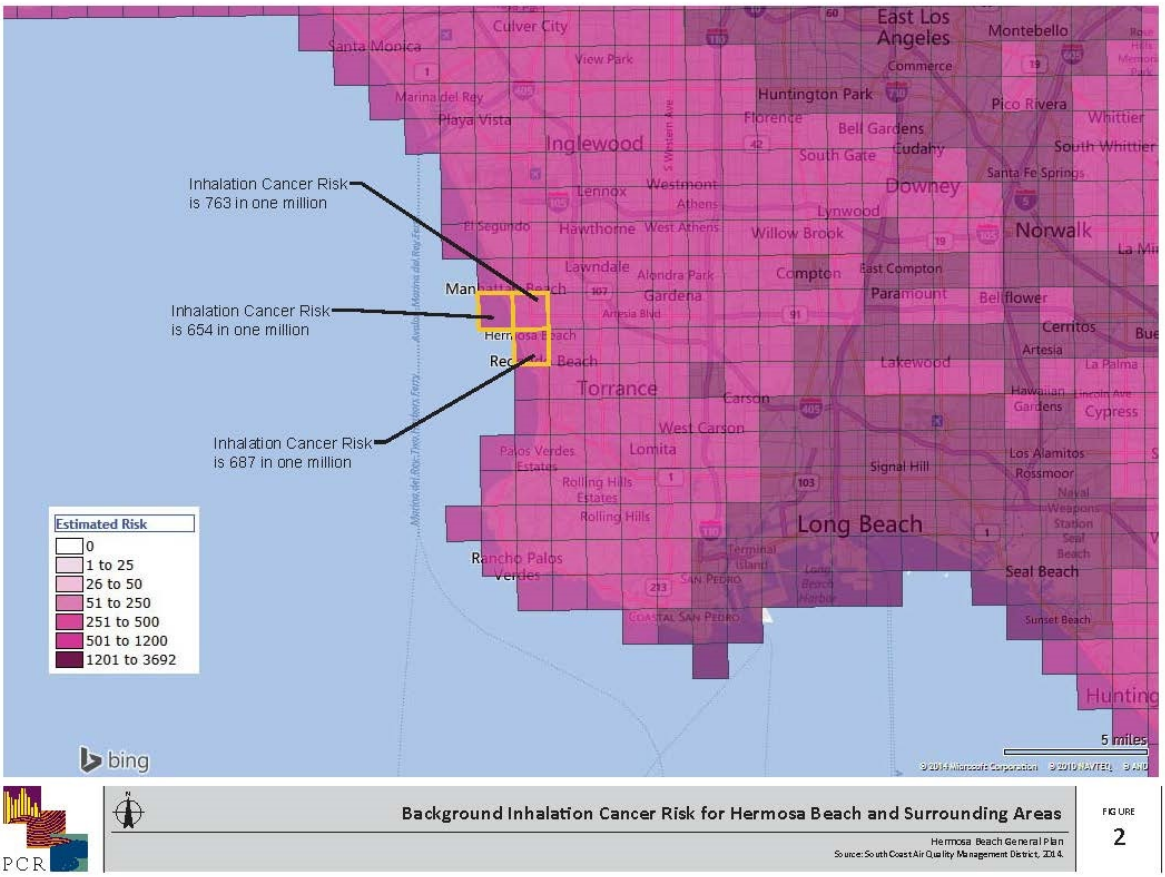
According to the SCAQMD CEQA Air Quality Handbook, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The City does not contain any major sources of odors. Minor sources such as surfboard fiberglass repair, paint booths, auto body repair, and other light industrial sources exist within the City. Other temporary sources of odors may include construction activities such as painting and asphalt paving.

---

5 South Coast Air Quality Management District, Final Report – Multiple Air Toxics Exposure Study in the South Coast Air Basin, (2008) ES-2.

6 South Coast Air Quality Management District, Multiple Air Toxics Exposure Study, MATES III Carcinogenic Risk Interactive Map, http://www.aqmd.gov/prdas/matesIII/matesIII.html. Accessed February 2014.

FIGURE 2: BACKGROUND INHALATION CANCER RISK FOR HERMOSA BEACH AND SURROUNDING AREAS



PCR

Background Inhalation Cancer Risk for Hermosa Beach and Surrounding Areas

Hermosa Beach General Plan
Source: South Coast Air Quality Management District, 2014.

FIGURE 2

4.3 Regulatory Setting

A number of statutes, regulations, plans, and policies address air quality issues. The City is subject to air quality regulations developed and implemented at the federal, state, and local levels.

a. Criteria Air Pollutants

Federal Regulations and Standards

The federal Clean Air Act of 1963 was the first federal legislation regarding air pollution control and has been amended numerous times in subsequent years, with the most recent amendments occurring in 1990. At the federal level, the USEPA is responsible for implementation of some portions of the Clean Air Act (e.g., certain mobile source and other requirements). Other portions of the Clean Air Act (e.g., stationary source requirements) are implemented by state and local agencies.

The Clean Air Act establishes federal air quality standards, referred to as the NAAQS, and specifies future dates for achieving compliance. The Clean Air Act also mandates that the state submit and implement a State Implementation Plan for areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met. The 1990 amendments to the Clean Air Act identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the Clean Air Act which are most applicable to the City include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions). Title I requirements are implemented for the purpose of attaining NAAQS for the following criteria pollutants: (1) ozone (O_3); (2) nitrogen dioxide (NO_2); (3) sulfur dioxide (SO_2); (4) particulate matter (PM_{10}); (5) carbon monoxide (CO); and (6) lead. The NAAQS were last amended in September 2006 to include an established methodology for calculating fine particulate matter ($PM_{2.5}$) as well as revoking the annual PM_{10} threshold. The NAAQS were amended in July 1997 to include an 8-hour standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. Table B.2-1, *Ambient Air Quality Standards*, shows the NAAQS currently in effect for each criteria pollutant.

The City of Hermosa Beach is located within the South Coast Air Basin, which is an area designated as non-attainment because it does not currently meet NAAQS for certain pollutants regulated under the Clean Air Act. The Clean Air Act set certain deadlines for meeting the NAAQS within the Air Basin including the following: (1) 1-hour O_3 by the year 2010; (2) 8-hour O_3 by the year 2024;[7] (3) PM_{10} by the year 2006; and (4) $PM_{2.5}$ by the year 2015. Nonattainment designations are categorized into seven levels of severity: (1) basic, (2) marginal, (3) moderate, (4) serious, (5) severe-15, (6) severe-17, and (7) extreme.[8] On June 11, 2007, the USEPA reclassified the Air Basin as a federal "attainment" area for CO and approved the CO maintenance plan for the Air Basin.[9] The Air Basin previously exceeded the NAAQS for PM_{10}, but has met the NAAQS at all monitoring stations and

---

7 The 8-hour ozone attainment deadline for the 1997 standard of 80 parts per billion is 2024. The 8-hour ozone attainment deadline for the 2008 standard of 75 parts per billion is 2032.

8 The "-15" and "-17" designations reflect the number of years within which attainment must be achieved.

9 "Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes: California, Final Rule." Federal Register 72 (11 May 2007):26718-26721

the USEPA approved the request for re-designation to attainment effective July 26, 2013.[10] The Air Basin does not meet the NAAQS for O_3 and $PM_{2.5}$ and is classified as being in non-attainment for these pollutants. The Los Angeles County portion of the Air Basin is designated as non-attainment for lead; however, this is due to localized emissions from two lead-acid battery recycling facilities located in the City of Vernon and the City of Industry, which are the only two lead-acid battery recycling facilities in Los Angeles County.[11] The attainment status of the Los Angeles County portion of the Air Basin with respect to the NAAQS is summarized in **Table 4.3**, *South Coast Air Basin Attainment Status (Los Angeles County).*

Table 4.3: South Coast Air Basin Attainment Status (Los Angeles County)

Pollutant	National Standards	California Standards
O3 (1-hour standard)	N/A a	Non-attainment – Extreme
O3 (8-hour standard)	Non-attainment – Extreme	Non-attainment
CO	Attainment	Attainment
NO2	Attainment	Non-attainment
SO2	Attainment	Attainment
PM10	Attainment	Non-attainment
PM2.5	Non-attainment	Non-attainment
Lead	Non-attainment	Non-attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Unclassified
Vinyl Chloride	N/A	N/A b

N/A = not applicable

[a] *The NAAQS for 1-hour ozone was revoked on June 15, 2005, for all areas except Early Action Compact areas.*

[b] *In 1990 the California Air Resources Board identified vinyl chloride as a toxic air contaminant and determined that it does not have an identifiable threshold. Therefore, the California Air Resources Board does not monitor or make status designations for this pollutant.*

Source: United States Environmental Protection Agency, The Green Book Non-attainment Areas for Criteria Pollutants, http://www.epa.gov/oaqps001/greenbk/index.html. Accessed September 2013; California Air Resources Board, Area Designations Maps/State and National, http://www.arb.ca.gov/desig/adm/adm.htm. Accessed September 2013.

Title II of the federal Clean Air Act pertains to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline, automobile pollution control devices, and vapor recovery nozzles on gas pumps are a few of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have

[10] Federal Register, Vol. 78, No. 123, June 26, 2013, 38223-38226.

[11] South Coast Air Quality Management District, Board Meeting, Agenda No. 30, Adopt the 2012 Lead State Implementation Plan for Los Angeles County, May 4, 2012.

strengthened in recent years to improve air quality. For example, the standards for nitrogen oxide (NO_X) emissions have lowered substantially, and the specification requirements for cleaner burning gasoline are more stringent.

State Plans, Regulations, and Standards

California Clean Air Act

The California Clean Air Act, signed into law in 1988, requires all areas of the State to achieve and maintain the CAAQS by the earliest practical date. The CAAQS apply to the same criteria pollutants as the federal Clean Air Act but also include sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. The CARB has primary responsibility for ensuring the implementation of the California Clean Air Act,[12] responding to the federal Clean Air Act planning requirements applicable to the state, and regulating emissions from motor vehicles and consumer products within the state. Table 1 shows the CAAQS currently in effect for each of the criteria pollutants as well as the other pollutants recognized by the state. As shown in Table 1, the CAAQS include more stringent standards than the NAAQS for most of the criteria air pollutants.

Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria. Table 2 provides a summary of the attainment status of the Los Angeles County portion of the Air Basin with respect to the state standards. The Air Basin is designated as attainment for the California standards for sulfates and unclassified for hydrogen sulfide and visibility-reducing particles. Because vinyl chloride is a carcinogenic toxic air contaminant, the CARB does not classify attainment status for this pollutant.

Regional Plans, Regulations and Standards

South Coast Air Quality Management District

The SCAQMD has jurisdiction over air quality planning for all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The Air Basin is a subregion within SCAQMD jurisdiction. While air quality in the Air Basin has improved, the Air Basin requires continued diligence to meet the air quality standards.

Air Quality Management Plan

The SCAQMD has adopted a series of Air Quality Management Plans to meet the CAAQS and NAAQS. In December 2012, the SCAQMD adopted the *2012 Air Quality Management Plan*, which incorporates the latest scientific and technological information and planning assumptions, including growth projections from the Southern California Association of Government's ("SCAG") *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy*, and updated emission inventory methodologies for various source categories.[13] The 2012 Air Quality Management Plan is the most recent plan to achieve air quality attainment within the region and builds upon other agencies' plans to achieve federal standards for air quality in the Air Basin. It incorporates a comprehensive strategy

[12] Chapter 1568 of the Statutes of 1988.

[13] South Coast Air Quality Management District, 2012 Air Quality Management Plan, http://www.aqmd.gov/aqmp/2012aqmp/index.htm. Accessed October 2013.

aimed at controlling pollution from all sources, including stationary sources, and on-road and off-road mobile sources. The 2012 Air Quality Management Plan builds upon improvements in previous plans, and includes new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches. In addition, it highlights the significant amount of emission reductions needed and the urgent need to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria pollutant standards within the timeframes allowed under the federal Clean Air Act.

The 2012 Air Quality Management Plan's key undertaking is to bring the Air Basin into attainment with the NAAQS for the 24-hour $PM_{2.5}$ standard by 2014. It also intensifies the scope and pace of continued air quality improvement efforts toward meeting the 2024 8-hour O_3 standard deadline with new measures designed to reduce reliance on the federal Clean Air Act Section 182(e)(5) long-term measures for NO_X and volatile organic compound ("VOC") reductions. SCAQMD expects exposure reductions to be achieved through implementation of new and advanced control technologies as well as improvement of existing technologies.

The control measures in the 2012 Air Quality Management Plan consist of four components: (1) Air Basin-wide and Episodic Short-term $PM_{2.5}$ Measures; (2) Contingency Measures; (3) 8-hour O_3 Implementation Measures; and (4) Transportation and Control Measures provided by the SCAG. The 2012 Air Quality Management Plan includes eight short-term $PM_{2.5}$ control measures, 16 stationary source 8-hour O_3 measures, 10 early action measures for mobile sources and seven early action measures proposed to accelerate near-zero and zero emission technologies for goods movement related sources, and five on-road and five off-road mobile source control measures. In general, the SCAQMD's control strategy for stationary and mobile sources is based on the following approaches: (1) available cleaner technologies; (2) best management practices; (3) incentive programs; (4) development and implementation of zero- near-zero technologies and vehicles and control methods; and (5) emission reductions from mobile sources.

SCAQMD Air Quality Guidance Documents

The *CEQA Air Quality Handbook* (the Handbook) was published by the SCAQMD in November 1993 to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts. The Handbook provides standards, methodologies, and procedures for conducting air quality analyses in EIRs and was used extensively in the preparation of this analysis. However, the SCAQMD is currently in the process of replacing the Handbook with the *Air Quality Analysis Guidance Handbook*. While this process is underway, the SCAQMD recommends that lead agencies avoid using the screening tables in the Handbook's Chapter 6 (Determining the Air Quality Significance of a Project), because the tables were derived using an obsolete version of CARB's mobile source emission factor inventory, and the trip generation characteristics of the land uses identified in these screening tables were based on the fifth edition of the Institute of Transportation Engineer's *Trip Generation Manual*, instead of the most current sixth edition. Additionally, the lead agency should avoid using the on-road mobile source emission factors in Table A9-5-J1 through A9-5-L (EMFAC7EP Emission Factors for Passenger Vehicles and Trucks, Emission Factors for Estimating Material Hauling, and Emission Factors for Oxides of Sulfur and Lead). The SCAQMD

instead recommends using other approved models to calculate emissions from land use projects, such as the CalEEMod modeling software, released February 2011.[14]

In addition, the SCAQMD has published a guidance document called the *Localized Significance Threshold Methodology* for CEQA Evaluations that is intended to provide guidance in evaluating localized effects from mass emissions during construction.[15] The SCAQMD adopted additional guidance regarding $PM_{2.5}$ in a document called *Final Methodology to Calculate Particulate Matter ($PM_{2.5}$) and $PM_{2.5}$ Significance Thresholds.*[16] This latter document has been incorporated by the SCAQMD into its CEQA significance thresholds and *Localized Significance Threshold Methodology*.

SCAQMD Rules and Regulations

Several SCAQMD rules adopted to implement portions of the Air Quality Management Plan may apply to the entities and projects within the City. For example, SCAQMD Rule 403 requires implementation of best available fugitive dust control measures during active construction periods capable of generating fugitive dust emissions from on-site earth-moving activities, construction/demolition activities, and construction equipment travel on paved and unpaved roads. Such sources of emissions may be subject to the following SCAQMD rules and regulations:

Regulation IV – Prohibitions: This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air emissions, fuel contaminants, start-up/shutdown exemptions and breakdown events. The following is a list of rules which may apply to such sources of emissions:

- **Rule 401 – Visible Emissions:** This rule requires that a person shall not discharge any emissions which are visible based on opacity or Ringelmann chart. Emissions which are typically subject to this rule include fugitive dust sources and stationary combustion.
- **Rule 402 – Nuisance:** This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
- **Rule 403 – Fugitive Dust:** This rule requires projects to prevent, reduce or mitigate fugitive dust emissions from a site. Rule 403 restricts visible fugitive dust to the project property line, restricts the net PM_{10} emissions to less than 50 micrograms per cubic meter ($\mu g/m^3$) and restricts the tracking out of bulk materials onto public roads. Additionally, projects must utilize one or more of the best available control measures (identified in the tables within the rule). Mitigation measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers and/or ceasing all activities. Finally, a contingency plan may be required if so determined by the USEPA.

---

14 South Coast Air Quality Management District, CEQA Air Quality Handbook (1993), http://www.aqmd.gov/ceqa/oldhdbk.html. Accessed October 2013.

15 South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, (2008).

16 South Coast Air Quality Management District, Final Methodology to Calculate Particulate Matter (PM)2.5 and PM2.5 Significance Thresholds, (2006).

Regulation XI – Source Specific Standards: Regulation XI sets emissions standards for different specific sources. The following is a list of rules which may apply to such sources of emissions:

- **Rule 1113 – Architectural Coatings:** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.
- **Rule 1146.2 (Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters)** – This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NO_X emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule.
- **Rule 1186 (PM_{10} Emissions from Paved and Unpaved Roads, and Livestock Operations)** – This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM_{10} emissions by requiring the cleanup of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also Rule 403).
- **Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities)** – This rule requires owners and operators of any demolition or renovation activity and the associated disturbance of asbestos-containing materials, any asbestos storage facility, or any active waste disposal site to implement work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials.

Southern California Association of Governments

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the federally designated Metropolitan Planning Organization for the majority of the Southern California region and is the largest Metropolitan Planning Organization in the nation. With regard to air quality planning, SCAG adopted the *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy* in April 2012, which addresses regional development and growth forecasts and forms the basis for the land use and transportation control portions of the Air Quality Management Plan. The growth forecasts are utilized in the preparation of the air quality forecasts and consistency analysis included in the Air Quality Management Plan. The Regional Transportation Plan/Sustainable Communities Strategy and Air Quality Management Plan are based on projections originating within local jurisdictions.

SCAG's Sustainable Communities Strategy provides specific strategies for successful implementation. These strategies include (1) supporting projects that encourage a diverse job opportunities for a variety of skills and education, recreation and culture and a full-range of shopping, entertainment and services all within a relatively short distance; (2) encouraging employment development around current and planned transit stations and neighborhood commercial centers; (3) encouraging the implementation of a "Complete Streets" policy that meets the needs of all users of the streets, roads and highways including bicyclists, children, persons with

disabilities, motorists, electric vehicles, movers of commercial goods, pedestrians, users of public transportation, and seniors; and (4) supporting alternative fueled vehicles. It is anticipated that SCAG will update the Sustainable Communities Strategy in 2016 and evaluate progress in implementing the strategies.

In 2008, SCAG released the Regional Comprehensive Plan which addresses regional issues such as housing, traffic/transportation, water, and air quality. The Regional Comprehensive Plan serves as an advisory document to local agencies in the Southern California region for their information and voluntary use for preparing local plans and handling local issues of regional significance. The Regional Comprehensive Plan presents a vision of how southern California can balance air quality with growth and development by including goals such as: (1) reducing emissions of criteria pollutants to attain federal air quality standards by prescribed dates and stated ambient air quality standards as soon as practicable; (2) reverse current trends in greenhouse gas emissions to support sustainability goals for energy, water supply, agriculture, and other resource areas; and (3) to minimize land uses that increase the risk of adverse air pollution-related health impacts from exposure to TACs, particulates (PM_{10} and $PM_{2.5}$) and CO.

b. Toxic Air Contaminants

Federal Regulations and Standards

Title III of the CAAA directed EPA to promulgate national emissions standards for hazardous air pollutants (HAPs) (NESHAP). The NESHAP for major sources of HAPs may differ from those for area sources. Major sources are defined as stationary sources with potential to emit more than 10 tons per year (tpy) of any HAP or more than 25 tpy of any combination of HAPs; all other sources are considered area sources. The CAAA also required EPA to promulgate vehicle or fuel standards containing reasonable requirements to control toxic vehicular emissions. These performance criteria limit mobile-source emissions of benzene, formaldehyde, and 1,3-butadiene. In addition, Section 219 of the CAAA required the use of reformulated gasoline in selected areas with the most severe ozone nonattainment conditions to further reduce mobile-source emissions.

State Plans, Regulations and Standards

California Air Resources Board Air Quality and Land Use Handbook

The CARB published the *Air Quality and Land Use Handbook* in April 2005 to serve as a general guide for considering impacts to sensitive receptors from facilities that emit toxic air contaminant ("TAC") emissions. The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions. Some examples of CARB's siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day; (2) avoid siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week); (3) avoid siting sensitive receptors within 300 feet of any dry cleaning operation using perchloroethylene and within 500 feet of operations with two or more machines, and (4) avoid siting sensitive receptors within 300 feet of a large gasoline dispensing facility (defined as a facility with a throughput of 3.6 million gallons per year or greater) or 50 feet of a typical gas dispensing facility (defined as a facility with a throughput of less than 3.6 million gallons per year).

California Air Resources Board On-Road and Off-Road Vehicle Rules

In 2004, CARB adopted an Airborne Toxic Control Measure ("ATCM") to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel PM and other TACs. The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given time.

In 2008 CARB approved the Truck and Bus regulation to reduce NO_X, PM_{10}, and $PM_{2.5}$ emissions from existing diesel vehicles operating in California. The requirements were amended in December 2010 and apply to nearly all diesel fueled trucks and busses with a gross vehicle weight rating greater than 14,000 pounds. For the largest trucks in the fleet, those with a gross vehicle weight rating greater than 26,000 pounds, there are two methods to comply with the requirements. The first way is for the fleet owner to retrofit or replace engines, starting with the oldest engine model year, to meet 2010 engine standards, or better. This is phased over 8 years, starting in 2015 and would be fully implemented by 2023, meaning that all trucks operating in the State subject to this option would meet or exceed the 2010 engine emission standards for NO_X and PM by 2023. The second option, if chosen, requires fleet owners, starting in 2012, to retrofit a portion of their fleet with diesel particulate filters achieving at least 85 percent removal efficiency, so that by January 1, 2016 their entire fleet is equipped with diesel particulate filters. However, diesel particulate filters do not typically lower NO_X emissions. Thus, fleet owners choosing the second option must still comply with the 2010 engine emission standards for their trucks and busses by 2020.

In addition to limiting exhaust from idling trucks, CARB recently promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers,

loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation adopted by the CARB on July 26, 2007, aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission controlled models. Implementation is staggered based on fleet size (which is the total of all off-road horsepower under common ownership or control), with the largest fleets to begin compliance by January 1, 2014. Each fleet must demonstrate compliance through one of two methods. The first option is to calculate and maintain fleet average emissions targets, which encourages the retirement or repowering of older equipment and rewards the introduction of newer cleaner units into the fleet. The second option is to meet the Best Available Control Technology ("BACT") requirements by turning over or installing Verified Diesel Emission Control Strategies (e.g., engine retrofits) on a certain percentage of its total fleet horsepower. The compliance schedule requires that BACT turn overs or retrofits be fully implemented by 2023 in all equipment in large and medium fleets and across 100 percent of small fleets by 2028.

CalGreen Building Code

Part 11 of the Title 24 Building Standards Code is referred to as the California Green Building Standards Code (CALGreen Code). The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality."

As of January 1, 2011, the CALGreen code is mandatory for all new buildings constructed in the state. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality. CALGreen was most recently updated in 2013 to include new mandatory measures for residential as well as nonresidential uses and the new measures took effect on January 1, 2014.

Although not originally intended to reduce pollutant emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer criteria pollutant emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Regional and Local

South Coast Air Quality Management District

The SCAQMD has adopted land use planning guidelines in the *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, which considers impacts to sensitive receptors from facilities that emit TACs.[17] The SCAQMD's distance recommendations are the same as those provided by CARB (e.g., a 500-foot siting distance for sensitive land uses proposed in proximity of

[17] South Coast Air Quality Management District, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, (2005).

freeways and high-traffic roads, and the same siting criteria for distribution centers and dry cleaning facilities). The guidance document introduces land use related policies that rely on design and distance parameters to minimize emissions and lower potential health risk. The SCAQMD's guidelines are voluntary initiatives recommended for consideration by local planning agencies.

The SCAQMD also regulates sources of toxic air contaminants through Rule 1401 – New Source Review of Air Toxic Contaminants. This rule provides methodology and guidance for preparing health risk assessments for sources of TACs. This methodology may also be used for analyzing projects which do not require a permit from the SCAQMD. SCAQMD Rule 1470 regulates emergency diesel engines commonly found at commercial and industrial uses. This regulation specifies emissions control requirements and requires locating emergency generator away from schools and other sensitive uses.

City of Hermosa Beach

The City has developed various programs and plans to reduce greenhouse gas (GHG) emissions. A recognized co-benefit of many GHG reducing measures is a reduction in criteria pollutant emissions. For example, the City's Sustainability Plan, South Bay Bicycle Master Plan, Carbon Neutral Scoping Plan, Living Streets Policy, Green Building Code updates, municipal electrical power reduction programs, electric vehicle programs and others, are designed to reduce GHG emissions in the City consistent with Assembly Bill 32 (AB 32) GHG reduction targets. The reduction in energy consumption proposed by these programs would also reduce criteria pollutant emissions.

In addition to City wide GHG reduction efforts, the South Bay Cities Council of Governments (SBCCOG) developed a voluntary integrated land use and transportation Sustainable Communities strategy to reduce GHG emissions from new development and transit. Reducing the reliance on personal motor vehicles by encouraging alternative modes and mass transit use is consistent with SCAG's goals to reduce GHG emissions by 13 percent by year 2035 throughout southern California. The reduction in motor vehicle fuel consumption would directly and indirectly result in reductions in GHG emissions, which also results in lower criteria pollutant emissions.

Odors

Regional and Local

SCAQMD Rules and Regulations

Several SCAQMD rules adopted to implement portions of the Air Quality Management Plan may apply to entities or projects within the City. Some of these rules are related to controlling or limiting odors. Properties within the City may be subject to the following SCAQMD rules and regulations regarding odors:

Regulation IV – Prohibitions: The following may apply to the entity or property:

- **Rule 402 – Nuisance:** This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public,

or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

- **Rule 410 – Odors from Transfer Stations and Material Recovery Facilities**: This rule establishes odor management practices and requirements to reduce odors from municipal solid waste transfer stations and material recovery facilities. Facilities subject to this rule and with throughputs greater than 250 tons per day (TPD) and less than or equal to 1,000 TPD are required to implement a Level 1 odor control strategy for the tipping floor. Facilities subject to this rule and with throughputs greater than 1,000 TPD are required to implement a Level 2 odor control strategy for the tipping floor, transfer tunnel, and material recovery facility. Currently, no trash transfer stations or recycling facilities are located within the City. If such uses are proposed in the future, these facilities would be subject to this rule.

C-5: Climate Change Mitigation and Adaptation

5. Climate Change Mitigation and Adaptation

5.1 Introduction

This section presents an overview of the existing greenhouse gas regulations and discusses the potential impacts of climate change.[i] It describes existing City efforts to reduce greenhouse gas emissions, such as the Sustainability Plan, and outlines key issues associated with climate change.

In general, there are two sets of strategies to cope with climate change: mitigation and adaptation. Mitigation strategies attempt to stop future warming, usually by lowering the level of greenhouse gases in the atmosphere. Examples of mitigation strategies include planting trees to absorb carbon dioxide from the air, increasing vehicle fuel efficiency to reduce the amount of carbon dioxide emitted per mile driven, and conserving electricity to lower greenhouse gas emissions during the production of energy. Adaptation strategies help find ways to live in a warming world by developing ways to protect people, infrastructure, ecosystems by reducing their vulnerability to climate impacts. Examples include developing seawalls or relocating buildings to higher ground to protect against sea level rise, and expanding access to cooling centers to protect vulnerable populations during extreme heat events.

Effective responses to climate change require some combination of mitigation and adaptation strategies. While mitigation efforts may curb some greenhouse gas emissions, these efforts are unlikely to halt climate change entirely, requiring some adaptation. Federal, state, regional, and local efforts to reduce and adapt to climate change are described in the following section.

5.2 Environmental Setting

Scientific Basis

During the past several decades, an extensive and scrutinized body of scientific evidence has demonstrated that human activity is altering the Earth's climate by increasing the concentration of greenhouse gases in the atmosphere. While there will always be some uncertainty in understanding a system as complex as Earth, the scientific evidence has been carefully examined and withstood serious evaluation and debate. As a result of this inquiry, there is a recognition that climate change poses significant risks for, and may already be affecting, human and natural systems, including coastal infrastructure, human health, energy sources, agriculture, and freshwater resources.[1]

[i] Climate change refers to any significant change in climate measurements, such as temperature, precipitation, or wind, lasting for an extended period (i.e., decades or longer) (United States Environmental Protection Agency [U.S. EPA], 2013).

Greenhouse Gases

Gases that trap heat in the atmosphere and re-emit infrared radiation are called greenhouse gases. The following compounds are greenhouse gases subject to control under California state law.[2]

- **Carbon Dioxide (CO_2)**. Carbon dioxide is produced through the burning of fossil fuels, solid waste, and wood products and is generated through certain chemical reactions, such as the manufacture of cement.
- **Methane (CH_4)**. Methane is produced during the production and transportation of fossil fuels, such as coal, natural gas, and oil. It also results from organic decay in landfills, livestock, and other agricultural processes.
- **Nitrous Oxide (N_2O)**. Nitrous oxide is generated during agricultural and industrial activities, combustion of fossil fuels, and solid waste.
- **Hydrofluorocarbons (HFCs)**. HFCs are used as refrigerants in both stationary refrigeration and mobile air conditioning.
- **Perfluorocarbons (PFCs)**. Perfluorocarbons are created as a byproduct of aluminum production and semiconductor manufacturing.
- **Sulfur Hexafluoride (SF_6)**. Sulfur hexafluoride is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity.

Carbon dioxide is the most widely emitted greenhouse gas and is the reference gas for determining the global warming potential (GWP) of other greenhouse gases. Greenhouse gas emissions are converted to metric tons of carbon dioxide equivalent (CO_2e) units. As shown in Table 5.1, gases such as methane and nitrous oxide are more potent than carbon dioxide at trapping heat and have higher global warming potential.

Table 5.1 : Greenhouse Gases[3]

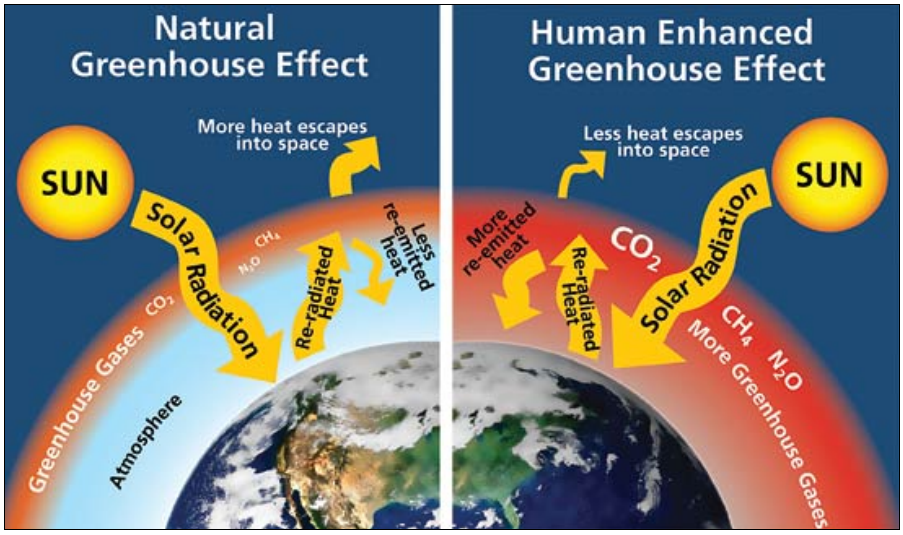
GAS	ACTIVITY	ATMOSPHERIC LIFETIME (YEARS)	GLOBAL WARMING POTENTIAL
Carbon Dioxide	Combustion	50 - 200	1
Methane	Combustion, Anaerobic Decomposition of Organic Waste (Landfills, Wastewater), Fuel Handling	12	21
Nitrous Oxide	Combustion, Wastewater Treatment	120	310
HFC-23	Leaked Refrigerants, Fire Suppressants	264	11,700
HFC-134a	Leaked Refrigerants, Fire Suppressants	14.6	1,300
HFC-152a	Leaked Refrigerants, Fire Suppressants	1.5	140
PFC: Tetrafluoromethane (CF_4)	Aluminum Production, Semiconductor Manufacturing, HVAC equipment,	50,000	6,500
PFC: Hexafluoroethane (C_2F_6)	Aluminum Production, Semiconductor Manufacturing, HVAC equipment,	10,000	9,200
Sulfur Hexafluoride	Transmission and Distribution of Power	3,200	23,900

The Greenhouse Effect

Greenhouse gases have always been present in the Earth's atmosphere, keeping surface temperatures warm enough to sustain human, plant, and animal life. Greenhouse gases absorb heat radiated from the Earth's surface and then radiate the energy back toward the surface, a process called the "greenhouse effect," which is shown in Figure 5.1. Without the greenhouse effect, it is estimated that the Earth's average surface temperature would be approximately 60°F colder.[4]

Human activities, such as the combustion of fossil fuels, industrial processes, and land use changes, have increased the amount of greenhouse gases in the atmosphere, intensified the greenhouse effect, and caused changes to the Earth's climate. Since the Industrial Revolution, atmospheric greenhouse gas concentrations have risen 40% to a level unequaled during the last 800,000 years.[5]

Figure 5.1: The Greenhouse Effect



Solar radiation or light passes through the atmosphere without being absorbed, strikes the Earth, and is absorbed or re-radiated as heat. Some of the re-radiated heat is absorbed by greenhouse gases and re-emitted toward the surface, while some of the heat escapes into space. Human activities that emit additional greenhouse gases to the atmosphere increase the amount of heat that gets absorbed before escaping to space, enhancing the greenhouse effect, and amplifying the warming of the earth.

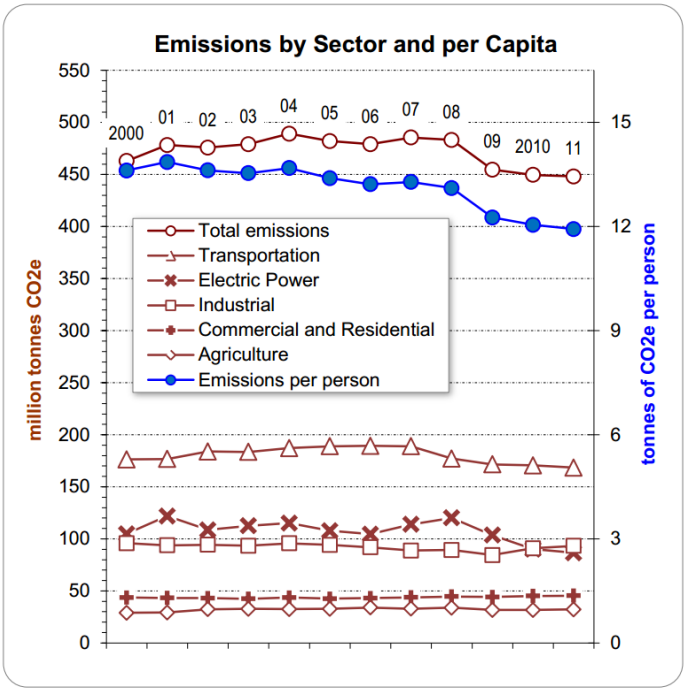
Sources of Greenhouse Gas Emissions

California Greenhouse Gas Emissions

The California Air Resources Board inventories greenhouse gas emissions each year. The inventory, which spans the years 2000-2011, includes estimates for carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, nitrogen trifluoride, hydrofluorocarbons, and perfluorocarbons.

California gross emissions of greenhouse gases were 448.1 million metric tons of CO_2e ($MMTCO_2e$) in 2011, declining 6% from 478.4 $MMTCO_2e$ in 2001. California's per capita greenhouse gas emissions decreased to 11.9 metric tons of CO_2e ($MTCO_2e$) per person in 2011, down from 13.9 $MTCO_2e$ in 2001. Since 2001, emissions in the transportation and electric power sectors has fallen, while other sectors have remained relatively flat. Figure 2 shows the emissions by sector and per capita for California.[6]

Figure 5.1: California Emissions by Sector and per Capita7



The transportation sector was the largest source of emissions in 2011 (168.4 $MMTCO_2e$), representing nearly 38% of California's greenhouse gas emissions. Transportation sector emissions include on-road vehicles, such as passenger vehicles, motorcycles, heavy duty trucks, and buses, ships and commercial boats, aviation, and rail.[8]

In recent years, industrial emissions from refineries, oil and gas extraction, cement plants, and other stationary sources have surpassed electric power as the second largest sector of emissions. Industrial sources produced 95.8 $MMTCO_2e$ in 2011. In particular, refineries produce approximately one-third of the sector's emissions. The electric power sector generated 86.6 $MMTCO_2e$ in 2011, approximately 19% of California's greenhouse gas emissions. Although California produces almost

70% of its electricity within the state, 54% of the greenhouse gas emission attributed to electricity production are from electricity imported from out-of-state.[9]

Commercial and residential sector emissions generated 45.5 $MMTCO_2e$ in 2011. This sector's emission are driven by the combustion of natural gas and other fuels for residential use and commercial businesses. This sector's emission have increased slightly since 2001. Additionally in 2011, agriculture (livestock, harvesting, and fuel use) contributed 32.2 $MMTCO_2e$, solid waste (land fill and composting) generated 7 $MMTCO_2e$, and high-GWP gases contributed 15.2 $MMTCO_2e$. [10]

Hermosa Beach Greenhouse Gas Emissions Inventory

The City of Hermosa Beach, working in conjunction with the South Bay Cities Council of Governments (SBCCOG), prepared greenhouse gas inventories for 1990, 2005, and 2007. The inventories estimate emissions for on-road transportation, off-road transportation, residential and commercial energy use, solid waste generation, and industrial fuel use. The SBCCOG is currently updating the inventory.

Methodology

The community inventory estimates emissions are based on the City's boundaries. The inventory quantifies emissions from the end-use of electricity and natural gas provided by Southern California Edison (SCE) and SoCal Gas Company using the Clean Air Climate Protection (CACP) software and emission factors from SCE for electricity and from the Local Government Operations Protocol (LGOP) for natural gas. Fuel use data was obtained by (South Coast Air Quality Management District (SCAQMD) and emissions were calculated using the CACP software and default emissions factors from the LGOP.

Transportation sector emissions were estimated based on an origin-destination approach of accounting for vehicle miles traveled (VMT). VMT was collected from the Southern California Association of Governments' (SCAG) regional transportation and greenhouse gas emissions were estimated using the CACP software. Solid waste data was collected from the Department of Resources Recycling and Recovery (CalRecycle) and entered into CACP software.

Key Findings from the Community Emissions Inventory

- In 2005, the City of Hermosa Beach generated approximately 138,463 $MTCO_2e$. Gasoline represents the largest source of emissions (from the transportation sector), producing 76,153 $MTCO_2e$ or 55% of the total share of 2005 emissions.
- In 2007, the City of Hermosa Beach generated approximately 134,253 $MTCO_2e$, representing a 3% decrease from the total emissions in 2005. This decrease was attributed to fewer emissions from electricity and gasoline sources. A decrease in electricity emissions is primarily the result of changes in utility operations.
- For both years 2005 and 2007, transportation was the largest sector of emissions (scope 1). In 2005, it generated approximately 81,686 $MTCO_2e$, or 59% of the total 2005 emissions. In 2007, it generated approximately 79,383 $MTCO_2e$. The majority of transportation sector emissions are the result of gasoline and diesel combustion in vehicles traveling to and from activity centers within Hermosa Beach.

- In 2005, community-generated waste made up 3% of the total emissions approximately 4,525 $MTCO_2e$. In 2007, community-generated waste made up 2% of the total emissions approximately 3,257 $MTCO_2e$ as a result of more materials being diverted from landfills and sent to waste-to-energy facilities.
- While short-term trends show a 3% reduction in emissions, long-term general trends in the absence of mitigation efforts suggest an increase in emissions. It is anticipated that Hermosa Beach's community emissions, under a business-as-usual scenario, will grow 2% by 2020 from 134,253 in 2007 to 136,944 $MTCO_2e$ in 2020.

An update is being prepared by SBCCOG with the city and should be available in 2015.

Climate Change Impacts

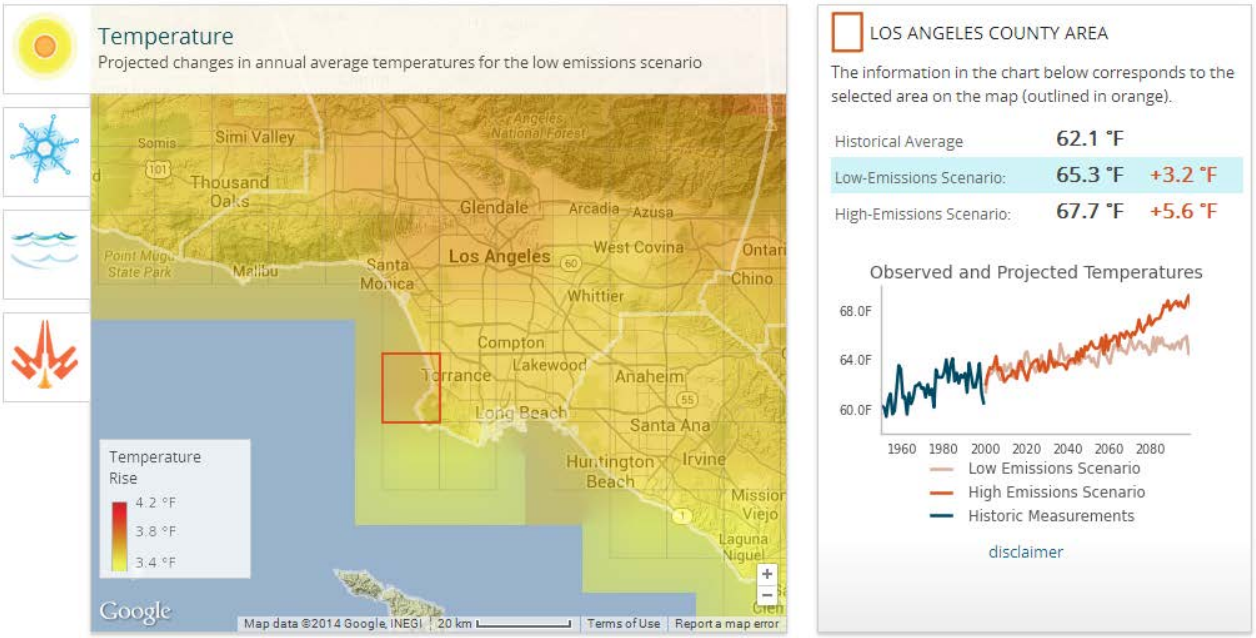
Climate change describes the long-term shift in global and regional weather patterns. This includes average annual temperatures *and* the timing and amount of local precipitation, the frequency and intensity of extreme weather events, sea level changes, and other aspects of weather. Depending on the extent of these changes, climate change may result in significant social, economic, and environmental consequences for residents and businesses, the city and the community generally.

Temperature

Since the early 20th Century, average surface temperature worldwide has risen at an average rate of 0.15°F per decade (1.5°F per century). Average surface temperatures across the lower 48 states has risen at an average rate of 0.14°F per decade (1.4°F per century). In the U.S. average surface temperatures have risen more quickly since the late 1970s (0.36 to 0.55°F per decade), with seven of the top ten warmest years on occurring since 1998.[11]

Scientists predict that over the next century, global temperatures will increase between 2.5°F and 10.4°F, depending upon the amount of future emissions and how the earth responds to those emissions.[12] For California, the average annual temperature is expected to rise 1.8°F to 5.4°F by 2050 and 3.6°F to 9°F by the end of the century.[13] For the Hermosa Beach area, scientists expect average temperatures to increase between 3.2°F and 5.6°F as shown in Figure 3. Along with changes to average annual temperature, climate change is expected to alter seasonal temperatures. Average July temperatures could increase by as much as 7°F.[14]

Figure 5.3: Temperature Degrees of Change Map (1960-2080)



These long-term temperature increases will be experienced along with short-term variation (daily, annual, and multi-year) in temperature related to Earth system changes such as El Niño, La Niña, or volcanic eruptions. As a result, temperatures for a single day or year may be higher or lower than the long-term average.[15]

Sea level rise and storm surge

Sea level rise and storm surge threatens to inundate homes, businesses, and infrastructure. Over the past century, sea level has risen by approximately 7 inches along the California coast, which is consistent with the observed global average.[16] While an oceanographic oscillation of currents (Pacific Decadal Oscillation) in the Pacific Ocean has suppressed sea level from rising significantly along the West Coast of the United States since the 1980s, scientists currently see this phase coming to an end, and thus agree that sea-level rise along the U.S. West Coast will resume a pace consistent with the global average in coming decades.[17] A 2012 study by the National Research Council, specifically commissioned by the states of California, Oregon, and Washington and several federal agencies to assess the state of sea-level rise science for the West Coast, concluded that sea level along Southern California's coast will rise up to about 12 inches by 2030, 2 feet by 2050, and 5.5 feet by 2100.[18]

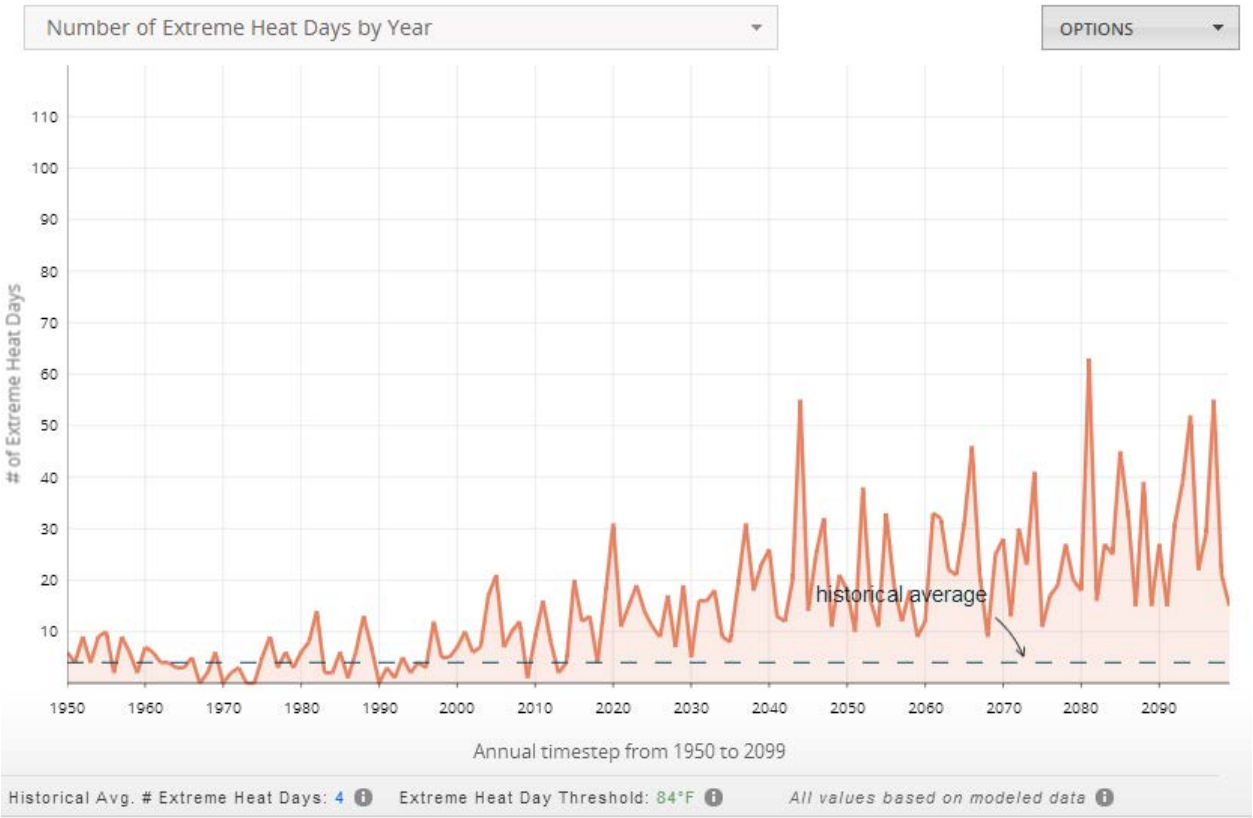
Precipitation

Research suggests that in California, climate change is likely to decrease annual precipitation amounts by more than 15% by the end of the 21st century.[19] In Hermosa Beach, precipitation is expected to decline over the next century, falling from around twelve inches per year to approximately ten inches per year. Seasonal precipitation will change more significantly with March and April receiving less rainfall than in the past. As a result of the seasonal change, Hermosa Beach will likely experience longer periods of drought, as the summer dry season starts earlier in the spring and extends later into the fall.[20]

Extreme Heat Events

Hermosa Beach is likely to see a significant increase in the number of days when temperature exceeds the extreme heat threshold of 84°F. Between 1950 and 2011, the average number of extreme heat days was four. Under the lower emissions scenario by 2050, the number of extreme heat days could increase to more than 30 per year, and by the end of the century, the number of extreme heat days could exceed 50 per year. Warmer days will also be accompanied by warmer nights, which could have a significant, negative effect on public health.

FIGURE 5.2: NUMBER OF EXTREME HEAT DAYS BY YEAR[21]



Climate change, particularly extreme heat events, present serious health risks to California's most vulnerable populations. The effects of extreme heat (over 84°F) on human health are well documented.[22] Increased temperature or extended periods of elevated temperatures can increase heat-related mortality,[23] cardiovascular-related mortality,[24] respiratory mortality,[25] and heart attacks,[26] while increasing hospital admissions[27] and emergency department visits.[28] Extreme heat can also affect a person's ability to thermo-regulate, causing heat stress and sometimes leading to death.[29] Exposure to extreme heat during pregnancy is related to lower birth weight, especially in the second and third trimesters.[30]

A number of factors contribute to the vulnerability of an individual to extreme heat. Intrinsic factors that contribute to heat-related risk include age (over 65 and infants and children)[31, 32] and medical conditions (cardiovascular disease, diabetes, and mental illness).[33, 34] Extrinsic factors, or those external to an individual, include neighborhoods with high levels of impervious surfaces and low

tree cover,[35] housing units that lack air conditioning,[36] or household access to a vehicle.[ii] [37] Along with these intrinsic and extrinsic factors, factors such as race and ethnicity, education level, poverty, immigration status, and profession (particularly individuals who work outside, such as farm and construction workers) may contribute to an individual's vulnerability to heat events.[38, 39, 40]

Other Potential Changes

Climate change may also create a variety of changes for California and Hermosa Beach, including:

- **Public health**: Climate change is expected to exacerbate some forms of air pollution, increase extreme heat days, affect the timing and severity of the allergens, and potentially increase incidences of infectious disease, particularly related to vector-, water-, and food-borne illness.[41]
- **Snowpack**: At least a quarter of the Sierra snowpack will be lost by 2050.[42] The snow pack provides natural water storage for the State.
- **Water:** Regional population growth is likely to increase water demand as temperatures rise, while sea level rise threatens aging coastal water infrastructure. Increased competition among urban and agricultural water users and environmental needs is expected.[43]
- **Biological resources**: Two-thirds of California's native flora will experience a greater than 80% reduction in suitable climate range within a century.[44]
- **Agriculture**: May very likely see significantly declining yields due to warming.[45]
- **Emergency management**: More extreme weather events, sea level rise, changing temperature and precipitation patterns, and more severe and frequent wildfires and present new risks and uncertainties that will affect emergency management.
- **Marine degradation:** Marine biological systems are strongly influenced by climate conditions including currents, winds, and temperatures, as well as ocean acidifcation. Changes to climatic and environmental conditions affect the specific ranges of plants and animals threatening the ability of species to survive.
- **Energy sector**: Higher temperatures combined with population growth are expected to increase demand for energy. Energy generation at hydroelectric plants may be reduced due to changes in snowpack and precipitation. [46]

In California, studies predict that conditions will become hotter and drier, with decreased snow levels and accelerating rates of sea-level rise.[47] California should also expect an increase in the intensity of extreme weather events, such as heat waves, droughts, and floods. California's extreme warm temperatures, which have historically occurred in July and August, will most likely extend into June and September.[48]

[ii] Transportation access is an important tool during extreme weather events and heat waves allowing individuals to travel to cooling centers and / or other safe locations.

5.3 Regulatory Setting

Federal Rules, Standards, and Court Rulings

In recent years, the federal government has taken steps to limit greenhouse gas emissions. The following section describes several of these efforts.

Clean Air Act

In 2007, the United States Supreme Court held that the U.S. Environmental Protection Agency (U.S. EPA) has the statutory authority to regulate greenhouse gas emissions from the transportation sector. After the Court decision, President Obama signed Executive Order 13432 directing the U.S. EPA, along with the Departments of Transportation, Energy, and Agriculture, to initiate a regulatory process that responds to the Supreme Court's decision.

In December 2007, the President signed the Energy Independence and Security Act of 2007, which sets a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022 and sets a national fuel economy standard of 35 miles per gallon by 2020. The Act also contains provisions for energy efficiency in lighting and appliances and for the implementation of green building technologies in Federal buildings.

On July 11, 2008, the U.S. EPA issued an Advance Notice of Proposed Rulemaking on regulating greenhouse gases under the Clean Air Act. The Advance Notice of Proposed Rulemaking reviews the various Clean Air Act provisions that may be applicable to the regulation of greenhouse gases and presents potential regulatory approaches and technologies for reducing greenhouse gas emissions, and seeks further public comment on the regulation of greenhouse gas emissions under the Clean Air Act.

Mandatory Reporting Rule

In 2009, the U.S. EPA adopted a mandatory greenhouse gas reporting rule for suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of greenhouse emissions. These businesses and facilities began submitting annual reports to the U.S. EPA in 2011 (covering the 2010 calendar year emission). Vehicle and engine manufacturers began reporting greenhouse gas emissions for model year 2011.

Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Clean Air Act

In 2009, the U.S. EPA Administrator issued a final endangerment finding and final cause finding for light duty vehicles under section 202(a) of the Clean Air Act. The findings include:

- **Endangerment finding:** The U.S. EPA found that current and projected concentrations of the six greenhouse gas emissions in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or contribute finding**: The U.S. EPA found that the combined emissions of these greenhouse gases from new motor vehicles contribute to the greenhouse gas pollution which threatens public health and welfare.

These findings do not impose any requirements on industry or other entities. However, this action was a prerequisite to finalizing the U.S. EPA's proposed greenhouse gas emission standards for light-duty vehicles, which were jointly proposed by the EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA).

On April 1, 2012, the U.S. EPA and NHTSA issued final rules requiring that by the 2016 model-year, manufacturers must achieve a combined average vehicle emission level of 250 grams of CO_2 per mile, which is equivalent to 35.5 miles per gallon as measured by U.S. EPA standards.

State Laws and Plans

During the past decade, the State of California made great strides in developing a regulatory framework to curb future greenhouse gas emissions and to adapt to the consequences of climate change. California adopted a series of policies, programs, and regulations that set targets for greenhouse emissions reductions and outlined strategic actions that enable government agencies, public institutions, and businesses to collaborate to achieve these reduction targets. The following section describes a number of the key state-level initiatives.

Executive Order S-3-05

In 2005, the Governor established California's greenhouse gas emissions reduction targets in Executive Order S-3-05. The Executive Order established the following goals: greenhouse gas emissions should be reduced to 2000 levels by 2010, 1990 levels by 2020, and 80% below 1990 levels by 2050. The Secretary of California Environmental Protection Agency is required to coordinate efforts of various agencies in order to collectively and efficiently reduce greenhouse gases. Some of the agency representatives involved in the greenhouse gas reduction plan include the Secretary of the Business, Transportation and Housing Agency, the Secretary of the Department of Food and Agriculture, the Secretary of the Resources Agency, the Chairperson of California Air Resources Board, the Chairperson of the California Energy Commission, and the President of the Public Utilities Commission.

Global Warming Solutions Act – Assembly Bill 32

After the Governor signed Executive Order S-3-05, the state assembly followed by passing Assembly Bill 32 in 2006, the Global Warming Solutions Act. Assembly Bill 32 directs the California Air Resources Board to develop the rules and regulations necessary to achieve the greenhouse gas emissions reduction targets. Assembly Bill 32 was the first statewide program to limit greenhouse gas emissions. Key steps of Assembly Bill 32 included:

- 2007 – Identifying initial greenhouse gas emission-reduction measures.
- 2008 – Calculating the 1990 baseline greenhouse gas emissions levels and receiving approval of a statewide limit equivalent to that level. Adopting reporting and verification standards and requirements concerning greenhouse gas emissions.
- 2009 – Adopting a scoping plan to reduce greenhouse gas emissions.
- 2010 – Adopting and enforcing regulations to implement the actions.
- 2011 – Adopting greenhouse gas emission limits and reduction measures.
- 2012 – Enforcing greenhouse gas emission limits and reduction measures.

California Climate Change Scoping Plan

In 2008, the California Air Resources Board approved the California Climate Change Scoping Plan (Scoping Plan), which contains the primary strategies California will use to reduce the greenhouse gas emissions that cause climate change. The Scoping Plan outlines a combination of policies, programs, and practices needed to reduce statewide emissions by 15% below current levels (the equivalent of 1990 levels) by 2020. Given projected trends, this would be approximately 30% below business-as-usual levels anticipated for 2020. Effectively, the Scoping Plan establishes a statewide carbon budget that will allow the State to grow while still meeting its emissions reduction targets. The Scoping Plan strategies include energy efficiency measures, regional transportation-related greenhouse gas emissions targets, a renewable portfolio standard, a cap-and-trade program, a light duty vehicle greenhouse gas standard, and a low carbon fuel standard.

The Scoping Plan recognizes the essential partnership between state, regional, and local governments to reduce greenhouse gas emissions. Local governments have authority over activities that produce both direct and indirect greenhouse gas emissions through land use planning and zoning, general permitting, local ordinances, and municipal operations. Therefore, many of the strategies outlined in the Scoping Plan need local governments to take action. The Scoping Plan also encourages local governments to inventory greenhouse gas emissions, adopt greenhouse gas emissions reduction targets, and develop local action plans to lower emissions. The continued re-inventory of Hermosa Beach's greenhouse gas emissions will continue to serve these purposes.

The Scoping Plan is currently undergoing an update. The update process builds on the initial Scoping Plan identifying new opportunities to leverage funds to further drive greenhouse gas emission reductions and defining California Air Resources Board's climate change priorities for the next five years to reach California's long-term climate goals.[49]

Cap-and-Trade Program

The Scope Plan identifies a cap-and-trade program as a means to reduce greenhouse gas emission that cause climate change. The cap-and-trade program places a cap on greenhouse gas emissions from specific sectors and facilities subject to the rules are allowed to trade permits or allowances to emit greenhouse gas emissions. Program rules were adopted into Subchapter 10 Climate Change, Article 5 of Title 17 of the California Code of Regulations.[50] The cap-and-trade program started on January 1, 2012 imposes a 'compliance obligation' on 'covered entities' beginning with their 2013 greenhouse gas emissions.

A covered entity with a compliance obligation is defined as an entity within California with one or more processes or operations that has emitted, produced, imported, manufactured, or delivered in 2009 or any subsequent year more than the applicable threshold level. In 2012, major greenhouse gas sources, such as electricity generation and large stationary sources that emit more than 25,000 $MTCO_2e$ per year will have to comply with the cap-and-trade program. Starting in 2015, the program will expand to include fuel distributors to address emissions from transportation fuels, and from combustion of other fossil fuels.[51] By expanding the program to fuel distributors, the California Legislative Office estimates that fuel prices could rise between 13 and 20 cents per gallon by 2020, noting, however, that gasoline prices fluctuate over time for many reasons and it will be

difficult to disentangle the effects of cap-and-trade from the many other determinants of gasoline prices.[52]

CEQA and Greenhouse Gas Emissions – Senate Bill 97

In 2007, the State Legislature enacted Senate Bill 97, which directed the California Office of Planning and Research (OPR) to develop guidelines that help local governments reduce greenhouse gas emissions under CEQA. OPR created guidance related to analysis of greenhouse gas emissions in CEQA documents and recommended that the lead agency determine the significance of those impacts and enact greenhouse gas reduction measures to reduce emissions to a less than significant level. The Natural Resources Agency adopted formal CEQA guideline amendments in 2009.

Pavley Vehicular Emissions Codes – Assembly Bill 1493

In 2002, Assembly Bill 1493 directed the California Air Resources Board to set more stringent vehicle fuel economy standards for cars and light trucks that reduce greenhouse gas emissions. The Pavley bill required approval from the federal government, and in 2009, the U.S. Environmental Protection Agency granted California a waiver that enabled the state to enforce stricter tailpipe emissions limits on new passenger vehicles. In 2010, the U.S. EPA and the Department of Transportation's National Highway Safety Administration announced new vehicle greenhouse gas emissions standards and corporate average fuel economy standards that reinforced California's standard. The standards would reduce emissions from passenger vehicles by approximately 30% in 2016, aiding local government efforts to reduce greenhouse gas emissions.

California Renewable Portfolio Standard – Senate Bill 1078 (2002) and 107 (2006) and Executive Order S-21-09

EO S-21-09 directed the California Air Resources Board to adopt regulations increasing California's Renewable Portfolio Standard (California RPS) to 33% by 2020. These rules apply to investor-owned utilities, such as Southern California Edison. These standards will reduce greenhouse gas emissions from electricity purchased by local governments.[53] The California Air Resources Board's adopted Scoping Plan makes it clear that implementation of the California RPS is a foundational element of California's emissions reduction plan. In 2002, Senate Bill 1078 established the California RPS program, requiring 20% renewable energy by 2017. In 2006, Senate Bill 107 advanced the 20% deadline to 2010, a goal which was expanded to 33% by 2020 in the 2005 Energy Action Plan II. On September 15, 2009, Governor Arnold Schwarzenegger signed EO S-21-09 directing the California Air Resources Board to adopt regulations increasing the California RPS to 33% by 2020.

Emission Performance Standards – Senate Bill 1368 (2006)

Signed in 2006, Senate Bill 1368 limits the ability of California's utilities to make long-term investments in carbon-intensive electricity generation. The bill enables utilities to make capital investments in baseload power plants if their emissions are as low as or lower than emissions from a new, combined-cycle natural gas power plant. The bill makes certain that the standards will not degrade the reliability of California's energy services.

California Green Building Code – (2007)

The California Building Standards Commission and other state agencies developed green building standards for residential, commercial, and public building construction. The "CALGreen Code" is the first statewide green building standards code in the United States. The code attempts to achieve reductions in greenhouse gas emissions and water and energy use.[54]

Low Carbon Fuel Standard – Executive Order S-1-07 (2007)

EO S-1-07 established a Low Carbon Fuel Standard (LCFS) for transportation fuels in California, which the ARB included in the Scoping Plan. The EO requires that the carbon intensity of California's transportation fuels be reduced at least 10% by 2020.[55] California Air Resources Board expects the LCFS to achieve the minimum 10% reduction goal; however, many of the early action items outlined in the Scoping Plan work in tandem with one another. To avoid the potential for double-counting emissions reductions associated with Assembly Bill 1493, the Scoping Plan has modified the aggregate transportation sector reduction expected from the LCFS to 6.7% for 2020.[56]

Property Assessed Clean Energy – Assembly Bill 811

Assembly Bill 811 allows local governments to define areas where property owners can receive long-term, low-interest loans for energy and water efficiency improvements. Improvements financed through Assembly Bill 811 are fixed to the property and repaid through property tax bills. Local governments can participate in a state-wide program, or they can establish their own Assembly Bill 811 programs, called Property Assessed Clean Energy (PACE) programs. City residents and businesses can also participate in the HERO or Figtree programs.

California Climate Adaptation Strategy – Executive Order S-13-08

In 2008, the Governor signed EO S-13-08, which directed the California Natural Resources Agency to lead a statewide effort to develop a climate adaptation strategy. Published in 2009, the statewide plan describes climate trends and the potential impacts of climate change on key sectors, and it outlines short- and long-term actions that state and local governments can take to address future climate impacts.[57]

General Plan Guidelines

The State OPR provides guidance to cities in the preparation of their local general plans. The 2003 General Plan Guidelines do not include guidance for climate change mitigation or adaptation; however, OPR is in the process of updating the General Plan Guidelines. The updated guidelines, due out in 2014 will include a section on climate change.[58]

Local Coastal Program Update Guide

Through the Local Coastal Program Planning Assistance, the California Coastal Commission publishes the Local Coastal Program Update Guide.[59] This document, which was last updated in 2013 ,provides guidance for updating Local Coastal Plans. The document recommends updating plans to address emerging issues related to adapting to climate change, including sea level rise, wildfires, and the impacts to ecosystems.

Sea Level Rise Policy Guidance

Drafted by the California Coastal Commission, this document provides step-by-step guidance on how to address sea-level rise in new and updated Local Coastal Programs (LCPs) and Coastal Development Permits (CDPs) according to the policies of the California Coastal Act.[60]

Regional Standards

Sustainable Communities Strategy – Senate Bill 375 (2008)

In California, the transportation sector produces between 35% and 40% of the state's greenhouse gas emissions, and the Scoping Plan includes a number of measures for the sector. In 2008 California adopted Senate Bill 375, the Sustainable Communities Strategy. Senate Bill 375 attempts to integrate regional land use, transportation, and housing planning in order to reduce greenhouse gas emissions from cars and trucks. Senate Bill 375 directs the California Air Resources Board to set regional greenhouse gas reductions targets for cars and trucks, to assign each metropolitan planning organization (MPO) a target, and to require each MPO to create a plan (a Sustainable Community Strategy) to achieve that target. The law provides relief from specific California Environmental Quality Act (CEQA) requirements for infill development projects that are consistent with the Sustainable Community Strategy. Senate Bill 375 provides one method for local governments to achieve regional transportation-related greenhouse gas emissions targets described in the Scoping Plan.

The Southern California Association of Governments (SCAG) is the largest MPO in California, representing six counties and over 180 cities, including Hermosa Beach. SCAG completed their SCS in 2012, tailoring the strategies to meet the needs of individual communities.

The regional SCS describes the goals and benefits of the SCS, the process used to create the SCS, SCS requirements, and next steps. SCS strategies are organized into land use strategies, transportation supply management, transportation demand management, vehicle technology, and other areas. The SCS builds on local strategies that communities have pursued over the past decade. This portfolio of strategies was combined with regional and subregional transportation projects to provide a roadmap for local governments to reduce emissions. If implemented, the SCS estimates that strategies and transportation projects would reduce greenhouse gas emissions per capita from the 2005 benchmark.

To help inform the regional SCS, the South Bay Cities Council of Governments (SBCCOG) completed the Sustainable South Bay Integrated Land Use and Transportation Strategy . The SBCCOG intends to use this document as a guide to develop a scenario planning model to help plan and evaluate its member cities' development scenarios. This approach will supplement the regional SCS with a concrete tool to demonstrate to SCAG, Metro, and South Bay cities planning staff a strategy that best fits the conditions in the South Bay.

South Coast Air Quality Management District

As a result of SB 97, local air districts, including the South Coast Air Quality Management District (SCAQMD), began a process to provide guidance to local lead agencies on determining the significance of greenhouse gas emissions identified in CEQA documents. In 2008, SCAQMD established interim greenhouse gas emissions thresholds of significance of 10,000 MTCO2e per

year for projects where SCAQMD was the lead agency. At that same time, guidance on setting thresholds for local agencies were proposed but never formally adopted by SCAQMD.

The proposed thresholds developed by the SCAQMD working group were designed to be used by local lead agencies, like the City of Hermosa Beach or the South Bay Cities Council of Governments, in evaluating the greenhouse gas impact of proposed residential, commercial, and industrial projects. The proposed thresholds use a tiered approach to determine a project's significance. The Tier 3 threshold requires that a project's incremental increase in greenhouse gas emissions should be below or mitigated to less than the significance screening level (10,000 $MTCO_2e$ per year for industrial projects; 3,500 $MTCO_2e$ for residential projects; 1,400 $MTCO_2e$ for commercial projects; 3,000 $MTCO_2e$ for mixed-use or all land use projects). The Tier 4 threshold requires that projects achieve a 28 percent reduction from a base case scenario, including land use sector reductions from Assembly Bill 32 (total emissions not to exceed 25,000 $MTCO_2e$) or achieve a project-level efficiency target. The working group also recommended a project-level efficiency target of 4.8 $MTCO_2e$ per service population as a 2020 target and 3.0 $MTCO_2e$ per service population as a 2035 target. The working group recommended a plan-level target of 6.6 $MTCO_2e$ for 2020 and a plan-level target of 4.1 $MTCO_2e$ for 2035.

City of Hermosa Beach

The City of Hermosa Beach is involved in a number of efforts to reduce its greenhouse gases and adapt to climate change. Some of these policies and programs include:

- **Strategic Plan**: The City Council calls for leadership in environmental sustainability, including stewardship of natural resources, use of alternative energy, reduced dependence on the automobile, increased pedestrian and bicycle infrastructure, water conservation and reuse, and carbon neutrality.
- **Cool Cities Program:** The City Council became a participant in the 'Cool Cities Program' in 2006. The 'Cities for Climate Protection' Campaign helps local governments to adopt policies and implement changes that reduce local greenhouse gas emissions, improve air quality, and enhance urban livability.
- **International Council for Local Environmental Initiatives (ICLEI)**: The City is a member of ICLEI, an international association of local governments that have made a commitment to sustainable development.
- **Beacon Award Program**: The City is a participant in this program which recognizes California cities and counties that are working to reduce greenhouse gas emissions, save energy and adopt policies and programs that promote sustainability.
- **Carbon Neutral Initiative**: The City Council in 2010 declared its intent to pursue the path to make city operations carbon neutral.
- **Hermosa Beach Sustainability Plan**: The City's Green Task Force prepared this plan in 2011. The plan outlines municipal and community actions to reduce greenhouse gas emissions.
- **Clean Fleet Policy and Action Plan**: The City Council adopted a Clean Fleet Policy and Action Plan on June 11, 2013 with a goal of net zero greenhouse gas emissions for the City fleet and alternative fuels for 100% of contracted city service vehicles.

- **Municipal energy reduction retrofits**: The City is engaged in the SCE Energy Leadership Program and continues to implement energy reduction programs and retrofits at municipal facilities, and is working on a solar program.
- **City Hermosa Beach Carbon Neutral Scoping Plan**: Hermosa Beach engaged a group of UCLA Environmental Science Senior Practicum students which analyzed greenhouse gas emissions by sector and developed a series of scenarios to understand the impacts of different packages of greenhouse gas reduction measures.
- **Carbon Neutrality Road Map**: The City Council's Strategic Plan adopted in 2014 identifies development of a municipal carbon neutral road map as a top priority and to achieve a leading edge in carbon neutrality for both the city and community as a longer term goal.
- **South Bay Bicycle Master Plan, Beach Cities Livability Plan, Living Streets Policy**: Adopted in 2011 these plans and policies promote active transportation and greenhouse gas emissions reduction.
- **Green Building Codes**: The City adopted Tier 1 amendments in 2010 and 2013 requiring energy reduction measures 15% below state requirements for new buildings, and in 2013 adding a 15% reduction for the expansion or remodel of any existing building by more than 50%. Other requirements included solar conduit, reduction in concrete, and cool roofs for all new and re-roofs.
- **City programs and incentives**: The city is also a participant in Energy Upgrade California and several PACE programs that can be used by residents and businesses. The City provides incentives to reduce greenhouse gas emissions in various sectors.
- **Energy Element of a Climate Action Plan**: The SBCCOG, in consultation with its member cities including Hermosa Beach, is preparing the energy component of the climate actions plans for each city, to be completed in 2015.
- **Decarbonizing the Energy Supply in Hermosa Beach**: UCLA Environmental Science Senior Practicum Project to be delivered in June 2014.
- Actively engaged in other climate planning activities: Climate Ready Grant, LA sea level rise grant, UCLA study of model coastal overlay zone.. need to get exact info
- **Solid waste reduction**: In 2013 the City approved a new solid waste agreement requiring a minimum 50% waste diversion; previously diversion was around 26% for the city alone.
- **Water Conservation**: The City adopted a water conservation and drought management ordinance in 2010.
- **Community dialogue:** In 2014, the City launched a Community Dialogue process and developed a Decision-making Tool. The Tool is designed to enhance the effectiveness of local governance by encouraging critical thought about decisions placed before the community. The Tool includes criteria for environmental impact, including alignment with carbon neutral goal.
- **City of Hermosa Beach General Plan:** Climate change is not directly addressed in the existing General Plan. However, objectives such as those that facilitate a more pedestrian oriented downtown encourage greenhouse gas mitigation.

- **City of Hermosa Beach Coastal Land Use Plan**: Certified in 1981 and most recently revised in 2004, the Coastal Plan does not address climate change mitigation or adaptation.
- **City of Hermosa Beach Municipal Code:** The City's municipal code includes regulations for green building (see Green Building Codes above) and water conservation and drought management. The code also outlines the conditional use permit requirements for small wind energy systems.

Hermosa Beach Sustainability Plan

City Council accepted the Hermosa Beach Sustainability Plan in 2011. The Sustainability Plan describes community and municipal greenhouse gas emissions, compares future emissions to Assembly Bill 32 emission reduction target (15% below 2005 levels), and outlines a series of strategies and actions to reduce greenhouse gas emissions. The strategies addressed emissions from building energy (commercial, residential, and municipal), transportation, solid waste, and water consumption determining that the suite of programs could reasonably reduce emissions 15% below 2005. Although the Sustainability Plan qualitatively compared future emissions to the Assembly Bill 32 emission reduction target, the Sustainability Plan did not adopt targets for greenhouse gas emissions.

Carbon Neutral Initiative

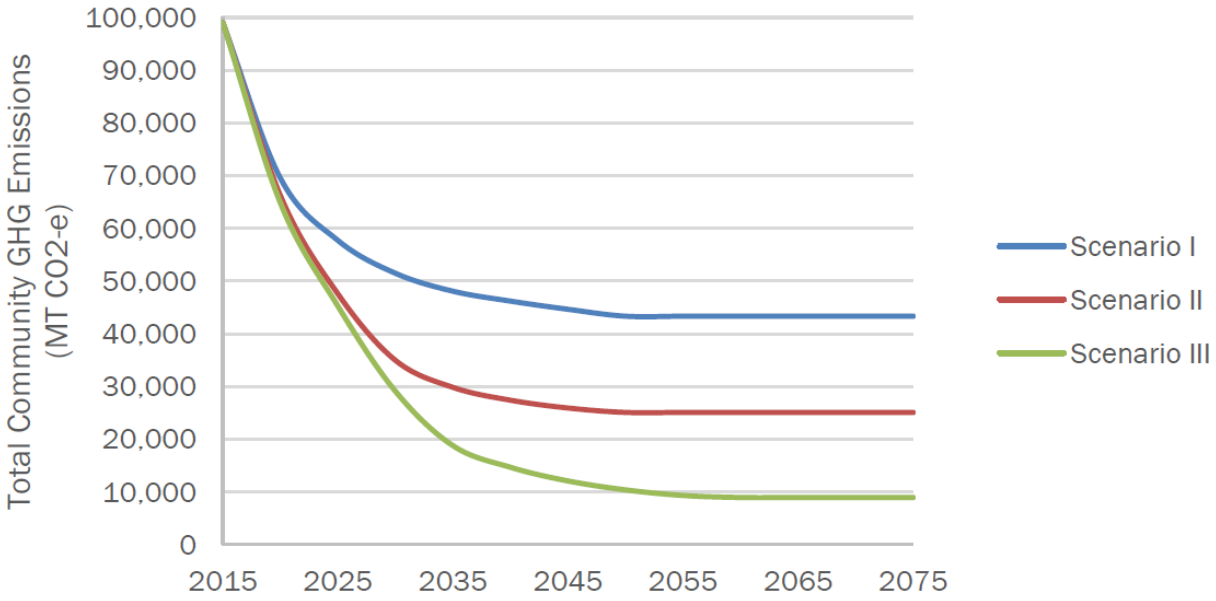
In 2010, the Hermosa Beach City Council directed the City to pursue carbon neutrality beginning with city operations and facilities. Hermosa Beach adopted a Strategic Plan in 2013, which places developing a municipal carbon neutral action plan at the top of the City's policy agenda for 2013, and this goal was renewed in 2014.

In 2011, Hermosa Beach engaged a group of UCLA Environmental Science Senior Practicum students to analyzed greenhouse gas emissions by sector and developed a series of scenarios (year 2015 to 2075) to understand the impacts of different packages of greenhouse gas reduction measures. The scenarios include:

- **Scenario I**: Implements existing measures and "low hanging fruit" resulting in an emission reduction of 56%.
- **Scenario II**: Implements more aggressive climate action based on current political will and technology resulting in a reduction of 75%.
- **Scenario III**: Implements more aggressive climate action assuming that there will be changes in political will and available technological advancements resulting in a reduction of 91%.

The scenarios were used to define what carbon neutrality means for the City and to provide information on the projected impacts of greenhouse gas reduction measures. Figure 5 shows the total greenhouse gas emissions for Scenarios I-III.

Figure 5.3: Total Greenhouse Gas Emissions for Scenarios I-III



Citations

[1] National Research Council, 2010. *Advancing the Science of Climate Change*. Washington, DC: The National Academies Press.

[2] All GWPs are given as 100-year GWP. Unless noted otherwise, all GWPs were obtained from the Intergovernmental Panel on Climate Change. *Climate Change 1995: The Science of Climate Change – Contribution of Working Group I to the Second Assessment Report of the IPCC*. Cambridge (UK): Cambridge University Press, 1996.

[3] California Air Resources Board, et al. (2010). Local Government Operations Protocol: For the quantification and reporting of greenhouse gas emission inventories. Version 1.1.

[4] Karl, T. R., et. al. (2009). Global Climate Change Impacts in the United States. Cambridge University Press.

[5] Center for Climate and Energy Solutions. (2011). Climate Change 101: Science and Impacts. Retrieved from http://www.c2es.org/docUploads/climate101-science.pdf

[6] California Air Resources Board. (2013, October). California Greenhouse Gas Emissions for 2000 to 2011 – Trends of Emissions and Other Indicators. Retrieved from http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_trends_00-11_2013-10-02.pdf

[7] California Air Resources Board. (2013, October). California Greenhouse Gas Emissions for 2000 to 2011 – Trends of Emissions and Other Indicators. Retrieved from http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_trends_00-11_2013-10-02.pdf

[8] California Air Resources Board. (2013, October). California Greenhouse Gas Emissions for 2000 to 2011 – Trends of Emissions and Other Indicators. Retrieved from http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_trends_00-11_2013-10-02.pdf

[9] California Air Resources Board. (2013, October). California Greenhouse Gas Emissions for 2000 to 2011 – Trends of Emissions and Other Indicators. Retrieved from http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_trends_00-11_2013-10-02.pdf

[10] California Air Resources Board. (2013, October). California Greenhouse Gas Emissions for 2000 to 2011 – Trends of Emissions and Other Indicators. Retrieved from http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_trends_00-11_2013-10-02.pdf

[11] NOAA (National Oceanic and Atmospheric Administration). 2013. National Climatic Data Center. Accessed April 2013. www.ncdc.noaa.gov/oa/ncdc.html.

[12] Intergovernmental Panel on Climate Change. 2007. *Climate Change 2007: Mitigation of Climate Change*.

[13] California Natural Resources Agency. 2009. *California Climate Adaptation Strategy*.

[14] Scripps Institution of Oceanography. 2009. Projected Temperatures Data Set. Received from http://cal-adapt.org/temperature/century/.

[15] National Aeronautics and Space Administration. 2005. What's the difference between weather and climate? Retrieved from http://www.nasa.gov/mission_pages/noaa-n/climate/climate_weather.html.

[16] National Research Council (2012).*Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future.* Washington, DC: The National Academies Press. Available at: http://www.nap.edu/openbook.php?record_id=13389&page=103

[17] Bromirski, P. D., A. J. Miller, R. E. Flick, and G. Auad (2011). Dynamical suppression of sea level rise along the Pacific coast of North America: Indications of imminent acceleration. *Journal of Geophysical Research* 116: C07005, 12 pp.

[18] National Research Council (2012).*Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future.* Washington, DC: The National Academies Press. Available at: http://www.nap.edu/openbook.php?record_id=13389&page=103

[19] California Climate Action Team, "Draft Biennial Climate Action Report" March 2009. Available at http://www.energy.ca.gov/2009publications/CAT-1000-2009-003/CAT-1000-2009-003-D.PDF.

[20] Scripps Institution of Oceanography. 2009. Projected Precipitation Data Set. Received from http://cal-adapt.org/precip/decadal/.

[21] Scripps Institution of Oceanography. 2009. Projected Daily Temperature Data Set. Received from http://cal-adapt.org/temperature/heat/.

[22] Duffy, P.B. and Tebaldi, C. (2012). Increasing Prevalence of Extreme Summer Temperatures in the U.S. *Climate Change*, 111: pp. 487-495.

[23] Chestnut, L.G., et. al. (1998). Analysis of Differences in Hot-Weather-Related Mortality Across 44 U.S. Metropolitan Areas. *Environmental Science Policy*, 1(1): pp. 59-70.

[24] Medina-Ramon, M.; Zanobetti, A.; Cavanagh, D.P.; and Schwartz, J. (2006). Extreme Temperatures and Mortality: Assessing Effect Modification by Personal Characteristics and Specific Cause of Death in a Multi-City Case-Only Analysis. *Environmental Health Perspectives*, 114: pp. 1331-1336.

[25] Mastrangelo, G., et. al. (2007). Pattern and Determinants of Hospitalization During Heat Waves: An Ecologic Study. *BMC Public Health,* 7: p. 200.

[26] Braga, A.; Zanobetti, A.; and Schwartz, J. (2002). The Effect of Weather on Respiratory and Cardiovascular Deaths in 12 U.S. Cities. *Environmental Health Perspectives*, 110: pp. 859-863.

[27] Ostro, B.D., et. al. (2009). Estimating the Mortality Effect of the July 2006 California Heat Wave. *Environmental Research*, 109: pp. 106-112.

[28] Dolney, T., and Sheridan, S. (2007). The Relationship between Extreme Heat and Ambulance Response Calls for the City of Toronto, Ontario, Canada. *Environmental Resources*, 101(1): pp. 94-103.

[29] Luber, G.; Sanchez, C.; and Conklin, L. (2006). Heat-Related Deaths—United States, 1999–2003. *Morbidity and Mortality Weekly Report*, 55(29): pp. 796-798.

[30] Deschênes, O.; Greenstone, M., and Guryan, J. (2009). Climate Change and Birth Weight. *American Economic Review*, 99: pp. 211–217.

[31] Knowlton, K., et. al. (2009). The 2006 California Heat Wave: Impacts on Hospitalizations and Emergency Department Visits. *Environmental Health Perspectives*, 117(1): pp. 61-67.

[32] Basu, R. and Ostro, B. (2009). A Multi-County Analysis Identifying the Vulnerable Populations for Mortality Associated with High Ambient Temperatures in California. White Paper for the California Climate Change Center.

[33] Reid, C., et. al. (2009). Mapping Community Determinants of Heat Vulnerability. *Environmental Health Perspectives,* 117(11): pp. 1730-1736.

[34] Poumadere, M., et. al. (2005). The 2003 Heat Wave in France: Dangerous Climate Change Here and Now. *Risk Analysis*, 25(6): pp. 1483-1493.

[35] Shonkoff, S., et. al. (2009). Minding the Climate Gap: Environmental Health and Equity Implications of Climate Change Mitigation Policies in California. *Environmental Justice*, 2(4), pp. 173-177.

[36] Reid, C., et. al. (2009). Mapping Community Determinants of Heat Vulnerability. *Environmental Health Perspectives,* 117(11): pp. 1730-1736.

[37] Shonkoff, S., et. al. (2009). Minding the Climate Gap: Environmental Health and Equity Implications of Climate Change Mitigation Policies in California. *Environmental Justice*, 2(4), pp. 173-177.

[38] Reid, C., et. al. (2009). Mapping Community Determinants of Heat Vulnerability. *Environmental Health Perspectives,* 117(11): pp. 1730-1736.

[39] Poumadere, M., et. al. (2005). The 2003 Heat Wave in France: Dangerous Climate Change Here and Now. *Risk Analysis*, 25(6): pp. 1483-1493.

[40] Shonkoff, S., et. al. (2009). Minding the Climate Gap: Environmental Health and Equity Implications of Climate Change Mitigation Policies in California. *Environmental Justice*, 2(4), pp. 173-177.

[41] Luber, G., et. al. (2013). Human Health. Chapter for the National Climate Assessment.

[42]California Department of Water Resources. (2008). Managing an Uncertain Future: Climate Adaptation Strategies for California's Water. Retreived from http://www.water.ca.gov/climatechange/docs/ClimateChangeWhitePaper.pdf

[43] California Climate Change Center. Our Changing Climate 2012: Vulnerability & Adaptation to the Increasing Risks from Climate Change. Retrieved from http://uc-ciee.org/downloads/Our%20Changing%20Climate%202012.pdf

[44] Loarie, S. R., et. al. (2008). Climate Change and the Future of California's Endemic Flora. *PLoS ONE*, v.3 (6), e2502.

[45]Deschenes, O., and Kolstad, C. (2011). Economic Impacts of Climate Change on California Agriculture. *Climatic Change*, 109 (S1), p. 365–386.

[46] California Climate Change Center. Our Changing Climate 2012: Vulnerability & Adaptation to the Increasing Risks from Climate Change. Retrieved from http://uc-ciee.org/downloads/Our%20Changing%20Climate%202012.pdf

[47] Moser, Susanne, Guido Franco, Sarah Pittiglio, Wendy Chou and Dan Cayan. 2008. The Future is Now: An Update on Climate Change Science Impacts and Response Options for California. 2008 Climate Change Impacts Assessment Project – Second Biennial Science Report to the California Climate Action Team, CEC-500-2008-071.

[48] California Climate Action Team. 2009. *Draft Biennial Climate Action Report*. Available at http://www.energy.ca.gov/2009publications/CAT-1000-2009-003/CAT-1000-2009-003-D.PDF.

[49] California Air Resources Board. (2014). Assembly Bill 32 Scoping Plan. Retrieved from http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm.

[50] State of California. (2013, July). Subchapter 10 Climate Change, Article 5, Sections 95800 to 96023, Title 17, California Code of Regulations. Retreived from http://www.arb.ca.gov/cc/capandtrade/ctlinkqc.pdf.

[51] California Air Resources Board. (2013). California Cap-and-Trade Program Implementation Frequently Asked Questions. Retreived from http://www.arb.ca.gov/cc/capandtrade/implementation/faq_5_24_2013.pdf

[52] California Legislative Analysis Office. (2014, August 4). LAO Response to Assembly Member Perea. Retrieved from http://la.streetsblog.org/wp-content/uploads/2014/08/LAOresponsetoPerea-Gasoline-Cap-and-Trade1.pdf

[53] SCE Renewable Energy. http://www.sce.com/PowerandEnvironment/renewables/

[54] California Building Standards Commission. "CALGreen." Retrieved on May 21, 2010 from http://www.bsc.ca.gov/CALGreen/default.htm.

[55] California Low Carbon Fuel Standard. Retrieved from http://www.arb.ca.gov/fuels/lcfs/lcfs.htm.

[56] Scoping Plan. http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm

[57] California Department of Natural Resources, 2009. *California Climate Adaptation Strategy.* http://resources.ca.gov/climate_adaptation/statewide_adaptation/californias_adaptation_strategy.html

[58] California Office of Planning and Research. (2014). General Plan. Retrieved from http://www.opr.ca.gov/s_generalplanguidelines.php

[59] California Coastal Commission. (2013). Local Coastal Program Update Guide. Retrieved from http://www.coastal.ca.gov/la/lcp.html

[60] California Coastal Commission. (2014). DRAFT Sea-Level Rise Policy Guidance. Retrieved from http://www.coastal.ca.gov/climate/SLRguidance.html

C-6: Biological Resources

6. Biological Resources

6.1 Introduction

This section describes the environmental setting, regulatory setting, and key issues for biological resources in the planning area. This section draws upon data from the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB), the US Fish and Wildlife (USWS) Information, Planning and Conservation (IPaC) System, the California Native Plant Society (CNPS), and previous environmental documentation prepared for the City of Hermosa Beach.

6.2 Environmental Setting

Regional Setting

The City of Hermosa Beach (planning area) is located within the Southern California Coast ecological section of the California Coastal Chaparral Forest and Shrub ecological province. The landscape of the Southern California Coast section is characterized by narrow ranges and broad fault blocks, as well as coastal terraces and alluviated lowlands. Predominant cover types in this section consist of chaparral, coastal sagebrush, southern oak forest, and valley oak savannah (McNab et al. 2007). The Southern California Coast section is further subdivided into 10 subsections, including the Los Angeles Plain subsection.

The planning area is associated with the Los Angeles Plain subsection of the Southern California Coast ecological section, comprising the mountains, hills, alluvial fans, marine terraces, and floodplains located south of the San Gabriel Mountains. The subsection includes the Los Angeles Basin, San Fernando Valley, Verdugo Mountains, San Rafael Hills, and Palos Verdes Hills. Soils are predominantly well drained. Vegetation is largely characterized by California sagebrush—California buckwheat series and mixed sage series, with coast live oak series and California walnut series common, but not extensive. California sycamore series is common in riparian areas, and pickleweed series occurs in coastal salt marsh areas such as San Pedro Bay. Chamise and mixed chaparral shrublands dominate at higher elevations. The climate is hot and subhumid, characterized by mean annual temperatures between 58° and 64° Fahrenheit, and 12–20 inches of precipitation annually that falls mostly as rain. The climate is greatly modified by marine influences and summer fog is common. The Los Angeles River, the largest stream on the plain, drains the San Fernando Valley and the San Gabriel Mountains. Most of the streams in the region are dry through summer (Goudey and Miles 1998).

Local Setting

The planning area encompasses all lands within the Hermosa Beach city limits. Elevations in the city range from sea level along the coast to approximately 200 feet above mean sea level inland. The planning area is characterized by rolling hills with most elevation gain occurring from west to east. The planning area includes approximately 1.8 miles of coastline along the Santa Monica Bay. This area is characterized by an approximately 400-foot-wide sandy beach between the Pacific Ocean and urban development. The planning area is bounded on all remaining sides by urban development.

Vegetative Communities

Historically, the planning area was characterized by coastal sage scrub and southern coastal scrub vegetative communities. These communities are composed of drought-tolerant, low-growing shrubs with an understory of grasses and herbs. The scrub communities are structurally diverse and provide high value habitat for wildlife. Scrub and any other naturally occurring vegetative communities have been extirpated from the planning area. Hermosa Beach is largely built-out. Open space areas include the beach along the coastline, Veterans Parkway (Hermosa Valley Greenbelt), a hillside west of Marineland Mobilehome Park, and two large parks.

The location and extent of vegetative communities in the planning area was derived from aerial photography, a reconnaissance-level survey, and the US Forest Service (USFS) Pacific Southwest Region CalVEG Vegetation Classification and Mapping data (2014). The reconnaissance-level survey was conducted by PMC biologists Leslie Parker and Summer Pardo on February 25, 2014. The planning area comprises primarily urban/developed land uses along with the sandy beach coastline and non-native/ornamental open space areas. These communities are described below and shown in Figure 6-1. Table 6-1 summarizes the acreages of each vegetative community within the coastal zone and the inland portion of the city.

TABLE 6.1: ACREAGES OF VEGETATIVE COMMUNITIES WITHIN THE COASTAL AND INLAND ZONES

Zone	Vegetative Community	Area (acres)
Coastal	Urban/Developed	343
	Beach Sand	57
	Non-Native/Ornamental	19
	TOTAL	**419**
Inland	Urban/Developed	479
	Non-Native/Ornamental	18
	TOTAL	**497**

FIGURE 6.1: VEGETATIVE COMMUNITIES

City of Hermosa Beach General Plan Update 2035

Pepared by Raimi + Associates for the City of Hermosa Beach
Source: City of Hermosa Beach, Los Angeles County, November 2013

Urban/Developed

Urban/developed land uses encompass the majority of the planning area. Urban vegetative communities are classified as areas that have been heavily modified by humans, including roadways, existing buildings, and structures, as well as recreation fields, small parks, lawns, and other landscaped vegetation. Because of the high degree of disturbance in these areas, they generally have low habitat value for wildlife; however, migratory birds may find limited nesting and foraging opportunities in trees and shrubs scattered throughout the urban areas.

Non-native/Ornamental

The non-native/ornamental areas in the planning area include the Greenbelt, South Park, Valley Park, and a hillside west of the Marineland Mobilehome Park that runs northward through several residential parcels to 24th Street. These areas could be considered urban cover as they largely comprise non-native landscaped vegetation; however, CalVEG classifies them as non-native/ ornamental. For the purposes of this report they are separate from the urban/developed cover type.

The Hermosa Valley Greenbelt runs the complete north-south length of the planning area. It consists of a mulched trail, work-out stations, benches, and landscaped shrubs and trees. The non-native trees and shrubs associated with the Greenbelt include eucalyptus (*Eucalyptus* spp.), Peruvian pepper tree (*Schinus molle*), cape honeysuckle (*Tecoma capensis*), and acacia (*Acacia* sp.). Groundcover comprises non-native grasses, ice plant (*Carpobrotus edulis*), and Boston ivy (*Parthenocissus tricuspidata*). The vegetation within the Greenbelt is regularly landscaped. The hillside west of the Greenbelt behind the houses east of Loma Drive, is characterized by a similar suite of non-native species and includes areas of woodland and open grassland. South Park and Valley Park are characterized by open, manicured grassy areas bounded by large trees. The parks also include trails, picnic areas, playgrounds, and recreation areas.

Although these areas consist primarily of non-native vegetation, they provide some limited resources for wildlife species that are accustomed to heavily urbanized settings. The trees, shrubs, and grassy fields provide suitable roosting, foraging, and nesting habitat for numerous bird species, including mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhyncos*), house finch (*Carpodacus mexicanus*), northern mockingbird (*Mimus polyglottos*), and Anna's hummingbird (*Calypte anna*). Raptors, such as red-tailed hawk (*Buteo jamaicensis*) and American kestrel (*Falco sparverius*), may also forage in the open areas and use large trees for perching and nesting.

Beach Sand

The entire length of the coastline within the planning area is characterized by sandy beach habitat. This habitat is typically found between the intertidal zone and areas where vegetation becomes established, often forming dunes. The beach is heavily used by humans and mostly barren, with the exception of kelp rake that can collect on the beach. Kelp rake provides cover for a variety of organisms and is itself a food source for invertebrates after it is beached. Several invertebrate species, such as crustaceans and worms, live in the sand of the intertidal zone. These invertebrates attract shorebirds such as sanderling (*Calidris alba*), western sandpiper (*Calidris maudi*), least sandpiper (*Calidris minutilla*), willet (*Tringa semipalmata*), and various species of gull (*Larus* spp.). Western snowy plover (*Charadrius nivosus nivosus*), a special-status species, is known to winter on the shores of Hermosa Beach.

Sensitive Biological Resources

Several steps were taken to characterize sensitive biological resources in the planning area. First, project-related documentation was reviewed to collect site-specific data regarding habitat suitability for special-status species, as well as the identification of potentially jurisdictional waters. Additional information was obtained from a variety of outside data sources identified in the references section. In addition, database searches were performed using the following resources to identify special-status species with potential to occur in the planning area:

- US Fish and Wildlife Service (USFWS) Information Planning and Conservation (IPaC) System (USFWS 2014a)
- USFWS Critical Habitat Portal (USFWS 2014b)
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB; CDFW 2014a)
- California Native Plant Society (CNPS) Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2014)

The USFWS IPaC System identifies special-status species within the jurisdiction of the USFWS that have the potential to occur within the planning area. In addition, the USFWS Critical Habitat Portal identifies designated critical habitat within 1 mile of the planning area. The CNDDB database provides a list of known occurrences for special-status species within a 5-mile radius of the planning area. The CNPS database identifies special-status plant species with the potential to occur within the Venice and Redondo Beach, California USGS 7.5 minute quadrangles. Raw data from queries of each database are provided in Appendix B1.

Special-Status Species

Candidate, sensitive, or special-status species are commonly characterized as those that are at potential risk or actual risk to their persistence in a given area, or across their native habitat. These species have been identified and assigned a status ranking by governmental agencies, the CDFW, the USFWS, and private organizations, including CNPS. The degree to which a species is at risk of extinction is the determining factor in the assignment of a status ranking. Some common threats to a species' or population's persistence include habitat loss, degradation, and fragmentation, as well as human conflict and intrusion. For the purposes of this report, special-status species are defined using the following codes:

- Listed, proposed, or candidates for listing under the federal Endangered Species Act (ESA) (50 Code of Federal Regulations [CFR] 17.11 – listed; 61 Federal Register [FR] 7591, February 28, 1996 candidates)
- Listed or proposed for listing under the California Endangered Species Act (CESA) (Fish and Game Code ([FGC] 1992 Section 2050 et seq.; 14 California Code of Regulations [CCR] Section 670.1 et seq.)
- Designated as Species of Special Concern by the CDFW
- Designated as Fully Protected by the CDFW (FGC Sections 3511, 4700, 5050, 5515)

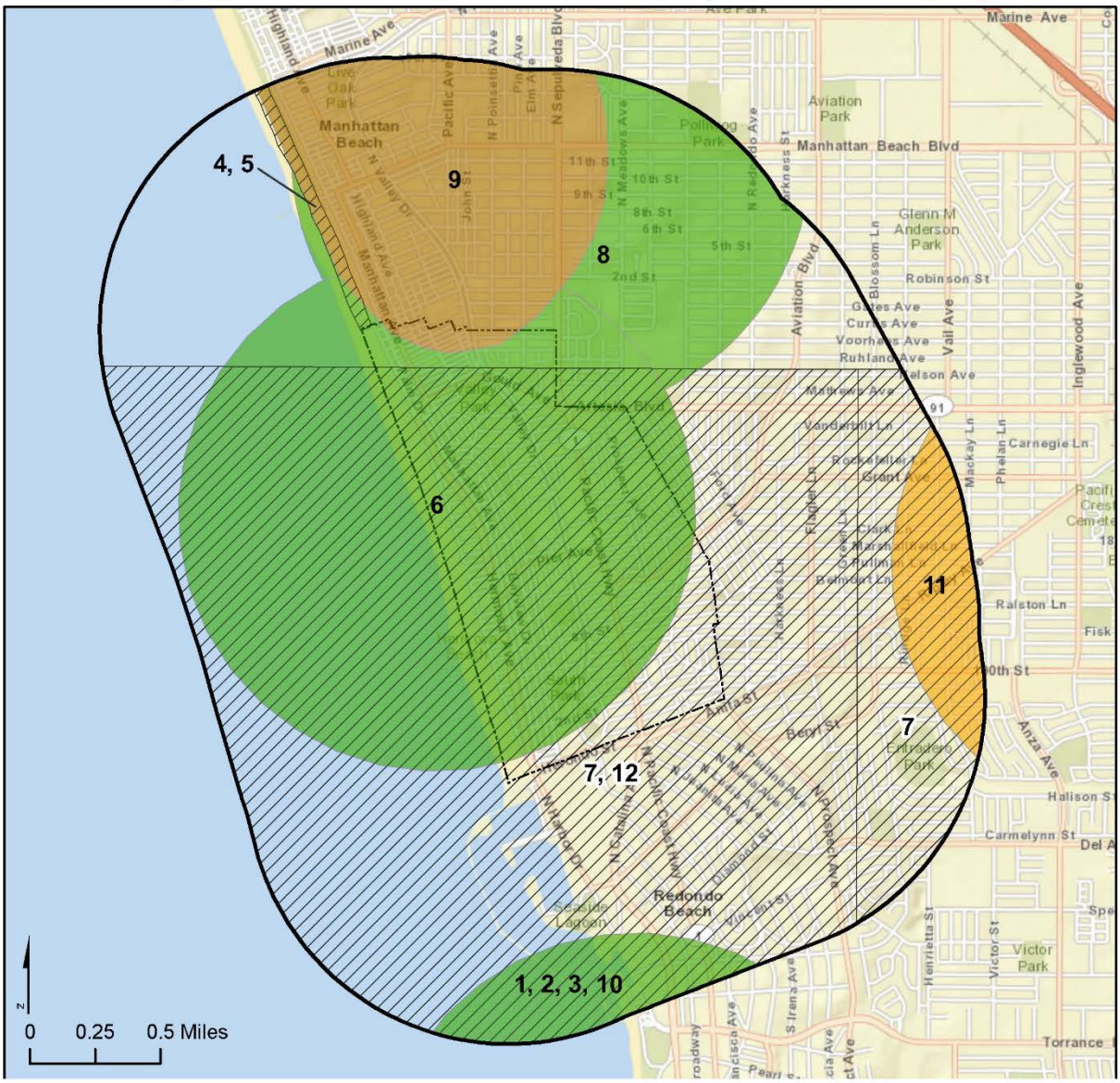
- Species that meet the definition of rare or endangered under the California Environmental Quality Act (CEQA) (14 CCR Section 15380), including CNPS List Rank 1b and 2

The USFWS, CDFW, and CNPS database queries identified several special-status species with the potential to occur in the planning area. Table 1 and Table 2, found in Appendix B1, summarize all special-status species identified in the database results, describe the habitat requirements for each species, and provide conclusions regarding the potential for each species to occur in the planning area. The CNDDB results within 1 mile of the planning area are depicted on Figure 6-2**.**

Special-Status Plants

Due to the extirpation or high modification of natural habitats within Hermosa Beach, it is extremely unlikely that any special-status plants occur in the planning area. The open space areas are routinely landscaped and frequented by human traffic. The beach is extremely disturbed and no vegetated dune habitat remains.

FIGURE 6.2: PREVIOUSLY RECORDED OCCURRENCES OF SPECIAL-STATUS SPECIES



Legend

- City Boundary
- 1-Mile Buffer

CNDDB Occurrence Type

- Mammal
- Reptile
- Invertebrate
- Plant

Map ID	Scientific Name	Common Name	Federal Listing	State Listing	Rare Plant Rank
1	*Aphanisma blitoides*	aphanisma	None	None	1B.2
2	*Atriplex pacifica*	south coast saltscale	None	None	1B.2
3	*Atriplex parishii*	Parish's brittlescale	None	None	1B.1
4	*Brennania belkini*	Belkin's dune tabanid fly	None	None	
5	*Cicindela senilis frosti*	senile tiger beetle	None	None	
6	*Dithyrea maritima*	beach spectaclepod	None	Threatened	1B.1
7	*Glaucopsyche lygdamus palosverdesensis*	Palos Verdes blue butterfly	Endangered	None	
8	*Navarretia prostrata*	prostrate vernal pool navarretia	None	None	1B.1
9	*Perognathus longimembris pacificus*	Pacific pocket mouse	Endangered	None	
10	*Phacelia stellaris*	Brand's star phacelia	None	None	1B.1
11	*Phrynosoma blainvillii*	coast horned lizard	None	None	
12	*Rhaphiomidas terminatus terminatus*	El Segundo flower-loving fly	None	None	

City of Hermosa Beach General Plan Update 2035

Source: CA Dept of Fish & Wildlife (Feb, 2014);
City of Hermosa Beach, Los Angeles County, November 2013

Special-Status Wildlife

Based on the database search results, two wildlife species have potential to occur within the planning area. They are described below based on data obtained from various sources.

California Least Tern (*Sterna antillarum browni*)

The California least tern is a federally endangered species and is state-listed as endangered. This species is a summer visitor that breeds along the Southern California coast from April to September. California least terns nest in colonies on beaches or islands cleared of vegetation (USFWS 2006).

Historically, California least terns nested on sandy beaches and salt flats all along the coast; however, habitat loss caused a drastic reduction in breeding sites. The nearest breeding colonies to the planning area are in Venice Beach and at the Port of Los Angeles (USFWS 2006). There are no records of this species nesting in the planning area; however, they likely forage offshore.

Western Snowy Plover (*Charadrius nivosus nivosus*)

The western snowy plover is a federally endangered species and a California species of special concern. This species typically nests on coastal beaches, sand spits, sparsely vegetated dunes, beaches at river mouths, and salt pans at lagoons and estuaries. They can also be found nesting on man-made features such as dredged material disposal sites and around salt ponds. Recent western snowy plover use of beaches in the planning area is expected, although nesting in the planning area has not been recorded since 1949. The nearest breeding colony to the planning area is Bolsa Chica in Orange County (USFWS 2007).

Designated critical habitat for western snowy plover occurs on Hermosa State Beach. The critical habitat subunit stretches roughly 0.5 miles from 11th Street southward to 1st Street and totals approximately 27 acres. This subunit supports wintering flocks of snowy plover. Human recreation, pets, and beach raking are all threats to the features of this critical habitat subunit (USFWS 2012).

Marine Wildlife

Offshore resources of the Santa Monica Bay include a rich diversity of migratory and resident species of mammals, birds, fishes, and invertebrates. Common coastal seabirds found foraging near the shore of Hermosa Beach include western (*Aechmorphorus occidentalis*) and Clark's grebes (*Aechmorphorus clarkii*), cormorants (*Phalacrocorax* spp.), loons (*Gavia* spp.), California brown pelicans (*Pelecanus occidentalis*), and gulls. Coastal birds are at their highest densities during the winter months. Mammal species found in the area include various cetaceans (whales, dolphins, and porpoises), pinnipeds (seals and sea lions), and sea otters. All marine mammals are protected under the Marine Mammal Protection Act.

Sensitive Natural Communities

Two habitats (Southern Coastal Bluff Scrub and Southern Dune Scrub) located in the vicinity of the planning area were identified in the CNDDB query as locally sensitive habitats. Southern coastal bluff scrub occurs south of the planning area along the bluffs of the Palos Verdes Peninsula. Southern dune scrub occurs north of the planning area in the El Segundo dunes. Neither habitat is present in or located adjacent to the planning area.

6.3 Regulatory Setting

This section details the federal, state, and local laws, regulations, and policies that pertain to biological resources in the planning area.

Federal Plans, Policies, Regulations, and Laws

Endangered Species Act

The Endangered Species Act of 1973 (ESA), as amended, provides protective measures for federally listed threatened and endangered species, including their habitats, from unlawful take (16 United States Code (USC) Sections 1531–1544). The ESA defines "take" to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Title 50, Part 222, of the Code of Federal Regulations (50 CFR Section 222) further defines "harm" to include "an act which actually kills or injures fish or wildlife. Such acts may include habitat modification or degradation where it actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns including feeding, spawning, rearing, migrating, feeding, or sheltering."

Clean Water Act

The basis of the Clean Water Act (CWA) was established in 1948; however, it was referred to as the Federal Water Pollution Control Act. The act was reorganized and expanded in 1972 (33 USC Section 1251), and at this time the Clean Water Act became the act's commonly used name. The basis of the CWA is the regulation of pollutant discharges into waters of the United States, as well as the establishment of surface water quality standards.

Migratory Bird Treaty Act

Migratory birds are protected under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC Sections 703–711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Section 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR Section 21). The majority of birds found in the project vicinity would be protected under the MBTA.

Marine Mammal Protection Act

Under the Marine Mammal Protection Act of 1972, the Secretary of Commerce delegated the authority to protect all cetaceans and pinnipeds to the National Marine Fisheries Service. The Secretary of the Interior is responsible for protecting sea otters and delegated this authority to the USFWS. The Marine Mammal Protection Act established a moratorium on the taking of marine mammals in waters under US jurisdiction. Under the act, "taking" includes hunting, capturing, and killing and attempting to harass, hunt, capture, or kill any marine mammal. "Harassment" is defined as any act of pursuit, torment, or annoyance that has the potential to injure a marine mammal or marine mammal stock in the wild.

Coastal Zone Management Act

In accordance with the Coastal Zone Management Act and the Coastal Zone Act Reauthorization Amendments of 1990, all federal activities must be consistent, to the maximum extent practicable, with the enforceable policies of each affected state's Coastal Zone Management program. The programs set forth policies, and standards regarding public and private use of land and water in the coastal zone.

State Plans, Policies, Regulations and Laws

California Endangered Species Act

Under the California Endangered Species Act (CESA), the CDFW has the responsibility for maintaining a list of endangered and threatened species (FGC Section 2070). The CDFW also maintains a list of "candidate species," which are species formally noticed as being under review for potential addition to the list of endangered or threatened species, and a list of "species of special concern," which serve as a species "watch lists."

Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present and determine whether the proposed project will have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may impact a candidate species.

State-listed species are fully protected under the mandates of the CESA. Take of protected species incidental to otherwise lawful management activities may be authorized under FGC Section 206.591. Authorization from the CDFW would be in the form of an incidental take permit.

Native Plant Protection Act

The Native Plant Protection Act (FGC Sections 1900–1913) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered (as defined by the CDFW). An exception in the Act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify the CDFW and give that state agency at least 10 days to retrieve the plants before they are plowed under or otherwise destroyed (FGC Section 1913).

Birds of Prey

Under FGC Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.

"Fully Protected" Species

California statutes also afford "fully protected" status to a number of specifically identified birds, mammals, reptiles, and amphibians. These species cannot be taken, even with an incidental take permit. FGC Section 3505 makes it unlawful to take "any aigrette or egret, osprey, bird of paradise, goura, numidi, or any part of such a bird." FGC Section 3511 protects from take the following fully protected birds: (a) American peregrine falcon (*Falco peregrinus anatum*); (b) brown pelican (*Pelecanus occidentalis*); (c) California black rail (*Laterallus jamaicensis coturniculus*); (d) California clapper rail (*Rallus longirostris obsoletus*); (e) California condor (*Gymnogyps californianus*); (f) California least tern (*Sterna antillarum browni*); (g) golden eagle (*Aquila chrysaetos*); (h) greater sandhill crane (*Grus canadensis tabida*); (i) light-footed clapper rail (*Rallus longirostris levipes*); (j) southern bald eagle (*Haliaeetus leucocephalus leucocephalus*); (k) trumpeter swan (*Cygnus buccinator*); (l) white-tailed kite (*Elanus leucurus*); and (m) Yuma clapper rail (*Rallus longirostris yumanensis*).

FGC Section 4700 identifies the following fully protected mammals that cannot be taken: (a) Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*); (b) bighorn sheep (*Ovis canadensis*), except Nelson bighorn sheep (subspecies *Ovis canadensis nelsoni*); (c) Guadalupe fur seal (*Arctocephalus townsendi*); (d) ring-tailed cat (genus *Bassariscus*); (e) Pacific right whale (*Eubalaena sieboldi*); (f) salt-marsh harvest mouse (*Reithrodontomys raviventris*); (g) southern sea otter (*Enhydra lutris nereis*); and (h) wolverine (*Gulo gulo*).

FGC Section 5050 protects from take the following fully protected reptiles and amphibians: (a) blunt-nosed leopard lizard (*Crotaphytus wislizenii silus*); (b) San Francisco garter snake (*Thamnophis sirtalis tetrataenia*); (c) Santa Cruz long-toed salamander (*Ambystoma macrodactylum croceum*); (d) limestone salamander (*Hydromantes brunus*); and (e) black toad (*Bufo boreas exsul*).

FGC Section 5515 identifies certain fully protected fish that cannot lawfully be taken, even with an incidental take permit. The following species are protected in this fashion: (a) Colorado River squawfish (*Ptychocheilus lucius*); (b) thicktail chub (*Gila crassicauda*); (c) Mohave chub (*Gila mohavensis*); (d) Lost River sucker (*Catostomus luxatus*); (e) Modoc sucker (*Catostomus microps*); (f) shortnose sucker (*Chasmistes brevirostris*); (g) humpback sucker (*Xyrauchen texanus*); (h) Owens River pupfish (*Cyprinoden radiosus*); (i) unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*); and (j) rough sculpin (*Cottus asperrimus*).

Several of the aforementioned species have the potential to occur in the planning area including brown pelican, California least tern and the marine mammals.

Marine Life Protection Act

The Marine Life Protection Act (MLPA; FGC Sections 2850-2863) directs the state to redesign California's system of marine protected areas (MPAs) to function as a network in order to: increase coherence and effectiveness in protecting the state's marine life and habitats, marine ecosystems, and marine natural heritage, as well as to improve recreational, educational, and study opportunities provided by marine ecosystems subject to minimal human disturbance.

California Planning and Zoning Requirements

The California Government Code establishes the authority for and scope of general plans prepared by local jurisdictions in California. This includes requirements for local jurisdictions to include specific elements and address certain issues associated with local land use decisions within a general plan. Biological resources are typically addressed within the conservation and open space elements of a general plan to ensure adequate protection or enhancement of biological resources in the context of development patterns and intensities and the natural qualities of a community.

Santa Monica Bay Restoration Commission

The Santa Monica Bay Restoration Commission (SMBRC) is an independent state organization devoted to restoring and protecting Santa Monica Bay and its resources. The State of California and the U.S. Environmental Protection Agency established the Santa Monica Bay Restoration Project (SMBRP) as a National Estuary Program in December 1988. The SMBRP was formed to develop the Santa Monica Bay Restoration Plan to ensure the long-term health of the Bay and its watershed. The primary mission of SMBRP is to facilitate and oversee the implementation of the plan.

California Coastal Act of 1976

The California Coastal Act of 1976 (Coastal Act) and the California Coastal Commission, the state's coastal protection act and planning agency, were established by voter initiative in 1972 to plan for and regulate new development, and to protect public access to and along the shoreline. The Coastal Act contains policies to guide local and state decision-makers in the management of coastal and marine resources.

To provide maximum public access to the coast and public recreation areas, the Coastal Act directs each local government located within the coastal zone to prepare a Local Coastal Program (LCP) consistent with Section 30501 of the Coastal Act, in consultation with the Coastal Commission and with public participation.

California Coastal Act
Section 30230 Marine resources; maintenance

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 Biological productivity; waste water

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30240 Environmentally sensitive habitat areas; adjacent developments

Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Source: California Public Resources Code, Division 20: California Coastal Act

Local Plans, Policies, Regulations and Laws

City of Hermosa Beach General Plan

The City of Hermosa Beach General Plan was last adopted in October 1979. Policies that relate to natural resources are included in the Conservation and Open Space elements of the existing General Plan. Policies include preservation and enhancement of open space areas, including the beach; prohibition of oil drilling on the beach or by off-shore platform; and minimizing the effects of water runoff.

City of Hermosa Beach Local Coastal Program (LCP)

An LCP consists of the Coastal Land Use Plan (general plan-level policies and maps) and a Local Implementation Program (coastal zoning code, zoning maps, and implementing ordinances). The City does not have a certified LCP. The Coastal Land Use Plan component, adopted by the City and certified by the California Coastal Commission in 1981, and as amended, does not include policies or programs specifically related to biological resources.

City of Hermosa Beach Municipal Code

Chapter 8.44 Stormwater and Urban Runoff Pollution Control Regulations

The purpose of Chapter 8.44 of the Hermosa Beach Municipal Code is to ensure the future health, safety and general welfare of citizens of the city and the water quality of the receiving waters of the surrounding coastal areas. In addition, the Chapter strives to protect and enhance the quality of watercourses, water bodies, and wetlands within the city in a manner consistent with the Clean Water Act, the California Porter-Cologne Water Quality Control Act, and the Municipal NPDES Permit. The Chapter prohibits illicit discharges and connections, littering, disposal of landscape decries, non-storm water discharges, and any discharges in violation of the Municipal NPDES.

Chapter 12.36 Trees

Chapter 12.36 of the Hermosa Beach Municipal Code strives to preserve and protect trees in the public right-of-way (parkway). The chapter prohibits the planting, maintenance, damage, destruction, or removal of parkway trees. Chapter 12.36 also states that a permit is necessary for the removal of a parkway tree. Additionally, during construction projects, the project proponent shall take all necessary precautions to protect parkway trees.

Nongovernmental Organizations

California Native Plant Society

The CNPS is a nongovernmental agency that classifies native plant species according to current population distribution and threat level in regard to extinction. These data are used by the CNPS to create/maintain a list of native California plants that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2014). Potential impacts to populations of CNPS-listed plants receive consideration under CEQA.

The following identifies the definitions of the CNPS listings:

List 1A: Plants believed to be extinct

List 1B: Plants that are rare, threatened, or endangered in California and elsewhere

List 2: Plants that are rare, threatened, or endangered in California, but are more numerous elsewhere

All of the plant species on List 1 and 2 meet the requirements of the Native Plant Protection Act Section 1901, Chapter 10, or FGC Section 2062 and Section 2067 and are eligible for state listing. Plants appearing on List 1 or 2 are considered to meet the criteria of CEQA Section 15380, and effects on these species are considered "significant." Plants on List 3 (plants about which more information is needed, and/or List 4 (plants of limited distribution), as defined by the CNPS, are not currently protected under state or federal law.

Heal the Bay

Heal the Bay is a nonprofit environmental organization endeavoring to make Southern California coastal waters and watersheds, including Santa Monica Bay, safe, healthy and clean. The organization uses science, education, community action, and advocacy to pursue its mission.

Surfrider Foundation

The Surfrider Foundation is a nonprofit environmental organization founded in 1984. The South Bay chapter of the Surfrider Foundation strives to protect and restore coastal and ocean ecosystems and ensure free and open access to the beaches and waves in the vicinity of the planning area.

C-7: Cultural Resources

7.0 Cultural Resources

7.1 Introduction

Cultural resources are generally defined as the collective evidence of the past activities and accomplishments of people, such as buildings, objects, feature, locations, and structures with scientific, historic, and cultural value. This section primarily focuses on the historic resources, though the topic of cultural resources typically includes historical, architectural, archeological, and paleontological resources. Additional analysis of paleontological resources in Hermosa Beach can be found in Appendix B6.

A historical resource is a building, site or structure significant in architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural history. Furthermore, historical resources include properties listed in or formally determined eligible for listing in the California Register of Historical Resources, or local historic register. A "local historic register" or "local register of historical resources" means a list of resources that are officially designated or recognized as historically significant by a local government pursuant to resolution or ordinance. "Historical Resources" also include resources identified as significant in an historical resource survey conducted by qualified individuals in accordance with accepted federal and/or state survey guidelines. Additionally, properties, which are not listed but are otherwise determined to be historically significant, based on substantial evidence, would also be considered historical resources.

The purpose of the historical resources section of the General Plan Update is to provide policy direction regarding the role of historic preservation in protecting Hermosa Beach's heritage as an integral part of Hermosa Beach's future development. Historic preservation is an important planning and economic development tool for the revitalization of neighborhoods and the city center. The historic resources component incorporates the preservation and protection of historic resources into long-range land use and economic planning. The goals and objectives will provide continuity and guidance to actions of the City Council, Commissions and Boards, city staff, and citizens in preserving and protecting Hermosa Beach's historic districts and resources.

The purpose of preservation is to identify, protect, and preserve the structures of the City's cultural and architectural history, to assert pride in the community and what makes it unique, and to draw on the past as an invaluable guide for future growth.

7.2 Methodology

The Historical Resources investigations were conducted by PCR Services Corporation's (PCR) Historic Resources Division personnel Margarita J. Wuellner, Ph.D., Director of Historic Resources, and Amanda Y. Kainer, M.S., Architectural Historian, who meet and exceed the Secretary of the Interior's Professional Qualification Standards in history and architectural history, Dr. Wuellner and

Ms. Kainer were assisted by Chris Taylor, Intern, M.A. Candidate, University of Southern California, who conducted survey work, research and contributed to the historic context.

The historical resources investigations follow the standards and guidelines set forth by the National Park Service (NPS) and the California Office of Historic Preservation (OHP), including the *Secretary of the Interior's Standards for Preservation Planning*; National Register Bulletin 24: *Guidelines for Local Surveys: A Basis for Preservation Planning*; National Register Bulletin 15: *How to Apply the National Register Criteria for Evaluation*; National Register Bulletin 16: *How to Complete the National Register Registration Form*; and the OHP's *Instructions for Recording Historical Resources*.

7.2.1 Research

A thorough archival records search was conducted by PCR through the South Central Coastal Information Center at California State University, Fullerton, as well as the City of Hermosa Beach Department of Community Development. The archival records review included all pertinent available previous surveys reports and historical resources inventories on file at these repositories, as appropriate. Previously known resources are depicted on Figure 1 and the records search results are discussed below and included in Appendix B3.

PCR completed background research necessary for the development of a historic context for the Project Area, presented below, which provides an overview of the economic, cultural, architectural, social, and transportation history of the area. Historical background research was conducted to obtain information on the local trends and patterns of history and the overall architectural development of the study area. The Hermosa Beach Historical Society graciously provided PCR access to their archival collections and took PCR staff on a site tour of historically significant properties in the City. Research included but was not limited to an extensive review of historic tract development, aerial photographs, topographic maps, Sanborn Fire Insurance maps, and archival and published sources on local history. Research was primarily conducted at the Hermosa Beach Historical Society and Los Angeles Public Library.

7.2.2 Field Survey

Field survey methods consisted of an initial windshield reconnaissance survey with members of the Hermosa Beach Historical Society on December 6, 2014 followed by a City-wide windshield reconnaissance survey by PCR in December 2013.

The initial Windshield Survey of the entire Project Area was completed by PCR on December 6, 2014 with members of the Hermosa Beach Historical Society. The initial Windshield Survey provided an introduction for the team in regard to the existing conditions and property types in the Project Area and included locating potential individual historical resources as well as concentrations or groups of resources that appear eligible as potential districts. This was followed by a City-wide Windshield Reconnaissance Survey by PCR staff of all potentially historic buildings within the survey area, including previously recorded resources as well as all unevaluated properties containing buildings 45 years of age or older. Furthermore, parcels with improvements younger than 45 years of age were analyzed for potentially significant examples of architecture of the recent past (less than 45 year of age). The Study Area is shown on Figure 1.

Properties 45 years of age or older that retain enough architectural and/or historical significance were identified, photographed, studied in the field, notes were taken, and data entered into the survey database. In addition, with the assistance of the Hermosa Beach Historical Society, properties with historical significance were also recorded. The survey utilized a Microsoft Access database as a tool to document, inventory and analyze historical resources survey data and the data fields match those on the Department of Recreation and Parks (DPR) 523 Primary form. PCR surveyors used the database to enter field data for each subject parcel, create a general physical description, and link photographs. All properties identified as potentially eligible were photographed and recorded by PCR into the database and assigned a California Historical Resources ("CHR") Status Code of 5S3, 5D3, or 6Z.

- A CHR Status Code of 5S3 is defined as "appears to be individually eligible for local listing or designation through survey evaluation."
- A CHR Status Code of 5D3 is defined as "appears to be a contributor to a district that appears eligible for local listing or designation through survey evaluation.'
- A CHR Status Code of 6z is defined as "found ineligible for National Register, California Register, or Local designation through survey evaluation."

7.3 Environmental Setting

7.3.1. Historic Context

7.3.1.1. Early Inhabitants and the Rancho Era

A thousand years before European contact with the Americas, the Tongva people occupied the Los Angeles Basin and nearby Channel Islands. When the Spaniards encountered the Tongva, they numbered as many as 10,000 people and possessed a strong maritime tradition. The Tongva later became known as Gabrielenos based on their association with the San Gabriel Mission.[1] For the prehistory of the area, see Appendix B6, Archaeological and Paleontological Resources.

When Juan Cabrillo explored the California Coastline in 1542, it was the first time a European had set eyes on the new land. Although Cabrillo made stops along the way, the territory was not formally explored until 1769 when the King of Spain sent a group of missionaries to colonize the new land.[2] Missionaries like those on the Portola Expedition of 1769, were often accompanied by soldiers who were rewarded for their services with land grants.

This land grant tradition carried on after Mexico gained its independence. In 1822 Captain de la Guerra y Noriega, Comandante of Santa Barbara, awarded a grant of five square leagues to a Mexican soldier named Antonio Ignacio Avila. Rancho Sausal Redondo, also known as Sausal Redondo y Guaspito, covered 22,459 acres, extending north to present day Marina Del Rey, south to Redondo Beach, and east to Inglewood and Lawndale.[3]

In 1848, the treaty of Guadalupe Hidalgo gave the United States control of what would later become the state of California. Despite many of the existing Spanish and Mexican land grants being held in dispute, the federal government upheld Avila's ownership of the land, issuing a patent for the rancho in 1855.[4]

By the late 19th century, a Canadian, Daniel Freeman, owned the rancho. Freeman grew barley and other grains to graze sheep, horses and cattle. In 1900, real estate agents for the Hermosa Land and Water Company, started by electric railway barons Moses Sherman and Eli Clark, purchased 1500 acres at $35 an acre as a land speculation venture.[5] This small strip of beachfront property became Hermosa Beach.

7.3.1.2 Formation of the Townsite

Once the land was purchased, Clement L. Reinbolt and a team of surveyors began laying out the new beach community.[6] At the time, Santa Monica was the coastal town most popular among urban Angelinos. Redondo continued to grow to the south while Long Beach was already establishing itself as a popular summer destination. Reinbolt and his team began grading the site of Hermosa in May of 1901 starting with Santa Fe Avenue, later renamed Pier Avenue. Hermosa's first street ran from the Santa Fe Railroad to the beach, allowing the transportation of wood planks needed to build the community's first boardwalk (Image 1).[7] Intersecting Santa Fe Avenue and running parallel to the beach, Hermosa Avenue became the town site's second thoroughfare.

IMAGE 1. HERMOSA BEACH'S ORIGINAL BOARDWALK (HERMOSA BEACH HISTORICAL SOCIETY, HTTP://WWW.HERMOSABEACHHISTORICALSOCIETY.ORG/OLDSTRANDPAGE.HTML)

The Redondo and Hermosa Beach Railroad Company was established early in 1901 with the intent of constructing an electric rail line connecting the two beach communities. However, the company was unable to come to an agreement with local landowners on a right-of-way and therefore construction did not begin within the allotted ninety days.[8] Despite early failed attempts to construct an electric railway, settlers slowly populated the new community. In 1904 the Los Angeles-Pacific Railway sent a company of men to construct a rail line connecting Hermosa with neighboring Redondo Beach.[9] By 1910, Hermosa Beach was a stop on the Pacific Electric's "Balloon Route Excursion," which included Santa Monica, Hollywood, Venice, and Redondo (Images 2 and 3).[10] The new rail line brought a slew of tourists to the area promoting Hermosa's growth as a recreational getaway.

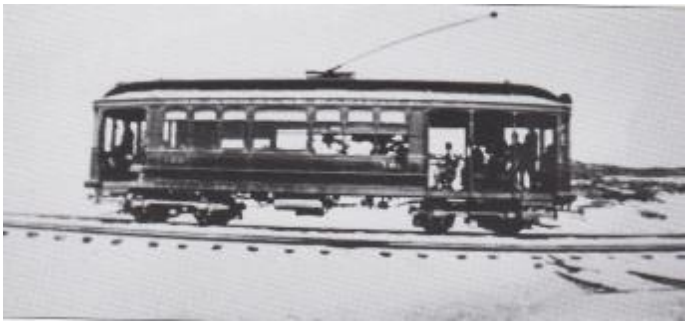


IMAGE 2. THE PACIFIC ELECTRIC RED CAR LINE BROUGHT MANY VISITORS TO HERMOSA BEACH (IMAGES OF AMERICA: HERMOSA BEACH (IMAGES, P. 16)

IMAGE 3. THE PACIFIC ELECTRIC RED CAR LINE BROUGHT MANY VISITORS TO HERMOSA BEACH (IMAGES, P. 26)

In September of 1901 the first tract of Hermosa Beach was subdivided between the boardwalk and Hermosa Avenue. In December of the same year, the Hermosa Beach Land and Water Company subdivided the land between Hermosa Avenue and Summit Avenue (later named Monterey Boulevard). As the town continued to grow inland, new tracts were subdivided and sold to residents and developers.

One of the earliest residents was Ralph Edward Matteson, who moved to Hermosa Beach in 1905. Matteson was an influential member of the young beach community and became manager of the Western Gas and Power Company.[11] The Matteson residence still remains today at 1040 Manhattan Avenue. Matteson was not the first resident, nor would he be the last as the small city continued to expand eastward throughout the early twentieth century. In 1907 Eli Clark and Moses Sherman sold their interests in Hermosa Beach to the Los Angeles Securities Company for $450,000.

Hermosa Beach continued to grow inland and in January of 1907 the small beach community became an incorporated city.[12] To attract new residents and investors, the City spent thousands of dollars on improvements to its streets and lighting. They joined Inglewood and Redondo Beach in a "Good Roads Campaign," providing well-paved boulevards connecting the three cities.[13] Tracts continued to subdivide, making room for new inhabitants and by the mid 1920s most of the 1500-acre townsite had been subdivided for commercial or residential use, as described in the Early Residential section below.

7.3.1.3 Early Residential Development

In 1901 George Steele began surveying the townsite of Hermosa Beach for the Hermosa Beach Land and Water Company. The first area Steele surveyed was between the boardwalk, also known as The Strand, and Hermosa Avenue and named the Hermosa Beach tract. Steele divided the small strip of land into hundreds of lots for both commercial and residential purposes, while short streets running east and west connected the boardwalk to Hermosa Avenue.[14]

Later in 1901, Steele surveyed land east of Hermosa Avenue. This "First Addition to Hermosa Beach" ran from 26th Street in the north to the City's southern border with Redondo Beach and added more lots and streets between Hermosa Avenue and Loma Drive.[15] A year later, in December of 1902, Steele added the "Second Addition to Hermosa Beach" shaping the remaining territory between Loma Drive and the eastern border of Hermosa Beach, just beyond Prospect Avenue.[16]

The area north of 26th Street, between The Strand and Highland Avenue, was surveyed in 1903 on behalf of the Los Angeles Pacific Rail Road Company. This area was known as Shakespeare Beach with many of the streets named after famous poets, such as Alfred Tennyson, Henry Wadsworth Longfellow, Nathaniel Hawthorne, and John Keats.[17] East of Shakespeare Beach was the Carnation Villa Tract, surveyed in 1905, and the Shakespeare Heights Tract added in 1912.[18]

The addition of Shakespeare Heights in 1912 marked the completion of major survey work for Hermosa Beach. Although minor changes to City's road network occurred over time, the Hermosa Beach we see today is very similar to the Hermosa Beach depicted in this 1915 map (Image 4). The rural area along Prospect Avenue on the eastern border of the City was further subdivided in the 1920s as the population of Hermosa grew.

IMAGE 4. MAP OF HERMOSA BEACH PUBLISHED IN 1915 (IMAGES, PPS. 10&11)

Due to the rapid subdivision of the City's land, residential development occurred sporadically throughout the first two decades of Hermosa Beach's existence. The 1915 map (Image 4) of the City shows dense residential development along the beach, west of Manhattan Avenue, as well as the South End, while the North End remains sparsely developed.

However, it wouldn't be long for the North End to catch up. With the addition of Hermosa Beach to the Pacific Electric's popular Balloon Route in 1910, the City was as popular as any Los Angeles seaside community.[19] The *Los Angeles Times* reported the purchases of hundreds of lots in the Shakespeare Beach neighborhood as early as 1907.[20] By the 1920s, many new residences appeared throughout the Shakespeare Beach neighborhood. A 1920s Map of Hermosa Beach (Image 5) shows most of the residential sections had been subdivided by that time.

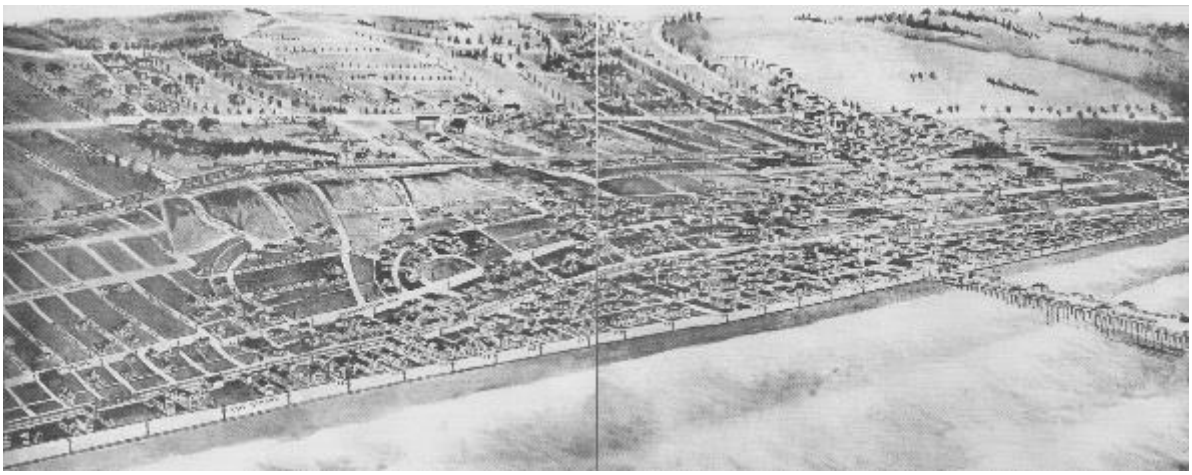


IMAGE 5. 1920S MAP OF HERMOSA BEACH SHOWING MOST OF THE RESIDENTIAL SECTIONS HAD BEEN SUBDIVIDED BY THAT TIME (IMAGES, PPS. 22 & 23)

The dominant residential building type throughout Hermosa Beach was the vernacular beach cottage, popular among most Southern California beach communities, constructed between the initial subdivision of the City up to 1930. In many cases these beach cottages contained elements of popular period revival styles and the Craftsman style. The Spanish Colonial Revival, Shingle, Arts and Crafts, and Period Revival styles were also applied to Hermosa Beach residences and can be found throughout the City.

Despite the early development of Hermosa Beach's coastal tracts, areas east of Shakespeare Beach remained undeveloped, possibly as late as 1946. The 1927 Sanborn Maps, amended in 1946, contained no structures in the Carnation Villa Tract or Shakespeare Heights tract, suggesting that these areas remained undeveloped.[21] The 1950s Ranch style home was popular in this area indicating a post-World War II period of development.

Sanborn fire insurance maps show the construction of many homes in the formerly rural area to the east of Camino Real (Pacific Coast Highway) along Prospect Avenue with larger lots than those along the coast.[22] While a few of these homes appeared to be post-World War II additions, most of the homes in this area were characteristic of earlier years in Hermosa Beach's development. Like the neighborhoods closer to the beach, the vernacular beach cottage style was popular east of Camino Real.

Today the boundaries of Hermosa Beach can be identified by a series of boulevards, avenues and small neighborhood streets. Herondo Street marks the southern boundary, while the eastern boundary is identified by a combination of Prospect Avenue, Reynolds Lane, and Harper Avenue. To the north the City is bound by a zigzag pattern of major and minor streets including Artesia Boulevard, Pacific Coast Highway, Boundary Place, Longfellow Avenue, Ingleside Drive, 33rd Street, Morningside Road, Homer Street, Manhattan Avenue, and 1st Street. To the west Hermosa Beach is bound by its main attraction, the Pacific Ocean.

7.3.1.4. Hermosa Beach: Resort Town

Bathhouse

In 1917 the Hermosa Beach Bathhouse Company announced plans for a bathhouse of comparable quality to those of other beach resort communities (Image 6).[23] The new bathhouse stood along The Strand south of the municipal pier and provided a private place for beach visitors to change into their bathing suits. "It was a popular location to rent bathing suits, beach umbrellas and lockers to store street clothes."[24] Architects designed the structure in the popular Spanish colonial style. The bath house has been demolished.

IMAGE 6. THE BATHHOUSE ON THE STRAND AND PIER AVENUE
(POSTCARD HISTORY SERIES: HERMOSA BEACH, P. 44)

Recreation Pier and Boardwalk (Strand)

What set Hermosa Beach apart from neighboring beach communities was its classic boardwalk mimicking popular beach communities on the East Coast. Like most traditional boardwalks, Hermosa's was constructed out of wood; however frequent winter storms often left the boardwalk in ruins (Image 7). The City trustees approved plans for a concrete boardwalk nearly two miles in length in the summer of 1913. The new permanent boardwalk ("The Strand") cost $35,000 and included ornamental lighting, matching the lights on side streets connecting the boardwalk with Hermosa Avenue and is shown in Image 8 below[25]

IMAGE 7. THE STRAND'S PREDECESSOR WAS THE HERMOSA BEACH BOARDWALK (IMAGES, P. 10)

IMAGE 8. CONCRETE STRAND DEPICTED AFTER CONSTRUCTION IN 1914 (HERMOSA BEACH HISTORICAL SOCIETY, HTTP://WWW.HERMOSABEACHHISTORICALSOCIETY.ORG/STRAND2.HTML)

In addition to the new concrete boardwalk, City trustees approved the expenditure of $60,000 on a new concrete pier. Like the boardwalk, winter storms often threatened the wooden pier leaving the locals to pick up the pieces and start again (Image 9). In December of 1913, Mercereau Bridge and Construction Company completed Hermosa's first concrete municipal pleasure pier (Image 10).[26] It was the first of its kind along the coast to be used purely for recreational purposes and included pagodas with red tile roofs at intervals along the pier (Image 11). A T-shaped head at the end provided space for fisherman to apply their skills.

IMAGE 9. THE FIRST PIER OF HERMOSA BEACH WAS MADE COMPLETELY OF WOOD (IMAGES P. 11)

IMAGE 10. OVERHEAD VIEW OF HERMOSA BEACH'S FIRST CONCRETE PIER BUILT IN 1914 (POSTCARD HISTORY SERIES: HERMOSA BEACH, P. 52)

IMAGE 11. PAGODAS WITH RED TILED ROOFS PROVIDED SHADE FOR PIER VISITORS. (IMAGES, P. 36)

At the entrance of the pier was a Spanish style structure that housed the Hermosa Beach Chamber of Commerce, Public Library, Los Angeles County Lifeguards, and Hermosa Beach Surfing Club. The structure consisted of two buildings connected by a breezeway over the pier entrance. Red tiled roofs matched the pagodas found further along the pier (Image 12).[27]

IMAGE 12. THE HERMOSA BEACH PIER ENTRANCE AS SEEN IN 1940 (IMAGES, P 41)

In 1961 the City determined that the old pier had deteriorated beyond repair and it was demolished.[28]

Ocean Aquarium (Marineland of the Pacific)[29]

In 1947 Hermosa Beach added a new attraction as work began on a $250,000 aquarium (Image 13). Known as Marineland of the Pacific, the aquarium was situated along The Strand between the municipal pier and the bathhouse. "Hundreds of live sea oddities attracted thousands of families to the aquarium."[30] The aquarium entertained visitors for over ten years, however in 1961 it was purchased by the City to make room for a new municipal pier.[31]

IMAGE 13. HERMOSA BEACH'S OCEAN AQUARIUM ENTERTAINED VISITORS FOR ROUGHLY A DECADE (IMAGES, P. 64)

Hotels, Motels and Resorts

Many of Hermosa Beach's visitors chose to stay for a few days, a week, or even longer. These vacationers had a variety of lodging options to choose from. Local entrepreneurs built hotels, motels, travel camps, and cottages to accommodate tourists. Located at the present site of Marineland Mobile Home Park, north of Pier Avenue, was the Zion Travel Camp (Image 14). The tent camp was located in a pasture and provided shelter to overnight travelers and long-term vacationers.[32]

IMAGE 14. THE ZION TRAVEL CAMP PROVIDED A PLACE TO REST FOR WEARY TRAVELERS AND VACATIONERS (IMAGES, P. 27)

In 1907, the Berth family opened Hermosa Beach's first hotel located on 10th Street and The Strand (Image 15). Theo Berth ran the establishment until his passing in 1909. Berth's wife ran the hotel for four more years before leasing the property to Clemens H. Moebest.[33] The Berth Hotel, consisting of twenty-one rooms, a dining hall and a large banquet hall, remained Hermosa's only hotel for more than a decade. In 1920, Mrs. S.P. Hendricks purchased the property with improvements and alterations in mind, including the addition of two stories.[34] The hotel was renamed the Breakers at one point before it was sold to Thelma and Richard Greenwald, owners of the neighboring parking lot. The Greenwalds added to the old Berth Hotel creating The Sea Sprite Motel extant at 1016 The Strand .[35]

IMAGE 15. THE BERTH HOTEL, BUILT IN 1907. (IMAGES, P. 14)

Hermosa Hotel

In 1923 the Surf and Sand Club announced plans for a $350,000 clubhouse located on The Strand between 14th and 15th streets (Image 16). Designed by prominent master architect Myron Hunt, the four-story structure included an artificially heated swimming pool, dressing rooms and lockers, ballroom, and one hundred and twenty-four sleeping rooms with their own bathrooms.[36] The elaborate clubhouse attracted many new members to the club, however operating the site as a private club proved to be a losing proposition. In the 1930s the building was taken over by hotel interests, becoming the Hermosa Biltmore Hotel. The iconic structure changed hands and roles a number of times in the mid-twentieth century before being torn down in 1969.[37]

IMAGE 16. ORIGINALLY KNOWN AS THE SURF AND SAND CLUB, THE BILTMORE HOTEL, AS IT CAME TO BE KNOWN, WAS AN ICONIC SITE ALONG HERMOSA'S COASTLINE UNTIL 1969 WHEN IT WAS DEMOLISHED. (IMAGES, P. 4)

Theaters

Local banker and one of Hermosa Beach's earliest settlers, Ralph Matteson was the driving force behind the construction of the Metropolitan Theater (Image 17). In 1923, Richard Douglas King, Los Angeles architect and Hermosa resident, designed a multi-use structure in the neo-classical style.[38] The new theater located on Hermosa Avenue, north of the pier, also housed the First Bank of Hermosa Beach and the Masonic Lodge.[39] Both motion pictures and live shows entertained visitors throughout the theater's history. In the early 1930s the theater was purchased by Fox West Coast and became known as "The Hermosa." In 1979 the theater was renamed the Cove Theater and then in 1983 it became known as the Bijou Theater.[40]

IMAGE 17. THE METROPOLITAN THEATER WAS HERMOSA BEACH'S FIRST SHOWPLACE AND REMAINED ITS ONLY THEATER FOR MANY YEARS. (IMAGES, P. 30)

Surfing and Lifeguard Culture

One of the nation's finest swimmers in the early twentieth century was Duke Kahanamoku. The native Hawaiian was a five-time Olympic medalist in swimming and has been credited with introducing the sport of surfing to mainland America. Kahanamoku traveled throughout the country giving swimming and surfing exhibitions. A 1913 article in the *Los Angeles Times* depicts the expert waterman riding his pine surfboard among Redondo Beach's waves.[41] With Kahanamoku, surfing had arrived and would soon establish itself as a staple in California's developing beach culture.

The earliest surfboards were constructed of heavy wood, making them difficult to maneuver. Over time new lighter foam boards replaced the wood boards allowing surfers to be more creative among the waves. With the new surfboards, Hermosa Beach's own Dewey Webber pioneered the "hot dog style" (Image 18).[42] Hermosa Beach was home to many professional surfers over the years and held events promoting surfing, such as Hermosa Beach Surfing Club's Annual Dance, shown in Figure 19 below.

IMAGE 18. DEWEY WEBBER DEMONSTRATING HIS "HOT-DOG" STYLE (IMAGES, P. 49)

IMAGE 19. AN INVITATION TO THE HERMOSA BEACH SURFING CLUBS ANNUAL DANCE, JULY 27, 1940 (IMAGES, P. 55)

Where there are surfers, there are surfboard shapers. Known as the mecca of surfboard shaping, Hermosa Beach was home to many world-renowned surfboard manufacturers.[43] Greg Knoll's surfboard factory still remains intact in the Cypress Street light industrial area of Hermosa at 716 Cypress Avenue (Images 20 and 21). Knoll used an assembly-line-like set up to manufacture surfboards from raw foam into the finished products displayed in the showroom at the end of the line.

Image 20. Greg Knoll Surfboards on Pacific Coast Highway (*Images*, p. 67)

IMAGE 21. GREG KNOLL SHAPING A NEW LONG BOARD WITH FRIENDS (IMAGES, P. 62)

While inviting, Hermosa Beach's main attraction, the Pacific Ocean, was a very unforgiving place. The *Los Angeles Times* is full of articles about lifeguards saving men, women, and children from the ocean hazard. It was common for young local swimmers to volunteer as lifeguards, most of which were members of the United States Volunteer Lifesaving Corps (USVLSC). Hermosa Beach had its own USVLSC chapter by 1914.[44] In one day, the *Los Angeles Times* reported 48 rescues all along Los Angeles' coastline, including six in Hermosa Beach.[45] These volunteer lifeguards were a competitive bunch. Rivalries between the groups grew over time. Many local volunteer groups claimed to be the best guards in the county.

In 1932, Los Angeles County Lifeguard Chief E. H. Carrol declared "So we hereby insinuate, assert and declare that our own county crews are the real, honest-to-goodness champs."[46] Lifeguard groups gathered in Hermosa Beach on Labor Day of that year to settle the dispute with a nighttime dory race. Santa Monica won the race with the Los Angeles County guards placing second.[47]

In 1933, Hermosa Beach was one of the first beach communities to handover its lifeguard service to Los Angeles County. Soon Santa Monica, Redondo and Manhattan Beach joined the County lifeguard service (Image 16).[48]

Beach Volleyball

Although the debate regarding the birthplace of beach volleyball continues to be between Santa Monica and Honolulu, the sport has become an iconic part of Southern California's beach culture. A 1938 *Los Angeles Times* article describes a "fierce volleyball game" among a "younger set" in Hermosa Beach.[49] Throughout the City's history, the beach has been protected from private interest keeping the valuable real estate available for public enjoyment. While many of Hermosa Beach's seaside activities take place in the water, beach volleyball has firmly supplanted itself in the City's history and culture. In 1965 the City's Parks and Recreation Department formed a new league predominantly for Hermosa Beach residents.[50] In 1970 Ron Van Hagen and Henry Bergman won the first Hermosa Beach tournament.[51] Photographs depicting volleyball on the beaches of Hermosa Beach are shown in Images 22 and 23 below

IMAGE 22. MAYA THIENE AND LINDA ROBERTSON IN THE 1978 HERMOSA OPEN FINALS (IMAGES, P. 71)

IMAGE 23. EARLY PHOTO OF AN ORGANIZED VOLLEYBALL MATCH IN 1946 (IMAGES, P. 59)

Restaurants and Clubs

Restaurants and clubs provided food and entertainment to Hermosa's visitors. In the Shakespeare neighborhood sits a round building housing a bar known as The North End. The establishment was once known as Esther's and the Chi Chi Club, a popular place for jazz music. It later became the Carousel and actually rotated on a circular device. The date of construction is unknown, however the building did exist as early as 1927.

Another popular place to listen to jazz music was the Lighthouse Café on Pier Avenue. The Lighthouse (Images 24 and 25) became known nationally as the origin of "West Coast Jazz." Howard Rumsey, a traveling bass player in Stan Kenton's jazz band, decided to settle in Hermosa Beach in 1949. Rumsey convinced John Levine, owner of the Lighthouse Café, to put on a weekly jazz show every Sunday evening. The band, known as The Lighthouse All-Stars, quickly gained in popularity, recording nine albums and playing nightly in the beachside café. Many music legends performed on the Lighthouse stage, including Miles Davis, Dizzy Gillespie, Stan Kenton, and Bobby Troupe. It was a common site to see people walk in straight off the beach in swimsuits and sandy feet to enjoy the sounds of The Lighthouse All-Stars.

IMAGE 24. THE EXTERIOR OF THE LIGHTHOUSE CAFÉ IN 1955 (IMAGES, P. 97)

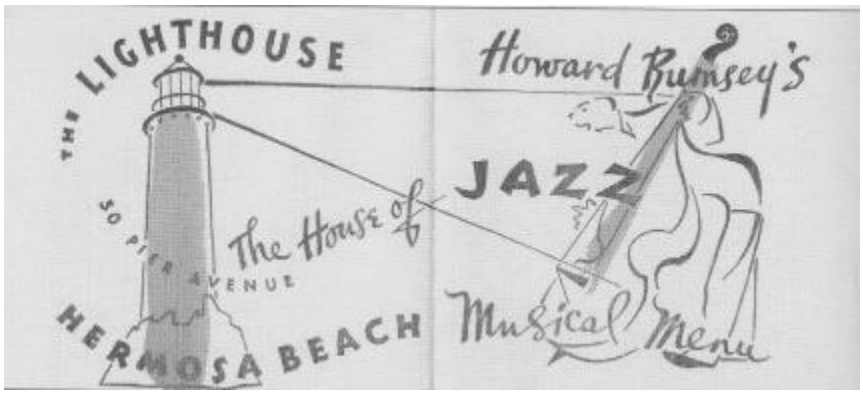


IMAGE 25. RIGHT: ADVERTISEMENT FOR THE LIGHTHOUSE CAFÉ (IMAGES, P. 104)

7.3.1.5 Post War Development

Following World War II, Southern California experienced another population boom and an increased optimism for the future. New development was geared to the ever expanding automobile culture and the rail-lines were no long the primary mode of transportation to Hermosa Beach. During the 1960s, the Santa Fe Railroad stopped using the Hermosa to Redondo line and removed the train tracks. The right-of-way would later be redeveloped into the Hermosa Valley Greenbelt during the late 1980s.

During the post World War II period, there was a renewed interest in eradicating urban blight and centralizing government departments. The Modern Civic Center complex was designed by Savo Stoshitch between 1961 and 1965. The Civic Center complex includes buildings for the City Hall, Public Library, Police Station and Fire Station. The ground was broken for the Public Library, facing Pier Avenue, on November 17, 1961 and dedicated on August 10, 1962. The City Hall was dedicated on January 24, 1965, as shown in Image 26, and the construction cost was approximately $328, 390.

IMAGE 26. HERMOSA BEACH CITY HALL DEDICATION, 1965 (LOS ANGELES PUBLIC LIBRARY IMAGE ARCHIVES)

7.3.2 Records Search Results

The historical resources investigation included records searches and review of local histories to determine: (i) if known historical resources have previously been recorded within the Project Area; (ii) if the project site has been systematically surveyed by historians prior to the initiation of the study; and/or (iii) whether there is other information that would indicate whether or not the area of the project site is historically sensitive or may pose indirect impacts to adjacent historical resources. PCR consulted the National Register of Historic Places ("National Register"), California Register of Historic Places ("California Register"), California Historic Resources Inventory ("HRI"), California Points of Historical Interest ("PHI"), California Historical Landmarks ("CHL"), and City of Hermosa Beach Landmarks to determine previously identified historical resources within the Project Area. Previously known resources are depicted on Figure 1 and records search results are provided in Appendix B3 and summarized below.

As of June 2009, three buildings have been designated for protection under the City's Historic Resources Preservation Ordinance:

- The 'Bijou Theater' at 1229-1235 Hermosa Avenue is a local and state designated landmark.
- The Bank of America Building at 90 Pier Avenue and Hermosa Hotel at 20-26 Pier Avenue are designated as potential landmarks that warrant further study by Section 17.53.040(B) of the Historic Preservation ordinance (per Planning Commission Resolution No. 98-65).
- The Community Center was designated a locally significant landmark for the purposes of a grant application (City Council Resolution 02-6216).

The California Historical Resources Information System lists three previously recorded properties in Hermosa Beach:

- 200 Pier Avenue (6Y, "Determined ineligible for NR by consensus through Section 106 process – Not evaluated for California Register or Local Listing") (recorded 6/15/2000)
- 710 Pier Avenue, Hermosa Beach Community Center, constructed 1911 (2S2, "Individual property determined eligible for NR by a consensus through Section 106 process – Listed in the California Register") (determination of eligibility 12/18/2002)

- 861 Valley Drive, Clark Building, constructed 1937 (2S2, "Individual property determined eligible for NR by a consensus through Section 106 process – Listed in the California Register") (determination of eligibility 6/19/1994)

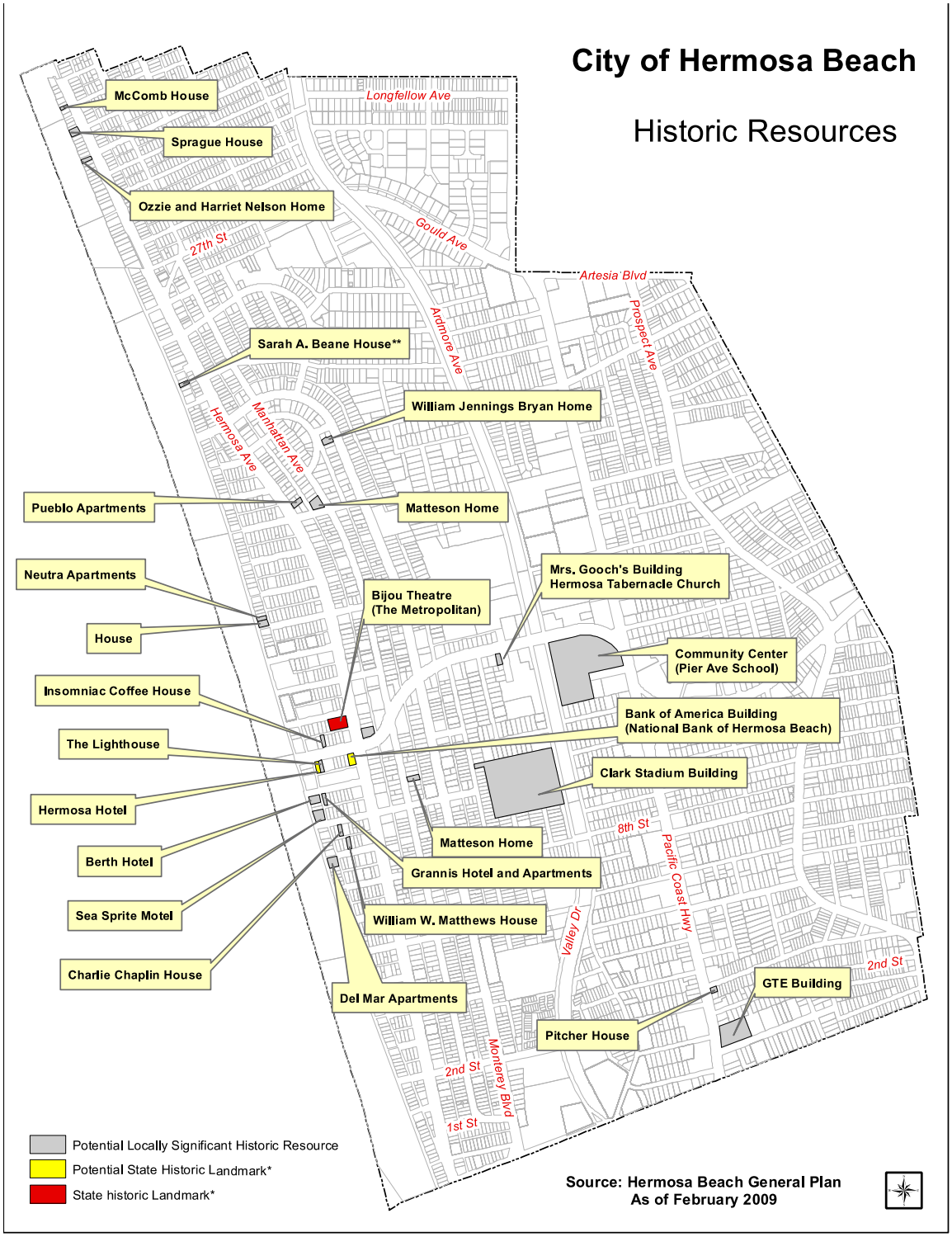
The City's General Plan Land Use Element (Historic Preservation) identifies 28 resources as **potentially locally significant** including those listed above. The list was compiled from information provided by member of the Hermosa Beach Historical Society and the publication *Castles on the Sand* (1977) by Patricia A. Gazin. A full historical evaluation of the identified historical resources was not conducted.

1. Commercial building at northeast corner of Pier and Hermosa, 1200 Hermosa Avenue/117 Pier Avenue (APN: 4183-013-063)
2. Pueblo Apartments, 1912 Hermosa Avenue (APN: 4182-007-003)
3. Matteson Home, 1040 Manhattan Avenue (APN: 4182-008-001)
4. Matteson Home, 1901 Manhattan Avenue (*Demolished*) (APN: 4187-009-005)
5. William Jennings Bryan Home, 2045 Monterey Boulevard (APN: 4182-018-014)
6. Hermosa Hotel, 26 Pier Avenue (APN: 4187-005-005)
7. The Lighthouse, 30 Pier Avenue (APN: 4187-005-006)
8. Insomniac Coffee House (*Demolished*), 49-53 Pier Avenue (APN: 4183-002-020)
9. Bank of American Building (National Bank of Hermosa Beach), 90 Pier Avenue (APN Number: 4187-005-013)
10. Mrs. Gooch's Building Hermosa Tabernacle Church, 526 Pier Avenue (APN: 4187-020-017)
11. Community Center (Pier Avenue School), 710 Pier Avenue (APN: 4187-024-902)
12. William W. Mathews House, 37 9th Street (APN: 4187-003-024)
13. Charlie Chaplin House, 32 10th Street (APN: 4187-003-010)
14. Grannis Hotel and Apartments, 24 11th Street (APN: 4187-004-006)
15. Bijou Theatre, 1229-1235 Hermosa Avenue (APN 4183-002-008)
16. GTE Building, 102 Pacific Coast Highway (APN: 4186-026-806)
17. Pitcher House, 142 Pacific Coast Highway (APN: 4186-025-001)
18. Del Mar Apartments, 840 Strand (APN: 4187-002-028)
19. Sea Sprite Hotel, 1016 Strand (APN: 4187-004-026)
20. Berth Hotel, 1042 Strand (APN: 4187-004-005)
21. House, 1602 Strand (APN: 4183-006-035)
22. Neutra Apartments, 1608 Strand (APN: 4183-006-002)
23. T.L. Woolwine House, 2601 Strand (APN: unkown)
24. McComb House, 3409 Strand (APN: 4181-034-007)
25. Sprague House, 3301 Strand (APN: 4181-035-004)
26. Ozzie and Harriet Nelson Home, 3133 Strand (APN: 4181-035-011)
27. Sarah A. Beane House, 2330 Strand (APN: 4182-003-019
28. Clark Stadium Building, 861 Valley Drive (APN: 4187-017-900)

The City's General Plan Land Use Element (Historic Preservation) identifies **possible historic districts** as follows:

- Residential neighborhood bounded by 16th Street, Strand, 20th Street, and Hermosa Avenue
- Strand Houses north of 26th Street

FIGURE 7.1: POTENTIAL LOCALLY SIGNIFICANT HISTORIC RESOURCES IN HERMOSA BEACH AS SHOWN IN THE EXISTING GENERAL PLAN



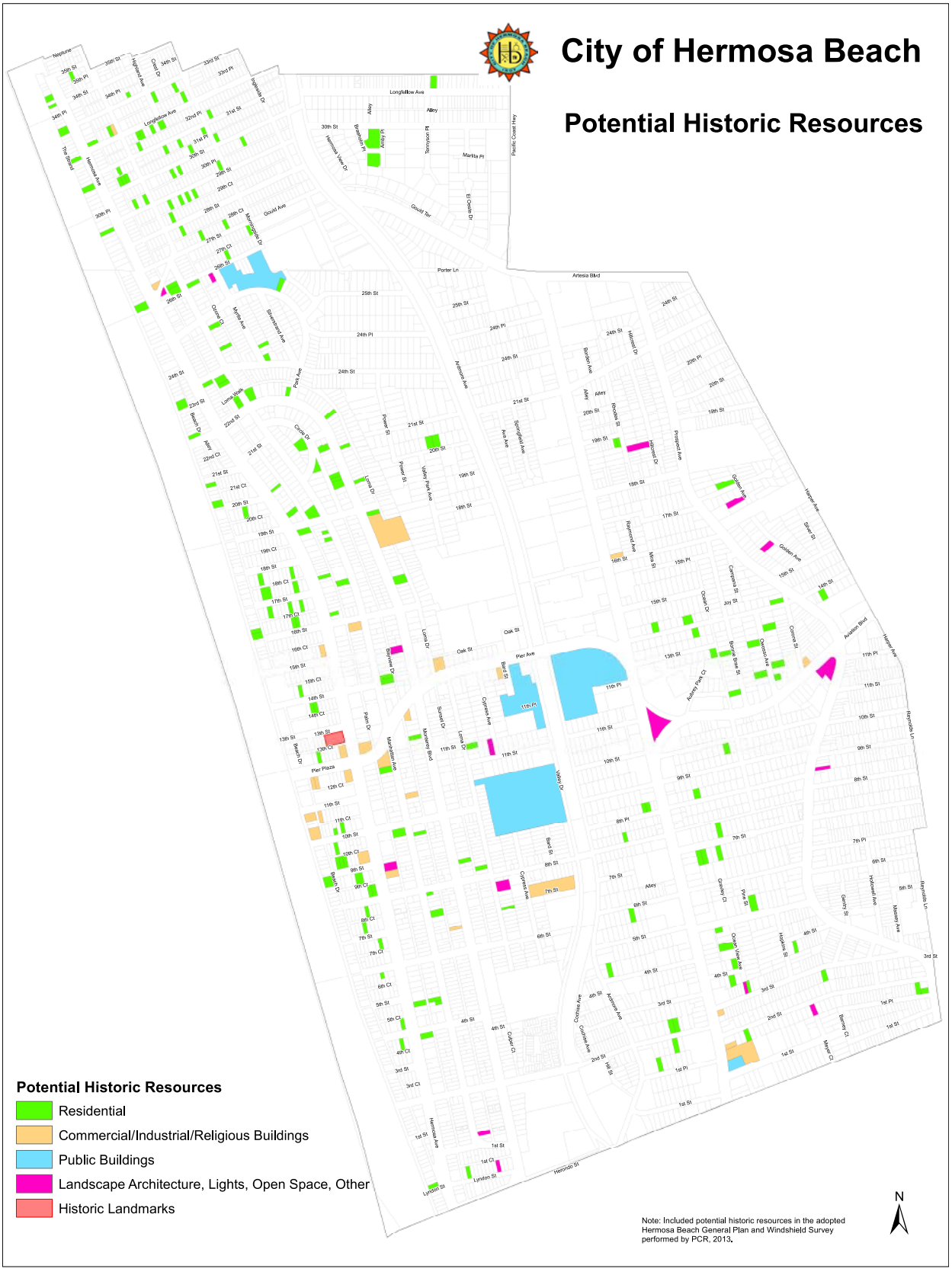
7.3.3 Survey Results

Hermosa Beach has not been surveyed previously; therefore, PCR conducted a Windshield Survey to identify existing conditions and property types which included locating potential individual historic resources as well as concentrations or groups of resources that appeared to be eligible as potential districts based on architecture. The windshield survey was conducted in accordance to guidance set forth by the National Park Service Guidelines for Local Surveys. There are approximately 3,600 parcels over 45 years in age in Hermosa Beach. PCR found 218 parcels potentially eligible for local listing (5S3) and two (2) potentially eligible groupings of single-family residences that appear eligible as beach cottage districts (5D3). Potentially eligible properties and districts were recorded on a Department of Parks and Recreation ("DPR") primary survey forms; these forms include the address, brief description, significance, date of construction, and picture of the property. The results of the Windshield Survey are presented in Figure 7.2 below. An inventory of the survey results is included in Appendix B4 and DPR primary survey forms are included in Appendix B5.

Properties identified in the Windshield Survey should be researched and evaluated further for their eligibility under the federal, state and local eligibility criteria, as explained further in Section 7.3 Regulatory Setting.

The list of potentially locally significant resources and districts identified in the General Plan Land Use Element were not evaluated because these resources require further evaluation of both their architectural and historical significance. However, based on architecture, some of the previously identified resources were included in PCR's windshield survey.

FIGURE 7.2: POTENTIAL HISTORIC RESOURCES (PCR WINDSHIELD SURVEY)



7.3.3.1. Architectural Overview

Early Twentieth-Century Development

Residential

Of the 220 potentially eligible historical resources identified in the Windshield Survey, approximately 60% are single-family one-story residential properties constructed between 1906 and 1930. These residences are located in the earliest subdivided tracts, such as the Hermosa Beach, First Addition to Hermosa Beach and Shakespeare tracts. The earliest recorded resource is a single-family beach cottage constructed in 1906 at 833 14th Street (Image 27), followed by two single-family beach cottages constructed in 1907 and located at 34 17th Street and 68 17th Street (Image 28). The vast majority of the beach cottages in Hermosa Beach are derivatives of the Craftsman style, Period Revival styles and Eclectic Cottages. Cottages were constructed on a budget, which is reflected in their vernacular design and use of inexpensive materials, such as wood-frame construction resting on brick foundations and minimal architectural ornamentation. Many of the houses were quickly constructed small seasonal homes that were added onto in multiple stages. The beach cottage architecture emphasized simple focal points: decorative shingling or board-and-batten siding exterior treatments, gabled or hipped roofs, bay windows, porches, windows and doors. Generally the residences are small-scale to allow for the maximum amount of yard space, patios, and courtyards to promote outdoor living. Concentrations of the beach cottage property type are located south of Pier Avenue in the Hermosa Beach and First Addition Tracts, in the Shakespeare Tract, and just east of the former Santa Fe railroad south of 6th Street.

IMAGE 27. 833 14TH STREET (PCR SERVICES)

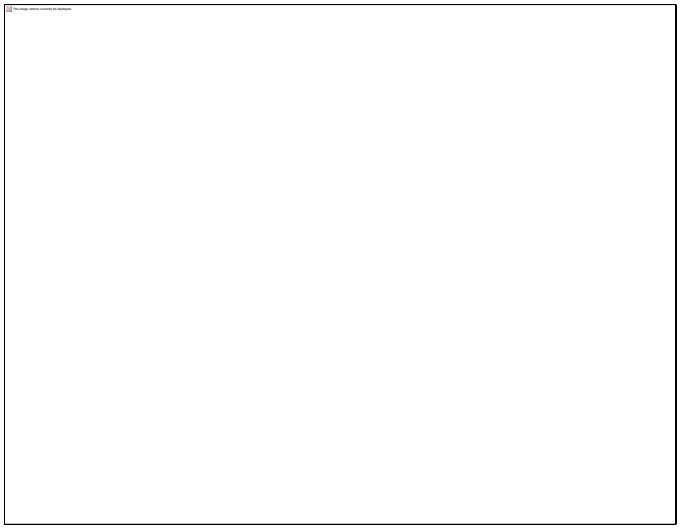


IMAGE 28. 68 17TH STREET (PCR SERVICES)

Associated with this period are approximately twelve walk-streets located between Hermosa Avenue and The Strand Hermosa Beach Tract (Images 29 and 30), and there are two walk streets located on

31st and 30th Streets between Manhattan Avenue and Morningside Drive in the Shakespeare Tract. The streets are closed to vehicles and the houses face inward toward each other.

IMAGE 29. WALK-STREET ON 7TH STREET BETWEEN HERMOSA AVENUE AND THE STRAND (PCR SERVICES)

IMAGE 30. WALK-STREET ON 20TH STREET BETWEEN HERMOSA AVENUE AND THE STRAND (PCR SERVICES)

Small parks called "parkettes" are distinctive landscape features. The Sand Hill Parkette located at Circle Drive and Long Walk is an example of a small park integrated into the early First Addition of Hermosa Beach residential tract. Other parkettes include Moondust Parkette (2nd Street) and Ocean View Parkette (3rd Street).

Larger, two-story residences were constructed between 1910 and 1930 in the earliest tracts in closest proximity to the beach with views of the Ocean. The Strand, Hermosa Avenue, Manhattan Avenue, and Circle Avenue have some of the grander residences in Hermosa Beach designed in the Arts and Crafts, Shingle and Craftsman styles.

Examples of Arts and Crafts single-family residences are located at 303 24th Street (Image 31) and 1412 Manhattan Avenue. Popular from 1895-1915, Arts and Crafts movement designers blended elements of the late 19th-century Shingle and Queen Anne styles with 20th-century Craftsman and Colonial Revival styles. A highly eclectic style, it promoted social reform ideals implicit in handcraft and simplified structure and ornament. Intended to reconnect architecture to the crafting of natural materials, the primary material associated with the Arts and Crafts Movement was wood, with many residences having elaborately crated wood framing, interior paneling, and built-in furniture. Other materials commonly used were brick and stone. Generally, Arts and Crafts designed residential buildings fall in to two property types: the 1- or 1 ½-story bungalow or the 2-story house. Associated styles were sometimes applied to places of worship, artisans' studios, and social halls, but were only rarely used during this period for government or industrial buildings.

IMAGE 31. 303 24TH STREET (PCR SERVICES)

There are three good examples of the shingle style located at 2601 Hermosa Avenue (Image 32), 2317 Manhattan Avenue (Image 33), and 2028 The Strand. The Shingle style (1900-1920) is a uniquely American adaptation that surrounds the basic forms of Queen Anne and Colonial Revival with unembellished wood shingles, and adds foundations and porches of rough field stone with classical column porch posts.

IMAGE 32. 2601 HERMOSA AVENUE (PCR SERVICES)

IMAGE 33. 2317 MANHATTAN AVENUE (PCR SERVICES)

The Craftsman style is more ubiquitous in Hermosa Beach compared to the two previously mentioned styles. The Windshield Survey recorded approximately eight Craftsman style residences, such as The single-family residence at 1230 Owosso Avenue, which is a good example of a one-story Craftsman style residence. The Craftsman style (1905-1940) borrows from English arts and crafts, oriental wood architecture, and a variety of other sources such as California adobe dwellings, Swiss chalets, and barns and log cabins. These simple residences were informal in plan, elevation, and detail. Sensitive to the surrounding natural environment, they hugged the ground and had low-pitched and wide-projecting gable roofs, with rafters exposed. Most had large porches under a

secondary (lower) roof supported by square or elephantine columns. Bases and foundations used river rock or clinker brick which connected them to the surrounding landscape.

IMAGE 34. 1230 OWOSSO AVENUE (PCR SERVICES)

During the 1920s and 1930s, Hermosa Beach experienced another wave of single-family development infilling the older tracts in Hermosa Beach. Between 1920 and 1940, one- and two-story Spanish Colonial (Image 35) and Mediterranean Revival-style (Image 36) residences were constructed. Typical character-defining features of these styles designed between 1900 and 1940 include asymmetrical facades, courtyards, verandas, red clay tile roofs, stucco-finished walls, wood framed multi-paned casement windows with prominent lintels and sills, arched doorways, wrought-iron window grilles, decorative carvings, glazed tiles and fountains.

IMAGE 35. 306 29TH STREET (PCR SERVICES)

IMAGE 36. 2901 MANHATTAN AVENUE (PCR SERVICES)

There are a few residences constructed during the 1920s-1930s period that represent other styles, including Tudor Revival, Italianate, and Art Deco style residences.

The single-family residence located at 310 33rd Street (Image 37) is a good example of the Tudor style with steeply pitched cross-gabled roof. The Tudor style is identified by steeply pitched roofs,

usually side-gabled, with one or more prominent cross gables; tall, narrow windows, usually in groups, with multi-pane glazing; and massive chimneys crowned by decorative chimney pots.

IMAGE 37. 310 33RD STREET (PCR SERVICES)

The only example of the Italianate style discovered during the Windshield Survey is the single-family two-story residence at 2418 Manhattan Avenue (Image 38). Italianate style houses are usually compact square blocks with wide eaves, tall windows, brackets underneath the rooflines, and formal, symmetrical or asymmetrical facades.

IMAGE 38. 2418 MANHATTAN AVENUE (PCR SERVICES)

The two-story single-family residence at 2055 Circle Drive (Image 39) is an example of the Art Deco style. The Art Deco tradition was established by the *Exposition Internationale des Arts Décoratif et Industriels Modernes* in Paris in 1925. The style used the tools of industrialization for highly artistically expressive purposes. It celebrated a break from historic precedence, the decorative arts, new construction and fabrication methods, and creative uses of technology in the modern world, particularly within booming cities of the 1920s. Character-defining features of the Art Deco style include stepped façade, sunrise and floriated patterns, polychromatic mosaic tiles, metal casement

type window, zig-zag parapet trim, and chevron and lozenge molding. The apartment building at 30 The Strand is a rare example of an Art Deco-style apartment building.

IMAGE 39. 2055 CIRCLE DRIVE (PCR SERVICES)

The overwhelming majority of Hermosa Beach's early residential properties are single-family, however there are a few duplexes, apartment buildings, and bungalow courts. There are Spanish Colonial Revival-style apartment buildings at 47 4th Street and 48 9th Street. The Pueblo Apartments located at 1912 Hermosa Avenue (Image 40) is a rare example of a Pueblo Revival-style apartment building constructed in 1924. A derivative of the Spanish Colonial Revival style, the Pueblo Revival style is characterized by battered walls, rounded corners, and flat roofs with projecting rounded roof beams or *vigas*. Straight-headed windows generally are set deep into the walls. Second and third floor levels are stepped or terraced. Other typical character-defining features of this style include asymmetrical facades, courtyards, red clay tile roofs, stuccoed walls, wood framed rectangular windows with prominent heavy timber lintels and wood sills, arched doorways, wrought iron window grilles, *canales*, projecting *vigas*, decorative carvings and mosaic tile.

IMAGE 40. PUEBLO APARTMENTS, 1912 HERMOSA AVENUE (PCR SERVICES)

Another rare property type is the Bungalow Court, and there are Spanish Colonial Revival examples at 35 17th Street (Image 41), 801 Hermosa Avenue, 1703 Manhattan Avenue, 1936 Monterey Boulevard, and 1322 Owosso Avenue, and a Beach Cottage example at 712 Manhattan Avenue.

IMAGE 41. 35 17TH STREET (PCR SERVICES)

Non-Residential

Commercial architecture constructed in Hermosa Beach during the first three decades of the twentieth century, reflects national architectural trends. Representative architectural styles include most of the Period Revival styles, however the primary architectural elements are unreinforced brick construction, parapets, and adaptable storefronts. During the historic period, early twentieth century commercial properties developed along Hermosa Avenue, Pier Avenue, and Pacific Coast Highway (El Camino Real). There are few commercial properties remaining extant from the early period of Hermosa Beach's development.

The most distinctive non-residential resource in Hermosa Beach is the Vetter Windmill. Originally the Vetter Windmill was located at Ardmore and Avenue and 16th Street, where it was erected by Herman Vawter to provide water for his flower and vegetable gardens. The Vetter Windmill (Image 42) has been relocated to Greenwood Park at the northeast intersection of Aviation Boulevard and Pacific Coast Highway.

IMAGE 42. VETTER WINDMILL (PCR SERVICES)

There is an Early 20th Century Utilitarian Brick Commercial Building which was constructed in 1913 located at 832 Hermosa Avenue. Constructed two years later is a one-story commercial building

with storefronts at 1131 Manhattan Avenue. There are two representative examples of 1920s commercial buildings; Art Deco/Moderne building at 901 Hermosa Avenue; and Renaissance Revival building at 142 Pacific Coast Highway (Image 43). The Renaissance Revival style (1895-1930) features symmetrical facades, with masonry or stone exterior walls highlighted by cast stone or terra cotta detailing and has arched openings.

IMAGE 43. 142 PACIFIC COAST HIGHWAY (PCR SERVICES)

Located near the former pier, are the Beaux Arts style Bijou Building (former Metropolitan Theater) (Image 44) constructed in 1923, and an Art Deco style former hotel located at 22 Pier Avenue (Image 45) constructed in 1924. The Beaux Arts style (1885-1930) uses formal symmetry, Italian Renaissance form, and classical Greek and Roman decorative elements like columns, pediments and balustrades to create a grand and imposing architectural statement.

Image 44. Bijou Building (PCR Services)

Image 45. 22 Pier Avenue (PCR Services)

Located in the First Addition to Hermosa Beach Tract is the Neoclassical Revival style First Church of Christ Scientist (Image 46) located at 1547 Manhattan Avenue and constructed in 1926. Character-defining features of the Neoclassical Revival style include fluted columns topped by complex capitals, friezes and entablatures embellished with garlanded or patterned carvings and massive porticos.

IMAGE 46. 1547 MANHATTAN AVENUE (PCR SERVICES)

There are two WPA Moderne Schools in Hermosa Beach, the North School located at 417 25th Street and Pier Avenue School located at 710 Pier Avenue (Image 47). In 1935, Mayor John Clark built a Lawn Bowling facility with the help of WPA funds between 8th and 9th Street on Valley Drive. The facility consists of the WPA Moderne Clark Stadium and Clark Field located on approximately six acres. The WPA/PWA Moderne style was popular during the Great Depression as developed by the various government relief projects sponsored by the Works Progress Administration (WPA) and Public Works Administration (PWA). The government created jobs for architects, designers, and builders by putting them to work, creating hundreds of government and civic buildings, including post offices, train stations, public schools, museums, bridges, and dams throughout the United States. WPA/PWA Moderne structures reflect a greater use of conservative and classical elements and have a distinct monumental feel to them. The WPA/PWA Moderne style was characterized by board-form or smooth concrete exterior; typically flat-roofed, although occasionally gabled or hipped and tiles; generally symmetrical; mostly horizontal emphasis; piers, often fluted or reeded, separating recessed window channels; incorporation of shallow relief panels and interior murals; rounded and bullnosed corners or other curved elements; and Art Deco motifs such as chevrons.

IMAGE 47. 710 PIER AVENUE (PCR SERVICES)

Post-War Development

Residential

Following World War II, there was some single- and multi-family residential infill in older Hermosa Beach tracts and newly subdivided tracts were improved. Architectural styles popular during this period were the Ranch, Minimal Traditional, and Mid-Century Modern.

There are four potentially eligible Ranch-style residences (Image 48) in Hermosa Beach constructed between 1938 and 1957. Ranch style (1945-1965) buildings are usually one story, rectangular in plan with broad tiled or wood or composition shingled roofs often with a side gable or gable-on-hipped roof extension, and also broad hipped roofs with overhanging eaves and exposed rafters. Ranch features are sometimes found mixed with the Minimal Traditional style.

IMAGE 48. 1139 17TH STREET (PCR SERVICES)

The Sea Skiff located at 150 10th Street (Image 49) and constructed in 1961 and 243 27th Street constructed in 1951 are good examples of a Mid-Century Modern style apartment buildings. Mid-Century Modern style architecture reflects the influence of the Modern Movement and International Style architecture along with other post-World War II architectural trends. Modern materials,

architectural innovations in plan, function and use, incorporation of modern amenities in residential architecture, and a lack of traditional architectural ornamentation characterize the style.

IMAGE 49. SEA SKIFF, 150 10TH STREET (PCR SERVICES)

Non-Residential

Commercial infill along the vacated railroad rights-of-way that were improved into roads also occurred during the Post War period. There are approximately four Mid-Century Modern commercial buildings (Images 50 and 51) along Aviation Boulevard, Hermosa Avenue, Pacific Coast Highway, and Pier Avenue. Mid-Century Modern design (1945-1965) used sleek, simplified geometry and asymmetrical, intersecting angular planes of masonry volumes and glass curtain walls, locked together by a flat planar roof. Designers embraced the optimistic spirit of the time, experimenting with the newest technologies and materials in building, such as concrete and aluminum, and incorporating futuristic elements.

IMAGE 50. 1075 AVIATION BOULEVARD (PCR SERVICES)

IMAGE 51. 1501 HERMOSA AVENUE (PCR SERVICES)

The former grocery store constructed in 1945 at 526 Pier Avenue (Image 52), and the Carousel constructed in 1950 at 2626 Hermosa Avenue (Image 53) are examples of Roadside Vernacular buildings designed to draw traffic off the street.

IMAGE 52. 526 PIER AVENUE (PCR SERVICES)

IMAGE 53. 2626 HERMOSA AVENUE (PCR SERVICES)

The Sea Sprite motel at 1016 The Strand was constructed in 1958 near the ocean and is an example of a Mid-Century Modern style motel related to recreation.

An industrial Vernacular Modern building constructed in 1968 stands at 716 Cypress Avenue (Image 54) housed one of the first surf board industries in Hermosa Beach. The building was used as Greg Knoll's surfboard factory. Surf board manufacturing and surfing is very important to the economic and recreation history of Hermosa Beach. Constructed during the post-World War II era, functionalist Vernacular Modern style (1945-1965) industrial buildings were common throughout Southern California. Designed to accommodate light industry, these building were generally one-story and utilized modular tilt-up construction methods and standardized materials in order to minimize construction costs. The exteriors were generally exposed brick or concrete although there are a few examples with stucco on the front elevations. The primary façade was usually more decorative utilizing Mid-Century Modern design motifs and the focus was bold signage advertising the company name. Often the buildings were set-back from the street behind a Modern landscape.

IMAGE 54. 716 CYPRESS AVENUE (PCR SERVICES)

The Modern New Formalist style Civic Center (Image 55) complex comprised of City Hall, Public Library, Police Station and Fire Station buildings were designed by Savo Stoshitch between 1961 and 1965 at the corner of Pier Avenue and Valley Drive. The New Formalist style (1960-1975) embraced many Classical precedents such as building proportion and scale, classical columns, highly stylized entablatures, and colonades. The upper floors or roof were either cantilevered or supported by an exo-structure that was vertical to the outer edge of the upper floors or roof. Roofs dominate the form of New Formalist buildings and are designed as large, heavy slabs that project out from the building. Often supported by massive tapering concrete columns, the roof underside sometimes features a raised grid pattern. These buildings were often on a platform or plinth that opened onto a landscaped plaza.

IMAGE 55. CIVIC CENTER (PCR SERVICES)

The Hermosa Valley Greenbelt is a unique City landscape that was developed during the late 1980s from an abandoned Santa Fe rail line. The park follows the historic railroad right-of-way which runs south to north through the City.

7.4 Regulatory Setting

Historical resources fall within the jurisdiction of several levels of government. Federal laws provide the framework for the identification, and in certain instances, protection of historical resources. Additionally, states and local jurisdictions play active roles in the identification, documentation, and protection of such resources within their communities. The National Historic Preservation Act (NHPA) of 1966, as amended and the California Register of Historical Resources are the primary federal and state laws and regulations governing the evaluation and significance of historical resources of national, state, regional, and local importance. Descriptions of these relevant laws and regulations are presented below.

7.4.1 Federal Level

7.4.1.1. National Register of Historic Places

The National Register was established by the NHPA as "an authoritative guide to be used by federal, state, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment."[52] The National Register recognizes properties that are significant at the national, state, and/or local levels.

National Register Criteria

To be eligible for listing in the National Register, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Four criteria for evaluation have been established to determine the significance of a resource:

A. It is associated with events that have made a significant contribution to the broad patterns of our history;

B. It is associated with the lives of persons significant in our past;

C. It embodies the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction;

D. It yields, or may be likely to yield, information important in prehistory or history.[53]

Districts, sites, buildings, structures, and objects that are 50 years in age must meet one or more of the above criteria and retain integrity (this is, convey their significance) to be eligible for listing. Under the National Register, a property can be significant not only for the way it was originally constructed, but also for the way it was adapted at a later period, or for the way it illustrates changing tastes, attitudes, and uses over a period of time.[54]

7.4.1.2 Integrity

The National Register recognizes seven aspects or qualities that, in various combinations, define integrity: Location, Design, Setting, Materials, Workmanship, Feeling, and Association:

> *Location* is the place where the historic property was constructed or the place where the historic event occurred. The relationship between the property and its location is often important to understanding why the property was created or why an event or activity happened. The actual location of a historic property, complemented by its setting, is particularly important in recapturing the sense of historic events and persons. Except in rare cases, the relationship between a property and its historic associations is destroyed if the property is moved.
>
> *Design* is the combination of elements that create the form, plan, space, structure, and style of a property. It results from conscious decisions made during the original conception and planning of a property (or its significant alteration) and applies to activities as diverse as community planning, engineering, architecture, and landscape architecture. Design includes such elements as organization of space, proportion, scale, technology, ornamentation, and materials. A property's design reflects historic functions and technologies as well as aesthetics. It includes such considerations as the structural system; massing; arrangement of spaces; pattern of fenestration; textures and colors of surface materials; type, amount and style of ornamental detailing; and arrangement and type of plantings in a designed landscape.
>
> *Setting* is the physical environment of a historic property. Whereas location refers to the specific place where a property was built or an event occurred, setting refers to the *character* of the place in which the property played its historic role. It involves *how*, not just where, the property is situated and its relationship to surrounding features and open space.
>
> *Workmanship* is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. It is the evidence of artisans' labor and skill in constructing or altering a building, structure, object, or site. Workmanship can apply to the property as a whole or to its individual components.
>
> *Materials* are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property. The choice and combination of materials reveal the preferences of those who created the property and indicate the availability of particular types of materials and technologies. A property must retain key exterior materials dating from the period of its historic significance.
>
> *Feeling* is a property's expression of the aesthetic or historic sense of a particular period of time. It results from the presence of physical features that, taken together, convey the property's historic character.

> *Association* is the direct link between an important historic event or person and a historic property. A property retains association if it *is* the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer.[55]

To retain historic integrity, a property will always possess most of these aspects and depending upon its significance, retention of specific aspects of integrity may be paramount for a property to convey its significance.56 Determining which of these aspects are most important to a particular property requires knowing why, where and when a property is significant.[57]

For properties that are considered significant under National Register Criteria A and B, for historical association with an event, pattern or person, *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation* ("*National Register Bulletin 15*") explains, "a property that is significant for its historic association is eligible if it retains the essential physical features that made up its character or appearance during the period of its association with the important event, historical pattern, or person(s)."[58]

In assessing the integrity of properties that are considered significant under National Register Criterion C, for architectural merit, *National Register Bulletin 15* states, "a property important for illustrating a particular architectural style or construction technique must retain most of the physical features that constitute that style or technique."[59]

7.4.2 State Level

7.4.1.2. California Register of Historical Resources

The Office of Historic Preservation ("OHP"), as an office of the California Department of Parks and Recreation ("DPR"), implements the policies of the NHPA on a Statewide level. The OHP also carries out the duties as set forth in the Public Resource Code ("PRC") and maintains the Historic Resources Inventory ("HRI") and the California Register. The State Historic Preservation Officer ("SHPO") is an appointed official who implements historic preservation programs within the State's jurisdictions. Also implemented at the State level, CEQA requires projects to identify any substantial adverse impacts which may affect the significance of identified historical resources.

The California Register signed into law on September 27, 1992 is "an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change."[60] The criteria for eligibility for the California Register are based upon National Register criteria.[61] Certain resources are determined by the statute to be automatically included in the California Register by operation of law, including California properties formally determined eligible for, or listed in, the National Register.[62]

The California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally Determined Eligible for the National Register;

- California Registered Historical Landmarks from No. 770 onward;
- Those California Points of Historical Interest ("PHI") that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.[63]

Other resources which may be nominated to the California Register include:

- Individual historical resources;
- Historical resources contributing to historic districts;
- Historical resources identified as significant in historical resources surveys with significance ratings of Category 1 through 5;
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an Historic Preservation Overlay Zones ("HPOZ").[64]

California Register Criteria

To be eligible for the California Register, a historical resource must be significant at the local, State, or national level, under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

Integrity for California Register Listing

A historical resource eligible for listing in the California Register must meet one or more of the criteria of significance described above and retain enough of its integrity, historic character or appearance to be recognizable as a historical resource and to convey the reasons for its significance. Historical resources that have been rehabilitated or restored may be evaluated for listing. Integrity is evaluated with regard to the retention of seven aspects of integrity similar to the National Register: location, design, setting, materials, workmanship, feeling, and association. Also like the National Register, a resource must also be judged with reference to the particular criteria under which a resource is proposed for eligibility. Alterations over time to a resource or changes in its use may themselves have attained historical, cultural, or architectural significance. It is possible that historical resources may not retain sufficient integrity to meet the criteria for listing in the National Register, but they may still be eligible for listing in the California Register in consideration of local, regional or state architectural and historical contexts and integrity thresholds. A resource that has lost its historic character or appearance may still have sufficient integrity for the California Register if it

maintains the potential to yield significant scientific or historical information or specific data (usually under Criterion 4).[65]

California Office of Historic Preservation Evaluation Methodology

The evaluation instructions and classification system prescribed by the California OHP in its manual, *Instructions for Recording Historical Resources* (March 1995) provide a three-digit evaluation rating code ("Status Code") for use in classifying potential historical resources. The first digit indicates one of the following general evaluation categories for use in conducting cultural resources surveys:

1. Listed on the National Register or the California Register;
2. Determined eligible for listing in the National Register or the California Register;
3. Appears eligible for the National Register or the California Register through survey evaluation;
4. Appears eligible for the National Register or the California Register through other evaluation;
5. Recognized as Historically Significant by Local Government;
6. Not eligible for any Listing or Designation; and
7. Not evaluated for the National Register or California Register or needs re-evaluation.

The second digit of the Status Code is a letter code indicating whether the resource is separately eligible (S), eligible as part of a district (D), or both (B). The third digit is a number that is used to further specify significance and refine the relationship of the property to the National Register and/or California Register. Under this evaluation system, categories 1 through 4 pertain to various levels of National Register and California Register eligibility. Locally eligible resources are given a rating code level 5. Properties found ineligible for listing in the National Register, California Register, or for designation under a local ordinance are given an evaluation Status Code of 6. Properties given an evaluation Status Code of 6Z are "found ineligible for the National Register, California Register, or Local designation through survey evaluation."[66]

7.4.1.3. City of Hermosa Beach

PCR reviewed a variety of planning and policy documents related to the City of Hermosa Beach. Historic preservation is first mentioned in the *City of Hermosa Beach Local Coastal Plan* (1981). A goal and objective within the Coastal Development and Design Chapter of the *Local Coastal Plan* was "to encourage historic preservation to maintain the eclectic character of Hermosa' mixed architectural styles."[67] Also, it was recommended as a future policy and program "that rehabilitation of commercial-residential structures be encouraged to preserve the City's historical buildings and cultural heritage."[68]

Prepared in 1994, the City's General Plan Land Use Element (Historic Preservation) outlined Federal and State preservation laws, local registration of historic properties and sites, and potential candidates for historic resources designation. Also discussed was the importance of a certified-local ordinance and certified local government, in order for a local government to receive preservation

benefits and incentives under the Mills Act from the Office of Historic Preservation. Twenty-eight historical resources were identified as **potentially locally significant**, in addition to two potential historic districts, and the City's General Plan Land Use Element (Historic Preservation) set forth an objective to establish a historic preservation program.

Four years later, the City of Hermosa Beach adopted a preservation ordinance in 1998 (Hermosa Beach Municipal Code, Chapter 17.53, Ordinance 98-1186). Under the City's current policies and ordinance, only resources that are listed as federal, state or local landmarks are protected. Other potential resources are only protected when proposed alterations or demolition requires a 'discretionary' review, pursuant to CEQA.

An historic resource may be designated a local landmark, pursuant to Sections 17.53.070 through 17.53.120, if it meets one or more of the following criteria:

A. It exemplifies or reflects special elements of the City's cultural, social, economic, political, aesthetic, engineering, or architectural history;
B. It is identified with persons or events significant in local, state, or national history;
C. It embodies distinctive characteristics of a style, type, period, or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship;
D. It is representative of the notable work of a builder, designer, or architect;
E. Its unique location or singular physical characteristic(s) represents an established and familiar visual feature or landmark of a neighborhood, community, or the City.[69]

Nominations of an historic resource as a landmark shall be made by the City, or by application of the property owner or property owners representing a majority or controlling interest in the property on which the resource is located.[70] In order to be eligible for consideration as a landmark, an historic resource must be at least 50 years old; with the exception that an historic resource of at least 30 years old may be eligible if the City Council determines that the resource is exceptional, or that it is threatened by demolition, removal, relocation, or inappropriate alteration.[71]

One zoning district, Specific Plan Area No. 11 (along Pier Avenue between Palm Drive and Valley Drive) provides incentives for preserving historic resources: "the conservation and continued use and reuse of existing buildings that are iconic of and contribute to the character of upper Pier Avenue as a small-scale, pedestrian-oriented village with diverse architectural character is encouraged through the granting of incentives by the Planning Commission."72 Buildings do not need to be a designated historic landmark in order to be eligible for incentives. After an application is submitted to the community development department, the planning commission will decide whether:

i. The conservation of the existing building will contribute to the character of upper Pier Avenue and advance the purposes of this zone set forth in Section 17.38.530, or the building has been designated by a state or federal agency or the city council as a landmark pursuant to Chapter 17.53.

ii. The project will not result in significant alteration of the building. "Significant alteration" means changes or modifications that adversely alter, affect or destroy exterior architectural

features or the essential elements that make the building worthy of protection.

iii. Any deviation from zoning standards is to the minimum extent necessary.

iv. The incentives are consistent with the purposes of this zone.

v. The incentives will not conflict with the provisions of, or be detrimental to, the general plan.

vi. The incentives will not be materially detrimental to the public welfare or injurious to the property or improvements in the vicinity and this zone.73

The City Council's Strategic Plan (2014) and the Community Dialogue Decision Making Tool (2014) also identify the City's small-scale and eclectic mix of architecture as important to the city's character, culture and economy. The documents recognize the importance of historical buildings to the character of the City of Hermosa Beach and their contribution to the overall sense of place as a beach community.[74]

[1] William McCawley, The First Angelinos, Malki Museum Press, Banning, California, April 1996.
[2] Hubert Howe Bancroft, *History of California*, Vol. 1: 1542-1800, Wallace Hebberd, Santa Barbara, California, 1963; original 1886. 140.
[3] Burgess McK Shumway, *California Ranchos: Patented Private Land Grants Listed by County*, The Borgo Press, San Bernardino, California, 1988, 36.

[4] Ibid.
[5] Patricia A. Gazin, *Footnotes on the Sand: An Incomplete Compendium, an Arbitrary Selection of Events, Rumor, Speculation, Some Fact, and Some Fiction about Hermosa Beach*, Myron Gazin, Hermosa Beach, CA, 1991,
[6] Gazin, *Footnotes on the Sand*, p. 10.
[7] "Redondo: Grading a Townsite," *Los Angeles Times*, May 3, 1901, 15.
[8] "Railroad Sensation in Redondo, Track-Laying Begun on Alleged Forfeited Route," *Los Angele Times*, September 13, 1901, A5.
[9] "Hermosa: Laying Double Track," *Los Angeles Times*, November 17, 1904, A11.
[10] "Daily Balloon Route Excursion Brochure," Pacific Electric Railway Historical Society, accessed January 13, 2014, http://www.pacificelectric.org/pacific-electric/western-district/daily-balloon-route-excursion-brochure-1910/
[11] Gazin, *Footnotes on the Sand, p. 16*.
[12] Gazin, *Footnotes on the Sand*, p. 43.
[13] "Good Roads Campaign: Redondo Beach, Hermosa and Inglewood Join In It," *Los Angeles Times*, August 2, 1909, I14.
[14] George Steele, Map of Hermosa Beach, Tract Map TR0001-025. September 04, 1901, Los Angeles County's Department of Public Works. http://dpw.lacounty.gov/sur/nas/landrecords/tract/MB0001/TR0001-025.pdf
[15] George Steele. First Edition to Hermosa Beach. Tract Map TR0001-059. December 18, 1901. http://dpw.lacounty.gov/sur/nas/landrecords/tract/MB0001/TR0001-059.pdf
[16] George Steele. Second Edition to Hermosa Beach. Tract Map TR0003-011A. December 30, 1902. http://dpw.lacounty.gov/sur/nas/landrecords/tract/MB0003/TR0003-011A.pdf
[17] Map of Shakespeare Beach. Tract Map TR0004-083. December 01, 1903. http://dpw.lacounty.gov/sur/nas/landrecords/tract/MB0004/TR0004-083.pdf
[18] Carnation Villa Tract. Tract Map TR0007-042. May 02, 1905. http://dpw.lacounty.gov/sur/nas/landrecords/tract/MB0007/TR0007-042.pdf
[19] "Daily Balloon Route Excursion Brochure," Pacific Electric Railway Historical Society, accessed January 13, 2014, http://www.pacificelectric.org/pacific-electric/western-district/daily-balloon-route-excursion-brochure-1910/
[20] "Shakespeare Beach: Significant Sale of Lots Reported at This Popular Resort Near Hermosa." *Los Angeles Times.* August 16, 1907. III1.
[21] Sanborn Insurance Maps. Hermosa beach. Los Angeles County. January 1927. Amended September 1946. Sheets 1-27.
[22] Ibid.
[23] "Hermosa Is About to Realize Dream," *Los Angele Times*, August 26,1917, I11.
[24] Chris Miller and Jerry Roberts, *Images of America: Hermosa Beach*, Arcadia Publishing, San Francisco, California, 2005, 31.
[25] "New Promenade Along Strand," *Los Angele Times*, August 23, 1913, II11.

[26] "Hermosa Pier Completed," *Los Angele Times*, November 27, 1913, II8.
[27] Miller and Roberts, Images of America, 41.
[28] "Hermosa Takes Look at Itself," *Los Angele Times*, September 8, 1961, A7.
[29] "Work Started on Aquarium," *Los Angele Times*, November 20, 1947, 16. The Los Angeles Times announced the new aquarium as Marineland of the Pacific, however most local resources and images show the attraction's name was Ocean Aquarium. A much larger aquarium known as Marineland of the Pacific was later constructed in Palos Verdes.
[30] "Coastal Trip Has Many Attractions: Coastal Tour," *Los Angele Times*, May 24, 1953, A19.
[31] "Hermosa Takes Look at Itself," *Los Angele Times*, September 8, 1961, A7.
[32] Miller and Roberts, *Images of America*, 27.
[33] "Hermosa Beach," *Los Angele Times*, June 20, 1913, II8.

[34] "At Hermosa Beach," *Los Angele Times*, September 26, 1920, V4.
[35] Colleen Viana, "Landmark Hermosa: The Sea Sprite Motel," *Hermosa Beach Patch*, November 05, 2010, accessed January 27, 2014, http://hermosabeach.patch.com/groups/arts-and-entertainment/p/landmark-hermosa-the-sea-sprite-motel
[36] "Club to Grace Ocean Front at Hermosa Beach," *Los Angele Times*, December 9, 1923, V12.
[37] Miller and Roberts, *Images of America*, 114.

[38] Jan Ostashay, DPR Form: Bijou Building, December 22, 1998.
[39] "Hermosa Beach Bank Building Nears Completion, *Los Angeles Times*, August 22, 1923, V5.
[40] Miller and Roberts, *Images of America*, 26.
[41] "A Day With Duke Kahanamoku," *Los Angeles Times*, July 10, 1913, IV1.
[42] Miller and Roberts, *Images of America*, 49.
[43] Miller and Roberts, *Images of America*, 74.
[44] "Lifeguards: Who is a LACoFD Lifeguard," Los Angeles County Fire Department, Accessed January 27, 2014, http://fire.lacounty.gov/Lifeguards/WhoIsHistoryByDecade.asp
[45] "Guards Rescue Many Bathers," *Los Angeles Times*, March 23, 1931, A1.
[46] "Life Guards Set Title Race," *Los Angeles Times,* August 31, 1932, 10.
[47] "Canadian Girl Cops Hermosa Oceanic Swim," *Los Angeles Times,* September 6, 1932, 13.
[48] "Lifeguards: Who is a LACoFD Lifeguard," Los Angeles County Fire Department, Accessed January 27, 2014, http://fire.lacounty.gov/Lifeguards/WhoIsHistoryByDecade.asp
[49] "Beau Peep Whispers," *Los Angeles Times*, July 31, 1938, D1.
[50] Volleyball League Forming in Hermosa," *Los Angeles Times*, January 17, 1965, CS9.
[51] Beach Volleyball Database, accessed January 29, 2014, http://www.bvbinfo.com/history.asp
[52] 36 CFR Section 60.2.
[53] "Guidelines for Completing National Register Forms," in National Register Bulletin 16, U.S. Department of Interior, National Park Service, September 30, 1986. This bulletin contains technical information on comprehensive planning, survey of cultural resources and registration in the NRHP.
[54] National Register Bulletin 15, p. 19.
[55] National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation, 44-45, http://www.nps.gov/nr/publications/bulletins/pdfs/nrb15.pdf, accessed July 7, 2013.
[56] The National Register defines a property as an "area of land containing a single historic resource or a group of resources, and constituting a single entry in the National Register of Historic Places." A "Historic Property" is defined as "any prehistoric or historic district, site, building, structure, or object at the time it attained historic significance. Glossary of National Register Terms, http://www.nps.gov/nr/publications/bulletins/nrb16a/nrb16a_appendix_IV.htm, accessed June 1, 2013.
[57] National Register Bulletin 15, p. 44.
[58] "A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer. Like feeling, association requires the presence of physical features that convey a property's historic character. . Because feeling and association depend on individual perceptions, their retention alone is never sufficient to support eligibility of a property for the National Register." Ibid, p. 46.
[59] "A property that has lost some historic materials or details can be eligible if it retains the majority of the features that illustrate its style in terms of the massing, spatial relationships, proportion, pattern of windows and doors, texture of materials, and ornamentation. The property is not eligible, however, if it retains some basic features conveying massing but has lost the majority of the features that once characterized its style." Ibid.
[60] PRC Section 5024.1(a).
[61] PRC Section 5024.1(b).
[62] PRC Section 5024.1(d).
[63] Ibid.
[64] PRC Section 5024.1(e)
[65] Codified in California Code of Regulations, Title 14, Chapter 11.5, Section 4852(c) which can be accessed on the internet at http://ohp.parks.ca.gov
[66] Ibid.
[67] *City of Hermosa Beach Local Coastal Plan* (December 1981): 10.
[68] *City of Hermosa Beach Local Coastal Plan* (December 1981): 12.
[69] Municipal Code Sections 17.53.070 through 17.53.120, .

[70] Municipal Code Section 17.53.070 Nomination and application requirements, landmark.
[71] Municipal Code Section 17.53.080 Minimum eligibility requirement, landmark.

[72] Chapter 17.38 Specific Plan Areas, 17.38.550 Plan Area No. 11 – Development standards. http://www.hermosabch.org/index.aspx?page=454#520, accessed May 7, 2014.
[73] Ibid.
[74] Lyle Sumek Associates, Inc., Strategic Plan 2014-2019-2029, Prepared for the City of Hermosa Beach (March 2014).

C-8: ENERGY

8. Energy

8.1 Introduction

This section identifies existing conditions, regulations, and key issues related to energy use and facilities within the planning area.

8.2 Environmental Setting

Existing Energy Use

As of 2012, California ranked second in the United States in total energy consumption of natural gas, petroleum, and retail electricity sales, following only Texas in each category (EIA 2014a). Despite being a large consumer of energy, in particular transportation energy, California's per-capita consumption rate for all these energy sources combined is one of the lowest in the country (49th). This is largely because of California's proactive energy efficiency programs and mild weather, which reduces energy demands for heating and cooling (EIA 2014b).

Residential and nonresidential (businesses, industrial processes, government operations) activities in Hermosa Beach such as building heating and cooling, lighting, and appliance operation require electricity and natural gas. Table 8-1 presents an overview of the electricity and natural gas consumed in the city in 2010; more detailed information by fuel source is provided below.

TABLE 8.1: ENERGY USE BY FUEL (2010)

Sector	Electricity (kWh)	Percent of Total Electricity Use	Natural Gas (Therms)	Percent of Total Natural Gas Use
Residential	49,906,427	51%	3,448,010	81%
Nonresidential	48,545,739	49%	827,116	19%
Total	98,452,166	100%	4,275,126	100%

Source: Southern California Edison 2011a, 2011b, 2013a, 2013b; SoCalGas 2010

Notes: 2010 is the most recent year for which data is available for both fuel sources.

Energy Sources

Energy generation occurs across the state from many different sources. Tracking the specific source of energy used in any one place can be difficult. Energy that is not generated at a facility by an energy provider can be purchased from other producers and transmitted to the energy user through transmission networks. Energy sources used in Hermosa Beach include hydroelectric, waste-to-energy, transformation, geothermal, solar, wind, coal, natural gas, and nuclear. The following sections describe the existing sources of electricity and natural gas energy for Hermosa Beach.

Electricity

Over the past 15 years, electricity generation in California has undergone a transition. Historically, California has relied heavily on oil- and gas-fired plants to generate electricity. Spurred by regulatory measures and tax incentives, California's electrical system has become more reliant on renewable energy sources, including cogeneration, wind energy, solar energy, geothermal energy, biomass conversion, transformation plants, and small hydroelectric plants. Unlike petroleum production, generation of electricity is usually not tied to the location of the fuel source and can be delivered great distances via the electrical grid.

Southern California Edison (SCE) supplies electricity to customers in Hermosa Beach. Additional information on SCE's electricity sources and the annual amount of electricity delivered is provided below under "Energy Service Providers."

The generating capacity of a unit of electricity is expressed in megawatts (MW). One MW provides enough energy to power 1,000 average California homes per day. Net generation refers to the gross amount of energy produced by a unit, minus the amount of energy the unit consumes. Generation is typically measured in megawatt-hours (MWh), kilowatt-hours (kWh), or gigawatt-hours (GWh).

Natural Gas

Natural gas is a hydrocarbon fuel found in reservoirs beneath the earth's surface and is composed primarily of methane (CH_4). It is used for space and water heating, process heating and electricity generation, and as transportation fuel. Southern California Gas Company (SoCalGas) supplies natural gas in Hermosa Beach.

Use of natural gas is expected to increase in coming years because it is a relatively clean alternative to other fossil fuels like oil and coal. In California and throughout the western United States, many new electrical generation plants that are fired by natural gas are being brought online. Thus, there is great interest in importing liquefied natural gas from other parts of the world. As of 2012, 43 percent of the electricity consumed in California was generated using natural gas (CEC 2013b).

While the supply of natural gas in the United States and production in the lower 48 states has increased greatly since 2008, California produces little, and imports 90 percent of its natural gas. Most imports are delivered via interstate pipelines from the Southwest, Rocky Mountains, and Canada (CEC 2013b)..

Additional information on the amount of natural gas delivered to SoCalGas customers in Hermosa Beach is provided below under "Energy Service Providers."

Alternative and Renewable Energy Sources

Wind Energy

Wind energy systems convert the kinetic energy in the wind into mechanical or electrical energy that can be used for practical purposes. Wind electric turbines generate electricity for homes and businesses and for sale to utilities. Wind electricity can be generated on a small residential scale with small turbines (typically a few kW or less in capacity, but some as large as 30 kW), or on a utility scale via large wind farms.

Wind energy plays an integral role in California's electricity portfolio. According to the California Energy Commission (CEC), in 2004, turbines in wind farms in California generated about 1.5 percent of the state's total electricity resource, enough to light a city the size of San Francisco. Hermosa Beach has adopted regulations for small wind energy systems, and one application for a small residential wind energy system was recently submitted and withdrawn. This source is expected to have minimal potential in Hermosa Beach due to existing density and height restrictions.

Solar Energy

Solar power can be harnessed for several applications, including heating, cooling and electricity generation. The most common method to produce energy uses photovoltaic (PV) cells, which convert sunlight directly into electricity. Large-scale use of solar energy represents a major potential energy resource in the Southern California climate. In general, large-scale solar power plants are very land intensive compared to conventional power plants, requiring acres of reflectors, pipelines, and transmission lines. No large-scale solar power plants exist in Hermosa Beach, although small-scale solar generation facilities are used on individual properties.

The state of California has emphasized developing solar-produced energy by developing the California Solar Initiative in 2006. The California Solar Initiative provides incentives to help increase the amount of solar energy generated in California. One such incentive is to encourage solar energy to be used in new homes. The incentive program is known as the New Solar Homes Partnership. Overall, the California Solar Initiative has a goal to provide 1,750 MW of solar-generated energy by 2016 (CEC 2013a). As shown in Table 8-2, residents and businesses in Hermosa Beach have invested nearly $3 million to install approximately 378 kW of solar through this program, consisting of 74 residential PV systems and 6 nonresidential PV systems. The City waives building permit fees.

TABLE 8.2: HERMOSA BEACH SOLAR PV INSTALLATIONS THROUGH CALIFORNIA SOLAR INITIATIVE (2008–2014)

Sector	Number of Systems	kW Installed	Incentives Paid by California Solar Initiative	Total Cost
Nonresidential	6	108	$146,422	$689,370
Residential	74	270	$354,252	$2,303,662
Total	80	378	$500,674	$2,993,032

Source: Go Solar California 2014

Geothermal Energy

Geothermal power uses heat from below the earth's surface to produce electricity or heat buildings and water systems. Geothermal power produces little to no air pollution and is extremely reliable during the lifetime of the power plant. Geothermal applications cover a range of uses, from small-scale geothermal heat pumps used in homes to large-scale power plants that provide electricity.

Currently, California's capacity to generate geothermal energy is approximately 1,870 MW from resources using predominantly dry steam and liquid. In California, 46 geothermal power plants are widely dispersed from north to south. Most development of these plants has occurred in The Geysers (Lake and Sonoma counties), the Salton Sea (Imperial County), and Coso Hot Springs (Inyo

County) Known Geothermal Resource Areas. Geothermal direct use projects generally have less intensive environmental effects than electrical-generating projects.

Transformation

Transformation projects (also known as resource recovery or waste-to-energy projects) convert agricultural and municipal wastes, respectively, to fuel or electricity. The primary reason for most transformation projects is to dispose of wastes, and the energy produced is a useful byproduct to offset disposal costs. Systems to recover landfill gas and methane fermentation projects both produce methane gas, which can be burned in a gas turbine to generate electricity. Methane gas can be recovered from landfills and sewage treatment plants and converted to electricity.

Direct combustion projects, where agricultural refuse or municipal solid waste is burned to generate electricity, have greater environmental impacts and are usually more controversial than methane-producing projects. Transformation technologies are still relatively new to California. Transformation plants have been proposed statewide as a solution to the state's diminishing landfill capacity. Proposals throughout the state have sparked public opposition over issues regarding odor, toxic wastes, air pollutant emissions, noise, and traffic.

Energy Service Providers

Southern California Edison

In 2012, SCE provided electricity service to 11,114 customers in Hermosa Beach. There were 9,640 domestic customers (86.7 percent of total), 1,459 general accounts (13.2 percent) in the GS-1, GS-2, and TOU-GS rate classes described in Table 8.4, and 15 street lighting accounts (0.1 percent).

Beginning in 2011, SCE implemented a time of use (TOU-GS) rating, where the cost of electricity varies depending on the time of day in which electricity is used. As shown in Table 8-3, the Domestic rate class (residential users) accounts for nearly half of all the electricity consumed by SCE customers in Hermosa Beach, followed by General Service (GS-1, GS-2), TOU-GS energy use, and Street Lighting and Traffic Controls (TC).

TABLE 8.4: HERMOSA BEACH ELECTRICITY CONSUMPTION BY RATE CLASS (2009–2012)

Rate Class	Rate Class Description	2009 kWh	2010 kWh	2011 kWh	2012 kWh
Domestic	Residential	50,190,864	49,906,427	50,200,614	49,778,450
GS-1	Nonresidential	10,897,087	10,513,133	10,493,798	11,253,695
GS-2	Nonresidential	29,733,546	28,282,699	844,826	872,214
Street Lighting	Street Lighting	9,701,884	9,673,561	64,204	66,719
TC-1	Traffic Control Lighting	76,345	76,346	--	--
TOU-GS	Time-of-Use Non-residential	--	--	27,954,246	28,999,204
Total		100,599,726	98,452,166	89,557,688	90,970,282

Source: Southern California Edison 2011a, 2011b, 2013a, 2013b

Southern California Gas Company

In Hermosa Beach, natural gas is provided by SoCalGas, which is owned by Sempra Energy. Sempra Energy also owns San Diego Gas & Electric (SDG&E). The SoCalGas territory covers approximately 20,000 square miles from San Luis Obispo and Visalia in the north to the Mexican border, with the exception of San Diego County. Natural gas services are provided to residential, commercial, industrial, utility electric generation companies, and wholesale customers.

In 2008, SoCalGas had 344 billion cubic feet in natural gas sales: 240 billion cubic feet for residential customers and 104 billion cubic feet for commercial and industrial customers (Sempra Energy 2008). Table 8-4 shows nonresidential and residential natural gas consumption in Hermosa Beach for the 2010 calendar year.

TABLE 8.4: HERMOSA BEACH NATURAL GAS CONSUMPTION (2010)

Sector	Natural Gas Use (Therms)	Percent of Total
Nonresidential	827,116	19%
Multi-Family	558,322	13%
Single-Family	2,889,688	68%
Total	**4,275,126**	**100%**

Source: SoCalGas 2010

8.3 Regulatory Setting

The following federal, state, and local laws, regulations, and policies pertain to energy in the planning area.

Federal Plans, Policies, Regulations and Laws

US Congress

Beginning in the late 1990s, Congress introduced a tax subsidy on the production of renewable wind-generated electricity. The availability, the expiration, and the potential extension of the Production Tax Credit (PTC) caused the boom and bust production of energy that typifies wind development in the United States. The PTC's limitations have determined the role of the wind energy industry in the United States and contributed to the dominance of electric utility subsidies.

Congress also periodically directs federal agencies to use increasing amounts of renewable energy or otherwise aid private companies in developing wind energy. One example is the Department of Energy's Wind Powering America initiative which, among other tasks, has created Wind Working Groups in each state with a wind resource.

National Energy Act

The National Energy Act of 1978 was a legislative response by the US Congress to the 1973 energy crisis. It includes the following statutes:

- Public Utility Regulatory Policies Act (Public Law 95-617)
- Energy Tax Act (Public Law 95-318)
- National Energy Conservation Policy Act (Public Law 95-619)
- Power Plant and Industrial Fuel Use Act (Public Law 95-620)
- Natural Gas Policy Act (Public Law 95-621).

Some of the more notable legislative acts are discussed below.

Energy Tax Act

The Energy Tax Act (Public Law 95-318) was passed by Congress in 1978 as part of the National Energy Act. It was a response to the 1973 oil crisis and promoted fuel efficiency and renewable energy through taxes and tax credits.

National Energy Conservation Policy Act

The National Energy Conservation Policy Act (NECPA) of 1978 (Public Law 95-619) is a US statute signed into law as part of the National Energy Act. NECPA requires utilities to provide residential consumers with energy conservation audits and other services to encourage slower growth of electricity demand. NECPA was amended in 1985 by the Energy Policy and Conservation Act Amendments of 1985 (Public Law 99-58).

US Department of Energy

The US Department of Energy is responsible for energy policy and nuclear safety. Its purview includes the nation's nuclear weapons program, nuclear reactor production for the US Navy, energy conservation, energy-related research, radioactive waste disposal, and domestic energy production. Many of these activities are funded through the Department of Energy's system of national laboratories.

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission (FERC) regulates and oversees energy industries in the economic, environmental, and safety interests of the American public. FERC is the US federal agency with jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, and oil pipeline rates. FERC also reviews and authorizes liquefied natural gas terminals, interstate natural gas pipelines and nonfederal hydropower projects. Electricity is run by the states; however, FERC has jurisdiction over certain matters (FERC 2009).

State Plans, Policies, Regulations, and Laws

California Energy Commission

Established in 1974 by the Warren-Alquist Act (Public Resources Code Section 25000 et seq.), the CEC is the state's primary energy policy and planning agency. The CEC has five major responsibilities:

1. Forecasting future energy needs and keeping historical energy data.

2. Licensing thermal power plants 50 MW or larger.
3. Promoting energy efficiency through appliance and building standards
4. Developing energy technologies and supporting renewable energy.
5. Planning for and directing the state response to an energy emergency.

California Public Utilities Commission

The California Public Utilities Commission has authority to set electric rates, regulate natural gas utility service, protect consumers, promote energy efficiency, and ensure electric system reliability.

California Public Utilities Commission General Order 131-D (adopted by Decision 94-06-014 and modified by Decision 95-08-038) contains the rules for the planning and construction of new transmission facilities, distribution facilities, and substations. This decision requires utility companies to obtain permits to construct certain power line facilities or substations if the voltage would exceed 50 kV or if the substation would require the acquisition of land or an increase in voltage rating above 50 kV. Utilities do not need to comply with this decision for distribution lines and substations with voltage less than 50 kV; however, they must obtain any nondiscretionary local permits required for the construction and operation of these projects. Compliance with the California Environmental Quality Act is required for construction of facilities. The California Public Utilities Commission also has jurisdiction over the siting of natural gas transmission lines.

California Power Authority

The California Power Authority provides taxable municipal bond financing for the construction of new generation projects to meet the state's energy needs and to maintain healthy electricity reserves. The California Power Authority is authorized to issue up to $5 billion in revenue bond financing for renewable, peaking, and base load generation projects, as well as conservation and energy efficiency measures.

Renewables Portfolio Standard

California's Renewables Portfolio Standard (RPS), established in 2002 by Senate Bill 1078 (Sher, Chapter 516, Statutes of 2002), originally required retail electricity providers to procure at least 1 percent of their electricity supplies from renewable resources to achieve a 20 percent renewable mix by no later than 2017. Since then, the CEC, the California Public Utilities Commission, and the California Power Authority approved the first Energy Action Plan (EAP) in 2003, which accelerated the 20 percent target date to 2010. A second EAP was adopted in 2005, which provided updates in energy policy. Senate Bill 107 (Smitian and Perata, Chapter 464, Statutes of 2006) adopted the revised 2010 target date into law. A third EAP update was adopted in 2008, which "examines the state's ongoing actions in the context of global climate change" (CEC 2009). Executive Order S-14-08 expands the state's renewable energy standard to 33 percent renewable power by 2020.

California Energy Efficiency and Green Building Standards (CALGreen)

Title 24 of the California Code of Regulations is a statewide standard applied by local agencies through building permits. It includes requirements for the structural, plumbing, electrical, and mechanical systems of buildings and for fire and life safety, energy conservation, green design, and

accessibility in and around buildings. Part 6 (the California Energy Code) and Part 11 (the California Green Building Standards Code) include prescriptive and performance-based standards to reduce electricity and natural gas use in every new building constructed in California. These standards are regularly updated every three to four years to incorporate new market-ready technologies and design techniques to further reduce energy use from the built environment. The most recent update to these standards occurred in 2014.

Local Plans, Policies, Regulations, and Laws

City of Hermosa Beach Municipal Code Section 15.48.020

Section 15.48.020 of the City's Municipal Code modifies the California Energy Code, requiring new residential and nonresidential buildings to be 15 percent more energy efficient than California Energy Code requirements. The section also includes requirements for cool roofs or roofs with high levels of solar reflectance, energy-efficient appliances, and energy-efficient heating, ventilation, and air conditioning systems.

Permit Processing and Rebates

The City provides building permit and planning fee rebates for eligible green building, energy efficiency, and renewable energy projects. Eligible projects include those obtained through Energy Upgrade California or the HERO program, as well as projects certified through LEED or Build it Green. Renewable energy projects (including wind and solar) are also eligible for rebates.

Hermosa Beach Sustainability Plan

The Hermosa Beach Sustainability Plan was accepted by City Council in 2011. Chapter 5 of the plan focuses on building energy and includes measures and projects to reduce energy use at municipal facilities and encourage the installation of renewable energy projects at homes and businesses.

C-9: Geology and Soils

9. Geology and Soils

9.1 Introduction

This section presents the environmental and regulatory settings for geology, soils, and seismic hazards in the planning area. This section refers to data from the California Geological Survey (CGS), California Governor's Office of Emergency Services (Cal OES), the US Geological Survey (USGS), and previous environmental documents prepared for the City of Hermosa Beach. For information on sea level rise and how it could affect soils and seismic hazards in the planning area, please refer to the Sea Level Rise Vulnerability Assessment presented in Appendix A2.

9.2 Environmental Setting

Topography

Hermosa Beach sits at the southwest end of Santa Monica Bay and ranges in elevation from sea level in the west to about 200 feet above sea level at inland locations (USGS 1981). The city is characterized by rolling hills. Most vertical elevation gains occur from west to east.

Geology

Regional Geology

Hermosa Beach is located along the southwestern margin of the Los Angeles Basin and Coastal Plain. The Los Angeles Basin is an alluvial-filled basin bound to the north and east by the Santa Monica, San Gabriel, and Santa Ana mountains, and to the west and south by the Pacific Ocean and the Palos Verdes Hills. The Los Angeles Basin is approximately 70 miles long and 10 miles wide. It is a structural basin formed in the mid-Miocene epoch as a result of tectonic processes. As the basin formed, it filled with a sequence of sedimentary deposits up to 35,000 feet thick. The Los Angeles Basin is also referred to as a "depositional basin" to describe the simultaneous deepening of the basin by tectonic processes and sediment infill. Prior to approximately five million years ago, this basin was submerged under the ocean and much of the sediment was deposited in a marine environment (City of Hermosa Beach 2014).

Local Geology

The planning area is underlain by Holocene-age dune sands located west of the adjacent older alluvial deposits of the Los Angeles Basin to the east. Beneath the surficial dune sands is the Pleistocene-age San Pedro Formation, consisting of unconsolidated and semi-consolidated stratified sands with some clays, silts, and gravels. The late Pliocene-age Pico Formation, consisting of marine siltstones and sandstones, sits beneath the San Pedro Formation. Beneath the Pico Formation is the early Pliocene-age Repetto Formation, consisting of siltstones with layers of sandstones and conglomerates. Beneath the Repetto Formation is the Miocene-age Puente Formation, which

contains the primary oil reservoir in the planning area (City of Hermosa Beach 2014).The California Department of Conservation (DOC) provides soil maps for the state of California by USGS Quadrangle, and the planning area lies within the Redondo Beach Quadrangle. The oldest Quaternary geologic unit mapped in the Redondo Beach Quadrangle is the Pleistocene San Pedro Formation. The only identified soil substrate mapped in the planning area is Quaternary Older Alluvium (DOC 1998).

Soils

Soils Erosion

Erosion is a normal and inevitable geologic process whereby earth materials are loosened, worn away, decomposed, or dissolved and are removed from one place and transported to another. Precipitation, running water, waves, and wind are all agents of erosion. Within the planning area, opportunities for accelerated erosion include the steepening of slopes, removing groundcover, and other human-induced activities associated with construction and landscaping. For example, hillside construction often requires land grading activities that can result in steeper slopes, which are more prone to soil erosion. Preparing land for construction can also remove ground cover, exposing soils to wind erosion. Accelerated erosion within an urban area can cause damage by undermining structures; blocking storm sewers; and depositing silt, sand, or mud in roads and tunnels. Eroded materials are eventually deposited into coastal waters where the carried silt remains suspended for some time, constituting a pollutant and altering the normal balance of plant and animal life.

Expansive and Collapsible Soils

Expansive soils consist largely of clays, which greatly increase in volume when saturated with water and shrink when dried. Because of this effect, building foundations may rise during the rainy season and fall during the dry season. If this expansive movement varies underneath different parts of a single building, foundations may crack, structural portions of a building may be distorted, and doors and windows may become warped so that they no longer function properly. The potential for soil to undergo shrink and swell is greatly enhanced by the presence of a fluctuating, shallow groundwater table. Changes in the volume of expansive soils can result in the consolidation of soft clays after the lowering of the water table or the placement of fill. The volume of collapsible soils reduces when the pore spaces in the soil become saturated, causing loss of grain-to-grain contact and possibly dissolving interstitial cement holding the grains apart. Collapsible soils can cause uniform or differential damage to foundations and walls built on this soil type. In some cases, subsidence, or the gradual sinking of land, can occur in collapsible soils.

It does not appear that expansive clays or soils exhibiting shrink-swell characteristics underlie the planning area. However, since no citywide soil report exists, expansive and collapsible soils are analyzed on a project-by-project basis.

Corrosive Soils

Soils and bedrock throughout Southern California have varying degrees of sulfate and corrosion potential. Corrosion of infrastructure can result in weakening of the metal and resultant leaks to the environment. The planning area is known to include corrosive soils (NMG Geotechnical 2012, as cited in City of Hermosa Beach 2014).

Seismic Hazards

The primary effects of seismic hazards are fault ground ruptures and ground shaking. Secondary seismic hazards include liquefaction, lateral spreading, differential settlement, landslide-induced earthquakes, and subsidence. Each of these potential hazards is discussed below. While Hermosa Beach is located in a seismically active region, the planning area is not located directly on an active fault. Although tsunamis are typically triggered by seismic events, the effects that would be experienced in the planning area are consistent with flooding events; therefore, tsunamis are included in Section 12 (Hydrology and Water Quality).

Primary Hazards

Seismic Ground Shaking

Ground shaking (i.e., motion that occurs as a result of energy released during faulting) could potentially result in the damage or collapse of buildings and other structures, depending on the magnitude of the earthquake, the location of the epicenter, and the character and duration of the ground motion. The characteristics of the underlying soil and rock and, where structures exist, the building materials used and the workmanship of the structures are important details affecting the potential for damage due to seismic ground shaking.

Earthquake magnitude is generally measured on a logarithmic scale known as the Richter scale. This scale describes a seismic event in terms of the amount of energy released by fault movement. Because the Richter scale expresses earthquake magnitude (M) in scientific terms, it is not readily understood by the general public. The Modified Mercalli Intensity scale describes the magnitude of an earthquake in terms of actual physical effects. Table 9-1 compares the Modified Mercalli Intensity scale to the Richter scale.

TABLE 9.1: EARTHQUAKE MAGNITUDE AND INTENSITY DESCRIPTION

Richter Magnitude	Modified Mercalli Index Intensity—Description
<3.0	I. Not felt except by a very few under especially favorable circumstances (I Rossi-Forel scale).
3.0–3.9	II. Felt only by a few persons at rest, especially on upper floors of high-rise buildings. Delicately suspended objects may swing.
	III. Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing automobiles may rock slightly. Vibration like passing of truck. Duration estimated.
4.0–4.9	IV. During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls make creaking sound. Sensation like a heavy truck striking a building. Standing automobiles rocked noticeably.

Richter Magnitude	Modified Mercalli Index Intensity—Description
	V. Felt by nearly everyone, many awakened. Some dishes, windows, and so on broken; cracked plaster in a few places; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
5.0–5.9	VI. Felt by all, many frightened and run outdoors. Some heavy furniture moved, few instances of fallen plaster and damaged chimneys. Damage slight.
	VII. Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving cars.
6.0–6.9	VIII. Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, and walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving cars disturbed.
	IX. Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.
7.0–7.9	X. Some well-built wooden structures destroyed; most masonry and frame structures destroyed; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed, slopped over banks.
	XI. Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.
8.0 and higher	XII. Damage total. Waves seen on ground surface. Lines of sight and level distorted. Objects thrown into air.

Source: USGS 2013a

Historical records indicate that the planning area has experienced shaking from a number of seismic events over the last century and a half. The seismic events that likely caused varying degrees of ground motion include earthquakes in 1812, 1827, 1852, 1855, 1857, 1893, 1936, 1952, 1956, 1965,

1971, 1974, 1977, 1987, 1991, and 1994. The 1812 and 1857 events are thought to have occurred along the Mojave Segment of the San Andreas Fault and caused significant damage to developed areas of Southern and Central California. Those earthquakes were estimated to have had moment magnitudes of approximately M7.1 and M7.8 on the Richter scale, respectively. The 1952 Tehachapi earthquake had an estimated moment magnitude of M7.7 on the Richter scale. The 1933 Long Beach earthquake, which occurred on the nearby Newport-Inglewood Fault, caused serious damage to weak masonry structures and killed 115 people. The earthquake had an estimated moment magnitude of M6.4 on the Richter scale (City of Hermosa Beach 2014; USGS 2012b; Southern California Earthquake Data Center 2014).

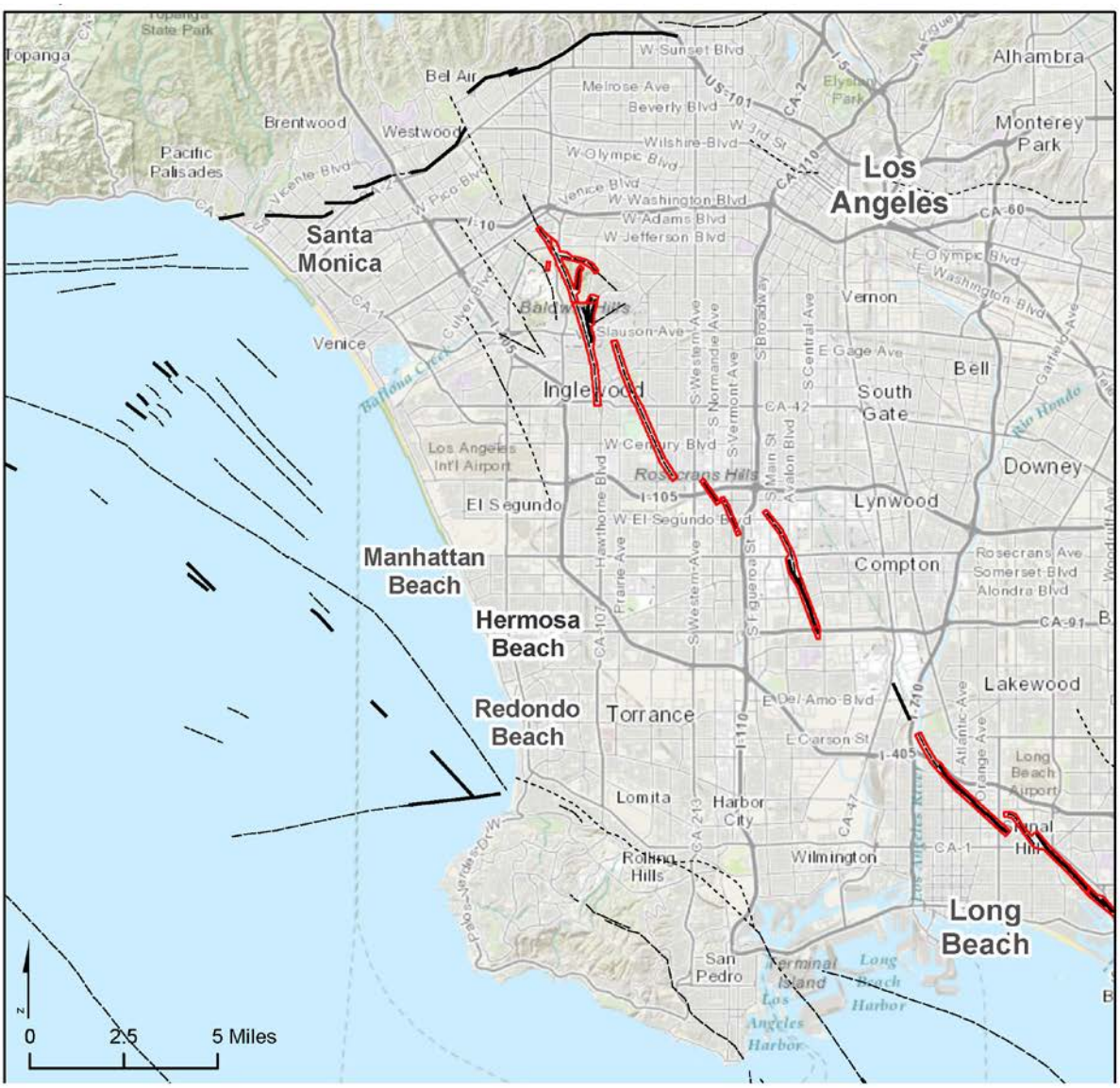
Fault Rupture

Fault rupture describes the sudden release of elastic energy that results from the sliding of one part of the earth's crust past another. The resulting fracture is known as a fault, while the sliding movement of earth on either side of a fault is called fault rupture. Fault rupture begins below the ground surface at the earthquake hypocenter, typically between three and ten miles below the ground surface in California. If an earthquake is large enough, the fault rupture will actually travel all the way to the ground surface, damaging structures built across its path (Cal OES 2013).

The seismicity of Southern California is dominated by the intersection of the northwest-trending San Andreas Fault System, and the east-west trending Transverse Ranges Fault System. The Los Angeles Basin is located at the intersection of these two systems. Both systems are responding to strain produced by the relative motions of the Pacific and North American tectonic plates. The strain is relieved by right lateral strike-slip faulting on the San Andreas and related faults; and by vertical, reverse slip, or left lateral strike-slip displacement on faults in the Transverse Ranges. The effects of this deformation include mountain building, basin development, deformation of Quaternary marine terraces, widespread regional uplift, and earthquakes.

The planning area is not located within a fault-rupture hazard zone, as defined by the Alquist-Priolo Special Studies Zones Act (CGS 2010). Based on information from the California Geological Survey (2010), no known major active faults are located within the planning area. The closest active faults are the Newport-Inglewood Fault, located approximately 5 miles to the east, and the Palos Verdes Fault, located approximately 2 miles to the west (CGS 2010). An inactive offshore fault, named Offshore Fault 103, is located approximately 1.4 miles west of the planning area (City of Hermosa Beach 2014). Figure 9.1 shows the location of the planning area relative to mapped active and potentially active faults in Southern California.

FIGURE 9.1: REGIONAL FAULTS



Legend

- Alquist-Priolo Fault Zones
- Accurately Located Fault Trace
- Approximately Located Fault Trace
- Inferred Fault Trace

City of Hermosa Beach General Plan Update 2035

Source: CA Geological Survey, City of Hermosa Beach, Los Angeles County, November 2013

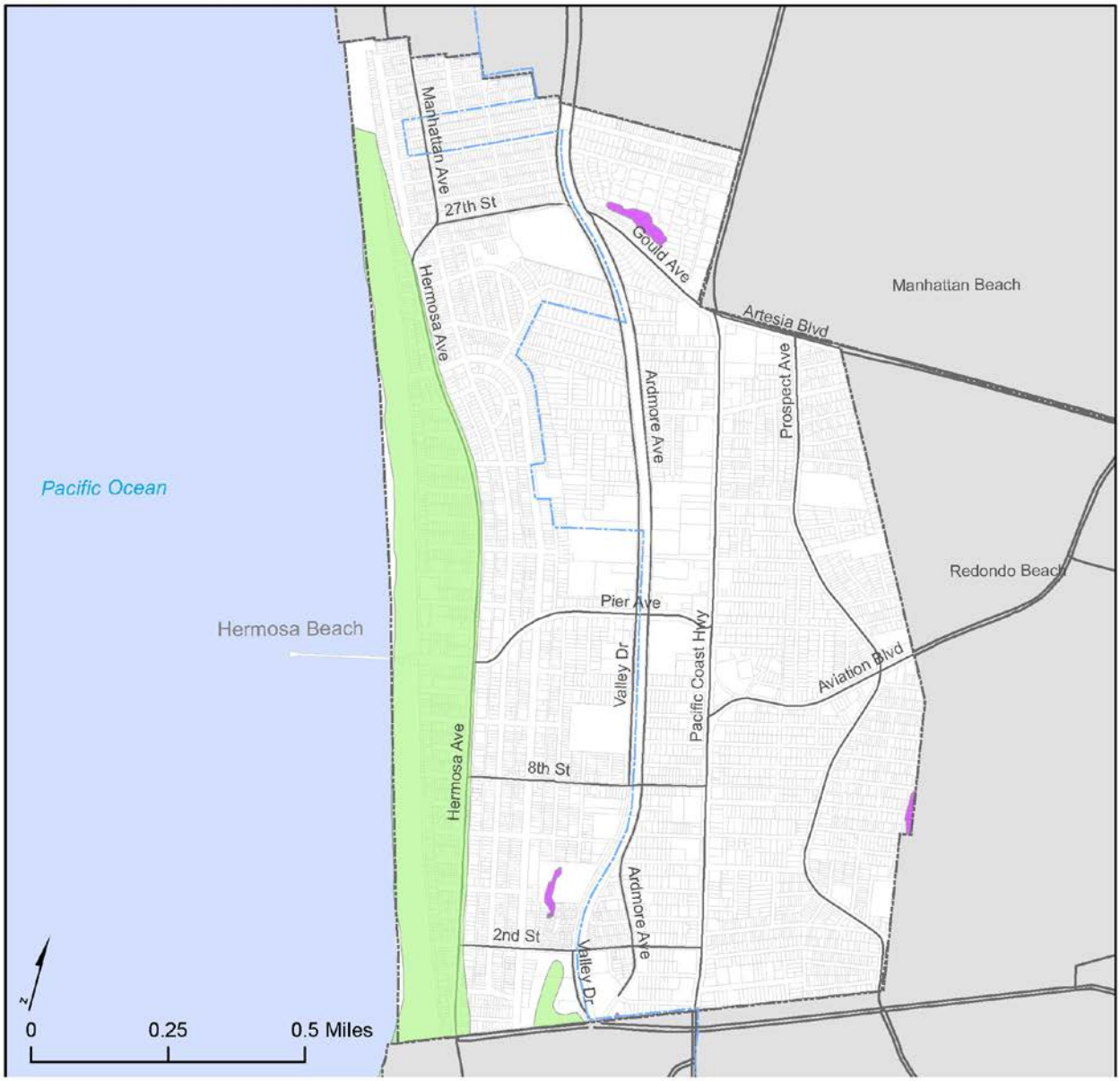
Secondary Hazards

Landslide

A landslide describes the downhill movement of masses of earth material under the force of gravity. Factors contributing to landslide potential include steep slopes, unstable terrain, and proximity to earthquake faults. This process typically involves surface soil and an upper portion of underlying bedrock. Movement may be very rapid, or so slow that a change of position can be noted only over a period of weeks or years. The size of a landslide can range from several square feet to several square miles.

Flows consist of rivers of rock, earth, and other debris saturated with water. Landslides develop when water rapidly accumulates in the ground during heavy rainfall, changing the earth into a flowing river of mud or "slurry." Landslides can strike with little or no warning at avalanche speeds. The 1998 DOC *Seismic Hazard Zone Report* identifies landslide zones as "areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693 (c) would be required." Figure 9-2 identifies landslide zones in the planning area. The zones are identified as follows: one near South Park, east of Monterey Boulevard between 2nd Street and 6th Street; one on the City's southern border at the intersection of Valley Drive and Ardmore Avenue; one to the north of Gould Avenue between Ardmore Avenue and Pacific Coast Highway (SR1); and one on the western border of the City between 8th Street and 6th Street. An additional landslide zone is located just east of the city limits between Havemeyer Lane and Haynes Lane in Redondo Beach (DOC 1999).

FIGURE 9.2: LANDSLIDE AND LIQUEFACTION ZONES IN HERMOSA BEACH



Legend

- City Boundary
- Coastal Zone Boundary
- Liquefaction Zone
- Earthquake-Induced Landslide Zone

City of Hermosa Beach General Plan Update 2035

Source: CA Division of Mines & Geology, March 1999,
City of Hermosa Beach, Los Angeles County, November 2013

Liquefaction

Liquefaction describes the loss of soil strength caused by a sudden increase in pore water pressure during shaking and is one of the most destructive secondary effects of seismic shaking. Liquefaction occurs primarily in saturated and loose, fine- to medium-grained soils. Liquefaction occurs most often where groundwater lies within 30 feet of the surface, but it may also occur in areas where groundwater lies up to 50 feet beneath the surface. High pore pressures that build up in sediments during repeated seismic vibrations cause the soil to behave as a liquid. The excess pore pressures are often pushed upward through fissures and soil cracks, which causes water-soil slurry to bubble onto the ground surface.

CGS Seismic Hazard Zones (SHZ) maps identify areas within and adjacent to the planning area that are susceptible to liquefaction (see Figure 9-3). The SHZ maps define liquefaction zones as "areas where historic occurrence of liquefaction, or local geological, geotechnical, and groundwater conditions indicate a potential for permanent ground displacement such that mitigation as defined in Public Resources Code Section 2693 (c) would be required." In general, the entire planning area located west of Hermosa Avenue may include potentially liquefiable layers. The CGS maps also identify a liquefaction zone in the south portion of the planning area near the northeast corner of Monterey Boulevard and Herondo Street. If groundwater levels in these areas rise to within 30 to 50 feet of the ground surface, the sediments would have a moderate to high susceptibility to liquefaction. The highest water levels recorded in Hermosa Beach are measured at 10 feet deep along the coast (DOC 1998). The presence of laterally extensive layers of loose, fine- to medium-grained soils in a seismically active area, combined with the potential for the soil to be saturated, creates a large potentially liquefiable area along the coastal portion of the planning area. The liquefiable area could also become larger as sea level rises and causes groundwater tables to rise as well. For more information on sea level rise, please refer to Appendix A2.

Lateral Spreading

Lateral spreading occurs as a result of liquefaction in which a subsurface layer becomes a liquefied mass, and gravitational and inertial forces cause the mass to move downslope. This type of failure is common in over-steepened slopes composed of unconsolidated silts and sands. The magnitude of lateral spreading movements depends on earthquake magnitude, distance between the site and the seismic event, thickness of the liquefied layer, ground slope or ratio of free-face height to distance between the free face and structure, fine-grained material content, average particle size of the materials composing the liquefied layer, and the standard penetration rates of the materials. Lateral spreading during a strong seismic event in the planning area is not anticipated to occur as most of the liquefaction areas are located in areas with relatively flat land (City of Hermosa Beach 2014).

Differential Settlement

Differential settlement is a process whereby soils settle non-uniformly, potentially resulting in stress and damage to structures. Such movement can occur in the absence of seismically induced ground failure, due to improper grading and soil compaction or discontinuity of naturally occurring soils; however, strong ground shaking often greatly exacerbates soil conditions already potentially prone to differential settlement, resulting in distress to overlying structures (California Division of Mines and Geology 1988 as cited in City of Hermosa Beach 2014).

Native earth materials in Hermosa Beach are relatively dense and therefore not prone to seismically induced settlement (City of Hermosa Beach 2014).

9.3 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

The following federal, state, and local plans, policies, regulations and laws pertain to geology and soils in the planning area. They provide the regulatory framework for addressing all aspects of geology and soils.

Earthquake Hazards Reduction Act

The US Congress passed the Earthquake Hazards Reduction Act in 1977 to reduce risks to life and property from future earthquakes in the United States by establishing and maintaining an effective earthquake hazards reduction program. To accomplish this goal, the act established the National Earthquake Hazards Reduction Program (NEHRP). The National Earthquake Hazards Reduction Program Act (NEHRPA) substantially amended this program in 1990 by refining the description of agency responsibilities, program goals, and objectives.

The NEHRP's mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; reduced risks through post earthquake investigations and education; improved design and construction techniques; improved mitigation capacity; and accelerated application of research results. The NEHRPA designates the Federal Emergency Management Agency (FEMA) as the lead agency for the program and assigns several planning, coordinating, and reporting responsibilities. Other NEHRPA agencies include the USGS, the National Institute of Standards and Technology, and the National Science Foundation.

State Plans, Policies, Regulations, and Laws

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Act of 1972 (Public Resources Code Sections 2621–2630) mitigates surface faulting hazards to structures designed for human occupancy. The main purpose of the law is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The law addresses only the hazard of surface fault rupture. To aid agencies responsible for approving projects, the Alquist-Priolo Act requires the CGS to establish regulatory zones known as Earthquake Fault Zones. There are no Earthquake Fault Zones in the planning area.

Seismic Hazards Mapping Act

The 1990 Seismic Hazards Mapping Act (SHMA) (Public Resources Code Sections 2690–2699.6) addresses hazards such as strong ground shaking, earthquake-induced landslides, and, in some areas, zones of amplified shaking. The act established a mapping program for areas that have the potential for liquefaction, landslide, strong ground shaking, or other earthquake and geologic hazards. The CGS is the primary state agency charged with implementing the SHMA and provides local jurisdictions with the seismic hazard zone maps that identify areas susceptible to liquefaction,

earthquake-induced landslides, and amplified shaking. Site-specific hazard investigations are required by the SHMA when a development project is located within a Seismic Hazard Mapping Zone identified as a zone of required investigation. The law also specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

Natural Hazards Disclosure Act

The Natural Hazards Disclosure Act (NHDA) (effective June 1, 1998), requires "that sellers of real property and their agents provide prospective buyers with a 'Natural Hazard Disclosure Statement' when the property being sold lies within one or more state-mapped hazard areas, including a Seismic Hazard Zone." The NHDA specifies two ways in which this disclosure can be made:

1. The Local Option Real Estate Transfer Disclosure Statement as provided in Section 1102.6a of the California Civil Code.
2. The Natural Hazard Disclosure Statement as provided in Section 1103.2 of the California Civil Code.

The Local Option Real Estate Disclosure Statement can be substituted for the Natural Hazards Disclosure Statement if it contains substantially the same information and substantially the same warning as the Natural Hazards Disclosure Statement. Both the Alquist-Priolo Act and the SHMA require that real estate agents, or sellers of real estate acting without an agent, disclose to prospective buyers that the property is located in an Alquist-Priolo Earthquake Fault Zone or Seismic Hazard Mapping Zone.

California Building Code

The California Building Standards Commission is responsible for coordinating, managing, adopting, and approving building codes in California. The 2013 California Building Code (CBC) became effective on July 1, 2014, and updated all the subsequent codes under the California Code of Regulations (CCR) Title 24 (24 CCR). The City of Hermosa Beach has adopted the 2013 CBC. The state requires local governments to adopt Title 24 on a triennial basis. The state also provides minimum standards for building design through the CBC. Where no other building codes apply, Chapters 16, 17, 18, 20, and 21 of the 2013 CBC regulates excavation, foundations, and retaining walls. Additionally, Section 16 provides for structural design requirements for new buildings to mitigate the impacts of earthquakes.

The state earthquake protection law (California Health and Safety Code Section 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. The previous 2007 CBC replaced the previous "seismic zones" (assigned a number from 1 to 4, where 4 requires the most earthquake-resistant design) with new seismic design categories A through F (where F requires the most earthquake-resistant design) for structures. With the shift from seismic zones to seismic design, the CBC philosophy has shifted from "life safety design" to "collapse prevention," meaning that structures are designed to prevent collapse under the maximum level of ground shaking that could reasonably be expected to occur. Chapter 16 of the

CBC specifies how each seismic design category is to be determined through site-specific soil characteristics and proximity to potential seismic hazards.

Chapter 18 of the CBC regulates the excavation of foundations and retaining walls by requiring preparation of a preliminary soil report, engineering geologic report, geotechnical report, and supplemental ground-response report. Chapter 18 also regulates analysis of expansive soils and the determination of depth to the groundwater table. For seismic design category C, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading. For seismic design categories D, E, and F, Chapter 18 requires these same analyses plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. Chapter 18 also requires that mitigation measures be considered in structural design. Mitigation measures may include ground stabilization, selection of appropriate foundation types and depths, selection of appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions. Peak ground acceleration must be determined from a site-specific study, the contents of which are specified in CBC Chapter 18.

Appendix Chapter J of the 2013 CBC regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction.

California Coastal Act

The California Coastal Act of 1972 created the California Coastal Commission to enact policies and standards in its coastal development permit decisions. Among many issues, the California Coastal Commission and the coastal development permit program protect against loss of life and property in the coastal zone from coastal hazards, including geologic hazards (Section 30006.5, Public Resources Code, Division 20, California Coastal Act). Section 30262 [5] of the act also provides that "development will not cause or contribute to subsidence hazards unless it is determined that adequate measures will be undertaken to prevent damage from such subsidence." (

California Coastal Act
Section 30253 Minimization of adverse impacts

New development shall do all of the following:

(a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
(b) 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.
(c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.
(d) Minimize energy consumption and vehicle miles traveled.
(e) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.

Source: California Public Resources Code, Division 20: California Coastal Act

Regional and Local Plans, Policies, Regulations, and Laws

City of Hermosa Beach General Plan, Seismic Safety Element

The Seismic Safety Element of the City of Hermosa Beach General Plan generally describes the seismic setting for the area, describes seismic-related problems associated with existing older structures, and provides recommendations for new development. In addition, the plan provides recommendations for providing public information on geologic hazards and associated disaster preparedness. .

City of Hermosa Beach Municipal Code Chapter 15.36

Chapter 15.36 of the Hermosa Beach Municipal Code promotes public safety and welfare by reducing the risk of death or injury that may result from the effects of earthquakes on existing unreinforced masonry bearing wall buildings. The provisions of the chapter require existing seismically unreinforced buildings to be retrofitted and provide minimum seismic reinforcement standards for new buildings.

City of Hermosa Beach Building Requirements

Geotechnical Reports

The City requires developers to submit a geotechnical report before starting construction on new buildings. As mentioned above, groundwater levels under sites located west of Hermosa Avenue can be as shallow as 10 feet from the surface. The geotechnical reports ensure that new development appropriately consider and design geological, soil, and seismic safety conditions for each project site.

C-10: Hazards and Hazardous Material

10. Hazards and Hazardous Materials

10.1 Introduction

This section identifies background conditions and regulations related to human health and the environment due to exposure to hazardous materials or conditions within the City of Hermosa Beach. Although the planning area has numerous historic hazardous sites, all but two have been successfully remediated and are no longer considered hazardous. Hermosa Beach has low risk due to exposure to other hazards presented in this section.

Seismic hazards are presented in Section 9 Geology and Soils. Water-related hazards including flooding and tsunami are included in Section 12 Hydrology and Water Quality.

10.2 Environmental Setting

Hazardous Sites

A hazardous material is any material that, due to its quantity, concentration, physical, or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released. Hazardous materials include, but are not limited to, hazardous substances, hazardous wastes, and any material that a business or local implementing agency has a reasonable basis to believe would be injurious to the health and safety of persons, or would be harmful to the environment if released.

Government Code Section 65962.5 requires the California Department of Toxic Substances Control (DTSC) to compile and regularly update a list of hazardous waste sites (see "Government Code Section 65962.5 [Cortese List]," under "Regulatory Setting" below for more information). Under the Cortese List, certain state and local government agencies are required to provide additional information on hazardous material releases.

The State Water Resources Control Board (SWRCB) maintains the GeoTracker database, which allows interested parties to obtain information related to permitted underground storage tanks (UST), leaking underground storage tanks (LUST), Department of Defense sites, landfills, and Spills-Leaks-Investigations-Cleanups (SLIC) sites. GeoTracker provides the location, current status of the site, chemicals of concern, potential media affected, regulatory activities, and any data submitted to the oversight agency (e.g., Los Angeles Regional Water Quality Control Board (RWQCB), DTSC).

According to the GeoTracker database and as shown in Table 10-1, one LUST site in the planning area has been remediated to the satisfaction of the respective oversight agency and is undergoing monitoring (SWRCB 2014). GeoTracker also identifies 14 additional LUST sites that have completed cleanup and monitoring activities.

TABLE 10.1: LEAKING UNDERGROUND STORAGE TANKS (CURRENT AND HISTORICAL) IN HERMOSA BEACH

Site Name	Cleanup Status	Address	Chemicals of Concern
Key Centers, Inc.	Open - Verification Monitoring	1325 Hermosa Ave.	Gasoline

Source: SWRCB 2014

There are no open non-LUST cleanup sites in the planning area, although GeoTracker identifies one additional site that has completed cleanup and monitoring activities.

No properties in the planning area are identified on DTSC's Hazardous Waste and Substances Site List (Cortese List), compiled pursuant to Government Code Section 65962.5 (DTSC 2014a).

No sites in the planning area are identified in the Superfund database (EPA 2014).

In addition to the information sources listed above, the E & B Oil Drilling and Production Project Final Environmental Impact Report certified in 2014 identifies the City Maintenance Yard (Yard) at 555 6th Street as being contaminated from historical uses, with existing lead and total petroleum hydrocarbon (TPH) contamination in the northeast corner of the Yard and extending onto the property to the immediate north. According to an Environmental Site Assessment prepared in 2012, 10 of the 73 soil samples taken at the site exceeded Regional Water Quality Control Board guidelines for TPH. Six of the samples exceeded the EPA Region 9 Industrial Regional Screening Levels for lead. In addition, a series of groundwater borings conducted in 2013 found the presence of TPH, lead, barium, and arsenic in the groundwater below the Yard that exceeded the Maximum Contaminant Levels (MCLs) established for drinking water by the Regional Water Quality Control Board (City of Hermosa Beach 2014).

Schools

Children are considered more susceptible to adverse health effects from hazardous materials and emissions. The California Environmental Quality Act (CEQA) Guidelines Section 15186, School Facilities, requires that school projects, as well as projects proposed to be located near schools, examine potential health impacts resulting from exposure to hazardous materials, wastes, and substances. In particular, State CEQA Guidelines require environmental impact reports to assess whether a project would emit hazardous air emissions or involve the handling of extremely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school (also see Public Resources Code Sections 21151). Older schools constructed before these state regulations were established in 1972 could place children near existing sources of hazardous materials and emissions.

Please refer to Section 17. Public Services, Utilities, and Recreation for additional information regarding schools located in the planning area.

Airport Hazards

There is no airport located in the planning area. The nearest airports are Torrance Airport located 5.4 miles to the southeast, Los Angeles International Airport located 5.5 miles to the north, and Hawthorne Municipal Airport located 5.9 miles to the northeast.

Transportation of Hazardous Materials

The California Department of Toxic Substances Control (DTSC) provides a summary of all registered hazardous material transporters in the state. As of February 2014, no registered transporters were located in Hermosa Beach (DTSC 2014b). However, major transportation corridors such as Pacific Coast Highway (State Route 1) as well as truck routes in Hermosa Beach, such as portions of Pier Avenue, Valley Drive, Herondo Street, and Artesia Boulevard, may be used to transport hazardous materials and represent accident risks that could result in releases of hazardous materials. When acutely toxic hazardous materials are transported, the California Highway Patrol (CHP) must be notified; the Hermosa Beach Police Department and Hermosa Beach Fire Department must also be notified if city streets are used. The City does not designate specific haul routes for hazardous materials.

The US Pipeline and Hazardous Materials Safety Administration provides summary maps of natural gas transmission and hazardous liquid pipelines. As of 2012, no natural gas or hazardous liquid transmission lines were located in the planning area (PHMSA 2012). However, the electorate will vote in March 2015 on whether to allow an oil production facility on property located on Valley Drive, which would include oil and gas transmission pipelines along Valley Drive if approved.

Fire Hazards

Wildfire

Public Resources Code Sections 4201–4204 and Government Code 51175–51189 require identification of fire hazard severity zones within the state of California. Fire hazard severity zones are modeled based on vegetation, topography, weather, fuel load type, and ember production and movement within the area of question. Fire hazard severity zones are defined as moderate, high, and very high fire hazard severity by the California Department of Forestry and Fire (CAL FIRE). Fire prevention areas considered to be under state jurisdiction are referred to as "state responsibility areas," while areas under local jurisdiction are called "local responsibility areas."

No fire hazard severity zone is identified by CAL FIRE in the planning area (CAL FIRE 2007).

Urban Fire Protection

Although the planning area is generally well equipped to reduce the chances and mitigate the impact of urban fires, post-earthquake conflagration could be started by fires resulting from earthquake damage and made much worse by the loss of pressure in the fire mains (City of Hermosa Beach 2005). New development in the planning area is subject to fire standards set forth in the California Building Code. Fire services are provided by the Hermosa Beach Fire Department. For more information about fire department services, please refer to Section 17 (Public Services, Utilities, and Recreation).

Critical and Essential Facilities

The Hermosa Beach Natural Hazards Mitigation Plan (2005) identifies 16 critical and essential facilities in the planning area and three facilities located in Torrance that are considered critical or essential to health and safety in Hermosa Beach (Table 10-2). The facilities range from grocery stores and medical centers to the pier. All of the facilities were identified as vulnerable to earthquakes and windstorms. Two facilities were identified as vulnerable to flooding; six facilities were identified as vulnerable to tsunamis. No facilities are listed as vulnerable to wildfire or urban fires. In addition the Emergency Operations Center (710 Pier Avenue) and Police and Fire Departments located at the Civic Center at 1315 Valley Drive are considered essential facilities.

TABLE 10.2: CRITICAL AND ESSENTIAL FACILITIES

Facility	Address	Earthquakes	Flooding	Windstorms	Tsunamis
Pier	Pier Avenue	X	X	X	X
Downtown District	800-1500 Hermosa Avenue	X		X	X
CalWater Water Tower	1600 Golden	X		X	
Hermosa Valley Elementary School	1645 Valley	X		X	X
City Lifeguard	1201 The Strand	X		X	X
City Maintenance Yard	600 Valley Drive	X		X	
Ralph's Shopping Center	1100 Pacific Coast Highway	X		X	
Vons Shopping Center	715 Pier Avenue	X		X	
Sunrise Assisted Living	1837 Pacific Coast Highway	X		X	
Community Center	710 Pier Avenue	X		X	
Hermosa View School K-2	1800 Prospect	X		X	
Our Lady of Guadalupe Church	320 Massey	X		X	
Marineland Mobile Home Park	531 Pier Avenue	X	X	X	X
Seven Pump Stations	3500 The Strand	X		X	X
Verizon Switching Station	102 Pacific Coast Highway	X		X	
Providence Little Company of Mary Hospital Medical Center	4101 Torrance Boulevard, Torrance	X		X	
Torrance Memorial Medical Center	3330 Lomita Boulevard, Torrance	X		X	
Harbor-UCLA Medical Center	1000 West Carson Street, Torrance	X		X	

Source: City of Hermosa Beach 2005 (Facilities updated, 2014; Albertsons has been converted to another use.)

10.3 Regulatory Setting

The following federal, state, and local plans, policies, regulations, and laws pertain to hazards and hazardous materials in the planning area. They provide the regulatory framework for addressing all aspects of hazards and hazardous materials.

Federal Plans, Policies, Regulations and Laws

Resource Conservation and Recovery Act

Within the authority of the Resource Conservation and Recovery Act (RCRA), the Environmental Protection Agency (EPA) is the principal federal agency that regulates the generation, transport, and disposal of hazardous substances. Under the RCRA, the EPA regulates the generation, transportation, treatment, storage, and disposal of hazardous substances. The Hazardous and Solid Waste Amendments of 1984 amended the RCRA to specifically prohibit the use of certain disposal techniques for various hazardous substances. The Federal Emergency Planning and Community Right to Know Act of 1986 requires hazardous-materials planning to help protect local communities in the event of accidental release of hazardous substances. The EPA has delegated many of the RCRA requirements to the DTSC. The US Department of Labor Occupational Safety and Health Administration regulates use and safety considerations related to blasting activities under the Construction Safety and Health Outreach Program.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress in 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for cleanup when no responsible party could be identified. Cleanup actions can be conducted only at sites listed on EPA's National Priorities List (NPL). The NPL is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation.

Regulation of Polychlorinated Biphenyls and Lead-Based Paint

The Toxic Substances Control Act of 1976 (Title 15 of the U.S. Code, Section 2605) banned the manufacture, processing, distribution, and use of polychlorinated biphenyls (PCB) in enclosed systems. PCBs are considered hazardous materials because of their toxicity. They have been shown to cause cancer in animals, along with effects on the immune, reproductive, nervous, and endocrine systems, and studies have shown evidence of similar effects in humans.

The EPA Region 9 PCB Program regulates remediation of PCBs in several states, including California. Title 40 of the Code of Federal Regulations, Section 761.30(a)(1)(vi)(A) states that all owners of electrical transformers containing PCBs must register their transformers with EPA.

Specified electrical equipment manufactured between July 1, 1978, and July 1, 1998, that do not contain PCBs must be marked by the manufacturer with the statement "No PCBs" (Section 761.40[g]). Transformers and other items manufactured before July 1, 1978, and containing PCBs, must be marked as such.

The Residential Lead-Based Paint Hazard Reduction Act of 1992 amended the Toxic Substances Control Act to include Title IV, Lead Exposure Reduction. The EPA regulates renovation activities that could create lead-based paint hazards in target housing and child-occupied facilities, and has established standards for lead-based paint hazards and lead dust cleanup levels in most pre-1978 housing and child-occupied facilities.

State Plans, Policies, Regulations and Laws

State laws that govern hazardous materials are equal to or more stringent than their federal counterparts. The EPA has granted California primary oversight responsibility to administer and enforce hazardous waste management programs. The state has developed detailed planning and management requirements to ensure that hazardous wastes are handled, stored, and disposed of properly to reduce risks to human health and the environment. Several key state laws pertaining to hazardous wastes are discussed below. In addition, the DTSC, the SWRCB, and the Integrated Waste Management Act have prescribed roles related to the generation and disposal of hazardous materials, also described below.

Hazardous Materials Handling

The California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires hazardous materials business plans to be prepared and inventories of hazardous materials to be disclosed. A business plan includes an inventory of the hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee safety and emergency response training (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). Statewide, the DTSC has primary regulatory responsibility for managing hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the state. Local agencies, including the Los Angeles County Environmental Health Department, administer these laws and regulations. For a hazardous materials incident, the City would provide the initial response and then rely on the resources of the hazardous materials unit from the Los Angeles County Fire Department (LACFD).

Sections 12101 through 12103 of the California Health and Safety Code require that permits be obtained by those manufacturing, transporting, possessing, or using explosives and endorsed by the jurisdiction(s) in which the transportation or use would occur.

Hazardous Waste Control Act

The Hazardous Waste Control Act is codified in California Code of Regulations Title 26, which describes requirements for the proper management of hazardous wastes. The act created the state's hazardous waste management program, which is similar to but more stringent than the federal RCRA program. The program includes hazardous waste criteria for:

- Identification and classification.

- Generation and transportation.
- Design and permitting of recycling, treatment, storage, and disposal facilities.
- Treatment standards.
- Operation of facilities and staff training.
- Closure of facilities and liability requirements.

The Hazardous Waste Control Act and Title 26 regulations list more than 800 potentially hazardous materials and establish criteria for identifying, packaging, and disposing of such wastes. To comply with these regulations, the generator of hazardous waste material must complete a manifest that accompanies the material from the point of generation to transportation to the ultimate disposal location, and file copies of the manifest with the DTSC.

Emergency Services Act

Under the Emergency Services Act (California Government Code Section 8850 et seq.), the state developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. Quick response to incidents involving hazardous materials or hazardous waste is a key part of the plan. The Governor's Office of Emergency Services (Cal OES) administers the plan and coordinates the responses of other agencies, including California EPA (Cal/EPA), the CHP, California Department of Fish and Wildlife, RWQCBs, air quality management districts, and county disaster response offices.

Government Code Section 65962.5 (Cortese List)

The provisions of Government Code Section 65962.5 are commonly referred to as the Cortese List. The Cortese List is a planning document used by the state and local agencies to provide information about hazardous materials release sites. Government Code Section 65962.5 requires Cal/EPA to develop an updated Cortese List annually, at minimum. The DTSC is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information for the Cortese List.

Underground Storage Tank Program

The California Department of Public Health (formerly the California Department of Health Services) and the SWRCB maintain lists of hazardous USTs for remediation. Sites are listed based on unauthorized release of toxic substances. Leak prevention, cleanup, enforcement, and tank testing certification are elements of the UST program.

Unified Program

Cal OES grants oversight and permitting responsibility to qualifying local agencies for certain state programs pertaining to hazardous waste and hazardous materials. This is achieved through the Unified Program, created by state legislation in 1993 to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities for the following emergency and management programs:

- Hazardous materials release response plans and inventories (business plans).
- California Accidental Release Prevention Program.

- UST Program.
- Aboveground Petroleum Storage Act Requirements for Spill Prevention, Control and Countermeasure plans.
- Hazardous Waste Generator and On-site Hazardous Waste Treatment (tiered permitting) Programs.
- California Uniform Fire Code: Hazardous material management plans and hazardous material inventory statements.

Hermosa Beach's participation in the Unified Program is coordinated by the LACFD Health Hazardous Materials Division, as the designated Certified Unified Program Agency (CUPA) for the City. There are 28 facilities in the City of Hermosa Beach that are inspected by the LACFD for hazardous materials storage, use, and disposal compliance.

Cleanup of Contaminated Sites

The state of California has a number of different regulatory structures governing cleanup of contaminated sites. The DTSC regulates many of these programs, including RCRA corrective actions, state Superfund sites, brownfields programs, and voluntary cleanups. The SWRCB (through RWQCBs and some local agencies) regulates releases with the potential to affect water resources under programs such as the LUST program and SLIC program. Regulatory authority for these programs may be delegated by the federal government (as with RCRA corrective actions directed by the DTSC) or may be found in the California Health and Safety Code. These regulations vary in their specifics but require the reporting, investigation, and remediation of sites where releases of hazardous materials have occurred, followed by appropriate disposal of any hazardous materials. The programs govern a range of pollutants, such as solvents, petroleum fuels, heavy metals, and pesticides) in surface water, groundwater, soil, sediment, and air.

School Site Selection and Approval Criteria and Guide

State CEQA Guidelines Section 15186, School Facilities, requires that school projects, as well as projects proposed to be located near schools, examine potential health impacts resulting from exposure to hazardous materials, wastes, and substances. In particular, State CEQA Guidelines require environmental impact reports to assess whether a project would emit hazardous air emissions or involve the handling of extremely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school (also see Public Resources Code Sections 21151).

The California Department of Education has developed the School Site Selection and Approval Guide to help school districts select appropriate locations for educational institutions. The guide contains 12 screening and ranking criteria, including safety, location, topography, cost, utilities, and public acceptance.

California Coastal Act

The California Coastal Act of 1972 created the California Coastal Commission to enact policies and standards in its coastal development permit decisions. Among many issues, the California Coastal Commission and the coastal development permit program protect against oil and hazardous substance spills as well as regulate the disposal of hazardous substances at sea.

California Coastal Act
Section 30232 Oil and hazardous substance spills

Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

Section 30420 Actions relating to disposal of hazardous substances at sea; consultation with specified governmental entities

Prior to taking any action on (1) a local coastal program or any amendment thereto, (2) any coastal development permit, or (3) any consistency determination or certification, which relates to the disposal of hazardous substances at sea, the commission shall consult with the following governmental entities:

(a) Department of Toxic Substances Control.
(b) State Lands Commission.
(c) State Air Resources Board and relevant air pollution control districts or air quality management districts.
(d) Department of Fish and Game.
(e) State Water Resources Control Board and relevant California regional water quality control boards.
(f) Secretary for Environmental Protection.
(g) Governor's Office of Planning and Research.
(h) The local government located closest to the proposed activity, or within whose jurisdiction the activity is proposed, or within whose jurisdiction there may be effects of the proposed activity.

Source: California Public Resources Code, Division 20: California Coastal Act

Regional and Local Plans, Policies, Regulations and Laws

Certified Uniform Program Agency

The Los Angeles County Fire Department Health Hazardous Materials Division is the designated CUPA for the City. The CUPA was created by the California legislature to minimize the number of business inspections and fees imposed on businesses. CUPA areas of responsibility are those described above under "Unified Program."

City of Hermosa Beach Natural Hazards Mitigation Plan

The City's Natural Hazards Mitigation Plan (NHMP), updated in 2005, meets the requirements of the Disaster Mitigation Act of 2000 (DMA). The DMA requires local governments to prepare plans that identify hazards and risks within a community, and create appropriate mitigation. The purpose of the NHMP is to integrate hazard mitigation strategies into the daily activities and programs of the city. Pursuant to federal and state requirements, the NHMP is incorporated by reference in the Hermosa Beach General Plan.

The NHMP assesses risk to the city from earthquakes, flooding, tsunami, and windstorms. The City developed a specific list of long-term hazard mitigation goals, objectives, and related potential actions. The long-term goals and objectives include:

- Protect life, environment and property
    - Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to losses from natural hazards.
    - Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards.
    - Improve hazard assessment information to make recommendations for discouraging new development in high hazard areas and encouraging preventative measures for existing development in areas vulnerable to natural hazards.
- Public awareness
    - Develop and implement education and outreach programs to increase public awareness of the risks associated with natural hazards.
    - Provide information on tools, partnership opportunities, and funding resources to assist in implementing mitigation activities.
- Natural systems
    - Balance natural resource management, and land use planning with natural hazard mitigation to protect life, property, and the environment.
    - Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions.
- Partnerships and implementation
    - Strengthen communication and coordinate participation among and within public agencies, citizens, nonprofit organizations, business, and industry to gain a vested interest in implementation.
    - Encourage leadership within public and private sector organizations to prioritize and implement local and regional hazard mitigation activities.
- Emergency services
    - Establish policies to ensure mitigation projects for critical facilities, services, and infrastructure.
    - Strengthen emergency operations by increasing collaboration and coordination among public agencies, nonprofit organizations, business, and industry.
    - Coordinate and integrate natural hazard mitigation activities, where appropriate, with emergency operations plans and procedures.

City of Hermosa Beach Emergency Operations Plan

The City's Multi Hazard Functional Plan addresses Hermosa Beach's planned response to emergencies associated with natural disasters, technological, and national security emergencies (City of Hermosa Beach 2011). It provides an overview of operational concepts, identifies components of the City's emergency management organization within the Standardized Emergency Management System and National Incident Management System, and describes the overall responsibilities of the federal, state, and county entities and the City for protecting life and property and ensuring the overall well-being of the population.

C-11: HYDROLOGY AND WATER QUALITY

11. Hydrology and Water Quality

11.1 Introduction

This section presents the existing hydrology and water quality conditions, existing flood and coastal hazards, regulations, issues, and indicators for the Hermosa Beach planning area. This section draws upon data from the California Department of Water Resources (DWR) California Geological Survey, the US Environmental Protection Agency (EPA), the Los Angeles Regional Water Quality Control Board (Los Angeles RWQCB), the City's 2005 Natural Hazards Mitigation Plan, the West Basin Municipal Water District, and previous environmental documentation prepared for the City.

11.2 Environmental Setting

Regional Hydrology

The planning area is located in the West Coast subbasin of the Coastal Plain of the Los Angeles Watershed, one of 19 major watersheds in the South Coast Hydrologic Region. The South Coast Hydrologic Region covers 11,000 square miles (approximately 7 percent) of the state's total land area and contains about 54 percent of the state's population. The West Coast subbasin is adjudicated and commonly referred to as the "West Coast Basin." It is bounded on the north by the Ballona Escarpment, an abandoned erosional channel from the Los Angeles River. It is bounded on the east by the Newport-Inglewood fault zone, and on the south and west by the Pacific Ocean and consolidated rocks of the Palos Verdes Hills (DWR 1999). The Los Angeles River crosses the southern surface of the subbasin through the Dominguez Gap, and the San Gabriel River crosses the subbasin through the Alamitos Gap. Both rivers then flow into San Pedro Bay (DWR 2004). Major hydrologic inputs to the watershed include precipitation and flows from the South Lahontan Region and Colorado River Region. All of the South Coast watersheds flow into the Pacific Ocean.

Offshore marine waters are a part of Santa Monica Bay, which generally extends south from Point Dume, in Malibu, to the Palos Verdes Peninsula. Prior to 1825, the primary drainage flowing into the bay was the Los Angeles River. However, a catastrophic flood event in 1825 diverted the Los Angeles River south of the Palos Verdes Peninsula. Ballona Creek is now the primary drainage feeding into the bay. Other waterways draining into the bay include Malibu Creek and Topanga Creek (City of Hermosa Beach 2014).

Hermosa Beach's Mediterranean climate is typical of the coastal areas of the South Coast region. The climate is characterized by mild, wet winters and warm, dry summers. Approximately 75 percent of the region's precipitation typically occurs between December and March. Average precipitation can vary greatly within the South Coast region: from more than 40 inches annually in the mountains to less than 10 inches annually in the valleys (DWR 2009). Average precipitation throughout the West Coast subbasin is 12 to 14 inches (DWR 2004). Although generally dry, monsoonal thunderstorms may inundate the eastern and southern portions of the region with water in the late summer. These thunderstorms result from low pressure cells in the southwest.

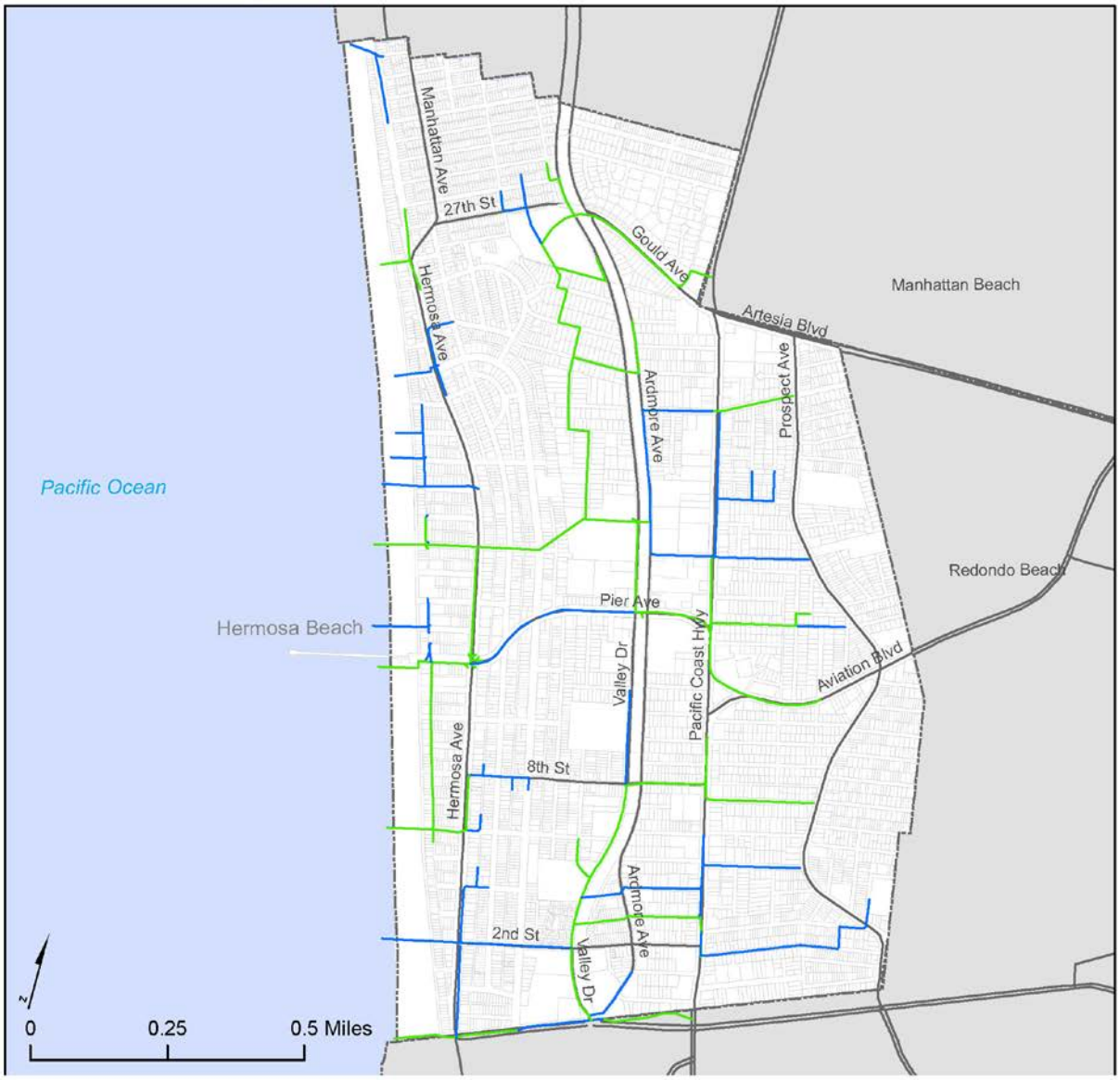
The region generally experiences substantial climactic variability, with periods of higher than normal precipitation followed by lower than normal precipitation and periodic drought conditions. For instance, the region experienced extremely dry conditions in 2013, with precipitation levels being the lowest on record. Conversely, above average precipitation was recorded in 2005, with the region experiencing approximately 254 percent of normal precipitation (DWR 2009). The West Basin Municipal Water District's 2010 Urban Water Management Plan reports that the average annual rainfall in its service area (including Hermosa Beach) is 12.23 inches (West Basin Municipal Water District 2011).

Local Hydrology

No freshwater waterways or surface water bodies are located in the planning area. Approximately 1.8 miles of the western edge of the planning area abuts the south end of the Santa Monica Bay. This area includes a 400-foot-wide sandy beach between the Pacific Ocean and urban development.

Urban runoff (stormwater) flows from inland locations through the planning area to the Pacific Ocean through a network of drainage lines identified in Figure 11-1. The network is a mixture of County-owned and City-owned lines that generally run east to west along major roads including 16th Street Pier Avenue, and 2nd Street. The lines generally terminate through one of 11 outfalls at the west end of the city on the beach or in the Pacific Ocean.

FIGURE 11.1: STORMWATER DRAINAGE MAP



Legend

City Boundary

Storm Drain Lines

City-owned

County-owned

City of Hermosa Beach General Plan Update 2035

Source: City of Hermosa Beach, Los Angeles County, November 2013

Groundwater Hydrology

As mentioned above, the West Coast subbasin of the Coastal Plain of the Los Angeles Basin is adjudicated and is bounded on the north by the Ballona Escarpment, on the east by the Newport-Inglewood fault zone, and on the south and west by the Pacific Ocean and consolidated rocks of the Palos Verdes Hills (DWR 1999). The water in underlying aquifers is confined throughout most of the basin. Table 11-1 identifies the principal aquifers in the West Coast subbasin.

TABLE 11.1. PRINCIPAL AQUIFERS IN THE WEST COAST SUBBASIN

Aquifers/Aquiclude	Epoch	Formation	Lithology	Max. Thickness (feet)
Semiperched	Holocene	Alluvium	Sand, silt, clay	60
Bellflower	Not reported	Not reported	Silty clay, clay	80
Gaspur	Not reported	Not reported	Coarse sand, gravel	120
Bellflower	Not reported	Not reported	Silty clay, clay	200
Gardena	Not reported	Not reported	Sand, gravel	160
Gage	Pleistocene	Lakewood Formation	Fine to coarse-grained sand and gravel	160
Lynwood	Lower Pleistocene	San Pedro Formation	Sand, gravel with small amount of clay	200
Silverado	Not reported	Not reported	Coarse sand and gravel	500
Unnamed	Not reported	Not reported	Coarse sand and gravel/silt and clay	500 to 700

Source: DWR 2004

Water service in the planning area is provided by the California Water Service Company, Hermosa-Redondo District (Cal Water) using groundwater, imported surface water, and recycled supplies. Groundwater extracted from the Silverado aquifer satisfies 10 to 15 percent of the district's water demand (Cal Water 2011). The Silverado aquifer is confined, underlies most of the basin, and is the most productive aquifer in the basin. It ranges from 100 to 500 feet thick and yields 80 to 90 percent of the groundwater extracted annually from the basin. The storage capacity of the Silverado aquifer is estimated to be 6.5 million acre feet (DWR 1961). Cal Water's adjudicated right of the safe yield of the groundwater basin is 4,070 acre feet per year (AFY). However, Cal Water does not currently have the ability to sustain production and delivery of this quantity and normally produces

approximately 2,000 AFY of groundwater. The remaining groundwater is either sold to other entities or left for basin recharge (Cal Water 2011).

Water Quality

Surface Water

There are no potable surface water resources in the planning area. However, Hermosa Beach and the Santa Monica Bay are designated as "water quality-limited" for impairments under federal Clean Water Act Section 303(d), indicating that these water bodies are not reasonably expected to attain or maintain water quality standards due to impairments without additional regulation. Impairment is measured by Total Maximum Daily Load (TMDL), the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards. Table 11-2 identifies the listing category, pollutant, and pollutant type for Hermosa Beach and Santa Monica Bay.

TABLE 11.2: IMPAIRED WATER BODIES IN THE PLANNING AREA

Water Body Name	Water Body Type	Listing Category	Pollutant	Pollutant Category
Hermosa Beach	Coastal & Bay Shoreline	4A	Indicator Bacteria	Pathogens
Santa Monica Bay Offshore/ Nearshore	Bay & Harbor	4A	DDT (tissue & sediment)	Pesticides
			Debris	Trash
			Fish Consumption Advisory	Miscellaneous
			Sediment Toxicity	Toxicity

Note: Category 4A means the item on the 303(d) list is being addressed by an EPA approved TMDL;

Source: Los Angeles RWQCB 2010; updated to reflect that Santa Monica Bay pollutants are now 4A listed.

The Los Angeles RWQCB and US EPA have developed two TMDLs for Hermosa Beach: the *Santa Monica Bay Bacteria Dry Weather TMDL* and the *Santa Monica Bay Bacteria Wet Weather TMDL* (LA RWQCB 2002a and 2002b). Two additional TMDLs were approved by the LA RWQCB and the EPA after the 303(d) list update identified in Table 11-2: *Santa Monica Bay Total Maximum Daily Loads for DDTs and PCBs* (2012) and *Santa Monica Bay Nearshore and Offshore Debris TMDL* (2010).

The *Santa Monica Bay Bacteria Dry Weather TMDL* (Resolution No. 02-004 Amendment to the Water Quality Control Plan – Los Angeles Region) notes that elevated bacterial indicator densities were causing impairment of water contact recreation beneficial uses at many Santa Monica Bay beaches. Dry weather bacteriological objectives identified in the Los Angeles Region Basin Plan include limits for total coliform density, fecal coliform density, and enterococcus density. The *Santa Monica Bay Bacteria Dry Weather TMDL* sets the number of days that can be in exceedance of the limits identified in the Basin Plan. Table 11-3 reports the number of exceedance days for summer dry weather and winter dry weather (Los Angeles RWQCB 2002a).

TABLE 11.3: DRY WEATHER BACTERIA EXCEEDANCE TOTAL MAXIMUM DAILY LOADS

Location	Sub-watershed	Summer (4/1 –10/31)		Winter (11/1 – 3/31)	
		Daily Sampling (No. days)	Weekly Sampling (No. days)	Daily Sampling (No. days)	Weekly Sampling (No. days)
26th Street Extended	Hermosa	0	0	0	0
Herondo Street Extended	Hermosa	0	0	3	1

Source: Los Angeles RWQCB 2002a

The Los Angeles RWQCB also established TMDLs for the number of days exceeding bacteria counts during wet weather. The *Santa Monica Bay Bacteria Wet Weather TMDL* (Resolution No. 02-022 Amendment to the Water Quality Control Plan – Los Angeles Region) sets the number of days that can be in exceedance of the bacteriological limits identified in the Basin Plan. Table 11-4 reports the number of wet weather exceedance days in a critical year and the final allowable number of wet weather exceedance days based on daily sampling for Hermosa Beach monitoring locations (Los Angeles RWQCB 2002b).

TABLE 11.4: WET WEATHER BACTERIA EXCEEDANCE TMDL

Location	Estimated Number of Wet Weather Exceedance Days	Final Allowable Number of Wet Weather Exceedance Days
Hermosa City Beach at 26th Street	12	12
Hermosa Beach Pier - 50 Yards South	8	8
Herondo Street Stormwater Drain (in front of drain)	19	17

Note: The compliance targets are based on shoreline monitoring data available at the time the resolution was adopted and assumes daily sampling. If systematic weekly sampling is conducted, the compliance targets will be scaled accordingly.

Source: Los Angeles RWQCB 2002b

As a co-permittee to the Los Angeles MS4 NPDES Permit (see below), Hermosa Beach is responsible for meeting water quality-based effluent limitations that allow the Santa Monica Bay to meet TMDL targets identified in *Santa Monica Bay Total Daily Maximum Loads for DDTs and PCBs* and *Santa Monica Bay Nearshore and Offshore Debris TMDL*.

Stormwater Runoff

Stormwater runoff into Santa Monica Bay is regulated primarily through four National Pollutant Discharge Elimination System (NPDES) permits:

- The municipal separate storm sewer system (MS4) NPDES permit issued to the 84 municipalities within the urbanized area of County of Los Angeles, except the City of Long Beach, which has its own MS4 NPDES permit.
- A separate statewide stormwater permit specifically for the California Department of Transportation (Caltrans).
- The statewide Construction Activities Stormwater General Permit.
- The statewide Industrial Activities Stormwater General Permit.

The NPDES permits program defines these discharges as point sources because the stormwater discharges from the end of a stormwater conveyance system. Since the industrial and construction stormwater discharges are enrolled under NPDES permits, these discharges are treated as point sources. The Los Angeles MS4 permit was first issued in 1990 and includes 85 co-permittees including Los Angeles County and the City of Hermosa Beach. The latest revision of the permit (Order No. R4-2012-0175) was issued on November 8, 2012.

Groundwater

In the Silverado zone, the character of water varies considerably. In the coastal region, the water is calcium chloride in character, transitioning into sodium bicarbonate moving inland. Data from 45 public supply wells shows an average total dissolved solids (TDS) content of 720 mg/L and a range of 170 to 5,510 mg/L (DWR 2004).

Seawater intrusion occurs in the Silverado zone along the Santa Monica Bay. Two seawater barrier projects are currently in operation. The West Coast Basin Barrier Project runs from the Los Angeles Airport to the Palos Verde Hills, and the Dominguez Gap Barrier Project covers the area of the West Coast Basin bordering San Pedro Bay. Injection wells along these barriers create a groundwater ridge, which inhibits the inland flow of salt water into the subbasin to protect and maintain groundwater elevations (DWR 2004).

Flood and Coastal Hazards

The planning areas is not adjacent to any major rivers that pose an immediate threat from riverine flooding; however, there is a threat of coastal flooding along the shoreline (City of Hermosa Beach 2005).

Dam Failure

The planning area does not include water reservoirs or dams subject to failure. However, the threat from dam failure in other parts of Los Angeles County is considerable. Loss of life and damage to structures, roads, and utilities may result from a dam failure. Economic losses can also result from a lowered tax base and lack of utility profits. Because dam failure can have severe consequences, the Federal Emergency Management Agency (FEMA) requires that all dam owners develop emergency action plans for warning, evacuation, and post-flood actions. Although there may be coordination with county officials in the development of the emergency action plan, the responsibility for developing potential flood inundation maps and facilitation of emergency response is the responsibility of the dam owner (City of Hermosa Beach 2005).

Flood Hazards

The Southern California coastline is exposed to waves generated by winter and summer storms originating in the Pacific Ocean. It is not uncommon for these storms to cause 15-foot swells. The occurrence of such a storm event, in combination with high astronomical tides and strong winds, can cause a wave run-up and allow storm waves to attack higher than normal elevations along the coastline. When this occurs, shoreline erosion and coastal flooding result in damage to inadequately protected structures and facilities located along low-lying portions of the shoreline.

Coastal flooding poses a threat to life and safety, and can cause severe damage to public and private property. This flooding can be attributed to the following mechanisms:

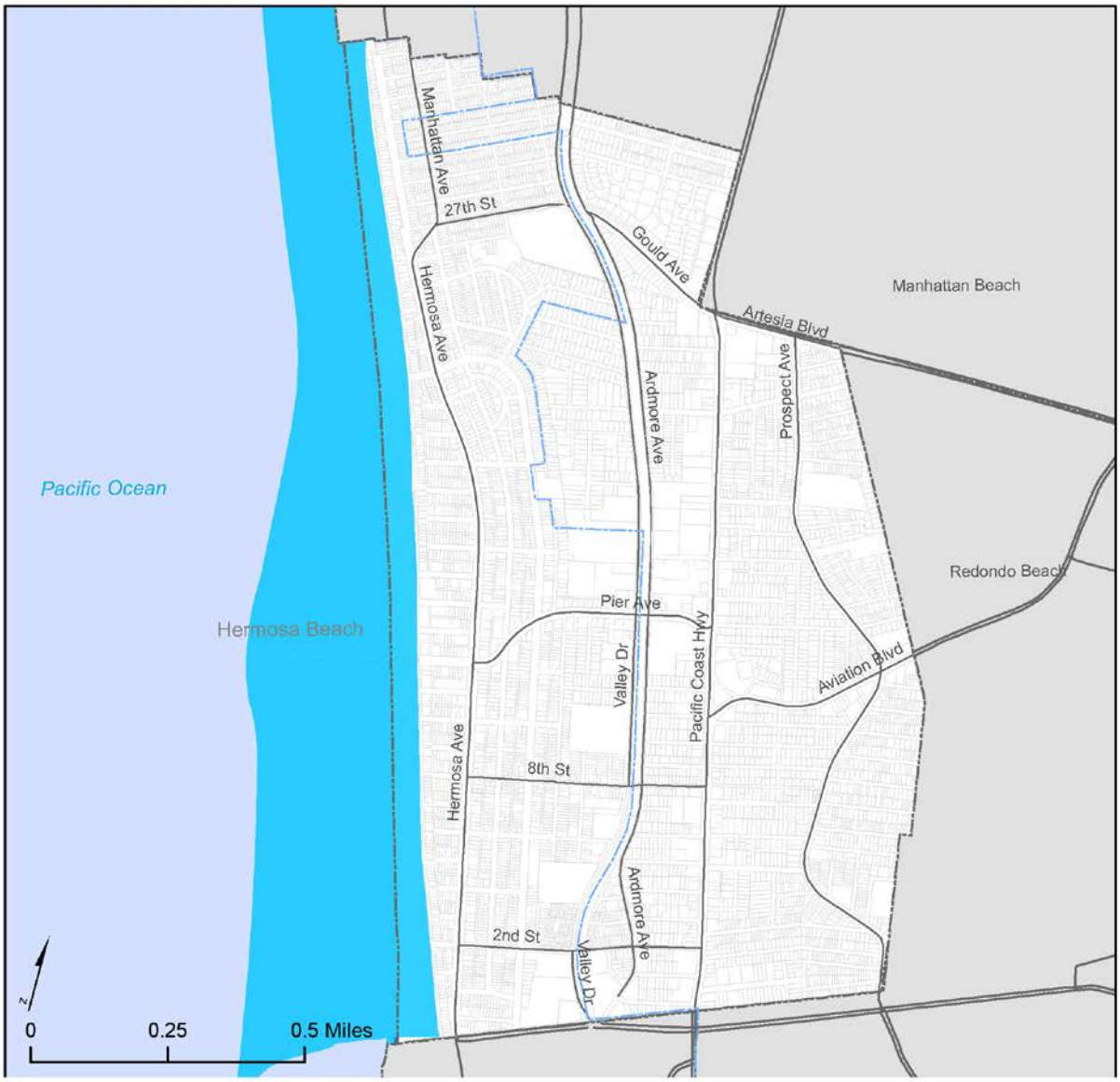
- Swell run-up from intense offshore winter storms in the Pacific.
- Tsunamis from the Aleutian-Alaskan and Peru-Chile Trenches.
- Run-up from wind waves generated by landfalling storms.
- Swell run-up from waves generated off Baja California by tropical cyclones.
- Effects of landfalling tropical cyclones.
- The combined effects of run-up and high tides.

The City of Hermosa Beach has large areas along the beachfront that are less than 15 feet above sea level. Normally, the very wide beach will buffer these areas from the surf. During heavy storm seasons, this beach can be eroded to such an extent that these properties may be subject to wave run-up. This has occurred during past El Nino events and during astronomical high tides. Resulting damage has been primarily to private property, although the extent of the damages have not been documented (City of Hermosa Beach 2005).

FEMA Flood Ratings and Flood Insurance Rate Maps

Figure 11-2 illustrates FEMA's 100-year flood zone areas for Hermosa Beach (FEMA 2008). A 100-year flood is an event that has a 1 percent chance of occurring in any given year. The entirety of Hermosa's sandy beaches (extending from offshore waters to The Strand) are identified as a 100-year flood zone with the designation of Zone A, which means no base flood elevations were determined. The remainder of the city is outside of the 100-year flood zone.

FIGURE 11.2: FEMA FLOOD ZONE MAP



Legend

- City Boundary
- Coastal Zone Boundary

Flood Zone Type

- 100 Year Flood Zone
- 500 Year Flood Zone

City of Hermosa Beach General Plan Update 2035

Source: FEMA,
City of Hermosa Beach, Los Angeles County, November 2013

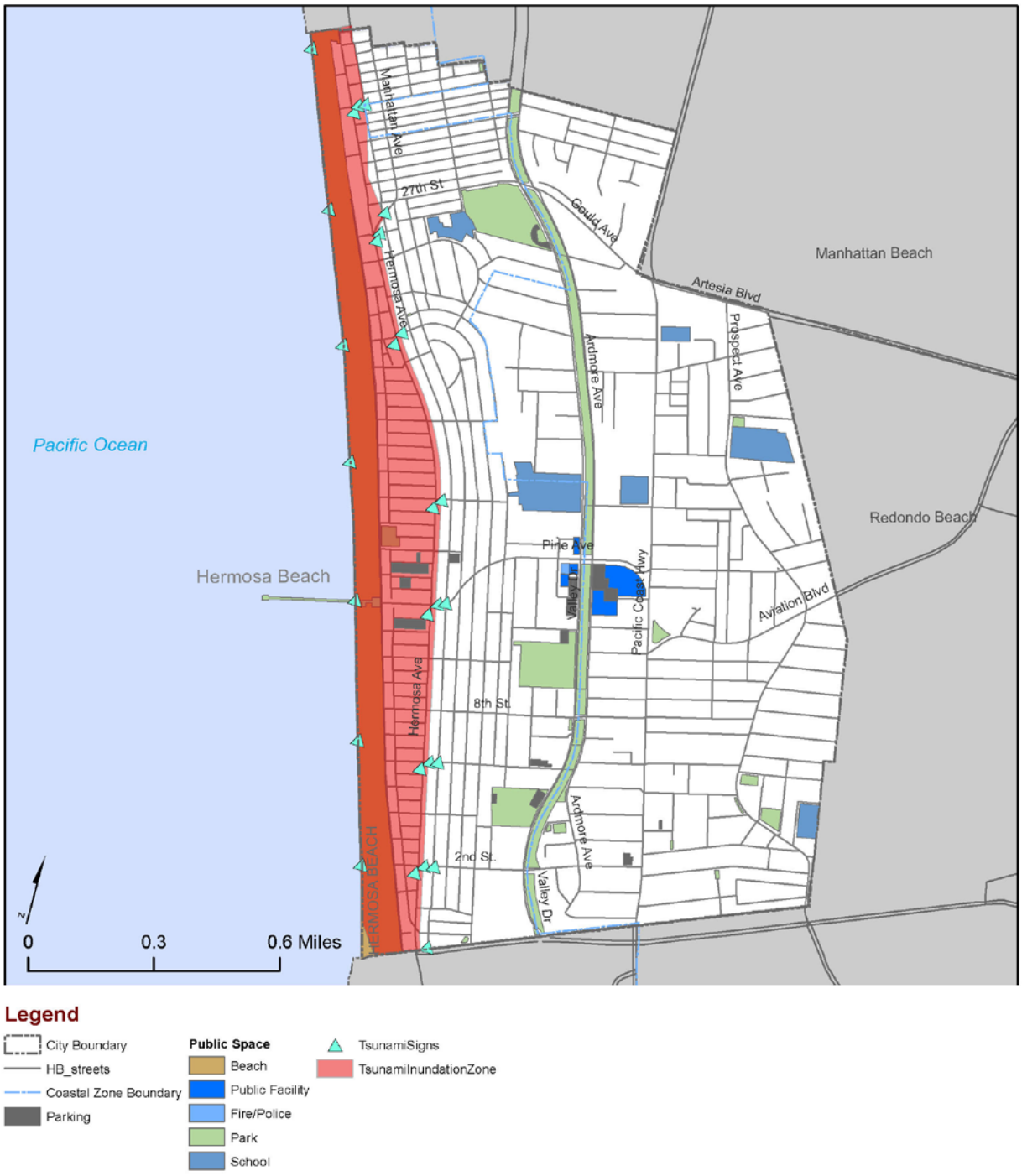
Tsunamis

A tsunami is a series of long-period traveling ocean waves primarily generated by earthquakes occurring below or near the ocean floor. Underwater volcanic eruptions and landslides can also generate tsunamis. In the deep ocean, tsunami waves move with a speed exceeding 500 miles per hour and a wave height of only a few inches. Tsunami waves are distinguished from ordinary ocean waves by their long period between wave crests, often exceeding 60 miles or more in the deep ocean. As they reach shallow waters off the coast, the waves slow down and water can pile up into a wall of destruction up to 30 feet or more in height (City of Hermosa Beach 2005).

Tsunamis have been documented extensively in California since 1806. Although the majority of tsunamis have occurred in Northern California, Southern California has been impacted as well. In the 1930s, four tsunamis struck the Los Angeles County, Orange County, and San Diego County coastal areas. In Orange County, the tsunami wave reached heights of 20 feet or more above sea level. In 1964, following the Alaska magnitude 8.2 earthquake, tidal surges of approximately 4 feet to 5 feet hit the Huntington Harbour area, causing moderate damage. In 2011, a major earthquake in Japan triggered a tsunami that reached most of California's shoreline (City of Hermosa Beach 2005). Although major damage occurred as the result of the tsunami in some areas, no structural damage was reported in Hermosa Beach (City of Hermosa Beach 2005).

The probability of a tsunami in the planning area is extremely low. However, if a tsunami should occur, the consequences would be great (City of Hermosa Beach 2005). The California Geologic Survey prepares tsunami inundation maps for California's coastline. As illustrated in Figure 11-3, the tsunami inundation line runs parallel with Hermosa Avenue, except in the northern part of the planning area where it extends eastward as much as one city block.

FIGURE 11.3: TSUNAMI INUNDATION ZONE



City of Hermosa Beach General Plan Update 2035

Pepared by Raimi + Associates for the City of Hermosa Beach
Source: City of Hermosa Beach, Los Angeles County, November 2013

Sea-Level Rise

According to the *Sea Level Rise Vulnerability Study for the City of Los Angeles* (Grifman et al. 2013), "Although it is occurring around the globe, sea level rise is not uniform; it varies from place to place (NRC 2012). […] Sea level rise in Los Angeles is expected to match global projections over the next century, despite the fact that local sea level has been relatively static for the past decade. For the Los Angeles region, the NRC report projects sea level rise of an increase of 0.1 - 0.6 m (or, 0.3 - 2.0 ft), from 2000 - 2050 and 0.4 - 1.7 m (or 1.3 - 5.6 ft) from 2000 - 2100 (NRC 2012)." As mentioned in the flooding section, above, coastal flooding is exacerbated by storm surge and high tides. Although though there is variability in sea level rise projections, even a minor increase in sea level could lead to substantial increases in coastal flooding severity and frequency. These conditions could affect coastal infrastructure and increase the effect of flooding from coastal related events in the planning area. As part of the General Plan and Local Coastal Plan update process, the City is assessing possible impacts and vulnerabilities to sea-level rise.

11.3 Regulatory Setting

This section details the federal, state, and local plans, policies, regulations, and laws that pertain to surface water and groundwater in the planning area. They provide the regulatory framework for addressing hydrology and water quality in the context of the General Plan Update.

Federal Plans, Policies, Regulations, and Laws

Federal Clean Water Act

The Clean Water Act (CWA) of 1972 is the primary federal law that governs and authorizes the EPA and the states to implement activities to control water quality. The following sections outline the various water quality elements of the CWA that apply to the General Plan Update.

Water Quality Criteria and Standards

The EPA is the federal agency with primary authority for implementing regulations adopted under the CWA. The EPA has delegated to the state of California the authority to implement and oversee most of the programs authorized or adopted for CWA compliance through the state's Porter-Cologne Act, described below.

Under federal law, the EPA has published water quality regulations under Volume 40 of the Code of Federal Regulations. Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of the designated beneficial uses of the water body in question and criteria that protect the designated uses. Section 304(a) requires the EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use.

National Pollutant Discharge Elimination System Permit Program

The CWA established the NPDES permit program to regulate municipal and industrial discharges to surface waters of the United States. A discharge from any point source is unlawful unless the discharge is in compliance with an NPDES permit. Federal NPDES permit regulations have been established for broad categories of point source discharges including industrial wastewater, municipal wastewater, and point sources of stormwater runoff, including municipal separate storm sewer systems and industrial stormwater which includes construction sites. NPDES permits generally establish effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge, prohibitions on discharges not specifically allowed under the permit, and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

In 1990, the EPA published regulations establishing NPDES permit requirements for municipal and industrial stormwater discharges, including construction. Phase 1 of the permitting program applied to municipal discharges of stormwater in urban areas where the population exceeded 100,000 persons. Although the City of Hermosa Beach's population falls far below this threshold, the City is regulated because its stormwater is managed as part of a large, interconnected flood control system operated by the Los Angeles County Flood Control District. Construction sites within the planning area that disturb one acre or more must obtain coverage under the statewide NPDES Construction General Permit. Currently there are no industrial facilities within the planning area that are subject to the statewide NPDES Industrial General Permit. The RWQCBs implement the NPDES permit system (see additional information under *State Plans, Policies, Regulations, and Laws*, below). The planning area is within the jurisdiction of the Los Angeles RWQCB.

Section 401 Water Quality Certification or Waiver

Under Section 401 of the CWA, an applicant for a Section 404 permit (to discharge dredged or fill material into waters of the US) must first obtain a certificate from the appropriate state agency stating that the fill is consistent with the state's water quality standards and criteria. In California, the nine RWQCBs have the authority to grant water quality certification or waive requirements.

Section 303(d) Impaired Waters List

Section 303(d) of the CWA requires states to develop lists of water bodies that would not attain water quality objectives after implementation of required levels of treatment by point-source dischargers (municipalities and industries). Section 303(d) requires that the state develop a TMDL for each of the listed pollutants. As noted previously, the TMDL is the amount of loading that the water body can receive and still be in compliance with water quality objectives. The TMDL can also act as a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives. The state-prepared TMDL must include an allocation of allowable loadings to point and nonpoint sources, with consideration of background loadings (sources of naturally occurring pollutants) and a margin of safety. The TMDL must also include an analysis that shows links between loading reductions and the attainment of water quality objectives. The EPA must either approve a TMDL prepared by the state or, if it disapproves the state's TMDL, issue its own. NPDES permit limits for listed pollutants must be consistent with the waste load allocation

prescribed in the TMDL. After implementation of a TMDL, it is intended that the problems that led to placement of a given pollutant on the Section 303(d) list would be remediated.

National Toxics Rule and California Toxics Rule

In 1992, the EPA issued the National Toxics Rule under the CWA to establish numeric criteria for California priority toxic pollutants. The National Toxics Rule established water quality standards for 42 pollutants not covered under California's statewide water quality regulations at that time. As a result of the court-ordered revocation of California's statewide water quality control plans (basin plans) in 1994, the EPA initiated efforts to issue additional federal water quality standards for California. In 2000, the EPA issued the California Toxics Rule, which includes all the priority pollutants for which the EPA has issued numeric criteria not included in the National Toxics Rule.

Safe Drinking Water Act

Under the Safe Drinking Water Act (Public Law 93-523) passed in 1974, the EPA regulates contaminants of concern to domestic water supply. The act defines contaminants of concern as contaminants that pose a public health threat or alter the aesthetic acceptability (e.g., taste and odor, staining of laundry and porcelain fixtures) of the water. The EPA's primary and secondary maximum contaminant levels (MCLs), which apply to treated water supplies delivered to the distribution system, regulate contaminants of concern. MCLs and the process for setting these standards are reviewed every three years. Amendments to the Safe Drinking Water Act enacted in 1986 and 1996 established an accelerated schedule for setting MCLs for drinking water.

The EPA has delegated the responsibility for administering California's drinking-water program to the California Department of Public Health (DPH). The DPH is accountable to the EPA for program implementation and for adopting standards and regulations that are at least as stringent as those developed by the EPA. The applicable state primary and secondary MCLs are set forth in Title 22, Division 4, Chapter 15, Article 4 of the California Code of Regulations (CCR), and described in "Title 22 Standards" below.

National Flood Insurance Program

FEMA administers the National Flood Insurance Program to provide subsidized flood insurance to communities that comply with FEMA regulations that limit development in floodplains. FEMA also issues Flood Insurance Rate Maps (FIRM) that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. FEMA established the design standard for flood protection in areas covered by FIRMs, with the minimum level of flood protection for new development determined to be a 1-in-100 probability of annual exceedance (i.e., the 100-year flood event). As developments are proposed and constructed, FEMA is also responsible for issuing revisions to FIRMs, such as Conditional Letters of Map Revision and Letters of Map Revision through the local agencies that work with the National Flood Insurance Program.

Executive Order 11988

Executive Order 11988 requires federal agencies to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. It generally requires federal agencies constructing, permitting, or funding a project in a floodplain to avoid incompatible floodplain development, be consistent with the standards and criteria of the National Flood Insurance Program, and restore or preserve natural and beneficial floodplain values.

US Army Corps of Engineers

The US Army Corps of Engineers (USACE) is responsible for issuing permits for the placement of fill or discharge of material into waters of the United States. These permits are required under Sections 401 and 404 of the CWA. Water supply projects that involve stream construction, such as dams or other types of diversion structures, trigger the need for these permits and related environmental reviews by the USACE. The USACE also is responsible for flood control planning and assisting state and local agencies with the design and funding of local flood control projects.

State Plans, Policies, Regulations, and Laws

California Coastal Act of 1976

The California Coastal Act of 1976 (Coastal Act) and the California Coastal Commission, the state's coastal protection and planning agency, were established by voter initiative in 1972 to plan for and regulate new development, and to protect public access to and along the shoreline. The Coastal Act considers water quality and water-related public safety concerns as issues of public importance.

To provide maximum public access to the coast and public recreation areas, the Coastal Act directs each local government located within the coastal zone to prepare a Local Coastal Program (LCP) consistent with Section 30501 of the Coastal Act, in consultation with the Coastal Commission and with public participation.

California Coastal Act
Section 30251 Scenic and visual qualities

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30253(a) Minimization of adverse impacts

New development shall [...] [m]inimize risks to life and property in areas of high geologic, flood, and fire hazard.

Source: California Public Resources Code, Division 20: California Coastal Act

Until an LCP has been adopted by the local jurisdiction and certified compliant with the Coastal Act, the Coastal Commission retains permitting authority within the local jurisdiction. A coastal development permit (CDP) is required for development in the Coastal Zone that results in changes to the density or intensity of the use of land, changes in water use, and impacts to coastal access.

State Water Resources Control Board (SWRCB)

In California, the SWRCB has broad authority over issues related to controlling water quality for the state. The SWRCB is responsible for developing statewide water quality policy and exercises the powers delegated to the state by the federal government under the CWA. Other state agencies with jurisdiction over water quality regulation in California include the DPH (for drinking water regulations), the California Department of Pesticide Regulation, the California Department of Fish and Wildlife, and the Office of Environmental Health and Hazard Assessment.

Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The regional boards are required to formulate and adopt basin plans for all areas in the region and establish water quality objectives in the plans. California water quality objectives (or "criteria" under the CWA) are found in the basin plans adopted by the SWRCB and each of the nine RWQCBs. The Los Angeles RWQCB is responsible for the planning area and surrounding region.

In 2006, the SWRCB adopted Order Number 2006-003 establishing General Waste Discharge Requirements for all publicly owned or operated sanitary sewer systems in California. The Waste Discharge Requirements require owners and operators of sewer collection systems to report sanitary sewer overflows using the California Integrated Water Quality System, and to develop and implement a Sewer System Management Plan. The Hermosa Beach Sewer System Management Plan,

adopted in 2009 and updated in 2011, requires periodic updates details sewer collection system operations, maintenance, repair, and funding.

Chapter 17, Public Services, Utilities, and Recreation, addresses the state regulations that apply to the demonstration of adequate water supply for the future water demands caused by implementation of the proposed General Plan.

Title 22 Standards

California's drinking water quality standards are contained in Title 22 of the CCR. Water quality standards are enforceable limits composed of two parts: the designated beneficial uses of water and criteria (i.e., numeric or narrative limits) to protect those beneficial uses. Municipal and domestic supply is among the "beneficial uses" defined in Section 13050(f) of the Porter-Cologne Act as uses of surface water and groundwater that must be protected against water quality degradation. MCLs are components of the drinking water standards adopted by the California Department of Health Services (now DPH) pursuant to the California Safe Drinking Water Act (Title 22 of the CCR, Division 4, Chapter 15, Domestic Water Quality and Monitoring). Primary water quality objectives were established for protection of health. Secondary water quality objectives were established for aesthetic concerns (e.g., taste and odor, staining of laundry and porcelain fixtures), and at elevated levels do not pose a health hazard.

Drinking water MCLs directly apply to water supply systems "at the tap" (i.e., at the point of use by consumers in, for example, their home and office), and are enforceable by the state and Los Angeles County Department of Public Health. California MCLs, both primary and secondary, directly apply to groundwater and surface water resources when they are specifically referenced as water quality objectives in the pertinent basin plan. In such cases, MCLs become enforceable limits by the SWRCB and RWQCBs. When fully health-protective, MCLs may also be used to interpret narrative water quality objectives prohibiting toxicity to humans in water designated as a source of drinking water in the basin plan.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act is California's statutory authority for the protection of water quality. Under the act, the state must adopt water quality policies, plans, and objectives that protect the state's waters for the use and enjoyment of the people. The act sets forth the obligations of the SWRCB and RWQCBs to adopt and periodically update basin plans. Basin plans are the regional water quality control plans required by both the CWA and Porter-Cologne Act in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The act also requires waste dischargers to notify the RWQCBs of their activities through the filing of reports of waste discharge and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements (WDR), NPDES permits, Section 401 water quality certifications, or other approvals. The RWQCBs also have authority to issue waivers to reports of waste discharge and/or WDRs for broad categories of "low threat" discharge activities that have minimal potential for adverse water quality effects when implemented according to prescribed terms and conditions.

Los Angeles Regional Water Quality Control Board Basin Plan

The planning area is within the jurisdiction of the Los Angeles RWQCB, which is responsible for the preparation and implementation of the water quality control plan for the Los Angeles Region (Los Angeles RWQCB 1995). The basin plan defines the beneficial uses, water quality objectives, implementation programs, and surveillance and monitoring programs for waters of the coastal drainages in the Los Angeles region between Rincon Point on the coast of western Ventura County and the eastern Los Angeles County line. The basin plan contains specific numeric water quality objectives that apply to certain water bodies or portions of water bodies. Objectives have been established for bacteria, dissolved oxygen, pH, pesticides, electrical conductivity, total dissolved solids, temperature, turbidity, and trace elements. Numerous narrative water quality objectives have also been established.

California Ocean Plan

Section 13170.2 of the California Water Code directs the SWRCB to formulate and adopt a water quality control plan for ocean waters of California. The SWRCB first adopted this plan, known as the California Ocean Plan, in 1972. The California Water Code also requires a review of the California Ocean Plan at least every three years to guarantee that current standards are adequate and are not allowing degradation to indigenous marine species or posing a threat to human health. The current iteration of the California Ocean Plan (SWRCB 2012) establishes water quality objectives for California's ocean waters and provides the basis for regulation of wastes discharged into the state's coastal waters.

California State Nondegradation Policy

In 1968, the SWRCB adopted a nondegradation policy aimed at maintaining high quality for waters in California. The nondegradation policy states that the disposal of wastes into state waters shall be regulated to achieve the highest water quality consistent with maximum benefit to the people of the state and to promote the peace, health, safety, and welfare of the people of the state. The policy provides as follows:

- Where the existing quality of water is better than required under existing water quality control plans, such quality would be maintained until it has been demonstrated that any change would be consistent with maximum benefit to the people of the state and would not unreasonably affect present and anticipated beneficial uses of such water.
- Any activity which produces waste or increases the volume or concentration of waste and which discharges to existing high-quality waters would be required to meet waste discharge requirements, which would ensure (1) pollution or nuisance would not occur and (2) the highest water quality consistent with the maximum benefit to the people of the state would be maintained.

NPDES Permit System and Waste Discharge Requirements for Construction

The SWRCB and Los Angeles RWQCB have adopted specific NPDES permits for a variety of activities that have potential to discharge wastes to waters of the state. The SWRCB General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order

2009-0009-Division of Water Quality [DWQ]) applies to all land-disturbing construction activities that would affect one acre or more. The Los Angeles RWQCB has issued a general NPDES permit and general WDRs governing construction-related dewatering discharges within the Los Angeles RWQCB's jurisdictional area (Los Angeles RWQCB Order No. R4-2003-0111; NPDES No. CAG994004). This permit, known as the General Dewatering Permit, addresses discharges from temporary dewatering operations associated with construction and permanent dewatering operations associated with development. The discharge requirements include provisions mandating notification, sampling and analysis, and reporting of dewatering and testing-related discharges. The NPDES permits all involve similar processes including submittal of notices of intent to discharge to the Los Angeles RWQCB and implementation of best management practices (BMPs) to minimize those discharges. The Los Angeles RWQCB may also issue site-specific WDRs, or waivers to WDRs, for certain waste discharges to land or waters of the state.

Construction activities subject to the general construction activity permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters. The permit also requires dischargers to install post-construction permanent BMPs that would remain in service to protect water quality throughout the life of the project consistent with the planning and land development requirements of the MS4 Permit. Types of BMPs include source controls, treatment controls, and site planning measures.

Activities subject to the NPDES general permit for construction activity must develop and implement a stormwater pollution prevention plan (SWPPP). The SWPPP includes a site map and description of construction activities and identifies the BMPs that will be employed to prevent soil erosion and discharge of other construction-related pollutants, such as petroleum products, solvents, paints, and cement, that could contaminate nearby water resources. A monitoring program is generally required to ensure that BMPs are implemented according to the SWPPP and are effective at controlling discharges of pollutants that are related to stormwater.

Municipal Stormwater Permit Program

The SWRCB Municipal Storm Water Permitting Program regulates stormwater discharges from MS4s. MS4 permits are issued in two phases. Under Phase I, which started in 1990, the RWQCBs adopted NPDES stormwater permits for large and medium municipalities (large MS4 systems serve populations of 250,000 or more people). Most of these permits are issued to a group of co-permittees encompassing an entire metropolitan area such as the Los Angeles County area. The current MS4 permit requires the discharger to develop and implement a stormwater management plan/program with the goal of reducing the discharge of pollutants in stormwater to the maximum extent practicable (MEP). The MEP is the performance standard specified in Section 402(p) of the CWA. The management programs specify what BMPs will be used to address certain program areas. The program areas include public education and outreach; illicit discharge detection and elimination; construction and post-construction; and good housekeeping for municipal operations.

In 2001, the Los Angeles RWQCB issued an MS4 permit (No. CAS004001, Order No. 01-182, as amended in 2012, by Order R4-2012-0175) to Los Angeles County, the Los Angeles County Flood Control District, and 84 co-permittee cities within the Los Angeles region, including the City of

Hermosa Beach. Each co-permittee is required to comply only with the permit requirements applicable to discharges within its boundaries. Within its geographic jurisdiction, each co-permittee is required to:

- Prohibit non-storm water discharges through the MS4 to receiving waters, excepting certain conditions.
- Comply with the requirements of the Stormwater Quality Management Program (summarizes the program components the co-permittees will implement to comply with the MS4 permit and to reduce the discharges of pollutants in stormwater to the MEP), as described in Part VI.C of the MS4 permit.
- Comply with water quality-based effluent limitations consistent with the assumptions and requirements of all available TMDL waste load allocations assigned to discharges from the permittees' MS4s.
- Coordinate among its internal departments and agencies, as appropriate, to facilitate implementation of the requirements of the Stormwater Quality Management Program.
- Participate in intra-agency coordination (e.g., fire department, building and safety, code enforcement, public health) necessary to successfully implement the provisions of the permit and the Stormwater Quality Management Program.
- Prepare an annual budget summary of expenditures applied to the stormwater management program.
- Implement a Planning and Land Development Program (Program) pursuant to Part VI.D.7.b for all new development and redevelopment projects. The Program is intended to:
    - Lessen the water quality impacts of development by using smart growth practices.
    - Minimize the adverse impacts from stormwater runoff on the biological integrity of natural drainage systems and the beneficial uses of water bodies in accordance with requirements under the California Environmental Quality Act (CEQA) (Cal. Pub. Resources Code Section 21000 et seq.).
    - Minimize the percentage of impervious surfaces on land.
    - Maintain existing riparian buffers and enhance riparian buffers when possible.
    - Minimize pollutant loadings from impervious surfaces.
    - Control post-construction stormwater through properly selected, designed and maintained low-impact development (LID) and hydromodification control BMPs.
    - Prioritize the selection of BMPs to remove stormwater pollutants, reduce stormwater runoff volume, and beneficially use stormwater to support an integrated approach to protecting water quality and managing water resources in the following order of preference:
        - On-site infiltration, bioretention, and/or rainfall harvest and use.
        - On-site biofiltration, off-site ground water replenishment, and/or off-site retrofit.

Urban Water Management Planning Act

Each urban water supplier in California is required to prepare an urban water management plan (UWMP) and update the plan on or before December 31 in years ending in 5 and 0, pursuant to

California Water Code Sections 10610–10657, as last amended by SB 318 (Chapter 688, Statutes of 2004), the Urban Water Management Planning Act. SB 318 is the 18th amendment to the original bill requiring an UWMP, which was initially enacted in 1983. The City of Hermosa Beach receives potable water and recycled water from different sources, and is therefore considered in two currently adopted UWMPs. Recycled water is covered in the West Basin Municipal District 2010 Urban Water Management Plan (2011). Potable water is covered in the California Water Service Company 2010 Urban Water Management Plan (2011).

Senate Bill 610

SB 610 (Chapter 643, Statues of 2001) became effective January 1, 2002. The purpose of SB 610 is to strengthen the process by which local agencies determine whether current and future water supplies are adequate and sufficient to meet current and future demand. SB 610 amended the California Public Resources Code to incorporate California Water Code requirements within the CEQA process for certain types of projects. Projects requiring water supply assessments include (State Water Code Section 10912 (a):

- A proposed residential development of more than 500 dwelling units.
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- A proposed hotel or motel, or both, having more than 500 rooms.
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- A mixed-use project that includes one or more of the projects specified in this subdivision.
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project.

SB 610 also amended the California Water Code to broaden the types of information required to be included in an UWMP (Water Code Section 10610 et seq.).

Senate Bill 221

SB 221 (Chapter 642, Statues of 2001) requires a county or city to include as a condition of approval of any tentative map, parcel map, or development agreement for certain residential subdivisions a requirement that a "sufficient water supply" be available. Proof of a sufficient water supply must be based on a written verification from the public water system that would serve the development. To determine "sufficient water supply," the water supplier must consider:

- The availability of water supplies over a historical record of at least 20 years.
- The applicability of an urban water shortage contingency analysis.

- Any reductions in water supply allocated to a specific water use sector pursuant to an adopted resolution or ordinance or contractual obligation on the part of the public water system.
- The amount of water that the water supplier can reasonably rely on receiving from other water supply projects.

The written verification of a water supplier's ability or inability to provide sufficient water to a subdivision needs to be supported by substantial evidence, which may include the public water system's most recently adopted UWMP or other information relating to the sufficiency of the water supply.

Recycled Wastewater Requirements

Wastewater recycling in California is regulated under Title 22, Division 4, of the CCRs under the jurisdiction of DPH. The intent of these regulations is to ensure protection of public health associated with the use of recycled water. The regulations establish acceptable levels of constituents in recycled water for a range of uses and prescribe means for ensuring reliability in the production of recycled water. Using recycled water for nonpotable uses is common throughout the state and is an effective means of maximizing use of water resources. The Los Angeles RWQCB establishes water reclamation requirements under the Title 22 regulations and is responsible for implementing wastewater recycling projects.

California Department of Water Resources

The DWR is responsible for preparation of the California Water Plan, regulation of dams, provision of flood protection, and other functions related to surface water and groundwater resources. These other functions include helping water agencies prepare their UWMPs, which are discussed in Chapter 17, Public Services, Utilities, and Recreation.

Regional and Local Plans, Policies, Regulations, and Laws

Standard Urban Stormwater Mitigation Plan

The *Standard Urban Storm Water Mitigation Plan* (SUSMP) was developed as required in Part D.2 of the Los Angeles County MS4 permit to address stormwater pollution from new construction and redevelopment. The final SUSMP approved by the Los Angeles RWQCB in 2000 was updated in February 2002 and incorporated into Chapter 8.44 of the Hermosa Beach Municipal Code. The current regulations, when amended, will be superseded by the planning and land development provisions in the Los Angeles MS4 Permit which requires the city to adopt a Low Impact Development Ordinance and Green Street Policy by May 2015.

Hermosa Beach Sewer System Management Plan

The Sewer System Management Plan adopted in 2009 was amended in 2011 by the Sanitary Sewer Master Plan Update (SSMP) which provides an overview of existing conditions and recommends a rehabilitation program for Hermosa Beach's sanitary sewer infrastructure. The SSMP estimates that the entire sanitary sewer system is estimated to have a present replacement value of $40 million. The SSMP recommends that the City invest $7.5 million (present value), plus 20 percent equal to $1.5

million for design and administration to rehabilitate approximately 95,000 lineal feet of sanitary sewer pipes through year 2021 (City of Hermosa Beach 2011).

City of Hermosa Beach Local Coastal Program (LCP)

Hermosa Beach's LCP will consist of the Coastal Land Use Plan, which will be an element in the General Plan, and a Local Implementation Program (LIP), which will be incorporated into the city's coastal zoning code, zoning maps, and implementing ordinances. The Coastal Land Use Plan component adopted by the City and certified by the California Coastal Commission in 1981 addresses hydrology, water quality, and water-related public safety considerations of development within the coastal zone. The Coastal Development and Design chapter includes a policy to minimize risk to life and property in areas of high flood hazard. The Local Implementation Program (LIP) of the LCP has not yet been certified and, therefore, the Coastal Commission retains the authority to review and issue CDPs for development within the coastal zone.

City of Hermosa Beach Municipal Code

Chapter 8.44 Stormwater and Urban Runoff Pollution Control Regulations

Chapter 8.44 of the Hermosa Beach Municipal Code seeks to ensure the future health, safety, and general welfare of the citizens of the city and the water quality of the receiving waters of the County of Los Angeles and surrounding coastal areas by:

- Reducing pollutants in storm water discharges to the maximum extent practicable.
- Regulating illicit connections and illicit discharges and thereby reducing the level of contamination of stormwater and urban runoff into the MS4.
- Regulating non-stormwater discharges to the MS4.
- Protecting and enhancing the quality of watercourses, water bodies, and wetlands in the city in a manner consistent with the federal Clean Water Act, the California Porter-Cologne Water Quality Control Act, and the Municipal NPDES Permit.

Chapter 8.44 specifically prohibits illicit connections to the municipal stormwater system, littering, and the discharge of certain kinds of untreated runoff into the stormwater system. Chapter 8.44 also requires that owners and occupants of property in the city implement BMPs to prevent or reduce the discharge of pollutants to the municipal stormwater system to the maximum extent practicable. Additionally, Chapter 8.44 provides runoff requirements for industrial/commercial and construction activities and standard urban stormwater mitigation plan requirements for new development and redevelopment.

As indicated above, the current regulations will be replaced by the planning and land development provisions in the Los Angeles MS4 Permit which requires the City to adopt a Low Impact Development Ordinance and Green Street Policy by May 2015.

Chapter 8.52 Floodplain Management Regulations

This chapter's purpose is to minimize public and private losses due to flood conditions by provisions designed to protect human life and health; minimize expenditure of public money for

costly flood control projects; minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public; minimize prolonged business interruptions; minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, and streets and bridges located in areas of special flood hazard; help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future blighted areas caused by flood damage; ensure that potential buyers are notified when property is in an area of special flood hazard; and ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

To accomplish these purposes, this chapter includes regulations to restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities; require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction; control the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters; control filling, grading, dredging, and other development which may increase flood damage; and prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.

Urban Water Management Plans

- The City obtains recycled water through the West Basin Municipal District (WBMD) and potable water through Cal Water. Both agencies have adopted 2010 UWMPs, which serve as foundational documents and sources of information for Water Supply Assessments (SB 610) and Written Verifications of Water Supply (SB 221). The WBMD and CalWater UWMPs ensure each water agency has adequate water supplies available or planned infrastructure improvements to meet future demand in the face of diminishing water resources.

Pursuant to SB 610, described above, the UWMPs provide estimates for population, water demand, and water supply with projections in five-year increments to 2035.

C-12: Land Use and Planning

12. Land Use and Planning

12.1. Introduction

This section identifies existing land use and planning conditions, regulations, and key issues within the inland and coastal zone areas of the City of Hermosa Beach (planning area). This chapter addresses both the existing land use setting as well as the Land Use Maps in the City's adopted General Plan and Coastal Land Use Plan.

12.2. Environmental Setting

Located in southwest Los Angeles County, the City of Hermosa Beach encompasses 1.4 square miles with 1.8 miles of coastline along Santa Monica Bay. The City of Manhattan Beach borders the City to the north and northeast, with the City of Redondo Beach located to the south and southeast.

Overall the topography of the City generally slopes upward from the coastline providing sweeping views of the Pacific Ocean to the west from various public and private locations. The City's grid street layout generally runs on a north-south and east-west direction with few diagonal streets. Pacific Coast Highway (State Route 1) runs north/south, effectively bisecting the community into western and eastern Hermosa. Valley/Ardmore Drive and Hermosa Avenue provide north/south corridors running parallel with Pacific Coast Highway. Gould Avenue, Pier Avenue/Aviation Boulevard and Herondo Street provide major east/west linkages. To the east, Prospect Avenue also provides a major north/south residential corridor linking Herondo Street and Aviation and Artesia Boulevards.

12.3. Existing Uses

Existing land uses in the City include residential, commercial, institutional, industrial, and open space as shown in Figure 12.1 and Table 12.1.

FIGURE 12.1: HERMOSA BEACH EXISTING LAND USES

TABLE 12.1: HERMOSA BEACH EXISTING LAND USES

Use	Number of Parcels	Total Acres	% of Land Area
Residential Uses			
Single-Family	3,261	263.0	39.1%
Multi-Family	1,898	186.3	27.6%
Mobile Homes	3	4.6	0.7%
Mixed Residential and Commercial	17	1.5	0.2%
Residential Subtotal	**5,179**	**455.4**	**67.6%**
Commercial & Industrial Uses			
Commercial and Services	274	57.6	8.5%
General Office	40	7.9	1.1%
Industrial	26	4.1	0.6%
Mixed Commercial and Industrial	1	0.2	< 0.1%
Commercial and Industrial Subtotal	**341**	**69.8**	**10.2%**
Institutional & Other Uses			
City Facilities	46	19.6	2.9%
Education	9	16.7	2.4%
Open Space and Recreation	52	104.5	15.5%
Transportation, Communication, and Utilities	8	4.2	0.6%
Vacant	33	2.6	0.4%
Institutional & Other Subtotal	**148**	**147.6**	**21.8%**
Total	**5,668**	**672.8**	**100%**

Source: City of Hermosa Beach, 2014.

Residential Uses

Residential parcels comprise over 67% of the City's land area, with approximately 10,000 housing units encompassing 455 acres of the City. Residential uses include single-family residential, multi-family, mobile homes, and mixed use property (with both residential and commercial).

Single-family land uses are found throughout the City, with some blocks and neighborhoods in the northeast, east, and southeast areas of the City that are exclusively or predominantly filled with single-family uses. There are 3,261 parcels in Hermosa Beach with single-family uses currently in place. Multi-family housing units are predominantly found in the southwest area of Hermosa Beach, with other multi-

family housing found in the northwest and southeast portions of the City. The northwest portion of the City and The Strand have an even mix of single-family and multi-family housing options. There are two mobile home areas - one located north of Pier Avenue, between Loma Drive and Valley Drive, which is a resident owned park, and the other along 10th Street between Ardmore Avenue and Pacific Coast Highway, which also serves recreational vehicles.

Commercial and Industrial Uses

There are 69.8 acres of commercial and industrial land uses within the City; this accounts for 10.2% of total land area in the City. Commercial uses include retail stores or shopping centers, lodging accommodations, restaurants, professional office space, auto related uses, entertainment uses, and personal services (salons, art studios, dry-cleaning, photo copying services, fitness studios, etc.). Commercial uses in Hermosa Beach are primarily focused along the City's major street corridors: Pacific Coast Highway, Pier Avenue, Hermosa Avenue, Aviation Boulevard, and Artesia Boulevard.

The Downtown District generally extends the length of Pier Avenue to Valley Drive, encompassing Pier Plaza, as well as Hermosa and Manhattan Avenues between 8th and 15th Streets. The Downtown Core[1] is generally bounded by 10th and 14th Streets and The Strand and Hermosa Avenue, and serves as the hub for commercial and pedestrian activity offering an array of retail, restaurant, and entertainment uses, and to a lesser extent personal services and office uses. Pier Plaza serves as a popular venue for outdoor events and dining, connecting downtown to the beach, pier, and recreational facilities. The types of uses are targeted both for residents as well as visitors to the City. Commercial uses clustered along Hermosa or Manhattan Avenue, outside of the Downtown Core, primarily consist of restaurants, stores, and services to serve the neighborhood and nearby beachgoers.

The Pacific Coast Highway/Aviation Boulevard corridor offers a wide variety of commercial uses. Though traditionally dominated by auto-oriented uses such as auto sales and repair, the uses along the corridors have diversified to include lodging accommodations, professional office space, retail and entertainment, and restaurant

[1] Downtown Core as defined the Downtown Core Revitalization Strategy prepared by ROMA Design Group, 2014.

uses. The largest shopping centers, anchored by retail (grocery) uses, are located on the northwest corner of Pier Avenue and Pacific Coast Highway and the northeast corner of Pacific Coast Highway and Aviation Boulevard. There is, however, one break in commercial use along Pacific Coast Highway, between 21st and 18th Street, comprised of multi-family residential units and a residential care facility.

Other larger sites include the northeast corners of Pacific Coast Highway and Artesia Boulevard with a church, office and some retail, and Aviation Boulevard and Prospect Avenue comprised of a retail strip mall. The northeast corner of the City, near the intersection of Artesia Boulevard and Pacific Coast Highway, primarily includes professional office uses, as well as a hotel, retail, and restaurants.

The Cypress Avenue area is 4.05 acres of industrial land use including light manufacturing, warehouses, construction supply, a surfboard manufacturing use and auto shops, and air conditioning and heating manufacturing uses, and the City maintenance yard which will be considered for a possible oil drilling and production site. One other industrial use parcel is located on Valley Ave, adjacent to Valley Elementary School occupied by a telecommunications company.

Institutional and Other Uses

Institutional land uses include religious organizations, public and private schools, and government-owned facilities, parks, the beach and open space, and essential operations and service areas such as parking, utility buildings, the city maintenance yard and other facilities, or utility easements and accounts for 147 acres or 21.8% of the total land area.

Hermosa Beach currently has 104.5 acres of parkland with a total of 20 parks and parklettes. The beach, which is owned by the City, provides a valuable and prominent open space resource for residents and visitors, accounting for 63 acres of open space. The Hermosa Valley Greenbelt encompasses 19 acres, providing a vegetated pedestrian open space corridor that runs north-south along the entire length of the City and continues into Manhattan Beach.

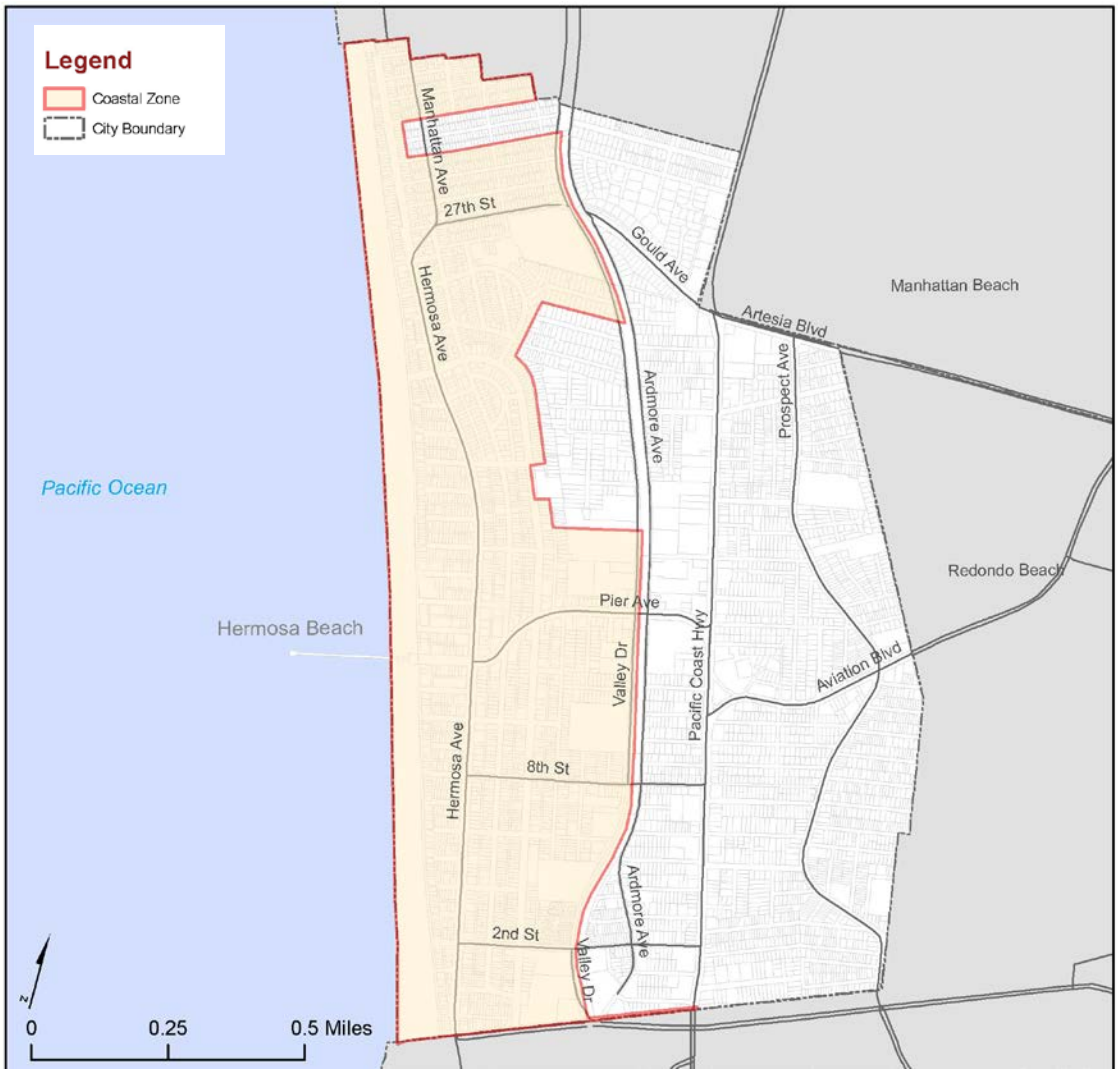
The City's largest parks or recreational spaces: the Community Center, Valley Park, South Park, and Clark Stadium are located adjacent to the Greenbelt with smaller parks or parklettes, less than 1 acre in size, distributed throughout the city. Parks

within the City provide play fields, tennis courts, and space for a number of activities, from lawn bowling at Clark Field Park to a structured Skate Park, for picnics, youth programs, and other outdoor recreation activities. In 2011, the City established a temporary community garden at South Park to test options. The community garden area will be permanently constructed as a part of the park renovations underway. See the Public Services, Utilities, and Recreation Section for a more detailed description of Hermosa Beach's parks and open space.

Coastal Zone

Approximately half of the city, 43 percent (295 acres), lies within the coastal zone. The coastal zone boundary is defined by the California Coastal Act. The coastal zone boundary spans the entire length of the planning area from north to south, and extends from the mean high tide line inland to roughly Ardmore Avenue with two exclusions – the area from Hermosa Avenue to Valley Drive between Longfellow Avenue and 31st Place; and the area east of Park Avenue or Loma Drive between 25th Street and 16th Street, as shown in Figure 12.2 below.

FIGURE 12.2: HERMOSA BEACH COASTAL ZONE BOUNDARY



Within the coastal zone, there is a diversity of land uses: residential, downtown and neighborhood commercial, industrial, institutional and non-public institutional, and open spaces land uses. Open space uses include the beach, the Strand, the Hermosa Beach Pier, several parks and the Hermosa Valley Greenbelt. Hermosa Beach's downtown lies entirely within the coastal zone. The residential and recreational uses in the coastal zone are supported by commercial and visitor-serving uses primarily concentrated within the downtown area with smaller commercial uses along Hermosa and Manhattan Avenues.

The Coastal Act places a high priority on the protection and maximization of recreation and visitor serving land uses, including low- or moderate-cost amenities within the Coastal Zone. Visitor-serving uses include hotel and lodging

accommodations, restaurants, parking facilities, and shopping or entertainment uses for visitors and tourists. The majority of existing recreational or visitor-serving uses are found in the Pier Plaza and Downtown Core area.

12.4. Community Character

A community's character can be defined by the distinctive or unique physical features, qualities, or attributes (i.e. hilly, small buildings, wide sidewalks) as well as the social characteristics that are influenced by physical characteristics (i.e. pedestrian-friendly, safe, auto-oriented). Various descriptions on the overall character of Hermosa Beach include: small town, eclectic, beach culture, clean.

This section describes the existing character of the community by neighborhood or corridor (as defined in Figure 12.3). The character defining features of Hermosa Beach vary by area of the City and generally include density (Figure 12.4), building height (Figure 12.5), lot size (Figure 12.6), and the year in which the structure was built (Figure 12.7).

FIGURE 12.3: COMMUNITY CHARACTER AREAS

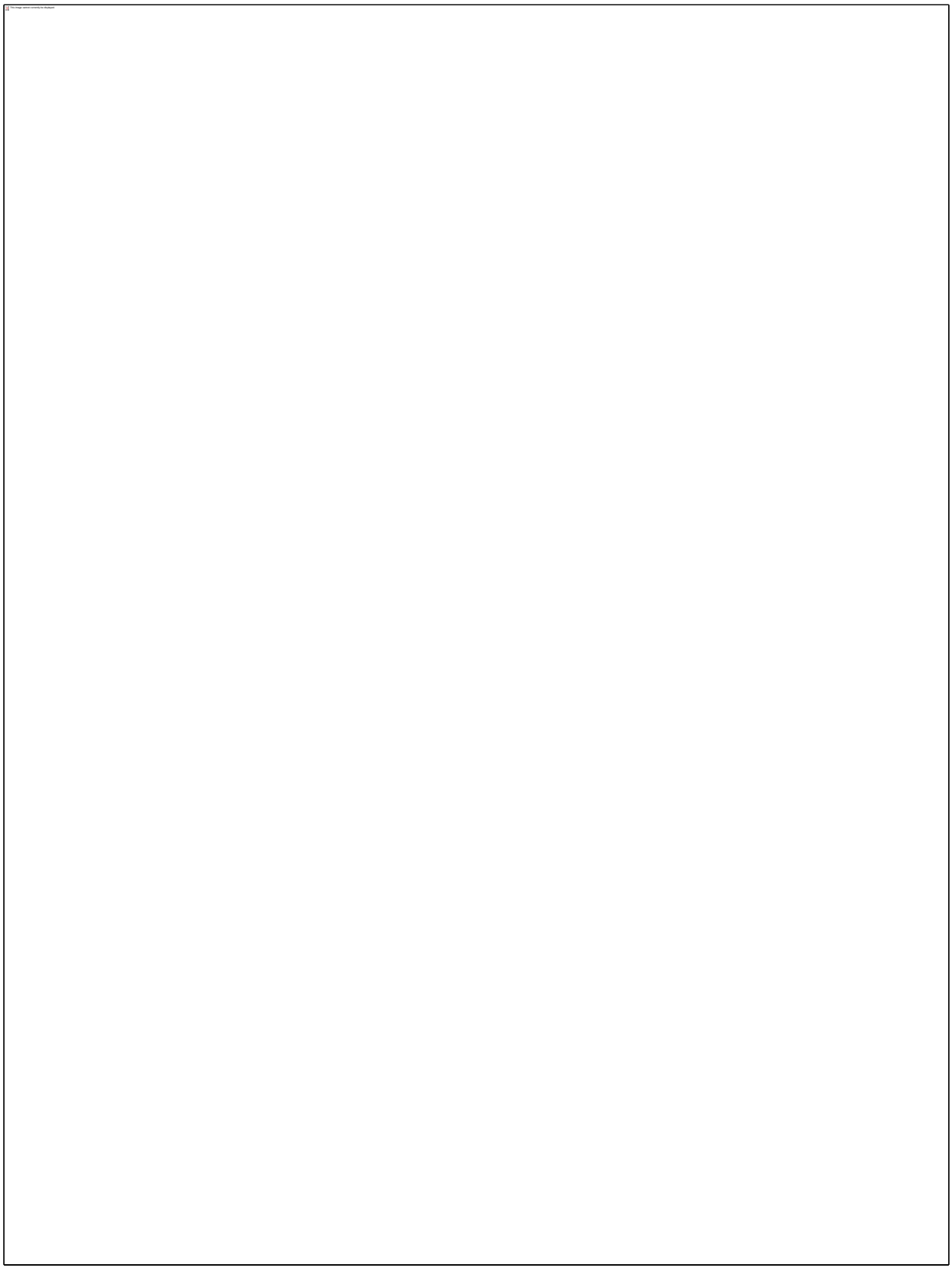
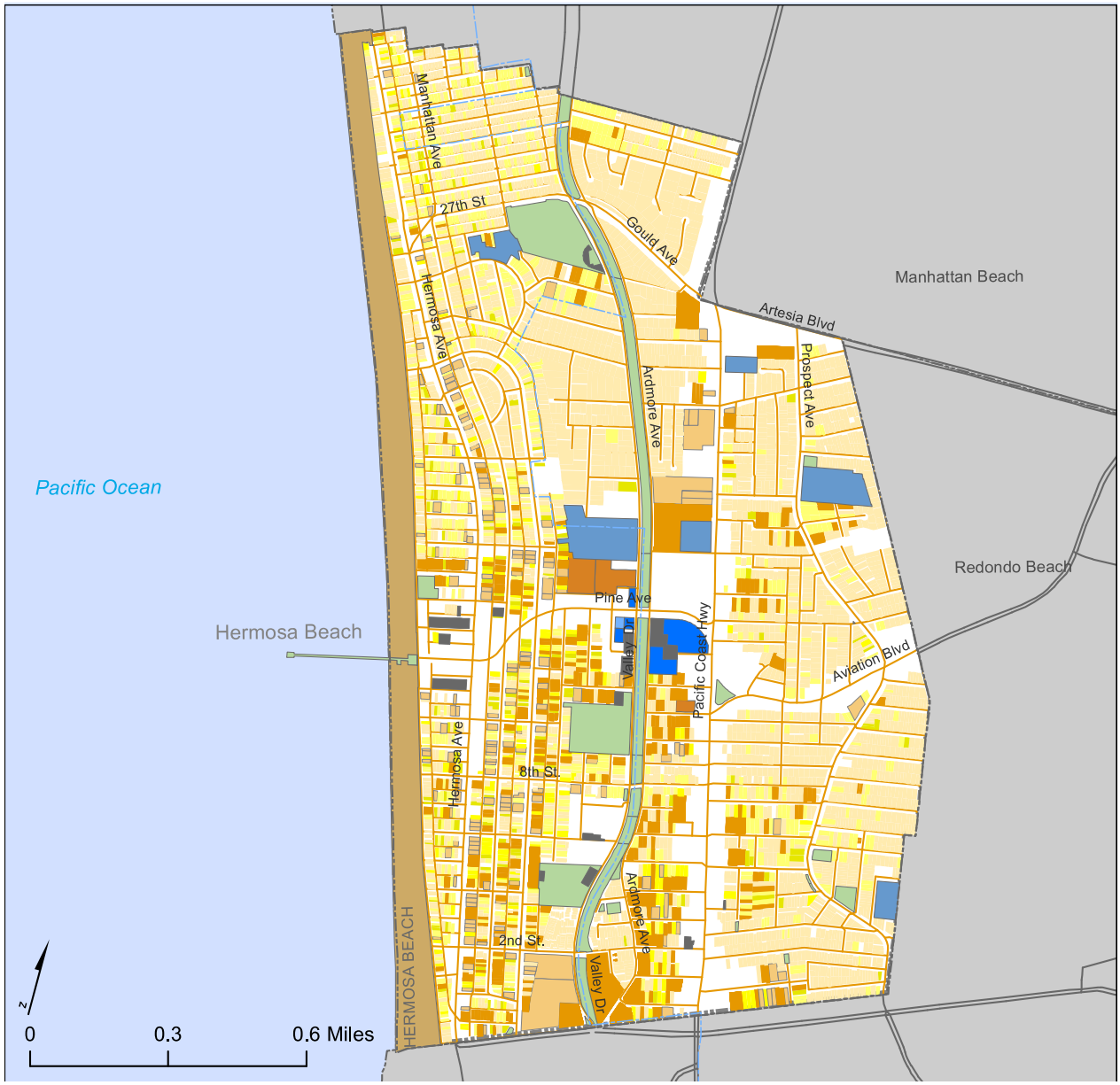


FIGURE 12.4: RESIDENTIAL USES



Legend

- City Boundary
- HB_streets
- Coastal Zone Boundary
- Parking Lots

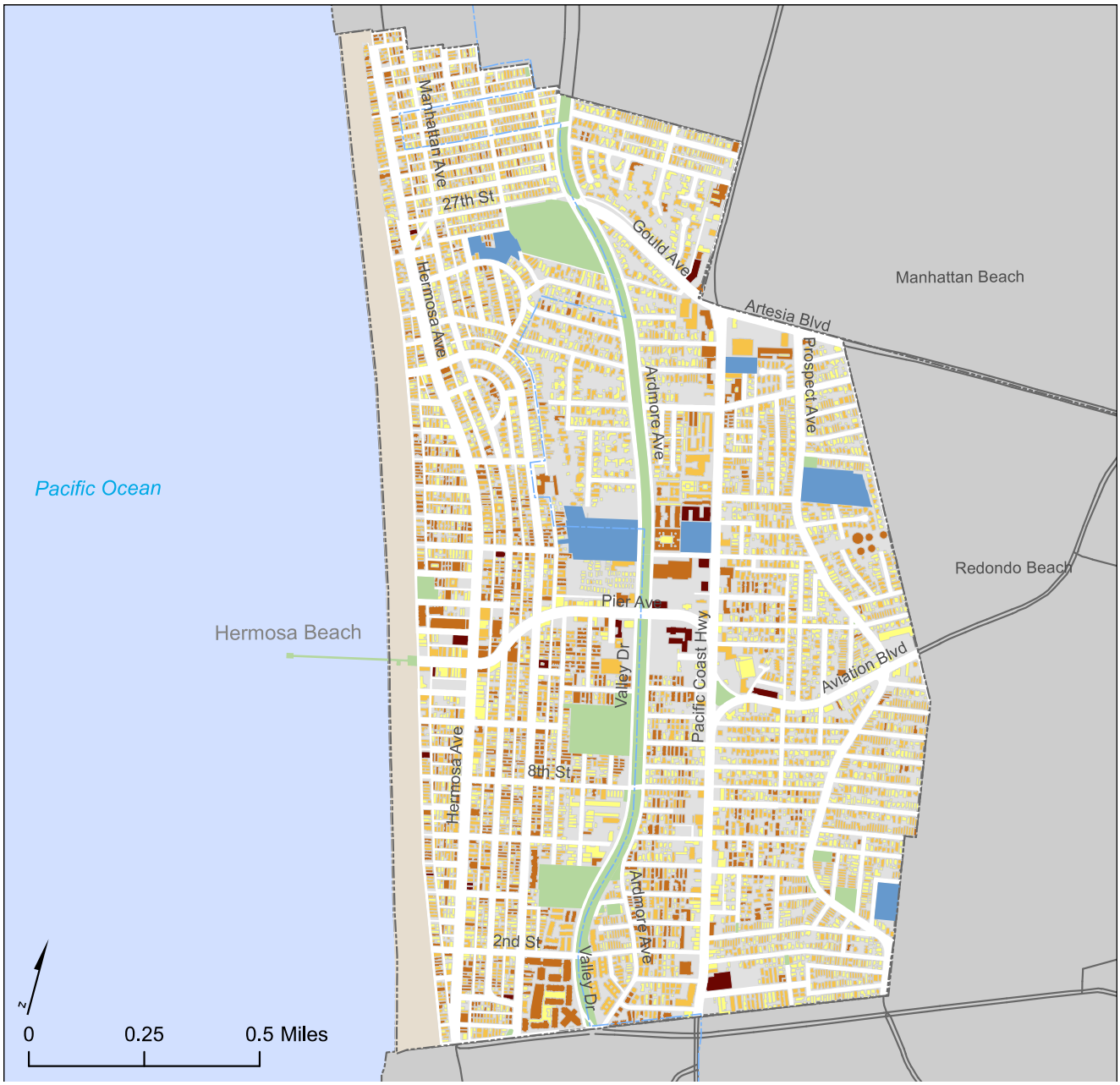
Public Space

- Beach
- Public Facility
- Fire/Police
- Park
- School

Uses

- 1 Unit
- 2 Units
- 3 Units
- 4 Units
- 5+Units
- Condominium
- Mobile Home Park

FIGURE 12.5: BUILDING HEIGHT



Legend

- City Boundary
- Coastal Zone Boundary

Public Space

- Beach
- Park
- School

Building Height

- Less than 20 Feet
- 20 to 30
- 30 to 45
- 45 to 58 feet

FIGURE 12.6: PARCEL LOT SIZE

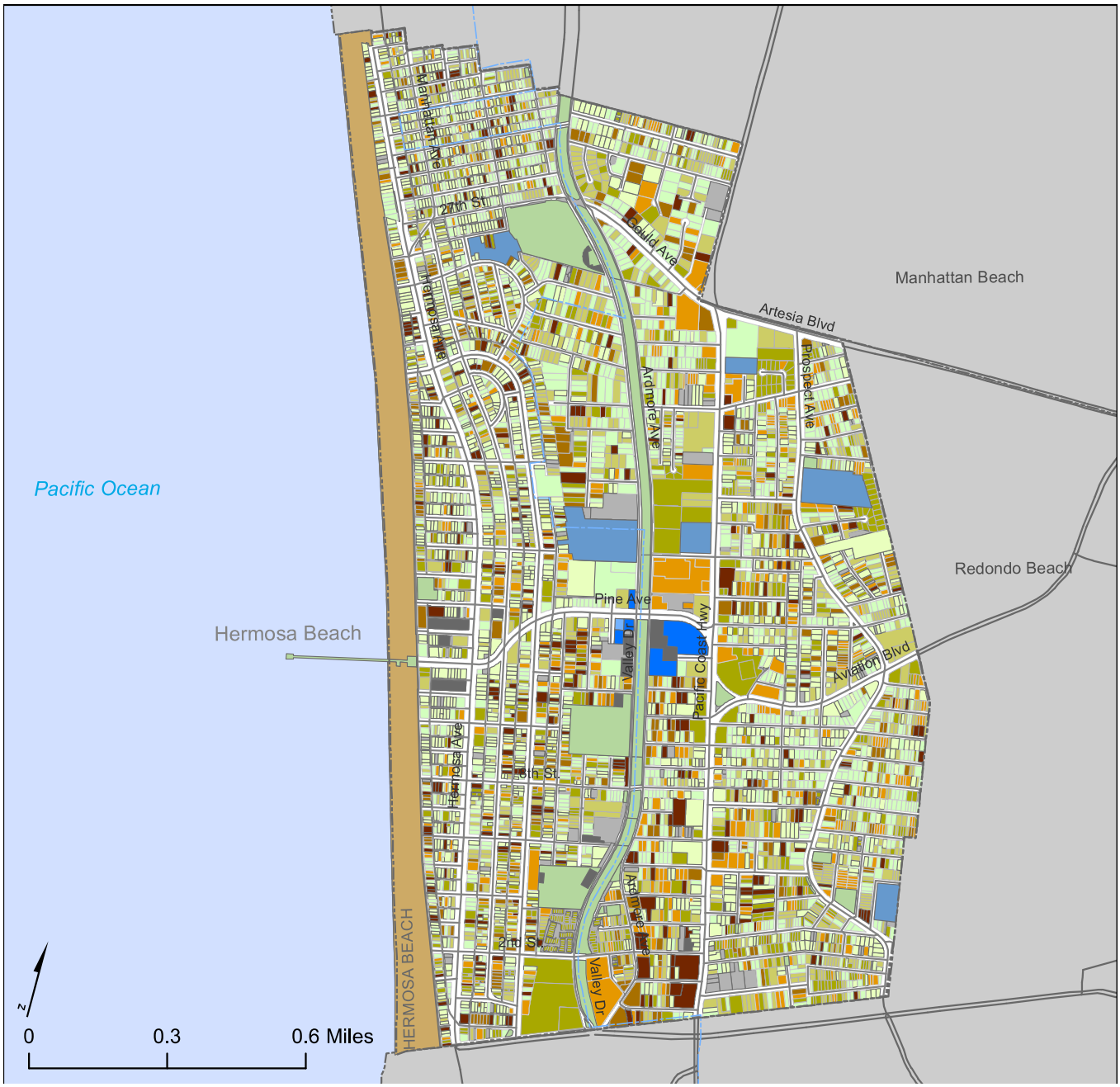
Legend

City Boundary
HB_streets
Coastal Zone Boundary
Parking Lots

Public Space
Beach
Public Facility
Fire/Police
Park
School

Residential Parcel Size
Under 2,500 sq ft
2,501-5,000 sq ft
5,001-7,500 sq ft
7,501-10,000 sq ft
10,000 sq ft +

FIGURE 12.7: YEAR STRUCTURES BUILT



Legend

- City Boundary
- HB_streets
- Coastal Zone Boundary
- Parking Lots

Public Space

- Beach
- Public Facility
- Fire/Police
- Park
- School

Year Built

- Before 1950
- 1950-1959
- 1960-1969
- 1970-1979
- 1980-1989
- 1990-1999
- 2000-2007
- Vacant Land

Walk Street Residential

The walk street residential character area spans the length of the City, extending from homes along The Strand inland to Hermosa Avenue. Outside of the Downtown, and small pockets of neighborhood services around 22nd Street and Hermosa Avenue, the beachfront area is almost exclusively residential uses.

The majority of buildings are 2-4 story wood-frame residential buildings, with a combination of small-scale multi-family buildings and single-family homes. Typical parcel size ranges from 2,500 to 5,000 square feet, with densities of 15 to 50 units per acre. While many of the buildings in this area date back to the 1930s and 1940s, redevelopment of these beachfront properties has occurred over time, with approximately 50 parcels having new buildings constructed since 2000.

The walk streets that provide beach access from Hermosa Avenue out to The Strand, are a feature unique to the beachfront residential area. With most parcels having access on both a walkstreet and an alleyway, buildings are designed with porches, patios, or decks oriented toward walk streets or The Strand and parking is provided in tuck-under garages through alleyways. Most homes fronting on Hermosa Avenue built into the hill, with garages dominating the scene at the street level.

North End Residential

The North End Residential Character area stretches from 27th street to the city's north border. The area is predominantly residential uses with a pocket of neighborhood commercial uses along Manhattan Avenue. A mixture of single-family, duplex, secondary welling units, and small multi-unit apartments are found throughout this neighborhood. While buildings range in height from 1 to 4 stories, most buildings are 1 or 2 stories or approximately 15-25 feet tall. Due to the relatively small lot sizes, most parcels are developed at densities between 25 and 50 dwelling units per acre. Most of the buildings in this area were built prior to 1950 and are located on lots 2,500 square feet or less.

Front setbacks in this area are fairly narrow, with many older buildings developed up to the sidewalk. Sidewalks are found on all collector streets, though narrow right-of-

ways result in the sidewalk directly abutting the curb. Walk streets similar to those found in the beachfront area are found in this area.

North and South Sand Residential

Inland from the beachfront residential character area is the character area dominated by the grid-style street structure and alley-loaded streets. The north sand residential area, like the beachfront residential, is almost exclusively residential outside of the downtown core.

A mixture of single-family, duplex, secondary welling units, and small multi-unit apartments are found throughout this neighborhood. While buildings range in height from 1 to 4 stories, most buildings are 1 or 2 stories or approximately 15-25 feet tall. Due to the relatively small lot sizes, most parcels are developed at densities between 25 and 50 dwelling units per acre. Both the north and south parts of this area have seen individual properties built or redeveloped since 2000. Most of the buildings in the northern portion of this area were built prior to 1950 and are located on lots 2,500 square feet or less. The southern portion of the character area has more buildings constructed between 1960 and 1980 and includes lot sizes predominantly in the 2,500 – 5,000 square foot range.

Front setbacks in this area are fairly narrow, with many older buildings developed up to the sidewalk. Sidewalks are found on all collector streets, though narrow right-of-ways result in the sidewalk directly abutting the curb. In most cases, parking is accessed off alleys, which supports frontages that are pedestrian-oriented and active.

Valley Residential

The Valley residential area is comprised of the neighborhood north of Downtown/Pier Avenue along the Hermosa Valley Greenbelt towards Pacific Coast Highway. The neighborhood sits at lower elevations between the City's ridgelines along Loma Drive and Pacific Coast Highway.

The Valley area is almost exclusively 1 to 2-story single-family homes, with a few multi-family condo developments adjacent to Valley Park and the intersection of Artesia Avenue and Pacific Coast Highway. The area is dominated by ranch style houses, primarily constructed between 1960 and 1980. The average density for this area is

roughly 10 dwelling units per acre, with parcel sizes ranging from 5,000 to 10,000 square feet. This area also includes a small mobile home park, just north of Pier Ave.

Due to natural topographic features, this neighborhood's street structure exhibits less of a grid pattern, with some streets following ridge or valley lines. Many streets in this neighborhood have sidewalks on just one side, intermittent sidewalks, or no sidewalks at all. Sidewalks, where present, tend to be narrow (5 feet or less). The Hermosa Valley Greenbelt transects the entirety of this neighborhood, from the Manhattan Beach border to the Civic Center area.

Hermosa View Residential

The Hermosa View neighborhood includes the area north of Gould Avenue to the north city border. This neighborhood is exclusively residential uses with single-family homes the primary use, though some parcels also have second units or granny units. Parcels range in size from under 2,500 square feet to 5,000 square feet along Longfellow Avenue, with most being developed between 1950 and 1969. The parcels developed between 1970 and 1999 are typically larger in size, some greater than 10,000 square feet. Several local streets at the south end of this neighborhood have low connectivity with dead-ends or cul-de-sacs.

Mixed Residential

The Mixed residential neighborhood is located south of downtown/Pier Avenue along the Hermosa Valley Greenbelt towards Pacific Coast Highway. This area also includes the Clark Field and South Park areas adjacent to Valley Blvd.

Most dwellings in this neighborhood are 2-4 unit buildings, with densities in the 20-25 dwelling units per acre range. Most lots in this neighborhood range from 2,500 to 5,000 square feet, with the buildings ranging in height from 1 to 3 stories.

Setbacks are generally less in this area than the predominantly single-family neighborhoods. Garages are less visually intrusive than homes fronting Hermosa Avenue, since garages and parking are typically accessed through alleyways or driveways that extend behind buildings. Additionally, the rear accessed parking minimizes curb cuts on the street, helping to maintain the integrity of the sidewalks and the pedestrian environment.

High Density Residential

Located in the southern portion of Hermosa Beach, between 2nd Avenue and the City boundary, this area has some of the highest density development within the City.

The area includes complexes and condo developments, ranging in density from 15 to 25 dwelling units per acre, with the major apartment complexes over 50 dwelling units per acre. Several parcels are over 10,000 square feet. The major apartment complexes in this area were built in the 1970s.

Hermosa Hills Residential

The hillside area covers the residential portions of Hermosa Beach east of Pacific Coast Highway to the City boundary. Most streets in this area have a gentle upslope, allowing for most homes to have views out over their neighbors to the ocean.

Though predominantly 1 or 2-story single-family structures, duplexes and a few midsize apartment buildings back onto commercial properties along Pacific Coast Highway. Most residential development in this area is built at densities between 15 and 25 dwelling units per acre. With the exception of the southern portion of this area, most homes were initially developed prior to 1960, on lots between 2,500 and 5,000 square feet. Several of the larger, deep lots are located closest to Pacific Coast Highway and have two or more units. The southern portion includes a higher number of homes developed between 1960 and 1980, many on lots smaller than 2,500 square feet. Individual homes in this neighborhood have been steadily developed or redeveloped over the last several decades.

Prospect Avenue is the primary arterial street connecting this neighborhood to the rest of the City. Many of the local streets also have vehicle barriers along near Pacific Coast Highway, discouraging cut-through traffic but allowing for excellent pedestrian connectivity. With fewer alleys, the streets in this neighborhood have more garages, driveways, and vehicles fronting the street. Many streets in this neighborhood have sidewalks on just one side, intermittent sidewalks, or no sidewalks at all. Sidewalks, where present, tend to be narrow (5 feet or less). Many local streets have low connectivity with dead-ends or cul-de-sacs.

Pacific Coast Highway & Aviation Blvd Corridor

The Pacific Coast Highway and Aviation corridor in Hermosa Beach includes the parcels and lots that face one or both of these streets. The corridor serves as the primary entry point into Hermosa Beach, as well as a pass-through corridor between Manhattan Beach and the Palos Verdes Peninsula. There are a variety of commercial retail, office, and auto-oriented (mechanics, car wash, car dealerships) uses along the corridor.

In May of 2014, the City Council adopted a Master Plan for the Pacific Coast Highway/Aviation Corridor, with goals to address existing challenges which include: an auto-oriented focus, lack of pedestrian safety, lack of green space, street trees, medians, and limited cohesive design or identity. The Master Plan also identifies preliminary concepts to develop up to 4 new gateways or monuments and directional signage to bring better identity to Hermosa Beach.

Highway Residential

The Highway Residential character area is a small pocket of residential uses along Pacific Coast Highway between 18th street and 21st street. This area includes several apartment and condo complexes built between 1970 and 1979 and is one of the City's higher density residential areas, with buildings ranging from 25 dwelling units per acre to more than 50 dwelling units per acre.

Downtown

The Downtown area generally extends the length of Pier Avenue, encompassing Pier Plaza, as well as Hermosa and Manhattan Avenues between 9th and 15th Streets. The Downtown core serves as the hub for commercial and pedestrian activity offering an array of retail, restaurant, and entertainment uses, and to a lesser extent personal services and office uses. Pier Plaza serves as a popular venue for outdoor events and dining, connecting downtown to the beach, pier, and recreational facilities. The types of uses are targeted both for residents as well as visitors to the City.

To increase the economic vitality of the downtown the City initiated the Downtown Core Revitalization Strategy in January 2013. The Strategy was designed to identify

opportunities, focusing on how City assets, including the civic center property and downtown parking lots, could be leveraged in conjunction with redevelopment of key privately held sites and for increased economic vitality generally. The policies and goals of the Downtown Core Revitalization Strategy are designed to transform the area into a more family-friendly atmosphere, and a more economically balanced business district.

Civic Center

The Civic Center area includes the administrative center of the city including city administrative, police and fire offices, as well as the Hermosa Beach County Library and Community Center including the Hermosa Beach Museum, city recreational program offices and room and several recreational facilities. The Community Center was deed restricted for community and recreational uses when acquired from the Hermosa Beach City School District. The city recognizes the need to evaluate current and future City administrative needs and preparation of a Master Plan is an action in the City Council's 2014 Strategic Plan.

Cypress Area

The Cypress area includes the four blocks at the intersection of 6th street and Cypress St. This area is the City's industrial center, with a variety of light manufacturing, construction equipment, and storage uses, although design services and other uses are also present; the city recently amended the code to also allow limited fitness centers.

Most parcels in this area are between 5,000 and 10,000 square feet and consist of a single building space. Buildings in the Cypress area are generally less than 20 feet in height, with most using concrete or cinderblock construction methods.

With the need for loading and storage space on many of the parcels in this area, most buildings are setback from the street 20 or more feet. This setback area serves as the driveway parking space for many properties, with the sidewalk often being encroached upon by vehicles. Entry to many of the buildings in this area are less prominent, or located behind parking areas or on the side of buildings.

There has been discussion about potentially transforming this area into a creative district and the City Council's Strategic Plan includes this as a 2014 action.

12.5. Plans, Regulations, and Ballot Initiatives

Hermosa Beach General Plan

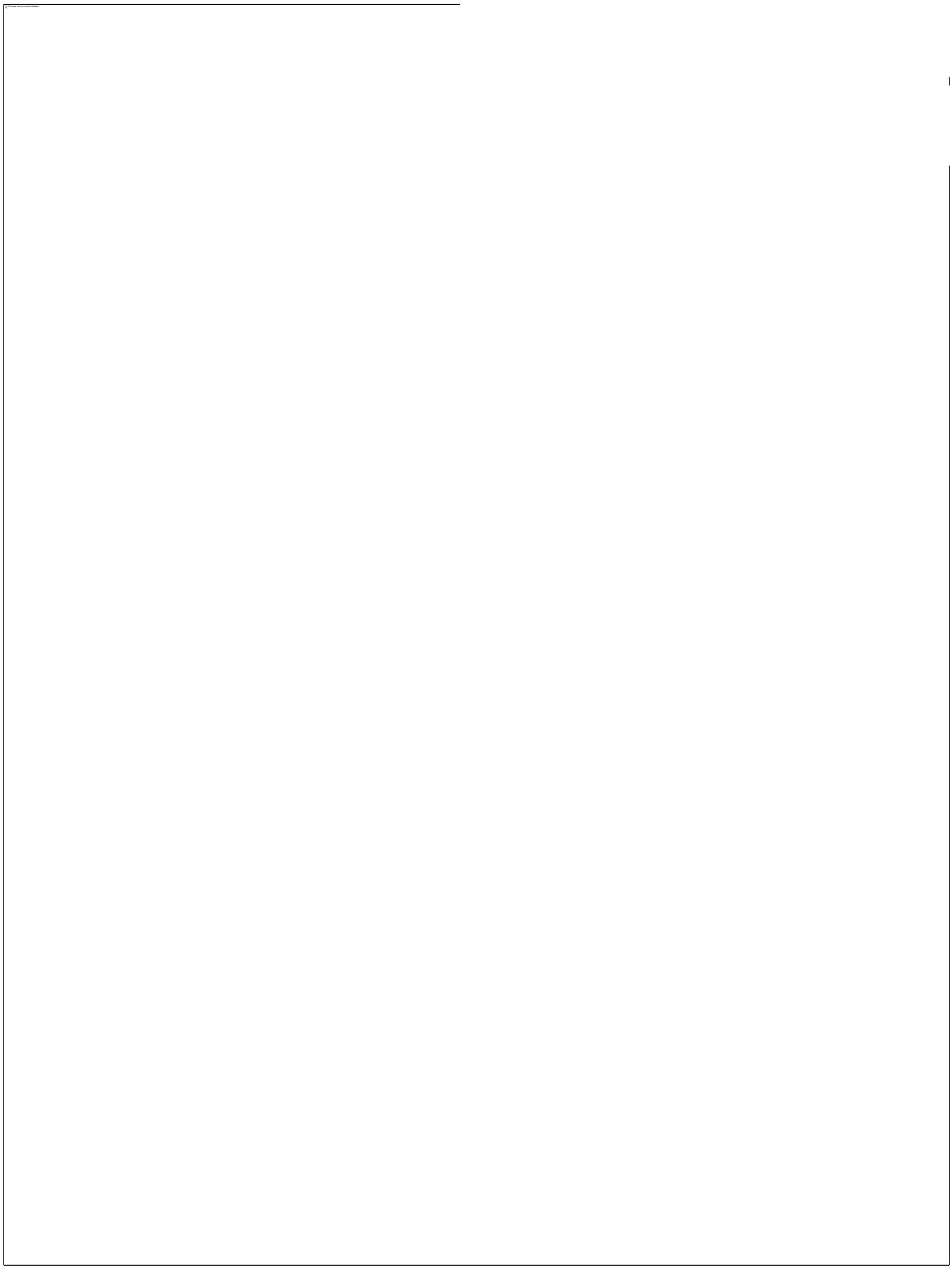
The California Government Code (Section 65300) describes the scope and authority of local jurisdictions to prepare, adopt, and amend General Plans. Communities prepare general plans to guide the long-term physical development of the jurisdiction, and any land within the jurisdiction's sphere of influence. At a minimum, the California Government Code requires general plans to address land use, circulation, housing, noise, conservation, open space, and safety issues[2].

The land use portion of the general plan is required to describe and identify the general location and extent of uses of land for housing, business, industry, open space, public facilities and categories for public or private uses of land. The land use element is also required to establish and define population density and building standards for each district and other territories covered by the plan.

The Land Use Element of the adopted Hermosa Beach General Plan establishes the quality and character of Hermosa Beach's built environment by defining the distribution of land uses, intensity of commercial and other development, and provision of other public facilities. In addition to the land use designations and map, the Land Use Element establishes and describes the goals, policies and programs necessary to provide sufficient land for community needs while preserving the environment and quality of life for Hermosa Beach residents. The General Plan Land Use designations are identified for each parcel in the City in Figure 12.8.

[2] State of California, 2014.

FIGURE 12.8: HERMOSA BEACH GENERAL PLAN LAND USE DESIGNATIONS



While identical or similar to the existing use on many parcels, the Land Use Designations identified in Figure 12.8, the designation defines the type and intensity of uses that are allowed on the parcel, regardless of the existing use. Table 12.2 identifies the number of assessor's parcels and area of land within each land use designation.

TABLE 12.2: HERMOSA BEACH GENERAL PLAN LAND USE DESIGNATIONS

General Plan Land Use Designations	Citywide		Inland (Excluding Coastal Zone)		Coastal Zone	
	Number of Parcels	Area (acres)	Number of Parcels	Area (acres)	Number of Parcels	Area (acres)
Residential Land Uses						
LD Low Density Residential	2,615	232.2	2,190	198.9	425	33.3
MD Medium Density Residential	1,381	118.3	500	63.5	881	54.8
HD High Density Residential	1,086	97.9	62	17.9	1,024	80.0
MHP Mobile Home Park	2	4.2	0	0.0	2	4.2
Commercial and Industrial Land Uses						
NC Neighborhood Commercial	38	2.9	0	0.0	38	2.9
GC General Commercial	278	48.2	144	31.4	134	16.8
CC Commercial Corridor	132	30.4	132	30.4	0	0.0
IND Industrial	38	6.8	0	0.0	38	6.8
Institutional and Other Uses						
OS Open Space	50	66.8	35	34.2	15	32.6
CR Commercial Recreation	10	0.9	0	0.0	10	0.9
SPA Specific Plan Area	10	1.1	10	1.1	0	0.0
Beach	11	63.1	0	0	11	63.1
Total	**5,651**	**672.8**	**3,073**	**377.4**	**2,578**	**295.4**

Source: City of Hermosa Beach 2013. Parcels = Assessor's Parcels.

To ensure the intent and goals of the General Plan are effectively implemented in the built environment, all projects seeking entitlements and building permits should be

designed to accommodate uses that are consistent with the General Plan land use designations and meet the applicable zoning standards.

Hermosa Beach Municipal Code

The City of Hermosa Beach Municipal Code, and in particular the Zoning Code (Title 17) implements the General Plan, particularly the Land Use Element. While the General Plan designations are more generalized in nature, the zoning code and zoning districts provide specific controls on land use, density or intensity of development, and development standards to implement the City's goals and policies expressed in the General Plan. Other parts of the Municipal Code, including Title 10 Vehicles and Traffic, Title 12 Street, Sidewalks, and Public Places, Title 15 Buildings and Construction, and Title 16 Subdivisions are also instrumental in carrying out policy or programs in the General Plan.

Concurrent with or within a reasonable time following this General Plan update, amendments to the Municipal Code should be adopted to carry out the revised General Plan and ensure the City's land use framework is consistent as required by the state law.

City of Hermosa Beach Local Coastal Program

The City does not have a certified Local Coastal Program, which is required to have both a Coastal Land Use Plan as well as a Local Implementation Program. The Hermosa Beach Coastal Land Use Plan (including a land use map) was adopted by the City and certified by the California Coastal Commission in 1981 and has been amended several times since that time.

The certified 1981 Coastal Land Use Plan focuses on four main areas of emphasis; Access, Housing, Recreation, and Development. Primary goals are to: 1) preserve parking and increase where feasible, residential, commercial, and general public parking in the Coastal Zone; 2) maintain diversified housing environment, and provide policies dealing with the replacement and protection of existing housing; 3) maintain high level of recreational access and facilities; and 4) provide and protect the community of Hermosa Beach as a coastal resource for the people of California.

In order to achieve certification from the Coastal Commission, and receive local control over the issuance of Coastal Development Permits, Hermosa Beach must update the Coastal Land Use Plan, and prepare and adopt a Local Implementation Program that collectively consider and address emerging coastal issues such as beach management, parking, water quality, sea level rise, and climate change.

Other Relevant Plans and Programs

SCAG's Regional Comprehensive Plan

The Southern California Association of Governments (SCAG) is the largest metropolitan planning organization (MPO) in California, representing six counties and over 180 cities. SCAG's Regional Comprehensive Plan identifies regional approaches that are necessary to address housing, transportation, water, and air quality issues that affect local jurisdictions within Southern California. The plan also helps guide local governments in state and federal regulation compliance, and provides advisory strategies on how the region will address social and environmental challenges facing Southern California.

SCAG's Regional Transportation Plan/Sustainable Communities Strategy

SCAG's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), adopted in 2012 prioritizes sustainability and low emissions standards through an efficient effective transportation network throughout the region. The plan addresses existing mobility, safety, air quality, and financial challenges facing Southern California, and provides a regional strategy to combat these issues. The 2012 RTP/SCS aims to reduce greenhouse gas emissions from passenger vehicles by 8% per capita by 2020, and 13% per capita by 2035. RTP/SCS strategies are organized into land use strategies, transportation supply management, transportation demand management, vehicle technology, and other areas. The SCS is an accounting of local strategies that communities have pursued over the past decade to provide a roadmap for local governments to reduce emissions. If implemented, the RTP/SCS estimates that strategies and transportation projects would reduce greenhouse gas emissions per capita from the 2005 benchmark. While the SCS is an accounting of existing local policies and programs, the RTP governs which regional transportation improvements will be funded over the course of the RTP's timeframe.

The RTP/SCS also provides the framework for the Regional Housing Needs Assessment (RHNA) and aids jurisdictions with growth and housing needs projections that must be met by their housing elements.

SCAG's Sustainability Program

As part of SCAG's Sustainability Program, its Compass Blueprint program serves the communities of Southern California by helping to build partnerships and fostering innovative transportation and land-use planning. Compass Blueprint aids local planning efforts in the areas of mobility, livability, prosperity, and sustainability to support the additional six million residents of Southern California projected by 2035, for a total of 25 million people. The City of Hermosa Beach was a grant recipient of SCAG's Sustainability Program in 2013, receiving funding to develop a Carbon Neutral Plan.

South Coast Air Quality Management District Air Quality Management Plan

The most recent Air Quality Management Plan (AQMP) was adopted by the SCAQMD in December 2012. The purpose of the 2012 Air Quality Management Plan (AQMP or Plan) is to establish a comprehensive and integrated program that will bring the South Coast Air Basin into compliance with the federal 24-hour PM_{25} air quality standard, and to provide an update to commitments towards meeting the federal 8-hour ozone standards. The Plan also includes specific measures to further implement the ozone strategy in the 2007 AQMP to assist attaining the 8-hour ozone standard by 2023.

City of Hermosa Beach City Council Strategic Plan

This plan prioritizes various plans within the City to promote economic viability and action items to meets defined goals for 2029. Each action item has a timeline of milestones, with projected completion dates. The 2019-2029 Economic Goals include 1) Commitment to a Safe Community 2) Financially Sound City Government 3) High Performing Services 4) More Livable, Sustainable Beach City 5) Enhanced Economic Development through Revitalization of Downtown and Corridors. The Strategic Plan helps decision-makers and the public to understand the Council's vision and goals for Hermosa Beach when identifying and prioritizing projects, staffing, and funding requests.

City of Hermosa Beach Sustainability Plan

Adopted by the City in September 2011, the Hermosa Beach Sustainability Plan aims to increase sustainability and reduce greenhouse gas emissions and addresses water conservation, waste reduction, energy use, transportation, the marine environment and public involvement. The Sustainability Plan is also the Hermosa Beach's response to the California Global Warming Solutions Act of 2006 (AB 32), Senate Bill 375, and South Bay Cities Council of Governments 'Cool Cities' Initiative. Achievement of the Sustainability Plan's transportation goals will require changes and strategies to both land use and circulation systems in Hermosa Beach.

Beach Cities Livability Plan

The Beach Cities Livability Plan focuses on how to improve livability and well-being in Hermosa Beach, Manhattan Beach and Redondo Beach – the "beach cities" – through land-use and transportation systems that better support active living. The plan aims to identify and prioritize efforts that will not only improve walking and biking in the beach cities, but when fully implemented will also improve air quality, reduce congestion, and reduce overall travel time by automobiles along corridors. Three strategies focused around adoption of policies, building staff for implementation, and education and outreach for community members.

12.6. Ballot Initiative and Land Use Restrictions[3]

Over the years, the City residents have adopted various ballot initiatives that result in land use controls. These initiatives impact the policies in the General Plan and will impact future direction of the City. Changes to these land use controls require a vote of the people to amend, modify or repeal. Those relevant to future land use planning are summarized below.

[3] http://www.hermosabch.org/modules/showdocument.aspx?documentid=3292

Ballot Measure	Relevant to General Plan/Land Use
OPEN SPACE	
Prop O: Amendment to General Plan Open Space Designation Requires Vote, 1986	Proposition O requires that any proposed modification, amendment, or elimination of the following Open Space designated areas of the General Plan is prohibited without a vote of the electorate: 1. Valley Park (Gould Ave. & Valley Dr.) 2. South Park/Bicentennial (4th Street) 3. Greenwood Park (Aviation & Pacific Coast Highway) 4. Fort Lots-of-Fun Park (6th Street) 5. Seaview Park (19th St. & Prospect) 6. Clark Stadium Recreation Center (Valley Dr. & 11th St.) 7. Ingleside Park (Ingleside & 33rd St.) 8. Moondust Park (N. of Meyer & S. of 2nd St.) 9. 8th & Valley Park 10. Ardmore Ave. at 5th St. Park 11. Hermosa View School site 12. Prospect Heights School site 13. South School site 14. Hermosa Valley School site 15. North School site
Proposition D: Biltmore Site for Open Space Park (now Noble Park), 1992	Proposition D required the Biltmore site (now Noble Park) to be designated O-S-2 in the General Plan and zoned O-S-2 (Restricted Open Space) and maintained as a 100% Open Space O-S-2 Oceanfront Strand Public Park with landscaping, beautification, grass, trees, flowers, plants and other uses authorized as improvements: A. Only non-building public improvements relating to landscaping, beautification: grass, trees, flowers, plants, soil, unobtrusive park lighting, some benches to view the ocean, existing public utilities, one flag pole for the American Flag, and erosion and irrigation improvements to assure permanent open space for park purposes shall be permitted. B. No buildings, malls, plazas or structures, temporary or permanent in nature, shall be built, developed, constructed or erected on the Biltmore Site. C. Softscape shall include grass, trees, plants, soil, flowers and shall be artistically designed to cover all of the Biltmore Site. D. The use and improvements to the park are to ensure a natural, peaceful, serene and safe environment to improve and enhance the quality of life of Hermosa Beach.
Prop J: OSPAC Measure - Buy Railroad Right-of-Way, 1987	Proposition J directed the City of Hermosa Beach to acquire Railroad Right of Way to be used for public access, parkland and open space. No amendment, modification or repeal permitted without a vote of the people. This proposition was implemented by zoning the Hermosa Valley Greenbelt O-S-1 (Restricted Open Space Zone)
DEVELOPMENT STANDARDS	
Prop I: Maximum Height Limit in C-2, C-3 SPA-7 and SPA-8 Zones, 1991)	Proposition M established maximum Building Height limits for commercial zones. C-2 zone: 30 feet. (*Also applies to SPA-11) C-3 zone: 35 feet. SPA-7 zone: east of Pacific Coast Highway /west of Pacific Coast Highway, First Tier: 30 feet. east of Pacific Coast Highway/ west of Pacific Coast Highway, Second Tier: 35 feet.

Ballot Measure	Relevant to General Plan/Land Use
	SPA-8 zone: east of Pacific Coast Highway, First Tier: 25 feet; all other: 35 feet. *Also applies to all land zoned rezoned to or from the above zones, as they existed when the measure was enacted. (Thus applies to land zoned SPA-11.)
Prop Q: Limit Density in Residential Zones - Minimum Lot Size, 1986	Proposition Q established density limits for residential zoning: R-1 One-Family Residential Zone: 4000 Sq Ft per Unit R-2 Two-Family Residential Zone: 1750 Sq Ft per Unit R-2B Limited Multiple Family Residential Zone: 1750 Sq Ft per Unit R-3 Multiple Family Residential Zone: 1320 Sq Ft per Unit R-P Residential Professional Zone: 1320 Sq Ft per Unit The ordinance does not preclude normal zone variance procedures.
Advisory: Prop EE - Consistency of General Plan and Zoning; lower residential density should prevail, 1980.	Proposition EE was an advisory measure that when there is an inconsistency between General Plan and Zoning density, the plan allowing fewer dwelling units per acre should prevail and the one allowing the higher density should be amended to conform to the lower density figure.
Oil DEVELOPMENT	
Prop E: Repeal Exceptions to Citywide Ban on Oil Drilling, 1995	Proposition E eliminated exceptions allowing drilling on two sites which resulted in a ban of oil drilling throughout Hermosa Beach. The ballot measure asking the voters whether to repeal the prohibition on oil production for the E&B oil project will be on the March 3, 2015 ballot.
Prop L: Oil Revenue directed to Open Space Fund, 1991	Proposition L states that any and all funds derived, acquired, awarded or given to the city from or for hydrocarbon recovery (including but not limited to drilling, platform fees, royalties, bonuses, etc.) shall be deposited in the park and recreation facilities fund for the acquisition, maintenance, and improvement of available excess school or other properties for open space and parkland purposes. The ballot measure asking the voters whether to repeal this restriction will be on the March 3, 2015 ballot as part of the measure for the proposed E&B oil project.

In addition to various ballot measures, several restrictions on land use which could affect future land use options are noted. This list is not intended to be all inclusive.

Restriction	Summary
Use of the Beach restricted (deeds from Hermosa Beach Land and Water Company to the City of Hermosa Beach)	Deed of two-mile stretch of coastline, excluding 210 feet on either side of the pier to be held "in perpetuity as a beach playground, free from commerce, and for the benefit of not only the residents of Hermosa, but also for the sea lovers of Southern California."" Deed of the land lying between the ocean front boundary line and the line of high tide "as a public pleasure ground and common, thereby meaning to restrict and forever prohibit the use of said pleasure or playground for vehicles, teams, horses,

	wagons, carriages and automobiles and every other kind of conveyance. ..." Source: The Early History of Hermosa Beach," by Fern Rhein/4
Restriction on use of Community Center, 710 Pier Avenue	The Community Center was a prior school site. Pursuant to the Naylor Act the use is restricted to community and park purposes.

[4] http://law.justia.com/cases/california/calapp2d/231/295.html (1964) http://articles.latimes.com/1991-04-14/local/me-449_1_hermosa-beach (1991) http://archive.easyreadernews.com/archives/news2000/0706/HBpath0706.php (2000)

C-13: Mineral Resources

13. Mineral Resources

13.1 Introduction

Non-fuel mineral resources are protected in the state of California by the Surface Mining and Reclamation Act. No known non-fuel mineral resources exist in the City.

13.2 Environmental Setting

The State Mining and Geology Board (SMGB) last updated the Southern California Mineral Resource Zone (MRZ) maps in 1994. As mapped by the SMGB, the majority of Hermosa Beach lies within the San Fernando Valley Production-Consumption Region in Los Angeles County. A small portion of Hermosa Beach south of 2nd Street lies in the San Gabriel Valley Production-Consumption Region. A review of the *Generalized Mineral Land Classification Map of Los Angeles County – South Half* (DOC 1994) shows that all of the planning area is designated as MRZ-3 land. The MRZ-3 classification indicates areas of undetermined mineral resource significance. Although mineral resources may be present, the presence or absence of resources is considered speculative due to a lack of available data.

Although mineral resources may be present, the classification of this MRZ-3 area was not broken down to the more detailed MRZ-3a or MRZ-3b categories because no mining has occurred in the area. Additionally, the urbanized nature of Hermosa Beach effectively precludes mining activities in the planning area.

13.3 Regulatory Setting

State regulations and policies provide a regulatory framework to protect mineral resources that would be affected by implementation of a local government's general plan. As mining is effectively precluded in the planning area, the Hermosa Beach General Plan would not affect state mineral resources. Therefore, this section provides the federal, state, and local mineral resources regulatory framework for informational purposes.

Federal Plans, Policies, Regulations, and Laws

No federal plans, policies, regulations, or laws related to mineral resources apply to Hermosa Beach.

State Plans, Policies, Regulations, and Laws

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act (SMARA) of 1975 (Public Resources Code, Division 2, Chapter 9, Section 2710 et seq.) mandated the classification of mineral lands throughout the state to help identify and protect mineral resources within areas subject to urban expansion or other

irreversible land uses that would preclude mineral extraction. Since 1975, the SMGB has mapped areas throughout California that contain regionally significant mineral resources. Deposits of construction aggregate resources (sand, gravel, or crushed stone) were the initial commodity targeted for classification by the SMGB because of its importance to the state. Once mapped, the SMGB is required to designate for future use those areas that contain aggregate deposits that are of prime importance to meeting the region's future need for construction quality aggregates.

The key objective of mineral lands classification under SMARA is for each jurisdiction to develop policies that will conserve important mineral resources, if feasible, when such resources are needed. SMARA requires that once policies are adopted, land use decisions by the local agency must be in accordance with that local agency's management policies for mineral resources. These decisions must also balance the mineral value of the resource to the market region as a whole, not just their importance to the local jurisdiction.

The State Geologist developed the California Mineral Land Classification System to assist in the implementation of SMARA. The system identifies the following types of MRZs for mapping and reporting purposes (DOC 2010):

MRZ-1: Areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.

MRZ-2a: Areas underlain by mineral deposits where geologic data show that significant measured or indicated resources are present. Areas classified MRZ-2a contain discovered mineral deposits that are either measured or indicated reserves as determined by such evidence as drilling records, sample analysis, surface exposure, and mine information. Land included in the MRZ-2a category is of prime importance because it contains known economic mineral deposits.

MRZ-2b: Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present. Areas classified MRZ-2b contain discovered deposits that are either inferred reserves or deposits that are presently sub-economic as determined by limited sample analysis, exposure, and past mining history.

MRZ-3a: Areas containing known mineral deposits that may qualify as mineral resources, which could be considered hypothetical resources. MRZ-3a areas are considered to have a moderate potential for the discovery of economic mineral deposits.

MRZ-3b: Areas containing inferred mineral deposits that may qualify as mineral resources, which could be considered speculative resources. Land classified MRZ-3b represents areas in geologic settings which appear to be favorable environments for the occurrence of specific mineral deposits.

MRZ-4: Areas where geologic information does not rule out either the presence or absence of mineral resources. The distinction between the MRZ-1 and MRZ-4 categories is important for land-use considerations. It must be emphasized that the MRZ-4 classification does not imply that there is little likelihood for the presence of mineral resources, but rather that there is a lack of knowledge regarding mineral occurrence.

Regional and Local Plans, Policies, Regulations, and Laws

No regional or local plans, policies, or laws related to mineral resources apply to Hermosa Beach.

C-14: Population and Housing

14. Noise and Vibration

14.1 Introduction

This chapter identifies the existing conditions, regulations, and key issues related to noise and vibration within the planning area. The following common terms will be used throughout this chapter:

A-Weighting: Weighting systems were developed to measure sound in a way that more closely mimics the ear's natural sensitivity. The A-weighting system is incorporated into the sound level meter to alter its sensitivity relative to frequency so that the instrument is less sensitive to noise at frequencies where the human ear is less sensitive and more sensitive at frequencies where the human ear is more sensitive. (Refer to Figure 14.1 for typical noise source levels.) Sound levels measured using the A-weighting network are denoted as dBA (A-weighted decibels).

Ambient Noise: The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources both near and far.

Community Noise Equivalent Level (CNEL): A 24-hour A-weighted average sound level which takes into account the fact that a given level of noise may be more or less tolerable depending on when it occurs. The CNEL measure of noise exposure weights average hourly noise levels by adding 5 dB for the evening hours (between 7:00 p.m. and 10:00 p.m.), and by adding 10 dB between 10:00 p.m. and 7:00 a.m., then combines the results with the daytime levels to produce the final CNEL value. It is measured in decibels, dB. (Refer to Figure 14.2 for typical noise exposure levels.)

Day-Night Average Sound Level (Ldn): A measure of noise exposure level that is similar to CNEL except that there is no weighting applied to the evening hours of 7:00 p.m. to 10:00 p.m. It is measured in decibels, dB. For traffic noise sources, the CNEL and the Ldn are usually within 0.5 dB of each other. (Refer to Figure 14.2 for typical noise exposure levels.)

Decibels: The basic unit of measure for sound level, denoted as dB. Since decibels are logarithmic units, sound levels cannot be added or subtracted by ordinary arithmetic means. For example, if one car produces a sound level of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dB. In fact, they would combine to produce 73 dB. This same principle can be applied to other traffic quantities as well. In other words, doubling the traffic volume on a street will increase the traffic noise level by 3 dB. Conversely, halving the traffic volume will reduce the traffic noise level by 3 dB.

Noise: Any unwanted or disagreeable sound.

FIGURE 14.1: COMMON NOISE SOURCES AND A-WEIGHTED NOISE LEVELS

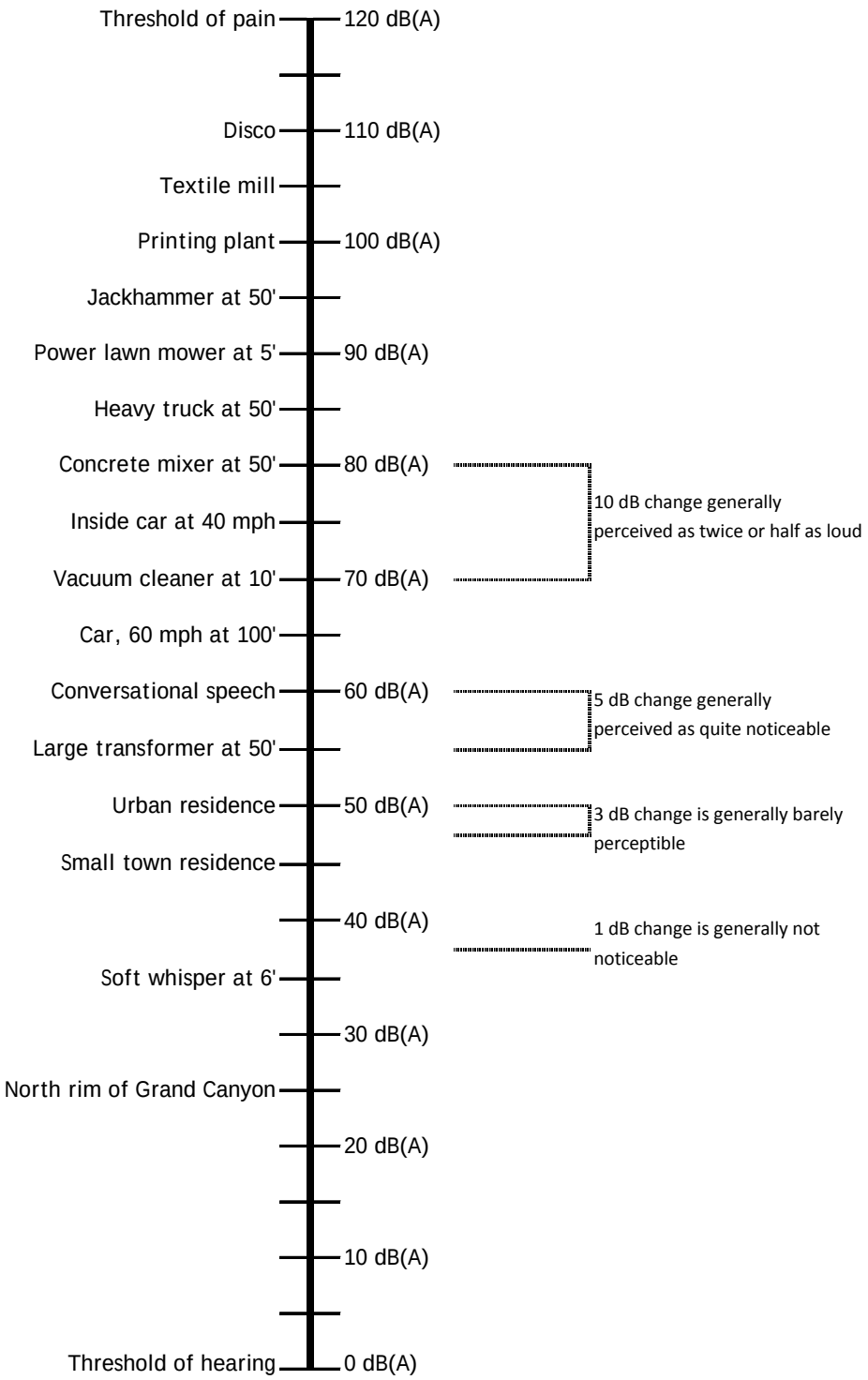
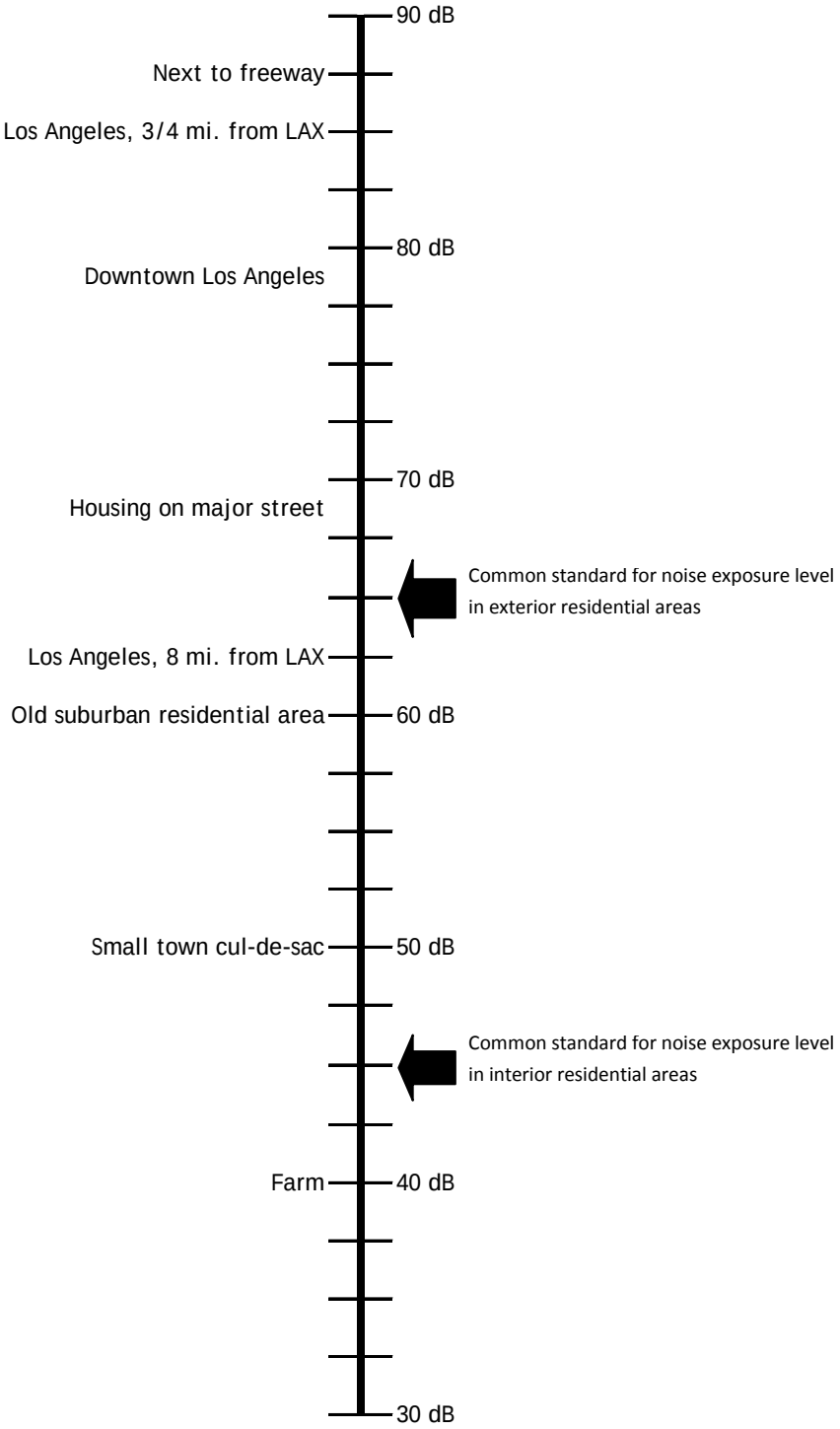


FIGURE 14.2: COMMON CNEL/LDN NOISE EXPOSURE LEVELS AT VARIOUS LOCATIONS



14.2 Environmental Setting

The City of Hermosa Beach is affected by a number of noise sources that are common to urbanized beach communities, including traffic on the local streets, commercial/industrial activities, construction/demolition activities, refuse collection, bars and restaurants, and public and private events and parties. Construction and demolition operations are the only significant sources of ground-borne vibration in the City, although heavy trucks traveling over potholes or other discontinuities in the pavement can cause vibration levels high enough to generate complaints from nearby residents. This type of issue can typically be resolved by smoothing the roadway surface.

The following sections provide detailed discussions of the sources that contribute to the existing noise and vibration environments throughout the City of Hermosa Beach.

Traffic Noise

In order to document the existing traffic noise environment in Hermosa Beach, measurements were obtained at ten locations throughout the City. (Refer to Figure 14.3.) Because the City of Hermosa Beach typically receives an influx of tourists during the summer months, which in turn leads to higher traffic noise levels, these noise measurements were obtained during the month of August in 2014 to provide a "worst case" assessment. At locations #4 and #10, the noise measurements were obtained over a continuous 24-hour period. At the remaining locations, the measurements were obtained for a period of about 20 to 30 minutes. The results of the noise measurements are summarized in the following table:

TABLE 14.1: SUMMARY OF NOISE MEASUREMENT RESULTS

Location #	Location Description	Measurement Period	Average Noise Level, dBA	CNEL, dB
1	2703 El Oeste Dr.	12:21 PM to 12:46 PM	67.1	Not measured
2	2491 Valley Dr.	11:36 AM to 12:00 PM	63.5	Not measured
3	1838 Hermosa Ave.	4:27 PM to 4:47 PM	63.6	Not measured
4	1901 Pacific Coast Hwy	24 hours	56.2 – 72.3	71.3
5	237 Pier Ave.	10:59 AM to 11:21 AM	56.3	Not measured
6	1021 Bonnie Brae St.	10:18 AM to 10:40 AM	66.0	Not measured
7	420 Ardmore Ave.	1:07 PM to 1:38 PM	56.2	Not measured
8	104 Hermosa Ave.	3:52 PM to 4:14 PM	63.2	Not measured
9	540 1st St.	3:00 PM to 3:25 PM	62.7	Not measured
10	117 Prospect Ave.	24 hours	58.2 – 65.7	68.7

FIGURE 14.3: NOISE MEASUREMENT LOCATIONS

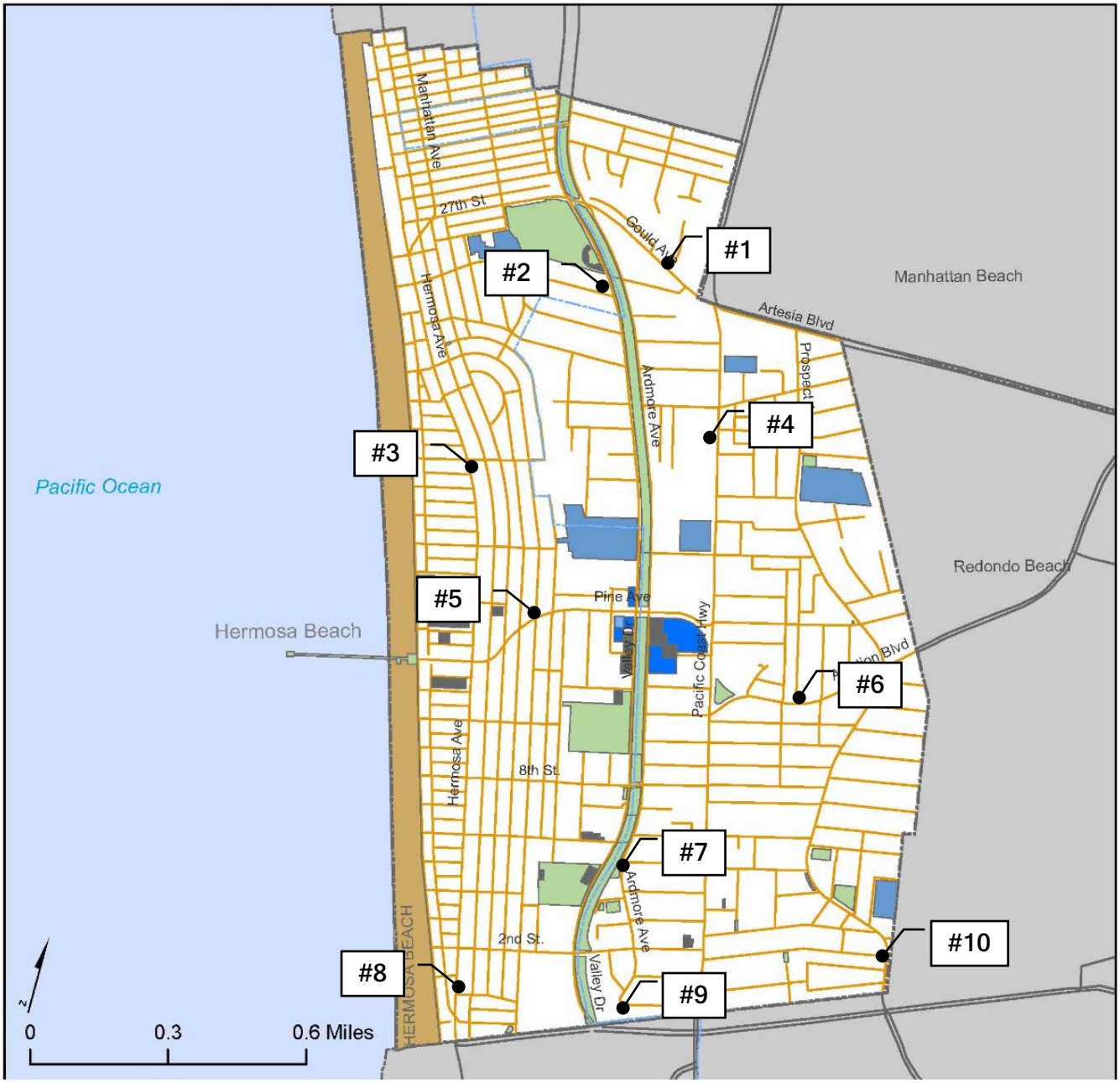


Table 14.2 compares the noise measurement results with the City's Noise Element policy to restrict the maximum traffic noise levels. Referring to the table, all of the measured ambient noise levels are well above the City's policy for maximum traffic noise levels.

TABLE 14.2: COMPARISON OF NOISE MEASUREMENT RESULTS WITH CITY'S NOISE ELEMENT POLICY

Location #	Location Description	Zone	Measured Noise Level, dBA	City's Policy for Maximum Traffic Noise Level, dBA[1]
1	2703 El Oeste Dr.	R-1	67.1	50 or below
2	2491 Valley Dr.	R-1A	63.5	50 or below
3	1838 Hermosa Ave.	R-2	63.6	55 or below
4	1901 Pacific Coast Hwy	R-3	56.2 – 72.3	60 or below
5	237 Pier Ave.	SPA-11 (used as R-1)	56.3	50 or below
6	1021 Bonnie Brae St.	C-3 (used as R-1)	66.0	50 or below
7	420 Ardmore Ave.	M-1(used as R-1)	56.2	50 or below
8	104 Hermosa Ave.	R-3	63.2	60 or below
9	540 1st St.	SPA-4 (used as R-2 or -3)	62.7	55-60 or below
10	117 Prospect Ave.	R-1	58.2 – 65.7	50 or below

Notes:
1. The City's General Plan states that maximum traffic noise levels should be restricted in residential areas to no more than 5 dBA above ambient standard levels. The ambient standard levels are 45 dBA or below for R-1 zones, 50 dBA or below for R-2 zones, and 55 dBA or below for R-3 zones.

The results of the noise measurements, together with data provided by Fehr & Peers, were used to analyze the existing traffic noise environment in the City of Hermosa Beach. Table 14.3 summarizes the results of the analysis. Referring to the table, the results are presented in terms of an unmitigated CNEL at the distance of the nearest existing receptor from the centerline of the roadway. Also provided in the table are the distances from the roadway centerlines to the unmitigated 60 dB, 65 dB, and 70 dB noise contour lines.

TABLE 14.3: DISTANCE TO EXISTING UNMITIGATED CNEL CONTOUR LINES

Arterial/Segment	CNEL at Nearest Sensitive Receptor	Distance to Unmitigated CNEL Contours from Roadway Centerline		
		60 dB	65 dB	70 dB
8th Street				
Hermosa to Valley	57 dB	R/W	R/W	R/W
PCH to Prospect	47 dB	R/W	R/W	R/W
Ardmore Avenue				
16th to 11th	58 dB	R/W	R/W	R/W
8th to 2nd	57 dB	R/W	R/W	R/W
Artesia Boulevard				
PCH to Prospect	65 dB	429'	157'	52'
Aviation Boulevard				
PCH to Prospect	70 dB	358'	126'	40'
Gould Avenue				
Ardmore to PCH	64 dB	79'	R/W	R/W
Hermosa Avenue				
27th to 22nd	62 dB	71'	R/W	R/W
22nd to 16th	62 dB	65'	R/W	R/W
16th to 8th	62 dB	76'	R/W	R/W
8th to Herondo	62 dB	76'	R/W	R/W
Herondo Street				
Hermosa to Valley	65 dB	156'	50'	R/W
Pacific Coast Highway				
Artesia to 16th	72 dB	557'	214'	67'
16th to Aviation	67 dB	419'	152'	48'
Aviation to 2nd	68 dB	484'	180'	57'
Pier Avenue				
Hermosa to Valley	62 dB	91'	R/W	R/W
Ardmore to PCH	65 dB	147'	46'	R/W
Prospect Avenue				
Artesia to Aviation	59 dB	R/W	R/W	R/W
Aviation to 2nd	63 dB	62'	R/W	R/W
Valley Drive				
Gould to Pier	59 dB	R/W	R/W	R/W
Pier to 8th	60 dB	R/W	R/W	R/W
Note: R/W signifies that the noise contour falls within the right-of-way of the street.				

The State of California's Building Code Standards require that all multi-family residential dwellings be designed to achieve a CNEL of 45 dB within the interior of all habitable spaces. The City of Hermosa Beach's Noise Element extends this requirement to include all single-family residential dwellings as well. Typically, residential construction in California provides about 20 dB of noise reduction with all windows and doors closed. Therefore, it may be reasonably assumed that all residential dwellings located in an area where the exterior CNEL is 65 dB or less will be exposed to an interior CNEL of 45 dB or less, complying with both the State's standard and the City of Hermosa Beach's Noise Element policy. Referring to Table 14.3, the existing CNEL is estimated to be 65 dB or less at the exterior of all residential dwellings adjacent to the street segments analyzed for this study with the following exceptions: residences adjacent to Aviation Boulevard between Pacific Coast Highway and Prospect Avenue, and adjacent to Pacific Coast Highway between Artesia Boulevard and 2nd Street.

In compliance with California Government Code Section 65302(f), Figure 14.4 provides the CNEL contours for the existing traffic noise environment within the City of Hermosa Beach. The map provides the CNEL contours ranging from 60 dB to 70 dB in 5 dB increments. The CNEL contours were developed utilizing SoundPLAN version 7.3 software, which uses the prediction algorithms developed by the Federal Highway Administration (FHWA) for their Traffic Noise Model (TNM).

FIGURE 14.4: EXISTING NOISE CONTOURS WITHIN THE CITY OF HERMOSA BEACH

Bar and Restaurant Noise

Noise from bars and restaurants is a frequent source of complaints in beach communities, including the City of Hermosa Beach. Often this is because the bars and restaurants have outdoor dining areas, operate late into the night, and/or provide live or recorded entertainment. Because bar and restaurant noise typically consists primarily of human speech or laughter, as well as music, it stands out from the background ambient "hum" produced by traffic and by waves crashing on the beach. This increases its potential to annoy nearby residents. Also, the low frequency content of music (e.g., bass guitars and drums) easily propagates through walls and windows over large distances, increasing the area that is affected by the bar or restaurant.

The noise level produced by a bar or restaurant varies widely depending on a number of factors. Measurements indicate that average noise levels within the building can range from 75 dBA (with low background music or no music at all) to over 95 dBA (with entertainment). Maximum noise levels can be up to 20 dBA higher than these average levels. Typical building construction will reduce these noise levels by about 10 dB with windows and doors open, or by about 20 dB with windows and doors closed. Outdoor dining areas can produce average noise levels of 65 dBA to 70 dBA and maximum noise levels of 85 dBA to 90 dBA at a distance of 20 feet from the center of the dining area.

The City of Hermosa Beach does not have quantitative standards by which to assess the impact of noise from bars and restaurants. Rather, the City's Municipal Code regulates it in the following manner:

Section 8.24.040(I) prohibits "repeated or sustained noise from the premises of any commercial establishment which is adjacent to one or more residential dwelling units, including any outdoor area part of or under the control of the establishment, between the hours of 10:00 p.m. and 8:00 a.m. that is plainly audible from the residential dwelling unit's property line."

Section 8.24.040(J) prohibits "sustained amplified music from the premises of any commercial establishment on Pier Plaza that is plainly audible eighty (80) feet from the property line of the establishment."

Section 8.24.045 requires that "all exterior doors and windows of a business establishment located on Pier Plaza shall be closed while amplified music is being played in the establishment."

Public and Private Event and Party Noise

The City of Hermosa Beach plays host to a number of public and private events throughout the year. For the most part, these events take place at the beach or around the pier, with occasional events held downtown or in a park. Some of these events (for example, the summer concerts at the beach) can generate significant levels of noise that can be heard over large areas of the City. To identify typical noise levels that can be generated by these events, a measurement was obtained on the strand in front of the residence at 934 Beach Drive during the summer concert held on August 24, 2014. This was the closest residence to the concert being held at the pier. The results of the measurement are summarized as follows:

TABLE 14.4: MEASURED NOISE LEVELS DURING A SUMMER CONCERT

Measurement	Measured Noise Level
Noise level exceeded for more than 30 minutes/hour	73.1 dBA
Noise level exceeded for more than 15 minutes/hour	74.9 dBA
Noise level exceeded for more than 5 minutes/hour	76.5 dBA
Noise level exceeded for more than 1 minute/hour	78.0 dBA
Average noise level	73.6 dBA
Maximum noise level	81.8 dBA

During the event, a number of residents commented that other bands during the summer concert series had been noticeably louder.

The City of Hermosa Beach does not regulate the noise levels generated by public and private events held on public property other than to require that a permit be obtained prior to the use of sound amplification equipment. The permit application does not require the applicant to identify the noise levels that will be generated by the equipment. In general, the Chief of Police must approve the application unless, among other things, he or she determines that issuance of the permit would substantially interfere with the peace and quiet of the neighborhood or community.

Commercial/Industrial Activity Noise

Within Hermosa Beach, industrial properties are generally concentrated along Cypress Avenue between 8th Street and South Park. These properties are occupied by various light manufacturing facilities, warehouses, construction supply sites, a surfboard manufacturing use, auto shops, air conditioning and heating manufacturing uses, and the City's maintenance yard (which is being considered for a possible oil drilling and production site). Surrounding these industrial properties are various residential properties, commercial properties, and South Park. Another industrial property, occupied by a telecommunications company, is located on Valley Drive adjacent to a mobile home park and Hermosa Valley School.

Commercial properties are generally concentrated along Pacific Coast Highway, Pier Avenue, Hermosa Avenue, Aviation Boulevard, and Artesia Boulevard. They include retail stores and shopping centers, hotels and motels, restaurants, professional office spaces, auto-related uses, entertainment uses, and personal services. These commercial properties are typically backed by noise-sensitive residential properties.

The primary complaints associated with commercial/industrial properties are related to noise generated by trucks and heavy equipment, loading dock operations, trucks entering and leaving the area, and mechanical equipment located both inside and outside the buildings. Commercial/ industrial noise impacts primarily result when activities occur during noise-sensitive times of the day (early morning, evening, or nighttime hours), or the activities occur in areas immediately adjoining noise-sensitive land uses. The City of Hermosa Beach Municipal Code provides no quantitative standards by which to identify and assess potential noise impacts resulting from commercial/ industrial operations. Rather, it limits the hours during which certain specific noise sources can occur. The City's General Plan identifies "noise tolerance standards" for various types of land uses within the City, ranging from 45 dBA or below for R-1 zones (including schools, hospitals, nurseries, and rest homes) to 65 dBA or below for M zones. It is likely that the City's General Plan "noise tolerance standards" are being exceeded at all residential properties located adjacent to commercial/industrial properties.

Construction/Demolition Activity Noise

Construction activities generate considerable amounts of noise, especially during the demolition phase and the construction of project infrastructure when heavy equipment is used. Noise levels resulting from construction depend on the number and types of construction equipment being used, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive receptors.

The highest maximum noise levels generated by project construction would typically range from about 90 to 105 dBA at a distance of 50 feet from the noise source. Typical hourly average construction-generated noise levels are about 81 dBA to 89 dBA measured at a distance of 50 feet from the center of the site during busy construction periods, such as when earth moving equipment and impact tools are being used. Construction-generated noise levels drop off at a rate of about 6 dBA per doubling of distance between the source and receptor. Shielding by buildings or terrain often result in much lower construction noise levels at distant receptors.

Typically, small residential, commercial, or office construction projects do not generate significant noise impacts when standard construction noise control measures are enforced at the project site and when the duration of the noise-generating construction period is relatively short (typically one year or less). Construction noises associated with projects of this type are disturbances that are necessary for the construction or repair of buildings and structures in urban areas. Larger construction projects are typically built out over more than one year, and some construction methods, such as pile driving, generate higher noise levels and noise that would be considered impulsive.

Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction durations last over extended periods of time. The City of Hermosa Beach minimizes the potential for noise impacts by limiting the hours when construction can occur. Section 8.24.050 of the Municipal Code limits construction activity to between 8:00 a.m. and 6:00 p.m., Monday through Friday (except national holidays), and between 9:00 a.m. and 5:00 p.m. on Saturdays. Construction activity is prohibited at all other hours, and on Sundays and national holidays.

Refuse Collection Noise

Trash pickup and compacting vehicles typically use hydraulic equipment to raise and lower the trash bins and to compact their contents. Typical noise levels range from 80 to 85 dBA at 50 feet during the raising, lowering and compacting operations. A typical trash pickup takes approximately three minutes, with the higher noise levels occur during about one-half of the operation. Noises associated with refuse collection are disturbances that are necessary for the health and welfare of a community. They are not regulated by the City of Hermosa Beach.

Construction/Demolition Vibration

The only significant vibration source within the City of Hermosa Beach is construction equipment. Construction of new projects on sites adjacent to existing developments could result in the generation of excessive ground-borne vibration on a temporary basis. Construction activities may include demolition of existing structures, site preparation work, excavation of below grade levels, foundation work, pile driving, and framing. Demolition activity at an individual site may last several weeks and at times may produce substantial vibration. Excavation for underground levels could also occur on some project sites and vibratory pile driving could be used to stabilize the walls of the excavated area. Piles or drilled caissons may also be used to support building foundations.

Pile driving has the potential to generate the highest ground vibration levels and is the greatest risk factor in causing structural damage, particularly when it occurs within 100 feet of structures. Vibration levels generated by pile driving activities would vary depending on project conditions including type, construction methods, and equipment used. Other construction activities, such as caisson drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.) may also generate substantial vibration in the immediate vicinity of the site.

Depending on the proximity of existing structures to each construction site, the structural soundness of the existing buildings, and the methods of construction used, vibration levels caused by pile driving or other impact work may be high enough to damage existing structures.

The Federal Transit Administration has developed typical vibration levels for various types of equipment used on construction projects. Table 14.5 provides these typical vibration levels at a distance of 25 feet from the equipment item, and also identifies the distance within which the equipment item will generate a vibration velocity level exceeding the Los Angeles County standard of 0.01 in/sec. For example, if an impact pile driver operates closer than 158 feet from the property line of the construction site, it will generate a perceptible vibration velocity level that exceeds the County's standard of 0.01 in/sec.

TABLE 14.5: TYPICAL VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Vibration Velocity Level at 25 Feet, in/sec	Distance from Equipment Within Which the LA County Standard is Exceeded
Pile driver (impact)	0.158	158 ft
Pile drive (sonic)	0.045	68 ft
Clam shovel drop (slurry wall)	0.050	74 ft
Hydromill (slurry wall)	0.002-0.006	9-17 ft
Vibratory roller	0.050	74 ft
Hoe ram	0.022	43 ft
Large bulldozer	0.022	43 ft
Caisson drilling	0.022	43 ft
Loaded trucks	0.020	40 ft
Jackhammer	0.009	24 ft
Small bulldozer	0.001	5 ft

14.3 Regulatory Setting

The following federal, state, and local plans, policies, regulations, and laws pertain to noise in the planning area. They provide the regulatory framework for addressing all aspects of noise in Hermosa Beach.

Federal Plans, Policies, Regulations, and Laws

Department of Housing and Urban Development (HUD)

HUD environmental noise regulations, presented in the Code of Federal Regulations (24 CFR Part 51B), require that new HUD-financed housing construction meet the following noise standards. Exterior noise levels are considered:

- Acceptable at 65 dB Ldn or less.

- Normally unacceptable if they exceed 65 dB Ldn but not 75 dB Ldn, unless appropriate sound attenuation measures are provided, which include 5 decibels of additional attenuation over standard construction in the 65 to 70 dB Ldn zone or 10 decibels of additional attenuation in the 70 to 75 dB Ldn zone.

- Unacceptable if they exceed 75 dB Ldn.

Interior noise levels and attenuation requirements are geared toward achieving an interior noise level of 45 dB Ldn. The HUD guidelines assume that standard construction will provide sufficient attenuation to achieve interior levels of 45 dB Ldn or less if the exterior noise level is 65 dB Ldn or less. These regulations apply to new residential projects that receive federal funding. If housing developed in Hermosa Beach receives federal funding, the federal noise standards may be applicable in the City.

State Plans, Policies, Regulations, and Laws

California Administrative Code Section 65302(f)

California Government Code Section 65302(f) requires that all General Plans include a Noise Element to address noise problems in the community. State law also requires that current and future noise level contours be developed for the following sources:

- Highways and freeways.

- Primary arterials and major local streets.

- Passenger and freight on-line railroad operations and ground rapid transit systems.

- Commercial, general aviation, heliport, and military airport operations, aircraft flyovers, jet engine tests stands and all other ground facilities and maintenance functions related to airport operation.

- Local industrial plants, including, but not limited to, railroad classification yards.

- Other stationary ground noise sources identified by local agencies as contributing to the community noise environment.

California Environmental Quality Act Guidelines

The California Environmental Quality Act (CEQA) was adopted by the state legislature in response to a public mandate for thorough environmental analysis of projects that might affect the environment. Excessive noise is considered an environmental impact under CEQA. The provisions of the law and environmental review procedures are described in the CEQA Statutes and the CEQA Guidelines. Implementation of CEQA ensures that during the decision making stage of development, City officials and the general public will be able to assess the noise impacts associated with public and private development projects.

California State Building Code

Title 24, Part 2, of the California Code of Regulations requires all multifamily residential dwellings, hotels, and motels exposed to a CNEL of 60 dB or greater to have an acoustical study performed that shows how an interior CNEL of 45 dB or less will be achieved in habitable rooms. Title 24 is commonly referred to as the State's Noise Insulation Standards.

California Green Building Standards Code

Section 5.507 of the Code places mandatory requirements on the design of new non-residential buildings that are located within the 65 dB CNEL noise contour of an airport, freeway, expressway, railroad, industrial source, or fixed-guideway source as determined by the Noise Element of the General Plan. The purpose of the design requirements is to achieve a 1-hour average noise level of 50 dBA or less within occupied interior spaces. Buildings with few or no occupants or where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures, and utility buildings, are not required to comply with the mandatory design requirements.

Division 5.7 of the Code places the same mandatory requirements on the design of additions or alterations to existing non-residential buildings. However, the requirements only apply to the portions of the building being added or altered, and only for additions or alterations on or after the dates shown in the following table:

TABLE 14.6: CALIFORNIA GREEN BUILDING STANDARDS CODE

Effective Date of Compliance	Square Footage of Addition	Permit Valuation or Estimated Construction Cost of Alteration
July 1, 2012	2,000	$500,000
Effective date of the 2013 California Building Standards Code	1,000	$200,000

Regional and Local Plans, Policies, Regulations, and Laws

City of Hermosa Beach General Plan

The current Noise Element of the General Plan for the City of Hermosa Beach was adopted in October 1979, and has the following stated goals:

- Reduce transportation noise to a level that does not jeopardize health and welfare.
- Minimize noise levels of future transportation facilities.
- Establish compatible land use adjacent to transportation facilities.
- Allocate noise mitigation costs among those who produce the noise.
- Alert the public regarding the potential impact of transportation noise.
- Protect areas that are presently quiet from future noise impact.

To achieve these goals, the Noise Element identifies a number of policies and implementation programs to guide the City's actions. The Noise Element further states that "City policy should be geared to the following maximum ambient noise levels:"

TABLE 14.7: HERMOSA BEACH MAXIMUM AMBIENT NOISE LEVELS

Zoning	Maximum Ambient Noise Levels
R-1	45 or below (also schools, hospitals, nurseries and rest homes)
R-2	50 or below (also parks and playgrounds)
R-3	55 or below
C-1	55 or below
C-2/C-3	60 or below
M	65 or below

Maximum traffic noise should be restricted to no more than 5dBA above the ambient standard levels in residential areas, and to no more than 10 dBA above the ambient standard levels in commercial and manufacturing areas.

The Noise Element also includes a program that extends the acoustical requirements of the State's Building Code (Title 24, Part 2, of the California Code of Regulations) to include single-family dwellings. This extension requires all single-family residential dwellings exposed to a CNEL of 60 dB or greater to have an acoustical study performed that shows how an interior CNEL of 45 dB or less will be achieved in habitable rooms.

City of Hermosa Beach Municipal Code

The City's Municipal Code does not provide any quantitative noise standards. However, Chapter 8.24 of the Municipal Code establishes the City's policy towards noise. Its stated purpose is "to strike a balance between normal, everyday noises that are unavoidable in an urban environment and those noises that are so excessive and annoying that they must be curtailed in order to protect the comfort and tranquility of all persons who live and work in the City". Chapter 8.24 uses the following methods to achieve its purpose: (1) establishing general standards by which to determine whether a noise is annoying and unreasonable; (2) placing limits on the audibility of certain noise sources or on the hours during which certain noise sources may be audible; (3) restricting the hours during which certain activities can produce noise; (4) prohibiting the use of leaf blowers; and (5) requiring that doors and windows at businesses on Pier Plaza be closed when amplified music is being played.

Chapter 9.28 of the Municipal Code establishes the City's policies regarding parties, events, and gatherings on private property. With regard to noise, the event may not produce a noise level that exceeds 95 dBA at the property line at any time. Such events are restricted to between 5:00 p.m. on Fridays through 10:00 p.m. on Sundays.

Chapter 17.42.150(D)(5) of the Municipal Code states that amplified entertainment at temporary minor special events shall be limited to the hours of 10:00 a.m. to 9:00 p.m. and may not last more than four hours in any day. Noise levels may not exceed 80 dBA at the property line, and may not constitute a nuisance or violate the requirements of Chapter 8.24.

City of Hermosa Beach Oil Code

Ordinance No. 85-803 established the City's Oil Code, which states that it is unlawful for any drilling or re-drilling operation to create a noise level that exceeds the following standards when measured at the property line of any single- or multi-family dwelling unit, guest room, commercial building, school, hospital, church, or public library:

TABLE 14.8: CITY OF HERMOSA BEACH OIL CODE NOISE STANDARDS

Cumulative Number of Minutes in Any 1-Hour Time Period	Noise Level Standard, dBA	
	Daytime (8 a.m. to 7 p.m.)	Nighttime (7 p.m. to 8 a.m.)
30	50	45
15	55	50
5	60	55
1	65	60
0	70	65

If the existing ambient noise level at the nearest adjacent property line site does not exceed the permitted nighttime noise levels, then the following regulations shall apply:

1. The only activity permitted between the hours of seven p.m. and eight a.m. will be "on-bottom" drilling, with single joint connections. None of the following will be done during the hours of 7 p.m. and 8 a.m.:
    a. Hammering on pipe;
    b. Racking of pipe;
    c. Acceleration and deceleration of engines or motors;
    d. Use of drilling assembly rotational speeds that could cause more noise than necessary and could reasonably be reduced by use of slower rotational speed;
    e. Picking up or laying down drill pipe, casing, tubing or rods into or out of the drill hole.

2. If the measured ambient noise level exceeds that permissible within any of the first four noise limit categories in [Table 14.8] above, the allowable noise exposure standard shall be increased in five-decibel increments in each affected category as appropriate to encompass or reflect the ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to equal the maximum ambient noise level.

3. If the difference between the noise levels with noise source operating and not operating is four decibels or greater, then the noise measurement of the alleged source can be considered valid with a correction applied to account for the contribution of the ambient noise. The correction to be applied is identified in the Oil Code.

The Hermosa Beach Oil Code also requires that all derricks and drilling machines that produce noise be enclosed in acoustical blankets.

Los Angeles County Code - Vibration Standards

The City of Hermosa Beach has no vibration regulations. However, vibration is addressed in Chapter 12.08 of the County of Los Angeles Code. This chapter prohibits the operating of any device that creates vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property, or at 150 feet from the source if on a public space or public right-of-way. The perception threshold is defined as a motion velocity of 0.01 in/sec over the range of 1 to 100 Hertz.

14.4 References

1. U.S. Department of Transportation/Federal Transit Administration (FTA-VA-90-1003-06). May 2006. *Transit Noise and Vibration Impact Assessment.*

2. NDS/ATD. 2014. Traffic count volumes.

3. City of Hermosa Beach. October 1979. *Noise Element*.

4. City of Hermosa Beach. *Municipal Code*. Accessed February 2015. http://www.codepublishing.com/CA/HermosaBeach/.

5. U.S. Department of Transportation, Federal Highway Administration. Final Report, December 2004. *FHWA Traffic Noise Model, Version 2.5 Look-Up Table, User's Guide*.

6. U.S. Department of Transportation, Federal Highway Administration. February 22, 2007. *Traffic Noise Model (FHWA TNM) LookUp Program*, Software Version 2.1 (Data Generated by TNM Version 2.5).

C-15: Noise

15. Population, Housing, and Employment

15.1 Introduction

This Chapter addresses demographic, market, and labor force conditions and their trends in the City of Hermosa Beach. A summary of the regulatory setting, policies and programs which influence these conditions, is also included. Following the discussion of the existing environmental and regulatory setting, key issues and performance indicators are identified and discussed. Key issues relate to communitywide economic vitality, housing, and employment, and are areas which should be considered when updating the City's General Plan or assessing land use policy. Indicators are qualitative or quantitative measurements which can be used as a baseline against which the efficacy of City programs can be assessed, or as a means to monitor changes in the City's employment, population, and housing conditions. Where possible and appropriate, this data is reported relative to the County or State levels to provide context.

The City in 2013 updated its General Plan Housing Element as required by State law for the planning period ending in 2021. Additional information about population, housing, income, and housing issues can be found here,
http://www.hermosabch.org/modules/showdocument.aspx?documentid=1305

Data Sources

Data was obtained from the United States Census Bureau and the Southern California Association of Governments (SCAG). Additional information was obtained from the Market and Economic Analysis prepared by Economic & Planning Systems[1], and the Neighborhood Oriented Development Economic Analysis for South Bay Cities, prepared by Pro Forma Advisors LLC. The 2013 Housing Element also provide background information for this section, and can be found in Appendix B7.

[1] In support of the City of Hermosa Beach Downtown Core Revitalization Strategy prepared by ROMA Design Group.

15.2 Environmental Setting

Demographic Profile

Population Growth

Between 2000 and 2012, the total population of the City of Hermosa Beach increased by 5.4 percent, to 19,574. The City grew most rapidly between 2000 and 2004, with population decreases in 2005, 2006, and 2007. Population began increasing in 2008 and growth has remained steady, growing by 68 between 2010 and 2012.

TABLE 15.1: POPULATION GROWTH TRENDS, HERMOSA BEACH

Year	Population	% Increase
2000	18,566	0
2004	19,389	4.43%
2010	19,506	0.61%
2012	19,574	0.35%
Source: US Census, 2010; SCAG, 2013		

TABLE 15.2: POPULATION HERMOSA BEACH AND LOS ANGELES, 2000- 2012

POPULATION	**2000**	**2012**	**% INCREASE**
Hermosa Beach	18,566	19,574	5.4 %
Los Angeles County	9,519,338	9,884,632	3.8 %
Source: US Census, 2000; SCAG, 2013			

Age

In Hermosa Beach, approximately 75 percent of the population is of working age, between ages 15 and 64. The majority of the population is between 25 and 34 years old (see Figure 1). Between 2000 and 2012, the group growing most rapidly was between ages 20 and 24, with a 0.99 percent increase. The 5 to 19 year old age group represents the largest increase in share of population between 2000 and 2012, growing from 8.9 to 13 percent. Conversely, the 25 to 34 age group is experiencing the greatest decline in population share, dropping from 24.1 percent of the City's population in 2000, to 21.3 percent in 2012 (see Table 15.3).

FIGURE 15.1 AGE DISTRIBUTION, HERMOSA BEACH, 2010

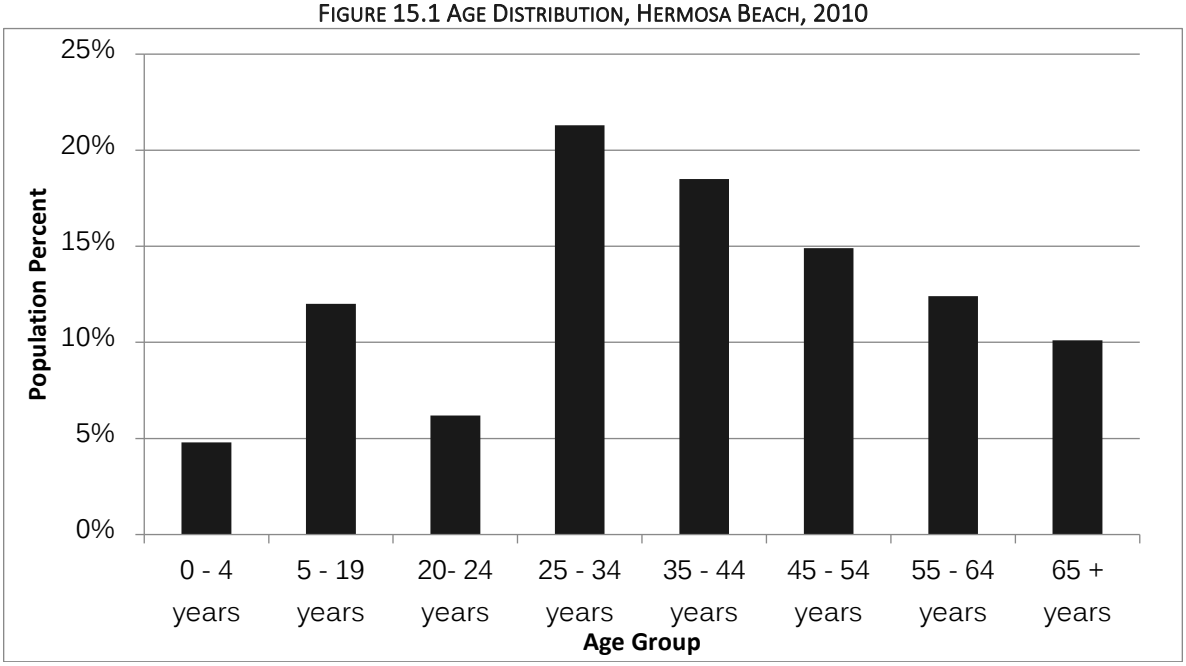


TABLE 15.3: AGE DISTRIBUTION, HERMOSA BEACH, 2000 - 2012

Age Group	Total		% Change
	2000	2012	
0 - 4	992	938	-0.05
5 - 19	2,280	2,344	0.03
20 - 24	1,063	2,111	0.99
25 - 34	4,697	4,161	-0.11
35 - 44	3,819	3,614	-0.05
45 - 54	2,848	2,911	0.02
55 - 64	2,050	2,422	0.18
65 +	1,757	1,973	0.12
Source: US Census, 2010; SCAG, 2013			

Race/Ethnicity

The racial/ethnic composition of Hermosa Beach is relatively homogeneous, with 86 percent of residents identifying themselves as white. Asian or Pacific Islander and Other Race are the next highest racial categories, each at 5.9 percent of the population. The Hispanic or Latino population in Hermosa Beach of 8.4 percent is considerably lower than Los Angeles County at 50 percent and California at 38 percent.

Income

In 2010, the median household income for Hermosa Beach was $99,976, a 23 percent increase from 2000. This is nearly twice as high as the median household income for Los Angeles County, yet lower than the median income of Manhattan Beach. Between 2000 and 2010, Hermosa Beach saw a 46 percent increase in the number of households with an income greater than $150,000 per year.

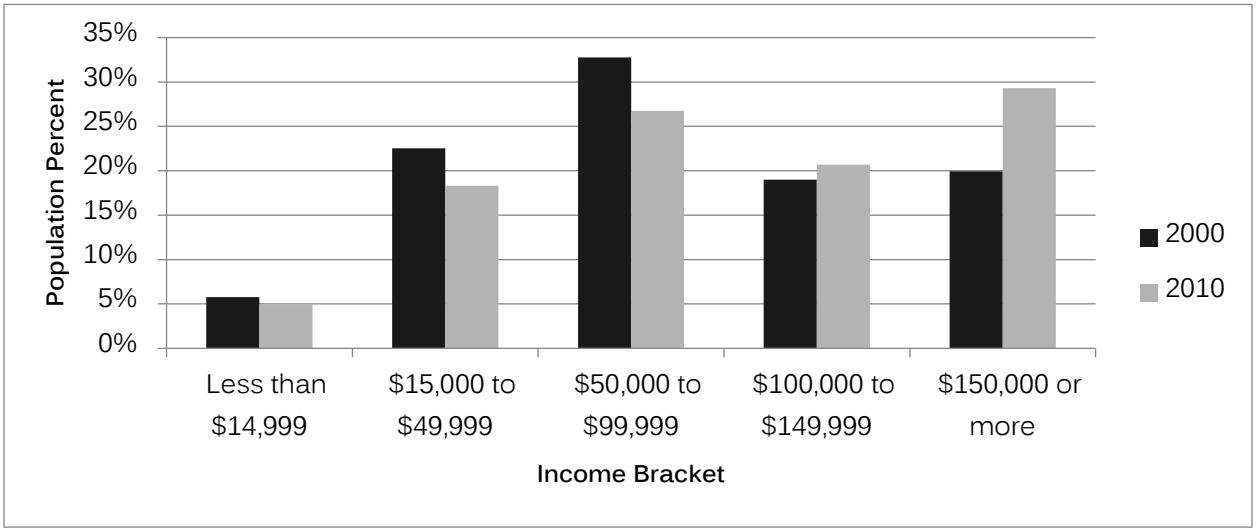
TABLE 15.4: RACE/ETHNICITY, BY POPULATION PERCENT, 2010

	Hermosa Beach	**Manhattan Beach**	**Los Angeles County**	**California**
Race/Ethnicity				
White	86.8%	84.5%	50.3%	57.6%
Black or African American	1.2%	0.8%	8.7%	6.2%
American Indian or Alaska Native	0.3%	0.2%	0.7%	1.0%
Asian or Pacific Islander	5.9%	8.7%	14.0%	13.4%
Other Race (including 2 or more)	5.9%	5.8%	26.3%	21.9%
Total	**100%**	**100%**	**100%**	**100%**
Hispanic Origin				
Hispanic or Latino	8.4%	6.9%	47.7%	37.6
Non-Hispanic	91.6	93.1%	52.3%	62.4%
Total	**100%**	**100%**	**100%**	**100%**
Source: US Census, 2010				

TABLE 15.5: HOUSEHOLD INCOME, 2010

	Hermosa Beach	Manhattan Beach	Los Angeles County
< $15,000	5%	4%	12%
$15,000- $49,999	18%	12%	33%
$50,000 - $99,999	27%	21%	30%
$100,000 - $149,999	21%	18%	13%
$150,000 +	29%	45%	11%
Median	$99,976	$131,723	$55,476
Source: US Census, 2010			

FIGURE 15.2 INCOME DISTRIBUTION, HERMOSA BEACH, 2000 AND 2010



Educational Attainment Levels

Approximately 69 percent of Hermosa Beach residents hold a college degree. Twenty five percent of residents hold graduate or doctoral degrees. This is similar to the educational attainment of Manhattan Beach (74% with a college degree), and higher than the education attainment status of Los Angeles County (19% with a college degree).

TABLE 15.6: EDUCATIONAL ATTAINMENT, 2010

	Hermosa Beach	Manhattan Beach	Los Angeles County
No High School Diploma	2%	1%	24%
High School Graduate	6%	7%	21%
Some College, No Degree	17%	13%	19%
Associate Degree	6%	5%	7%
Bachelor's Degree	44%	42%	19%
Master's/Professional/PhD.	25%	32%	10%
Source: US Census, 2010			

Household Characteristics

Household Growth

Between 2000 and 2010, there was a one (1) percent decrease in the number of households in the City although there was a population increase of 5.1 percent over the same period. This corresponds to a 5 percent increase in average household size, with 2.04 people per household. Despite the increase since 2000, this is lower than the average household size in Manhattan Beach and Los Angeles County.

TABLE 15.7: HOUSEHOLD CHARACTERISTICS, 2000 TO 2010

	Hermosa Beach		Manhattan Beach		Los Angeles County	
	2010	2000-2010 Change	2010	2000-2010 Change	2010	2000-2010 Change
Total Population	19,506	5.1%	35,135	3.8%	9,818,605	3%
Total Households	9,389	-1%	13,732	-5%	3,217,889	2.7%
Total Housing Units	10,311	4.8%	15,128	0.6%	3,425,736	4.7%
Average Household Size	2.04	5%	2.50	7%	2.97	-0.33%
Source: US Census 2000; US Census, 2010						

Housing Stock

Half of the housing stock in Hermosa Beach is comprised of single family attached and detached homes. The remaining housing stock is a combination of multi-family, mobile homes, and other housing types.

TABLE 15.8: HOUSING STOCK, HERMOSA BEACH, 2000 AND 2010

Tenure	**2000**	**2010**	**% Change**
Single Family	5,007	5,214	4.13%
Multi-Family	4,724	4,730	3.24%
Mobile Home/RV/Other	82	220	168.29%
Source: US Census, 2010			

Tenure

Between 2000 and 2010 there was a 150% increase in the number of vacant housing units. At the same time, the total number of occupied units decreased by 0.92 percent. A 5 percent vacancy rate is considered healthy, allowing housing options without oversaturation. Hermosa Beach had an 8.9 percent vacancy rate in 2010.

TABLE 15.9: HOUSING TENURE, HERMOSA BEACH, 2000 AND 2010

Tenure	2000	2010	% Change
Occupied Housing Units	9,476	9,389	-0.92%
Owner-Occupied	4,068	4,279	5.19%
Renter- Occupied	5,408	5,110	-5.51%
Vacant Housing Units	364	922	153.3%
Source: US Census, 2010			

Affordability

Table 15.10 shows the range of affordable housing costs based on levels of annual income established by the California Department of Housing and Community Development (HCD) per income sector, based on the Los Angeles County area median income of $64,800. In 2010, median rents in Hermosa Beach were $1,795/month and median sale value was $967,000. Typical household costs in Hermosa Beach are affordable for above moderate income residents. Residents with lower incomes must spend more than 30 percent of their income on housing costs, contributing to 2,005 renter occupied households and 1,560 owner occupied households being cost-burdened in 2010.

TABLE 15.10: HOUSING AFFORDABILITY, HERMOSA BEACH, 2013

Income Group	HCD Income Limits		Monthly Housing Costs		Maximum Affordable Price	
	Max Annual Income	**Affordable Total Payment**	**Utilities**	**Taxes & Ins. (for ownership)**	**Own**	**Rent**
Extremely- Low						
One Person	$ 17,950	$ 449	$75	$79	$49,157	$ 374
Two Person	$20,500	$513	$100	$89	$53,982	$413
Three Person	$23,050	$576	$125	$99	$58,746	$451
Four Person	$25,600	$640	$150	$109	$63,608	$490
Very Low						
One Person	$29,900	$748	$75	$137	$89,400	$673
Two Person	$34,200	$855	$100	$152	$100,555	$755
Three Person	$38,450	$961	$125	$168	$111,508	$836
Four Person	$42,700	$1,068	$150	$183	$122,460	$918
Low						
One Person	$47,850	$1,196	$75	$231	$148,533	$1,121
Two Person	$54,650	$1,366	$100	$260	$167,858	$1,266
Three Person	$61,500	$1,538	$125	$289	$187,392	$1,413
Four Person	$68,300	$1,708	$150	$318	$206,773	$1,558
Moderate						
One Person	$54,450	$1,361	$75	$356	$155,202	$1,286
Two Person	$62,200	$1,555	$100	$403	$175,494	$1,455
Three Person	$70,000	$1,750	$125	$450	$196,050	$1,625
Four Person	$77,750	$1,944	$150	$497	$216,341	$1,794

Notes:

1. Based on households allocating 30% of their monthly earnings toward housing costs.
2. $75 for single person household, additional $25 per person.
3. Property taxes at 1.3%.
4. Personal mortgage insurance at about 0.045% of the home price.
5. Homeowner's insurance at 0.02% of the home price.
6. Based on a conventional 30---year loan with 6% interest and a 5% down payment.

Source: HCD income limits, 2013; Lisa Wise Consulting, Inc. 2014

Employment

Employment by Industry, Hermosa Residents

As of 2011, there were 16,783 persons in Hermosa Beach of 16 years old and over, with 13,188 (79 percent) of those in the labor force (eligible for employment). Of those in the labor force, 94 percent were employed. The largest employment industry for Hermosa Beach residents was mainly professional, such as financial, insurance, information, professional, scientific, and technology services. These are jobs typically associated with higher education levels and with higher incomes. Lower-wage industries, such as accommodation and food services, entertainment, and production, were less represented in the Hermosa Beach labor force, each at 4 percent.

TABLE 15.11: EMPLOYMENT BY INDUSTRY, HERMOSA BEACH 2011

	2011	Percent
Employed Population, 16 and over	12,394	100%
FIRE[1] , Information, Prof./Tech. , Exec. Mgmt.	4,729	38%
Manufacturing	1,384	11%
Educational Services	1,051	8%
Retail Trade	982	8%
Health Care and Social Assistance	904	7%
Wholesale Trade, Transport, Warehousing	835	7%
Accommodation and Food Services	553	4%
Arts, Entertainment, and Recreation	462	4%
Production[2]	448	4%
Admin. & Support, Waste Mgmt. /Remediation	394	3%
Other Services (excluding Public Admin.)	327	3%
Public Administration	325	3%

NOTES:

1. FIRE includes Finance, Insurance, and Real Estate
2. Production includes Agriculture, Forestry, Fishing, Hunting, Resource Extraction, Utilities, and Construction

Source: US Census, 2011

Jobs by Industry, Hermosa Employees

The largest employment sector measured by number of j in Hermosa Beach is the accommodation and food service industry, accounting for 31 percent of all jobs in 2011 (See Table 15.12). There were 1,026 financial, information, and professional jobs in the City, however over 4,700 Hermosa Beach residents are employed in this sector. This shows that residents are traveling outside of Hermosa Beach to work. Only 462 residents live and work in Hermosa Beach.

TABLE 15.12: JOBS BY INDUSTRY, HERMOSA BEACH 2002-2011

	2011	Percent	2002-2011 Change
All Jobs	5,862	100%	628
Accommodation and Food Services	1,801	31%	445
FIRE[1] , Information, Prof./Tech., Exec. Mgmt.	1026	18%	82
Retail Trade	847	14%	8
Health Care and Social Assistance	394	7%	130
Other Services (excluding Public Admin.)	390	7%	(7)
Admin. & Support, Waste Mgmt. /Remediation	364	6%	(182)
Arts, Entertainment, and Recreation	289	5%	137
Educational Services	216	4%	17
Wholesale Trade, Transport, Warehousing	206	4%	32
Public Administration	173	3%	37
Production[2]	156	3%	(71)

NOTES:

1. FIRE includes Finance, Insurance, and Real Estate

2. Production includes Agriculture, Forestry, Fishing, Hunting, Resource Extraction, Utilities, and Construction

( ) Denotes decrease

Source: LEHD Census, Economic & Planning Systems, Inc. 2014

Table 15.13 shows the median earnings, per job sector in 2011. The highest paying jobs were in wholesale trade, manufacturing, information, administration, finance and insurance and real estate. One of the lowest paying jobs, accommodation and food services, is the largest employment sector in Hermosa Beach.

TABLE 15.13: INCOME BY SECTOR HERMOSA BEACH 2011

Job Sector	Median Earnings
Wholesale trade	84,653
Manufacturing	84,278
Information	83,349
Public administration	80,156
Finance and insurance, and real estate and rental and leasing	78,815
Health care and social assistance	77,353
Construction	71,224
Professional, scientific, and technical services	69,397
Educational services	56,726
Retail trade	56,173
Administrative and support and waste management services	43,625
Agriculture, forestry, fishing and hunting, and mining	42,750
Arts, entertainment, and recreation	33,929
Transportation and warehousing	31,346
Other services, except public administration	30,865
Accommodation and food services	29,659
Utilities	18,826
Source: US Census, 2011	

Employment, Inflow/Outflow

Table 15.14 shows the typical daytime population for Hermosa Beach and neighboring Manhattan Beach and Redondo Beach. Hermosa Beach experiences a typical outflow of approximately 3,600 persons due to worker inflow/outflow, or travel to jobs within/outside of the City. Most notably, 45 percent of employed Hermosa Beach residents commute outside of the City for work. This pattern may explain the discrepancy between Hermosa Beach resident employment sectors (Table 15.12) and City jobs by industries (Table 15.13).

TABLE 15.14: POPULATION IN HERMOSA BEACH DURING THE DAY, 2010

	Hermosa Beach	Manhattan Beach	Redondo Beach
Residential Population	19,506	35,135	66,748
Typical Daytime Population	15,945	36,760	57,163
Total Jobs in Hermosa Beach	4,023		
Live in City, Employed Outside City (outflow)	(8,867)	(14,233)	(30,479)
Employed in City, Living Outside City (inflow)	5,306	15,888	20,894
Net Inflow/Outflow	(3,561)	1,655	(9,585)
Source: US Census, 2010, Census Longitudinal Employment Housing-Dynamics (LEHD), 2010; ESRI, Economic & Planning Systems Inc. , 2014			

In 2010, approximately 5.9 percent of residents lived and worked in Hermosa Beach while 94.1 percent commuted to other places. Table 15.15 shows the destination for those who commute.

TABLE 15.15: COMMUTE DESTINATION, HERMOSA BEACH RESIDENTS, 2010

Destination		Number of Commuters	Percent of Total Commuters
1	Los Angeles	2,631	27.9%
2	El Segundo	673	7.1%
3	Torrance	603	6.4%
4	Hermosa Beach	559	5.9%
5	Manhattan Beach	450	4.8%
6	Redondo Beach	361	3.8%
7	Santa Monica	297	3.2%
8	Burbank	290	3.1%
9	Culver City	222	2.4%
10	Long Beach	219	2.3%
Other Destinations		3,121	33.1%
Source: Census LEHD, 2010			

Jobs-Housing Balance

Another factor related to worker inflow/outflow, is the jobs-housing balance. Hermosa Beach has a jobs-housing ratio of 0.62, meaning there are approximately 0.62 jobs available within the City per household. Lower jobs-housing ratios may indicate an unbalanced relationship between housing options and types of jobs, with employees commuting to work outside their city of residence. Larger ratios mean the area is a job-importer, with people commuting into the area for work. A more balanced jobs-housing ratio, closer to equilibrium, or 1.0, is found in Manhattan Beach (1.25) and the City of Los Angeles (1.2).

TABLE 15.16: JOBS/HOUSING RATIO, 2010

	Hermosa Beach	Manhattan Beach	Los Angeles City
In-City Jobs/Household	0.62	1.25	1.22
Source: US Census, 2010, Census LEHD, ESRI, Economic & Planning Systems Inc. , 2014			

Population, Household and Employment Projections

SCAG's 2012 Regional Transportation Plan (RTP) Growth Forecast projects a 1.55 percent growth in the population of Hermosa Beach by 2035 or an increase of 300 people between 2008 and 2035. This growth rate of approximately 0.06 percent/year is ten times lower than Los Angeles County (0.60 percent/year). According to the Growth Forecast, the number of households within the City will increase by 0.09 percent annually until 2020, and then remain constant through 2035. Comparatively, Manhattan Beach is not projected to increase in number of households through 2035, yet the City population and employment is projected to continue to grow at a slow rate.

TABLE 15.17: SCAG 2012 GROWTH FORECAST PROJECTIONS OF POPULATION, HOUSEHOLDS, AND EMPLOYMENT (2008 TO 2035)

Jurisdiction	2008	2020	2035	Percent Change (2008 – 2035)	Average Annual Growth rate
Hermosa Beach					
Population	19,400	19,600	19,700	1.55	0.06
Households	9,500	9,600	9,600	1.05	0.04
Employment	7,000	7,300	7,700	10.00	0.37
Job / Household Ratio	0.74	0.76	1.01	36.49	1.35
Manhattan Beach					
Population	35,100	35,500	36,000	2.56	0.09
Households	14,100	14,100	14,100	0.00	0.00
Employment	15,100	16,100	17,200	13.91	0.52
Job / Household Ratio	1.07	1.14	1.22	14.02	0.52
Los Angeles County					
Population	9,778,000	10,404,000	11,353,000	16.11	0.60
Households	3,228,000	3,513,000	3,852,000	19.33	0.72
Employment	4,340,000	4,558,000	4,827,000	11.22	0.42
Job / Household Ratio	1.34	1.29	1.25	(6.72)	(0.25)
Source: SCAG Growth Forecast, 2012, Regional Transportation Plan					

15.3 Regulatory Setting

Federal Plans, Policies, Regulations, and Laws

No federal plans, policies, regulations, or laws related to population, housing, and employment apply to the City of Hermosa Beach.

State Plans and Regulations

State Housing Element Requirements

Article 10.6 of the California Government Code outlines the California general plan housing element requirements. The housing element must analyze existing and projected housing needs, examine special housing needs within the population, evaluate the effectiveness of current goals and policies, identify governmental and other constraints, determine compliance with other housing laws, and identify opportunities to incorporate energy conservation into the housing stock. The element must also establish goals, policies, and programs to maintain, enhance, and develop housing. Hermosa Beach updated its General Plan Housing Element in 2013 for the planning period ending in 2021.

California Relocation Law

The California Relocation Law, California Public Resources Code Section 7260(b), requires the fair and equitable treatment of persons displaced as a direct result of programs or projects undertaken by a public entity. The law requires agencies to prepare a relocation plan, provide relocation payments, and identify substitute housing opportunities for any resident that is to be displaced by a public project.

California Coastal Act

The California Coastal Act established the California Coastal Commission and sets specific policies to address issues related to shoreline public access and recreation, low-cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, development design, power plants, ports, and public works. The California Coastal Commission uses the policies of the California Coastal Act as the statutory standards for all of the planning and regulatory decisions they make.

Regional and Local Plans, Regulations, and Ordinances

Southern California Area Governments

SCAG's Regional Comprehensive Plan and Guide and Regional Housing Needs Allocation (RHNA) are tools for coordinating regional planning and housing development strategies in southern California. State Housing Law mandates that Councils of Governments allocate the responsibility to plan for existing and future housing needs by income group to jurisdictions through the Regional Housing Needs Allocation. The city is responsible for evaluating housing needs and reducing impediments to affordable housing development consist with its regional allocation. The RHNA process does not require the city to develop housing. The City of Hermosa Beach was assigned a

RHNA of two (2) units for the planning period ending in 2021 and has demonstrated that sufficient sites exist to meet this demand.

General Plan Housing Element, 2014-2021

The Housing Element is a component of the General Plan. The City of Hermosa Beach's Housing Element contains goals, policies, and programs that are intended to guide land use and development decisions related primarily housing conservation and development for people of all income groups and abilities. The Housing Element must be updated on a schedule prescribed by law and certified by the State Department of Housing and Community Development (HCD) as being in compliance with State law.

The City's Housing Element was updated in 2013 for the planning period ending in 2021 and is certified by HCD. While the policies in the adopted Housing Element may be supplemented, it is anticipated they will remain largely unchanged in order to maintain the Housing Element certification as compliant with State law. Since all components of the General Plan must be internally consistent, it is useful to identify the goals, policies and programs in the adopted Housing Element most relevant to the General Plan update:

Policy 1.1: The City will continue to encourage the maintenance and improvement of the existing housing stock within the local neighborhoods.

Policy 1.4: The City will promote and encourage the conservation and maintenance of the existing neighborhoods.

Policy 2.1: The City will continue to promote the development of a variety of housing types and styles to meet the existing and projected housing needs of all segments of the community.

Policy 2.2: The City will continue to encourage the development of safe, sound, and decent housing to meet the needs of varying income groups.

Policy 2.3: The City will continue to implement the land use policy contained in the City's General Plan, which provides for a wide range of housing types at varying development intensities.

Policy 2.4: The City will continue to support and promote home ownership in the community.

Policy 3.1: The City will evaluate new development proposals in light of the community's environmental resources and values, the capacity of the public infrastructure to accommodate the projected demand, and the presence of environmental constraints.

Policy 6.1: The City will support sustainable residential development through land use planning, building technology and lifestyle options.

C-16: Public Services and Utilities, and Recreation

16. Public Services, Utilities, and Recreation

16.1 Introduction

This section identifies existing public services, utilities, and recreation conditions, regulations, and key issues within the planning area. Topics addressed include fire protection, police protection, water supply and use, telecommunication, wastewater, storm drainage, solid waste, schools, city facilities, and parks and recreation. Topics relating to street lighting, electricity, and natural gas are described in Section 8 (Energy).

16.2 Environmental Setting

Fire Protection

Fire protection, first response emergency medical services, and natural disaster preparedness services in Hermosa Beach are provided by the Hermosa Beach Fire Department (HBFD). The HBFD conducts fire- and life-safety inspections, enforces codes and ordinances, and provides public education regarding fire preparedness and protection. The HBFD also provides basic to advanced life support, ranging from first aid to life-threatening or traumatic injuries, and transport of emergency medical incidents. The HBFD also administers the City's Hazardous Material Plan and Emergency Preparedness Program and maintains the City's emergency operations center.

Stations and Staffing

The HBFD consists of one fire station with a total of 18 fire suppression personnel, one Assistant Fire Chief, and one Fire Chief. Of the 18 fire suppression personnel, 16 have paramedic status. Three platoons rotate on a 48-hour schedule. The HBFD station, located on Pier Avenue, houses three fire engines (two front-line and one reserve) and two ambulances.

Aid Agreements

The City has "automatic" aid agreements with the Manhattan Beach and Redondo Beach Fire Departments. This means that the dispatch of units to an incident is handled automatically by the dispatch center and the dispatch of additional units does not require the input of a commander on the scene. Manhattan Beach and Hermosa Beach have the same dispatch center. Redondo Beach has its own dispatch center.

The City also has mutual aid agreements with the Los Angeles County Fire Department and the Torrance and El Segundo Fire Departments. Under the mutual aid agreement, units from the

County, Torrance, and El Segundo could be dispatched to Hermosa Beach under the request of the commander on the scene. Likewise, units from Hermosa Beach could be requested to assist in those jurisdictions.

Emergency Medical Service and Fire Service Demand

Regional communications and dispatch services are provided for the HBFD by the South Bay Regional Public Communications Authority, referred to locally as South Bay 911 or Regional Call Center (RCC). The RCC processes approximately 250,000 police and fire incidents annually in the cities of El Segundo, Gardena, Hawthorne, Hermosa Beach, and Manhattan Beach. In Hermosa Beach, 2,427 calls were reported between May 1, 2012, and April 30, 2013, as recorded in the National Fire Incident Reporting System. Of these, 1,152 calls were for emergency medical service (EMS) (47.4%), 322 were for fire incidents (13.2%), and 186 calls were cancelled (7.7%). The HBFD received 775 calls for mutual aid requests within other jurisdictions (31.9%), of which 314 calls were cancelled (Center for Public Safety Management 2013a).

The HBFD received an average of 6.6 calls per day throughout the year, with the highest average number of calls per day occurring in July (7.8), January (7.5), and June (7.4) (Center for Public Safety Management 2013a). The average number of units dispatched was 2.4 for EMS calls, and 1.7 for fire calls.

Response Times

Maintaining low fire and emergency medical response times is one of the City's highest priorities. The HBFD has set an EMS response time standard of 5 minutes or less for 90 percent of incidents, and a fire response time standard of 5 minutes 20 seconds or less for 90 percent of fire incidents.

Excluding mutual aid calls, the average response time for EMS calls was 5.0 minutes, and the average response time for fire calls was 7.3 minutes. Ninety percent of EMS calls were responded to within 6.8 minutes, and 90 percent of fire calls were responded to within 10.8 minutes.

Insurance Services Office Rating

The Insurance Services Office (ISO) property class rating is important to a community, as many insurance companies base the fire risk portion of property insurance premiums on the community's ISO rating. The ISO uses a 1 to 10 rating scale, with Class 1 being the best level of service (and lowest fire insurance premium cost) and Class 10 representing no service at all. The HBFD has an ISO Class 4 rating (City of Hermosa Beach 2013a.)

Police Protection

The Hermosa Beach Police Department (HBPD) provides police protection services to preserve peace and prevent crime and disorder by enforcing state laws and city ordinances within the planning area.

Stations and Staffing

The HBPD has one police station, located at 540 Pier Avenue. The HBPD has 51 staff assigned to the station, consisting of 39 sworn personnel and 12 civilian staff. The HBPD consists of several distinct units to which officers are assigned. These units include detectives, traffic, patrol, backgrounds and training, internal affairs, Community Lead Program and Narcotics K-9. The

HBPD has 12 marked vehicles, 5 motorcycles, 10 unmarked vehicles, and 2 speed trailers (City of Hermosa Beach 2013b).

General patrol operations for the HPBD are staffed using 12-hour shifts. Police are assigned to beach-related events including beach volleyball, concerts on the beach, the Surf Festival, Hermosa Arts Fair, and the Hermosa Triathlon. The two days of the year which draw the largest crowds are the 4th of July and New Years Eve. The entire department is deployed on these days.

Calls for Service

Regional communications and dispatch services are provided for the HBPD by the South Bay 911/RCC. The RCC processes approximately 250,000 police and fire incidents annually in the cities of El Segundo, Gardena, Hawthorne, Hermosa Beach, and Manhattan Beach. Between May 1, 2012, and April 30, 2013, HBPD officers were dispatched to 17,381 calls, or approximately 48 calls per day. Of those calls, approximately 38 percent were initiated by the police, and 62 percent were direct calls from the public. Approximately 30 percent of total calls for service (5,285) were for traffic enforcement, resulting in 12,096 direct demands for service.

Crime Rates

As defined by the FBI Uniform Crime Reporting Program, seven major Part I offenses are used to measure the extent, fluctuation, and distribution of serious crime. Part I crimes are split into violent crimes (murder, rape, robbery, and aggravated assault) and property crimes (burglary, larceny, and motor vehicle theft).

In 2011, Hermosa Beach reported 314 Part I violent crimes per 100,000 residents, and 3,066 Part I property crimes per 100,000 residents. The reported number of violent crimes was 23.7 percent lower than the statewide rate, and 18.7 percent lower than the national rate. Property crime rates were 18.7 percent higher than the state average, and 5.4 percent higher than the national average.

Response Times

For HBPD response, a priority code of 1 to 4 is assigned to each call by the dispatch center, with 1 being the highest priority. Between May 2012 and April 2013, the HBPD reported 9,345 calls with valid response times. The highest priority calls were responded to within 5.5 minutes. The average response time, after weighting total calls by priority, was 9.5 minutes (see Table 16-1).

TABLE 16.1: AVERAGE POLICE RESPONSE TIMES BY PRIORITY, MAY 2012–APRIL 2013

Priority	Response Time	Total Calls
1	5.5	1,254
2	8.9	5,397
3	13.5	2,333
4	5.6	361
Total	**9.5**	**9,345**

Source: Center for Public Safety Management 2013b

Water Supply and Use

Potable water is provided to the city by the California Water Service Company (Cal Water). Formed in 1926, Cal Water serves more than 472,000 customers through 28 operations centers throughout the state. About 95 percent of Cal Water's business is regulated by state commissions (Cal Water 2011).

Hermosa Beach is located in Cal Water's Hermosa-Redondo District (District). The District supplies groundwater, imported surface water, and recycled water. Table 16-2 provides a breakdown of water supply sources. Approximately 11 percent of the District's water comes from groundwater extracted from the West Coast Basin's Silverado aquifer; the remaining potable water is imported through agreements with the West Basin Municipal Water District.

TABLE 16.2: HERMOSA-REDONDO DISTRICT WATER SUPPLY, 2010

Water Supply Source	Acre Feet/Year	Percent
Cal Water Produced Groundwater	1,424	11%
West Basin Municipal Water District	10,958	88%
Recycled Water	134	1%
Total	12,516	100%

Source: Cal Water 2011

To offset the demand for potable water, reclaimed water is provided to the City of Hermosa Beach by the West Basin Municipal Water District (West Basin), which provides drinking water and recycled water to a 185-square-mile service area. Historically, West Basin's primary supply source was imported water from the Metropolitan Water District of Southern California (Metropolitan). West Basin purchases water from Metropolitan and wholesales the water to cities and private companies, such as Cal Water, in southwest Los Angeles County. However, given recent concerns over future reliability of these imported supplies, West Basin has been increasing development of additional local supplies. Groundwater production within the West Basin service area includes the West Coast Groundwater Basin and pumping from the Central Groundwater Basin into the West Basin service area. West Basin is projecting to more than double current recycled water supplies by 2035, as well as possibly invest in over 20,000 acre-feet per year (AFY) of ocean water desalination supply. These sources, coupled with an additional doubling of conserved supply through water use efficiency programs, are expected to cut the overall imported water use nearly in half from 2008 to 2020. West Basin's service area uses 220,000 acre-feet of water annually. An acre-foot of water is approximately 326,000 gallons, which is enough to meet the water needs of two average families in and around their homes for one year (West Basin 2011a, 2011b).

Wastewater

The City of Hermosa Beach provides wastewater collection services within the planning area. The sanitary sewer system network comprises approximately 37 miles of sewer lines. Much of the system is believed to have been installed in the late 1920s, although confirmation of this is difficult. The majority of the original system is concrete, with recent replacements of clay pipe. The system is primarily a gravity flow system, with the exception of two pump stations. The effluent collected by sewer lines is discharged into the Sanitation Districts of Los Angeles County (LACSD) trunk lines, which flow in a north-northwesterly direction toward the City of Manhattan Beach (MBF Consulting 2011).

The LACSD trunk lines flow to a Joint Water Pollution Control Plant (JWPCP), located in Carson. The JWPCP is one of the largest wastewater plants in the world and is the largest of the LACSD wastewater treatment plants. The facility provides both primary and secondary treatment for approximately 280 million gallons of wastewater per day and has a total permitted capacity of 400 million gallons per day. The plant serves a population of approximately 3.5 million people throughout Los Angeles County. Treated discharge from the plant is transported to the Pacific Ocean through a network of outfalls, which extend 1.5 miles off the Palos Verdes Peninsula, to a depth of 200 feet (LACSD 2013).

Storm Drainage

Hermosa Beach is part of the Santa Monica Bay watershed, which has an annual discharge of more than 30 billion gallons of stormwater and urban runoff each year through 200 outlets. Urban runoff is caused by precipitation falling upon impermeable pavement (City of Hermosa Beach 2010).

The City of Hermosa Beach and Los Angeles County are co-permittees on a Municipal Separate Storm Sewer System (MS4) Permit within the planning area. The City is responsible for the development, implementation, and enforcement of stormwater runoff and drainage requirements to protect local and coastal water quality. Please refer to Section 11 (Hydrology and Water Quality) for additional information on water quality within the planning area.

Telecommunications

Telecommunications services in the planning area include cable television, high speed internet, and telephone services. These services are provided by private companies including Time Warner Cable, Verizon, Direct TV, and Dish Network.

Solid Waste

Solid waste disposal services in Hermosa Beach are provided by a commercial vendor, Athens Services, pursuant to an agreement for Integrated Solid Waste Management Services dated May 24, 2013 (City of Hermosa Beach 2013c). Athens Services provides collection service, including recycling, to both residential and commercial properties in the planning area. Solid waste is hauled to the Athens United Waste Materials Recovery Facility in the City of Industry, where it is sorted and recycled in compliance with state Assembly Bill (AB) 341. Waste materials are then transported to a variety of landfills identified in the Integrated Solid Waste Management agreement (Table 16.3).

TABLE 16.3: MUNICIPAL SOLID WASTE HAULED TO LANDFILLS (2012)

Facility Name	Tons Hauled to Each Landfill (2012)	Percentage of Annual Waste
Antelope Valley Recycling and Disposal Facility	4	0%
Azusa Land Reclamation (Inert)	33	0%
Chiquita Canyon Landfill	439	3%
Lancaster Landfill	65	0%
Puente Hills Landfill	775	5%

Facility Name	Tons Hauled to Each Landfill (2012)	Percentage of Annual Waste
Southeast Resource Recovery Facility	1,182	8%
Sunshine Canyon City/County Landfill	11,675	82%
Total	14,173	100%

Source: Los Angeles County, 2013b.

Data from the Los Angeles County Public Works Department (Los Angeles County 2013a and 2013b) lists approximately 5,000 tons per day available capacity for the Sunshine Canyon landfills, where 82% of the City's solid waste was disposed in 2012. The permitted life for the Sunshine Canyon landfill currently extends through 2037.

Residential hazardous waste disposal is available at a facility operated by the City of Los Angeles Bureau of Sanitation located in Playa Del Rey. The facility is open on Saturdays and Sundays. The California Integrated Waste Management Board certifies used oil recycling collection centers to encourage recycling of motor oil.

According to the City of Hermosa Beach Sustainability Plan, in 2009, the City recycled 26 percent of the waste disposed by residents and commercial uses (City of Hermosa Beach 2011a). In 2013, the City executed a new waste franchise agreement with Athens Disposal Services, which includes a guaranteed 50 percent or higher diversion rate or higher, through the implementation of a 'pay as you throw' as well as single stream waste recovery and disposal system. After implementation of the new franchise agreement, December 2013 records showed that the City reached a 50.3 percent diversion rate (City of Hermosa Beach 2013e). Athens also provides street sweeping and cleaning services which eliminate waste, while Los Angeles County provides beach cleaning services.

Schools

The Hermosa Beach City School District (HBCSD) provides elementary school (K-8) public education to students living in the planning area. For high school, students attend either Mira Costa High School in Manhattan Beach, or Redondo Union High School in Redondo Beach (Hermosa Beach City School District, 2009). One private elementary school, Our Lady of Guadalupe School at 340 Massey Street, is also located in the planning area. Table 16-4 identifies schools located in the planning area and their enrollments for the 2012–2013 school year. Fusion Academy is also an accredited, non-traditional private school for grades 6-12 at 1601 Pacific Coast Highway.

TABLE 16.4: HERMOSA BEACH SCHOOL ENROLLMENT, 2012–2013

School	Grades	Total Enrollment
Hermosa View	K-2	467
Hermosa Valley	3-8	929
Our Lady of Guadalupe School	Preschool-8	180

Source: California Department of Education, Educational Demographics Unit 2013

With recent changes in the City's demographic composition, Hermosa View Elementary and Hermosa Valley Elementary have observed increases in school enrollment totals since the 2005–2006 school year, when enrollment levels were at 395 and 671, respectively. The District is currently preparing a Long Range Facilities Master Plan for Valley and View, as well as North School which is owned by the District, but is not currently used as a school facility.

City Administrative Facilities

The City owns, operates, and maintains two administrative service facilities. City Hall includes administrative offices for all City departments. Police and fire stations are described in their respective "stations and staffing" subsections, above. Table 16-5 provides a summary of the City's administrative service facilities.

TABLE 16.5: ADMINISTRATIVE FACILITIES

Facility Name	Facility Address
Hermosa Beach City Hall	1315 Valley Drive
Hermosa Beach Public Works City Yard	555 6th Street

Parks and Recreation

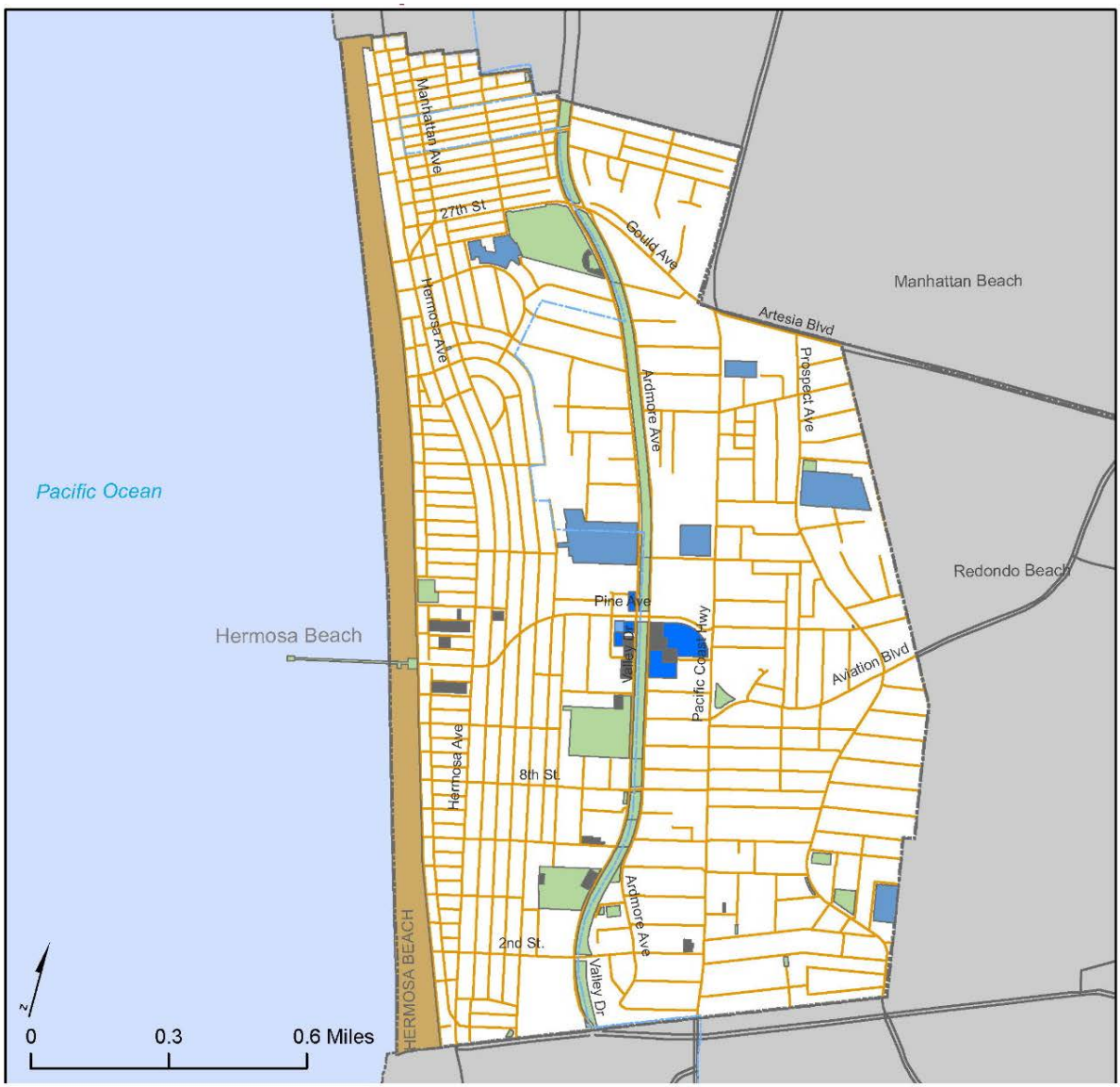
Park Facilities

The City owns, operates, and maintains many developed park and recreation facilities providing green space, picnic facilities, a skateboard park, tennis courts, lawn bowling, and space for sporting events, as well as a community garden. The Strand and Greenbelt provide city-long paths. Following a ballot initiative (Measure O, 1986), redesignation of park land designated Open Space in the General Plan to any other use requires voter approval.

Figure 16.1 identifies locations of parks and recreational facilities in the planning area. The Hermosa Beach Community Resources Department administers the City's recreation program which offers a variety of recreational activities for participants of all ages, and rents City park facilities for private events.

The planning area includes approximately 48.4 acres of parkland and 63.4 acres of public beaches (see Table 16-6). Hermosa Beach does not have an established goal or standard for open space or parkland. With 19,653 residents in 2013 and 111.8 acres of accessible open space or parkland in Hermosa Beach, the City provides 5.7 acres of parkland per 1,000 residents. This is above the goal or standard of 4 acres set by many cities in Los Angeles County, and above the 3 acres per 1,000 residents standard required under the Quimby Act. For comparison, excluding the beach (63.4 acres), the City provides 2.46 acres per 1,000 residents.

FIGURE 16.1: PUBLIC SERVICES AND SPACES IN HERMOSA BEACH



Legend

- City Boundary
- HB_streets
- Coastal Zone Boundary
- Parking Lots

Public Space

- Beach
- Public Facility
- Fire/Police
- Park
- School

City of Hermosa Beach General Plan Update 2035

Pepared by Raimi + Associates for the City of Hermosa Beach
Source: City of Hermosa Beach, Los Angeles County, November 2013

TABLE 16.6: PARK AND RECREATION FACILITIES IN HERMOSA BEACH

Park Name	Address	Park Type	Size (Acres)
4th & Prospect Parkettes	4th St & Prospect Ave	Parkette	< 0.1
5th & Prospect	5th St & Prospect Ave	Parkette	< 0.1
Ardmore Park	491 Ardmore Park	Park	0.2
Beach		Beach	63.4
Bicentennial Park	Valley Dr & 4th St	Park	0.4
Clark Stadium	861 Valley Dr	Park	6.6
Edith Rodaway Friendship Park	Prospect Ave & Hollowell Ave	Park	0.8
Fort Lots-o-Fun	Prospect Ave & 6th St	Park	0.4
Greenbelt		Park	19.0
Greenwood Park	Pacific Coast Hwy & Aviation Blvd	Park	0.5
Hermosa Beach Community Center	710 Pier Ave	Community Center	4.8
Hermosa Beach Fishing Pier		Fishing Pier	0.9
Ingleside Park/Shaffer Park	Ingleside Ave & 33rd Pl	Park	< 0.1
Kay Etow Park	Monterey Blvd & Lyndon St	Park	< 0.1
Moondust Parkette	2nd St	Parkette	< 0.1
Noble Park & Greg Jarvis Memorial	1400 The Strand	Park	0.8
Ocean View Park	3rd St	Park	< 0.1
Sand Hill Parkette	Circle Dr & Loma Walk	Parkette	< 0.1
Scout Parkette	Prospect Ave & 14th St	Parkette	< 0.1
Sea View Parkette	Prospect Ave & 19th St	Parkette	0.3
South Park	425 Valley Dr	Park	4.5
Valley Park	Valley Dr & Gould Ave	Park	8.8
TOTAL			111.8

Source: City of Hermosa Beach 2013d

Three facilities, Valley Park, Clark Stadium, and South Park, support activities and sport leagues for both youth and adult participants. Clark Stadium also provides lawn bowling. The Clark Building, located at 861 Valley Drive, provides a multi-purpose hall and lighted sports fields. The farmers market is held every Friday just north of the tennis courts at Clark Stadium. South Park, located at 425 Valley Drive, provides lawn areas, a new play area (under construction), and a community garden.

The Veterans Parkway (Hermosa Valley Greenbelt/Trail), located between Valley Drive and Ardmore Avenue, runs the length of the planning area and connects to Redondo Beach and Manhattan Beach. The Greenbelt provides a walking and jogging trail. Also located within the planning areas are Ardmore Park (491 Ardmore Avenue) and Bicentennial Park (Valley Drive and 4th Street).

The Community Center and Hermosa Beach Community Theater are located at 710 Pier Avenue, at the intersection of Pacific Coast Highway and Pier Avenue. This complex includes a community center with meeting rooms, senior center, large and small theaters, gymnasium, skate park, tennis courts and the Hermosa Beach Museum. The P.A.R.K. (Positive Active Recreation for Kids) Program is a new after-school program offered at the Hermosa Beach Community Center and South Park for Hermosa Beach residents, emphasizing active recreation for children in 1st through 8th grades. Children walk with a supervisor from Hermosa Valley School and Hermosa View School to the community center and also along the Greenbelt to South Park.

Lifeguard and Beach Management

The City of Hermosa Beach owns 50 acres of public beaches, including 1.5 miles of shoreline and the Hermosa Pier. With annual beach attendance of 3.7 million visitors in fiscal year (FY) 2010-2011, ocean protection and lifeguarding services are important public services to protect public safety along the City's beaches and coastal areas. The City contracts with the Los Angeles County Fire Department's Lifeguard Division for these services. The Lifeguard Division consists of 150 full-time and 700 seasonal lifeguards throughout Los Angeles County.

The Lifeguard Division operates out of four sectional headquarters, one of which is located in Hermosa Beach. The Hermosa Beach sectional headquarters staffs a 24-hour emergency medical technician response unit and is connected to the 911 system.

Beaches

Hermosa Beach is known for its beach, surfing, and the paved path that parallels the beach known as "The Strand," connecting Hermosa Beach to neighboring beach cities. The City owns the wide beach that runs the length of the planning area and serves both locals and visitors. The Strand is also part of the statewide California Coastal Trail system.

As a beach community, Hermosa experiences a high visitor population. During FY 2010–11, monthly beach attendance ranged from a low of 94,300 in December 2010 to a high of 939,000 in July 2010 (Los Angeles County Fire Department 2014). Total beach attendance in FY 2010–11 was up 18.5 percent from FY 2009–10 to 3,763,700.

The Hermosa Pier is 1,228 feet long and offers year-round fishing. The pier contains the Surfer's Walk of Fame, where surfing legends from Hermosa Beach are commemorated with bronze plaques embedded within the pier's walking surface. In addition to surfing, recreational beach activities include volleyball, skating and skateboarding, jogging, and bicycling. Special events throughout the year are primarily focused on the beach, the adjacent Pier Plaza, and Downtown area. There were nearly 60 public special events scheduled for 2014 as of January 2014.

Other Services and Facilities

Many other services are needed and used by Hermosa Beach residents, but not all are within the jurisdiction of the City. Examples of non-City services with increased demands as a result of increased population include medical services, such as hospitals and emergency care centers, child care services, and senior services. Although the allocation of these services is not within the control of the City, some brief descriptions of these services are provided below.

Medical Facilities

There are no emergency medical facilities located within the planning area. The Torrance Memorial Medical Center and Little Company of Mary are the hospitals closest to Hermosa Beach, both located within five miles south of the planning area.

Child Care Facilities

Child care facilities are also needed to serve residents as population increases. Similar to hospital and medical facilities, the City does not have discretionary authority over these facilities, but these facilities, along with adult care facilities, are required to be licensed by the California Department of Social Services, Community Care Licensing Division. There are a total of four child care facilities in Hermosa Beach (California Department of Social Services 2012), with a total capacity of 209 children.

Senior Services

Senior services are needed to serve the unique needs of older community members. Private facilities, such as Sunrise Senior Living, provide living arrangements for older residents ranging from independent housing to assisted medical care for persons with Alzheimer's disease. For recreational purposes, the City opened the Hermosa Five-O Senior Activity Center in May 2010. The center provides group activities and classes to all South Bay residents who are 50 years of age or older.

16.3 Regulatory Setting

The following federal, state, and local plans, policies, regulations, and laws pertain to public services, utilities, and recreation in the planning area.

Federal Plans, Policies, Regulations, and Laws

Clean Water Act and National Pollutant Discharge Elimination System(NPDES)

Authorized by the Clean Water Act in 1972, the NPDES permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Any industrial, municipal, or other facility which discharges directly to surface waters must obtain permits through the authorized states. In California, the State Water Resources Control Board (SWRCB) serves as the authorized agency to issue NPDES permits.

State Plans, Policies, Regulations, and Laws

WATER SUPPLY AND MANAGEMENT

Senate Bill 610

Senate Bill (SB) 610 (Section 21151.9 of the Public Resources Code and Section 10910 et seq. of the Water Code) requires the preparation of "water supply assessments" (WSA) for large developments (e.g., for projects of 500 or more residential units; 500,000 square feet of retail commercial space; or 250,000 square feet of office commercial space). It is extremely unlikely that this type of development will occur in Hermosa Beach.

Urban Water Management Act

The California Urban Water Management Planning Act of 1983 requires that each urban water supplier, providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, shall prepare, update, and adopt its Urban Water Management Plan (UWMP) at least once every five years on or before December 31, in years ending in 5 and 0. The plan describes and evaluates sources of water supply, projected water needs, conservation, implementation strategy, and schedule. The Hermosa-Redondo District of California Water Service Company, the City's water supplier, last prepared an UWMP in 2010.

WASTE MANAGEMENT

Sewer System Management Plan

The SWRCB adopted new policies in December 2004 requiring wastewater collection providers to report sanitary sewer overflows and to prepare and implement sewer system management plans (SSMP). SSMP requirements are modeled on proposed federal capacity, management, operations, and maintenance plans. The SSMP policy requires dischargers to provide adequate capacity in the sewer collection system, take feasible steps to stop sewer overflows, identify and prioritize system deficiencies, and develop a plan for disposal of grease, among other requirements. In addition, wastewater providers must now report sanitary sewer overflows to the Los Angeles Regional Water Quality Control Board, must keep internal records of these overflows, and must produce an annual report on overflows. Overflows from laterals on private property, if caused by an owner, are not required to be reported.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the California Legislature passed the California Integrated Waste Management Act of 1989 (AB 939, Statutes of 1989), effective January 1990. According to this act, all cities and counties were required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000.

To help in the increase of diversion rates, each jurisdiction is required to create an integrated waste management plan. Each city plan must demonstrate integration with the relevant county plan. The plans must promote source reduction, recycling and composting, and environmentally safe transformation and land disposal. Elements of the plans must be updated every five years.

AB 939 established the California Integrated Waste Management Board (CIWMB) to oversee integrated waste management planning and compliance. The bill's passage led to the refinement of a statewide system of permitting, inspections, maintenance, and enforcement for waste facilities in California, and also required the CIWMB to adopt minimum standards for waste handling and disposal to protect public health and safety and the environment. The CIWMB is responsible for approving permits for waste facilities, approving local agencies' diversion rates, and enforcing the planning requirements of the law through local enforcement agencies (LEA). LEAs are responsible for enforcing laws and regulations related to solid waste management, issuing permits to solid waste facilities, ensuring compliance with state-mandated requirements, coordinating with other government agencies on solid waste-related issues, and overseeing corrective actions at solid waste facilities. LEAs inspect facilities, respond to complaints, and conduct investigations into various aspects of solid waste management.

SCHOOLS

California Department of Education Facilities and Planning Division

The California Education Code contains various provisions governing the siting, design, and construction of new public schools (e.g., Education Code Sections 17211, 17212, and 17212.5). In addition, to help focus and manage the site selection process, the California Department of Education (CDE) School Facilities and Planning Division has developed screening and ranking procedures based on criteria commonly affecting school selection (Education Code Section 17251[b], Title 5 of the California Code of Regulations, Section 14001[c]). The foremost consideration in the selection of school sites is safety. Certain health and safety requirements are governed by state statute and CDE regulations. In selecting a school site, a school district should consider factors such as proximity to airports and railroads, proximity to high-voltage power transmission lines, presence of toxic and hazardous substances, and hazardous air emissions within one-quarter mile.

School Facility Fees

Education Code Section 17620 authorizes school districts to levy a fee, charge, dedication, or other requirement against any development project for the construction or reconstruction of school facilities, provided that the district can show justification for levying of fees. Government Code 65995 limits the fee to be collected to the statutory fee (Level I) unless a school district conducts a Facility Needs Assessment (Government Code Section 65995.6) and meets certain conditions. These fees are adjusted every two years in accordance with the statewide cost index for Class B construction, as determined by the State Allocation Board.

SB 50 (1998) instituted a new school facility program by which school districts can apply for state construction and modernization funds. This legislation imposed limitations on the power of cities and counties to require mitigation for school facility impacts as a condition of approving new development. Proposition 1A/SB 50 prohibits local agencies from using the inadequacy of school facilities as a basis for denying or conditioning approvals of any "legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property…" (Government Code Section 65996[b]). Additionally, a local agency cannot require participation in a Mello-Roos district for school facilities; however, the statutory fee is reduced by the amount of any

voluntary participation in a Mello-Roos district. Satisfaction of the Proposition 1A/SB 50 statutory requirements by a developer is deemed to be "full and complete mitigation."

State Service Standards Affecting All Districts

The California Education Code Section 41402 states that unified school districts are required to have eight administrative employees per 100 teachers.

State standards for the number of students per classroom pursuant to Chapter 407, Statutes of 1998 (loading standards), require a maximum of 25 students per classroom in elementary schools and 27 students per classroom in middle and high schools.

PARKS

Quimby Act

As part of approval of a final tract or parcel map, the California Quimby Act allows a city to require dedication of land, the payment of in-lieu fees, or a combination of both to be used for the provision of parks and recreational services. Cities can require land or in-lieu fees for a minimum of 3 acres per 1,000 residents, with the possibility of increasing the requirement to a maximum of 5 acres per 1,000 residents if the city already provides more than 3 acres per 1,000 residents.

California Coastal Act

The California Coastal Act of 1976 (Coastal Act) and the California Coastal Commission, the state's coastal protection and planning agency, were established by voter initiative in 1972 to plan for and regulate new development, and create strong policies to protect public access to and along the shoreline.

To ensure maximum public access to the coast and public recreation areas is provided, the Coastal Act directs each local government lying within the coastal zone to prepare a Local Coastal Program (LCP) consistent with Section 30501 of the Coastal Act, in consultation with the Coastal Commission and with public participation. Provisions of the Coastal Act relative to public services, utilities, and recreation are summarized below.

Until an LCP has been adopted by the local jurisdiction and certified compliant with the Coastal Act, the Coastal Commission retains permitting authority within the local jurisdiction. A coastal development permit (CDP) is required for development in the Coastal Zone that results in changes to the density or intensity of the use of land, changes in water use, and impacts to coastal access.

California Coastal Act

Section 30210 Access; recreational opportunities; posting

In carrying out requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all of the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from over use.

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 30221 Oceanfront land; protection for recreational use and development

Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the 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 nonautomobile 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 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.

Source: California Public Resources Code, Division 20: California Coastal Act

Regional and Local Plans, Policies, Regulations, and Laws

Hermosa Beach Capital Improvement Program (CIP)

The CIP is a budget for the upcoming fiscal year as well as a projection of revenue and desire projects for the next five years. The City's current CIP is a product of extensive public outreach and reflects the spending priorities of the community including street and highway improvements, sewer/storm drain improvements, parks improvements, and public buildings and grounds improvements. The current commitment for FY 2014–2015 is just over $6 million.

Sanitation Districts of Los Angeles County

The LACSD serves approximately 5.7 million people in Los Angeles County through 24 independent special districts. The service area includes approximately 820 square miles in 78 cities and unincorporated areas within the county. Approximately 1,400 miles of main trunk sewers and 11 wastewater treatment facilities serve the area. The 23 independent special districts are governed by Boards of Directors, consisting of the mayors of each city within the districts and the chair of the

Board of Supervisors for unincorporated territories. The planning area lies within the South Bay Cities District of the LACSD.

Los Angeles Regional Agency (LARA)

LARA was approved by the California Integrated Waste Management Board (CIWMB) in 2004 to assist its 14 member cities to achieve AB 939 recycling goals through a Joint Powers Agreement on a regional basis. The City is a member of LARA which assists member cities in complying with recycling requirements.

Hermosa Beach Sewer Master Plan

The 2011 Sanitary Sewer Master Plan Update (SSMP) provides an overview of existing conditions and recommends a rehabilitation program for Hermosa Beach's sanitary sewer infrastructure. The SSMP estimates that the entire sanitary sewer system has a present replacement value of $40 million. The SSMP recommends that the City invest $7.5 million (present value), plus 20% equal to $1.5 million for design and administration to rehabilitate approximately 95,000 lineal feet of sanitary sewer pipes through year 2021 (City of Hermosa Beach 2011b).

Hermosa Beach Municipal Code

The Hermosa Beach Municipal Code provides regulations and standards related to development and operations. The chapters relevant to public services, utilities, and recreation include:

- **Chapter 2 – Administration and Personnel** – contains bylaws and administration procedures for City advisory committees (including Parks, Recreation and Community Resources, Emergency Preparedness), commissions (including Planning Commission, Public Works Commission), and City departments or divisions (Police Department Traffic Division, Emergency Services, Police Reserve Corps).
- **Chapter 8 – Health and Safety** – includes standards and procedures to protect the health and safety of residents, businesses, and visitors regarding garbage collection and disposal, hazardous materials, nuisances, sewage and industrial waste, stormwater and urban runoff pollution, and water conservation and drought management.
- **Chapter 9 – Public Peace, Morals and Welfare** – identifies expectations for public conduct within the planning area, enforced by the police department.
- **Chapter 12 – Street, Sidewalks and Public Places** – establishes development and operations standards for public spaces within the planning area (e.g., parks, sidewalks, the beach).
- **Chapter 13 – Public Services** – identifies fees associated with sewer connections and the process to establish underground utility districts.
- **Chapter 15 – Buildings and Construction** – establishes building and construction standards to protect public health, safety, and welfare through fire prevention, abatement of dangerous buildings, seismic strengthening, and enforcement of mechanical, plumbing, and electrical codes.
- **Chapter 16 – Subdivisions** – identifies standards and procedures for subdividing land within the planning area consistent with the Subdivision Map Act, including park and recreation area dedication and fees.

- **Chapter 17 – Zoning** – identifies and defines appropriate activities and operations through the establishment of zoning districts within the planning area.

Hermosa Beach Comprehensive Parks and Recreation Master Plan

The City of Hermosa Beach Comprehensive Parks and Recreation Master Plan (CPRMP) was adopted in 1990 and provides guidance for the management and orderly development of parks, recreation, and open space facilities and programs within Hermosa Beach. The CPRMP identifies the long-term goals of the community to be a steward of existing park and recreational spaces, provide recreational resources, programs, and activities, and promote preservation and interpretation of historical resources, cultural resources, and natural environments. These goals are supported through the CPRMP by specific policies associated with park land acquisition, classification of park lands, design and development standards, program and service policies, operation and maintenance objectives, and economic performance policies. An updated plan for South Park was adopted in 2009.

Hermosa Beach Local Coastal Program (LCP)

The LCP consists of the Coastal Land Use Plan (general plan-level policies and maps) and a Local Implementation Program (coastal zoning code, zoning maps, and implementing ordinances). The Hermosa Beach Coastal Land Use Plan component, adopted by the City and certified by the California Coastal Commission in 1981, addresses the public access and recreation considerations within the Coastal Zone. The Local Implementation Program of the LCP has not yet been certified and, therefore, the City does not have a certified LCP and the Coastal Commission retains the authority to review and issue CDPs for development within the Coastal Zone.

The Coastal Land Use Plan includes a statement of philosophy and supporting goals, policies, and programs to "maintain [Hermosa Beach's] current high level of recreational access to the coast and its recreational facilities to be consistent with maintaining the beach in its most natural state" by maximizing access, maintaining availability of low-cost visitor facilities, and establishing and enforcing building and development standards with priority for recreational and visitor-serving uses.

C-17: Transportation

Chapter 17. Transportation

17.1 Introduction

The availability and affordability of transportation options shape not only the way in which people of all abilities navigate the physical environment, but also the environment itself. Mobility within a community involves a range of transportation modes, including automobiles, public transit, bicycles, pedestrians, wheelchairs, and even skateboards or Segways. Offering multiple modes of transportation provides a range of choices for persons of all abilities, in turn improving utility, social connectivity, and health. The movement of people, goods and services can also have implications for the economy. The use of space to accommodate the various transportation modes and parking is also part of transportation related considerations.

This chapter describes the physical and operational conditions of the circulation network within and connecting Hermosa Beach with the region, including roadways and circulation of people across all modes of transportation. This chapter also summarizes the regulatory framework affecting transportation in the City, including State, regional and local regulations and plans. Finally, this chapter identifies key issues and opportunities for consideration in developing the Hermosa Beach General Plan Update, as well as community indicators that can be used to monitor the health of the overall transportation system moving forward.

17.2 Environmental Setting

Existing Conditions

The transportation system in Hermosa Beach features diverse elements including roadway, bicycle and pedestrian systems, as well as a public transit system providing both local and regional bus service. Each of these elements is discussed in greater detail below.

Roadway System

The City of Hermosa Beach is fully developed with established traffic patterns. The street system is primarily a traditional grid system with blocks that are approximately 500 feet from north to south by 250 feet from east to west. The street system is comprised of three functional systems: arterials, collectors, and local streets. The classification of streets is based on a functional hierarchy defined by the number of travel lanes, roadway width (curb to curb), right-of-way (public property line to public property line), and traffic volumes. Pacific Coast Highway (PCH), also known as State Route 1, Ardmore Avenue/Valley Drive, Artesia Boulevard (State Route 91), Aviation Boulevard, and Herondo Street provide connectivity to neighboring cities. The closest freeway providing regional access, the San Diego Freeway (I-405), is located approximately three miles east of the city border.

Functional Classifications

The existing Hermosa Beach General Plan Circulation, Transportation, and Parking Element, adopted in 1990, designates three different roadway types in the City. Functional classification refers to how a road accommodates two characteristics: First, the extent to which the roadway prioritizes the through movement of traffic and second, the level of access provided to adjacent properties. Based on these generalized characteristics, roadways often vary in terms of right-of-way, roadway width, number of lanes, intersection and traffic signal spacing, speed, and other factors. Functional classification is generally determined in the Circulation Element of the City's General Plan, in which the functional classification is assigned to a particular roadway based on the criteria above. Table 17.1 below identifies these roadway types for Hermosa Beach and gives a description of their performance characteristics. Table 2 outlines the classified facilities within the city. Table 3 shows the Average Daily Traffic (ADT) volumes, as reported in the 1990 Circulation Element, along the major streets in the City. Since that data is now almost a quarter century old, where available, data from the 2008 SCAG model and/or the 2014 E&B Oil Drilling and Production Environmental Impact Report are shown for comparison purposes. New ADT counts will be collected in 2014 as part of the General Plan update process.

TABLE 17.1: HERMOSA BEACH ROADWAY FUNCTIONAL CLASSIFICATIONS

Roadway Type	Accommodation for Movement of Traffic	Level of Property Access
Arterial	Primary roadway for movement of traffic at city level; prioritizes traffic movement; can also provide regional connectivity.	Driveways and other curb cuts along arterials are limited to minimize disruption to traffic flow.
Collector	These roadways carry traffic between residential neighborhoods and arterial streets. Collectors typically provide intra-city and some inter-city, but no regional, access.	Access is prioritized similarly to a local street with more considerations for traffic flow and visibility.
Local	These roadways are designed to serve adjacent residential land uses only and provide the lowest accommodation for traffic movement.	Local streets provide the highest level of property access. Driveways are closely spaced and there are few access limitations.
Walk Street	Walk streets provide no vehicular access.	Walk streets provide high levels of pedestrian- and bicycle-only property access.

Source: Hermosa Beach General Plan Circulation, Transportation, and Parking Element, 1990

TABLE 17.2: HERMOSA BEACH ROADWAYS

Classification	Streets
Arterial Streets	Artesia Boulevard
	Aviation Boulevard
	Hermosa Avenue (14th Street to south City Limit)
	Pacific Coast Highway
	Pier Avenue (PCH to Ardmore Avenue)
Collector Streets	2nd Street (PCH to Hermosa Avenue)
	5th Street (PCH to Prospect Avenue)
	8th Street (PCH to Hermosa Avenue)
	25th Street
	27th Street
	Ardmore Avenue (Pier Avenue to north City Limit)
	Gould Avenue
	Manhattan Avenue (27th Street to north City Limit)
	Monterey Boulevard
	Pier Avenue (west of Ardmore Avenue)
	Prospect Avenue
	Valley Drive (Pier Avenue to south City Limit)
Local Roads	All others

Source: Hermosa Beach General Plan Circulation, Transportation, and Parking Element, 1990

TABLE 17.3: HERMOSA BEACH ADT COUNTS

Street	Segment	General Plan	SCAG Model	Oil DEIR
2nd St	west of Valley Dr	4,600	3,000	-
	east of Ardmore Av	3,000	16,700	-
6th St	Valley Dr to Hermosa Av	5,000	-	800
8th St	Ardmore Av to PCH	5,000	-	-
Ardmore Av	north end of City	8,500	-	-
	south end of City	3,200	-	-
Artesia Bl	east City Limit to PCH	23,400	19,600	-
Aviation Bl	east City Limit to PCH	29,500	15,900	28,000
Gould Av	Morningside Dr to Valley Dr	9,100	800	-
	Ardmore Av to PCH	12,900	14,900	-
Hermosa Av	north City Limit to 31st St	3,700	-	-
	19th St to 14th St	13,200	12,600	-
	14th St to south City Limit	17,570	10,700	-
Pacific Coast Hwy	Artesia Bl to Aviation Bl	47,000	27,900	-
	Aviation Bl to south City Limit	54,500	36,100	-
Pier Av	PCH to Ardmore Av	20,800	10,800	16,000
Prospect Av	Artesia Bl to Aviation Bl	-	12,500	4,800
	Aviation Bl to south City Limit	-	24,100	9,200
Valley Dr	Longfellow Av to Gould Av	9,100	-	-
	Pier Av to 6th St	-	1,500	4,700
	6th St to Herondo St	5,500	5,200	4,000

Sources:

Hermosa Beach General Plan Circulation, Transportation, and Parking Element, 1990

SCAG Model, 2008 Baseline Volumes

E&B Oil Drilling & Production Project Draft Environmental Impact Report, 2014

Hermosa Beach Streets

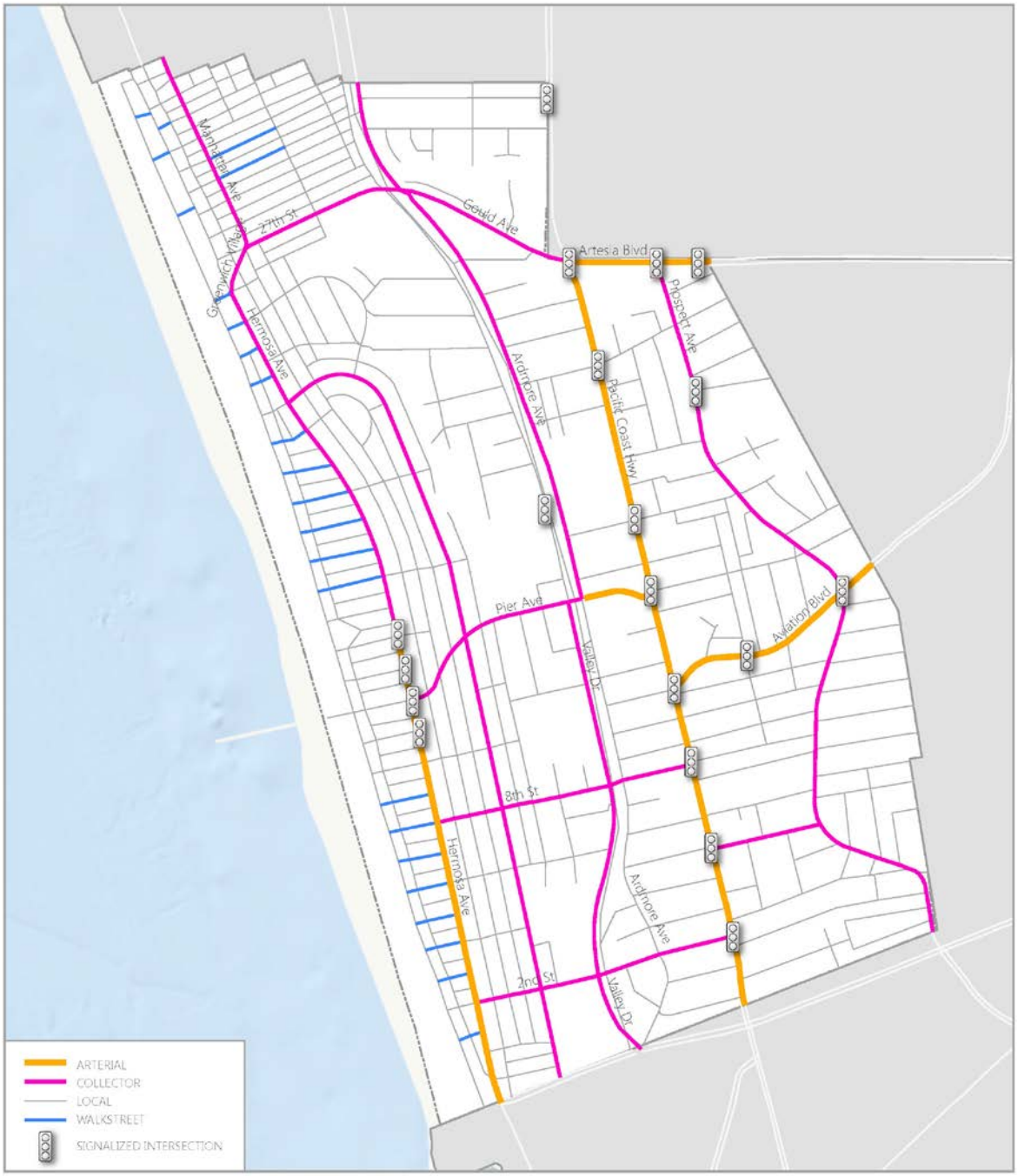
Many streets in Hermosa Beach are primarily narrow, two-lane tree-lined streets with no medians and often no centerline. Some arterials (PCH, Hermosa Avenue, and Artesia Boulevard) have medians and four or more lanes of traffic. Posted speed limits within the City are typically between 25 and 35 mph. On-street parallel parking is common throughout the City, with angled parking on Pier Avenue west of Valley Drive, and perpendicular parking on Valley Drive opposite Clark Field. Described below are the primary streets forming the transportation network in Hermosa Beach.

The majority of streets in Hermosa Beach are classified as local streets. Local streets are generally two-lane roadways without medians, and in some cases, without centerlines. Some local streets have sidewalks while others lack pedestrian facilities. Speed limits are typically 25 mph or less, and there is a higher likelihood of tight radius turns and meandering alignments. As the majority of streets are local streets, they will not be individually addressed in this report. Arterial and collector streets are discussed below.

A TYPICAL LOCAL STREET IN HERMOSA BEACH

Figure 17.1 shows the Hermosa Beach roadway network by functional type, as well as the location of signalized intersections.

FIGURE 17.1: HERMOSA BEACH STREET CLASSIFICATION AND SIGNALIZED INTERSECTIONS



Arterial Streets

Pacific Coast Highway – Also known as State Route 1, PCH is the major coastal access route throughout most of California, and is controlled and operated by the California Department of Transportation (Caltrans). PCH is the largest street in Hermosa Beach. PCH travels north-south throughout Hermosa Beach, and is the primary road connecting the City to Manhattan Beach and other points north and Redondo Beach and other points south. Within the City, PCH carries traffic generated by Hermosa Beach residents and businesses, as well as commuter and truck traffic, and other through traffic. PCH is a designated truck route in the City of Hermosa Beach.

The roadway is generally 74 feet wide curb-to-curb, and provides four through lanes, as well as off-peak curbside parking lanes in both directions. During the morning peak-hour period (7:00 to 9:00 AM), a third northbound travel lane is provided by prohibiting parking on the east side of the street. The roadway is partially divided by a center median. Posted speeds range from 30 to 35 mph. Existing land uses along the roadway are primarily commercial in strip mall developments, with a small pocket of single- and multi-family residential uses on the east side of the street between 17th Street and 21st Street.

Artesia Boulevard – Also called State Route 91, Artesia Boulevard is controlled and maintained by Caltrans. The roadway originates in Hermosa Beach at PCH and continues east to the Harbor Freeway (I-110), where it becomes the Redondo Beach Freeway. Within Hermosa Beach, the roadway is 80 feet wide curb-to-curb, and provides four through lanes divided by a raised, and sometimes landscaped, center median. On-street parking is prohibited between PCH and Prospect Avenue, and permitted east of Prospect Avenue across from Mira Costa High School. Land uses along Artesia Boulevard are commercial and institutional. Artesia Boulevard is a designated truck route in the City of Hermosa Beach.

Aviation Boulevard – Aviation Boulevard originates at Pacific Coast Highway in Hermosa Beach and heads north through Manhattan Beach and El Segundo to LAX, where it terminates at Manchester Avenue. Within Hermosa Beach, it has a curb-to-curb width of 64 feet, two through lanes in each direction, and curbside parking. The posted speed limit is 35 mph. Time-limited on-street parking is permitted west of Prospect Avenue. Land uses around Aviation Boulevard are commercial. Aviation Boulevard is a designated truck route in the City of Hermosa Beach.

Pier Avenue (PCH to Ardmore Avenue) – Between PCH and Ardmore Avenue, Pier Avenue is 72 feet wide from curb to curb, and provides two through lanes in each direction as well as metered curb parking on both sides of the roadway. Land uses around the roadway are commercial and recreational. This segment of Pier Avenue is a designated truck route.

Hermosa Avenue (south of Pier Avenue) – This segment of Hermosa Avenue has two lanes in each direction plus a raised, planted median. Between 14th Street and 10th Street, the curb-to-curb width is 80 feet, left-turn lanes are provided, and metered parking is available on both outside curbs. South of 10th Street, the curb-to-curb width is 84 feet, no left-turn lanes are provided, and metered parking is there available along both outside curbs and along both sides of the center median. The

posted speed limit is 30 mph. Land uses around the arterial portion of Hermosa Boulevard include local retail and restaurants.

Collector Streets

Hermosa Avenue (north of Pier Avenue) – North of Pier Avenue, land uses around Hermosa Avenue transition abruptly to residential only, and the roadway is classified down to a collector. The collector street portion of Hermosa Avenue begins and continues northward from Pier Avenue to the northern city limits. There is a raised center median along the entire length of the roadway. Between 14th Street and 27th Street, the roadway provides two lanes in each direction and metered parking along both outside curbs and both sides of the raised median. From 27th Street to the northern city limits, the roadway narrows to provide just one lane in each direction with metered parking allowed only along the outside curbs. The posted speed limit is 25 mph.

Valley Drive – Valley Drive originates in Manhattan Beach, where it is a one-way southbound street. From the northern city limits to 6th Street, Valley Drive is 24 feet wide curb-to-curb and provides one lane of travel in each direction. Parallel unmetered parking is available intermittently along the southbound side of the road. Perpendicular head-in parking is also found on the northbound side between 11th and 8th Street. South of 6th Street to the roadway's terminus at Herondo Street, Valley Drive reverts to two one-way southbound travel lanes. The roadway runs parallel to Ardmore Avenue. The Hermosa Beach Greenbelt, formerly the Atchison, Topeka, and Santa Fe railroad right-of-way, separates the two roadways. South of Pier Avenue and north of 18th Street, land uses around the roadway are recreational and residential. Between Pier Avenue and 18th Street, there are commercial and institutional land uses.

5th Street – The segment of 5th Street from Prospect Avenue to Pacific Coast Highway is classified as a collector street. It is 30 feet wide curb-to-curb and provides one travel lane in each direction plus curbside unmetered parking on the north side of the street. Throughout the remainder of the City, 5th Street is a local street.

Ardmore Avenue – Ardmore Avenue originates in Manhattan Beach and terminates on the south City Limit at Herondo Street. From the north City Limit to Pier Avenue, the roadway is 24 feet wide curb-to-curb and provides one lane of travel in each direction. On-street parking is prohibited. South of Pier Avenue, the travel lanes narrow to substandard widths of eight to nine feet in order to provide unmetered parking on the east (northbound) side of the street. The posted speed limit is 30 mph. Land uses around the roadway are residential and recreational, except between 18th Street to 11th Street, where they are commercial and institutional. Ardmore Avenue runs parallel to Valley Drive. The Hermosa Beach Greenbelt, formerly the Atchison, Topeka, and Santa Fe railroad right-of-way, separates the two roadways.

Pier Avenue (west of Ardmore Avenue) – This segment of Pier Avenue has two lanes of traffic in each direction with a raised center median and angled metered parking on both sides of the street. It is a designated truck route in the City. Land uses around the roadway are commercial.

Gould Avenue – Gould Avenue originates at PCH at Artesia Boulevard and runs westward to 27th Street. From PCH to 600 feet west, Gould Avenue is 80 feet wide curb-to-curb and provides two travel lanes in each direction plus a raised median. After 600 feet, Gould Avenue narrows to 46 feet curb-to-curb and provides one travel lane each in each direction, a center left-turn lane, and unmetered curb parking on the south side of the street. West of Ardmore Avenue, Gould Avenue narrows a further 24 feet, and provides just one travel lane in each direction. Land uses around Gould Avenue are primarily residential.

Monterey Boulevard / 22nd Street – 22nd Street runs from the beach eastward and becomes Monterey Boulevard before curving south to the southern city limits. The roadway is 40 feet wide curb-to-curb and provides one travel lane in each direction plus unmetered parking on both sides of the street. The posted speed limit is 25 mph. Land uses along the roadway are residential.

8th Street – From Hermosa Avenue to PCH, 8th Street is classified as a collector street and provides one travel lane in each direction as well as metered curbside parking on both sides of the road. It is a local street through the remainder of the City. Between PCH and Valley Drive, 8th Street narrows to approximately 30 feet wide and unmetered parking is allowed on the south side of the street. From Ardmore Avenue to Loma Drive, the street narrows to 25 feet curb-to-curb and no parking is allowed on either side of the street. The posted speed limit is 25 mph. Land uses around the roadway are residential.

2nd Street – From Hermosa Avenue to PCH, 2nd Street is classified as a collector street, is 30 feet wide curb to curb, and provides one travel lane in each direction as well as metered curbside parking on the north side of the street. The posted speed limit is 25 mph. Land uses around the roadway are residential, except at the intersections with Hermosa Avenue and PCH, where they are commercial.

Signalized Intersections

There are 18 signalized intersections in Hermosa Beach. With the exception of the signalized pedestrian crossings in front of Hermosa View and Hermosa Valley Elementary Schools, both of which are located on collector streets, all signalized intersections within the City are located on arterial streets. Table 17.4 below shows the location of signalized intersections.

SIGNALIZED PEDESTRIAN CROSSING AT HERMOSA VALLEY SCHOOL

TABLE 17.4 - SIGNALIZED INTERSECTIONS

Arterial Street	Location
Artesia Boulevard	Pacific Coast Highway
	Prospect Avenue
	South Meadows Avenue
Aviation Boulevard	Pacific Coast Highway
	Prospect Avenue
	Ocean Drive
Hermosa Avenue	11th Street
	13th Street
	14th Street
	Pier Avenue
Pacific Coast Highway	2nd Street
	5th Street
	8th Street
	16th Street
	21st Street
	Aviation Boulevard
	Gould Avenue / Artesia Boulevard
	Longfellow Avenue
	Pier Avenue
Prospect Avenue	Artesia Boulevard
	Aviation Boulevard
	Hermosa View School
Valley Drive	Hermosa Valley School

Source: City of Hermosa Beach Public Works Department, 2014

Parking

Providing adequate parking for residents, visitors, shoppers, and employees is a primary goal of the 1981 Coastal Land Use Plan, as is maintaining the existing high level of recreational access to the coast. The Coastal Land Use Plan prohibits the elimination of existing on- or off-street parking spaces within the coastal zone, which extends inland to Valley Drive. To meet future demand, the Plan suggests offering alternatives to providing parking in pedestrian-oriented commercial zones.

Within the coastal zone, metered parking is available on Hermosa Avenue, on streets west of Hermosa Avenue near the Hermosa Pier, on Pier Avenue between Hermosa Avenue and Valley Drive, and on local streets immediately to the east of Hermosa Avenue near the northern and southern city limits.

METERED PARKING ON HERMOSA AVENUE

Time-limited, free street parking is available on most other streets between Hermosa Avenue and Valley Drive, and on PCH and Aviation Boulevard. Off-street municipal parking is available near Pier Plaza, in City parks, and by the Community Center. Unlimited street parking is available on a majority of local streets throughout the remainder of the City except during street sweeping times. A map of Hermosa Beach metered, on-street, and off-street municipal parking spaces is presented below (Figure 17.2).

The Coastal Land Use Plan requires protection of public access to the beach and coastal resources. Coastal Development Permit (CDP) No. 5-82-251, issued in 1982, requires maintaining a minimum of 1,100 metered parking spaces within two blocks of the beach which allow for a minimum of six hours parking. The City must also provide free and long-term remote public parking, at a minimum of 320 weekday spaces and 396 weekend/holiday spaces. Residents of areas impacted by parking limitations and coastal visitor parking may purchase parking permits that allow them to park in yellow (24-hour) metered spaces free of charge and in time-limited one-hour on-street parking spaces without regard to the time limit. Policy 3.2 of the Circulation Element mandates continued implementation of preferential parking districts in residential neighborhoods as requested by residents and where shown to be warranted by existing conditions.

FIGURE 17.2: PUBLIC PARKING AND FACILITIES

Source: City of Hermosa Beach

Public Transit

Objective 1.0 of the Circulation Element is to maximize the use and availability of alternative transportation modes and multi-passenger vehicles for transportation within and through the City by both residents and visitors, and decrease the reliance on single-passenger vehicles. Public transit in Hermosa Beach is provided through local and regional bus services, as well as demand-responsive paratransit service.

Fixed-Route Transit Services

Within Hermosa Beach, three transportation agencies provide transit services: Beach Cities Transit (BCT), LADOT Commuter Express, and Los Angeles County Metropolitan Transportation Authority (LACMTA, or Metro). The City of Hermosa Beach, along with other communities served by BCT, provides some Proposition A funding in support of the service. BCT services were created in response to discontinued Metro lines.

Metro

Line 130 – This line runs primarily east-west from the Beach Cities of Redondo Beach and Hermosa Beach to the Gateway Cities and provides service through Lawndale, Torrance, Gardena, Harbor Gateway, Carson, Compton, North Long Beach, Paramount, Bellflower, Cerritos, Norwalk, and Artesia. Major stops include the Artesia Transit Center, providing a connection to the Silver Line, and the Metro Blue Line Artesia Station. Within Hermosa Beach, Line 130 travels along Hermosa Avenue, Pier Avenue, and Pacific Coast Highway. Line 130 hours of operation are from 5:00 AM to 10:30 PM on weekdays, and 6:00 AM to 10:30 PM on weekends and holidays. Headways are 30 minutes during the weekday peak hour periods and 50 to 60 minutes outside the peak hour and on weekends.

Line 232 (Downtown Long Beach-Los Angeles Airport City Bus Center) – This line runs north-south from Downtown Long Beach through Wilmington, Lomita, Torrance, Redondo Beach, Hermosa Beach, Manhattan Beach, and El Segundo to the Los Angeles Airport City Bus Center. Within Hermosa Beach, Line 232 travels along Pacific Coast Highway. This line provides a connection to the Metro Blue Line in Downtown Long Beach at Anaheim Street, 5th Street, 1st Street, the Transit Mall, and Pacific Avenue stations, and to the Metro Green Line at Aviation/LAX and Mariposa stations. Line 232 hours of operation are from 4:00 AM to midnight on weekdays and Saturdays, and 5:30 AM to 1:00 AM on Sundays and holidays. Headways are 20 minutes during the weekday peak hour periods and 30 to 60 minutes outside the peak hour and on weekends.

Green Line – Metro provides a light rail transit connection to the South Bay communities via the Green Line. The nearest stop to Hermosa Beach is the Redondo Beach Station at Marine Ave, although Metro Line 232 also connects Hermosa Beach to the Green Line as noted above. Bus connections to the Green Line can be made from Hermosa Beach in about 30 minutes or less. The Green Line runs primarily east-west along I-105 (The Century Freeway) and connects with the regional rail network. There are long-range studies underway by Metro exploring a potential extension of the Green Line further south to Torrance.

Los Angeles Department of Transportation Commuter Express

Line 438 – This line provides express service from the Beach Cities area to Downtown Los Angeles via the Century and Harbor Freeways. This line makes local stops in Redondo Beach, Hermosa Beach, Manhattan Beach, and El Segundo. Within Hermosa Beach, Line 438 travels along Hermosa Avenue and Manhattan Avenue. Line 438 hours of operation are from 5:45 to 9:00 AM and then again from 3:45 to 7:30 PM, Monday thru Friday only. Morning peak hour headways range from 10 to 30 minutes, while evening peak hour headways range from seven to 45 minutes. The fare is $2.50 per ride. Reduced fares for individual rides are available to seniors, the disabled, and Medicare card-holders. Monthly passes are also available, with reduced pass rates for seniors and the disabled.

Beach Cities Transit

Line 109 (Redondo Beach Riviera Village-Los Angeles Airport City Bus Center) – This line runs north-south beginning in Redondo Beach, traveling along Catalina Avenue, Hermosa Avenue, Manhattan Avenue, Highland Avenue, Rosecrans Avenue, Sepulveda Boulevard, Imperial Highway, Aviation Boulevard, and Century Boulevard. The line terminates at the Los Angeles Airport City Bus Center. Line 109 provides a connection to the Metro Green Line at Douglas Station. Within Hermosa Beach, Line 109 connects to Metro Line 130. Line 109 hours of operation are from 6:00 AM to 10:00 PM, with 30 to 50 minute headways on weekdays and 60 minute headways on weekends. The fare is $1.00 per ride. Reduced fares for individual rides are available for seniors, the disabled, Medicare card holders. Monthly passes are also available, with reduced pass rates for K-12 students, seniors, and the disabled.

WAVE Paratransit Services

Paratransit is an alternative mode of flexible passenger transportation that does not follow fixed routes or schedules. Typically vans or mini-buses are used to provide paratransit service, but shared taxis and jitneys are important providers. Paratransit services may vary considerably on the degree of flexibility they provide their customers. At their simplest they may consist of a taxi or small bus that will run along a more or less defined route and then stop to pick up or discharge passengers on request. At the other end of the spectrum, the most flexible paratransit systems offer on-demand call-up curb-to-curb service from any origin to any destination within a specified service area.

Hermosa Beach provides fully demand-responsive transportation service through the WAVE Dial-A-Taxi program. WAVE provides same day, curb to curb transit to anyone who meets the qualification conditions: be a city resident, and be either 62 years of age or older, or disabled in a manner that makes use of regular transit unduly difficult. Any qualifying users must submit an application with the City before using the service. Eligible residents may purchase a total of 20 vouchers per calendar month, with each voucher allowing for a one-way trip from one pick-up point to one destination. The standard fare for service within Hermosa Beach, Redondo Beach, or any area south of El Segundo Boulevard, west of Crenshaw Boulevard, and north of Pacific Coast Highway is $1.00. Travel outside these boundaries is subject to an additional meter charge. The small size of the City makes this type of paratransit possible.

Transit Facilities

Transit facilities within Hermosa Beach are limited to bus stops on Hermosa Avenue, Manhattan Avenue, PCH, and Pier Avenue. Most bus stops in the City include signage, a bench, and a trash receptacle. There are few bus shelters in Hermosa Beach, currently located only on Pier Avenue.

A TYPICAL BUS STOP IN HERMOSA BEACH

Transit Ridership Statistics

Transit ridership data for Hermosa Beach was only available from Metro. Metro provided data on stop-level average daily boardings and alightings in May 2013. Line 232 attracts more riders than does 130. The stops with the highest number of daily boardings and alightings are both located on PCH, at 16th Street and at Artesia Boulevard. Complete numbers are presented below in Table 17.5.

TABLE 17.5 - TRANSIT RIDERSHIP

Line	Along	At	Dir of Travel	Boardings	Alightings
130	Artesia Boulevard	Harper Avenue	West	55	8
	Hermosa Avenue	10th Street	East	18	6
		11th Street	East	4	27
		2nd Street	East	7	5
		6th Street	West	1	1
		6th Street	East	4	1
		8th Street	West	4	3
		Lyndon Street	West	3	1
	PCH	Artesia Boulevard	West	5	49
		16th Street	East	19	32
		21st Street	West	5	6
	Pier Avenue	Ardmore Avenue	East	3	12
		Monterey Boulevard	West	4	22
		Monterey Boulevard	East	26	2
		PCH	West	0	1
		Valley Drive	West	22	9
232	PCH	5th Street	North	36	47
		9th Street	North	34	34
		11th Street	North	52	41
		16th Street	North	51	53
		21st Street	North	16	19
		Artesia Boulevard	North	73	73
		Aviation Boulevard	North	29	60
		Longfellow Avenue	South	7	19

Pedestrian Environment

Given its gridded street network, small blocks, dense land uses, and low posted speed limits, Hermosa Beach holds the potential for a superior pedestrian environment. The City's 22 walk streets

provide safe and plentiful pedestrian connections between Downtown and the Beach, while walking paths on the Hermosa Valley Greenbelt provide north-south connections away from the beach. The Strand, Southern California's famous beachside bicycle path, also serves the Hermosa Beach community on its way between Torrance and Malibu.

Despite these inherent benefits, the pedestrian environment suffers from a lack of continuity. In particular, sidewalks are not continuous throughout the City. In some locations, sidewalks are present on both sides of the roadway, while in others – chiefly on local streets – they are present on just one side or not at all. Lacking curb ramps, narrow sidewalks, steep driveway entrances, and sidewalk obstructions present challenges to users of all abilities.

NUMEROUS ALLEYS REDUCE BLOCK SIZE AND ENHANCE WALKABILITY, BUT SIDEWALKS ARE MISSING

In addition to sidewalk continuity, five other factors that might affect walkability and the pedestrian experience in Hermosa Beach have been analyzed, including:

Sidewalk Conditions - This refers to the physical condition of sidewalk surfaces. Sidewalks that are broken or cracked can deter walkability and pose a safety hazard, particularly for the mobility impaired, such as those in wheel chairs and persons using walkers or strollers.

Shading - Persons are more inclined to walk in areas where there is shade present, particularly in Southern California with its relatively warm weather and limited rainfall as compared to other locations. Additionally, shade trees create an aesthetic value that is pleasing to the pedestrian.

Grade - Persons are more inclined to walk in areas that are relatively flat or have limited grade changes.

Amenities - All items being equal, persons are more inclined to walk in areas that are interesting environments with shopping, retail, restaurants, and other similar uses. Pedestrian-friendly amenities include street furniture, attractive paving, way-finding signage, enhanced landscaping, and improved lighting.

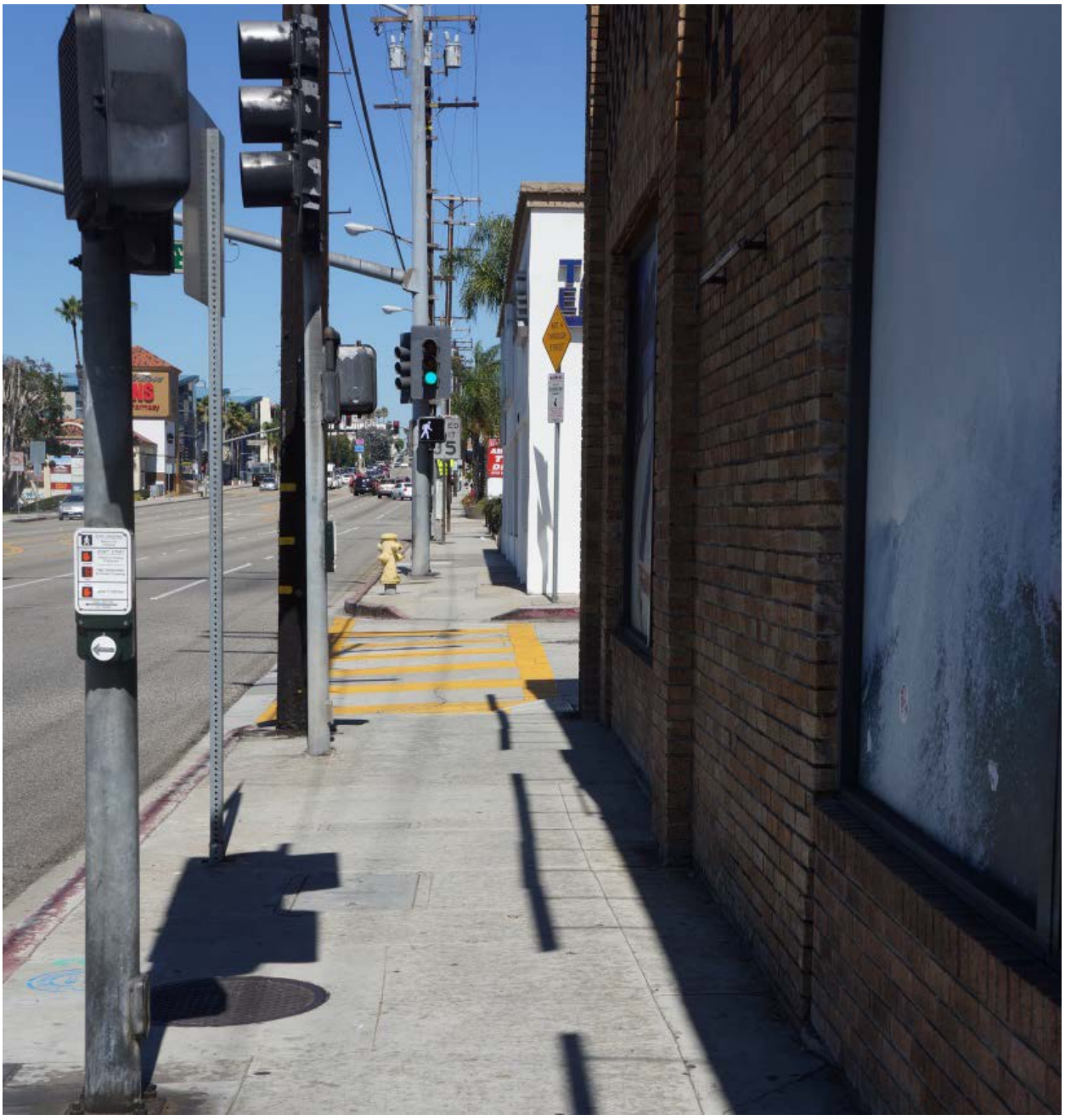
Buffers - A more walkable environment is one in which there is some degree of separation between the pedestrian and the motorist. This typically includes wider sidewalks, street parking and sidewalk bulb-outs at intersections where feasible. Crosswalks with appropriate signage serve as an important buffer as well.

A general evaluation of the pedestrian environment in Hermosa Beach is provided in Table 6 below.

TABLE 17.6 - EXISTING PEDESTRIAN FACILITIES

Criteria	Evaluation
Sidewalk Conditions	Within the Downtown area, sidewalks are generally in good condition, free of cracks, fissures, or uplift. Outside of the Downtown, there are substantial locations with obstructions in the sidewalk space such as utility boxes, light poles, or missing curb cuts. This poses an impediment to pedestrians, especially those with disabilities.
Shading	Hermosa Beach has both a mature tree network and abundant other vegetation that provide a visually attractive streetscape. Many of the trees on residential and commercial streets have small canopies, however, and ample shade is not a prevalent street feature.
Grade	In the east-west direction, streets are generally flat. In the north-south direction, the streets slope upward as they move away from the beach.
Amenities Offered	In the Downtown area amenities are plentiful, with public space, shopping, dining, benches, and shade. Outside of the Downtown area, the character is residential. Pedestrian amenities are found mainly in the City's plentiful parks.
Buffers	Buffered space is common throughout the City, and is commonly provided though pedestrian-only streets, off-street pedestrian paths, and curbside parking. There are many locations that could benefit from wider sidewalks, sidewalk bulb-outs at intersections where feasible, and appropriate signage.

Source: Fehr & Peers, 2013



PACIFIC COAST HIGHWAY, LOOKING NORTH AT 14TH STREET

Crosswalks are provided on at least one leg of all signalized and most stop-controlled intersections on arterial and collector streets throughout the City. Table 7 below summarizes the type of crosswalk provided at each intersection, as well as the number of crosswalk legs, the intersection control type, and the presence of a crossing guard during school opening and closing times.

TABLE 17.7 - EXISTING CROSSWALK LOCATIONS

North-South St	East-West St	Control Type	Crosswalk Type	Legs				Crossing Guard?
				N	S	E	W	
Ardmore Av	8th St	AWSC	Marked		X		X	
	11th St	AWSC	White	X				
	16th St	AWSC	Yellow	X		X		X
	21st St	AWSC	Yellow	X		X		
	Gould Av	AWSC	Yellow		X	X		
	Pier Av	AWSC	Yellow	X	X	X		X
Aubrey Park Ct	Aviation Bl	SSSC	White	X				
Bard St	Pier Av	AWSC	White	X	X		X	
Cypress St	Pier Av	SSSC	White				X	
Hermosa Av	2nd St	AWSC	White	X	X	X	X	
	4th St	TWSC	White	X				
	6th St	TWSC	White		X			
	8th St	AWSC	White		X	X		
	10th St	AWSC	White	X	X			
	11th St	Signal	White	X				
	13th St	Signal	White		X			
	14th St	Signal	Marked/White	X	X	X	X	
	16th St	AWSC	White	X	X			
	19th St	TWSC	White		X			
	22nd St	AWSC	White	X	X	X	X	
	24th St	SSSC	White	X				
	25th St	SSSC	White	X				
	28th St	AWSC	White		X			
	Greenwich Village	AWSC	White	X	X	X	X	
	Herondo St	Signal	Marked		X	X		

	Longfellow Av	AWSC	White		X		
	Pier Av	Signal	Scramble	X	X	X	X
Loma Dr	Pier Av	TWSC	White	X		X	
Longfellow Av	Highland Av	AWSC	White	X			
Manhattan Av	2nd St	AWSC	White	X	X	X	X
	6th St	AWSC	White	X	X		
	8th St	AWSC	White	X	X	X	X
	10th St	AWSC	White	X	X	X	X
	16th St	AWSC	White	X	X		
	19th St	AWSC	White	X	X		
	22nd St	AWSC	White	X	X		X
	24th St	TWSC	White			X	X
	25th St	AWSC	White	X	X		
	27th St	AWSC	White	X	X	X	X
	28th St	TWSC	White		X		
	29th St	TWSC	White	X			
	Longfellow Av	AWSC	White	X	X	X	X
	Pier Av	SSSC	White		X		
Meadows Av	Artesia Bl	Signal	Marked	X			X
Monterey Bl	6th St	AWSC	Marked	X	X	X	X
	8th St	AWSC	White	X	X	X	X
	10th St	AWSC	Marked	X	X	X	X
	Herondo St	SSSC	White	X			
	Pier Av	AWSC	White	X	X	X	X
Morningside Dr	27th St / Gould Av	AWSC	Marked	X	X		X
Ocean Dr	Aviation Bl	Signal	White				X
Pacific Coast Hwy	1st St	SSSC	Marked		X	X	
	2nd St	TWSC	Marked/White	X	X	X	

	3rd St	SSSC	White		X				
	4th St	SSSC	White		X				
	5th St	Signal	Marked		X		X		
	8th St	Signal	Marked		X			X	
	16th St	Signal	Yellow	X	X	X	X	X	
	21st St	Signal	Yellow	X	X	X	X	X	
	Aviation Bl	Signal	Marked/White	X			X		
	Gould Av / Artesia Bl	Signal	Marked		X	X	X		
	Pier Av	Signal	Yellow		X		X		
	Longfellow Av	Signal	Marked	X	X	X	X		
Prospect Av	5th St	AWSC	Yellow				X		
	6th St	AWSC	White		X	X	X		
	9th St	AWSC	White	X	X				
	17th St	AWSC	Yellow	X		X	X		
	19th St	AWSC	Yellow		X	X			
	21st St	AWSC	Yellow	X	X	X	X		
	Artesia Bl	Signal	Marked/White	X	X	X	X		
	Aviation Bl	Signal	White	X	X	X	X		
	Gentry St	TWSC	Yellow			X	X		
	Hermosa View Sch	Signal	Yellow	X					
	Hollowell Av	AWSC	Yellow	X		X	X		
	Massey St	AWSC	Yellow		X	X			
	Rodaway Park	TWSC	Yellow			X	X		
Valley Dr	2nd St	AWSC	White	X	X	X	X		
	8th St	AWSC	White		X	X	X		
	11th St	AWSC	White	X					
	18th St	AWSC	Yellow				X		

21st St	AWSC	Yellow		X		X
30th St	AWSC	White			X	
Clark Field	Uncon	White	X			
Gould Av	AWSC	Yellow/Marked	X	X	X	X
Hermosa Valley Sch	Signal	Yellow	X			
Herondo St	AWSC	White	X			X
Pier Av	AWSC	Yellow/White	X	X	X	X
South Park	Uncon	White	X			

Source: Hermosa Beach Public Works Department, 2014 and Fehr & Peers, 2014

The City of Hermosa Beach recently applied for Safe Routes to School funding to expand pedestrian amenities and improve pedestrian safety on identified routes around the City. Routes include most arterial and collector streets including Hermosa Avenue, Manhattan Avenue, Monterey Boulevard, Valley Drive, Ardmore Avenue, PCH, Prospect Avenue, Longfellow Avenue, Gould Avenue / Artesia Boulevard, 22nd Street, 16th Street, Pier Avenue / 14th Street, Aviation Boulevard, 8th Street, and 2nd Street. See Figure 4 for a map of Safe Routes to School.

Non-Motorized Transportation Facilities

Walking, bicycling, and other alternatives such as skateboards, rollerblades, or Segways are environmentally friendly modes of transportation that enhance both personal and social well-being. Included also are personal mobility devices such as wheelchairs and motorized scooters. They are all important traveling modes, part of a seamless transportation system that links to other modes of moving around such as transit. In addition to transporting, these two modes of travel provide many public access, health, and economic benefits and are recognized as integral components of Hermosa Beach's transportation system and beach lifestyle. Safe, convenient, attractive, and well-designed pedestrian and bicycle facilities are essential if these modes are to be properly accommodated and encouraged. Inadequate facilities discourage users and waste money and resources on unnecessary facilities.

Bicycle Facilities

There are 5.1 miles of existing bicycle facilities in Hermosa Beach, including the Los Angeles County-maintained Class I Marvin Braude Bikeway on the Strand, a Class II bicycle lane on Broadway, and a Class II sharrowed bicycle route along Hermosa Avenue.

SHARROWS ON HERMOSA AVENUE, NORTH OF PIER AVENUE

The existing Circulation Element seeks to encourage bicycle travel citywide through maintenance of bicycle path surfaces to maximize safety and ease of travel, provision of bicycle transport on public transit vehicles whenever possible, and requirement of new developments to accommodate parking consistent with Transportation Demand Management (TDM) programs. In November 2011, the City of Hermosa Beach adopted the South Bay Bicycle Master Plan (SBBMP). The SBBMP was funded by the Los Angeles County Department of Health's RENEW grant initiative in 2010 to facilitate more cycling and bike infrastructure in seven different participating cities within the South Bay

region. The result was a first-of-its-kind multi-city plan for El Segundo, Gardena, Hermosa Beach, Lawndale, Manhattan Beach, Redondo Beach, and Torrance with support from the South Bay Bicycle Coalition and the Los Angeles County Bicycle Coalition. The SBBMP proposed bicycle network for Hermosa Beach includes an additional 9.2 miles of bicycle facilities within the City, and connects with other SBBMP recommended networks in Manhattan Beach and Redondo Beach. Table 8 shows SBBMP proposed facilities.

TABLE 17.8 - SBBMP PROPOSED BICYCLE FACILITIES

Facility Type	Street	From – To
Class II Bicycle Lanes	Herondo Street	Hermosa Avenue to Valley Drive
	Aviation Boulevard	PCH to Harper Avenue
	Artesia Boulevard	PCH to Harper Avenue
Class III Bicycle Routes	Pier Avenue	Hermosa Avenue to Ardmore Avenue
	27th Street / Gould Avenue	Hermosa Avenue to PCH
	Longfellow Avenue	Hermosa Avenue to Valley Drive
	Valley Drive	Longfellow Avenue to Herondo Street
	Ardmore Avenue	North City Limits to Pier Avenue
	Highland Avenue	35th Street to Longfellow Avenue
	10th Street	Ardmore Avenue to PCH
	Hermosa Avenue	35th Street to 24th Street
Bicycle-Friendly Streets	8th Street	Hermosa Avenue to Prospect Avenue
	1st Street	Manhattan Avenue to the Strand
	22nd Street / Monterey Boulevard	The Strand to Herondo Street
	35th Street / Palm Drive	Hermosa Avenue to 1st Street
	21st Street	Ardmore Avenue to Prospect Avenue
	Prospect Avenue	Artesia Boulevard to south City Limits

Source: South Bay Bicycle Master Plan, 2011

In 2012, the City of Hermosa Beach published the Aviation Boulevard Bike Lane Preliminary Engineering Study, the first step in implementing a SBBMP-prioritized project. The impetus for the project came out of SBBMP public involvement workshops. Stakeholders expressed a strong desire for highly visible facilities along major corridors. Aviation Boulevard was selected as the location for the pilot facility due to it being one of only a few area roadways to provide a continuous north-south

connection through the Beach Cities area. Bicycle lanes on Aviation Boulevard will create a "spine" off which future facilities can build.

Existing bicycle parking facilities are located along the Strand, in Downtown, and in commercial shopping centers. The Hermosa Beach Municipal Code includes bicycle parking requirements as part of its transportation demand and trip reduction measures. However, the requirements vary by the type of land use and the size of the development, and a majority of projects developed are too small to be subject to the requirements. The Upper Pier Avenue Specific Plan Area No 11 incorporates bicycle parking requirement. A map of Hermosa Beach existing and proposed bicycle facilities is presented below (Figure 17.3).

Transportation System Performance

Using available data from a variety of sources including SCAG, Metro, the US Census, and the City, this section presents an overview of how the transportation system within Hermosa Beach currently performs.

Mode Choice

Mode choice refers to the mode of travel which is used for any particular trip. The US Census Department through the American Community Survey regularly reports mode choice for travel to work. The results for Hermosa Beach and comparable regions are provided in Table 9 below.

TABLE 17.9 - COMMUTER MODAL SPLIT

Commute Mode Choice	Hermosa Beach	Los Angeles County	California	United States
Single Occupant Auto	80.4%	72.2%	73.0%	76.3%
Carpool	6.4%	10.9%	11.5%	9.7%
Public Transit	1.1%	7.1%	5.1%	5.0%
Bicycling/Walking	2.3%	3.7%	3.8%	3.4%
Other Means	1.5%	1.2%	1.3%	1.2%
Work at Home	8.4%	4.8%	5.2%	4.4%

Source: American Community Survey (2008 – 2012)

FIGURE 17.3: EXISTING AND PROPOSED BICYCLE FACILITIES

Source: Los Angeles County Bicycle Coalition & South Bay Bicycle Coalition

As shown, residents of Hermosa Beach use single-occupant vehicles to travel to work substantially more than other residents in Los Angeles County. Consistent with their higher rate of driving alone, Hermosa Beach residents' rate of carpooling is substantially lower (6.4 percent as compared to 10.9 percent), as is their transit usage (1.1 percent to 7.1 percent). Bicycle and walking trips to work are also less in Hermosa Beach than in Los Angeles County as a whole (2.3 percent to 3.7 percent).

Travel Time to Work

Table 10 below presents comparative travel time information for Hermosa Beach and Los Angeles County for travel to work for a one-way trip. As shown, the average travel for work trips is comparable to the countywide average. One notable difference is that percentage of Hermosa Beach residents who travel 45 minutes or more to reach their work site is substantially higher than the countywide average (almost 27 percent as compared to just over 21 percent).

TABLE 17.10 - TRAVEL TIME TO WORK

Travel Time	Hermosa Beach	Los Angeles County
Less than 10 minutes	7.4%	8.4%
10 to 14 minutes	13.7%	11.6%
15 to 19 minutes	15.1%	13.9%
20 to 24 minutes	15.3%	14.3%
25 to 29 minutes	3.6%	5.5%
30 to 34 minutes	8.6%	17.6%
35 to 44 minutes	9.5%	7.6%
45 to 59 minutes	13.9%	9.6%
60 or more minutes	12.9%	11.6%
Mean travel time (minutes)	29.3	29.1

Source: American Community Survey (2008 – 2012)

Work trips inside Hermosa Beach

Another aspect of travel behavior relates to the propensity for residents to either remain within their community or travel outside of their community for their work trips. One data source for this information is the Longitudinal Employer Household Dynamics (LEHD). According to the LEHD database, as presented in Table 11, the percentage of persons living in Hermosa Beach who also work in Hermosa Beach has remained relatively constant since the data was first collected in 2002.

TABLE 17.11 - PERCENTAGE OF RESIDENTS TRAVELING OUTSIDE CITY FOR WORK

Year	Residents Working In Hermosa Beach	Residents Working Outside Hermosa Beach
2011	5.2%	94.8%
2007	6.0%	94.0%
2002	5.5%	94.5%

Source: LEHD (2002 – 2011)

Vehicle Miles Traveled (VMT)

A key transportation performance metric is vehicle miles traveled (VMT), which is a summation of the trip length for each vehicle trip multiplied by the number of trips. VMT is used to estimate GHG emissions, is a key element of SB 375, and may be required as an evaluation metric under SB 743. Table 12 presents VMT per household for Hermosa Beach using data provided by SCAG and Caltrans, as compared to all households in Los Angeles County. As shown in the table, VMT per household in Hermosa Beach is higher than the countywide average.

TABLE 17.12 - VMT PER HOUSEHOLD FOR HERMOSA BEACH AND LOS ANGELES COUNTY

Year	Hermosa Beach	Los Angeles County
2010	72.6	66.1

Source: SCAG Travel Demand Model, Caltrans HPMS

Traffic Congestion

Regional congestion can be assessed using a variety of approaches. One common approach is Level of Service (LOS), in which the traffic volume is compared against a theoretical capacity. A second approach is to use a variety of datasets to identify congestion through speed and stopped vehicles. Both analytics are presented in this section.

The City of Hermosa Beach traffic study guidelines require the use of the Intersection Capacity Utilization (ICU) method to analyze signalized intersections. The ICU method determines the volume-to-capacity (V/C) ratio on a critical lane basis and determines LOS associated with each critical V/C ratio at the signalized intersection. For unsignalized intersections, analysis by the Highway Capacity Manual (HCM) method is required. The HCM method determines the average control delay (in seconds per vehicle) and determines LOS associated with each delay value at the intersection. The Circulation Element set a minimum level of service policy of LOS C at signalized intersections. Signalized intersections are significantly impacted if traffic generated by a project causes operations at an

intersection to degrade from LOS C or better to LOS D, E or F, or if the volume-to-capacity ratio increases by 0.010 or more at an intersection already operating at LOS D, E, or F. The City of Hermosa Beach has not identified significant impact criteria for unsignalized intersections or roadway segments.

LOS was recently evaluated in the City's 2014 *E&B Oil Drilling & Production Project Draft Environmental Impact Report* (Oil DEIR). The Circulation Element set a minimum level of service threshold of LOS C at signalized intersections. The report identified four signalized intersections on PCH as currently operating at an unacceptable LOS (LOS F) during at least one or both peak hour periods (morning and evening): Artesia Boulevard, Aviation Boulevard, 8th Street, and Herondo Avenue. No roadways segments in Hermosa Beach were identified as currently operating at an unacceptable LOS. Table 13 presents the existing LOS during the morning and evening peak hour periods at all intersections in Hermosa Beach analyzed as part of the proposed E&B Oil Project Draft EIR.

TABLE 17.13 - INTERSECTION LOS

Intersection	Control	A.M. Peak Hours		P.M. Peak Hours	
		V/C or Delay	LOS	V/C or Delay	LOS
PCH / Artesia Bl	signal	1.247	F	0.83	D
PCH / 21st St	signal	0.720	C	0.672	B
PCH / Aviation Bl	signal	1.124	F	1.104	F
PCH / 8th St	signal	0.846	D	0.819	D
PCH / 5th St	signal	0.799	C	0.739	C
PCH / 2nd St	signal	0.748	C	0.771	C
PCH / Herondo Av	signal	0.847	D	1.084	F
PCH / Pier Av-14th St	signal	0.655	B	0.767	C
Prospect Av / Artesia Bl	signal	0.571	A	0.677	B
Prospect Av /Aviation Bl	signal	0.639	B	0.723	C
PCH / 16th St	signal	0.682	B	0.648	B
Ocean Dr / Aviation Bl	signal	0.400	A	0.454	A
Valley Dr / Pier Av	AWSC	12.3 sec	B	20.1 sec	C
Ardmore Av / Pier Av	AWSC	12.2 sec	B	17.1 sec	C
Valley Dr / 11th St	AWSC	7.8 sec	A	9.2 sec	A
Valley Dr / 8th St	AWSC	9.3 sec	A	11.9 sec	B
Valley Dr / 2nd St	AWSC	8.7 sec	A	11.0 sec	B
Valley Dr / 6th St	AWSC	7.9 sec	A	9.4 sec	A
Valley Dr / Herondo St	AWSC	11.0 sec	B	15.6 sec	C

Source: Oil DEIR, 2014

The second approach to congestion is to directly measure congestion as it occurs. One commonly used source is the INRIX database, which in turn uses crowd-sourced data from intersection detectors, GPS units in commercial vehicles, and other sensors to present real time data. Two screenshots of the INRIX database are presented below. The first screenshot (Figure 17.4) represents conditions in the region around Hermosa Beach at 8:00 AM on a Wednesday morning in February 2014. The blue dots and trailing lines indicate the location of a bottleneck and the extent of the bottleneck. As shown on the image, the roadways in Hermosa Beach impacted by peak hour traffic congestion are PCH and Aviation Boulevard. This is consistent with these roadways' roles as connectors to the regional transportation network.

FIGURE 17.4. CONGESTION BOTTLENECKS – MORNING PEAK PERIOD

Source: INRIX Analytic Tools System Monitoring Dashboard, 2014.

Data for the evening period (5:00 PM on the same day) is presented in the following screenshot (Figure 17.5). As with the morning period, PCH is congested throughout Hermosa Beach. However, there are no evening bottlenecks on Aviation Boulevard.

FIGURE 17.5. CONGESTION BOTTLENECKS – EVENING PEAK PERIOD

Source: INRIX Analytic Tools System Monitoring Dashboard, 2014.

Safety

A traffic collision is considered to be any event where a vehicle strikes any object while moving. That object could be another car, a pedestrian, or something fixed in place like a light post. When collisions cause damage or injury, the details are recorded by the local law enforcement agency and loaded into the California Highway Patrol (CHP) Statewide Integrated Traffic Records System (SWITRS). The latest SWITRS report was used to analyze collision data in Hermosa Beach. Another common source of collision information is the California Office of Traffic Safety (OTS). OTS uses collision data to rank similarly-sized California cities on traffic safety. OTS provides two types of rankings: 1) victim and collision rankings and 2) DUI arrest rankings. Victim and collision data for the rankings is taken from the latest published CHP SWITRS report. Victim and collision rankings are based on rates of victims killed and injured or fatal and injury collisions per "1,000 daily-vehicle-miles-of-travel" (2009 CALTRANS) and per "1,000 average population" (2008-2009 Department of Finance) figures. Pedestrian, bicyclist and motorcycle victim rankings do not take into account the size or demographics of a city or county's pedestrian/bicyclist/motorcyclist population. OTS collision rankings facilitate funding decisions and identify emerging traffic safety problem areas. The rankings allow cities to compare themselves to other cities with similar-sized populations and help them identify their potential disproportionate traffic safety problem(s). OTS data was not available for Hermosa Beach and has not been included in this analysis.

From 2008 to 2012, there were a total of 650 vehicle collisions, with one collision resulting in a single fatality and 10 collisions resulting in severe injuries. The top three cited factors contributing to collisions were: driving under the influence of alcohol and/or drugs (18 percent), unsafe speed (18 percent), and right-of-way violations (17 percent). Alcohol was a factor in 150 collisions, 76 percent of which listed driving under the influence as the primary cause of the collision. The share of collisions involving alcohol increased substantially at the weekend, with alcohol a factor in 19 percent of collisions occurring Monday through Thursday, and in 28 percent of collisions occurring Friday through Sunday.

The number of vehicle collisions of any type decreased every year during the five-year period, for a total reduction of 32 percent from 2008 to 2012. During the same time period, the number of collisions involving a pedestrian or bicyclist has remained constant, meaning that the total share of these types of collisions has increased, as illustrated in Figure 17.6 below.

FIGURE 17.6 - COLLISIONS BY TYPE

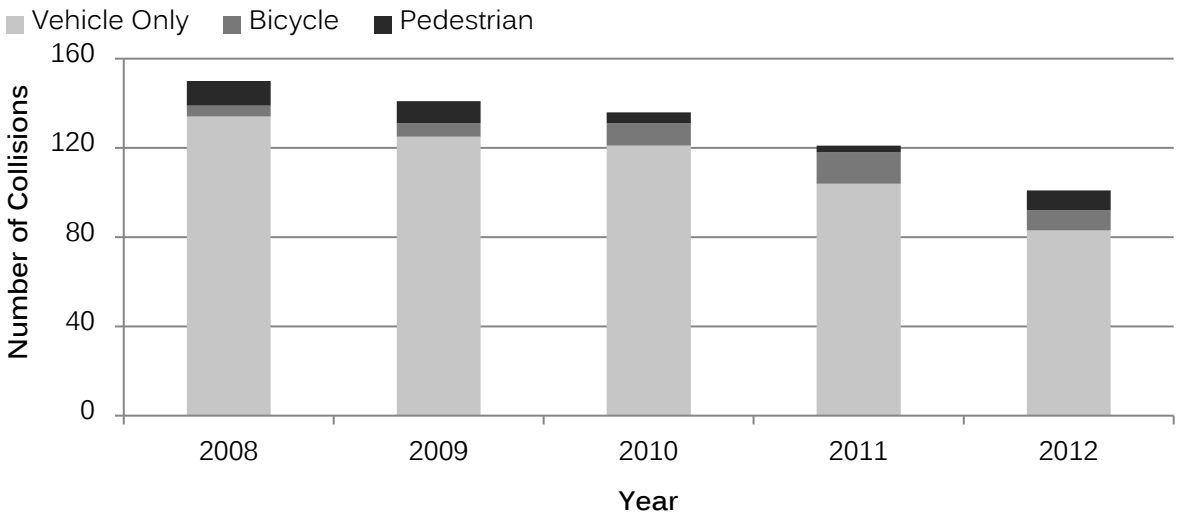
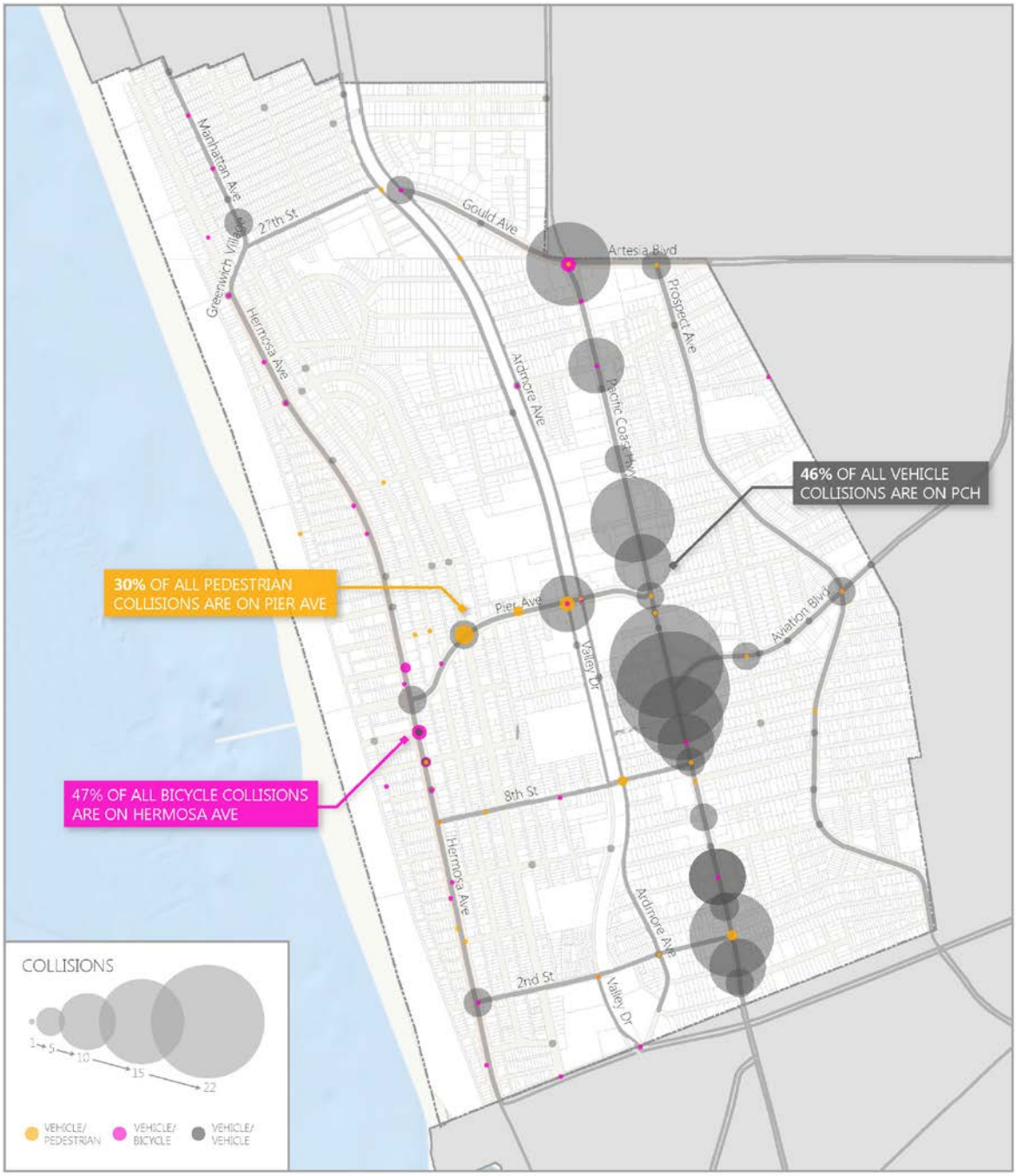


Figure 17.7 below shows the locations and types of collisions in Hermosa Beach in the five year period from 2008 to 2012. As illustrated in Figure 17.7, the spatial distribution of collision frequency differs by collision type. The areas with highest prevalence of collisions of a specific type are also areas in which one would expect high levels of activity for that mode choice. Specifically, the highest prevalence of vehicle-on-vehicle collisions in Hermosa Beach occurs on Pacific Coast Highway, the roadway with the highest ADT; the highest prevalence of vehicle-on-bicycle collisions occurs on Hermosa Avenue, the only marked bicycle facility; and the highest prevalence of vehicle-on-pedestrian collisions occurs on Pier Avenue, a major shopping center and popular pedestrian destination.

Figure 17.7: Collisions in Hermosa Beach (2008-2012)



17.3 Regulatory Setting

The regulatory framework is used to inform decision makers about the regulatory agencies/policies that affect transportation in the City. This enables them to make informed decisions about planning improvements to transportation systems in the City. This document includes a discussion of funding as well as regulation. Major policy documents impacting the transportation system in the City of Hermosa Beach include laws at the state level and planning documents at a regional and local level.

Federal Regulations

Americans with Disabilities Act

The Americans with Disabilities Act (ADA) of 1990 is a landmark piece of civil rights legislation protecting and promoting access to civic life by people with disabilities. Title II of the ADA requires governments to make accessible all programs and services, which includes public facilities and events. This extends to the basic transportation network, much of which was planned and built long before the ADA was written. Attaining ADA compliance with sidewalk ramps, audible pedestrian signals and many other tools would be cost prohibitive to implement all at once, especially given the ADA does not provide funding for planning or construction. Instead, compliance must be rolled into new projects and reconstruction; for example, the Upper Pier Avenue streetscape improvement project required building ADA-compliant access because the roadway was being altered.

Because major infrastructure is altered or rebuilt infrequently, it could take decades to modernize an entire city. The ADA requires cities to develop an ADA transition plan to identify all changes necessary and set a schedule for implementation. The City of Hermosa Beach does not presently have an ADA transition plan.

State Regulations

General Plan

California Statute 65302(b) requires that a City's General Plan include a Circulation Element, which must identify major transportation routes, terminals, military ports, and local public facilities. The circulation element must correlate with the Land Use element of the general plan. In recent years, the laws and guidance regarding General Plan Circulation Elements have been updated to reflect modern approaches to multimodal transportation networks, described below in the chapter on Best Practices and Emerging Trends.

California Coastal Act

The California Coastal Act of 1976 dictates certain policies related to shoreline resources, including transportation issues related to state shorelines. While the Act does not include a section specifically regarding transportation issues, it does state how development must maintain access to coastal resources and maintain and distribute parking supply or adequate public transportation so as to minimize adverse impacts.

Assembly Bill (AB) 1358 – Complete Streets Act

The California Complete Streets Act of 2008 was signed into law on September 30, 2008. Beginning January 1, 2011, AB 1358 required circulation elements to address the transportation system from a multi-modal perspective. The bill states that streets, roads, and highways must "meet the needs of all users…in a manner suitable to the rural, suburban, or urban context of the general plan." Essentially, this bill requires a circulation element to plan for all modes of transportation where appropriate – including walking, biking, car travel, and transit.

The Complete Streets Act also requires circulation elements to consider the multiple users of the transportation system, including children, adults, seniors, and the disabled. In December of 2010, the Governor's Office of Planning and Research released guidelines for compliance with this legislation.

AB 32 – Global Warming Solutions Act

With the passage of the Global Warming Solutions Act of 2006, the State of California committed itself to reducing greenhouse gas (GHG) emissions to 1990 levels by 2020. The California Air Resource Board (CARB), which is coordinating the response to comply with AB 32, is currently on schedule to meet this deadline.

In 2007, CARB adopted a list of early action programs that could be put in place by January 1, 2010. In 2008, CARB defined its 1990 baseline level of emissions, and by 2011 it completed its major rule making for reducing GHG emissions. Rules on emissions, as well as market-based mechanisms like the proposed cap and trade program, came into effect January 1, 2012. In order to meet AB 32 goals, reductions in GHG emissions will need to come from all sectors of the economy, and from sources large and small. At a municipal level, cities can use land use and transportation policies, planning, and incentives to reduce locally-created transportation-related GHG.

Senate Bill (SB) 375

On December 11, 2008, the CARB adopted its Proposed Scoping Plan for AB 32. This scoping plan included the approval of SB 375 as the means for achieving regional transportation-related GHG targets. SB 375 provides guidance on how curbing emissions from cars and light trucks can help the state comply with AB 32.

There are five major components to SB 375. First, SB 375 will address regional GHG emission targets. CARB's Regional Targets Advisory Committee will guide the adoption of targets to be met by 2020 and 2035 for each Metropolitan Planning Organization (MPO) in the State. These targets, which MPOs may propose themselves, will be updated every eight years in conjunction with the revision schedule of housing and transportation elements.

Second, MPOs will be required to create a Sustainable Communities Strategy (SCS) that provides a plan for meeting regional targets. The SCS and the Regional Transportation Plan (RTP) must be consistent with each other, including action items and financing decisions. If the SCS does not meet the regional target, the MPO must produce an Alternative Planning Strategy that details an alternative plan to meet the target.

Third, SB 375 requires that regional housing elements and transportation plans be synchronized on eight-year schedules. In addition, Regional Housing Needs Assessment (RHNA) allocation numbers must conform to the SCS. If local jurisdictions are required to rezone land as a result of changes in the housing element, rezoning must take place within three years. Hermosa Beach adopted the required Housing Element update by 2013 and did not need to rezone any land.

Fourth, SB 375 provides CEQA streamlining incentives for preferred development types. Residential or mixed-use projects qualify if they conform to the SCS. Transit-oriented developments (TODs) also qualify if they 1) are at least 50% residential, 2) meet density requirements, and 3) are within one-half mile of a transit stop. The degree of CEQA streamlining is based on the degree of compliance with these development preferences.

Finally, MPOs must use transportation and air emission modeling techniques consistent with guidelines prepared by the California Transportation Commission (CTC). Regional Transportation Planning Agencies, cities, and counties are encouraged, but not required, to use travel demand models consistent with the CTC guidelines.

SB 743

On September 27, 2013, Governor Jerry Brown signed SB 743 into law. A key element of this law is the potential elimination or deemphasizing of auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts in many parts of the State According to the legislative intent contained in SB 743, these changes to current practice were necessary to "*More appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions."*

To implement this intent, SB 743 contains amendments to current congestion management law that allows cities and counties to effectively opt-out of the LOS standards that would otherwise apply in areas where Congestion Management Plans (CMPs) are still used. Further, SB 743 requires the Governor's Office of Planning and Research (OPR) to update the CEQA Guidelines and establish, *"... criteria for determining the significance of transportation impacts of projects within transit priority areas."* The new criteria, *"… shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.*" Once the Secretary of the Natural Resources Agency certifies the new guidelines, then *"…automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment…, except in locations specifically identified in the guidelines, if any."*

As noted, SB 743 requires impacts to transportation network performance to be viewed through a filter that promotes the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. Some alternative metrics were identified in the law including VMT or automobile trip generation rates. SB 743 does not prevent a city or county from continuing to analyze delay or LOS as part of other plans (i.e., the general plan), studies, or ongoing network monitoring, but these metrics may no longer constitute the sole basis for CEQA impacts.

AB 417

Prior to AB 417, California cities and counties that prepared a bicycle transportation plan were required to conduct a CEQA review of the plan before approval. The requirement imposed high and sometimes prohibitive costs and delays, resulting in fewer improvements to bicycle safety in California.

AB 417 creates a statutory exemption from CEQA for bicycle transportation plans for an urbanized area for restriping of streets and highways, bicycle parking and storage, signal timing to improve street and highway intersection operations, and related signage for bicycles, pedestrians, and vehicles. Specifically, the bill exempts the following types of bicycle transportation plans or projects prepared pursuant to Streets and Highways Code Section 891.2 for an urbanized area if those projects have been described at a reasonably high level of detail: re-striping of streets and highways, bicycle parking and storage, signal timing to improve street and highway intersection operations, and related signage for bicycles, pedestrians, and vehicles. It does not exempt all potential impacts of a bike plan, such as a new path through a natural area, for example. Prior to determining that a bicycle plan is exempt, the lead agency shall do both of the following: (1) hold properly noticed public hearings in areas affected by the bicycle transportation plan to hear and respond to public comments, and (2) include measures in the bicycle transportation plan to mitigate potential bicycle and pedestrian safety and traffic impacts.

Regional Regulations and Plans

Southern California Association of Governments Regional Transportation Plan / Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) provides a regional transportation plan for six counties in Southern California: Orange, San Bernardino, Riverside, Los Angeles, Ventura and Imperial. The primary goal of the RTP is to increase mobility for the region. With recent legislation, this plan also encompasses sustainability as a key principle in future development. The SCS was borne out of SB 375 (above), and provides a regional policy foundation upon which individual communities may build General Plan policies.

South Bay Cities Council of Governments (SBCCOG)

The SBCCOG is instrumental in identifying, coordinating, and implementing sustainability programs. SBCCOG leads a Neighborhood Electric Vehicle (NEV) and Local Use Vehicle (LUV) program to reduce emissions, pollution, and gas consumption. According to the Council, many South Bay residents and businesses make trips of less than three miles using full size vehicles. Following the guidance of SBCCOG, several South Bay cities passed local ordinances to become the first group of suburbs in the nation to collectively join Daimer-Chrysler's Car2Go carsharing program, which typically begins in major metropolitan areas such as Austin, TX or Seattle, WA. Car2Go launched in the summer of 2014. SBCCOG also conducts studies to support regional rail and highway projects, including implementation of Measure R projects.

South Bay Bicycle Master Plan (SBBMP)

The SBBMP was funded by the Los Angeles County Department of Health's RENEW grant initiative in 2010 to facilitate more cycling and bike infrastructure in seven different participating cities within the South Bay region. The result was a first-of-its-kind multi-city plan of programs and policies for El Segundo, Gardena, Hermosa Beach, Lawndale, Manhattan Beach, Redondo Beach, and Torrance. The SBBMP complies with Caltrans Bicycle Transportation Account requirements to facilitate funding opportunities.

The City of Hermosa Beach adopted the SBBMP in 2011. The SBBMP proposed bicycle network for Hermosa Beach includes an additional 9.2 miles of bicycle facilities within the City, and connects with other SBBMP recommended networks in Manhattan Beach and Redondo Beach. The Plan also provides a comprehensive implementation program prioritizing projects through a ranking of various qualities. The top two priority projects were given a more thorough plan and proposal with a rough cost estimate.

Beach Cities Livability Plan

The Beach Cities Livability Plan, fostered by the Healthways Blue Zones (Vitality City) Initiative, focuses on how to improve livability and well-being in Hermosa Beach, Manhattan Beach and Redondo Beach through land-use and transportation systems that better support active living. The plan was adopted by each City and includes recommendations to (1) develop a regional pedestrian master plan, (2) adopt and implement the SBBMP, (3) improve and enhance Safe Routes to School programs. In Hermosa Beach, the plan recommends restriping Valley Drive and Ardmore Avenue, converting each street to one-way) with a Class III bike route on the street.

South Bay Cities Neighborhood Oriented Development Economic Analysis

The Neighborhood Oriented Development (NOD) Economic Analysis is Phase 3 of a larger South Bay Council of Governments NOD Feasibility Study. Within Hermosa Beach the study focused on PCH, but the findings are applicable to the entire City due to its small size. The impetus for the NOD Economic Analysis was to create a development model that would shape future development in the South Bay. The Analysis identified the core set of neighborhood functions that increase individual propensity to take short, frequent trips; identified various travel behaviors that likely affect the capture of residents to NODs via non-auto related travel modes; established parameters for demand for retail, service, and business-oriented neighborhood functions; discussed the historic patterns of commercial development and reviewed previously conducted research to present how NOD fits within the context of anticipated future retail development; and created an illustrative scenario that compares VMT in traditional regional serving shopping centers versus in NODs, as well as a theoretical distribution of additional retail space through scenario planning in the South Bay. The findings of the analysis will influence the development program recommendations and the market and financial feasibility analysis, which is part of the current and next phase of the NOD Feasibility Study. Recommendations include the transition of mid-block strip commercial to residential, development of intensified commercial at corners of major arterials, and street-fronting buildings by placing parking at the rear.

Los Angeles County Congestion Management Program (CMP)

California state statute requires that a congestion management program be developed, adopted and updated biennially for every county that includes an urbanized area and shall include every city and the county government within that county. Since the CMP became effective with the passage of Proposition 111 in 1990, it has forged new ground in linking transportation, land use and air quality decisions for one of the most complex urban areas in the country. The CMP addresses the impact of local growth on the regional transportation system.

Statutory elements of the CMP include Highway and Roadway System monitoring, multi-modal system performance analysis, the Transportation Demand Management Program, the Land Use Analysis Program and local conformance for all the county's jurisdictions. The current 2010 CMP summarizes the results of 18 years of CMP highway and transit monitoring and 15 years of monitoring local growth. As the Congestion Management Agency for Los Angeles County, Metro is responsible for implementing the Congestion Management Program (CMP). CMP conformance by local jurisdictions is required annually in order to continue receiving certain state gas tax funds and to preserve their eligibility for other state and federal transportation dollars. CMP implementation guidelines for local jurisdictions are provided in the appendices to the 2010 CMP.

Local Regulations and Plans

City of Hermosa Beach General Plan Circulation Element

The City of Hermosa Beach General Plan (1990) was developed to provide the policy framework for how and where physical development in the City would occur over the following 20 years. The 1990 General Plan replaced the previously adopted 1979 General Plan. Within the 1990 General Plan, the Circulation Element specifically addressed Hermosa Beach's transportation goals within that time frame. The Circulation Element included the following goals and objectives:

- Maximize the use of alternative transportation modes.
- Decrease the reliance on single-passenger automobiles.
- Protect residential streets from cut-through traffic intrusion and parking.
- Ensure an adequate supply of on-street and off-street parking.

City of Hermosa Beach Coastal Land Use Plan (CLUP)

The CLUP addresses parking supply and protection in the coastal zone. The CLUP's primary concern is maintaining access for all people to coastal resources. Goals include providing adequate residential parking; maintaining adequate parking space for both visitors and shoppers; providing easy access to work-related parking for business owners and their employees; maximizing the safety and accessibility of parking while minimizing the impacts from noise, traffic congestion, and negative visual settings; and providing an equitable distribution and allocation of parking resources. Of particular concern in the CLUP is recognition of the unique needs of Hermosa Beach's pedestrian-oriented downtown business area. Specific CLUP policies include: a prohibition against the elimination of existing on- or off-street parking within the coastal zone; the control of congestion through

the granting of preferential parking permits; and the separation of short- and long-term parkers in the immediate area around the beach.

City of Hermosa Beach Municipal Code

The Municipal Code provides regulations and standards governing traffic, parking and loading, encroachments on the public right-of-way, and development. Minimum parking requirements are generally based on building gross square footage, or other factors as specified in the Zoning Code (Chapter 17.44). The Municipal Code allows vehicle parking for any development to be reduced if a "Parking Plan" is approved by the planning commission based on various factors including bicycle and foot traffic.

The code lacks universal bicycle parking requirements for new and existing development, but bicycle parking is reviewed during the planning process. The Upper Pier Avenue Specific Plan Area (No. 11), which extends along both the north and south sides of Pier Avenue between Palm Drive (just east of Hermosa Avenue) and Valley Drive, requires pedestrian oriented development and has a separate bicycle parking requirement. There, minimum requirements are based on either square footage or number of employees. Developers must provide bicycle racks, fully enclosed spaces, lockers, or other secure parking. Specific Plan Area No. 11 also provides for an in lieu fee developers may pay when placement of bicycle parking on the property is not practical.

The chapter on Trip Reduction and Transportation Management (Chapter 17.48) implements the Los Angeles CMP and requires that, prior to approval of any development project, the applicant shall make provision for, as a minimum, a number of applicable transportation demand management and trip reduction measures related to ridesharing, public transit options, bicycle route information, the installation of preferential carpool/vanpool parking, sidewalk requirements, and bus stop requirements. Most development does not reach the threshold at which this chapter applies.

City Council Strategic Plan and Community Dialogue Decision Making Tool

The City Council Strategic Plan identifies a number of goals and actions that relate to transportation. The Downtown Core Revitalization Strategy proposes to create a more pedestrian-oriented environment along Hermosa Avenue between 10th and 14th Streets by widening sidewalks and modifying parking, including reducing travel lanes to one southbound, as well as construction of a parking structure in the downtown to support new development.

In early 2014, City Council also launched and refined a Community Dialogue process which developed a Decision Making Tool. The Tool should enhance the effectiveness of Hermosa Beach governance by encouraging critical thought about decisions placed before the community. Some of the questions used as part of the Tool assess a plan's environmental impact, including access to coastal resources and promotion of biking or walking.

City of Hermosa Beach Sustainability Plan

The City of Hermosa Beach Sustainability Plan addresses transportation through policies and infrastructure improvements that encourage bicycling, walking, and other alternative modes of transportation. The City seeks to adopt "complete streets" strategies in order to reduce greenhouse gas emis-

sions. These strategies include traffic calming, full implementation of the SBBMP, replacing vehicular lanes with bicycle lanes, and securing bicycle storage facilities. The Sustainability Plan sets the creation of streetscapes and environments that encourage walking as a high priority. The City seeks to take advantage of its compact size, dense land use patterns, grid street network, and low speed limits, and will coordinate with local schools to promote walking as an ideal way to get to school.

WALK TO SCHOOL WEDNESDAYS IN HERMOSA BEACH

The City is working with public transit providers to identify at least one transit improvement, and is also evaluating whether a "beach bus" shuttle from central parking facilities to the beach can reduce traffic, emissions, and alleviate parking shortages. The City seeks to reduce commute-based emissions from city employees and residents through TDM measures including ridesharing, telecommuting, promotion of public transit options, and parking cash-out. The City is developing alternative transportation-supportive land use plans and codes including reduced off-street parking requirements and adoption of parking maximums, and has made reduction in VMT a priority in planning decisions. The City is developing electric-vehicle supportive infrastructure, and is continuing to transition the municipal vehicle fleet to ultra-low emission vehicles. Finally, the City is encouraging local food retailers and restaurateurs to source supplies locally to reduce freight emissions.

City of Hermosa Beach Living Streets Policy

One of the measures on the Beach Cities Livability Plan (through the Blue Zones Community Policy Pledge scorecard program) is to adopt Complete Streets principles. In 2013, the Hermosa Beach Council adopted the Living Streets Policy as a policy level measure that incorporates both complete streets and sustainability principles. The goal of the policy is to promote the health and mobility of all Hermosa Beach residents and visitors through provision of high quality pedestrian, bicycling, and

transit access to destinations across the City. The policy provides a checklist and procedures to evaluate street projects through a comprehensive 'sustainability' lens. It ensures that various segments of the community – not just vehicle drivers – are considered when determining how to use and improve the public right-of-way. A next step is to adopt street standards to implement the policy.

Safe Routes to Schools Program

Safe Routes to Schools (SRTS) programs exist at both the Federal and State levels to provide funding for capital improvements and education about safe non-motorized travel to school. While the Federal grant program only provides funding related to grades K-8, the California "SR2S" program includes high school. Hermosa Beach has previously completed a Safe Routes project and is applying for funding for another.

Downtown Core Revitalization Strategy

The City prepared a Downtown Core Revitalization Strategy in 2013 improve economic conditions, including leveraging City assets and providing a framework for key private sites. Five strategies proposed for further evaluation and implementation include: improvements to Hermosa Avenue to create a more pedestrian oriented environment between 10th and 14th Street by widening sidewalks and modifying parking including reducing travel lanes to one southbound, which might result in a gain of approximately 30 spaces; improvements to Pier Plaza to create a more family friendly environment including improved bicycle parking; parking solutions including construction of a parking structure the downtown to support new development; code amendments focused on parking; and a framework for catalyst projects that provide significant public amenities. The City deferred study of improvements at the Civic Center which may include parking.

Best Practices and Emerging Trends

Complete Streets

The term Complete Streets describes a comprehensive approach to the practice of mobility planning, as opposed to planning exclusively for automobiles and trucks. The complete street concept recognizes that transportation corridors have multiple users with different abilities and mode preferences, such as drivers, bicyclists, pedestrians, and transit users. Complete streets apply equally to downtown main streets and high-capacity commercial corridors. Complete streets policies encourage street connectivity with the aim of creating a comprehensive, integrated, and connected network for all modes, and they consider the range of users, including children, the disabled, and seniors. Complete streets can be safer for everyone, support livable communities, and have positive public health and economic impacts. Hermosa Beach has recently adopted a complete streets program through its Living Streets Policy. The City is in 2015 required to incorporate 'green streets' measures that reduce runoff and improve water quality, to implement NPDES requirements.

Active Transportation

Active transportation (AT) is any means of getting around powered by human energy, primarily walking and bicycling, but also skateboarding, riding a scooter, and other modes. AT is often referred to as "non-motorized transportation." Just as motorized transportation networks connect

destinations via an interconnected system of roadways, AT networks allow people to do the same via walking or bicycling. Sidewalks and bicycle facilities are the primary components of AT networks. AT benefits health and the environment, can reduce VMT, and is proven to provide substantial economic benefits to communities. Federal funding for non-motorized transportation is provided in the Transportation Alternatives program under the current transportation bill, MAP-21, through the Congestion Mitigation and Air Quality Improvement Program, as well as the Highway Safety Improvement Program, the Strategic Highway Safety Plan, and the Surface Transportation Program. SB-99, the California Active Transportation Program bill, established various transportation programs and associated funds and accounts, including the Bicycle Transportation Account, the Bikeway Account, and the Safe Routes to School Program. The program will be funded in the annual Budget Act. At the regional level, SCAG and Los Angeles County also provide AT funds.

Multi-Modal Level of Service (LOS)

Conventional methods for calculating LOS for a road or intersection only address the experience of one set of users: vehicle drivers. This simple fact has broad implications, because LOS is often used as the primary (or sometimes the only) metric of transportation system performance. Over the past several years, the transportation planning field has seen a profusion of new methods for calculating LOS designed to account for the experiences of a much wider range of road users.

Layered Networks

In cases where it is difficult for a single roadway to meet the needs of all users, layered networks, which provide priority to particular modes on different roadways, can improve the efficiency and/or safety of a roadway or network. There are many situations where the needs of one mode can negatively affect another mode:

- Increased automobile speeds can reduce pedestrian and bicycle safety and may inhibit use of neighborhood vehicles
- Expanded automobile capacity can result in wider roadways less friendly to cyclists and pedestrians
- Creation of bicycle facilities may create conflicts with buses
- Pedestrian priority treatments can increase delays for vehicles
- Roadway designs that accommodate trucks can result in large intersections that increase pedestrian crossing times and reduce automobile LOS

Improving connectivity is important for each mode using the roadway system. A layered network concept allows certain roadways to be continuous for a particular mode, while discouraging use by other modes. For example, a collector street can provide continuity for pedestrians, bicyclists or transit vehicles, while discouraging use by 'cut-through' traffic. One of the advantages of a dense, highly-connected urban roadway network with redundant travel routes, such as in Hermosa Beach is that it provides flexibility in accommodating different travel modes on different roadways.

C-18: References

18. References

Aesthetics References

California Coastal Commission. 2013. California Public Resources Code, Division 20: California Coastal Act. Accessed February 18, 2014. http://www.coastal.ca.gov/coastact.pdf.

Caltrans (California Department of Transportation). 2011. California Scenic Highway Mapping System. Accessed February 18, 2014. http://www.dot.ca.gov/hq/LandArch/scenic_highways/.

City of Hermosa Beach. 1981. Hermosa Beach Local Coastal Program, Coastal Land Use Plan. http://www.hermosabch.org/index.aspx?page=501

——. 2014a. Hermosa Beach Municipal Code. http://www.hermosabch.org/index.aspx?page=111.

——.2014b. City Facts. http://www.hermosabch.org/index.aspx?page=47.

——.2014c. City of Hermosa Beach City Council Strategic Plan. http://www.hermosabch.org/index.aspx?page=99

——. 2014d. Community Dialogue Quality of Life and Decision Tool. http://www.hermosabch.org/modules/showdocument.aspx?documentid=3764Hermosa Beach Historical Society. 2009. The Greenbelt. Accessed February 24, 2014. http://www.hermosabeachhistoricalsociety.org/greenbeltpage.html.

State of California. 2014. California Government Code, Title 7. Planning and Land Use, Division 1. Planning and Zoning. Section 65302. http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=GOV&sectionNum=65302.1.

Agricultural Resources References

California Department of Conservation, Division of Land Resources. 2012a. Farmland Mapping and Monitoring Program, California Important Farmland Finder. Accessed February 18, 2014. http://www.conservation.ca.gov/dlrp/FMMP/Pages/Index.aspx.

———. 2012b. 2012 Land Conservation (Williamson) Act Status Report. Accessed February 18, 2014. http://www.conservation.ca.gov/dlrp/lca/Pages/Index.aspx.

Biological Resources References

CDFW (California Department of Fish and Wildlife). 2014a. California Natural Diversity Database – February 4, 2014 update. CDFW Biogeographic Data Branch; Sacramento, CA.

CNPS (California Native Plant Society). 2014. Inventory of Rare and Endangered Plants (online edition, v8-01a). California Native Plant Society. Sacramento, CA.

Goudey, Charles B., and Scott R. Miles. 1998. *Ecological Subregions of California: Section & Subsection Descriptions*. Major contributions by Earl B. Alexander and John O. Sawyer. UDSA, Forest Service, Pacific Southwest Region.

McNab, W.H., D.T. Cleland, J.A. Freeouf, J.E. Keys Jr., G.J. Nowacki, C.A. Carpenter, compilers. 2007. *Description of ecological subregions: sections of the conterminous United States*. General Technical Report WO-76B. Washington, DC: USDA, Forest Service.

———. 2006. *California Least Tern 5-Year Review*. USFWS; Carlsbad, CA.

———. 2007. *Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (Charadrius alexandrius nivosus)*. USFWS; Sacramento, CA.

———. 2012. *Endangered and Threatened Wildlife and Plants; Revised Designation of Critical Habitat for the Pacific Coast Population of the Western Snowy Plover*. Final rule. Federal Register 77(118): 36728 – 36869.

———. 2014a. Information, Planning, and Conservation System (IPaC). USFWS. February 2014.

———. 2014b. Critical Habitat Portal. USFWS. Accessed February 2014.

USFS (US Forest Service). 2014. Vegetation Classification & Mapping. http://www.fs.usda.gov/detail/r5/landmanagement/resourcemanagement/?cid=stelprdb5347192

Energy References

CEC (California Energy Commission). 2009. State of California Energy Action Plan. Accessed February 2014. http://www.energy.ca.gov/energy_ action_plan/index.html.

———. 2013a. California Public Utilities Commission California Solar Initiative Program Handbook. Accessed March 2014. http://www.gosolarcalifornia.ca.gov/documents/CSI_HANDBOOK.PDF

———. 2013b. California's Major Energy Sources. Accessed February 2014. http://energyalmanac.ca.gov/overview/ energy_ sources.html. EIA (Energy Information Administration). 2014a. Table C11. Energy Consumption by Source, Ranked by State, 2012. Accessed July 2014. http://www.eia.gov/state/seds/sep_sum/html/pdf/rank_use_source.pdf.

———. 2014b. State Energy Profiles, California. Accessed March 2014. http://tonto.eia.doe.gov/state/state_energy_profiles.cfm?sid=CA.

FERC (Federal Energy Regulatory Commission). 2009. About FERC, What FERC Does. Accessed March 2014. http://www.ferc.gov/about/ferc-does.asp.

Go Solar California. 2014. California Solar Initiative Working Data Set. Accessed March 2014. http://www.californiasolarstatistics.ca.gov/current_data_files/.

Sempra Energy. 2008. Sempra Energy 2008 Annual Financial Report. San Diego, CA.

SoCalGas (Southern California Gas Company). 2010. Natural Gas Use Report for City of Hermosa Beach.

Southern California Edison. 2011a. Electricity Use Report for City of Hermosa Beach, 2010.

———. 2011b. Electricity Use Report for City of Hermosa Beach, 2010.

———. 2013a. Electricity Use Report for City of Hermosa Beach, 2012.

———. 2013b. Electricity Use Report for City of Hermosa Beach, 2011.

Geology and Soil References

Cal OES (California Office of Emergency Services). 2013. *2013 State Hazard Mitigation Plan.* Accessed February 2014. http://hazardmitigation.calema.ca.gov/docs/SHMP_Final_2013.pdf.

CGS (California Geological Survey). 2010. *Online Website Fault Maps* and *Special Publication 42, Alquist-Priolo Earthquake Fault Zones*. Accessed February 2014. ftp://ftp.consrv.ca.gov/pub/dmg/pubs/sp/Sp42.pdf.City of Hermosa Beach. 2014. *E&B Oil Drilling & Production Project Final Environmental Impact Report*. Accessed July 2014. http://www.hermosabch.org/ftp/oil_docs/FEIR%20Hermosa%20beach%20Oil%20Project_All%20Sections.pdf.

DOC (California Department of Conservation). 1998. *Seismic Hazard Zone Report for the Redondo Beach 7.5-Minute Quadrangle, Los Angeles County, California*. Accessed February 2014. http://gmw.consrv.ca.gov/shmp/download/quad/REDONDO_BEACH/reports/redob_eval.pdf.

-----. 1999. *State of California Seismic Hazard Zones Redondo Beach Quadrangle Official Map.* Accessed February 2014. http://gmw.consrv.ca.gov/shmp/download/quad/REDONDO_BEACH/maps/ozn_redob.pdf.

Southern California Earthquake Data Center. 2014. *Significant Earthquakes and Faults, Chronological Earthquake Index, Long Beach Earthquake*. Accessed February 2014. http://www.data.scec.org/significant/longbeach1933.html.

USGS (US Geological Survey). 1981. "Redondo Beach Quadrangle Topographic Map." Accessed January 2014. http://www.archive.org/download/usgs_drg_ca_33118_g4/o33118g4.tif

-----. 2013a. *Earthquake Hazards Program, Banded Deaggregations*. Accessed January 2014. http://eqint.cr.usgs.gov/deaggband/2002/index.php.

-----. 2013b. *Magnitude Intensity Comparison*. Accessed January 2014. http://earthquake.usgs.gov/learn/topics/mag_vs_int.php.

Hazards and Hazardous Material Resources

CAL FIRE (Department of Forestry and Fire Protection). 2007. *Los Angeles County Fire Hazard Severity Zone Map*. Accessed January 2014. http://www.fire.ca.gov/fire_prevention/fhsz_maps_losangeles.php.

City of Hermosa Beach. 2005. *Natural Hazards Mitigation Plan*.

-----. 2011. *City of Hermosa Beach Emergency Operations Plan*. Accessed January 2014. http://hermosabeach.granicus.com/MetaViewer.php?view_id=4&clip_id=1452&meta_id=90083.

-----. 2014. E&B Oil Drilling & Production Project Final Environmental Impact Report. http://www.hermosabch.org/ftp/oil_docs/FEIR%20Hermosa%20beach%20Oil%20Project_All%20Sections.pdf.

DTSC (California Department of Toxic Substance Control). 2014a. *EnviroStor*. Accessed January 2014. http://www.envirostor.dtsc.ca.gov/public.

-----. 2014b. *Registered Hazardous Waste Transporter Database*. Accessed February 2014. https://dtsc.ca.gov/database/Transporters/index.cfm.

EPA (US Environmental Protection Agency). 2014. *Superfund*. Accessed January 2014. http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm.

PHMSA (US Pipeline and Hazardous Materials Safety Administration). 2012. *National Pipeline Mapping System Public Map Viewer*. Accessed February 2014. https://www.npms.phmsa.dot.gov.

SWRCB (State Water Resources Control Board). 2014. *GeoTracker*. Accessed January 2014. http://geotracker.swrcb.ca.gov/map/?CMD=runreport&myaddress= hermosabeach.

Hydrology and Water Quality Resources

Cal Water (California Water Service Company Hermosa-Redondo District). 2011. *California Water Service Company 2010 Urban Water Management Plan Hermosa-Redondo District.* Accessed January 2014. http://www.water.ca.gov/urbanwatermanagement/2010uwmps/CA%20Water%20Service%20Co%20-%20Hermosa-Redondo/_HR_UWMP_2010.pdf.

City of Hermosa Beach. 2005. *Natural Hazards Mitigation Plan.*

-----. 2011. City of Hermosa Beach Sanitary Sewer Master Plan. Accessed August 4, 2014. http://www.hermosabch.org/modules/showdocument.aspx?documentid=1765

-----. 2014. *E&B Oil Drilling & Production Project Draft Environmental Impact Report.* Accessed February 2014. http://www.hermosabch.org/ftp/oil_docs/_ALL%20DEIR.pdfDWR (California Department of Water Resources). 1961. *Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County.* Bulletin No. 104.

-----. 1999. *Watermaster Service in the West Coast Basin, Los Angeles County, July 1, 1998 – June 30, 1999.*

-----. 2004. "Coastal Plain of Los Angeles County Groundwater Basin West Coast Subbasin." *California's Groundwater Bulletin 118.* Accessed January 2014. http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/4-11.03.pdf.

-----. 2009. *California Water Plan: Update 2009, Volume 3 South Coast Regional Report.* Bulletin 160-09. Accessed January 2014. .http://www.waterplan.water.ca.gov/docs/cwpu2009/0310final/v3_southcoast_cwp2009.pdf.

FEMA (Federal Emergency Management Agency). 2008. *Flood Insurance Map: Los Angeles County California and Incorporated Areas.* Map number 06037C1907F. Accessed January 2014. https://msc.fema.gov/webapp/wcs/stores/servlet/MapSearchResult?storeId=10001&catalogId=10001&langId=-1&panelIDs=06037C1907F$&Type=pbp&nonprinted=&unmapped.

Grifman, P. M., J. F. Hart, J. Ladwig, A. G. Newton Mann, M. Schulhof. 2013. *Sea Level Rise Vulnerability Study for the City of Los Angeles.* USCSG-TR-05-2013. Accessed February 2014. https://www.usc.edu/org/seagrant/research/SeaLevelRise_docs/hires_pdfs/City%20of%20LA%20SLR%20Vulnerability%20Study%20FINAL%20Summary%20Report%20Online%20Hyperlinks.pdf.

Los Angeles RWQCB (California Water Quality Control Board, Los Angeles Region). 1995. *Water Quality Control Plan Los Angeles Region.* Accessed February 2014. http://www.waterboards.ca.gov/rwqcb4/water_issues/programs/basin_plan/electronics_documents/bp1_introduction.pdf.

-----. 2002a. *Attachment A to Resolution No. 02-004: Proposed Amendment to the Water Quality Control Plan – Los Angeles Region to Incorporate the Santa Monica Bay Beaches Bacteria TMDL.* Accessed

February 2014. http://63.199.216.6/larwqcb_new/bpa/docs/2002-004/2002-004_RB_BPA.pdf.

-----. 2002b. *Attachment A to Resolution No. 2002-022: Amendment to the Water Quality Control Plan – Los Angeles Region to Incorporate Implementation Provisions for the Region's Bacteria Objectives and to Incorporate the Santa Monica Bay Beaches Wet-Weather Bacteria TMDL.* Accessed February 2014. http://63.199.216.6/larwqcb_new/bpa/docs/2002-022/2002-022_RB_BPA.pdf.

-----. 2010. *Santa Monica Bay Nearshore and Offshore Debris TMDL.* Accessed February 2014. http://www.waterboards.ca.gov/losangeles/board_decisions/basin_plan_amendments/technical_documents/72_New/SMB%20Debris%20Staff%20Report%20102510.pdf.

-----. 2012. *Santa Monica Bay Total Maximum Daily Loads for DDTs and PCBs.* Accessed February 2014. http://www.epa.gov/region9/water/tmdl/santamonica/FinalSantaMonicaBayDDTPCBsTMDL.pdf.NRC (National Research Council). 2012. *Sea-Level Rise for the Coasts of California, Oregon, and Washington*: *Past, Present, and Future*. Accessed January 2014. www.nap.edu/catalog.php?record_id=13389.

SWRCB (State Water Resources Control Board). 2012. *California Ocean Plan*. Accessed July 2014. http://www.swrcb.ca.gov/water_issues/programs/ ocean/docs/cop2012.pdf.

West Basin Municipal Water District. 2011. *2010 Urban Water Management Plan*. Accessed January 2014. http://www.water.ca.gov/urbanwatermanagement/2010uwmps/West%20Basin%20Municipal%20Water%20District/West%20Basin%202010%20complete-final-draft.for-web.pdf.

Land Use References

California Coastal Commission. 2013. California Public Resources Code, Division 20: California Coastal Act. Accessed February 18, 2014. http://www.coastal.ca.gov/coastact.pdf.

———. n.d. Description of California's Coastal Management Program. Accessed February 24, 2014. http://www.coastal.ca.gov/fedcd/ccmp_description.pdf.

City of Hermosa Beach. 1981. City of Hermosa Beach Local Coastal Program.

———. 2013. Geographic Information Systems.

National Oceanic and Atmospheric Administration. 2014. Coastal Zone Management Act of 1972. Accessed February 24, 2014. http://coastalmanagement.noaa.gov/about/czma.html#section304.

Mineral Resources References

DOC (California Department of Conservation). 1994. *Generalized Mineral Land Classification Map of Los Angeles County – South Half*. Accessed January 2014. ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/OFR_94-14/OFR_94-14_Plate1B.pdf.

-----. 2010. *Guidelines for Classification and Designation of Mineral Lands. State Mining and Geology Board.* Accessed July 2014. <http://www.conservation .ca.gov/smgb/Guidelines/Pages/guidelines.aspx>.

Public Services and Utilities Resources

California Department of Education, Educational Demographics Unit. 2013. Hermosa Beach School Enrollment, 2012-2013 School Year. Accessed February 19, 2014. http://dq.cde.ca.gov/dataquest/Enrollment/GradeEnr.aspx?cChoice=DistEnrGr2&cYear=2012-13&cSelect=1964600--HERMOSA%20BEACH%20CITY%20ELEMENTARY&TheCounty=&cLevel=District&cTopic=Enrollment&myTimeFrame=S&cType=ALL&cGender=B.

California Department of Social Services. 2012. Community Care Licensing Division Facility Search List. Accessed February 20, 2014. http://www.ccld.ca.gov/docs/ccld_search/ccld_search.aspx.

California Environmental Protection Agency. 2014. National Pollutant Discharge Elimination System. http://www.waterboards.ca.gov/water_issues/programs/npdes/

Cal Water (California Water Service Company). 2011. 2010 Urban Water Management Plan, Hermosa-Redondo District. Accessed February 19, 2014. http://www.water.ca.gov/urbanwatermanagement/2010uwmps/CA%20Water%20Service%20Co%20-%20Hermosa%20Redondo%20District/.

Center for Public Safety Management. 2013a. Data Analysis Report Fire and Emergency Medical Services, Hermosa Beach, California. Accessed February 18, 2014. http://www.hermosabch.org/Modules/ShowDocument.aspx?documentID=3314.

———. 2013b. Police Operations Report, Hermosa Beach, California. Accessed February 18, 2014. http://www.hermosabch.org/modules/showdocument.aspx?documentid=3556.

City of Hermosa Beach. 2010. Hermosa Beach Stormwater Program and Water Quality Issues. Accessed February 20, 2014. http://www.hermosabch.org/modules/showdocument.aspx?documentid=669.

———. 2011a. City of Hermosa Beach Sustainability Plan. Accessed February 19, 2014. http://hermosabeach.granicus.com/MetaViewer.php?view_id=4&clip_id=1471&meta_id=91633.

———. 2011b. City of Hermosa Beach Sanitary Sewer Master Plan. Accessed August 4, 2014. http://www.hermosabch.org/modules/showdocument.aspx?documentid=1765

———. 2013a. Leader's Guide 2013. Accessed February 18, 2014. http://www.hermosabch.org/modules/showdocument.aspx?documentid=2675.

———.2013b. Police Department Web Page. Accessed February 19, 2014. http://www.hermosabch.org/index.aspx?page=178.

———. 2013c. Agreement between City of Hermosa Beach and Arakelian Enterprises DBA Athens Services, for Integrated Waste Management Services.

———. 2013d. Geographic Information Systems Database.

———. 2013e. Athens Services Monthly Solid Waste Tonnage Report.

Hermosa Beach City School District. 2009. Project Forward: Hermosa Beach Schools. Accessed February 29, 2014. http://www.hbcsd.org/view/5202.pdf.

LACSD (Sanitation Districts of Los Angeles County). 2013. Wastewater Facilities. http://www.lacsd.org/wastewater/wwfacilities/default.asp#map.

Los Angeles County. 2013a. Public Works Department. Countywide Integrated Waste Management Plan 2012 Annual Report.

———. 2013b.Public Works Department. Solid Waste Information Management System. 2013 Jurisdiction of Origin Report. http://dpw.lacounty.gov/epd/swims/OnlineServices/reports.aspx on March 6, 2014.

Los Angeles County Fire Department. 2014. LACFD Strategic Plan 2012. Accessed February 19, 2014. http://www.fire.lacounty.gov/wp-content/uploads/2014/02/LACFD_Strategic-Plan_2012_web.pdf.

MBF Consulting, Inc. 2011. Sanitary Sewer Master Plan – Update. Prepared for the City of Hermosa Beach, originally in April 2009, revised March 2011. http://www.hermosabch.org/Search.aspx?sa.x=9&sa.y=13&sa=Search&cof=FORID%3A11&q=sewer%20service&cx=014272426406783312333%3Akplopnjmbl8.

US Environmental Protection Agency. 2009. National Pollutant Discharge Elimination System. Accessed February 20, 2014. http://cfpub.epa.gov/npdes/.

West Basin Municipal Water District. 2011a. About West Basin. http://www.westbasin.org/about-west-basin.

_____. 2011b. 2010 Urban Water Management Plan. http://www.westbasin.org/water-reliability-2020/planning/water-resources-planning.