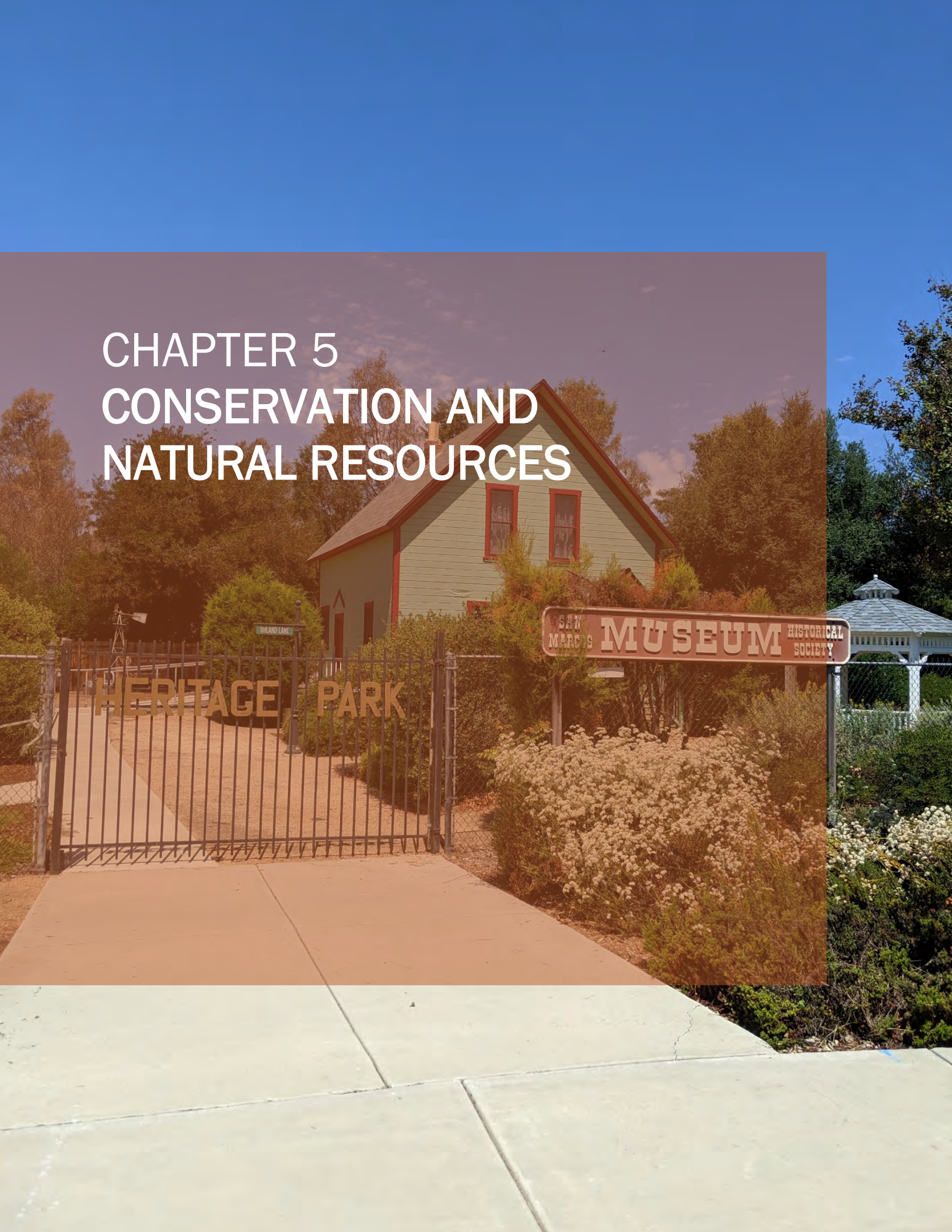

CHAPTER 5
CONSERVATION AND NATURAL RESOURCES

5 CONSERVATION AND NATURAL RESOURCES

The city's natural resources form an important part of its unique character and quality of life. In an effort to identify and understand the key natural resources of the city, this chapter is divided into the following sections **[CULTURAL AND HISTORIC RESOURCES TO BE PROVIDED UNDER SEPARATE COVER]**:

- 5.1 Biological Resources
- 5.2 Air Quality
- 5.3 Greenhouse Gases
- 5.4 Geology, Soils, and Seismicity
- 5.5 Mineral Resources
- 5.6 Hydrology and Water Quality
- 5.7 Visual Resources and Community Image

5.1 BIOLOGICAL RESOURCES

This section describes biological resources in the Planning Area. There are a number of regulatory agencies whose responsibility includes the oversight of the natural resources of the State and nation including the California Department of Fish and Wildlife (CDFW), the U.S. Fish and Wildlife Service (USFWS), the U.S. Army Corps of Engineers (USACE), and the National Marine Fisheries Service (NMFS). These agencies often respond to declines in the quantity of a particular habitat or plant or animal species by developing protective measures for those species or habitat type. The existing City of San Marcos General Plan identifies the following policies related to biological resources.

Element	Topic Area	Goal	Policy
Conservation and Open Space Element	Natural Resources	Goal COS-1: Identify, protect, and enhance significant ecological and biological resources within San Marcos and its adaptive Sphere of Influence.	Policy 1.1: Support the protection of biological resources through the establishment, restoration, and conservation of high-quality habitat areas. Policy 1.2: Ensure that new development, including Capital Improvement Projects, maintain the biotic habitat value of riparian areas, oak woodlands, habitat linkages, and other sensitive biological habitats. Policy 1.3: Continue to work with other federal, State,

		Goal COS-2: The City is committed to conserving, protecting, and maintaining open space, agricultural, and limited resources for future generations. By working with property owners, local organizations, and State and federal agencies, the City can limit the conversion of resource lands to urban uses.	regional, and local agencies. Policy 2.1: Provide and protect open space areas throughout the City for its recreational, agricultural, safety, and environmental value. Policy 2.2: Limit, to the extent feasible, the conversion of open space to urban uses and place a high priority on acquiring and preserving open space lands for recreation, habitat protection and enhancement, flood hazard management, water and agricultural resources protection, and overall community benefit. Policy 2.3: Protect existing agricultural areas, encourage farm to consumer, promote public health, and promote small-scale agriculture such as community gardens and the growing of organic produce. Policy 2.6: Preserve healthy mature trees where feasible; where removal is necessary, trees shall be replaced at a ratio of 1:1.

Source: City of San Marcos General Plan, 2012

5.1.1 Environmental Setting

The City of San Marcos is located in the northwestern portion of San Diego County. San Marcos is bordered by the City of Vista to the northwest, Escondido to the east, Carlsbad to the west, and Encinitas to the southwest. San Marcos is located approximately 40 miles north of downtown San Diego.

San Marcos is included in numerous regional efforts to protect local biological resources. These regional efforts include the San Diego Association of Government's (SANDAG) Multiple Habitat Conservation Program (MHCP), and County of San Diego's North County Multiple Species Conservation Program (MSCP).

Bioregions

San Marcos is located within the Southern California Coast bioregion. This bioregion is bounded on the north by the southern edge of the Los Padres National Forest and the northern base of the San Gabriel and San Bernardino Mountains. This bioregion is bounded on the east by the western edge of the Bureau of Land Management (BLM) California Desert Conservation Area, and is bordered on the south by the Mexican border. Landscapes in this bioregion range from flatlands to mountains, and ecosystems range from ocean to desert. The region also contains two of California's largest cities (Los Angeles and San Diego). More than any other bioregion in the State, urbanization has caused intense effects on natural resources. Urbanization in the Southern California Coast bioregion has resulted in the loss of habitat, spread of nonnative species, and the loss of native species.

Wildlife Corridors

Wildlife corridors are the corridors of natural movement that species make within their lifetime. Wildlife corridors can range from the length of a river to the length of a continent. According to the existing General Plan, a majority of wildlife movement within San Marcos occurs within the northern and southern portions of the City. The central portion of the City is not as hospitable to wildlife movement given the urban environment. Of the limited wildlife movement that occurs within the urbanized portions of the City, a majority occurs along riparian creeks and drainage corridors, including San Marcos Creek, Las Posas Creek, Twin Oaks Valley Creek, Buena Creek, Agua Hedionda Creek, and some tributaries

SANDAG North County Multiple Habitat Conservation Program

The Multiple Habitat Conservation Program (MHCP) is a comprehensive conservation planning process that addresses the needs of multiple plant and animal species in North Western San Diego County (CDFW, 2021). The MHCP encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. Its goal is to conserve approximately 19,000 acres of habitat, of which roughly 8,800 acres (46 percent) are already in public ownership and contribute toward the habitat preserve system for the protection of more than 80 rare, threatened, or endangered species.

Development of the MHCP subarea plan for San Marcos is ongoing. The MHCP Subregional Plan and Final Environmental Impact Statement / Environmental Impact Report (EIS/EIR) were adopted and certified by the SANDAG Board of Directors on March 28, 2003. Subarea plans for the cities of

Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, and Vista are being prepared and must be adopted by each City Council and implementing agreements with the CDFW and USFWS must be signed before incidental take permits can be issued. The City of Solana Beach does not need to prepare a subarea plan. To date, only one subarea plan has been completed in the City of Carlsbad (County of San Diego, 2019).

Coordinated through SANDAG, the MHCP is one of three subregional habitat conservation planning programs in the region that, together, will contribute to a coordinated preserve system for the San Diego region and Southern California. With the preserve area defined in advance of development, builders will know where new homes, employment, and commercial centers can be placed. When completed, the habitat preservation areas will serve as a key component of the region's smart growth efforts by preserving habitat and open space and by directing forecasted growth into appropriate areas.

County of San Diego North County Multiple Species Conservation Program

The County Multiple Species Conservation Program (MSCP) is a long-term, regional habitat conservation program focused on balancing protection of habitat with recreation, development and agricultural activities. The County's MSCP comprises of three separate planning areas covering the unincorporated regions of San Diego: the South County Plan, draft North County Plan, and draft East County MSCP. The North County Plan Area, which includes portions of the Planning Area, encompasses approximately 316,000 acres and includes over 120,000 acres of existing development with over 58,000 existing dwelling units. Preparation of the North County MSCP is ongoing, with the latest Preliminary Draft North County Plan revised in 2017 (County of San Diego, 2019).

California Wildlife Habitat Relationship System

The California Wildlife Habitat Relationship (CWHR) habitat classification scheme has been developed to support the CWHR System, a wildlife information system and predictive model for California's regularly-occurring birds, mammals, reptiles, and amphibians. At present, there are 59 wildlife habitats in the CWHR System, including: 27 tree, 12 shrub, 6 herbaceous, 4 aquatic, 8 agricultural, one developed, and one non-vegetated.

According to the CWHR System, there are 16 cover types (wildlife habitat classifications) in the Planning Area out of 59 found in the State. These include: Annual Grassland, Barren, Chamise-Redshank Chaparral, Coastal Oak Woodland, Coastal Scrub, Deciduous Orchard, Eucalyptus, Evergreen Orchard, Fresh Emergent Wetland, Irrigated Row and Field Crops, Lacustrine, Mixed Chaparral, Pasture, Perennial Grassland, Urban, and Valley Foothill Riparian.

Table 5-1 identifies the total area by acreage for each cover type (wildlife habitat classification) found in San Marcos and the Sphere of Influence. Figure 5-1 illustrates the location of each cover type (wildlife habitat classification) within San Marcos. A brief description of each cover type is listed below.

Table 5-1: Cover Types - California Wildlife Habitat Relationship System

Name	City Boundary (acres)	Sphere of Influence (acres)	Total Planning Area (acres)
Annual Grassland	966.03	247.61	1,213.64
Barren	179.53	15.40	194.94
Chamise-Redshank Chaparral	18.01	0.00	18.01
Coastal Oak Woodland	0.00	80.15	80.15
Coastal Scrub	2,469.63	573.59	3,043.22
Deciduous Orchard	52.47	792.26	844.73
Eucalyptus	19.35	34.91	54.26
Evergreen Orchard	0.00	57.65	57.65
Fresh Emergent Wetland	10.45	0.00	10.45
Irrigated Row and Field Crops	54.29	385.67	439.96
Lacustrine	13.34	65.16	78.50
Mixed Chaparral	2,356.26	1,369.38	3,725.64
Pasture	139.01	264.40	403.41
Perennial Grassland	3.11	0.00	3.11
Urban	9,229.18	1,530.13	10,759.31
Valley Foothill Riparian	209.53	28.89	238.42
Total	15,720.20	5,445.19	21,165.40

Source: CWHR, 2020.

Developed Cover Types

Deciduous Orchard is typically open single species tree dominated habitats. Depending on the tree type and pruning methods they are usually low, bushy trees with an open understory to facilitate harvest. Deciduous orchards include trees, such as, almonds, apples, apricots, cherries, figs, nectarines, peaches, pears, pecans, pistachios, plums, pomegranates, prunes and walnuts. Trees range in height at maturity for many species from 15 to 30 feet but may be 10 feet or less in pomegranates and some dwarf varieties, or 60 feet or more in pecans and walnuts (Sunset, 1972). Crowns usually touch and are in a linear pattern. Spacing between trees is uniform depending on desired spread of mature trees. The understory is typically composed of low-growing grasses, legumes, and other herbaceous plants, but may be managed to prevent understory growth totally or partially, such as along tree rows.

Evergreen Orchard is typically open single species tree dominated habitats. Depending on the tree type and pruning methods they are usually low, bushy trees with an open understory to facilitate harvest. Evergreen orchards include trees, such as, avocados, dates, grapefruit, lemons, limes, olives, oranges, tangerines, tangelos and tangors. Trees range in height at maturity for many species from 15 to 30 feet but may be 10 feet or less in some dwarf varieties, or 60 feet or

more in date palms (Sunset, 1972). Crowns often do not touch and are usually in a linear pattern. Spacing between trees is uniform depending on desired spread of mature trees. The understory is typically composed of low-growing grasses, legumes, and other herbaceous plants, but may be managed to prevent understory growth totally or partially, such as along tree rows.

Irrigated Row and Field Crops occur in association with orchards, vineyards, pasture, urban, and other wildlife habitats such as riparian, chaparral, wetlands, desert, and herbaceous types. They are located on flat to gently rolling terrain. When flat terrain is put into crop production, it usually is leveled to facilitate irrigation. Rolling terrain is usually irrigated by sprinklers. Soils often dictate the crops grown.

Urban habitats are not limited to any particular physical setting. Three urban categories relevant to wildlife are distinguished: downtown, urban residential, and suburbia. The heavily-developed downtown is usually at the center, followed by concentric zones of urban residential and suburbs. There is a progression outward of decreasing development and increasing vegetative cover. Species richness and diversity is extremely low in the inner cover. The structure of urban vegetation varies, with five types of vegetative structure defined: tree grove, street strip, shade tree/lawn, lawn, and shrub cover. A distinguishing feature of the urban wildlife habitat is the mixture of native and exotic species.

Herbaceous Dominated Cover Types

Annual Grassland habitat occurs mostly on flat plains to gently rolling foothills. Climatic conditions are typically Mediterranean, with cool, wet winters and dry, hot summers. The length of the frost-free season averages 250 to 300 days.

Fresh Emergent Wetland habitat occurs on virtually all exposures and slopes, provided a basin or depression is saturated or at least periodically flooded. However, they are most common on level to gently rolling topography. They are found in various landscape depressions or at the edge of rivers or lakes. The length of the frost-free season averages 250 to 300 days. This habitat is characterized by erect, rooted, herbaceous hydrophytes. Dominant vegetation is generally perennial monocots to 6.6 feet tall. All emergent wetlands are flooded frequently, enough so that the roots of the vegetation prosper in an anaerobic environment.

Pasture vegetation is a mix of perennial grasses and legumes that normally provide 100 percent canopy closure. Heights of vegetation varies, according to season and livestock stocking levels, from a few inches to two or more feet on fertile soils before grazing.

Perennial Grassland habitats occur in two forms in California: coastal prairie, found in areas of northern California under maritime influence, and relics in habitats now dominated by annual grasses and forbs. Perennial Grassland habitat typically occurs on ridges and south-facing slopes, alternating with forest and scrub in the valleys and on north-facing slopes. Perennial Grassland habitats are most often found on Mollisols.

Hardwood Woodland Cover Types

Coastal Oak Woodland habitats occupy a variety of Mediterranean type climates that vary from north to south and west to east. Precipitation occurs in the milder winter months, almost entirely as rainfall, followed by warm to hot, dry summers. Near the coast, the summers are tempered by fogs and cool, humid sea breezes. Mean annual precipitation varies from about 40 inches in the north to about 15 inches in southern and interior regions. Mean minimum winter temperatures are 29 to 44 °F, and the mean maximum summer temperatures are 75 to 96 °F. The growing season ranges from six months (180 frost-free days) in the north to the entire year in mild coastal regions to the south. The soils and parent material on which coastal oak woodlands occur are extremely variable. Coastal oak woodlands generally occur on moderately to well-drained soils that are moderately deep and have low to medium fertility.

Valley Foothill Riparian habitats are found in valleys bordered by sloping alluvial fans, slightly dissected terraces, lower foothills, and coastal plains. They are generally associated with low velocity flows, flood plains, and gentle topography. Valleys provide deep alluvial soils and a high water table. The substrate is coarse, gravelly, or rocky soils more or less permanently moist, but probably well aerated. Frost and short periods of freezing occur in winter (200 to 350 frost-free days). This habitat is characterized by hot, dry summers and mild and wet winters. Temperatures range from 75 to 102 °F in the summer to 29 to 44 °F in the winter. Average precipitation ranges from 6 to 30 inches, with little or no snow. The growing season is seven to 11 months.

Tree-Dominated Cover Types

Eucalyptus habitat occurs from San Diego and Imperial counties in the south, usually at elevations below 1,500 feet, but it has been found up 2,100 feet; and to Shasta in the north. However, most eucalyptus is found around populated areas of southern and central California. Eucalyptus habitats range from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. In most cases, eucalyptus forms a dense stand with a closed canopy.

Shrub-Dominated Cover Types

Chamise-Redshank Chaparral habitat structure is influenced by fire. Mature Chamise-Redshank Chaparral is single layered, generally lacking well-developed herbaceous ground cover and overstory trees. Shrub canopies frequently overlap, producing a nearly impenetrable canopy of interwoven branches. Chamise-dominated stands average 3.3 to 6.6 feet in height but can reach 9.8 feet. Total shrub cover frequently exceeds 80 percent but may be considerably lower on extremely xeric sites with poor soils. Redshank stands are slightly taller, averaging 6.6 to 13.1 feet but occasionally reach 19.7 feet. Mature redshank frequently is more open than chamise and can have sparse herbaceous cover between shrubs. Composition in southern California includes white sage, black sage, and California buckwheat, which are common at lower elevations and on recently disturbed sites.

Coastal Scrub habitat is typified by low to moderate-sized shrubs with mesophytic leaves, flexible branches, semi-woody stems growing from a woody base, and a shallow root system. Coastal Scrub seems to tolerate drier conditions than its associated habitats. It is typical of areas with steep, south-facing slopes; sandy, mudstone or shale soils; and average annual rainfall of less than 12 inches. However, coastal scrub habitat also regularly occurs on stabilized dunes, flat terraces, and moderate slopes of all aspects where average annual rainfall is up to 24 inches. Stand composition and structure differ markedly in response to these physiographic features.

Mixed Chaparral is a structurally homogeneous brushland type dominated by shrubs with thick, stiff, heavily cutinized evergreen leaves. Shrub height and crown cover vary considerably with age since last burn, precipitation regime, aspect, and soil type. At maturity, cismontane Mixed Chaparral typically is a dense, nearly impenetrable thicket with greater than 80 percent absolute shrub cover. Canopy height ranges from 3.3 to 13.1 feet., occasionally to 19.6 feet. Mixed Chaparral is a floristically rich type that supports approximately 240 species of woody plants. Composition changes between northern and southern California and with precipitation regime, aspect, and soil type. Dominant species in cismontane Mixed Chaparral include scrub oak, chaparral oak, and several species of ceanothus and manzanita.

Aquatic Cover Types

Lacustrine habitats are inland depressions or dammed riverine channels containing standing water. These habitats may occur in association with any terrestrial habitats, Riverine, or Fresh Emergent Wetlands. They may vary from small ponds less than one acre to large areas covering several square miles. Depth can vary from a few inches to hundreds of feet. Typical lacustrine habitats include permanently flooded lakes and reservoirs, and intermittent lakes and ponds (including vernal pools) so shallow that rooted plants can grow over the bottom. Most permanent lacustrine systems support fish life; intermittent types usually do not.

Non-Vegetated Habitats

Barren habitat is defined by the absence of vegetation, and habitat with less than 2% total vegetation cover by herbaceous, desert, or non-wildland species, and less than 10% cover by tree or shrub species. Structure and composition of the substrate is largely determined by the region of the State and surrounding environment. Urban settings covered in pavement and buildings may be classified as barren as long as vegetation, including non-native landscaping, does not reach the percent cover thresholds for vegetated habitats.

5.1.2 Special-Status Species

The following discussion is based on a search of special-status species that are documented in the California Natural Diversity Database (CNDDB), the California Native Plant Survey (CNPS) Inventory of Rare and Endangered Plants, and the USFWS endangered and threatened species lists. The search was regional in scope and focused on the documented occurrences within the following U.S. Geological Survey quadrangles: Escondido, Valley Center, San Marcos, Rancho Santa Fe (referred to herein as four-quad search area), and a one-mile search area of the City SOI.

Special Status Species Background

Special-status species are those plants and animals that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, state, or other agencies. Some of these species receive specific protection that is defined by federal or state endangered species legislation. Others have been designated as "sensitive" on the basis of adopted policies and expertise of state resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. These species are referred to collectively as "special status species" in this report, following a convention that has developed in practice but has no official sanction. For the purposes of this assessment, the term “special status” includes those species that are:

- Federally listed or proposed for listing under the Federal Endangered Species Act (50 CFR 17.11-17.12);
- Candidates for listing under the Federal Endangered Species Act (61 FR 7596-7613);
- State listed or proposed for listing under the California Endangered Species Act (14 CCR 670.5);
- Species listed by the USFWS or the CDFW as a species of concern (USFWS), rare (CDFW), or of special concern (CDFW);
- Fully protected animals, as defined by the State of California (California Fish and Game Code Section 3511, 4700, and 5050);
- Species that meet the definition of threatened, endangered, or rare under CEQA (CEQA Guidelines Section 15380);
- Plants listed as rare or endangered under the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.); and
- Plants listed by the CNPS as rare, threatened, or endangered (List 1A and List 2 status plants in Skinner and Pavlik 1994).

Special Status Plants

The search revealed documented occurrences of 41 special status plant species within the four-quad search area. Of these 41 special status plant species, 23 species are located within one-mile of the SOI.

Table 5-2 provides a list of special status plant species that are documented within one-mile of the San Marcos Sphere of Influence, and their current protective status. These special status plant species are illustrated on Figure 5-2. Figure 5-3 illustrates the special status plant species located within the four-quad search area.

Table 5-2: Special Status Plants Present or Potentially Present (one-mile search area)

Scientific Name	Common Name	Federal Status	State Status	CNPS*
Adolphia californica	California adolphia	None	None	2B.1
Isocoma menziesii var. decumbens	decumbent goldenbush	None	None	1B.2
Arctostaphylos glandulosa ssp. crassifolia	Del Mar manzanita	Endangered	None	1B.1
Corethrogyne filaginifolia var. linifolia	Del Mar Mesa sand aster	None	None	1B.1
Baccharis vanessae	Encinitas baccharis	Threatened	Endangered	1B.1
Monardella hypoleuca ssp. lanata	felt-leaved monardella	None	None	1B.2
Quercus dumosa	Nuttall's scrub oak	None	None	1B.1
Brodiaea orcuttii	Orcutt's brodiaea	None	None	1B.1
Harpagonella palmeri	Palmer's grapplinghook	None	None	4.2
Tetracoccus dioicus	Parry's tetracoccus	None	None	1B.2
Arctostaphylos rainbowensis	Rainbow manzanita	None	None	1B.1
Horkelia truncata	Ramona horkelia	None	None	1B.3
Eryngium aristulatum var. parishii	San Diego button-celery	Endangered	Endangered	1B.1
Bloomeria clevelandii	San Diego goldenstar	None	None	1B.1
Iva hayesiana	San Diego marsh-elder	None	None	2B.2
Acanthomintha ilicifolia	San Diego thorn-mint	Threatened	Endangered	1B.1
Leptosyne maritima	sea dahlia	None	None	2B.2
Centromadia parryi ssp. australis	southern tarplant	None	None	1B.1
Navarretia fossalis	spreading navarretia	Threatened	None	1B.1
Dudleya viscida	sticky dudleya	None	None	1B.2
Comarostaphylis diversifolia ssp. diversifolia	summer holly	None	None	1B.2
Brodiaea filifolia	thread-leaved brodiaea	Threatened	Endangered	1B.1
Ceanothus verrucosus	wart-stemmed ceanothus	None	None	2B.2
Adolphia californica	California adolphia	None	None	2B.1
Isocoma menziesii var. decumbens	decumbent goldenbush	None	None	1B.2
Arctostaphylos glandulosa ssp. crassifolia	Del Mar manzanita	Endangered	None	1B.1
Corethrogyne filaginifolia var. linifolia	Del Mar Mesa sand aster	None	None	1B.1
Baccharis vanessae	Encinitas baccharis	Threatened	Endangered	1B.1
Monardella hypoleuca ssp. lanata	felt-leaved monardella	None	None	1B.2
Quercus dumosa	Nuttall's scrub oak	None	None	1B.1
Brodiaea orcuttii	Orcutt's brodiaea	None	None	1B.1

Harpagonella palmeri	Palmer's grapplinghook	None	None	4.2
Tetracoccus dioicus	Parry's tetracoccus	None	None	1B.2
Arctostaphylos rainbowensis	Rainbow manzanita	None	None	1B.1
Horkelia truncata	Ramona horkelia	None	None	1B.3
Eryngium aristulatum var. parishii	San Diego button-celery	Endangered	Endangered	1B.1
Bloomeria clevelandii	San Diego goldenstar	None	None	1B.1
Iva hayesiana	San Diego marsh-elder	None	None	2B.2
Acanthomintha ilicifolia	San Diego thorn-mint	Threatened	Endangered	1B.1
Leptosyne maritima	sea dahlia	None	None	2B.2
Centromadia parryi ssp. australis	southern tarplant	None	None	1B.1
Navarretia fossalis	spreading navarretia	Threatened	None	1B.1
Dudleya viscida	sticky dudleya	None	None	1B.2
Comarostaphylis diversifolia ssp. diversifolia	summer holly	None	None	1B.2
Brodiaea filifolia	thread-leaved brodiaea	Threatened	Endangered	1B.1
Ceanothus verrucosus	wart-stemmed ceanothus	None	None	2B.2

Source: CDFW CNDDB, 2020.

Notes:

**California Native Plant Society (CNPS) Key*

1 CNPS - Rare, Threatened, or Endangered

2 CNPS - Rare, Threatened, or Endangered in California, But More Common Elsewhere

3 CNPS - Review list: plants which more information is needed

4 CNPS – Plants of limited distribution - a watch list

Special Status Animals

The search revealed documented occurrences of 19 special status animal species within a one-mile search radius of San Marcos. This includes: one amphibian, five birds, six mammals, one crustacean, and six reptiles. Table 5-3 provides a list of the special-status animal species that are documented within the one-mile search area, and their current protective status. These special status animal species are illustrated on Figure 5-2. Figure 5-3 illustrates the special status species located within the four-quad search area.

Table 5-3 Special Status Animals Present or Potentially Present (one-mile search area)

Scientific Name	Common Name	Federal Status	State Status	CDFW Status*
Taxidea taxus	American badger	None	None	SSC
Artemisiospiza belli belli	Bell's sage sparrow	None	None	WL
Phrynosoma blainvillii	coast horned lizard	None	None	SSC
Polioptila californica californica	coastal California gnatcatcher	Threatened	None	SSC
Aspidoscelis tigris stejnegeri	coastal whiptail	None	None	SSC
Plestiodon skiltonianus interparietalis	Coronado skink	None	None	WL
Lasiurus cinereus	hoary bat	None	None	
Vireo bellii pusillus	least Bell's vireo	Endangered	Endangered	
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None	None	SSC
Aspidoscelis hyperythra	orange-throated whiptail	None	None	WL
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None	None	SSC
Neotoma lepida intermedia	San Diego desert woodrat	None	None	SSC
Branchinecta sandiegonensis	San Diego fairy shrimp	Endangered	None	
Anniella stebbinsi	southern California legless lizard	None	None	SSC
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	None	None	WL
Corynorhinus townsendii	Townsend's big-eared bat	None	None	SSC
Agelaius tricolor	tricolored blackbird	None	Threatened	SSC
Thamnophis hammondii	two-striped gartersnake	None	None	SSC
Spea hammondii	Western spadefoot	None	None	SSC

Source: CDFW CNDDB 2020.

Notes:

**CDFW Status Key:*

FP California Fully Protected

SSC CDFW Species of Special Concern

WL CDFW Watch List

5.1.3 Sensitive Natural Communities

The CDFW considers sensitive natural communities to have significant biotic value, with species of plants and animals unique to each community. The CNDDB search revealed 25 sensitive natural communities within the four-quad search area, and seven sensitive natural communities within one-mile of San Marcos. Sensitive natural communities within the one-mile search area include Southern Cottonwood Willow Riparian Forest, Southern Willow Scrub, Southern Riparian Forest, San Diego Mesa Claypan Vernal Pool, and Southern Riparian Scrub.

Vernal Pools

Vernal pools are a temporary wetland that occur as a result of rainwater failing to drain into subsoils and provide habitat for several sensitive plant and animal species in the area. In California, vernal pools fill in the winter and spring, as water collects in depressions. The water eventually evaporates, leaving a dry depression in the summer and fall. Vernal pools support a range of unique plant and animal species. On some occasions, vernal pools can be connected by small drainages. These connected vernal pools are known as vernal complexes. Within San Marcos, the remaining vernal pool complexes are concentrated in a highly urbanized area within 11 lots located in the Business/Industrial District. This area is defined by Pacific Street on the west, Mission Road on the north, San Marcos Boulevard on the south, and South Bent Avenue on the East (City of San Marcos General Plan EIR, 2012). The SANDAG Multiple Habitat Conservation Program for North County identifies the vernal pools within urbanized San Marcos as areas that support critical populations of several narrow endemic species.

Creeks and Water Bodies

There are a number of large water bodies and creeks in the Planning Area. Large water bodies in the Planning Area include Lake San Marcos, Discovery Lake, South Lake, and Jacks Pond. Creeks within the Planning Area include San Marcos Creek, Twin Oaks Valley Creek, and the unnamed San Marcos Creek tributary running through Twin Oaks Valley, and Agua Hedionda Creek.

These water bodies and creeks support the riparian and wetland habitats that are listed above within the CDFW identified sensitive natural communities and support a number of the special status species identified within this document.

5.1.4 References

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5.2 AIR QUALITY

This section discusses the regulatory setting, regional climate, topography, air pollution potential, and existing ambient air quality for criteria air pollutants, toxic air contaminants, odors, and dust. Information presented in this section is based in part on information gathered from the San Diego Air Pollution Control District (SDAPCD) and the California Air Resources Board (CARB). The existing City of San Marcos General Plan identifies the following policies related to Air Quality.

Element	Topic Area	Goal	Policy
Conservation and Open Space Element	Air Quality, Climate Change, and Energy	Goal COS-4: Improve regional air quality and reduce greenhouse gas emissions that contribute to climate change.	Policy 4.1: Continue to work with the U.S. Environmental Protection Agency (EPA), California Air Resources Board, SANDAG, and the San Diego Air Pollution Control District (SDAPCD) to meet state and federal ambient air quality standards. Policy 4.2: Require new sensitive-use development, such as schools, day care centers and hospitals, located near mobile and stationary toxic air contaminants be designed with consideration of site and building orientation, location of trees, and incorporation of appropriate technology (i.e., ventilation and filtration) for improved air quality to lessen any potential health risks. Policy 4.3: Participate in regional efforts to reduce greenhouse gas emissions. Policy 4.4: Quantify community-wide and municipal greenhouse gas (GHG) emissions, set a reduction goal, identify and implement measures to reduce greenhouse gas emissions as required by governing legislation. Policy 4.5: Encourage energy conservation and the use of alternative energy sources within the community. Policy 4.6: Promote efficient use of energy and conservation of available resources in the design, construction, maintenance and operation of public and private facilities, infrastructure and equipment. Policy 4.7: As City facilities and services are constructed or

			upgraded, incorporate energy and resource conservation standards and practices by: • Taking a leadership role in implementing programs for energy and water conservation, waste reduction, recycling and reuse and increased reliance on renewable energy. • Upgrading City buildings and infrastructure facilities to comply with State of California green building standards. • Implementing landscaping that reduces demands on potable water; this may include the use of drought tolerant landscaping and/ or use of well water for irrigation, favoring recycling and energy-efficient products and practices when issuing City purchase agreements. Policy 4.8: Encourage and support the generation, transmission and use of renewable energy. Policy 4.9: Encourage use and retrofitting of existing buildings under Title 24 of the California Building Energy Code.

Source: City of San Marcos General Plan, 2012

5.2.1 Environmental Setting

Regulatory Setting

Air quality with respect to criteria air pollutants and toxic air contaminants (TACs) within the San Diego Air Basin (SDAB) is regulated by the SDAPCD, CARB, and U.S. Environmental Protection Agency (EPA). Each of these agencies develops rules, regulations, policies, and/or goals to attain the goals or directives imposed through legislation. Although the EPA regulations may not be superseded, both state and local regulations may be more stringent.

In 1992 and 1993, the CARB requested delegation of authority for the implementation and enforcement of specified New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPS) to the following local agencies: Bay Area Quality Management District (BAAQMD) and South Coast Air Quality Management District (SCAQMD). EPA's review of the State of California's laws, rules, and regulations showed them to be adequate for the implementation and enforcement of these Federal standards, and EPA granted the delegations as requested.

San Diego Air Basin

San Marcos is located within the SDAB, which is comprised of a single air district, the SDAPCD, and consists of all of San Diego County. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

Climate, Topography, and Air Pollution Potential

Highly varied terrain and weather patterns make the region vulnerable to emissions sourced from transport emissions that travel from northern polluting cities. The SDAB is classified as a transport recipient of emissions rather than an emissions contributor. The transport pollutants are ozone (O_3), nitrogen oxides (NOx) and volatile organic compounds (VOCs), that are transported from the South Coast Air Basin (SCAB), which includes Orange County, portions of Riverside County, portions of Los Angeles County, and portions of San Bernardino County.

The SDAB experiences frequent temperature inversions due to its climate. Temperature inversions inhibit air that is close to the ground from intermixing with air at higher elevations, thereby trapping air pollutants at the ground level. Additionally, a combination of abundant sunshine, warm temperatures, and poor vertical air mixing is conducive to the formation of ozone, commonly referred to as “smog”. Daytime winds from the north aggravate smog conditions even further by pushing the air pollutants inland toward the warmer foothills.

The problem is further heightened by the extent of exposure to elevated pollution levels from the adjacent air basin. The SCAB is located immediately to the north of the SDAB. SCAB is the nation’s second largest urban area and California’s largest metropolitan region. The SCAB is home to over 40 percent of the total state population, or about 16 million people, and over 10 million vehicles. Fifty thousand heavy duty diesel trucks travel nearly 10 million miles through the region annually, and well over 50,000 diesel engines are used to move goods and power construction and mining equipment. High air pollution levels often occur when polluted air from the SCAB travels southwest

over the ocean at night and is brought on shore into San Diego by the sea breeze during the day (San Diego County Air Pollution Control District 2010a).

San Marcos has a Mediterranean climate with mild, dry summers. The climate is dominated by the Pacific High Pressure System that results in these mild, dry summers, and mild, wet winters. The Pacific High is a semi-permanent, subtropical area of high pressure in the North Pacific Ocean that drives the existing winds in the SDAB. During the summer months, there is typically an inversion layer created over the coastal areas in the SDAB. This inversion layer increases the O_3 levels in the air basin. During the winter months, a shallow inversion layer dominates the region, which results in an increased carbon monoxide and fine particulate matter ($PM_{2.5}$) concentration as a result of residential wood burning. The hot and dry Santa Ana winds that occur during the fall months, tend to push pollution from the SDAB toward the ocean. The County of San Diego experiences an average of 201 days above 70 degrees Fahrenheit and nine to 13 inches of rain per year.

5.2.2 Existing Ambient Air Quality: Criteria Air Pollutants

CARB and the U.S. EPA currently focus on the following air pollutants as indicators of ambient air quality: ozone (O_3), particulate matter (PM), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), and lead (Pb). Because these are the most prevalent air pollutants known to be deleterious to human health, they are commonly referred to as “criteria air pollutants.” Sources and health effects of the criteria air pollutants are summarized in Table 5-4.

Table 5-4 Common Sources of Health Effects for Criteria Air Pollutants

Pollutants	Sources	Effects on Health and Environment
Ozone (O_3)	Atmospheric reaction of organic gases with nitrogen oxides in sunlight	Health: Aggravation of respiratory and cardiovascular diseases; reduced lung function; increased cough and chest discomfort. Environment: Crop, forest and ecosystem damage; damage to materials, including rubber, plastics, fabrics, paint and metals.
Particulate Matter (PM_{10} and $PM_{2.5}$)	Stationary combustion of solid fuels; construction activities; industrial processes; atmospheric chemical reactions	Health: Reduced lung function; aggravation of respiratory and cardiovascular diseases; increases in mortality rate; reduced lung function growth in children; premature death.
Nitrogen Dioxide (NO_2)	Motor vehicle exhaust; high temperature stationary combustion; atmospheric reactions	Health: Aggravation of respiratory illness (e.g. lung irritation; enhanced allergic responses).
Carbon Monoxide (CO)	Incomplete combustion of fuels and other carbon-containing substances, such as motor vehicle exhaust; natural events, such as decomposition of organic matter	Health: Aggravation of some heart diseases; reduced tolerance for exercise; impairment of mental function (e.g. light-headedness); headaches; birth defects; death at high levels of exposure.
Sulfur Dioxide (SO_2)	Combination of sulfur-containing fossil fuels; smelting of sulfur-bearing metal ore; industrial processes	Health: Aggravation of respiratory diseases (including asthma); reduced lung function.
Lead (Pb)	Contaminated soil	Health: Learning disabilities in children; nervous system impairment; impaired mental functioning; brain and kidney damage.

Source: California Air Resources Board, 2017

Ozone (O_3), or smog, is not emitted directly into the environment, but is formed in the atmosphere by complex chemical reactions between reactive organic gases (ROG) and nitrous oxide (NO_X) in the presence of sunlight. Ozone formation is greatest on warm, windless, sunny days. The main sources of NO_X and ROG, often referred to as ozone precursors, are combustion processes (including motor vehicle engines), the evaporation of solvents, paints, and fuels, and biogenic sources. Automobiles are a primary source of ozone precursors in the SDAB. Tailpipe emissions of ROG are highest during cold starts, hard acceleration, stop-and-go conditions, and slow speeds. They decline as speeds increase up to about 50 miles per hour (mph), then increase again at high speeds and high engine loads. ROG emissions associated with evaporation of unburned fuel depend on vehicle and ambient temperature cycles. Nitrogen oxide emissions exhibit a different curve; emissions decrease as the vehicle approaches 30 mph and then begin to increase with increasing speeds.

Ozone levels usually build up during the day and peak in the afternoon hours. Short-term exposure can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, it can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. Chronic exposure to high ozone levels can permanently damage lung tissue. Ozone can also damage plants and trees, and materials such as rubber and fabrics.

Particulate Matter (PM) refers to a wide range of solid or liquid particles in the atmosphere, including smoke, dust, aerosols, and metallic oxides. Respirable particulate matter with an aerodynamic diameter of 10 micrometers or less is referred to as PM_{10}. $PM_{2.5}$ includes a subgroup of finer particles that have an aerodynamic diameter of 2.5 micrometers or less. Some particulate matter, such as pollen, is naturally occurring. In the San Diego region, much of the particulate matter is a result of transport emissions from northern cities. However, there is significant particulate matter sourced from the SDAB region as well. Particulate Matter in the region is caused by combustion, factories, construction, grading, demolition, agricultural activities, and motor vehicles. Extended exposure to particulate matter can increase the risk of chronic respiratory disease. PM_{10} is of concern because it bypasses the body's natural filtration system more easily than larger particles, and can lodge deep in the lungs. The EPA and the State of California revised their PM standards several years ago to apply only to these fine particles. $PM_{2.5}$ poses an increased health risk because the particles can deposit deep in the lungs and contain substances that are particularly harmful to human health. Motor vehicles are currently responsible for a large portion of particulate matter in the SDAB. Wood burning in fireplaces and stoves is another large source of fine particulates.

Nitrogen Dioxide (NO_2) is a reddish-brown gas that is a by-product of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, nitrogen dioxide can increase the risk of acute and chronic respiratory disease and reduce visibility. NO_2 may be visible as a coloring component of a brown cloud on high pollution days, especially in conjunction with high ozone levels.

Carbon Monoxide (CO) is an odorless, colorless gas. It is formed by the incomplete combustion of fuels. The single largest source of CO in the SDAB is motor vehicles. Emissions are highest during cold starts, hard acceleration, stop-and-go driving, and when a vehicle is moving at low speeds. New findings indicate that CO emissions per mile are lowest at about 45 mph for the average light-duty motor vehicle and begin to increase again at higher speeds. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease or anemia, as well as fetuses. Even healthy people exposed to high CO concentrations can experience headaches, dizziness, fatigue, unconsciousness, and even death.

Sulfur Dioxide (SO_2) is a colorless acid gas with a pungent odor. It has potential to damage materials and it can have health effects at high concentrations. It is produced by the combustion of sulfur-containing fuels, such as oil, coal, and diesel. SO_2 can irritate lung tissue and increase the risk of acute and chronic respiratory disease.

Lead (Pb) is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.

Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the EPA set national regulations to gradually reduce the lead content in

gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The EPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.

Ambient Air Quality Standards and Designations

The current federal and state ambient air quality standards and attainment standards are presented in Table 5-5.

Table 5-5: Ambient Air Quality Standards and Designations

Pollutant	Averaging Time	State Standard	Federal Primary Standards
Ozone (O_3)	1-hour	0.09 ppm (180 µg/m^3)	–
	8-hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)
Carbon Monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)
	8-hour	9 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)
Respirable Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	–
	24-hour	50 µg/m^3	150 µg/m^3
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	15 µg/m^3
	24-hour	–	35 µg/m^3
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	–	0.030 ppm (for certain areas)
	24-hour	0.04 ppm (105 µg/m^3)	0.14 ppm (for certain areas)
	3-hour	–	–
	1-hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)
	1-hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)
Lead	30-day Average	1.5 µg/m^3	–
	Calendar Quarter	–	1.5 µg/m^3
	Rolling 3-Month Average	–	0.15 µg/m^3
Sulfates	24-hour	25 µg/m^3	–

Notes: ppm = parts per million, ppb = parts per billion, ug/m^3 = Micrograms per Cubic Meter
Sources: California Air Resources Board, 2017; SCAQMD, 2017.

The U.S. EPA established new national air quality standards for ground-level ozone and for fine particulate matter in 1997. The 1-hour ozone standard was phased out and replaced by an 8-hour standard of 0.075 parts per million (ppm). Implementation of the 8-hour standard was delayed by litigation, but was determined to be valid and enforceable by the U.S. Supreme Court in a decision issued in February of 2001. In April 2005, CARB approved a new eight-hour standard of 0.070 ppm and retained the one-hour ozone standard of 0.09 after an extensive review of the scientific literature. The U.S. EPA signed a final rule for the federal ozone eight-hour standard of 0.070 ppm on October 1, 2015, and was effective as of December 28, 2015.

In 1997, new national standards for fine particulate matter diameter 2.5 microns or less ($PM_{2.5}$) were adopted for 24-hour and annual averaging periods. The current PM_{10} standards were to be retained, but the method and form for determining compliance with the standards were revised.

In addition to the criteria pollutants discussed above, TACs are another group of pollutants of concern. TACs are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation and monitoring of TACs is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TACs are regulated on the basis of risk rather than specification of safe levels of contamination.

Existing air quality concerns within the Planning Area are related to increases of regional criteria air pollutants (e.g., ozone and particulate matter), exposure to toxic air contaminants, odors, and increases in greenhouse gas emissions contributing to climate change. The primary source of ozone (smog) pollution is motor vehicles which account for 70 percent of the ozone in the region. Particulate matter is caused by dust, primarily dust generated from construction and grading activities, and smoke which is emitted from fireplaces, wood-burning stoves, and agricultural burning.

Attainment Status

In accordance with the California Clean Air Act (CCAA), the CARB is required to designate areas of the State as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria.

Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An "unclassified" designation signifies that the data does not support either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The U.S. EPA designates areas for ozone, CO, and NO_2 as "does not meet the primary standards," "cannot be classified," or "better than national standards." For SO_2, areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than national standards." However, the CARB terminology of attainment, nonattainment, and unclassified is more frequently used.

San Diego County (encompassing the SDAB) has a state designation of nonattainment for ozone, PM_{10}, and $PM_{2.5}$ and is designated either unclassified or attainment for all other criteria pollutants. The County has a national designation of nonattainment for 8-Hour Ozone. The County is designated either attainment or unclassified/attainment for the remaining national standards. Table 5-6 presents the state and national attainment statuses for San Diego County.

Table 5-6: State and National Attainment Status

Pollutant	State Designation	National Designation
Ozone (O_3)	Nonattainment	Nonattainment (8 Hour Ozone)
Carbon Monoxide (CO)	Attainment	Unclassified/Attainment
Respirable Particulate Matter (PM_{10})	Nonattainment	Unclassified/Attainment
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment	Unclassified/Attainment
Sulfur Dioxide (SO_2)	Attainment	Unclassified/Attainment
Nitrogen Dioxide (NO_2)	Attainment	Unclassified/Attainment
Lead	Attainment	Unclassified/Attainment
Hydrogen Sulfide	Unclassified	--
Sulfates	Attainment	--
Visibility Reducing Particles	Unclassified	--

Sources: California Air Resources Board, 2020

Monitoring Data

SDAPCD and CARB maintain numerous air quality monitoring sites throughout various cities in the Air Basin to measure O_3, $PM_{2.5}$, and PM_{10}. It is important to note that the Federal ozone 1-hour standard was revoked by the EPA and is no longer applicable for federal standards. The two closest monitoring sites for gaseous pollutants in the SDAPCD monitoring network are the Escondido and McClellan-Palomar Airport Stations. Both stations are approximately 7 miles from the City of San Marcos. However, the closest monitoring site within the network which measures data for Ozone, PM_{10}, and $PM_{2.5}$ is the Kearny Villa Road site, located 25 miles away. Data obtained from these monitoring stations is shown in Table 5-7.

Table 5-7: Ambient Air Quality Monitoring Data

Pollutant	State	Federal	Year	Max Concentration	Days Exceeded State/Federal Standard
	Primary Standard				
Ozone (O_3) (8-hour)	0.07 ppm for 8 hour	0.07 ppm for 8 hour	2018 2017 2016	0.082 0.095 0.091	23 54 13
Particulate Matter (PM_{10})	50 ug/m^3 for 24 hours	150 ug/m^3 for 24 hours	2018 2017 2016	53 66 79	0 0 0
Fine Particulate Matter ($PM_{2.5}$)*	No 24 hour State Standard	35 ug/m^3 for 24 hours	2018 2017 2016	41.9 42.7 34.4	ND 1 0

Source: California Air Resources Board (Aerometric Data Analysis and Management System or iADAM) Air Pollution Summaries. Note: ND = No data

As shown in the Table 5-7, San Diego has realized a significant decrease in Ozone (8-Hour) levels over the last three years. It should be noted that the data in the table reflects San Diego County averages. Similarly, County trends show that PM_{10} concentrations have decreased over the last three years. However, the Countywide data shows that $PM_{2.5}$ concentrations in the SDAB have not declined over the last three years, but have varied depending on the year.

At the nearest site to the City of San Marcos, the Kearny Villa Road Station, the maximum concentration for 8-Hr Ozone for the year 2018 was 0.077 ppm. At the same site, the maximum PM_{10} concentration for 24-hrs for the year 2018 was 38 $\mu g/m^3$. $PM_{2.5}$ was not measured at this location.

5.2.3 Odors

Typically, odors are regarded as a nuisance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another.

It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Certain land uses are more likely to emit odors in higher concentrations that are detectable to humans. These land uses include; industrial uses, agricultural uses, composting operations, refineries, wastewater treatment plants, landfills, etc. Within the Planning Area, agricultural land uses along the perimeter and industrial uses zoned closer to the central core may be potential sources of odor.

5.2.4 Sensitive Receptors

Sensitive receptors are areas where human populations, especially children, seniors, and sick persons, are present and where there is a reasonable expectation of continuous human exposure to pollutants. Examples of sensitive receptors include residences, hospitals, schools, daycare facilities, elderly housing, and convalescent facilities.

There are numerous sensitive receptors within the Planning Area. Such sensitive receptors include residential areas, schools, mobile home parks, and hospital/medical facilities. A majority of the sensitive receptors within the Planning Area are located within or adjacent to the core of the City and are more likely to be impacted by odors from industrial uses rather than odors from agricultural uses, which are predominantly located along the perimeters of the Planning Area.

5.2.5 References

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5.3 GREENHOUSE GASES

This section discusses the linkage between greenhouse gases and climate change, the effects of global climate change, and existing and projected greenhouse gas emissions in San Marcos. The existing City of San Marcos General Plan identifies the following policies related to Greenhouse Gas.

Element	Topic Area	Goal	Policy
Conservation and Open Space Element	Air Quality, Climate Change, and Energy	Goal COS-4: Improve regional air quality and reduce greenhouse gas emissions that contribute to climate change.	Policy 4.1: Continue to work with the U.S. Environmental Protection Agency (EPA), California Air Resources Board, SANDAG, and the San Diego air Pollution Control District (SDAPCD) to meet state and federal ambient air quality standards. Policy 4.3: Participate in regional efforts to reduce greenhouse gas emissions. Policy 4.4: Quantify community-wide and municipal greenhouse gas (GHG) emissions, set a reduction goal, identify and implement measures to reduce greenhouse gas emissions as required by governing legislation. Policy 4.5: Encourage energy conservation and the use of alternative energy sources within the community. Policy 4.6: Promote efficient use of energy and conservation of available resources in the design, construction, maintenance and operation of public and private facilities, infrastructure and equipment. Policy 4.7: As City facilities and services are constructed or upgraded, incorporate energy and resource conservation standards and practices by: • Taking a leadership role in implementing programs for energy and water

			conservation, waste reduction, recycling and reuse and increased reliance on renewable energy. • Upgrading City buildings and infrastructure facilities to comply with State of California green building standards. • Implementing landscaping that reduces demands on potable water; this may include the use of drought tolerant landscaping and/ or use of well water for irrigation, favoring recycling and energy-efficient products and practices when issuing City purchase agreements. Policy 4.8: Encourage and support the generation, transmission and use of renewable energy. Policy 4.9: Encourage use and retrofitting of existing buildings under Title 24 of the California Building Energy Code.

Source: City of San Marcos General Plan, 2012

5.3.1 Greenhouse Gases and Climate Change Linkages

Various gases in the Earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation.

Naturally occurring greenhouse gases include water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and ozone (O_3). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but they are, for the most part, solely a product of industrial activities. Although the direct greenhouse gases CO_2, CH_4, and N_2O occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. From the pre-industrial era (i.e., ending about 1750) to 2011, concentrations of these three greenhouse gases have increased globally by 40, 150, and 20 percent, respectively (IPCC, 2013).

Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are CO_2, CH_4, O_3, water vapor, N_2O, and chlorofluorocarbons (CFCs).

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, accounting for almost 40 percent of statewide emissions in 2019, followed by the industrial sector (California Air Resources Board, 2021).

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California produced approximately 418.2 million metric tons of carbon dioxide equivalents ($MMTCO_2e$) in 2019, 7.2 $MMTCO_2e$ lower than 2018 levels and almost 13 $MMTCO_2e$ below the 2020 GHG Limit of 431 $MMTCO_2e$ (California Air Resources Board, 2021).

Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a GHG, is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2019, accounting for 39.7 percent of total GHG emissions in the State. This category was followed by the industrial sector (21.1 percent), the electricity generation sector (including both in-state and out-of-state sources) (14.1 percent), the residential and commercial sector (10.5 percent), and the agricultural sector (7.6 percent), with High Global Warming Potential

Gases and recycling and waste making up the remaining 7 percent (California Air Resources Board, 2021).

5.3.2 Effects of Global Climate Change

The effects of increasing global temperature are far-reaching and extremely difficult to quantify. The scientific community continues to study the effects of global climate change. In general, increases in the ambient global temperature as a result of increased GHGs are anticipated to result in rising sea levels, which could threaten coastal areas through accelerated coastal erosion, threats to levees and inland water systems and disruption to coastal wetlands and habitat.

If the temperature of the ocean warms, it is anticipated that the winter snow season would be shortened. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the State. The snowpack portion of the supply could potentially decline by 70% to 90% by the end of the 21st century (Cal EPA, 2006). This phenomenon could lead to significant challenges securing an adequate water supply for a growing state population. Further, the increased ocean temperature could result in increased moisture flux into the State; however, since this would likely increasingly come in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential and severity of flood events, placing more pressure on California's levee/flood control system.

Sea level has risen approximately seven inches during the last century and it is predicted to rise an additional 22 to 35 inches by 2100, depending on the future GHG emissions levels (Cal EPA, 2006). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion, and disruption of wetlands (Cal EPA, 2006). As the existing climate throughout California changes over time, mass migration of species, or failure of species to migrate in time to adapt to the perturbations in climate, could also result. Under the emissions scenarios of the Climate Scenarios report (Cal EPA, 2006), the impacts of global warming in California are anticipated to include, but are not limited to, the following:

Public Health. Higher temperatures are expected to increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation are projected to increase from 25 to 35 percent under the lower warming range, to 75 to 85 percent under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances depending on wind conditions. The Climate Scenarios report indicates that large wildfires could become up to 55 percent more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming scenario, there could be up to 100 more days per year with temperatures above 90ºF in Los Angeles and 95ºF in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures will increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

Water Resources. A vast network of man-made reservoirs and aqueducts capture and transport water throughout the State from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snow pack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snow pack, increasing the risk of summer water shortages.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater would degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta, a major state fresh water supply. Global warming is also projected to seriously affect agricultural areas, with California farmers projected to lose as much as 25 percent of the water supply they need; decrease the potential for hydropower production within the State (although the effects on hydropower are uncertain); and seriously harm winter tourism. Under the lower warming range, the ski season at lower elevations could be reduced by as much as 1 month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing and snowboarding.

If GHG emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snow pack by as much as 70 to 90 percent. Under the lower warming scenario, snow pack losses are expected to be only half as large as those expected if temperatures were to rise to the higher warming range. How much snow pack will be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snow pack would pose challenges to water managers, hamper hydropower generation, and nearly eliminate all skiing and other snow-related recreational activities.

Agriculture. Increased GHG emissions are expected to cause widespread changes to the agriculture industry, reducing the quantity and quality of agricultural products statewide. Although higher carbon dioxide levels can stimulate plant production and increase plant water-use efficiency, California's farmers will face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development will change, as will the intensity and frequency of pest and disease outbreaks. Rising temperatures will likely aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than optimal development for many crops, so rising temperatures are likely to worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits, nuts, and milk.

In addition, continued global warming will likely shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion is expected in many species while range contractions are less likely in rapidly evolving species with significant populations already established. Should range contractions occur, it is likely that new or different weed species will fill the emerging gaps. Continued global warming is also likely to alter the abundance and types of many pests, lengthen pests' breeding seasons, and increase pathogen growth rates.

Forests and Landscapes. Global warming is expected to intensify this threat by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the State. For example, if precipitation increases as temperatures rise, wildfires in southern California are expected to increase by approximately 30 percent toward the end of the century. In contrast, precipitation decreases could increase wildfires in northern California by up to 90 percent.

Moreover, continued global warming will alter natural ecosystems and biological diversity within the State. For example, alpine and sub-alpine ecosystems are expected to decline by as much as 60 to 80 percent by the end of the century as a result of increasing temperatures. The productivity of the State's forests is also expected to decrease as a result of global warming.

Rising Sea Levels. Rising sea levels, more intense coastal storms, and warmer water temperatures will increasingly threaten the State's coastal regions. Under the higher warming scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.

5.3.3 Local Greenhouse Gas Emissions

The City of San Marcos developed a Climate Action Plan (CAP) as part of its General Plan update process in 2013. The City initiated an update to its CAP in 2017 in order to comply with the State's SB 32 requirements to reduce GHG emissions to 40 percent below the 1990 levels by 2030. The City adopted the updated CAP (2020 CAP) in December 2020. The CAP identifies GHG baselines, projections, and reduction targets, strategies, and measures, including monitoring the progress by participating in SANDAG's biennial update of its local GHG inventory.

Emissions Inventory

The 2020 CAP assessed GHG emission within the City's jurisdictional boundaries based on a baseline year of 2012. The completed San Marcos Emissions Inventory estimates the total GHG emissions from San Marcos in 2012 were 599,000 metric tons CO_2e ($MTCO_2e$). The highest emitters by category included on-road transportation (54 percent), electricity (27 percent), and natural gas (12 percent), followed by solid waste (three percent), off-road transportation (two percent), water (one percent) and wastewater (less than one percent).

Projected GHG Emissions in San Marcos (2020, 2030, 2035)

Table 5-8 compares the 2012 baseline to the projected GHG emissions in San Marcos for the years 2020 and 2030. The emission projections are distinguished by emissions category, as well as by two projection scenarios, referred to as the "business-as-usual" (BAU) and Legislatively-Adjusted BAU scenarios. The BAU projection assumes no additional efforts (including the 2020 CAP), beyond what have already been adopted, will be made to reduce GHG emissions in the future. Legislatively-Adjusted BAU projections provide a reduction from the BAU projection accounting for federal and

State actions that are planned to take place in the future. Both projections assume that population, employment, and transportation activity will grow over time, consistent with SANDAG projections.

Table 5-8: San Marcos Projected GHG Emissions (MTCo2e)

Emissions Category	2012 (Baseline)	2020		2030	
		BAU	Legislatively-Adjusted BAU	BAU	Legislatively-Adjusted BAU
On-road Transportation	322,000	307,000	296,000	317,000	252,000
Electricity	162,000	121,000	110,000	136,000	49,000
Natural Gas	75,000	79,000	77,000	88,000	79,000
Off-Road Transportation	14,000	14,000	14,000	18,000	18,000
Solid Waste	15,000	15,000	15,000	17,000	17,000
Water	9,000	10,000	10,000	11,000	11,000
Wastewater	3,000	3,000	3,000	3,000	3,000
Total	**599,000**	**549,000**	**526,000**	**591,000**	**429,000**
Percent Change from 2012	*-*	*-8%*	*-12%*	*-1%*	*-28%*

Note: BAU = business as usual; GHG = greenhouse gas emissions; MTCO2 e = metric tons of carbon dioxide equivalent
Sources: City of San Marcos Final Climate Action Plan, 2020.

As shown in Table 5-8, although the City would experience an overall reduction in annual GHG emissions in 2020 under the BAU Conditions, the City's GHG emissions would begin to slowly increase under BAU conditions until 2030, as a result of growth in population and employment. The Legislatively-Adjusted BAU accounts for a variety of approved legislative actions that will further reduce BAU emissions from the City. While these projections include federal and State actions, they do not include local government actions such as the implementation of GHG emissions reduction measures identified in the 2020 CAP. Under the Legislative-Adjusted BAU scenario, GHG emissions were estimated to be 526,000 $MTCO_2e$ in 2020 or 12 percent lower than 2012 emissions and 429,000 $MTCO_2e$ in 2030 or 28% lower than 2012 emissions. While existing activities would be adequate to meet the City's 2020 target, these activities, along with federal and State legislative actions, would not be adequate to achieve the City's 2030 GHG reduction target of 42 percent below 2012 levels; therefore, the CAP focuses on reducing emissions in 2030 through local actions.

The City estimates that under the local reduction strategies and measures proposed in the 2020 CAP, the City would reduce total emissions by 82,000 $MTCO_2e$ by 2030, which would close the gap and help the City meet its 2030 target, consistent with SB 32 requirements. The CAP proposes eight strategies and 22 GHG reduction measures organized under five GHG emissions categories to achieve this goal. Strategies include:

- Strategy 1: Increase Use of Zero-Emission or Alternative Fuel Vehicles;Strategy 2: Reduce Fossil Fuel Use;
- Strategy 3: Reduce Vehicle Miles Traveled;
- Strategy 4: Increase Building Energy Efficiency;
- Strategy 5: Increase Renewable and Zero-Carbon Energy;
- Strategy 6: Reduce Water Use;

- Strategy 7: Reduce and Recycle Solid Waste; and
- Strategy 8: Increase Urban Tree Cover.

5.3.4 References

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5.4 GEOLOGY, SOILS, AND SEISMICITY

This section addresses soil, seismic, and geologic hazards in the Planning Area. The federal government and State of California have established a variety of regulations and requirements related to seismic safety and structural integrity, including the California Building Standards Code, the Alquist-Priolo Earthquake Fault Zoning Act and the Seismic Hazards Mapping Act. The existing City of San Marcos General Plan Public identifies the following goals and policies related to geologic hazards.

Element	Topic Area	Goal	Policy
Safety Element	Natural Geologic Hazards	Goal S-1: Reduce risks to the community from earthquakes by regulating new development and redevelopment to prevent the creation of new geologic and seismic hazards.	Policy 1.1: Reduce the risk of impacts from geologic and seismic hazards by applying current and proper land use planning, development engineering, building construction, and retrofitting requirements. Policy 1.2: Investigate specific groundwater levels and geologic conditions underlying all new development or redevelopment proposals in areas where potential fault rupture, liquefaction, or other geologic hazards are suspected.

Source: City of San Marcos General Plan, 2012

5.4.1 Environmental Setting

The City of San Marcos and Planning Area are located within the Peninsular Range Geomorphic Province which extends from Mount San Jacinto in the north to Baja, California in the south and includes the Inland Empire, Los Angeles, Orange County, and San Diego, California. The Peninsular Ranges Geomorphic Province is located in the southwestern corner of California and is bounded by the Transverse Ranges Geomorphic Province to the north and the Colorado Desert Geomorphic Province to the east. This geomorphic province is characterized by elongated northwest-trending mountain ridges separated by sediment-floored valleys. Many faults to the west of the Salton Trough section of the San Andreas Fault Zone, parallel this northwest-south east trending fault zone and have taken up some of the strain of the San Andreas.

Geomorphic Provinces

California's geomorphic provinces are naturally defined geologic regions that display a distinct landscape or landform. Earth scientists recognize eleven provinces in California. Each region

displays unique, defining features based on geology, faults, topographic relief, and climate. These geomorphic provinces are remarkably diverse.

The **Peninsular Ranges** geomorphic province consists of a series of mountain ranges separated by long valleys, formed from faults branching from the San Andreas Fault. The topographic trend is similar to the Coast Ranges, but the geology is more like the Sierra Nevada, with granitic rocks intruding the older metamorphic rocks. The Los Angeles Basin and the Channel Islands of Santa Catalina, Santa Barbara, San Clemente and San Nicolas are included in this province. Also included is the surrounding continental shelf (cut by deep submarine fault troughs). At the northern end of the province, Mount San Jacinto forms the dramatic backdrop to the Coachella Valley more than 10,000 feet below. The Peninsular Ranges extend south across the international border into Baja California, forming the spine of Baja California.

Regional Geology

The geology of southern California formed as a result of complex plate tectonics and fault movement. The most notable fault in southern California, the San Andreas Fault, is a right lateral strike-slip (or transform) fault that marks the boundary between the Pacific tectonic plate and the North American tectonic plate (Wallace 1990). Both plates are moving northward, but the Pacific plate is moving at a faster rate than the North American plate and the relative difference in the two rates results in movement along the San Andreas Fault (Wallace 1990). Northwest of the Los Angeles basin, where the southern San Joaquin Valley meets the San Emigdio and Tehachapi Mountains, the orientation of the San Andreas Fault changes from generally northwest to west-northwest (Wallace 1990). This portion of the fault system is known as the “Big Bend” (Singer, 2005). Another large fault in southern California, the left-lateral Garlock Fault, intersects the San Andreas Fault system at this location. This bend in the San Andreas Fault system results in transpressional forces between the two tectonic plates, a geologic result of which was the uplift of the Transverse Ranges, including the San Gabriel Mountains (Wallace 1990).

The City of San Marcos and Planning Area lies within the western foothills of the Peninsular Ranges. The topography of San Marcos varies, including hillsides, creek areas and lakes. Elevations range from approximately 590 feet above sea level to approximately 1,200 to 1,600 feet above sea level. The topography of the area is a result of regional landforms, fault movements, climate, and erosion. The higher elevation areas within San Marcos are a result of the range of hills and hillsides surrounding the City. The City is located in the northwestern portion of San Diego County. San Diego county is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the west and high mountain ranges to the east. The topography in the County varies significantly, from beaches on the west, to mountains and then desert to the east. Much of the topography in between consists of mesas intersected by canyons.

Faults

Faults are classified as Historic, Holocene, Late Quaternary, Quaternary, and Pre-Quaternary according to the age of most recent movement (California Geological Survey, 2002). These classifications are described as follows:

- **Historic:** faults on which surface displacement has occurred within the past 200 years;
- **Holocene:** shows evidence of fault displacement within the past 11,000 years, but without historic record;

- **Late Quaternary:** shows evidence of fault displacement within the past 700,000 years, but may be younger due to a lack of overlying deposits that enable more accurate age estimates;
- **Quaternary:** shows evidence of displacement sometime during the past 1.6 million years; and
- **Pre-Quaternary:** without recognized displacement during the past 1.6 million years.

Faults are further distinguished as active, potentially active, or inactive. (California Geological Survey, 2002).

- **Active:** An active fault is a Historic or Holocene fault that has had surface displacement within the last 11,000 years;
- **Potentially Active:** A potentially active fault is a pre-Holocene Quaternary fault that has evidence of surface displacement between about 1.6 million and 11,000 years ago; and
- **Inactive:** An inactive fault is a pre-Quaternary fault that does not have evidence of surface displacement within the past 1.6 million years. The probability of fault rupture is considered low; however, this classification does not mean that inactive faults cannot, or will not, rupture.

There are no known fault zones located within the City or City's Sphere of Influence. The nearest fault zones include: the Newport-Inglewood-Rose Canyon Fault Zone and the Elsinore Fault Zone. Figure 5-4 illustrates the location of nearby fault zones surrounding the Planning Area.

Seismic Hazards

Seismic Groundshaking

Seismic hazards include both rupture (surface and subsurface) along active faults and ground shaking, which can occur over wider areas. Ground shaking, produced by various tectonic phenomena, is the principal source of seismic hazards in areas devoid of active faults. All areas of the State are subject to some level of seismic ground shaking.

Several scales may be used to measure the strength or magnitude of an earthquake. Magnitude scales (ML) measure the energy released by earthquakes. The Richter scale, which represents magnitude at the earthquake epicenter, is an example of an ML. As the Richter scale is logarithmic, each whole number represents a 10-fold increase in magnitude over the preceding number. The following table represents effects that would be commonly associated with Richter Magnitudes:

Table 5-9 Richter Magnitudes and Effects

Magnitude	Effects
< 3.5	Typically, not felt
3.5 – 5.4	Often felt but damage is rare
5.5 – 6.0	Damage is slight for well-built buildings
6.1 – 6.9	Destructive potential over ±60 miles of occupied area
7.0 – 7.9	“Major Earthquake” with the ability to cause damage over larger areas
≥ 8	“Great Earthquake” can cause damage over several hundred miles

Source: USGS, earthquake program.

Faults and Fault Zones

An active earthquake fault, per California’s Alquist-Priolo Act, is one that has ruptured within the Holocene Epoch (≈11,000 years). Based on this criterion, the California Geological Survey identifies Earthquake Fault Zones. These Earthquake Fault Zones are identified in Special Publication 42 (SP42), which is updated as new fault data become available. The SP42 lists all counties and cities within California that are affected by designated Earthquake Fault Zones. The Fault Zones are delineated on maps within SP42 (Earthquake Fault Zone Maps).

Southern California is a region of high seismic activity. Similar to most cities in the region, San Marcos is subject to risks associated with potentially destructive earthquakes. The Planning Area is located in the seismically active southern California region; however, there are no designated Alquist-Priolo fault zones within the Planning Area.

Historically active regional faults and their associated size and frequency are shown in Table 5-10.

Table 5-10 Principal Historically Active and Active Faults in the Region

Fault	Maximum Moment Magnitude	Historical Seismicity (Last 150 Years)	Slip Rate (mm/year)
San Andreas (Mojave section)	7.4	M 7.0 (1899)	30.0
Newport-Inglewood	7.1	M 6.4 (1933)	1.0
Sierra Madre (San Fernando section)	6.7	M 6.4 (1971)	2.0
Whittier-Elsinore	6.8	M 5.9 (1987)	2.5
Palos Verdes	7.3	--	3.0
San Gabriel	7.2	--	1.0
Verdugo	6.9	--	0.5
Santa Monica	6.6	--	1.0

Source: California Geological Survey, 2003, 2010

Although there are no fault zones within the Planning Area, regional fault zones may have an impact on the City if the rupture is of a significant magnitude. No instrumentally recorded earthquake of greater than magnitude (M) 6.0 has occurred within 50 miles of the Planning Area.

Liquefaction

Liquefaction, which is primarily associated with loose, saturated materials, is most common in areas of sand and silt or on reclaimed lands. Cohesion between the loose materials that comprise the soil may be jeopardized during seismic events and the ground will take on liquid properties. Thus, liquefaction requires specific soil characteristics and seismic shaking.

Liquefaction zones are areas where historical occurrence of liquefaction, or local geological, geotechnical, and ground 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 5-5 shows areas having the potential for liquefaction within the Planning Area. There are three areas designated as having the potential for liquefaction. Two of these areas are located in the central portion of the City, while the third area is located in the northern portion and continues outside of the City's boundaries.

Seismic Induced Landslides

Earthquake-Induced Landslide Zones 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. The California Seismic Hazard Mapping Program (SHMP) delineates the approximate boundaries of areas susceptible to earthquake-induced landslides and other slope failures (e.g., rockfalls). SHMP mapping has not been completed for all areas of the State, and no maps have been prepared for north San Diego County or the Planning Area. However, areas with known landslides and bedrock formations more susceptible to landslides and surficial (soil-slip) failures are the most susceptible to earthquake-induced landslides. Within the Planning Area, an extremely limited area registers as having a "moderate" soil slip susceptibility.

5.4.2 Other Geologic Hazards

Soils

According to the Natural Resource Conservation Service (2020), there are 37 different soil series located in the Planning Area. Table 5-11 and Figure 5-6 presents the soil types and associated acreages located in the Planning Area. Although there are 351 soil types, some of the types fall within the same soil series.

Table 5-11 Planning Area Soils

Soil Types	Total Acres
Acid igneous rock land	293.32
Altamont (15 to 30 percent, 5 to 9 percent, and 9 to 15 percent)	271.13
Auld Aw	271.13
Auld Ay	41.47
Bonsali	15.97
Bosanko	12.90
Cieneba coarse sandy loam (15-30 and 5-15 percent slopes) eroded	191.20
Cieneba rock coarse sandy loam, 9 – 30 percent slopes, eroded	722.38
Cieneba- Fallbrook rocky sandy loams, 30 to 65 percent, eroded	98.44
Cieneba- Fallbrook rocky sandy loams, 9 to 30 percent slopes, eroded	163.72
Diablo Clay, 15 to 30 percent slopes	48.68
Diablo Clay, 2 to 9 percent slopes	245.99
Diablo Clay, 9 to 15 percent slopes, warm MAAT, MLRA 20	77.34
Escondido very fine sandy loam, 15 to 30 percent slopes, eroded	706.30
Escondido very fine sandy loam, 5 to 9 percent slopes	878.91
Escondido very fine sandy loam, 9 to 15 percent slopes, eroded	1,055.71
Escondido very fine sandy loam, deep, 5 to 9 percent slopes	21.10
Exchequer rocky silt loam, 30 to 70 percent slopes	1,997.87
Exchequer rocky silt loam, 9 to 30 percent slopes	1,165.81
Fallbrook sandy loam, 15 to 30 percent slopes, eroded	1.57
Fallbrook sandy loam, 2 to 5 percent slopes	18.60
Fallbrook sandy loam, 5 to 9 percent slopes	149.30
Fallbrook sandy loam, 9 to 15 percent slopes, eroded	12.49
Fallbrook rocky sandy loam, 5 to 9 percent slopes	3.33

Fallbrook-Vista sandy loams, 15 to 30 percent slopes	0.77
Fallbrook-Vista sandy loams, 9 to 15 percent slopes	50.86
Friant fine sandy loam, 30 to 50 percent slopes	225.65
Friant rocky fine sandy loam, 30 to 70 percent slopes	581.15
Friant rocky fine sandy loam, 9 to 30 percent slopes	756.21
Gaviota fine sandy loam, 9 to 30 percent slopes	242.80
Grangeville fine sandy loam, 0 to 2 percent slopes	251.46
Gravel pits	33.18
Greenfield sandy loam, 2 to 5 percent slopes	10.95
Huerhuero loam, 2 to 9 percent slopes	1,540.86
Huerhuero loam, 5 to 9 percent slopes, eroded	305.32
Huerhuero loam, 9 to 15 percent slopes	25.99
Huerhuero loam, 9 to 15 percent slopes, eroded	36.87
La Posta loamy coarse sand, 5 to 30 percent slopes, eroded	22.74
Las Flores loamy fine sand, 15 to 30 percent slopes	18.52
Las Flores loamy fine sand, 2 to 9 percent slopes	793.87
Las Flores loamy fine sand, 5 to 9 percent slopes, eroded	20.57
Las Flores loamy fine sand, 9 to 15 percent slopes	76.00
Las Flores loamy fine sand, 9 to 15 percent slopes, eroded	113.62
Las Flores-Urban land complex, 2 to 9 percent slopes	180.50
Las Posas fine sandy loam, 15 to 30 percent slopes, eroded	115.09
Las Posas fine sandy loam, 5 to 9 percent slopes	11.65
Las Posas fine sandy loam, 5 to 9 percent slopes, eroded	68.96
Las Posas fine sandy loam, 9 to 15 percent slopes, eroded	223.66
Las Posas stony fine sandy loam, 30 to 65 percent slopes	410.72
Las Posas stony fine sandy loam, 9 to 30 percent slopes	118.87
Las Posas stony fine sandy loam, 9 to 30 percent slopes, eroded	15.71
Linne clay loam, 9 to 30 percent slopes	21.32
Olivenhain cobbly loam, 2 to 9 percent slopes	12.27
Olivenhain cobbly loam, 9 to 30 percent slopes	10.68
Placentia sandy loam, 0 to 2 percent slopes, warm MAAT, MLRA 19	109.39
Placentia sandy loam, 2 to 9 percent slopes, warm MAAT, MLRA 19	1,055.84

Placentia sandy loam, 5 to 9 percent slopes, eroded	5.47
Placentia sandy loam, 9 to 15 percent slopes, eroded	10.06
Placentia sandy loam, thick surface, 0 to 2 percent slo pes	169.56
Placentia sandy loam, thick surface, 2 to 9 percent slo pes	19.02
Ramona sandy loam, 2 to 5 percent slopes	98.45
Ramona sandy loam, 5 to 9 percent slopes	87.11
Ramona sandy loam, 5 to 9 percent slopes, eroded	63.42
Ramona sandy loam, 9 to 15 percent slopes, eroded	52.72
Reiff fine sandy loam, 2 to 5 percent slopes	9.03
Cieneba very rocky coarse sandy loam, 30 to 75 percent slopes	1,678.30
San Miguel rocky silt loam, 9 to 30 percent slopes	296.94
San Miguel-Exchequer rocky silt loams, 9 to 70 percent slopes	768.71
Steep gullied land	29.80
Visalia sandy loam, 0 to 2 percent slopes	47.24
Visalia sandy loam, 2 to 5 percent slopes	815.18
Visalia sandy loam, 5 to 9 percent slopes	26.80
Vista coarse sandy loam, 15 to 30 percent slopes, eroded	19.40
Vista coarse sandy loam, 15 to 30 percent slopes, MLRA 20	32.99
Vista coarse sandy loam, 5 to 9 percent slopes	293.52
Vista coarse sandy loam, 9 to 15 percent slopes, eroded	85.94
Vista coarse sandy loam, 9 to 15 percent slopes, MLRA 20	252.34
Vista rocky coarse sandy loam, 5 to 15 percent slopes	49.99
cordiWater	72.08
Wyman loam, 2 to 5 percent slopes	140.22
Wyman loam, 5 to 9 percent slopes	173.64
Wyman loam, 9 to 15 percent slopes	10.47
Grand Total	21,165.39

Source: Natural Resource Conservation Service, 2020.

Note: The total acres listed is slightly larger than the planning area acreage listed as this figure includes right-of-way and other land use features that do not warrant land use designations.

Erosion

The U.S. Natural Resource Conservation Service (NRCS) delineates soil units and compiles soils data as part of the National Cooperative Soil Survey. The following description of erosion factors is provided by the NRCS Physical Properties Descriptions:

> *Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. Erosion factor Kw indicates the erodibility of the whole soil, whereas Kf indicates the erodibility of the fine soils. The estimates are modified by the presence of rock fragments. Soil erosion data for the City of San Marcos were obtained from the NRCS. As identified by the NRCS web soil survey, the erosion factor K within the Planning Area varies from 0.02 to 0.55, which is considered a low to high potential for erosion. Generally, erosion potential within the Planning Area increases to the south.*

Expansive Soils

The NRCS delineates soil units and compiles soils data as part of the National Cooperative Soil Survey. The following description of linear extensibility (also known as shrink-swell potential or expansive potential) is provided by the NRCS Physical Properties Descriptions:

"Linear extensibility" refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change.

The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

The linear extensibility of the soils within San Marcos ranges from Low to High. Figure 5-7 illustrates the shrink-swell potential of soils in the Planning Area. The majority of the Planning Area has low expansive soils. The areas with high expansive soils represent only a small portion of the Planning Area and would require special design considerations due to shrink-swell potentials.

Landslide

The California Geological Survey classifies landslides with a two-part designation based on Varnes (1978) and Cruden and Varnes (1996). The designation captures both the type of material that failed and the type of movement that the failed material exhibited. Material types are broadly categorized as either rock or soil, or a combination of the two for complex movements. Landslide movements are categorized as falls, topples, spreads, slides, or flows.

Landslide potential is influenced by physical factors, such as slope, soil, vegetation, and precipitation. Landslides require a slope, and can occur naturally from seismic activity, excessive saturation, and wildfires, or from human-made conditions such as construction disturbance, vegetation removal, wildfires, etc.

Figure 5-8 illustrates the landslide potential (for non-seismically included potential) in the vicinity of the Planning Area.

Subsidence

Subsidence is the settlement of soils of very low density generally from either oxidation of organic material, or desiccation and shrinkage, or both, following drainage. Subsidence takes place gradually, usually over a period of several years.

In California, large areas of land subsidence were first documented by USGS scientists in the first half of the 20th century. Most of this subsidence was a result of excessive groundwater pumping. Completion of California's State and Federal water projects that bring water from California's wet north to its dry south allowed some groundwater aquifers to recover, and subsidence decreased in these areas. The City of San Marcos does not have any historic or current USGS-recorded subsidence.

Collapsible Soils

Hydroconsolidation occurs when soil layers collapse, or settle, as water is added under loads. Natural deposits susceptible to hydroconsolidation are typically aeolian, alluvial, or colluvial materials, that have a high apparent strength when dry. The dry strength of the materials may be attributed to the clay and silt constituents in the soil and the presence of cementing agents (i.e., salts). Capillary tension may tend to act to bond soil grains. Once these soils are subjected to excessive moisture and foundation loads, the constituency including soluble salts or bonding agents is weakened or dissolved, capillary tensions are reduced and collapse occurs resulting in settlement. Existing alluvium within the Planning Area may be susceptible to collapse and excessive settlements, which could create the risk of hydroconsolidation if these soils were exposed to excessive moisture.

According to the geotechnical background report prepared by Wilson Geosciences, Inc. (2009) for the 2012 San Marcos General Plan and EIR, within the Planning Area there are both; younger alluvial deposits in San Marcos Creek and old sedimentary, metasedimentary, and crystalline basement rocks in the surrounding hills. Underlying formations of natural deposits are alluvium (both young and old) in the lowest areas, sedimentary and crystalline rocks in the intermediate elevation hills, and metavolcanic/crystalline rocks in the higher hills and mountains.

The alluvial surface in the central section of the Planning Area is underlain young alluvium over crystalline tonalite “hard” bedrock. Older alluvium occupies limited valley bottoms in the eastern position of the City. A relatively “soft” bedrock formation underlies the westernmost portions of the City and consists of poorly bedded sandstone, siltstone and claystone with conglomerate. The Cerro de las Posas Mountains (with Mount Whitney, Double Peak, and Frank’s Peak), as well as the surrounding higher hills around Twin Oaks Valley, are underlain by “hard” metavolcanic rocks with some plutonic crystalline rocks. These units are cut by San Marcos Creek and numerous unnamed secondary drainages filled with younger alluvium consisting of slightly consolidated silt, sand, and gravel.

As previously mentioned, existing alluvium within the Planning Area may be susceptible to collapse and excessive settlements, which could create the risk of hydroconsolidation if these soils were exposed to excessive moisture.

Liquefaction Induced Lateral Spreading

Liquefaction, which is primarily associated with loose, saturated materials, is most common in areas of sand and silt or on reclaimed lands. When liquefaction occurs, soils suddenly lose strength due to groundwater permeating the soil due to groundshaking. Thus, liquefaction requires specific soil characteristics and seismic shaking.

Liquefaction may induce lateral spreading. Lateral spread refers to landslides that are a result of lateral displacement of gently sloping ground. Areas identified to have high liquefaction susceptibility as well as sloping grounds are vulnerable to lateral spreading.

Naturally Occurring Asbestos

The term "asbestos" is used to describe a variety of fibrous minerals that, when airborne, can result in serious human health effects. Naturally occurring asbestos is commonly associated with ultramafic rocks and serpentinite. Ultramafic rocks, such as dunite, peridotite, and pyroxenite are igneous rocks comprised largely of iron-magnesium minerals. As they are intrusive in nature, these rocks often undergo metamorphosis, prior to their being exposed on the Earth's surface. The metamorphic rock serpentinite is a common product of the alteration process. According to the California Geological Survey, there is no naturally occurring asbestos mapped within the Planning Area.

Tsunami/Seiches

Tsunamis and seiches are standing waves that occur in the ocean or relatively large, enclosed bodies of water that can follow seismic, landslide, and other events from local sources (California, Oregon, Washington coast) or distant sources (Pacific Rim, South American Coast, Alaska/Canadian coast). The Planning Area is not within a tsunami or seiche hazard area.

5.4.3 References

California Department of Conservation. 2002. California Geological Survey, Note 36.

California Division of Mines and Geology. 1997. Guidelines for Evaluating Seismic Hazards in California. CDMG Special Publication 117.

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Wallace, Robert E. (ed.). 1990. The San Andreas Fault System, California. U.S. Geological Survey Professional Paper 1515. Washington, DC: U.S. Department of the Interior.

Yerkes, R.F. et al. 1965. Geology of the Los Angeles Basin California – an Introduction.

5.5 MINERAL RESOURCES

This section describes the mineral resource classification system and the mineral resources that occur within the Planning Area. The existing City of San Marcos General Plan Public identifies the following goals and policies related to mineral resources.

Element	Topic Area	Goal	Policy
Conservation and Open Space Element	Open Space and Limited Resources	Goal Cos-2: The City is committed to conserving, protecting, and maintaining open space, agricultural, and limited resources for future generations. By working with property owners, local organizations, and state and federal agencies, the City can limit the conversion of resource lands in urban uses.	Policy 2.4: Ensure compliance with State of California requirements for mineral resources contained in the State Surface Mining and Reclamation Act.

Source: City of San Marcos General Plan, 2012

5.5.1 Environmental Setting

Mineral Resource Classification

Pursuant to the Surface Mining and Reclamation Act of 1975 (SMARA), the California State Mining and Geology Board oversees the Mineral Resource Zone (MRZ) classification system. The MRZ system characterizes both the location and known/presumed economic value of underlying mineral resources. The mineral resource classification system uses four main MRZs based on the degree of available geologic information, the likelihood of significant mineral resource occurrence, and the known or inferred quantity of significant mineral resources. The four classifications are described in Table 5-12.

Table 5-12: Mineral Resources Classification System

Classification	Descriptions
MRZ-1	Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
MRZ-2	Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.
MRZ-3	Areas containing mineral deposits, the significance of which cannot be evaluated.
MRZ-4	Areas where available information is inadequate for assignment to any other MRZ classification.

Source: California Department of Conservation Division of Mines and Geology, 2000.

Mineral Resources

Mineral resources include commercially viable oil and gas deposits, and nonfuel mineral resources deposits. Nonfuel mineral resources include metals such as gold, silver, iron, and copper; industrial

metals such as boron compounds, rare-earth elements, clays, limestone, gypsum, salt, and dimension stone; and construction aggregate, including sand, gravel, and crushed stone. California is the largest producer of sand and gravel in the nation. Figure 5-9 shows resources by classification within the Planning Area. All four mineral resource zones (MRZ-1, MRZ-2, MRZ-3, MRZ-4) are present in the City of San Marcos. These mineral resource zones are described in the table above.

Location of Permitted Aggregate Mines

The California Office of Mine Reclamation periodically publishes a list of qualified permitted aggregate mines regulated under SMARA that is generally referred to as the AB 3098 List. The Public Contract Code precludes mining operations that are not on the AB 3098 List from selling sand, gravel, aggregates or other mined materials to state or local agencies. As of March 10, 2020, there are no mines listed within the Planning Area. Two historic mining/quarry locations exist within the corporate City limits; Meadowlark Ranch Quarry located in the southwest portion of the City and the former mine near Village Drive at Twin Oaks Valley Road. In the Sphere of Influence, there is one historic mine, known as the Galbrath Quarry. The Galbrath Quarry is located east of the City of Vista (City of San Marcos General Plan, 2012).

5.5.2 References

California Department of Conservation. 2002. California Geological Survey, Note 36.

California Department of Conservation. March, 2020. AB 3098 List – Current Listing 2018. Available at: http://www.conservation.ca.gov/omr/SMARA%20Mines/ab_3098_list.

City of San Marcos. General Plan. 2012.

5.6 HYDROLOGY AND WATER QUALITY

This section describes the regulatory setting, regional hydrology and water quality, and local hydrology and water quality for the Planning Area. The existing City of San Marcos General Plan Public identifies the following goals and policies related to Hydrology and Water Quality.

Element	Topic Area	Goal	Policy
Conservation and Open Space Element	Watershed and Water Quality Protection	Coal COS-6: Protect and restore appropriate surface water and groundwater beneicial uses through prioritizing the improvement of locally impaired water bodies within the City of San Marcos subwater sheds.	Policy 6.1: Establish sources, constituents, and water body priorities based on surface water quality and groundwater quality for each watershed within the City of San Marcos. For each subwatershed promote beneficial use designations and water quality objectives that are scientifically valid for each subwatershed. Reduce pollutant loads and flows that adversely impact ground water and surface water integrity in each subwatershed. For each subwatershed, support the identification and development of sustainable projects that provide diverse habitats and water quality benefits. For each subwatershed, cordinate development with existing watershed management plan Policy 6.2: Promote watershed stewardship as the community norm. Policy 6.3: Develop partnerships with other agencies to prioritize and implement watershed protection plans. Policy 7.1: Promote public policies that support watershed protection for

			surface water, ground water quality, and attainable beneficial uses. Policy 7.2: Obtain public support for long term sustainable funding for stormwater management, surface water quality, hydromodification, and groundwater quality initiatives. Policy 8.1: Identify pollutants of concern in each subwatershed for groundwater and surface water. Policy 8.2: Work with regulatory agencies and other parties to ensure that pollutant sources in subwatersheds to surface water and groundwater are re-assigned to the appropriate regulatory process (air, waste, water). Policy 8.3: Promote public policy that reduces pollutants of concern in subwatersheds, surface water and groundwater through source pollutant replacement, substitution, or application. Policy 8.4: Require new development and redevelopment to protect the quality of water bodies and natural drainage systems through site design, source controls, storm water treatment, runoff reduction measures, Best Management
		Goal COS-7: Achieve sustainable watershed protection or surface and ground water quality that balances social, economical, and environmental needs. Goal COS-8: Focus watershed protection, surface and groundwater quality management on sources and practices that the City has the ability to affect.	

			Practices (BMPs), low impact development (LID), hydromodification strategies consistent with the Current San Diego Regional Water Quality Control Board Municipal Stormwater National Pollutant Discharge Elimination System (NPDES) Permit, and all future municipal stormwater permits. Policy 9.1: Focus each watershed assessment on information needed to implement the most effective control strategies and adaptive management. Policy 9.2: Focus surface water, hydromodification, and groundwater quality monitoring programs, BMPs, and management programs at a subwatershed scale within each service neighborhood. Policy 9.3: Establish watershed-based educational programs for residents and business owners to reduce and prevent pollutants from entering the surface water and groundwater through the watershed and City's storm drain system.
		Goal COS-9: Support the development of a regulatory framework and organizational structure that facilitates the implementation of the most effective and efficient watershed protection programs for surface water and groundwater quality and beneficial use programs	

Land Use and Community Design	Growth Management and Adequate Provision of Services	Goal LU-15: Flood Control and Storm Water Drainage Facilities: Ensure adequate flood control and storm water drainage is provided (to) the community.	Policy 15.1: Implement activities, practices, procedures, or facilities that avoid, prevent, or reduce pollution of the San Marcos Storm Water Conveyance System and Receiving Waters. Policy 15.2: Improve inadequate or undersized drainage/ flood control facilities to solve both small neighborhood and large regional drainage and flood control problems.

Source: City of San Marcos General Plan, 2012

5.6.1 Environmental Setting

The State of California uses a hierarchical naming and numbering convention to define watershed areas for management purposes. Boundaries are defined according to size and topography, with multiple sub-watersheds within larger watersheds. Table 5-13 shows the primary watershed classification levels used by the State of California. The second column indicates the approximate size that a watershed area may be within a particular classification level, although variation in size is common.

Table 5-13: State of California Watershed Hierarchy Naming Convention

Watershed Level	Approximate Square Miles (Acres)	Description
Hydrologic Region (HR)	12,735 (8,150,000)	Defined by large-scale topographic and geologic considerations. The State of California is divided into ten HRs.
Hydrologic Unit (HU)	672 (430,000)	Defined by surface drainage; may include a major river watershed, groundwater basin, or closed drainage, among others.
Hydrologic Area (HA)	244 (156,000)	Major subdivisions of hydrologic units, such as by major tributaries, groundwater attributes, or stream components.
Hydrologic Sub-Area (HSA)	195 (125,000)	A major segment of an HA with significant geographical characteristics or hydrological homogeneity.

Source: Calwater, California Interagency Watershed Mapping Committee, 2008.

Hydrologic Region

The Planning Area is located within the South Coast HR, a large coastal watershed in southern California (DWR 2003: 148). The South Coast HR spans approximately 6.78 million acres and is

bounded on the west by the Pacific Ocean, on the north by the Transverse Ranges, on the east by the Colorado River HR, and on the south by the international boundary with Mexico.

Hydrologic Unit

Within the South Coast HR, the Planning Area located within the Carlsbad HU. The San Diego Regional Water Quality Control Board (RWQCB) governs basin planning and water quality within the Carlsbad HU. Figure 5-10 shows Hydrologic Units within and surrounding the city.

Hydrologic Area

For purposes of planning on a citywide basis, hydrologic areas are generally considered to be the appropriate watershed planning level. As a planning area becomes smaller the hydrologic area level may be too large in terms of scale, and a hydrologic subarea may be considered more appropriate. Within the Carlsbad HU, the City is located within three HAs: Agua Hedionda HA in the northwestern portion of the city, Escondido Creek HA in the southern portion of the city, and San Marcos HA in the majority of the City. There is an additional HA within the northern portion of the San Marcos Planning Area but outside of the City boundaries, called the Lower San Luis. Figure 5-11 shows Hydrologic Areas within and surrounding the city.

Hydrologic Sub-Area

There are several hydrologic sub-areas within and throughout Planning Area. Analysis of hydrologic sub-areas is appropriate for the review of individual projects, but it is not appropriate for the watershed analysis of the City's General Plan.

Creeks and Waterways

The Planning Area is contained within the Carlsbad Hydrologic Unit, a watershed covering approximately 210 square miles and containing six hydrologic areas: San Marcos, Agua Hedionda, Loma Alta, Encinas, Buena Vista Creek, and Escondido Creek. The Carlsbad Hydrologic Unit contains several smaller tributaries and bodies of water, including Loma Alta Creek, Buena Vista Creek, Buena Vista Lagoon, San Marcos Creek, Batiquitos Lagoon, Escondido Creek, San Elijo Lagoon, and Lake Wohlford. The Carlsbad Hydrologic Unit ultimately drains to the Pacific Ocean. A small portion of the Planning Area, located outside of the City limit in the northeast, is located within the San Luis Rey Hydrologic Unit. Figure 5-11 (Hydrologic Areas) shows local waterways in relation to the city.

The Planning Area is located within the Carlsbad HA and is separated into four primary sub watersheds based on topographical drainage areas to creek systems:

- San Luis Rey River (Moosa Creek);
- Agua Hedionda Creek;
- San Marcos Creek; and
- Escondido Creek.

Groundwater

The City of San Marcos is underlain by a small groundwater basin, identified by the California Department of Water Resources (CDWR) as Basin 9-32 or San Marcos Groundwater Basin. The Planning Area also includes additional groundwater basins and wells, but Basin 9-32 is the only groundwater basin formally designated in the Planning Area. Groundwater in San Marcos is not

considered to be a major water source. The San Marcos Groundwater Basin covers a surface area of 2,130 acres within the City and is located entirely within San Marcos Creek HAS 904.52, which is designated as impaired.

Water Quality

Surface water quality is affected by point source and non-point source pollutants. Point source pollutants are those emitted at a specific point, such as a pipe, while non-point source pollutants are typically generated by surface runoff from diffuse sources, such as streets, paved areas, and landscaped areas. Point source pollutants are controlled with pollutant discharge regulations or waste discharge requirements (WDRs). Non-point source pollutants are more difficult to monitor and control although they are important contributors to surface water quality in urban areas.

Stormwater runoff pollutants vary based on land use, topography, the amount of impervious surface, and the amount and frequency of rainfall and irrigation practices. Runoff in developed areas typically contains oil, grease, and metals accumulated in streets, driveways, parking lots, and rooftops, as well as pesticides, herbicides, particulate matter, nutrients, animal waste, and other oxygen-demanding substances from landscaped areas. The highest pollutant concentrations usually occur at the beginning of the wet season during the “first flush.”

Water quality in the city is governed by the San Diego RWQCB, which sets water quality standards in the Water Quality Control Plan for the Santa Diego Region. The Basin Plan identifies beneficial uses for surface water and groundwater and establishes water quality objectives to attain those beneficial uses.

The Clean Water Act (CWA) 303(d) list is a register of impaired and threatened waters which the CWA requires all states to submit for Environmental Protection Agency approval. The list identifies all waters where the required pollution control measures have so far been unsuccessful in reaching or maintaining the required water quality standards. Waters that are listed are known as “impaired.” In San Marcos, five water bodies are known to be adversely affected by pollutants generated by activities associated with each land use type in each watershed and as a result are listed on the State Water Resources Control Board’s (SWRCB) 303(d) impaired waters list. The five listed water bodies are:

- Agua Hedionda Creek,
- Buena Creek,
- Escondido Creek,
- San Marcos Creek,
- Lake San Marcos.

According to the 303(d) list, pollutants in Agua Hedionda Creek include: enterococcus, fecal coliform, manganese, phosphorus, selenium, TDS, nitrogen, and toxicity. Buena Creek contains dichlorodiphenyltrichloroethane (DDT) and nitrate.

Storm Drain System

There are five major drainage basins within the Planning Area. These major drainage basins include: San Marcos Creek-North Basin, San Marcos Creek-East Basin, San Marcos Creek-Main Basin, Las Posas Basin, North Outlying Basin, and South Outlying Basin. San Marcos Creek-North

Basin, San Marcos Creek-East Basin and Las Posas Basin are all tributary to the San Marcos Creek-Main Basin.

- The San Marcos Creek-North Basin: Approximately 7,000 acres consisting of San Diego County to the north and the City of San Marcos to the south.
- The San Marcos Creek- East Basin: Approximately 4,500 acres consisting of portions of San Diego county, City of Escondido, and City of San Marcos.
- The Las Posas Basin: Approximately 2,100 acres entirely within the City of San Marcos.
- The San Marcos Creek-Main Basin: Approximately 6,200 acres consisting of San Diego County, City of San Marcos, and ta small portion of the City of Carlsbad.
- The North Outlying Basin: Approximately 2,500 acres consisting primarily of the City of San Marcos with small portions of the City of Vista and San Diego County.
- The South Outlying Basin: Approximately 2,100 acres consisting primarily of the City of San Marcos with small portions of San Diego County.

These major drainage basins are further divided into sub-basins, each of which has a maximum area of approximately 20 acres.

There are 619,271 linear feet (LF) of existing pipes that transport stormwater within the City. According to the Drainage Master Plan for San Marcos, there are 188,185 LF of hydraulically deficient pipes in San Marcos. This deficiency was measured using a 2-year, 10-year, 50- year, and 100-year storm events. For a 100-year 24-hour storm event, 22,220 LF of a total 188,185 LF of deficient pipe has only upstream surcharging; 50,683 LF of a total 188,185 LF of deficient pipe has only downstream surcharging; 93,232 Lf of a total 188,185 LF of deficient pipe has both upstream and downstream surcharging.

As part of the recent Drainage Master Plan, the City of San Marcos developed a Capital Improvement Program (CIP), to produce order of magnitude probable construction costs drainage improvement projects throughout the City. The CIP supports a citywide initiative to develop new infrastructure and replace existing infrastructure to address deficiencies in the system. Ultimately, it is recommended the City ensure all drainage infrastructure can accommodate a 100-year storm event.

5.6.2 References

California Department of Water Resources. 2006. California's Groundwater Bulletin 118 – San Marcos Groundwater Basin.

California Department of Water Resources. 2012. Final 2012 Integrated Report (CWA Section 303(d) List / 305(b) Report).

State Water Resources Control Board (SWRCB). 2010 Integrated Report, Clean Water Act Section 303(d) List / 305(b) Report. Sacramento, CA. November 12, 2010. http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml.

U.S. Geological Survey. "National Hydrography Dataset." U.S. Department of the Interior. http://nhd.usgs.gov/. (Accessed December 2017).

San Marcos 2012 General Plan Environmental Impact Report. City of San Marcos.

5.7 VISUAL RESOURCES AND COMMUNITY IMAGE

The City of San Marcos and the surrounding areas possess numerous visual resources that contribute to San Marcos' community image. Many scenic resources are found in the natural areas surrounding the city, while within San Marcos visual resources include hillsides, creek areas, lakes, and trails, as well as defining visual elements including trees, landscaping, and structures. These resources enhance the quality of life for San Marcos residents, and provide for outdoor recreational opportunities. This section reviews and summarizes San Marcos' key visual resources. The City's existing General Plan contains the following goals and policies related to visual resources and community image.

Element	Topic Area	Goal	Policy
Conservation and Open Space	Open Spaces and Limited Resources	Goal COS-3 Protect natural topography to preserve and enhance the natural beauty of San Marcos	Policy 3.1: Preserve scenic resources, including prominent landforms such as Double Peak, Owens Peak, San Marcos Mountains, Merriam Mountains, Cerro de Las Posas, Franks Peak, and canyon areas through conservation and management policies. Policy 3.2: Encourage and maintain high-quality architectural and landscaping designs that enhance or complement the hillsides, ridgelines, canyons, and view corridors that comprise the visual character in San Marcos. Policy 3.3: Continue to work with new development and redevelopment project applicants in designing land use plans that respect the topography, landforms, view corridors, wildlife corridors, and open space that exists. Policy 3.4: Evaluate potential impacts to visual and aesthetic resources, including the potential to create new light sources, while still maintaining and being sensitive to rural lighting standards.
		Goal COS-2: The City is committed to conserving, protecting, and maintaining open space, agricultural, and limited resources for future generations. By working with property	Policy 2.1: Provide and protect open space areas throughout the City for its recreational,

		owners, local organizations, and state and federal agencies, the City can limit the conversion of resource lands to urban uses.	agricultural, safety, and environmental value. Policy 2.2: Limit, to the extent feasible, the conversion of open space to urban uses and place a high priority on acquiring and preserving open space lands for recreation, habitat protection and enhancement, flood hazard management, water and agricultural resources protection, and overall community benefit. Policy 2.3: Protect existing agricultural areas, encourage farm to consumer, promote public health, and promote small-scale agriculture such as community gardens and the growing of organic produce. Policy 2.4: Ensure compliance with State of California requirements for mineral resources contained in the State Surface Mining and Reclamation Act. Policy COS-2.5: Continue to review future development proposals to ensure that cultural resources (including prehistoric, historic, paleontological, and Senate Bill 18 Tribal resources) are analyzed and conserved in compliance with CEQA requirements. Policy 2.6: Preserve healthy mature trees where feasible; where removal is necessary, trees shall be replaced at a ratio of 1:1.

Source: City of San Marcos General Plan, 2012

5.7.1 Environmental Setting

San Marcos has a varied topography defined by hillsides, creeks, and canyons that provide a variety of scenic views. The elevations in the City range from approximately 590 feet above sea level at the central SR-78/West San Marcos Boulevard area of the City to prominent ridgelines of approximately 1,200 to 1,600 feet above sea level west of North Twin Oaks Valley Road and at Double Peak in the Questhaven/La Costa Meadows Neighborhoods, respectively. The broad range of elevations allows for plentiful scenic vistas within the City.

Prominent natural landforms within the City or visible from the City of San Marcos include; Mount Whitney, Double Peak, Owens Peak, San Marcos Mountains, Merriam Mountains, Cerro de Las Posas, Frank's Peak, and canyon areas that enhance the visual and scenic aesthetics of the City. Viewsheds of these peaks are visible from overlook points, trails, and roads.

Open space areas and preserves within San Marcos protect the area's natural beauty and contribute to a regional system of hiking, biking, and equestrian trails. In addition, the open space areas within the community preserve habitat for a variety of plants and animals. The City contains 2,499 acres of dedicated open space, which is approximately 12 percent of the City's acreage. A majority of the area designated as open space is located in the southern portion of the Planning Area. There are a number of areas north of SR-78 that are also designated as open space. These undeveloped open space areas in the north and south contribute to the aesthetic character of the Planning Area and provide opportunities for residents to experience natural open space areas within an urbanized environment.

In addition to open space, there are numerous agricultural lands within the Planning Area that contribute to its aesthetic character. Agricultural lands are designated in the northern portion of the Planning Area, as well as a small area designated in the southeast portion of the Planning Area. The Planning Area contains approximately 166 acres identified as Prime Farmland, 145 acres of Farmland of Statewide Importance, and 1,407 acres of Unique Farmlands. The Planning Area also contains approximately 807 acres of farmland classified by the County of San Diego as Farmland of Local Importance. In addition, approximately 11 acres of Williamson Act contract lands are located in the Twin Oaks Valley Neighborhood within the Sphere of Influence.

Because San Marcos has unique access to various mountains and hillsides, the City has a Ridgeline Protection and Management Overlay Zone to protect natural viewsheds and natural resources, minimize physical impacts to ridgelines, and establish innovative sensitive architectural standards. There are three main sections of the Ridgeline Protection and Management Overlay Zone. One section is located toward the west, on the northern border of the City. The other two sections are located in the southern portion of the City. This overlay zone protects the aesthetic quality of the Planning Area and allows for preserved visual character within the community.

Other natural landmarks and scenic resources contribute to the City's aesthetic quality including, but not limited to, creek corridors, eucalyptus stands, rock outcroppings, landmark or historic buildings, and ocean views. Urban and suburban features also contribute to the aesthetic quality of the community, such as the City's parks, landmarks, historic buildings, and public facilities. These resources are a focal point for community involvement and are well-known landmarks that provide a sense of community identity and pride. A list of City parks and community facilities can be found in Chapter 3.0 Utilities and Community Services.

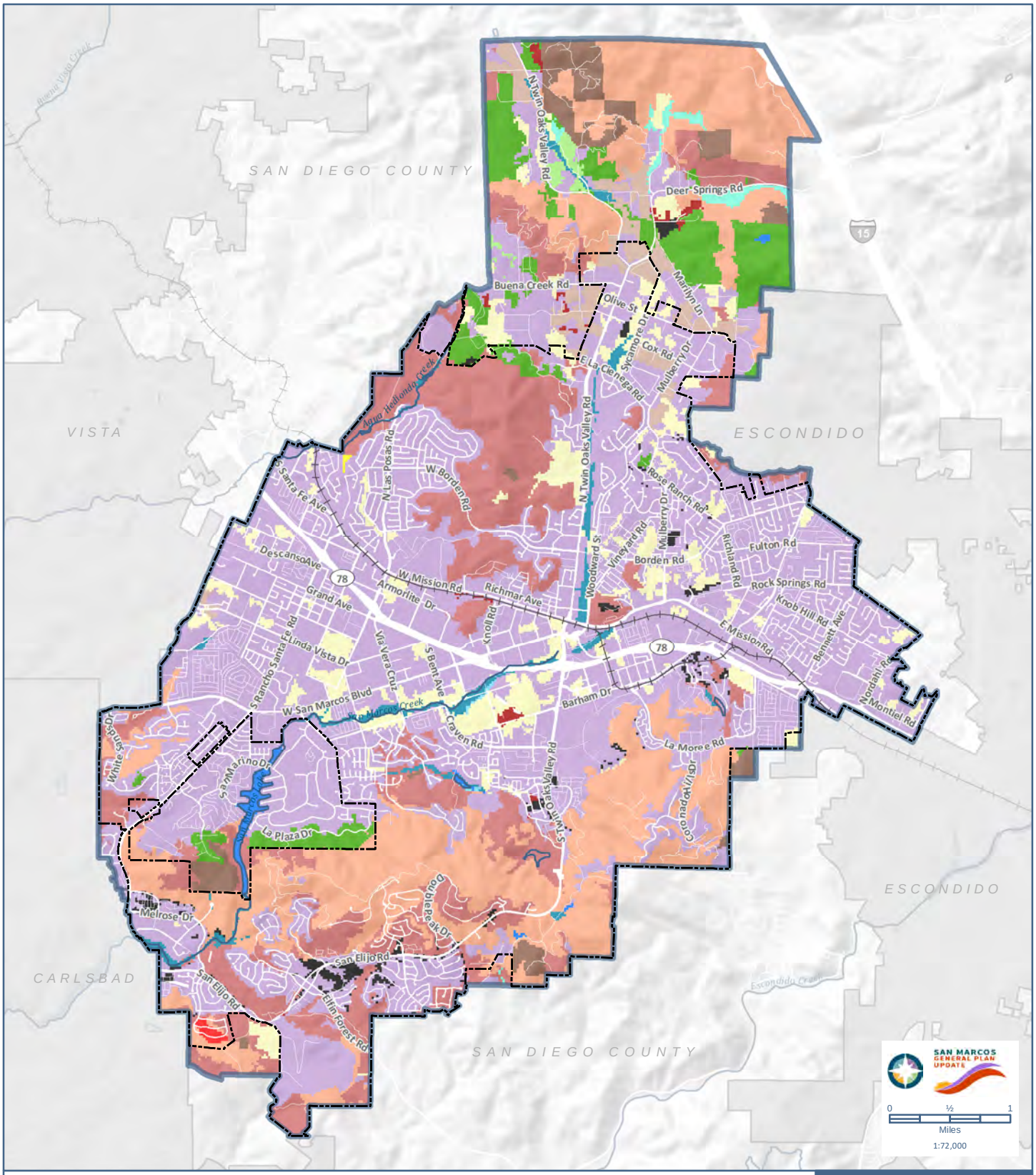
Scenic Highways and Corridors

According to the California Scenic Highway Mapping System, administered by Caltrans, there are no officially designated State Scenic Highways in the Planning Area. State Route 78, is designated by the City of San Marcos as a view corridor and is eligible as a State Scenic Highway. This highway corridor provides views of the Merriam Mountains, Mount Whitney, Double Peak, CSUSM, and Palomar Community College. Pacific Ocean views are visible from Double Peak Park and from roads and pathways within San Elijo Hills.

5.7.2 References

California Department of Transportation, California Scenic Highway Program

City of San Marcos. City of San Marcos General Plan. Adopted 2012.



LEGEND

- City of San Marcos
- Planning Area/Sphere of Influence
- Neighboring City
- Unincorporated San Diego County
- Lake or Pond
- Creek
- Railroad
- Annual Grassland
- Barren
- Chamise-Redshank Chaparral
- Coastal Oak Woodland
- Coastal Scrub
- Deciduous Orchard
- Eucalyptus
- Evergreen Orchard
- Fresh Emergent Wetland
- Irrigated Row and Field Crops
- Lacustrine
- Mixed Chaparral
- Pasture
- Perennial Grassland
- Urban
- Valley Foothill Riparian

FIGURE 5.1.

LAND COVER TYPES

Data sources: California Department of Forestry and Fire Protection, Vegetation (fveg_15), 2015; SandGIS/SANDAG; CalAtlas. Map date: April 17, 2020.

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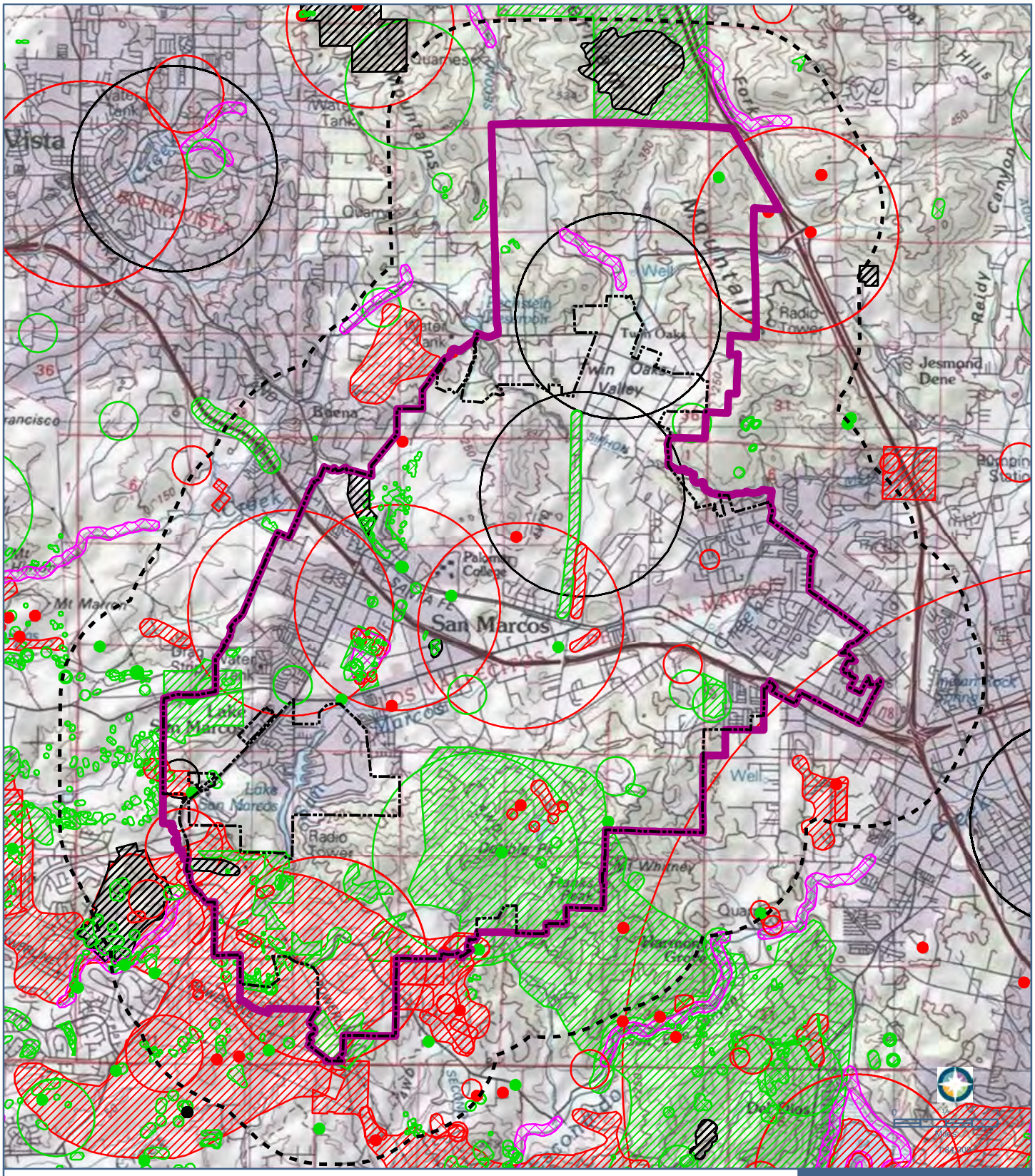

LEGEND

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (specific)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- City of San Marcos
- Sphere of Influence
- 1-mile Radius of SOI

Sources: SanGIS; ArcGIS Online USGS Topographic Map Service; CNDDB version 03/01/2020. Please Note: the occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area. Map date: March 12, 2020.

FIGURE 5.2

CALIFORNIA NATURAL DIVERSITY DATABASE

1-MILE RADIUS

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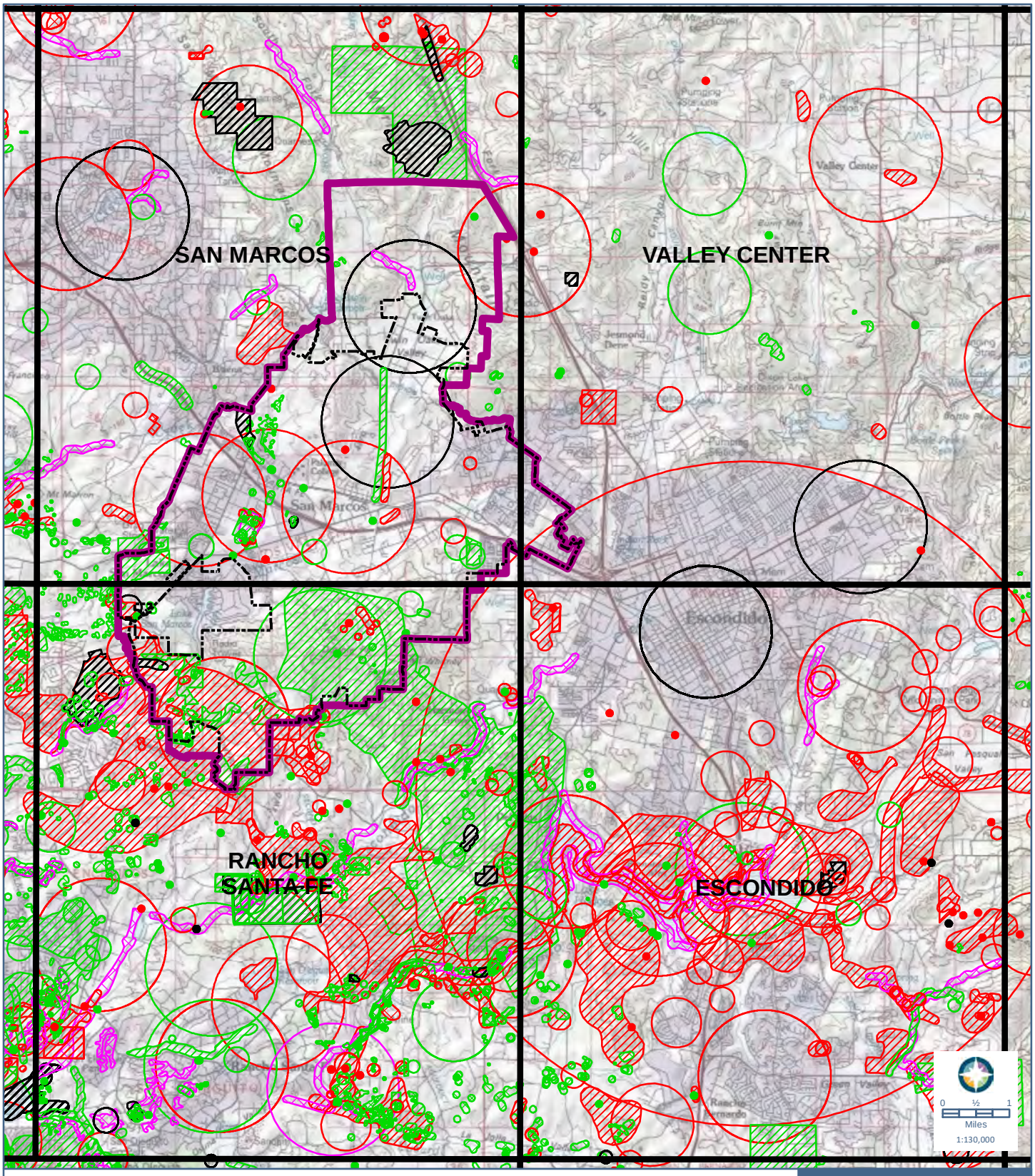

LEGEND

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- City of San Marcos
- Sphere of Influence
- USGS 7.5' Quadrangle Boundary

Sources: SanGIS; ArcGIS Online USGS Topographic Map Service; CNDDB version 03/01/2020. Please Note: the occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area. Map date: March 13, 2020.

FIGURE 5.3

CALIFORNIA NATURAL DIVERSITY DATABASE

QUADRANGLE SEARCH

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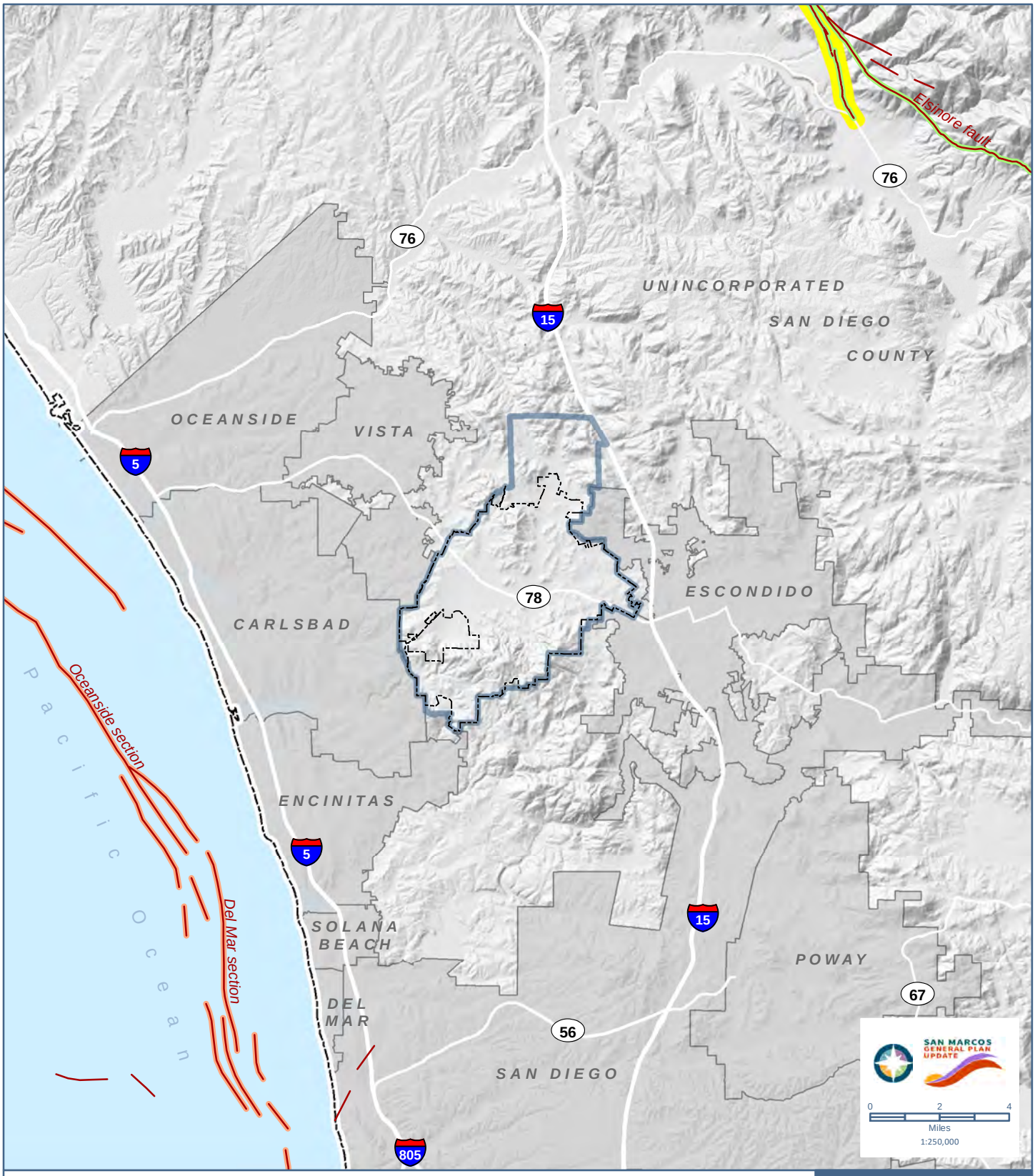

LEGEND

- City of San Marcos
- Planning Area/Sphere of Influence
- Neighboring City
- Unincorporated San Diego County
- Quaternary fault
- Elsinore fault zone
- Newport-Inglewood-Rose Canyon fault zone
- Alquist-Priolo Zone

FIGURE 5.4.

GEOLOGIC FAULTS

Data sources: United States Geological Survey; SANGIS; CalAtlas. Map date: April 15, 2020.

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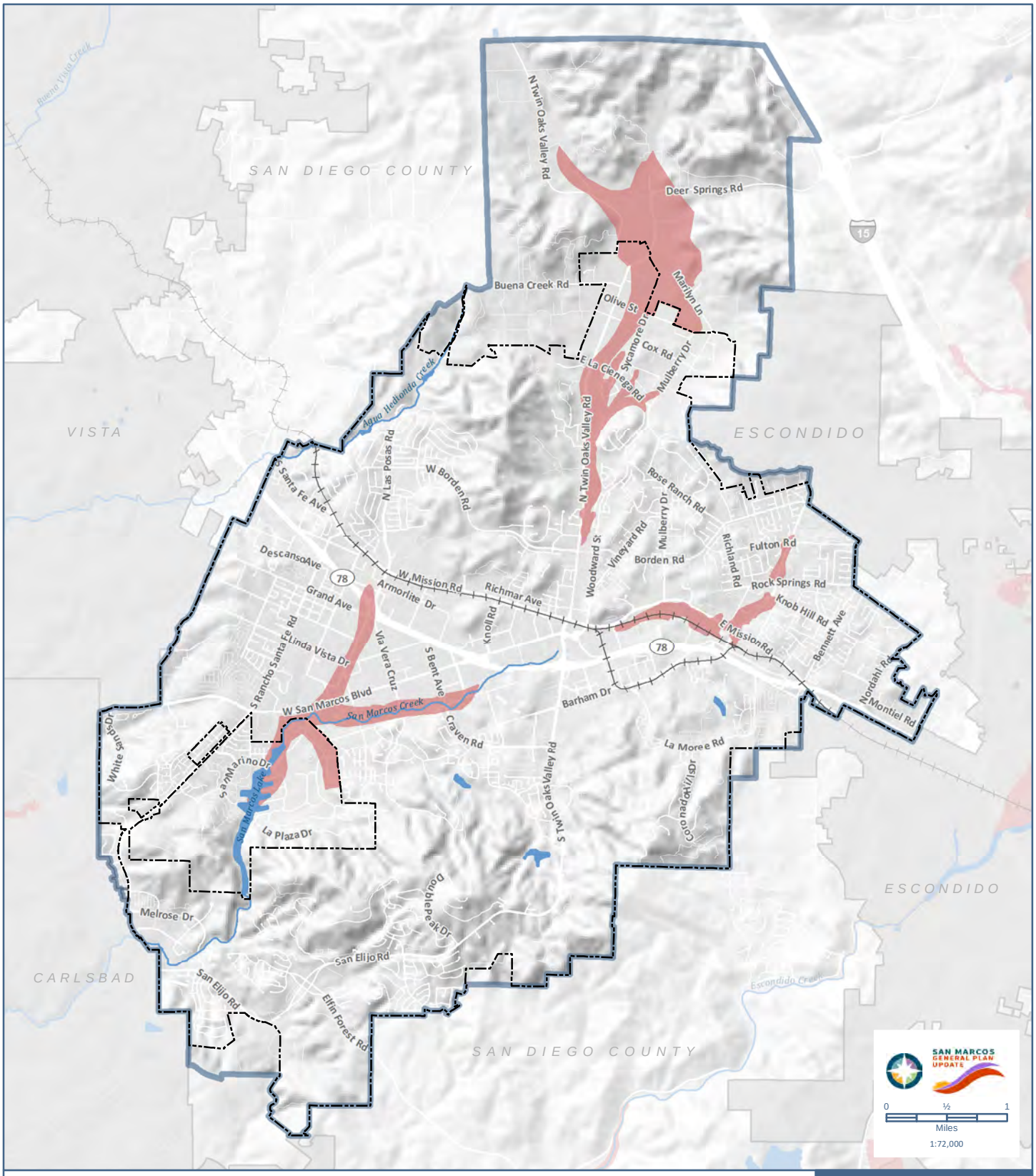

LEGEND

- City of San Marcos
- Planning Area/Sphere of influence
- Neighboring City
- Unincorporated San Diego County
- Lake or Pond
- Creek
- Railroad
- Potential Liquefaction Area

FIGURE 5.5.

POTENTIAL LIQUEFACTION AREAS

Data sources: SanGIS/SANDAG, County of San Diego Planning and Development Services, LUEG-GIS Services, National Earthquake Hazards Reduction Program; CalAtlas. Map date: April 17, 2020.

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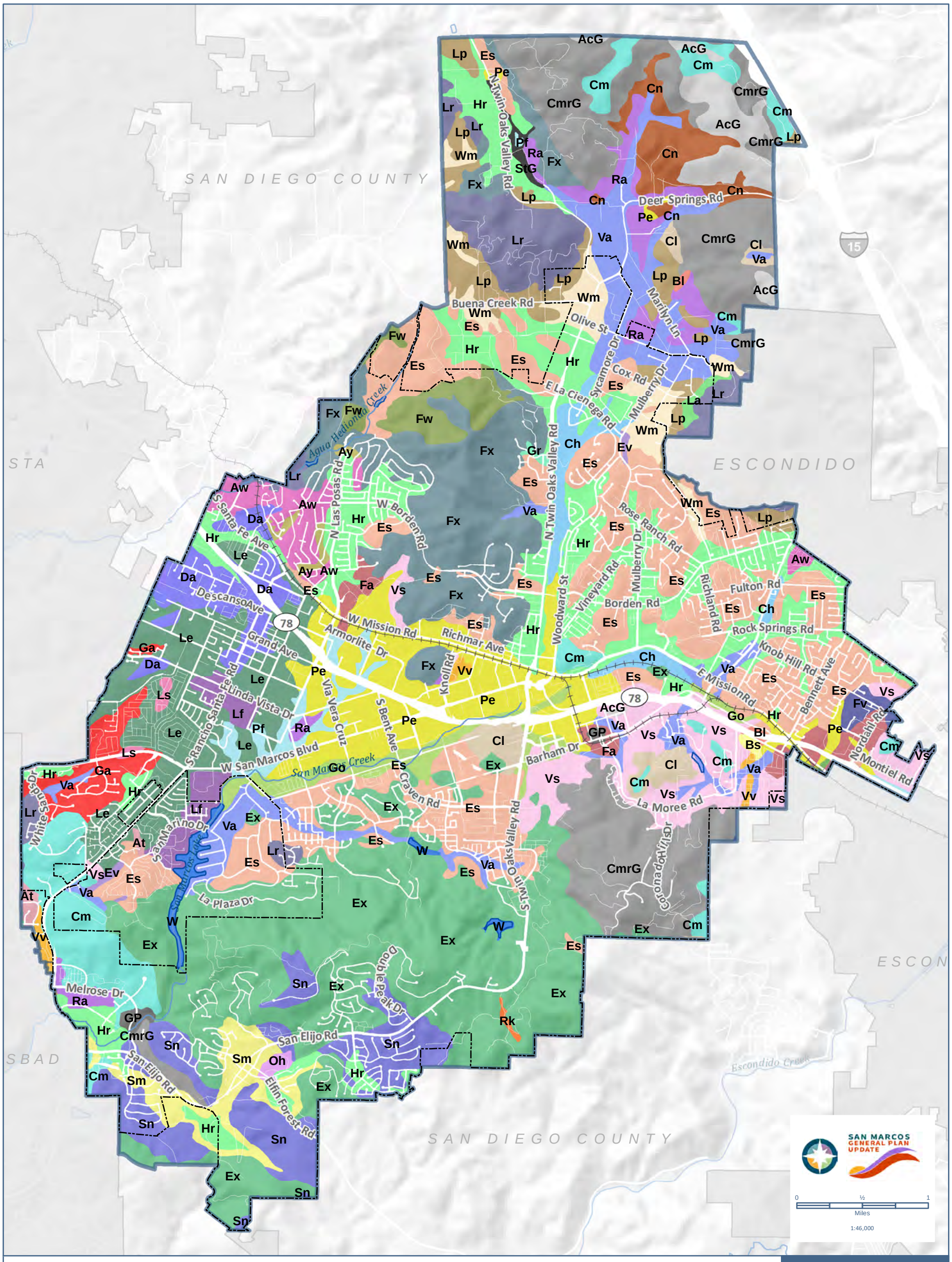

LEGEND

- City of San Marcos
- Planning Area/Sphere of Influence
- Neighboring City
- Unincorporated San Diego County
- Lake or Pond
- Creek
- Railroad

Miscellaneous Areas

- AcG- Acid igneous rock land
- CmrG- Rock outcrop
- GP- Gravel pits
- StG- Steep gullied land
- W- Water

Soil Series

- At- Altamont clay
- Aw- Auld clay
- Ay- Auld stony clay
- Bl- Bonsall sandy loam
- Bs- Bosanko clay
- Ch- Chino fine sandy loam
- Cl- Cieneba coarse sandy loam
- Cm- Cieneba rocky coarse sandy loam
- Cn- Cieneba-Fallbrook rocky sandy loam
- Da- Diablo clay
- Es- Escondido very fine sandy loam
- Ev- Escondido very fine sandy loam, deep
- Ex- Exchequer rocky silt loam
- Fa- Fallbrook sandy loam
- Fe- Fallbrook rocky sandy loam
- Fv- Fallbrook-Vista sandy loam
- Fw- Friant fine sandy loams
- Fx- Friant rocky fine sandy loams
- Ga- Gaviota fine sandy loam
- Go- Grangeville fine sandy loam
- Gr- Greenfield sandy loam
- Hr- Huerhuero loam
- La- La Posta loamy coarse sand
- Le- Las Flores loamy fine sand
- Lf- Las Flores-Urban land complex
- Lp- Las Posas fine sandy loam
- Lr- Las Posas stony fine sandy loam
- Ls- Linne clay loam
- Oh- Olivenhain cobbly loam
- Pe- Placentia sandy loam
- Pf- Placentia sandy loam, thick surface
- Ra- Ramona sandy loam
- Rk- Reiff fine sandy loam
- Sm- San Miguel rocky silt loam
- Sn- San Miguel-Exchequer rocky silt loam
- Va- Visalia sandy loam
- Vs- Vista coarse sandy loam
- Vv- Vista raocky coarse sandy loam
- Wm- Wyman loam

SAN MARCOS GENERAL PLAN UPDATE

0 ½ 1 Miles

1:46,000

FIGURE 5.6

NRCS SOILS

Data sources: NRCS soil database server accessed via ArcGIS Online, 3/18/2020; SANGIS; CalAtlas. Map date: March 18, 2020.

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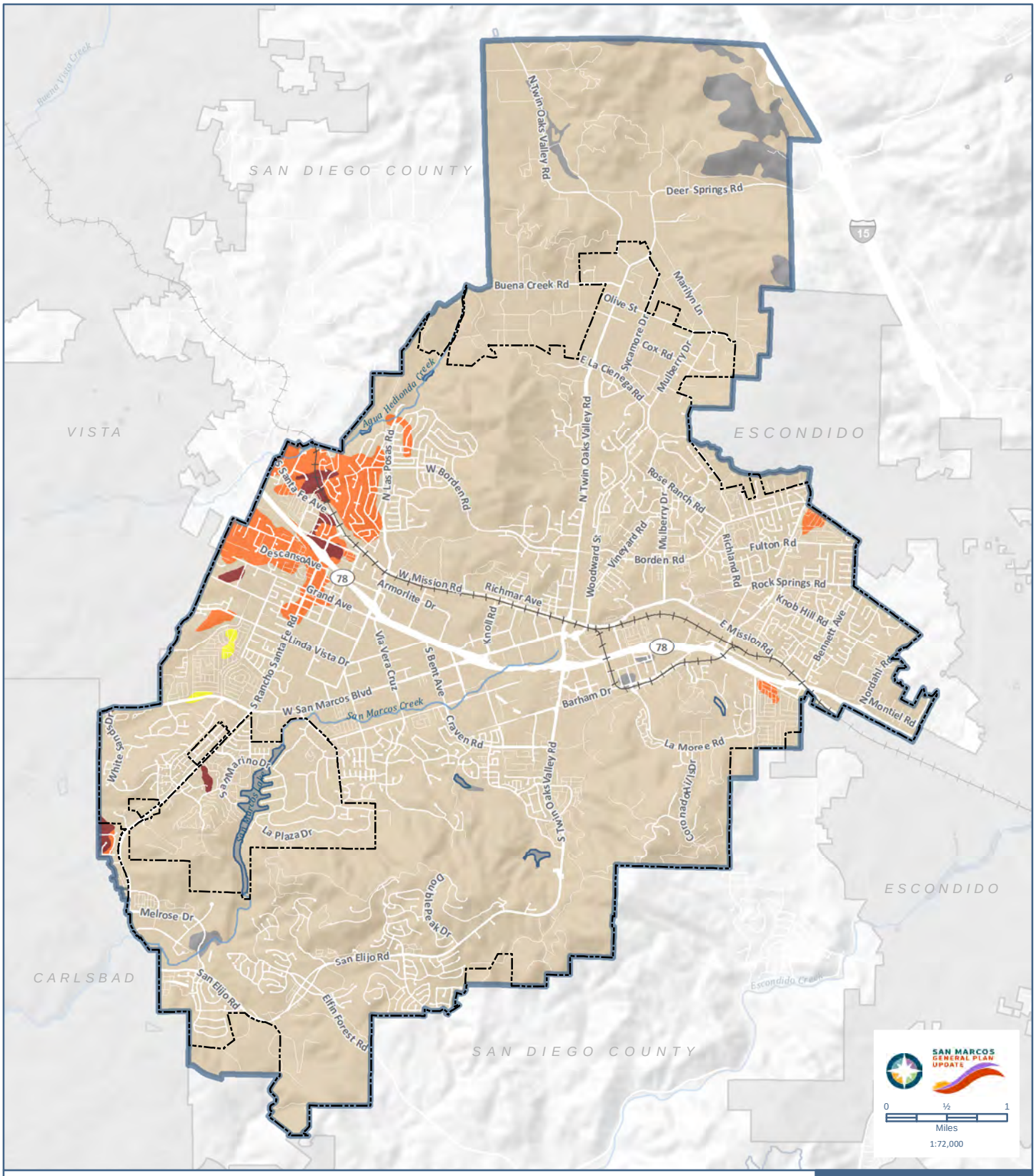

LEGEND

- City of San Marcos
- Planning Area/Sphere of Influence
- Neighboring City
- Unincorporated San Diego County
- Lake or Pond
- Creek
- Railroad

Shrink Swell Potential* (Linear Extensibility)

- Low Potential (0 - 3%)
- Moderate Potential (3 - 6%)
- High Potential (6 - 9%)
- Very High Potential (9 - 30%)
- Not rated or not available

**Shrink-Swell Potential is determined by linear extensibility. Linear extensibility refers to the change in length of an unconfined clod of soil as moisture content is decreased from a moist to a dry state. Soils are considered to have low potential when the linear extensibility is less than 3%, moderate if 3-6%, high if 6-9%, and very high if greater than 9%.*

FIGURE 5.7.

SHRINK-SWELL POTENTIAL OF SOILS

Data sources: NRCS Web Soil Survey, SSA San Diego County Area, California, 9/6/2019; SANGIS; CalAtlas. Map date: April 17, 2020.

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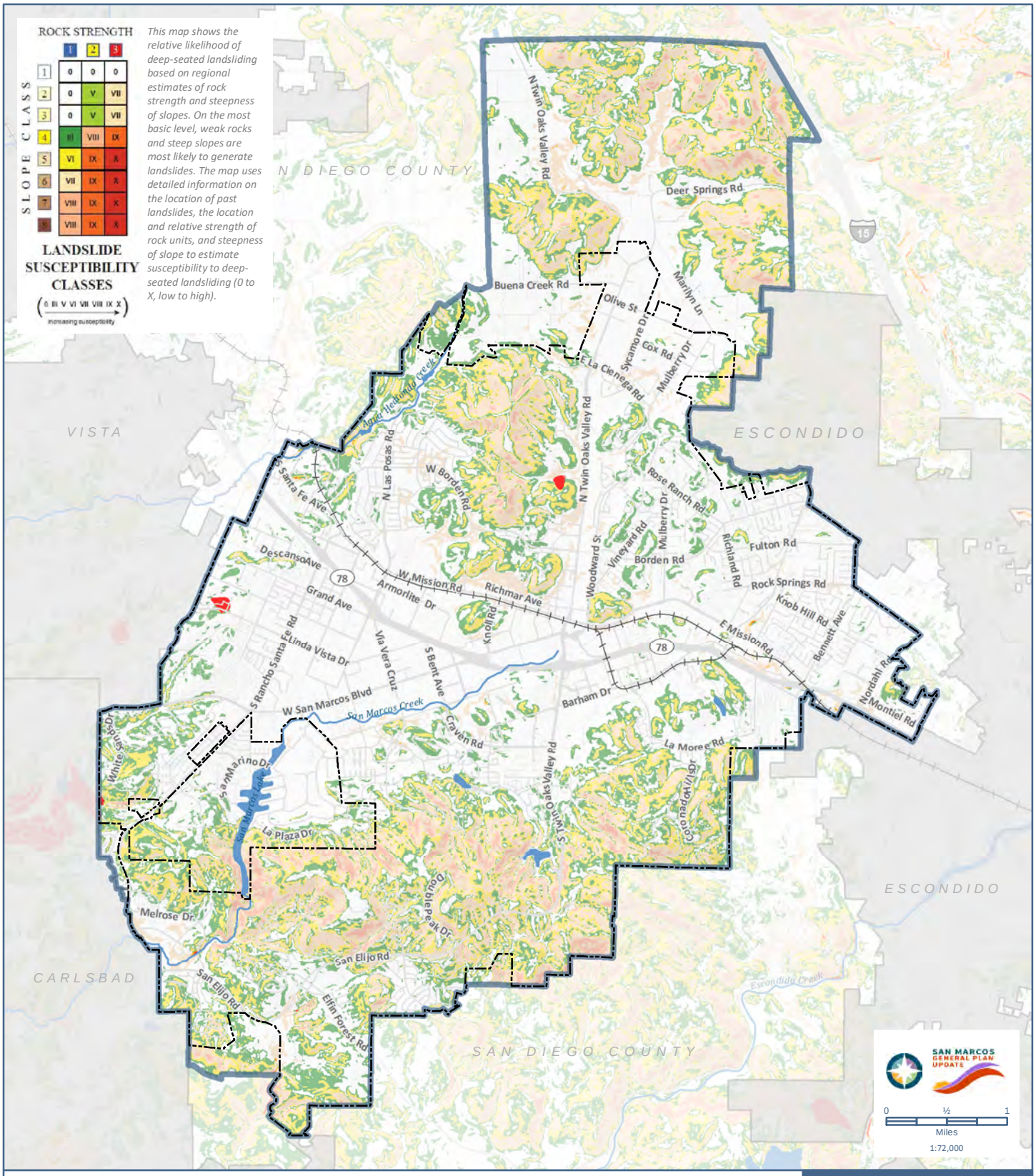

FIGURE 5.8.

SUSCEPTIBILITY TO DEEP-SEATED LANDLSIDES

Data sources: Wills C.J., Perez, F., Gutierrez, C., 2011, Susceptibility to deep-seated landslides in California: California Geological Survey, Map Sheet 58, http://www.conservation.ca.gov/cgs/Documents/library-publications/MS58.pdf; SanGIS/SANDAG; CalAtlas. Map date: April 17, 2020.

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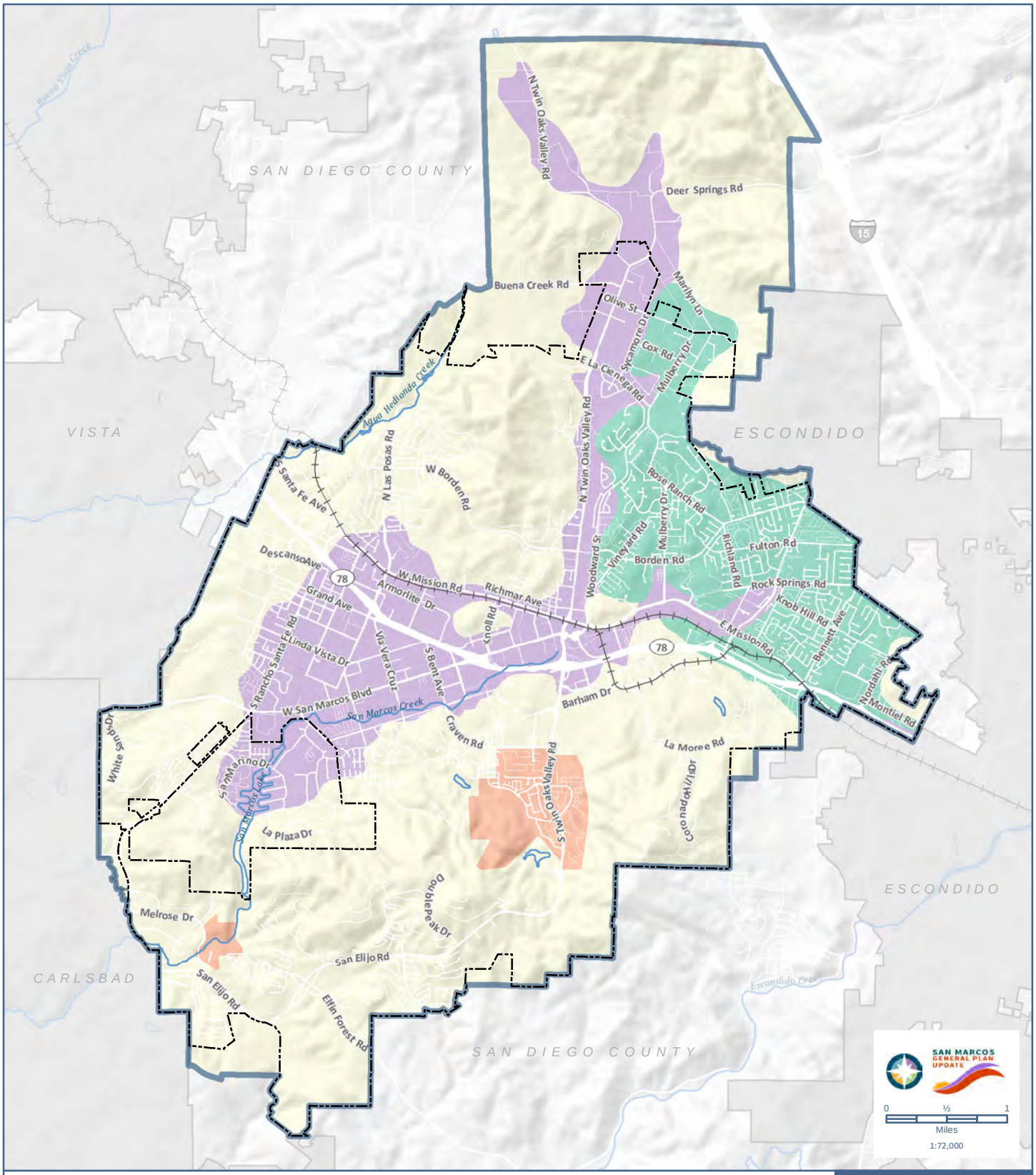

SAN MARCOS GENERAL PLAN UPDATE

0 ½ 1
Miles
1:72,000

LEGEND

- City of San Marcos
- Sphere of Influence
- Neighboring City
- Unincorporated San Diego County
- Lake or Pond
- Creek
- Railroad

Mineral Resource Zones*

- MRZ-1
- MRZ-2
- MRZ-3
- MRZ-4

**Mineral Resource Zone Descriptions*

MRZ-1: Areas where available geologic information indicates that little likelihood exists for the presence of significant mineral resources

MRZ-2: Areas where geologic information indicates that significant measured or indicated Portland Cement Concrete-grade aggregate resources are present

MRZ-3: Areas containing known or inferred mineral occurrences of undetermined mineral resource significance

MRZ-4: Areas where available information is inadequate to assign to any other MRZ category

FIGURE 5.9.

MINERAL RESOURCE ZONES

Data sources: California Department of Conservation/California Geological Survey, 2017, "Special Report 240 - Update of Mineral Land Classification: Portland Cement Concrete-Grade Aggregate in the Western San Diego County Production-Consumption Region, California," SANGIS; CalAtlas. Map date: April 17, 2020.

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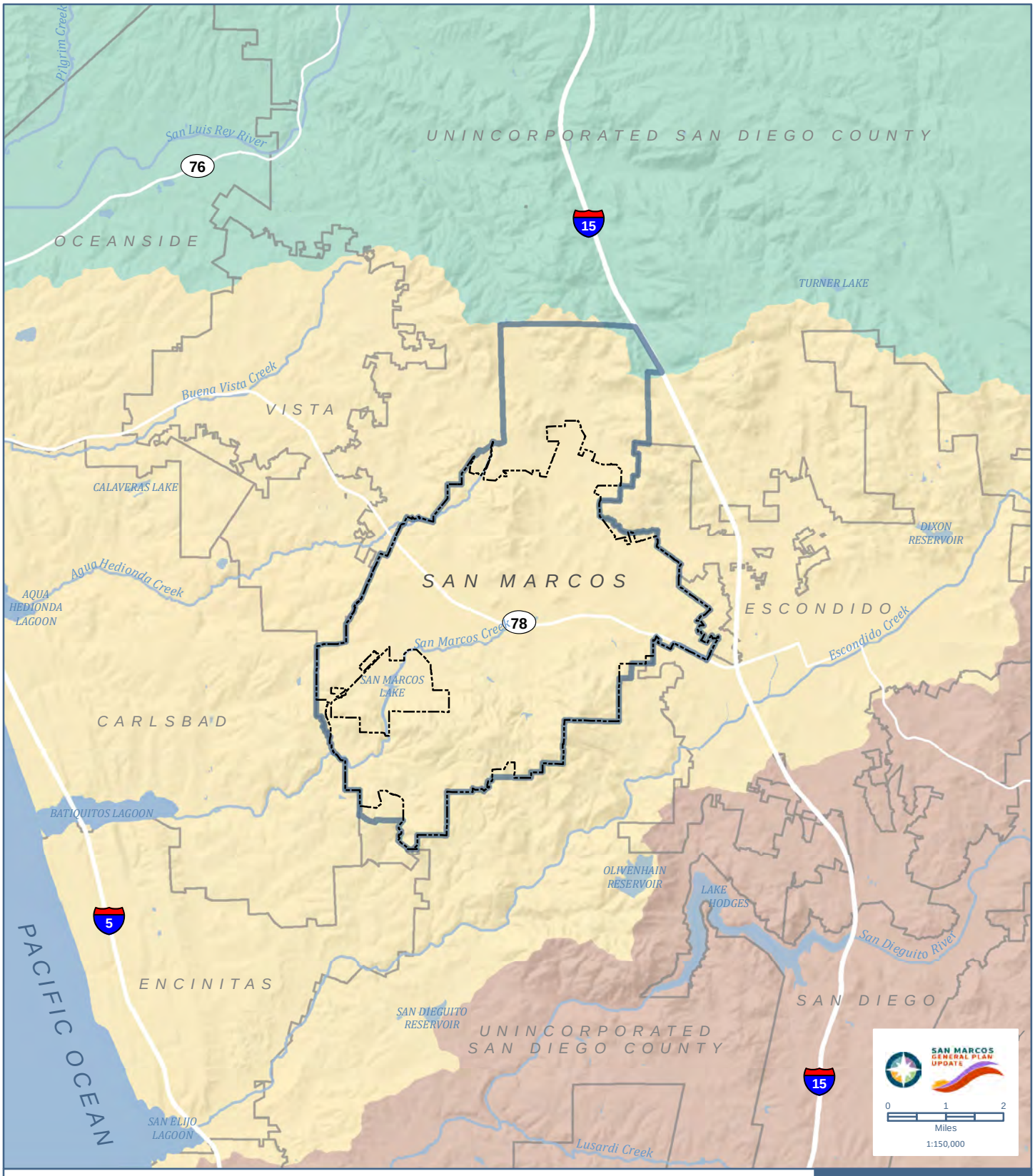

LEGEND

- City of San Marcos
- Planning Area/Sphere of Influence
- Neighboring City
- Water Body
- Creek or River

Hydrologic Unit

- Carlsbad
- San Dieguito
- San Luis Rey

FIGURE 5.10.

HYDROLOGIC UNITS

Data sources: CalWater 2.2.1; SANGIS; CalAtlas. Map date: April 17, 2020.

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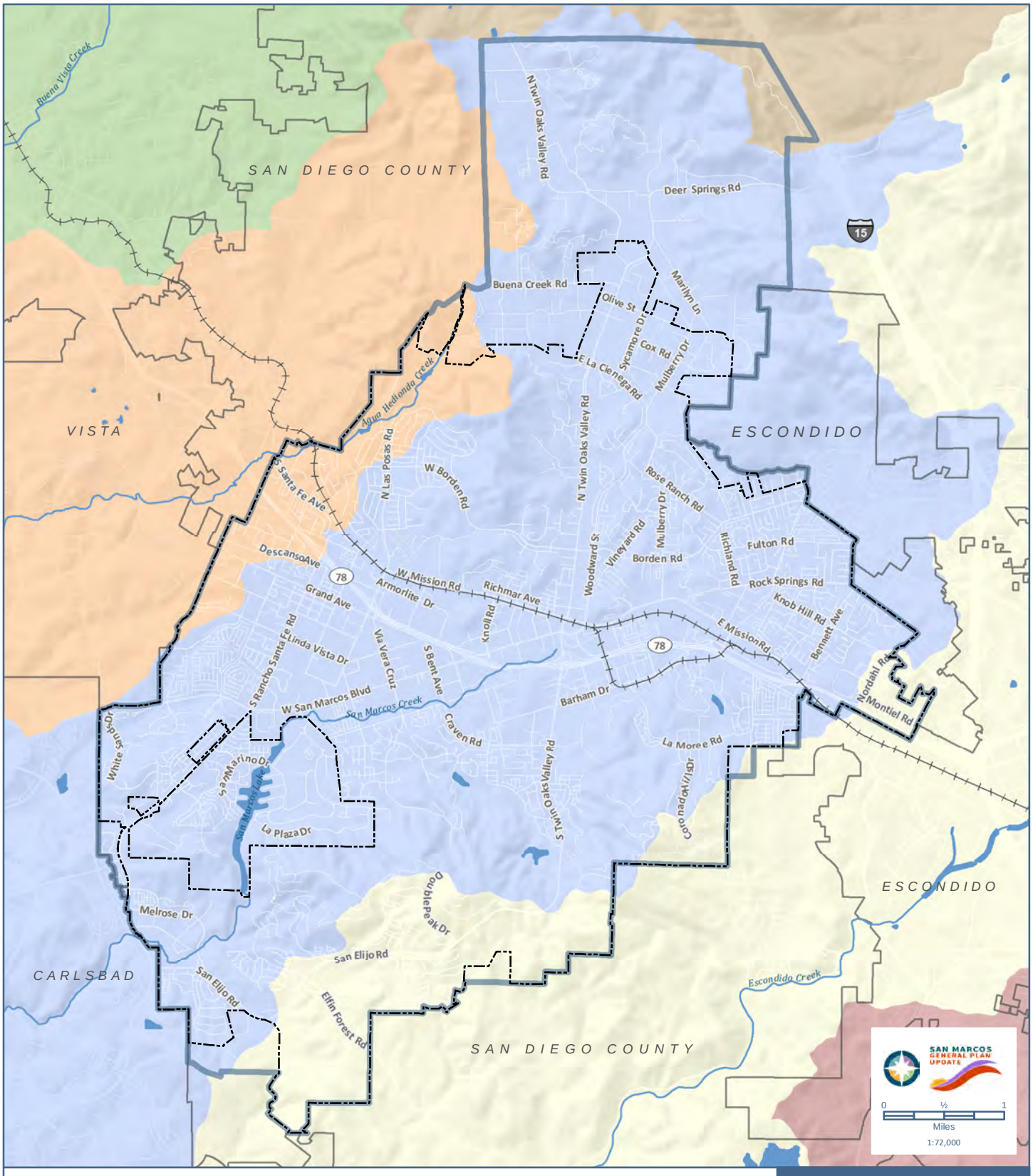

LEGEND

- City of San Marcos
- Planning Area/Sphere of Influence
- Neighboring City
- Lake or Pond
- Creek
- Railroad

Hydrologic Areas

- Agua Hedionda
- Buena Vista Creek
- Escondido Creek
- Hodges
- Lower San Luis
- San Marcos

FIGURE 5.11.

HYDROLOGIC AREAS

Data sources: CalWater 2.2.1; SANGIS; CalAtlas. Map date: April 17, 2020.

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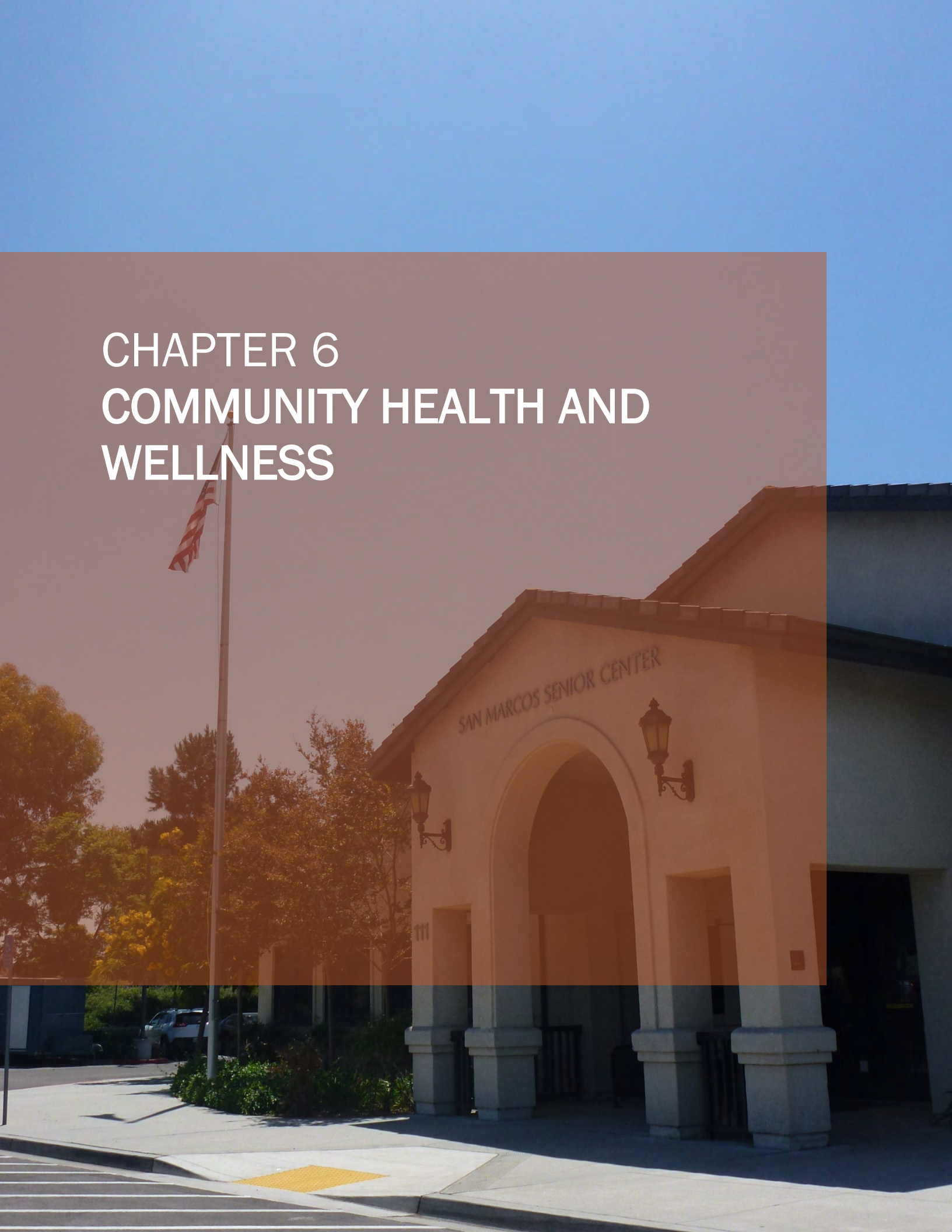

CHAPTER 6
COMMUNITY HEALTH AND WELLNESS

6 COMMUNITY HEALTH AND WELLNESS

This section addresses community health and wellness in the City of San Marcos. Given that community health and wellness is related to a number of other environmental categories and topics, there are numerous references to other sections in this report. For example, conditions regarding transit options, bicycle facilities, and pedestrian facilities are addressed in greater detail in Section 2.0 (Transportation and Circulation). Parks and recreational facilities are discussed in Section 3.0 (Utilities and Community Services). Hazards and hazardous materials and applicable regulations are addressed in Section 4.0 (Hazards, Safety, and Noise). Air quality and air quality regulations as well as water quality and water quality regulations, are addressed in Section 5.0 (Conservation).

6.1 HEALTH AND THE BUILT ENVIRONMENT- BACKGROUND AND OVERVIEW

This section describes the relationship between health and the built environment and outlines the manner in which city planning and policy can directly impact resident health.

6.1.1 Historical Background

The field of city planning and the role of city planners grew out of concerns for public health and welfare during the periods of rapid industrialization and urban growth in American cities in the early 20th century. These concerns were related to pollution and unsanitary conditions in cities where industrial operations such as tanneries and slaughter houses abutted homes and schools, and tall skyscrapers blocked light and air from streets. Poor living conditions for city residents often resulted in infectious disease outbreaks and public health emergencies. Early planners required sanitary sewers to prevent cholera epidemics and zoned city blocks to buffer residential neighborhoods from polluting industries, often resulting in a strict separation of uses that is still common today.

These land use restrictions, infrastructure requirements, and development regulations went far beyond the 19th Century Common Law Theory of Nuisance that addressed public health and safety by prohibiting 'unreasonable' uses of land to prevent similar outbreaks of infectious diseases.

By 1926, the U.S. Supreme Court's decision on *Village of Euclid vs. Ambler Realty Co.* established the right of local governments to control land use through zoning laws and introduced the concept of 'Euclidean' Zoning that segregated land uses to minimize conflicts. While these laws and trends prevented factories from locating close to neighborhoods, and offered centralized wastewater and waste disposal services which decreased instances of disease and epidemics, they also resulted in a shift in the built environment.

Strong zoning regulations that separated industrial and residential uses gave rise to the rapid expansion of suburbs and the "suburban lifestyle" during the 1950s. Increased U.S. investments in the national

highway system, and the increased accessibility of the automobile to average American families resulted in people living further and further away from their place of work, schools, shopping centers, and recreational centers. Improvements in the transportation system, including the construction of freeways, further weakened the connection between work, home, retail, and other daily services, isolating them from one another and making them accessible only by car.

While these laws and trends prevented factories from locating close to neighborhoods, and offered a means to escape from the polluted city center, they also provided local governments the power to exclude and segregate communities, and supported the growth of suburbs. People were protected from infectious diseases such as tuberculosis and cholera, but they now faced new epidemics such as obesity, asthma, heart disease, and diabetes, all related to the design of the built environment.

Despite the historical connection between public health and planning, addressing public health through city planning became less common as the 20th century progressed. One reason is that early planning practices successfully resolved many of the public health issues plaguing urban areas during the early 20th century, such as overcrowding and the close proximity of housing to heavy industry. Public health professionals began to focus on disease treatment, education, and discouraging unhealthy behaviors, while planning professionals shifted their attention to such issues as economic development and transportation. In particular, planners focused on how to accommodate rapid population growth and the desire for unlimited personal mobility through driving. Zoning increasingly became a means to protect property values and bolster the tax base, and infrastructure projects more often served to provide for efficient movement of vehicles.

In recent decades, however, there has been a rediscovery and professional shift in city planning that recognizes the role our built and natural environments play in public health and well-being. The environmental movement in the 1970s gave rise to the environmental review process, including the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Other urban planning concepts such as new urbanism and smart growth are attempting to reverse the impacts of urban development policies of the previous decades. All these efforts attempted to return to the traditional neighborhoods and urban form that valued a mix of uses, pedestrian and transit amenities and compact development.

6.1.2 Current Trends

The places where people live, work, and play profoundly shape the health of a community. Transportation options, accessible parks, crosswalks, the availability of grocery stores, and the prevalence of fast-food restaurants, and real or perceived levels of crime and safety are a few examples of physical indicators that provide a framework for a community, sculpt the daily routines of residents, impact lifestyle choices, and ultimately affect public health and longevity. Collaborative work between city planners and public health professionals can help strategically develop spaces and systems for safe and healthy human activity.

A growing body of evidence supports the idea that the built environment (urban form, design, and street configurations) has a strong impact on the public's health. Between 1995 and 2010, the number of Americans who are overweight or obese (as measured by body mass index, or BMI) increased from

15.9 percent to 27.6 percent.[1] Additionally, between 2004 and 2010, the percentage of Americans diagnosed with diabetes increased from 7 percent to 8.7 percent.

Based on current obesity trends, for the first time in American history, children are not predicted to live as long as their parents.[2] Increasing rates of these chronic conditions in the US have paralleled higher levels of physical inactivity, auto-dependence, and consumption of foods high in calories and low in nutrients. There is a movement to better understand our decisions about the way we structure our community. Walkable urban form, more compact development, mix of land uses, transportation choices, and access to recreation spaces all increase physical activity, which can improve health outcomes.[3]

California is among a select few states that have reported modest decreases in childhood obesity rates. Although California is meeting the Healthy People 2020 State targets, a significant percentage (25.4%) of California adults and adolescents (15.8%) are obese, and obesity rates among low-income children 2 to 4 years old (17.2%) and 5 to 19 years old (23.3%) exceed the State targets.[4]

Land use and planning decisions play a role in determining community members' behavioral and lifestyle choices that ultimately impact their physical health and mental well-being. The quality, safety, location, and convenience of the pedestrian or bicycle environment, such as sidewalks, bicycle lanes, signals, and crosswalks, may impact a resident's decision to use them, which in turn influences physical activity levels. Similarly, neighborhood parks and open space provide an avenue for increased physical activity. Infrastructure and zoning to support local food processing and distribution enables local food to be used in the community where it was grown. Access to full-service grocery stores and farmers' markets is also correlated with increased consumption of fruits and vegetables. The physical presence and distribution of health care providers and facilities influence how easily people can access health care.

Furthermore, urban design and maintenance can contribute to or decrease levels of crime and perceptions of pedestrian comfort and safety. Poor mental health is associated, in part, with a number of factors related to planning, including long commute times, exposure to crime, lack of transportation choice, driving related stress, lack of access to public spaces, and lack of opportunities for recreation and physical activity. Emissions from transportation sources are strongly linked with respiratory diseases, and various toxic air contaminants are known or suspected to cause asthma and cancer. Driving carries with it the risk of accidents that are fatal and or cause injuries for drivers, cyclists, or pedestrians. Automobile accidents alone kill roughly 30,000 Americans each year. Additionally, in 2014,

[1] Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, Prevalence and Trends Data: California 2010. Available at http://apps.nccd.cdc.gov/brfss. Accessed on June 21, 2016.

[2] L. Besser and A. Dannenberg, Walking to Public Transit: Steps to Help Meet Physical Activity Recommendations, Vol. 32, Issue 4, American Journal of Preventative Medicine, at 273-280 (November 2005).

[3] Frank, L.; Kavage, S; Litman, T. (2006). Promoting Public Health through Smart Growth. Prepared for *Smart Growth BC*: page 6.

[4] California Department of Public Health (2014 Report) Obesity in California The Weight of the State 2000-2012

4,884 pedestrians were killed in auto related accidents.[5] Crash data trends and analysis for the City is provided in Section 2.0 (Transportation and Circulation) of this Background Report.

Addressing public health and wellness in the San Marcos General Plan Update acknowledges the profound effects of the built environment on travel choices, access to food, levels of physical activity, and exposure to risk from accidents or pollution. Each of these has a health impact, and the General Plan provides an opportunity to prevent further disease and injury and sustain healthy lifestyle choices for San Marcos residents. Though the creation of a healthy general plan, San Marcos can focus on opportunities to affect changes in the overall health and well-being of the community.

6.2 HEALTH INDICATORS IN SAN MARCOS

6.2.1 Leading Cause of Death

The California Department of Public Health provides detailed statistics on deaths throughout California. Table 6-1 shows the percentage of deaths by age for San Diego County and California in 2013. These statistics indicate that San Diego County residents tend to live longer lives and pass away later in life than California residents as a whole.

Table 6-1 Percentages of Death by Age

Age	San Diego County	California
<1	1.0 %	0.95%
1-4	0.2%	.15%
5-14	0.2%	.23%
14-24	1.1%	1.20%
25-34	1.6%	1.75%
35-44	2.3%	2.72%
45-54	6.3%	6.77%
55-64	12.2%	12.79%
65-74	15.0%	16.26%
75-84	23.4%	23.32%
85+	36.7%	33.86%

Source: California Department of Health, Death Profiles By County, Data Files from 2013. Data Originally Downloaded at: https://data.chhs.ca.gov/dataset/leading-causes-of-death-by-zip-code. Accessed March 2020.

Table 6-2 shows the leading causes of death in the City of San Marcos and the County of San Diego in 2017, as reported by the California Department of Health. As of 2017, the leading cause of death in San Marcos was cancer, which was also the leading cause of death in San Diego County. The second leading cause of death in San Marcos in 2017 was heart disease, which aligns with the County totals. Generally, the top ten leading causes of death in San Marcos reflects the leading causes in San Diego County as a whole, with minor variations.

[5] National Highway Traffic Safety Administration, Fatality Analysis Reporting System, National Statistics. (2014). Accessed May 7, 2016. Accessible at: http://www-fars.nhtsa.dot.gov/Main/index.aspx.

Table 6-2 Causes of Death San Marcos and San Diego(2017)

Case	San Marcos	San Diego County
Cancer	152	5,033
Heart Disease	143	4,764
Stroke	52	1,376
Alzheimer's	50	1,450
Lower Respiratory Disease	31	1,025
Injury (Unintentional)	30	1,118
Diabetes	16	799
Suicide	15	426
Hypertension and Renal Disease	14	469
Liver Disease or Cirrhosis	12	364
Pneumonia or Influenza	9	393
Kidney Disease, Nephritis, and Nephrosis	Data not available	79

Source: California Department of Health and human services, Leading Causes of Death Workbook San Diego County. Data files from 2017. Available at: Accessed March 2020.

6.2.2 Obesity and Overweight Trends

Evidence demonstrates that risk of cancer, heart disease, stroke, Alzheimer's, and diabetes can be decreased by avoiding obesity or being overweight through lifestyle and behavior changes such as increased physical activity[6] and reduced consumption of foods high in calories, sugar, and fat.[7] As shown above, heart disease and cancer are the two most prevalent causes of death in San Marcos.

The California Health Interview Survey (CHIS) is the nation's largest state health survey. A random-dial telephone survey conducted every two years on a wide range of health topics, CHIS data gives a detailed picture of the health and health care needs of California's large and diverse population. Data regarding obesity for populations age 18 and up is available from CHIS for the City of San Marcos, San Diego County and the entire State. Adult obesity trends are shown in Table 6-3 and child and teen obesity trends are shown in Table 6-4.

Table 6-3 Obesity Trends - Adults (18+) BMI 30.0 or Higher

	2014	2016
San Marcos	27.4%	24.3%
San Diego County	24.1%	25.0%
California	25.8%	28.0%

[6] Giles-Corti, B., ad Donovan, R.J. (2002). "The Relative Influence of Individual, Social and Physical Environment Determinants of Physical Activity". *Social Science & Medicine 54*: 1793-1812.

[7] Morland, K., Roux, A., & Wing, S. (2006). "Supermarkets, Other Food Stores, and Obesity: The Atherosclerosis Risk in Communities Study". *American Journal of Preventive Medicine 30*(4):333-339.

Source: California Health Interview Survey. CHIS 2014, and 2016 Adult Source File. Los Angeles, CA: UCLA Center for Health Policy Research. Available at: www.chis.ucla.edu/ Accessed March 2020.

As shown in Table 6-3, obesity status in adults, or those with a body mass index (BMI) of 30.0 or higher, are lower in San Marcos than statewide, and County trends. In addition, the data shows that the City of San Marcos has significantly reduced their obesity percentage from the year 2014 to the year 2016 by approximately 3 percent.

Table 6-4 Obesity and Overweight Trends- Children & Teens (Age 2-11; 12-17)

	Children- Overweight for Age (Age 2-11) Weight ≥ 95th percentile		Overweight Teens (Age 12-17) BMI ≥ 85th percentile	
	2014	**2016**	**2014**	**2016**
San Marcos	11.2%	12.3%	Data Not Available	26.8%
San Diego County	9.5%	12.8%	31.0%	30.4%
California	13.3%	15.1%	33.1%	38.2%

Source: California Health Interview Survey. CHIS 2014, and 2016. Teen Source File. Los Angeles, CA: UCLA Center for Health Policy Research. Available at: www.chis.ucla.edu/ Accessed March 2020.

As shown in Table 6- 4 above, overweight status for children and teens is lower in San Marcos than County and Statewide rates, generally indicating that San Marcos' younger generation may experience fewer health risks later in life.

6.2.3 Physical Activity and Fitness

Lack of physical activity is a major risk factor for many chronic diseases and leading causes of death, including cancer, heart disease, diabetes, stroke, and Alzheimer's. CHIS includes data regarding activity levels for children and teens in San Marcos, San Diego County, and the state. As shown in Table 6-5 below, in 2016, 17.5% of children in San Marcos between the ages of five and 17 identified being physically active for at least one hour a week, which is one percent higher than the statewide average, but lower than the San Diego County average by approximately two percent. Although activity among children in San Marcos is higher than the State average, according to the results shown in Table 6-6, the physical activity for adults in San Marcos is roughly the same as state averages, and lower than County averages.

Table 6-5 Children and Teens (Age 5-17) who engaged in at least 60 minutes of physical activity in the past week

	2014	2016
San Marcos	17.6%	17.5%
San Diego County	19.0%	19.3%
California	20.7%	16.5%

Source: California Health Interview Survey. CHIS 2014, and 2016 Physical Activity Source File. Los Angeles, CA: UCLA Center for Health Policy Research. Available at: www.chis.ucla.edu/ Accessed March 2020.

Table 6-6 Adults (18+) who walked for at least 150 minutes in the past week

	2014	2016
San Marcos	36.8%	38.4%
San Diego County	35.1%	41.2%
California	33.0%	38.9%

Source: California Health Interview Survey. CHIS 2014, and 2016 Physical Activity Source File. Los Angeles, CA: UCLA Center for Health Policy Research. Available at: www.chis.ucla.edu/. Accessed March 2020.

Physical Fitness Testing

In addition to CHIS data, another indicator of physical activity and fitness for children and teens is the California Department of Education's Physical Fitness Testing (PFT) Program, which is administered by local school districts to all fifth, seventh, and ninth graders annually.[8] The test assesses six major fitness areas, including aerobic capacity (cardiovascular endurance), body composition (percentage of body fat), abdominal strength and endurance, trunk strength and flexibility, upper body strength and endurance, and overall flexibility. The PFT Program provides a statewide snapshot of physical fitness. However, its data is collected at the local school district level by people who are not health professionals, and tests for each of the fitness areas are difficult to administer consistently. Consequently, its results are prone to some margin of error over time and from place to place.

California Physical Fitness Test PFT Results for the San Marcos Unified District, and statewide results for the 2018-2019 academic year are shown in Table 6-7.

Table 6-7 Student Physical Fitness Testing (PFT) Results (2018-2019)

# of Physical Areas Meeting the	San Marcos Unified District % within Healthy Fitness Zone HFZ*			Statewide % within Healthy Fitness Zone HFZ		
	Gr. 5	Gr. 7	Gr. 9	Gr. 5	Gr. 7	Gr. 9
Aerobic Capacity	74.1%	71.2%	69.2%	60.2%	61.0%	60.0%
Body Composition	65.3%	65.4%	65.6%	58.7%	60.0%	62.2%
Abdominal Strength	76.2%	76.6%	71.8%	69.1%	77.1%	81.2%
Trunk Extension Strength	83.1%	82.4%	88.5%	83.8%	86.0%	89.3%
Upper Body Strength	72.1%	66.1%	69.7%	60.8%	62.9%	68.5%
Flexibility	70.3%	78.0%	87.4%	70.4%	78.5%	83.1%

*Note: *the healthy fitness zone (HFZ) is defined by standards established by the Cooper Institute that represents levels of fitness that offer some degree of protection against diseases that can result from sedentary living. These standards are organized by gender and age and can be accessed on the California department of education website.*
Source: California Department of Education, Physical Fitness Testing Results (2018-2019). Available at: www.cde.ca.gov. Accessed March 2020.

[8] California Department of Education. Physical Fitness Testing Results, Accessed on May 27, 2016. Accessible at: http://www.cde.ca.gov

As shown in Table 6-7 above, the PFT results for 5th 7th and 9th graders in the San Marcos Unified District between 2018-19 show that for a majority of fitness indicators, local children surpass the statewide averages or are within 1% of statewide averages. This trend shows that San Marcos students are generally performing better than or consistent-with the average California student.

6.2.4 Asthma and Heart Disease

Local air quality conditions can be a strong indicator of asthma rates within a community. Table 6-8 includes data from CHIS for asthma rates for San Marcos. Detailed data on local air quality conditions is contained in Section 5.0 (Conservation) of this report.

Table 6-8 Asthma Rates in San Marcos

Region	Ever Diagnosed with Asthma (Age 1-17)	Ever Diagnosed with Asthma (Age 18+)
San Marcos	11.0%	13.2%
San Diego County	12.1%	14.4%
California	14.6%	15.0%

Source: California Health Interview Survey. CHIS 2016 Asthma Source File. Los Angeles, CA: UCLA Center for Health Policy Research. Available at: www.chis.ucla.edu/ Accessed March 2020.

As shown in Table 6-8 above, 11 percent of San Marcos children and 13.2 percent of San Marcos adults have been diagnosed with asthma at some point in their lives as of the year 2016. The percentage of people diagnosed with asthma in San Marcos is lower than the rates in both San Diego County and the State of California.

6.2.5 Alcohol, Drug and Tobacco Use

Tobacco use is the leading cause of preventable disease and death in the United States, and nearly all tobacco use begins during youth and young adulthood. The Center for Disease Control and Prevention (CDC) and the Food and Drug Administration (FDA) analyzed data from the 2011–2017 National Youth Tobacco Surveys (NYTS) to determine patterns of current (past 30-day) use of seven tobacco product types among U.S. middle school (grades six to eight) and high school (grades nine to 12) students and estimate use nationwide.

Among high school students, current use of any tobacco product decreased from 24.2 percent (estimated 3.69 million users) in 2011 to 19.6 percent (2.95 million) in 2017. Among middle school students, current use of any tobacco product decreased from 7.5% (0.87 million) in 2011 to 5.6 percent (0.67 million) in 2017. In 2017, electronic cigarettes (e-cigarettes) were the most commonly used tobacco product among high (11.7 percent; 1.73 million) and middle (3.3 percent; 0.39 million) school students. During 2016–2017, decreases in current use of hookah and pipe tobacco occurred among high school students, while decreases in current use of any tobacco product, e-cigarettes, and hookah occurred among middle school students. Current use of any combustible tobacco product, ≥2 tobacco products, cigarettes, cigars, smokeless tobacco, and bidis did not change among middle or high school students during 2016–2017. Comprehensive and sustained strategies can help prevent and reduce the use of all forms of tobacco products among U.S. youths.

According to the CDC, e-cigarette use among both high school and middle school students tripled in one year, increasing from 4.5 percent in 2013 to 13.4 percent in 2014 among high school students,

and from 1.1 percent in 2013 to 3.9 percent in 2014 among middle school students. Youth use of e-cigarettes has now surpassed youth cigarette smoking.[9]

In 2016, approximately 9.5 percent of adults in San Marcos reported to the CHIS that they were currently tobacco smokers, which is lower than the state average of 12.4 percent and lower than the County average of 10.7 percent.

The American Medical Association (AMA) reports that approximately 11 million American youth under the age of 21 drink alcohol. Nearly half of them drink to excess, consuming five or more drinks in a row, one or more times in a two-week period. Alcohol is the most frequently used controlled substance by high school seniors, and its use is increasing. Boys usually try alcohol for the first time at just 11 years old, while the average age for American girls' first drink is 13. The AMA reports the following facts for teen-related drinking10:

- Underage drinking is a factor in nearly half of all teen automobile crashes, the leading cause of death among teenagers.
- Alcohol use contributes to youth suicides, homicides and fatal injuries – the leading cause of death among youth after auto crashes.
- Alcohol abuse is linked to as many as two-thirds of all sexual assaults and date rapes of teens and college students.
- Alcohol is a major factor in unprotected sex among youth, increasing their risk of contracting HIV or other transmitted diseases.

Research indicates that the density of alcohol outlets may be correlated to the level of crime, domestic violence, and sexual assault in a community. Alcohol outlet is defined as a locations where alcohol can be purchased and can be moved into on-premise setting such as a bar or restaurant, or off-premise settings (e.g., packaged liquor stores, grocery stores, convenience stores). Areas with a higher density of alcohol outlets also tend to have higher rates of vehicular accidents and fatalities, underage drinking, and adult alcohol and drug use.[11] In San Marcos, there is a total of 175 retail license for alcohol sales. To calculate retail license per capita, we utilized U.S. Census population data for the year 2018. The San Marcos retail license per capita density is slightly larger than the surrounding cities of Vista, Oceanside, and Escondido. Table 6-9 summarizes retail liquor licenses per capita in San Marcos, and other cities in the region.

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[9] Centers for Disease Control and Prevention. Tobacco Use Among Middle and High School Students - United States, 2011–2014. Morbidity and Mortality Weekly Report April 17, 2015; 64(14):381-5

[10] American Medical Association, Facts About Youth and Alcohol (Published 2011). Available at: http://www.ama-assn.org/ama/pub/physician-resources/public-health/promoting-healthy-lifestyles/alcohol-other-drug-abuse/facts-about-youth-alcohol.page. Accessed November, 2019.

[11] Kearns, M. C., Reidy, D. E., & Valle, L. A. (2015). The role of alcohol policies in preventing intimate partner violence: a review of the literature. Journal of studies on alcohol and drugs, 76(1), 21–30.

Table 6-9: Retail Liquor Licenses per Capita (2018-2019 Fiscal Year)

City	Active Retail Licenses	Density per Capita
San Marcos	175	1/553
Vista	166	1/610
Oceanside	307	1/574
Escondido	252	1/604

Source: Department of Alcoholic Beverage Control, Alcoholic Beverage Licenses, March 2020. Available at: http://www.abc.ca.gov

6.3 OPPORTUNITIES FOR PHYSICAL ACTIVITY

This section focuses on levels of neighborhood walkability and existing commercial services (and other destinations) that enable or encourage physical activity. Other chapters of this General Plan Existing Conditions Report address topics that also impact physical activity and health – these include Circulation (Section 2.0), Utilities and Community Services (Section 3.0), and Conservation (Section 5.0).

6.3.1 Neighborhood Walkability

One factor that determines physical activity levels is the distance between the home and other neighborhood amenities, including shopping centers, parks, transit, schools and places of work. If this distance is perceived as "walkable" (safe, pleasant, and distance-appropriate), residents may be more likely and willing to walk to those amenities. A distance of 1/4 mile is a commonly cited threshold for how far most people are willing to walk for neighborhood services, while many people are willing to walk up to 1/2 mile for work or access to regional transit. Many factors contribute to a neighborhood's real or perceived walkability. Land uses, pedestrian facilities such as lighting and benches, commercial services, urban design, and residents' perceptions of safety, distance, and relative need for goods and services are some indicators that may promote or impede the decision to walk, rather than drive. Residents of higher-density, mixed-use areas make fewer vehicle trips and drive fewer miles than residents of lower-density, more single-use areas.[12]

Within San Marcos, different areas of the City have different levels of walkability. One way of measuring walkability is with Walkscore, which is based on access and proximity to various destinations and amenities from a selected location within a community.[13] Walkscore provides numerical rankings of an area's walkability on a scale of 0-100. A description of the numerical ranking system is provided below.

- 90-100: Daily errands do not require a car.
- 70-89: Most errands can be accomplished on foot.
- 50-69: Some amenities within walking distance.
- 25-49: Most errands require a car.
- 0-24: Almost all errands require a car.

Table 6-10 shows the Walkscore calculated for various areas within San Marcos. The intent of this table is to generally illustrate sample areas of the City, but is not intended to serve as a description of all

[12] Crane, R. (2000). The Influence of Urban Form on Travel: An Interpretive Review. Journal of Planning Literature; 15(1), 3-23.

[13] Walkscore assessments and methodology are available at www.walkscore.com. Accessed May 9, 2016

areas of the City. The information should be considered for reference purposes only. As described above, a Walkscore above 70 indicates that most daily errands can be accomplished on foot, while a Walkscore below 50 indicates that few amenities are within walking distance.

Table 6-10 Walkability Scores in San Marcos

(Map Code)-City Points of Interest	Street Address	Walk Score
(1)- Cal State San Marcos	333 South Twin Oaks Valley Rd.	41
(2)- San Marcos Community Center	3 Civic Center Dr.	67
(3)- San Elijo Recreation Center	1105 Elfin Forest Rd.	50
(4)- San Marcos High School	1615 W. San Marcos Blvd.	69
(5)- Better Buzz Coffee	904 W. San Marcos Blvd.	56
(6)- Palomar College	Comet Circle	40

Source: www.walkscore.com. Accessed March 2020.

The results in Table 6-10 show that most areas in the City of San Marcos have "few" to "some" amenities within walking distance. Areas surrounding Cal State San Marcos and San Marcos High School have the highest walk score of the 6 areas assessed. Though no areas assessed had a Walkscore above 70, indicating that most errands can be accomplished on foot. Figure 6-1 shows a map of locations and walkability scores for the City of San Marcos.

These findings complement empirical evidence: in a comprehensive study of transportation, land use, air quality, and health, researchers found that when many destinations are near the home and there is a direct path to get there, people are more likely to engage in active transportation for at least 30 minutes on any given day.[14] These results highlight the importance of urban form and of a comfortable, safe, and inviting pedestrian environment. They suggest that a mix of land uses and development densities, a connected and well-maintained pedestrian network, and traffic calming measures can increase physical activity and health.

Sidewalks

More information on the existing pedestrian facilities and sidewalks in San Marcos can be found in Section 2.0 Transportation.

Active Transportation Use

Active transportation is any form of transportation that is non-motorized. The use of active transportation during a daily commute increases physical activity levels. Increased physical activity has positive health benefits; including mortality risk reduction, disease prevention, cardiorespiratory fitness, and metabolic health. Communities that are disadvantaged often have disproportionately

[14] Frank, L. D., Schmid, T. L., Sallis, J. F., Chapman, J., and Saelens, B. E. (2005). "Linking Objectively Measured Physical Activity with Objectively Measured Urban Form: Findings from SMARTRAQ". *American Journal of Preventive Medicine, 28* (2, Supplement 2), 117-125.

poorer health outcomes. Increasing opportunities for active transportation within a City can improve the overall health outcomes of disadvantaged communities.

The American Community Survey (ACS) 2017 5-year estimates reports that the majority of workers living in San Marcos (79.7 percent) drive alone to work, 8.2 percent carpool, 1.6 percent take public transit, 2.4 percent walked, and 8.1 percent use some other mode of getting to work. Other modes of transportation include bicycling, or working from home.[15] Based on this data, it is clear that active transportation use within San Marcos is not very prevalent. Utilizing active transportation is an effective way of engaging in physical exercise and can be a factor in improving community health outcomes in disadvantaged communities. More details on active transportation use and bicycle facilities can be found in the Public Facilities section and Section 2.0 (Circulation).

6.4 FOOD ACCESS

Residents of neighborhoods with higher concentrations of "unhealthy" food outlets – such as fast food and liquor stores rather than full-service grocery stores have more health problems and higher mortality rates than residents of neighborhoods with more full-service grocery stores and other vendors selling fruits and vegetables, even when other factors are held constant.[16] The presence of a grocery store in a neighborhood is linked to higher fruit and vegetable consumption and reduced prevalence of persons who are overweight or suffering from obesity.[17] Fresh, minimally processed, local food is generally the most nutritionally valuable and the least detrimental to the environment. Access to affordable specialty grocery stores and farmers markets increases the likelihood that people will eat healthy, locally sourced food.

The concentration of food outlets is important, but it is more significant to concentrate on the impacts of the system as a whole. In response to the environmental and health implications of food systems, the popularity of local food is on the rise. The proliferation of the term "food miles" to measure the impact of the food system on the environment reinforces the logic of local production. Locally sourced food attempts to address the negative externalities associated with packaging, preparing, and shipping food, which is higher for fresh food that is grown at long distances; because many foods do not travel a single or logical route, but take many steps along the supply chain from "field to plate."

6.4.1 Retail Food Environment

San Marcos' retail food environment includes non-restaurant shopping options that are located within the city. Table 6-12 provides examples of retail food options within the city limits.

[15] U.S. Census. American Community Survey, 2017

[16] Mari Gallagher Research and Consulting Group. (July 2006). "Examining the impact of food deserts on public health in Chicago". Accessed July 8, 2014. Available at: http://www.marigallagher.com/site_media/dynamic/project_files/Chicago_Food_Desert_Report.pdf.

[17] S. Inagami et al. (2006). "You Are Where You Shop: Grocery Store Locations, Weight, and Neighborhoods". *American Journal of Preventive Medicine;* 31(1): 10-17.; K. Morland et al. (2006). "Supermarkets, Other Food Stores, and Obesity: The Atherosclerosis Risk in Communities Study". *American Journal of Preventive Medicine*; 30(4): 333-339.

Table 6-12 Retail Food Environment Summary

Retail Food Type	Examples	Quantity
Non-restaurant Food Vendors		
Grocery Stores	Circle Market, Sprouts, Stater Bros, etc.	14
Small and/or Specialty Markets	Asian Grocery, Mexican Grocery stores,	7
Convenience & Discount Stores	7 Eleven, Circle K, Dollar General, etc.	18
Liquor Stores	Nordahl Liquor, etc.	12

Sources: google.com, Accessed March 2020. Note: Table 6-12 does not provide an exhaustive list of all food retailers.

As shown in Table 6-12, there are many food options within the city including grocery stores, and specialty food shops, which provide residents with a full range of grocery options and also provide a wide variety of healthy, and organic grocery options. There is also a weekly farmers market located at 251 North City Drive, which provides local, nutritional food options to the community year-round

With respect to restaurants, the City of San Marcos has a range of dining options that vary from chain restaurants to unique dining experiences. Many of the unique dining opportunities in San Marcos of are located at the Old California Restaurant Row and in North City.

6.4.2 Eating Habits

A person's overall health and well-being is strongly correlated to food choices. Fast foods tend to be high in saturated fats, high in simple sugars, and low in fiber and nutritional value. Recent studies suggest that junk food consumption alters brain activity in a manner similar to addictive drugs.18 After many weeks on a junk food diet, the pleasure centers of rat brains became desensitized, requiring more food for pleasure. After the junk food was taken away and replaced with a healthy diet, the rats starved for two weeks instead of eating nutritious fare.

More than 80 percent of people with Type 2 diabetes, the most common form of the disease, are obese or overweight. Data from the Centers for Disease Control and Prevention (CDC) National Health and Nutrition Examination Survey III shows that two-thirds of adult men and women in the U.S. diagnosed with Type 2 diabetes have a body mass index (BMI) of 27 or greater, which is classified as overweight and unhealthy.

According to the California Center for Public Health Advocacy, scientific evidence also suggests that sugar-sweetened beverages and sodas are contributing to the obesity epidemic. One 20-ounce bottle of soda has almost 17 teaspoons of sugar and contains 250 calories. Drinking a sugar-sweetened soda daily can increase a child's risk for obesity by 60 percent.[19]

Table 6-13 below, shows the percentage of adults (18+) that drink at least one sugary drink (soda or sweet beverages) a day. San Marcos residents were compared to residents throughout California (from the time the 2016 CHIS survey was conducted). According to CHIS data from 2016, approximately

[18] Johnson, Paul M.; Kenny, Paul J. (2010). "Dopamine D2 receptors in addiction-like reward dysfunction and compulsive eating in obese rats". Nature Neuroscience 13 (5): 635.

[19] California Center for Public Health Advocacy, Resources: Soda Consumption. Accessed in March 2020. Accessible at http://www.publichealthadvocacy.org/resources_soda.html.

12.7 percent of San Marcos residents drink one or more 12 ounce soda daily. This percentage for San Marcos is higher than both the County and Statewide rates for sugary drink consumption for the year 2016.

Table 6-13 Percentage of Adults that Consume 1+ Sugary Drinks a Day (2016)

Location	Percentage of Adults 18+
San Marcos	12.7%
San Diego County	11.1%
California	11.0%

Source: California Health Interview Survey. CHIS 2016 Sugar Drinks Source File. Los Angeles, CA: UCLA Center for Health Policy Research. Available at: www.chis.ucla.edu/. Accessed March 2020.

6.5 ACCESS TO HEALTHCARE AND HEALTH FACILITIES

Access to health care and mental health services is an important determinant of health and disease prevention, and increased access is very likely to improve public health. Preventive measures, such as screening for common health problems like diabetes and respiratory illnesses, dental care, and vaccinations have been shown to reduce the incidence and severity of illnesses,[20] and are often less expensive than care once someone has become sick.

San Marcos has a number of health care providers. This includes a Kaiser Medical Center and a new Kaiser Hospital, The Village Square Healthcare Center, and Children's Medical Group.

6.6 LOCAL POLICY PROGRAMS RELATED TO HEALTH AND WELLNESS

San Marcos has taken steps to ensure the health and wellness of the community. This section describes some of the steps the City has taken that aid in the development of a healthy community.

6.6.1 Mental Health and Social Capital

Poor social ties and networks and weak mental health is associated with a number of factors related to planning, including long commute times, exposure to crime, lack of transportation choice, and lack of access to public spaces. Social capital — often characterized by level of neighborhood trust and community participation — within a neighborhood is associated with many health benefits, such as increased physical activity.

Based on 2016 CHIS results, 16.4 percent of adult respondents ages 18 and older needed help for emotional/mental or alcohol/drug problem in the past 12 months, which is consistent with the statewide percentage of 16.9 percent. In addition, over 91.5 percent of San Marcos adults reported having no significant psychological distress during the past year, which is about the same as the statewide rate of 91.7 percent.

The City of San Marcos offers numerous programs to foster community activities especially for senior citizens and families. The San Marcos Senior Activity Center is used for a variety of events and activities

[20] U.S. Department of Health and Human Services Agency for Healthcare Research and Quality, *National Healthcare Disparities Report*, pg. 112, Rockville, Maryland. July 2003.

including senior classes, community meetings, small business conferences, church functions, non-profit functions and more. In addition, the City of San Marcos Parks and Recreation Department contracts with independent contractors to provide recreational classes for all ages. Programs include fitness, sports, dance, music, art, specialty classes and parent/child activities year-round. Other programs offered by the City include, Family Night, Fun Friday Nights!, and other family-centered activities.

6.6.2 Parks, Open Space and Street Trees

One of the elements of a sustainable and healthy city is adequate urban parks, open space, and street trees, which contribute to a local healthy environment. San Marcos has a number of parks that provide the community with many benefits including: improved air quality, shade, assist in calming traffic, and reduce urban heat island effects. These facilities are described in detail in Chapter 3, Utilities and Community Services.

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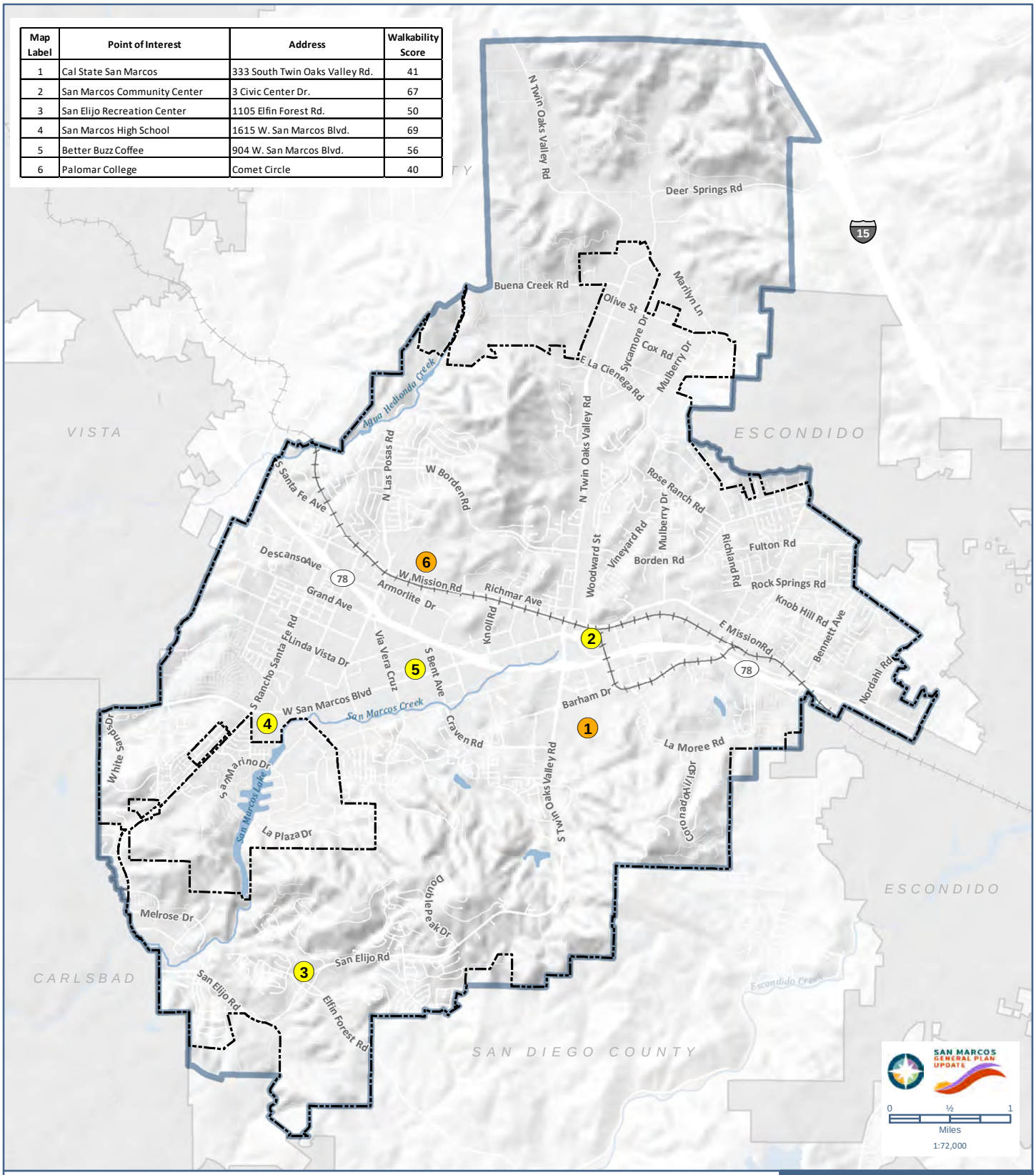
WalkScore 2020. Walkscore for San Marcos Points of Interest. Available At: https://www.walkscore.com/

Map Label	Point of Interest	Address	Walkability Score
1	Cal State San Marcos	333 South Twin Oaks Valley Rd.	41
2	San Marcos Community Center	3 Civic Center Dr.	67
3	San Elijo Recreation Center	1105 Elfin Forest Rd.	50
4	San Marcos High School	1615 W. San Marcos Blvd.	69
5	Better Buzz Coffee	904 W. San Marcos Blvd.	56
6	Palomar College	Comet Circle	40



LEGEND

- City of San Marcos
- Planning Area/Sphere of Influence
- Neighboring City
- Unincorporated San Diego County
- Lake or Pond
- Creek
- Railroad

Walkability Score Location

- # Most errands require a car
- # Some errands require a car

FIGURE 6.1.

WALKABILITY

Data sources: City of San Marcos; SANGIS; CalAtlas. Map date: May 13, 2020.

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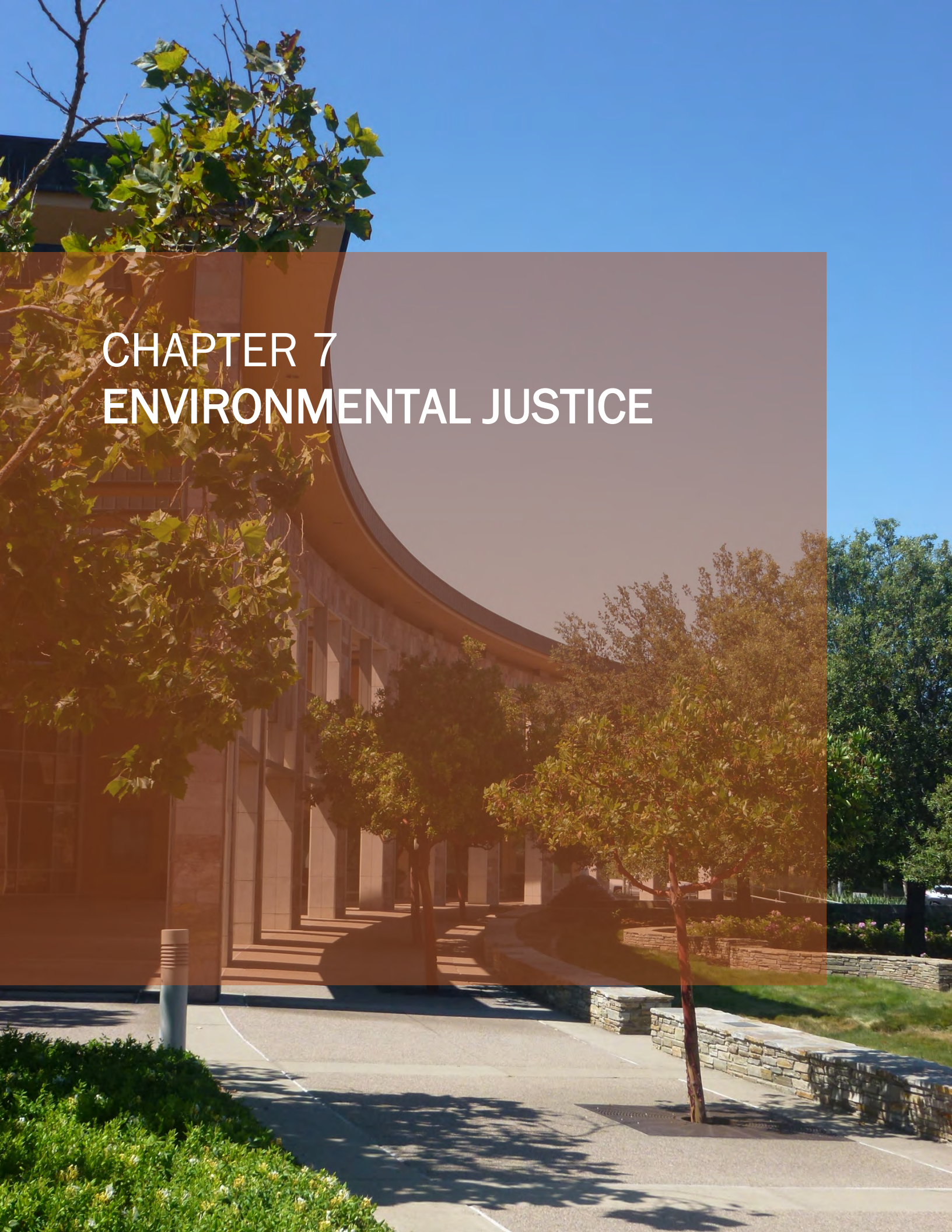

CHAPTER 7
ENVIRONMENTAL JUSTICE

7 ENVIRONMENTAL JUSTICE

This chapter addresses environmental justice in the City of San Marcos. The chapter provides an overview of existing environmental conditions for the general population in San Marcos and describes components of the built-environment that may impact human health disproportionately. Environmental justice is related to a number of environmental categories and topics. Therefore, this section of the San Marcos General Plan Existing Conditions Report contains numerous references to other sections in this report. For example, conditions regarding transit options, bicycle facilities, and pedestrian facilities are addressed in greater detail in Section 2 (Transportation and Circulation). Parks and recreational facilities are discussed in Section 3 (Utilities and Community Services). Hazards and hazardous materials and applicable regulations are addressed in Section 4 (Hazards and Safety). Air quality and air quality regulations, as well as water quality and water quality regulations, are addressed in Section 5 (Conservation and Natural Resources). This chapter is organized into in two sections:

- 7.1 Background and Overview
- 7.2 Environmental Justice Determinants in San Marcos

7.1 BACKGROUND AND OVERVIEW

The negative effects of environmental degradation and pollution are well-documented and include severe impacts to human health and longevity, depending on the level of exposure. Within the United States, certain communities have historically been disproportionately disadvantaged by environmental threats and the negative health impacts of environmental degradation. These disproportionately disadvantaged communities include, but are not limited to, communities of color, low-income communities, members of tribal nations, and immigrant communities within the country. Increased exposure to environmental pollutants, unsafe drinking water, and contaminated facilities/structures have contributed to poorer health outcomes for these identified communities. Local and regional policies, intersectional structural inequalities, land use planning, enforcement deficiencies, and lack of community engagement and advocacy are all critical facets of the disproportionate layout of negative environmental externalities. The field of environmental justice is focused on addressing these disproportionate impacts and improving the wellness of all communities by bolstering community planning efforts and promoting the fair treatment of all people regardless of their race, color, national origin, or income.

Environmental justice practices across the United States have worked to improve the status of numerous communities and have led to landmark policy decisions. These policy decisions have effectively restricted new sources of pollution, removed existing harmful sources of pollution, and have created safer spaces for all members of the community to engage with. Effective planning and policy decisions can help ensure that equal protection from environmental hazards is prioritized for all people.

7.1.1 Senate Bill 1000

Senate Bill (SB) 1000, also known as the *Planning for Healthy Communities Act*, is a comprehensive State legislation that requires California cities and counties to include an Environmental Justice element or a set of environmental justice policies into their General Plans. The bill was established as a State regulation on September 24, 2016, with the goal of improving the health of California cities and counties and addressing pertinent issues of environmental justice related to community wellness. SB 1000 outlines strategies to promote the protection of sensitive land uses within the state, and simultaneously mandates that cities and counties address the needs of disadvantaged communities. Through this bill, environmental justice is a mandated consideration in all local land use planning. SB 1000 was authored by Senator Connie Leyva and co-sponsored by the California Environmental Justice Alliance (CEJA) and the Center for Community Action and Environmental Justice (CCAEJ).

To aid city and county governments and planners in meeting the requirements of SB 1000, the California Environmental Justice Alliance collaborated with planning professionals to create a strategic toolkit. The SB 1000 Implementation Toolkit serves as a guide for key stakeholders by clarifying legislation requirements and providing tools, best practices, and resources to support stakeholders as they begin to incorporate the law into local practice. To effectively meet the mandates of the bill, cities and counties must determine if their jurisdiction includes "disadvantaged communities" and/or low-income communities that are disproportionately burned by environmental issues, and work to reduce health risks specific to these communities (these types of communities are described in detail below). If these special types of communities exist within a jurisdiction's Planning Area, the General Plan must address the following topics in order to meet the requirements of SB 1000:

- Pollution Exposure and Air Quality
- Public Facilities
- Food Access
- Safe and Sanitary Homes
- Physical Activity
- Civil or Community Engagement
- Improvements and Programs (that Address the Needs of Disadvantaged Communities)

7.1.2 Determining Communities Subject to SB 1000 Requirements

The term "Disadvantaged Community" is a broad designation that may include any community that lacks appropriate resources or is confronted with any exceptional economic, health, or environmental burden. In relation to environmental justice, disadvantaged communities are typically those communities that disproportionately face the burdens of environmental hazards. California's *Planning for Healthy Communities Act* (Senate Bill 1000) establishes a set criterion for identifying a Disadvantaged Community (DAC). The definition of a DAC for the purposes of the bill is as follows:

"An area identified by the California Environmental Protection Agency (CalEPA) pursuant to Section 39711 of the Health and Safety Code or an area that is a low-income area that is disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation."

Localities must prepare an Environmental Justice element of their General Plan (or address the topic within the context of other elements) when one or more DAC is identified within their Planning Area and/or if the City is home to a low-income area that is also disproportionately affected by certain environmental issues, as described in the excerpt from SB 1000 above. Senate Bill 535 (SB 535) provides direction on how to identify DACs and Assembly Bill 1550 (AB 1550) provides direction on how to identify low-income communities; low-income communities as identified by AB 1550 that are within ½-mile of a SB 535 DAC are low-income communities that are disproportionately affected by environmental issues, and warrant the same policy direction as a DAC within the context of a jurisdiction's General Plan.

The California Air Resources Board (CARB) has mapped DACs (per SB 535 and in accordance with CalEPA definitions), low-income communities (per AB 1550), and low-income communities within ½ mile of a SB 535 DAC, thereby providing the most complete resource to determine whether or not the environmental justice element component of SB 1000 is relevant to a specific jurisdiction. CARB uses the CalEnviroScreen 3.0 mapping tool to identify SB 535 disadvantaged communities. CalEnviroScreen 3.0 is a science-based tool developed by the Office of Environmental Health Hazards Assessment on behalf of CalEPA that uses existing environmental, health, and socioeconomic data to rank all census tracts in California with a CalEnivroScreen score designating disadvantaged communities as the highest 25 percent scoring census tracts. Based on this score, the map identifies where DACs are located within each city. CARB has prepared its own methodology to map low-income communities in accordance with AB 1550 using data from the American Community Survey, American Fact Finder, and the California Department of Housing and Community Development.

Using the CARB mapping tool, which integrated CalEnviroScreen 3.0, it is evident that San Marcos does not have any SB 535 communities (DACs) but it does have some low-income communities, as defined by AB 1550. However, since none of the AB 1550 low-income communities are located within ½-mile of a DAC, there are no communities within the Planning Area which trigger the need for San Marcos to prepare an Environmental Justice element. For reference, the census tracts in the Planning Area that are identified as low-income communities according to AB 1550 are shown on Figure 7-1.

7.2 ENVIRONMENTAL JUSTICE DETERMINANTS IN SAN MARCOS

The CalEnviroScreen 3.0 mapping tool is the standard metric for determining the location and presence of designated disadvantaged communities within an area. CalEnviroScreen utilizes environmental justice indicators for all census tracts in California that encompass topics like health, the environment, and population characteristics. These indicators are utilized to determine which communities should be designated as disadvantaged communities under SB 1000. Based on a screening of existing census tracts within the Planning Area, **there are no census tracts that are considered CalEnviroScreen-designated Disadavantaged Communities (DAC)**. As described previously, there are seven primary environmental justice focus areas defined within the *Planning for Healthy Communities Act* that must be used in addressing the unique or compounded health risks for disadvantaged communities (Pollution Exposure and Air Quality, Public Facilities, Food Access, Safe and Sanitary Homes, Physical Activity, Community Engagement, and Improvements and Programs). The existing conditions for these focus areas within San Marcos are assessed below.

7.2.1 Pollution Exposure and Air Quality

Pollution exposure and air quality is an aspect of environmental quality that may disproportionately impact disadvantaged communities. This is often due to the existence and maintenance of pollution-emitting sources within close proximity to DACs. If disadvantaged communities have unequal or excessive exposure to sources of pollution including air pollution, water contamination, and hazardous waste exposure, this exposure must be addressed using appropriate planning measures. Disproportionate exposure to pollutants is linked to negative health impacts including asthma, cardiovascular illness, and other fatal conditions.

Pollution Exposure and Air Quality is a mandated environmental justice focus area under SB 1000. As mentioned, no census tract within the boundaries of San Marcos is defined as a CalEnviroScreen-designated Disadvantaged Community. This section serves to assess pollution exposure and air quality in the City. More detailed assessments of existing air quality and air quality regulations as well as water quality and water quality regulations within the City of San Marcos are addressed in Section 5 (Conservation and Natural Resources) and Section 3 (Utilities and Community Services).

Air Quality

As described in Section 5 of this document, existing air quality concerns within the Planning Area are related to increases of regional criteria air pollutants (e.g., ozone and particulate matter), exposure to toxic air contaminants, odors, and increases in greenhouse gas emissions contributing to climate change. The primary source of ozone (smog) pollution is motor vehicles and other mobile sources, which account for 81 percent of the ozone in the region.[1] Particulate matter is caused by dust, primarily dust generated from construction and grading activities, and smoke which is emitted from fireplaces, wood-burning stoves, and agricultural burning.

[1] San Diego County Air Pollution Control District. 2007. Eight-Hour Ozone Attainment Plan for San Diego County.

Table 7-1 depicts the State and national attainment status for San Diego County. As evident in the table, San Diego County has a State designation of Nonattainment for O_3, $PM_{2.5}$, and PM_{10} and is either Attainment or Unclassified for all other criteria pollutants. In accordance with the California Clean Air Act (CCAA), areas of the state are designated as attainment, nonattainment, or unclassified with respect to applicable standards dependent upon the status of pollutant concentrations. "Attainment" refers to instances where pollutant concentrations did not violate the applicable standard in that area. A "Nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. A detailed analysis of criteria pollutants within San Diego County is available in Section 5 (Conservation).

Table 7-1: State and National Attainment Status

Pollutant	State Designation	National Designation
Ozone (O3)	Nonattainment	Nonattainment (Part)
Fine Particulate Matter (PM2.5)	Nonattainment	Attainment
Respirable Particulate Matter (PM10)	Nonattainment	Attainment
Carbon Monoxide (CO)	Attainment	Maintenance (Part)
Nitrogen Dioxide (NO2)	Attainment	Attainment
Sulfur Dioxide (SO2)	Attainment	Attainment
Sulfates	Attainment	--
Lead (Pb)	Attainment	Attainment
Hydrogen Sulfide	Unclassified	--
Visibility Reducing Particles	Unclassified	--

Sources: California Air Resources Board, 2018. U.S. Environmental Protection Agency.

Asthma Rates

Table 7-2 includes data from the California Health Interview Survey (CHIS) administered by the UCLA Center for Health Policy Research for asthma rates for San Marcos, San Diego County, and the state.

Table 7-2: Asthma Rates and Hospitalizations

Region	Ever Diagnosed with Asthma (1-17)	Ever Diagnosed with Asthma (18+)
San Marcos	**11.0%**	**13.2%**
San Diego County	**12.1%**	**14.4%**
California	**14.6%**	**15.0%**

Source: California Health Interview Survey (CHIS), 2016. AskCHIS.

As shown in Table 7-2 above, 13.2 percent of San Marcos residents 18 years of age and older have been diagnosed with asthma at some point in their lives, and 11.0 percent of residents between one and 17 years of age have been diagnosed (from the time the 2016 CHIS survey was conducted). The percentage of people diagnosed with asthma in San Marcos is slightly lower than both the countywide and statewide averages.

Water Quality

There are multiple facets of a city's water quality that can impact the health of residents who rely on their water resources for sustenance and recreation. The CalEnviroScreen 3.0 mapping tool uses numerous indicators to assess water quality within an area. Adequate water quality for drinking water is critical for the safety and well-being of city residents. Most drinking water in California meets requirements for health and safety; however, natural and human sources can contaminate drinking water and often in poorer communities, residents are more likely to be exposed to contaminants in their drinking water. The CalEnviroScreen 3.0 indicator for drinking water measures the concentration of contaminants and assesses water quality violations to establish a single score. For the census tracts within the Planning Area, the indicator that assesses contaminants in drinking water was measured at low levels. Nonetheless, improvements to water systems to address contaminants in drinking water can proactively ensure the health and safety of residents of San Marcos.

Hazardous chemicals stored underground can leak into soil and pollute the nearby groundwater. In some cases, contaminated groundwater may become drinking water. In addition, people who live near contaminated groundwater may be exposed to chemicals moving from the soil into the air, which then exposes them to airborne chemicals within and near their homes. The CalEnviroScreen 3.0 data also measures groundwater threats for individual census tracts within San Marcos. The groundwater threats from CalEnviroScreen 3.0 are measured using a weighted system that assigns a numerical value to leaking underground storage tank sites within buffered distances to populated blocks of census tracts. Leaking storage tanks can contaminate the soil, air, and water. Based on this data, scores for groundwater threats in San Marcos census tracts are relatively low; however, four census tracts within the Planning Area (CT 6073020018, CT 6073020029, CT 6073019208, and CT 6073020027) are at higher risk for groundwater threats. As mentioned, contaminated groundwater sites can pollute the surrounding environment and be detrimental to surrounding neighborhoods. Identified cleanup sites may still contain groundwater threats and therefore may still negatively impact communities.

According to the CalEnviroScreen 3.0 mapping tool, there are areas within San Marcos designated as Section 303(d) impaired waterbodies. The impaired water bodies include San Marcos Lake, San Marcos Creek, and Escondido Creek. These hydrologic areas extend beyond the Planning Area boundary so not all impaired water body segments are located entirely within San Marcos and/or its SOI. The pollution sources are not currently known.

Section 5 (Conservation and Natural Resources) and Section 3 (Utilities and Community Services) include additional information related to water quality and water quality facilities.

7.2.2 Public Facilities

Access and availability of public facilities is an aspect of the built-environment that may disproportionately limit the opportunities of disadvantaged communities. If disadvantaged communities have unequal access to public facilities, or if a city does not contain adequate facilities for public use, DACs may be limited in their ability to access necessary key resources. Adequate planning of parks and transportation infrastructure can ensure that all communities within a city have equal access to resources. Limited access to resources as a result of inadequate public facilities can lead to reduced lifespan, poorer health outcomes, and diminished mental well-being.

Public Facilities is a mandated environmental justice focus area under SB 1000. As mentioned, no census tract within the boundaries of San Marcos is defined as a CalEnviroScreen-designated Disadvantaged Community. Regardless of the absence of DACs throughout the City, this section serves to assess the adequacy of public facilities in the City of San Marcos.

Parks and Cultural Centers

Equitable access to public parks, schools, and cultural centers within a community is critical to the promotion of public health and well-being. Lack of recreational and open spaces is a significant driver of poor physical and mental health. Parks and public facilities provide opportunities for exercise, recreation, and community engagement, which are necessary to bolster resident health. Parkland within San Marcos is detailed in Section 3 Utilities and Community Services and Section 6 Community Health and Wellness.

The California Statewide Park Program (Public Resources Code § 5642) defines underserved communities as having a ratio of less than three acres of parkland per 1,000 residents. This measure identifies areas where surrounding population density may overwhelm limited park space. As described in Section 3 (Utilities and Community Services), the City has approximately 340.05 acres of existing parkland, trails, and recreational facilities. Therefore, with a 2018 population of approximately 96,834 the current distribution of park acreage per 1,000 residents is 3.51, which is slightly above the Statewide Park Program standard.

The General Plan's Parks, Recreation, and Community Health Element includes Policy PR-1.1, which reads:

> *Develop and maintain a complete system of public parks and recreational amenities that provide opportunities for passive and active recreation at a minimum standard of 5 acres per 1,000 residents. Parks, trails and recreational facilities will enhance community livability, public health, and safety; should be equitably distributed throughout the City; and be responsive to the needs and interests of residents, employees, and visitors.*

With the City's park acreage at approximately 3.51 acres per 1,000 residents, the existing levels are below the adopted City goal of 5 acres per 1,000 residents.

An additional factor that determines the equitability and accessibility of parks and public facilities within an area is the distance between these public facilities and the home. If this distance to public facilities is perceived as "walkable", residents may be more likely and willing to walk to those amenities. A distance of 1/4 mile is a commonly cited threshold for how far most people are willing to walk for neighborhood services. Conversely, a national survey of bicyclist and pedestrian attitudes and behavior by the National Highway Traffic Safety Administration (NHTSA) and the Bureau of Transportation Statistics surveyed almost 10,000 people over the age of 16 and found that the average trip length was 1.3 miles. Only 5 percent of walking trips were for getting to work while 38 percent were for personal errands, 28 percent were for exercise, and 21 percent were for recreation or leisure. The validity of both the 1/4 mile, and or longer distances, may be dependent on perceptions of the built-environment, safety, time constraints, distance, as well as connectivity. According to the California State Parks' Park Access Tool, 17 percent of residents of San Marcos live further than a half mile from a park and 32 percent of residents of San Marcos live in areas with less than 3 acres of park or open space per 1,000 residents.[2]

Public Transit

Public transit within a city increases accessibility to resources for disadvantaged communities and ensures that those without automobile access or without the ability to operate an automobile can maintain mobility. In this way, public transit provides a way of promoting equity within the built-environment.

Within the City of San Marcos, the North County Transit District (NCTD) is the primary provider of public transit. NCTD is the consolidated transportation service agency for North San Diego County and is responsible for coordinating transit services throughout the approximate 1,020 square mile service area. NCTD provides both its BREEZE bus system and its SPRINTER light-rail system to the City of San Marcos. BREEZE Lines 304, 305, 347, 353, and 445 serve the San Marcos area while SPRINTER modern light-rail system runs from Escondido to Oceanside with stops in the City.[3] The North County Transit District offers programs to increase accessibility for disabled and disadvantaged community members. NCTD provides paratransit (LIFT service) for people who are unable to independently use the transit system due to a physical or mental disability. NCTD also provides a discounted BREEZE fare of $1.25 for specific sub-groups of residents within the area, including seniors (age 65+), Medicare cardholders, and persons with disabilities.[4] Standard priced bus fare within the City of San Marcos as provided by NCTD is shown in Table 7-3 below.

2 California Department of Parks and Recreation. Neighborhood-Level Park Access Tool. Accessed on March 18, 2020. Available at: http://www.parksforcalifornia.org/parkaccess

3 North County Transit District. System Map. 2020. Available at: https://gonctd.com/wp-content/uploads/2019/01/NCTDSystemMap.pdf

4 North County Transit District. Accessed on March 18, 2020. Available at: https://www.gonctd.com/fares/fares-passes/

Table 7-3: North County Transit District Bus Fare

BREEZE Fare	Adult	Youth	Senior/Disabled/Medicare
Base Fare	$2.50	$2.50	$1.25
Day Pass (Regional)	$6.00	$3.00	$3.00
30-Day Pass (Regional)	$72.00	$23.00	$23.00

Source: North County Transit District, 2020.

The affordability and competency of the public transit network within a city is critical for ensuring equitable resource access. Ensuring that public transit is a feasible mode of transportation within the City of San Marcos is critical for increasing accessibility for not just disadvantaged residents but for all community members. Expanding the network of bus routes to improve connectivity and maintaining discounted fare rates will promote equitable mobility within San Marcos. Additional information on public transportation within the City is available in Section 2 (Transportation and Circulation).

Bike Lanes

Bike access is a facet of transportation that offers a mobility option for those residents who do not have access to a car and/or those who prefer active transportation. Increased accessibility of bike lanes may help reduce congestion, contribute to community physical health, and improve air quality. Communities that do not have available bike lanes may be disadvantaged by limited resource access and diminished opportunity for physical exercise. Maintaining facilities that allow for bicycle mobility is important for community vitality. This is especially true in disadvantaged communities where transportation via car may be less accessible.

The City's Mobility Element describes an extensive network of Class I, II, and III bike lanes that are proposed for the City to supplement existing bike lanes. The outline for proposed bike paths within the Mobility Element offers a bicycle circulation network that provides access to bike paths for the entire City of San Marcos. These improvements include increased connectivity to the residential areas throughout the City. More detailed information on the existing bike lanes and proposed improvements can be found in Section 2 (Transportation and Circulation).

7.2.3 Food Access

Ensuring adequate food access is challenging in many communities in California. Some communities within California cities and counties have reduced access to adequate and/or healthy food. Often, low-income areas may lack healthy food options or adequate supermarkets. An inability to access nutritious foods can lead to poor health outcomes in disadvantaged communities. Food insecurity, or the uncertainty of having adequate food, is especially harmful for children and pregnant women who are most in need of nutrient-rich foods. Communities that are most often impacted by food insecurity include low-income communities and communities of color.[5]

[5] Elsheikh, E. and N. Barhoum. 2013. Structural Racialization and Food Insecurity in the United States. U.N. Human Rights Committee on the International Covenant on Civil and Political Rights.

Food Access is a mandated environmental justice focus area under SB 1000. As mentioned, no census tract within the boundaries of San Marcos is defined as a CalEnviroScreen-designated Disadvantaged Community. Regardless of the absence of DACs within the City, this section serves to assess the existing conditions of food accessibility in San Marcos.

Food Insecurity

Food insecurity is the uncertainty about the availability or adequacy of nutritional and safe foods. Based on the available USDA food security data and data from the American Community Survey, Feeding America estimates the number of food insecure people within a given county. These estimates are presented in the Feeding America *Map the Meal Gap* report. Feeding America estimated that the number of food insecure individuals in San Diego County was 360,530, with a food insecurity rate of 11.0% for the year 2017. The state estimate for these same measures was 11.0%. Therefore, the rate of food insecurity within San Diego County is equal to the rate of food insecurity within California as a whole.

Of the food insecure population within San Diego County, 75% were from households which were below the federal poverty threshold used for nutrition assistance programs and were therefore eligible for food assistance from the federal government[6]. These residents who qualify for federal nutrition assistance programs can utilize assistance at any store that accepts WIC and SNAP purchases. Furthermore, the UCLA Center for Health Policy Research and the California Health Interview Survey (CHIS) reported that 8.7% of adults in San Marcos are food insecure due to low income. In comparison, the same measure for the county is 6.1% and for the state, 7.0%[7]. Based on the data from CHIS, it is evident that the San Marcos food insecurity rate is slightly above the average for the county and for cities in California.

Living in poverty increases the likelihood of food insecurity as a lack of funds can make food unaffordable and therefore inaccessible. The UCLA Center for Health Policy Research and CHIS reported that within California the percentage of adults (age 18+) living in poverty was 13.7% in 2016. For the City of San Marcos, the percentage of adults (age 18+) living in poverty was 14.6%, and for San Diego County, 12.5 percent.[8] The poverty rate in San Marcos is higher than both the county and the State, which contributes directly to the number of food insecure residents in San Marcos.

6 Feeding America, Map the Meal Gap 2017. Available at:

https://map.feedingamerica.org/county/2017/overall/california/county/san-diego

7 California Health Interview Survey (CHIS). 2016. AskCHIS. Available at: http://askchisne.ucla.edu/ask/_layouts/ne/dashboard.aspx#/. Accessed March 19, 2020.

8 California Health Interview Survey (CHIS). 2016. AskCHIS. Available at: http://askchisne.ucla.edu/ask/_layouts/ne/dashboard.aspx#/. Accessed March 19, 2020.

Food Access

In addition to the ability to afford food, the ability to access healthy and nutritious food in the surrounding environment is also critical to resident well-being. The USDA developed a *Food Access Research Atlas* that identifies "food deserts" in the United States at the census tract level. The 2008 U.S. Department of Agriculture (USDA) Farm Bill defined a food desert as an *"area in the United States with limited access to affordable and nutritious food, particularly such an area composed of predominantly lower income neighborhoods and communities."* Based on this definition, the USDA data shows that there are no census tracts located within or partially within the Planning Area that are flagged as food deserts and all residents residing within the Planning Area have adequate access to grocery stores. A food desert designation is based on consideration that a census tract is simultaneously low-income and has a significant number of the population more than 1 mile (urban areas) or more than 10 miles (rural areas) from the nearest supermarket, supercenter, or large grocery store.[9]

As well as the proximity of grocery and food sources within an area, the types of food sources available are important for determining adequacy of food access. The USDA *Food Access Research Atlas* data shows that there were 623 (2014) grocery stores and 47 farmers' markets across San Diego County (2016). In addition, the same data set shows that the County had 2,632 fast-food restaurants as of 2014.[10]

7.2.4 Safe and Sanitary Homes

The condition of the housing stock in a community may have negative impacts on the well-being of the community residents. These health impacts stem from issues such as poor indoor air quality, toxic building materials, exposure to climate variation such as excessive heat or cold, improper ventilation, and structural insecurity. Unsafe housing conditions can be a result of the age of the dwelling structure, which increases the likelihood of incorporation of dangerous materials like lead and asbestos, that have significant negative health impacts.[11] Disadvantaged communities often have a larger amount of older units within their housing stock, and therefore, residents of these communities are more likely to be exposed to the harmful health impacts that are associated with older housing. Other factors that can contribute to unsafe housing conditions include improper regulation and overcrowding. Ensuring the safety and sanitation of housing stock within a community ensures that there are proper living conditions for all residents.

Safe and Sanitary Homes is a mandated environmental justice focus area under SB 1000. As mentioned, no census tract within the boundaries of the City of San Marcos is defined as a CalEnviroScreen-designated Disadvantaged Community. Regardless of the absence of DACs

9 U.S. Department of Agriculture, Economic Research Service. Food Access Research Atlas. Accessed on March 18, 2020. Available at: https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/

10 U.S. Department of Agriculture, Economic Research Service. Food Access Research Atlas. Accessed on March 18, 2020. Available at: https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/

11 California Environmental Justice Alliance. SB 1000 Implementation Toolkit. October 2017.

throughout the City, this section serves to assess the existing conditions of home safety and home sanitation in San Marcos.

Housing Burden

Housing affordability is an important determinant of health and well-being. Residents of low-income households with high housing costs may suffer adverse health impacts. Although not considered a disadvantaged community, Census Tract 6073020018 has a high poverty percentile (77 percent) and a moderate housing burden percentile of 61 percent.[12] This indicates that within CT 6073020018 many of the households are both low-income households and are simultaneously burdened by high housing costs. The CalEnviroScreen measure for poverty is elevated slightly above the 75th percentile for this census tract and may indicate a need for City officials to address poverty concerns within its boundaries.

Age of Housing Stock

The age of a housing unit is a primary factor in the building conditions of the dwelling unit; therefore, the age of a community's housing stock is a good indicator of the condition of the housing stock. Data from the 2019 American Community Survey (ACS) indicates that a majority (68.0 percent) of units within the City of San Marcos were built between 1980 and 2019, with the highest percentage of units being built between 2000 and 2009 (29.5 percent).[13] According to the CDC, a substantial amount of existing U.S. housing regulations and bans related to the use of toxic materials were developed in the 1970s, including regulations on the use of lead paint and asbestos.[14] Additionally, older housing units are more likely to have structural and material damage. The relatively young age of San Marcos's housing stock indicates that overall housing conditions are good.

2020 Housing Conditions

In preparing the 2021-2029 Housing Element, City staff assessed the then existing housing conditions for San Marcos. According to the 2020 Department of Finance (DOF) E-5 Report, the majority (18,964 units or 58.4 percent) of the existing housing stock in the City consisted of single-family homes. Multi-family developments of two or more units represented the next largest segment (10,167 units or 31.3 percent), and with several mobile home parks dispersed throughout the City, mobile homes comprised the remainder (3,329 units or 10.3 percent).[15]

According to the existing Housing Element, the housing stock in San Marcos is relatively new. The US Census 2015-2019 American Community Service data indicates that most of the housing in the City is less than 30 years old; 55.2 percent of the housing units have been built since 1990 (meaning they are no more than 30 years old), and nearly all the City's housing stock has been

12 California Office of Environmental Health Hazard Assessment (OEHHA). 2020. CalEnviroScreen 3.0. Available at: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30

13 U.S. Census Bureau. 2015-2019 American Community Survey 5-year Estimates

14 Centers for Disease Control and Prevention, National Center for Environmental Health. 2020. Available at: https://www.cdc.gov/nceh

15 City of San Marcos, 2021-2029 Housing Element; U.S. Census 2015-2019 ACS.

built since 1970 (93.4 percent of units). Due to the relatively young age of the City's housing stock, overall housing conditions are good. Although the U.S. Census does not include statistics on housing condition based upon observations, it includes statistics that correlate closely with substandard housing conditions such as lack of plumbing or kitchen facilities (79 units or 0.3% of all units).[16]

As part of the 2021-2029 Housing Element Update, the City conducted a community survey regarding the quality of the City's housing stock. When asked to rate the physical condition of the residence they lived in, the majority (59 percent) responded that their home was in excellent condition while 35 percent indicated that their home is showing signs of minor deferred maintenance. Additionally, the City's Planning Division and Code Compliance Division have identified four areas of the City which appear to have a significant amount of housing that is in need of major repair. These areas include: the Richmar neighborhood, Rancho Santa Fe Road West in the vicinity of 9th and Grandon, around Hollencrest near DeLeon, and Mission Road around El Tigre.

Overcrowding

Overcrowding within a housing unit is a primary cause of unsafe housing conditions. The World Health Organization notes that overcrowding is a potential health risk as it contributes to the transmission of disease by creating unsanitary conditions. A housing unit is considered overcrowded if there is more than one person per habitable room (excluding bathrooms, kitchens, hallways, and porches) and severely overcrowded if there are more than 1.5 persons per room. Overcrowding contributes to increases in traffic within a neighborhood, accelerates deterioration of homes and infrastructure, can overburden utilities and services such as sewers, and results in a shortage of onsite parking. Table 7-4, taken from the City's Housing Element, shows overcrowding data for San Marcos. This data was pulled from the U.S. Census 2015-2019 ACS.

Table 7-4: Overcrowding by Tenure (2011)

Persons per room	Owner		Renter		Total	
	Number	Percent	Number	Percent	Number	Percent
1.00 or less	18,059	97.4%	9,753	86.8%	27,812	93.4%
1.01 to 1.50	347	1.9%	1,116	9.9%	1,463	4.9%
1.51 or more	131	0.7%	365	3.2%	496	1.7%
Total	18,537	100.0%	11,234	100.0%	29,771	100.0%
Overcrowded	478	2.6%	1,481	13.2%	1,959	6.6%

Source: City of San Marcos 2013-2021 Housing Element; U.S. Census, 2015-2019 ACS.

The extent of overcrowding varies significantly by income, type, and size of household. Generally, very low- and low-income households and large families are disproportionately affected by overcrowding.[17] Overcrowding is typically more prevalent among renters than among owners. 13

16 City of San Marcos 2021-2029 Housing Element; U.S. Census 2015-2019 ACS.

[17] U.S. Census Bureau. Overpayment and Overcrowding. Available at https://www.hcd.ca.gov/community-development/building-blocks/housing-needs/overpayment-overcrowding.shtml

percent of renter households experienced overcrowding in 2019, compared to three percent for owner households.

Policies

The existing San Marcos Housing Element was adopted in 2021 and contains policies that are focused on improvements, maintenance, and development of housing within San Marcos utilizing numerous factors to determine housing need and adequacy.[18] The Housing Element also includes policies to promote the construction of housing that is affordable to all income levels and policies to ensure healthy and safe housing, such as addressing the presence of toxic building materials. The City has taken a proactive approach within the Housing Element to ensure the safety and sanitation of housing for all residents.

7.2.5 Physical Activity and Fitness

Residents of disadvantaged communities are often more likely to have negative health outcomes. Increased physical activity levels are associated with a decreased risk for numerous health conditions and chronic illnesses. The built-environment in DACs can often be limited by land use planning and lack of investment, leaving less opportunities for formal and informal physical activity. Increasing the opportunity for physical activity within a community can work to positively impact the health of residents.

Physical Activity is a mandated environmental justice focus area under SB 1000. As mentioned, no census tract within the boundaries of the City of San Marcos is defined as a CalEnviroScreen-designated Disadvantaged Community. Regardless of the absence of DACs throughout the City, this section serves to assess the existing conditions of physical activity and fitness in San Marcos. More detailed information on physical activity and fitness can be found in Section 6 (Community Health and Wellness).

Physical Fitness and Health Demographics

Lack of physical activity is a major risk factor for many diseases and causes of death, including heart disease, obesity, mental health conditions, diabetes, stroke, and Alzheimer's. The California Health Interview Survey (CHIS) identifies health-related indicators for the City. According to the report, the obesity rate for adults (age 18+) in the City of San Marcos was 24.3 percent in 2016, which was slightly lower than the San Diego County rate of 25.0 percent. The Centers for Disease Control and Prevention (CDC) maintain that obesity is a major risk factor for additional illnesses and chronic disease. The physical activity levels within the City of San Marcos, measured by the number of adult residents (age 18+) who walk a minimum of 150 minutes per week, was lower than the same measure for San Diego County at 38.4 percent and 41.2 percent, respectively, in 2016.[19]

[18] City of San Marcos. 2021-2029 Housing Element. City of San Marcos General Plan.

[19] California Health Interview Survey (CHIS). 2016. AskCHIS. Available at: http://askchisne.ucla.edu/ask/_layouts/ne/dashboard.aspx#/. Accessed March 19, 2020.

Presence and prevalence of chronic disease within a community may be a result of the physical environment in which that community lives. As shown in Table 7-5 below, for two chronic disease indicators (diabetes prevalence and obesity rates) the City of San Marcos had statistically lower percentages of residents with health problems compared to the same indicators for San Diego County.

Table 7-5: Health Indicators for San Marcos and San Diego County

Indicator	San Marcos	San Diego County
Asthma prevalence (18+)	13.2%	14.4%
Diabetes prevalence (18+)	6.9%	8.2%
Heart disease prevalence (18+)	5.9%	6.2%
Obesity prevalence (bmi > 30)(18+)	24.3%	25.0%

Source: California Health Interview Survey (CHIS), 2016. AskCHIS.

Physical Fitness Testing

Another indicator of physical activity and fitness for children and teens is the California Department of Education's Physical Fitness Testing (PFT) Program, which is administered by local school districts to all fifth, seventh, and ninth graders annually.[20] The test assesses six major fitness areas, including aerobic capacity (cardiovascular endurance), body composition (percentage of body fat), abdominal strength and endurance, trunk strength and flexibility, upper body strength and endurance, and overall flexibility. The PFT Program provides a statewide snapshot of physical fitness. As a caveat, the data is collected at the local school district level by people who are not health professionals and tests for each of the fitness areas are difficult to administer consistently. Consequently, the PFT results are prone to some margin of error over time and from place to place.

California Physical Fitness Test (PFT) results for the San Marcos Unified District and statewide for the 2018-19 academic year are shown in Table 7-6.

Table 7-6: Student Physical Fitness Testing (PFT) Results (2018-2019)

Physical Fitness Area	San Marcos Unified District % within Healthy Fitness Zone			Statewide % within Healthy Fitness Zone		
	Gr. 5	Gr. 7	Gr. 9	Gr. 5	Gr. 7	Gr. 9
Aerobic Capacity	74.1%	71.2%	69.2%	60.2%	61.0%	60.0%
Body Composition	65.3%	65.4%	65.6%	58.7%	60.0%	62.2%
Abdominal Strength	76.2%	76.6%	71.8%	69.1%	77.1%	81.2%
Trunk Extension Strength	83.1%	82.4%	88.5%	83.8%	86.0%	89.3%
Upper Body Strength	72.1%	66.1%	69.7%	60.8%	62.9%	68.5%
Flexibility	70.3%	78.0%	87.4%	70.4%	78.5%	83.1%

[20] California Department of Education. Physical Fitness Testing. Accessed March 19, 2020. Accessible at: https://data1.cde.ca.gov/dataquest/PhysFitness/PFTDN/Summary2011.aspx?r=0&t=2&y=2018-19&c=37737910000000&n=0000

Source: California Department of Education, Physical Fitness Testing (PFT) Results (2018-2019).

As shown in Table 7-6 above, the PFT results for 5th, 7th, and 9th graders in the San Marcos Unified District for the 2018-19 academic year show that for more than half of the fitness indicators, local children surpass the statewide averages. The percentages for Abdominal Strength, Trunk Extension Strength, and Flexibility for San Marcos Unified District are slightly lower than the same statewide measures. This may indicate a need for targeted improvement of programs and/or environmental factors to facilitate a healthier community for school-age children.

Active Transportation Use

Active transportation is any form of transportation that is non-motorized. The use of active transportation during a daily commute increases physical activity levels. Increased physical activity has positive health benefits, including mortality risk reduction, disease prevention, cardiorespiratory fitness, and metabolic health. Disadvantaged communities often have disproportionately poorer health outcomes; therefore, increasing opportunities for active transportation within a city can improve the overall health outcomes of disadvantaged residents.

The 2017 American Community Survey (ACS) reports that the majority of workers living in San Marcos (79.7%) drive to work, 8.2% carpool, 1.6% take public transit, and 10.5% use some other mode of getting to work. Other modes of transportation include walking, bicycling, or working from home. Of those who utilize other modes of transportation to get to work, 2.4% walk and only 0.3% use a bicycle.[21] Based on this data, it is clear that active transportation use within San Marcos is not very prevalent. Utilizing active transportation is an effective way of engaging in physical exercise and can be a factor in improving community health outcomes in general. More details on active transportation use and bicycle facilities can be found in Section 2 (Transportation and Circulation).

Community Engagement

An important aspect of planning for environmental justice is the development of effective policies and programs that enable all residents to participate in local decision-making. Disadvantaged communities can often be excluded from decision-making when officials and policies do not focus on involving these communities in a strategic manner. SB 1000 emphasizes that community engagement must be promoted in a local jurisdiction through the development of objectives and policies that seek to involve members of DACs specifically. By involving and engaging DACs in decision-making processes, policymakers can more effectively meet the needs of these community members. Disadvantaged communities often have culturally-specific needs that should be made a priority within local policy to ensure community success. These needs are often distinct from those of the general population. The U.S. EPA Environmental Justice Policy requires the *"… meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies."* The presentation of appropriate opportunities for those who are low-income, minorities, and linguistically isolated to engage in local decision-making will help ensure that environmental justice issues are identified and resolved. In addition, community programs that address the needs of

[21] U.S. Census Bureau. 2013-2017 American Community Survey 5-year Estimates. Available at: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF

disadvantaged communities are critical to ensuring environmental justice is achieved for these communities within a city.

Promoting community engagement and programs for DACs is a mandated environmental justice focus area under SB 1000. As mentioned, no census tract within the City of San Marcos is defined as a CalEnviroScreen-designated Disadvantaged Community. Regardless of the absence of DACs, this section serves to assess the levels of civil or community engagement in San Marcos.

Levels of Civil or Community Engagement

At the local level, there were 1,825,237 total registered voters in San Diego County 15 days before the presidential primary election on March 3, 2020, and 833,638 total votes cast. This puts the voter turnout rate in San Diego County for the 2020 election at 45.7 percent. Of the voters registered within San Diego County, 47,266 of the registered voters were from the City of San Marcos.[22]

In 2017, there were 57,606 people of voting age living within the City of San Marcos according to the U.S. Census Bureau.[23] This indicates that approximately 82 percent of people of voting age in San Marcos registered to vote in the 2020 election. It should be noted that not all residents of voting age are eligible to vote in the state of California. Furthermore, voter turnout rates typically rise significantly on years when there is a presidential election.

Voter registration and participation are important for ensuring that all residents within a city can effectively play a role in local and regional decision-making. Lack of voter participation can occur for numerous reasons, including accessibility-based reasons. Some accessibility-based reasons for lower voter participation include lack of transportation, inability to vote due to work schedule, or lack of information. These causes of lower voter participation can often disproportionately impact minorities such as low-income residents, disabled residents, and ethnic minorities with language barriers. City programs can be established by policymakers that increase accessibility for residents within a city. The City of San Marcos may choose to explore opportunities and programs to increase voter participation and thereby ensure that all residents are equally represented in policy decisions.

Community Programs

A critical aspect of planning to achieve environmental justice is prioritizing projects and policies that directly benefit disadvantaged communities. As stated previously, in San Marcos there are no areas within the General Plan Planning Area designated as DACs; however, cities and counties should nonetheless incorporate programs and policies into their planning efforts to promote environmentally just planning.

The San Marcos General Plan includes a variety of goals and policies to support disadvantaged communities and environmental justice issues through policies aimed at improving the transportation network to accommodate bicycle and pedestrian travel, supplying the City's

22 County of San Diego Registrar of Voters. Report of Registration – State Reporting Districts. Run date: February 5, 2020. Available at: https://www.sdvote.com/content/dam/rov/en/reports/current_reg_report.pdf

23 U.S. Census Bureau; American Community Survey. 2013-2017 American Community Survey 5-Year Estimates. Available at: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF

residents with high-quality parks, recreational opportunities, and community services and facilities, and promoting air and water quality throughout the Planning Area.

Furthermore, the San Marcos 2021-2029 Housing Element contains policies that are focused on supporting low- and moderate-income families and special needs families and individuals. The Housing Element also includes policies to promote the construction of housing that is affordable to all income levels and policies to ensure healthy and safe housing. The City has taken a proactive approach within the Housing Element to ensure the safety and sanitation of housing for all residents.

7.2.6 References

California Department of Education. Physical Fitness Testing. Accessible at: https://data1.cde.ca.gov/dataquest/PhysFitness/PFTDN/Summary2011.aspx?r=0&t=2&y=2018-19&c=37737910000000&n=0000

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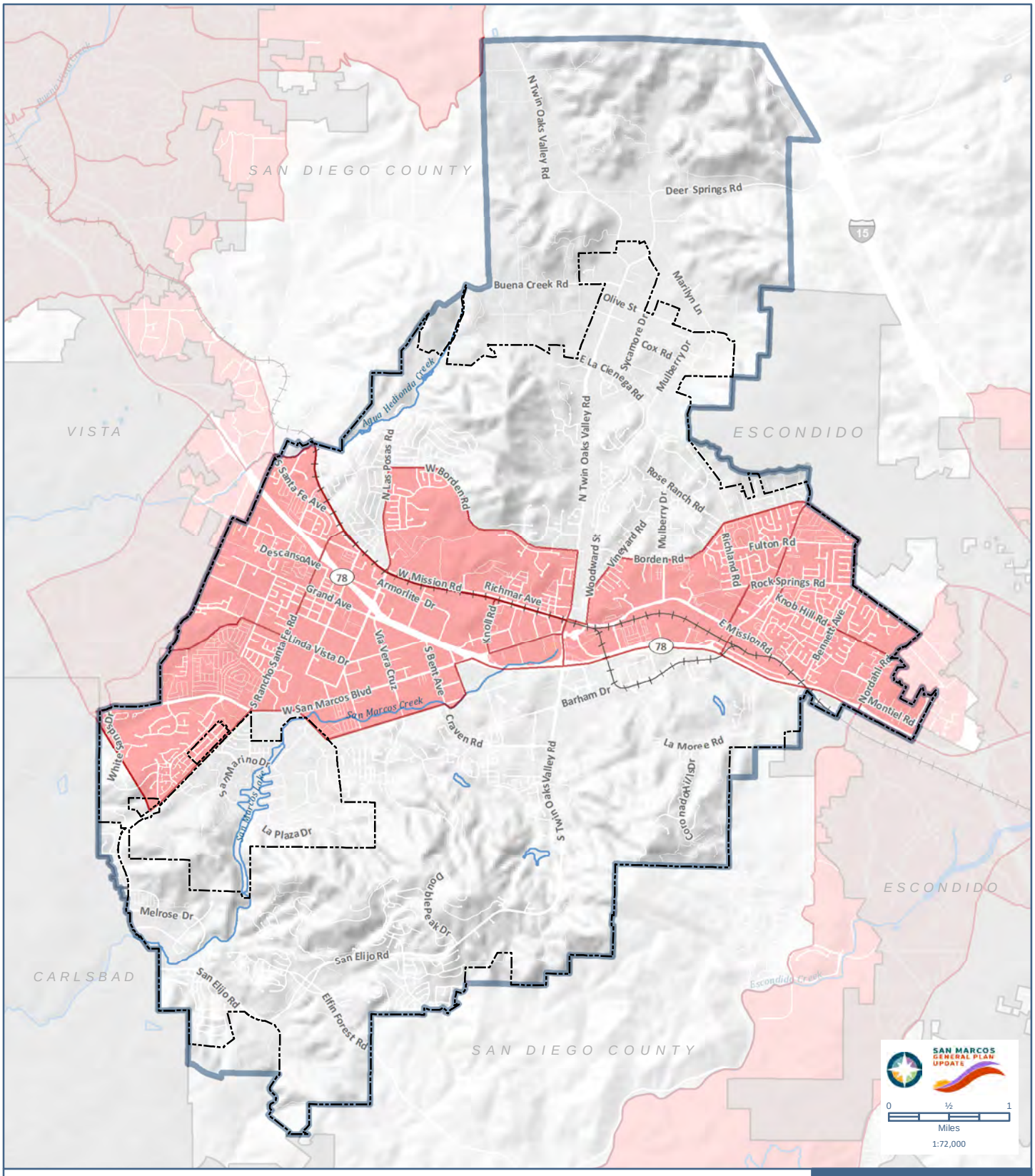
U.S. Census Bureau. *2014-2018 American Community Survey 5-year Estimates*. Retrieved from: https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml

University of California Los Angeles (UCLA) Center for Health Policy Research and the California Health Interview Survey (CHIS). Available at: http://askchisne.ucla.edu/ask/_layouts/ne/dashboard.aspx#/



LEGEND

- City of San Marcos
- Planning Area/Sphere of Influence
- Neighboring City
- Unincorporated San Diego County
- Lake or Pond
- Creek
- Railroad
- AB 1550 Low Income Community

FIGURE 7.1

AB 1550 LOW-INCOME COMMUNITIES

Data sources: AB 1550 Low Income Communities, TCC; City of San Marcos; SANGIS; CalAtlas. Map date: April 16, 2020.

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CHAPTER 8
MARKET CONDITIONS

8 MARKET CONDITIONS

8.1 INTRODUCTION

This chapter evaluates the economic, real estate, and fiscal conditions and trends that will inform the land use policies and alternatives considered as part of the City of San Marcos's General Plan Update. **It should be clearly noted that the majority of this analysis was prepared in early 2020, prior to the COVID-19 pandemic. While the information contained within this Chapter continues to be relevant, the City will complete additional market research as part of its comprehensive General Plan Update to consider the impacts of the COVID-19 pandemic and understand how this event has changed, and will continue to change, market conditions in the City and region. This information will be prepared in late 2021 and shared under separate cover.**

Baseline socio-economic and market trends can provide important information on where the City is headed under "business-as-usual" conditions. They are also intended to ensure that future land use alternatives being considered as part of the General Plan process are realistic and achievable from an economic perspective. Specifically, the findings will inform the following inter-related General Plan issues:

- **Economic Development:** What economic sectors have the strongest growth potential in the City? How can the General Plan help promote growth in these sectors, assuming the City is interested in this outcome?
- **Land Use (Re-) Development Feasibility:** What are the market prospects for various real estate development and investment projects in the City being considered for growth and/or change?
- **Economic Impacts of Land Use Policy:** What are the economic and market implications of various policies or land use regulations being considered as part of the General Plan Update?
- **Fiscal Sustainability**: How will various General Plan land use alternatives or policies affect the long-term fiscal health of the City and its ability to effectively provide adequate public services and infrastructure?

This baseline economic analysis is based on a review of publicly available data from a variety of sources as documented herein. It is important to note that the information provided is not intended as deterministic in terms of the type or amount of land use that should be considered going forward. Future development patterns will be influenced by a variety of factors, some external to the General Plan, and others that have and will continue to be directly shaped by local land use policies.

Further, the baseline analysis presented here does not incorporate input from the community at large, nor is it intended to reflect or address the opinions or preferences of San Marcos residents. Community and stakeholder outreach activities are being conducted as part of the broader General Plan Update study process, as reflected in separate deliverables from the De Novo Planning Group consultant team.

Finally, it is worth noting again, that this chapter was prepared in early 2020 as the nation and world sought to address the coronavirus pandemic, an unprecedented public health crisis. During this period protecting public health is a top priority. Additional discussion of the short and potential longer-term ramifications of the coronavirus crisis for the General Plan process are referenced where relevant herein, and will be further examined under separate cover.

8.2 TRADE AREA

As with the discussion regarding demographics in Chapter 1, this analysis focuses on data metrics for the City of San Marcos and provides data on other geographic areas for context and comparison purposes.

The Trade Area, which includes the cities of Carlsbad, Escondido, Oceanside, San Marcos, and Vista (see Figure 1-1), represents the core area of economic and market activity that impacts San Marcos, and is defined based on geographical mobility considerations that tend to focus a large share of regional economic activity. Most prominent among these features is State Route 78, which connects the five cities together and serves as a major commuter route for workers to move between the cities as well as connect to other parts of San Diego County and southern Orange County. The five cities also represent the majority of the population of the North County region of San Diego County.

It is worth noting the economies of the five cities of the Trade Area are very interconnected. Economic activity is not constrained by municipal boundaries, and economic development coordination and cooperation on a regional level often leads to economic growth that is greater than the sum of its parts. In recognition of this, the five cities have invested in supporting and furthering this interconnected economic activity through a partnership called Innovate78. The partnership allows the cities to build on each other's economic strengths and promote the area's overall skilled workforce, quality of life, and business incentives and resources in attracting and supporting new industries, businesses, and residents. The partnership is further supported through collaboration with the San Diego Economic Development Corporation, which is focused on promoting regionwide economic growth. The City can continue to play its part in supporting this partnership through the General Plan, by targeting land use that will promote Trade Area development strengths and opportunities, and through economic development strategies that underline the importance of continued regional cooperation.

8.3 ECONOMIC PROFILE AND TRENDS

8.3.1 Jobs and Industry Distribution and Trends

San Marcos has about 15 percent of the jobs within the Trade Area, and outpaced the Trade Area and County in job growth from 2010 to 2017 (see Table 8-1). Jobs in the City are split 80 percent / 20 percent between service-producing and goods-producing sectors, compared to an 85 percent / 15 percent split in the County. However, the City saw a relatively small amount of growth in its goods-producing sector compared to the Trade Area and County. Specifically, the City lost manufacturing jobs but added construction jobs in this period, while the Trade Area and County saw large increases in both sectors.

Industry sectors in the City that grew faster than overall job growth include management, healthcare, administration, education, accommodations and food service, and wholesale trade. The City noticeably lagged behind the Trade Area and County in creation of jobs in professional services, which is typically a higher-paying sector. Meanwhile, it outpaced these larger geographies in other higher-paying sectors such as real estate and finance and insurance, but these two sectors remain a small part of the economy overall. All of these trends have implications for real estate development in the City, which will be discussed further in subsequent sections.

The City's largest employers, shown in Table 8-2, are reflective of its largest industry sectors, particularly education, health care, and manufacturing. The three largest employers—Palomar College, San Marcos Unified School District, and CSUSM—employ nearly 7,000 people, representing a quarter of total City jobs. While education jobs can vary in skills and wages, these are institutions that tend to be more geographically stable and can also support the creation of jobs in a variety of other sectors. The City's 2019 community profile shows that while higher-education institutions in the City confer more than 9,500 degrees and certificates annually, just 4 percent of alumni of those institutions work in the City while 29 percent work in San Diego and 14 percent work in other Trade Area cities.[1] Additionally, employees working at jobs in the City have slightly lower levels of educational attainment compared to City residents and to workers in the Trade Area and County. Both metrics suggest an opportunity to attract more jobs to the City in industries that require the higher education levels of residents and recent graduates.

CSUSM and Palomar College have also seen growing enrollments and have plans to increase student numbers even more over the next 5-10 years. Both institutions have invested and are planning future investments in development projects around their campuses, and are driving other new large-scale developments—most notably, the North City project next to CSUSM, which includes the University's Extended Learning building and The Quad student housing building.

[1] From 2019 San Marcos Community Profile, prepared by City of San Marcos Economic Development Department.

Table 8-1 Jobs By Industry

Industry Sector	San Marcos			Trade Area [1]			San Diego County		
	# (2017)	Share	% Ch. '10-'17	# (2017)	Share	% Ch. '10-'17	# (2017)	Share	% Ch. '10-'17
Total	**34,717**	**100%**	**22%**	**226,184**	**100%**	**19%**	**1,289,224**	**100%**	**13%**
Goods-Producing									
Agriculture, Forestry, Fishing and Hunting	44	0%	-63%	1,203	1%	-32%	8,084	1%	-18%
Mining, Quarrying, and Oil and Gas Extraction	0	0%	-100%	8	0%	-83%	332	0%	-34%
Utilities	98	0%	-42%	1,192	1%	7%	6,754	1%	12%
Construction	2,675	8%	40%	17,993	8%	58%	76,944	6%	47%
Manufacturing	4,025	12%	-12%	29,526	13%	14%	107,389	8%	15%
Subtotal	**6,842**	**20%**	**1%**	**49,922**	**22%**	**24%**	**199,503**	**15%**	**23%**
Service-Producing									
Wholesale Trade	1,993	6%	41%	13,648	6%	15%	51,159	4%	22%
Retail Trade	3,320	10%	11%	27,847	12%	14%	126,256	10%	11%
Transportation and Warehousing	690	2%	14%	3,070	1%	28%	25,232	2%	23%
Information	244	1%	-6%	2,787	1%	-21%	25,437	2%	-8%
Finance and Insurance	464	1%	13%	4,689	2%	5%	44,520	3%	10%
Real Estate and Rental and Leasing	535	2%	11%	3,764	2%	-5%	26,205	2%	10%
Professional, Scientific, and Technical Services	1,407	4%	4%	14,956	7%	8%	131,987	10%	10%
Management of Companies and Enterprises	199	1%	91%	2,734	1%	26%	22,511	2%	29%
Admin & Support, Waste Mgmt and Remediation	2,890	8%	27%	12,793	6%	-1%	78,761	6%	14%
Educational Services	5,971	17%	32%	21,506	10%	15%	125,663	10%	1%
Health Care and Social Assistance	4,420	13%	83%	27,339	12%	54%	168,288	13%	29%
Arts, Entertainment, and Recreation	366	1%	169%	6,499	3%	80%	31,310	2%	-6%
Accommodation and Food Services	3,739	11%	55%	22,778	10%	30%	144,316	11%	32%
Other Services (excluding Public Administration)	1,324	4%	19%	8,146	4%	0%	47,526	4%	-8%
Public Administration	313	1%	-72%	3,706	2%	-21%	40,550	3%	-20%
Subtotal	**27,875**	**80%**	**29%**	**176,262**	**78%**	**18%**	**1,089,721**	**85%**	**12%**

[1] Trade Area is the cities of Carlsbad, Escondido, Oceanside, San Marcos, and Vista

Source: LEHD; Economic & Planning Systems

Table 8-2 Largest Employers in San Marcos (2019)

Organization	Sector	Number of Employees
Palomar Community College	Education	2,485
San Marcos Unified School District	Education	2,464
California State University San Marcos	Education	1,883
Hunter Industries, Inc.	Manufacturing	806
United Parcel Service, Inc.	Transportation	551
Southern California Permanente Medical Group	Healthcare	445
Costco Wholesale	Retail	363
North County Health Services	Healthcare	250
Lusardi Construction Co.	Construction	250
Wal-Mart Stores, Inc.	Retail	243
Fluid Components International, LLC	Manufacturing	230
Oncore Manufacturing Services, LLC	Manufacturing	212
Village Square Healthcare Center	Healthcare	208
Hollandia Dairy, Inc.	Manufacturing/Trade	206
Welk Resort Group, Inc	Accommodations	200

Source: San Marcos 2019 Comprehensive Annual Financial Report

8.3.2 Commute Trends

As an integral part of the North County economy, and particularly given the presence of its large education institutions, San Marcos has a dynamic inflow and outflow of workers and residents through the City each day. The City currently functions more as an employment center than a residential center, with a jobs-to-household ratio of 1.19—slightly higher than both the Trade Area and the County, as shown in Table 8-3.

Table 8-3 Jobs-to-Household Ratio

	San Marcos	Trade Area [2]	San Diego County
Jobs [1]	34,717	226,184	1,289,224
Households [1]	29,171	210,733	1,118,980
Jobs/HH Ratio	1.19	1.07	1.15

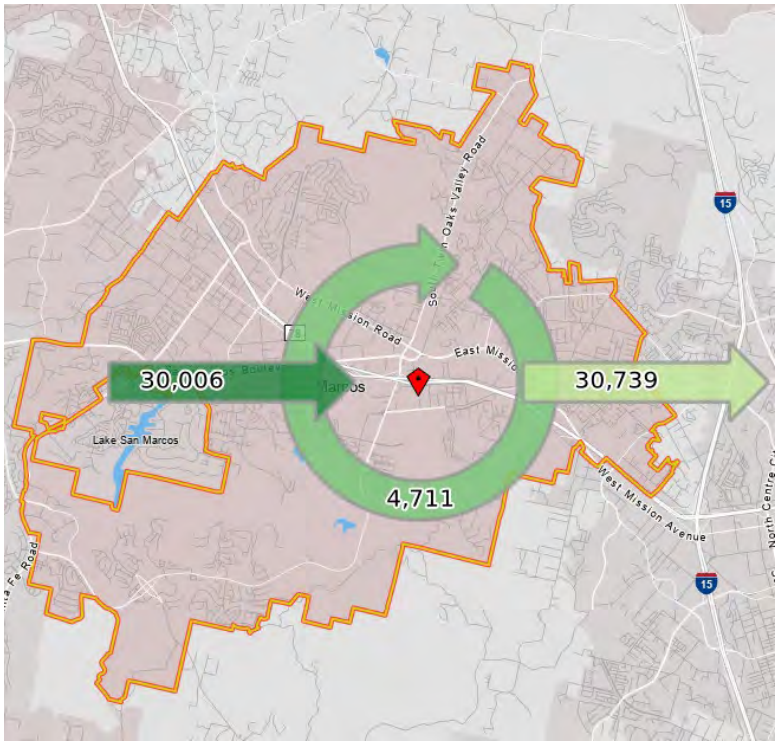
[1] 2017 total primary jobs estimates and 2018 occupied housing unit estimates

[2] Trade Area is the cities of Carlsbad, Escondido, Oceanside, San Marcos, and Vista

Source: LEHD; ACS; Economic & Planning Systems

As shown in Figure 8-1, there are about 30,000 residents who commute out from the City each day and other 30,000 workers who commute in. While the single most-common work destination for San Marcos residents is the City of San Diego, a plurality of residents (43 percent) work in one of the Trade Area cities, including San Marcos itself (see Table 8-4). Similarly, nearly half of workers in San Marcos come from the City or other Trade Area cities (see Table 8-5). This underlines the interconnectedness of the Trade Area's economy.

Figure 8-1 Inflow/Outflow of San Marcos Workers and Residents



Source: LEHD

Table 8-4 Top Ten Work Destinations for San Marcos Residents

Work Destination	Number	% of Total
San Diego city, CA	7,071	19.9%
San Marcos city, CA	4,711	13.3%
Carlsbad city, CA	4,160	11.7%
Escondido city, CA	2,594	7.3%
Vista city, CA	2,346	6.6%
Oceanside city, CA	1,586	4.5%
Encinitas city, CA	1,034	2.9%
Los Angeles city, CA	807	2.3%
Poway city, CA	598	1.7%
Irvine city, CA	497	1.4%
All Other Locations	10,046	28.3%

Source: LEHD; Economic & Planning Systems

Table 8-5 Top Ten Origins of San Marcos Workers

Origin of Employee	Number	% of Total
San Marcos	4,711	14%
Escondido	4,169	12%
San Diego	3,275	9%
Oceanside	2,908	8%
Vista	2,449	7%
Carlsbad	1,645	5%
Los Angeles	757	2%
Encinitas	701	2%
Chula Vista	428	1%
Fallbrook	415	1%
All Other Locations	13,259	38%

Source: LEHD; Economic & Planning Systems

A comparison of the sectors in which residents work with those located in the City provides insight into areas where residents' skills do not match local employment opportunities. For example, there are over 2,500 more City jobs in the education sector than there are residents working in education. On the other end of the spectrum, there are 1,750 more residents working in the finance and insurance sector than could be accommodated by City finance and insurance jobs.

Table 8-6 provides a breakdown of resident employment by industry, and Figure 8-2 shows the differences between City jobs and resident employment for all industry sectors. Positive numbers indicate industries where there are more City jobs than residents working in the industry, and negative numbers indicate industries with more residents working in them than there are jobs in the City. While no city can or should perfectly match their job opportunities to the skills of their residents, there are benefits to closing some of these gaps, and the General Plan Update process will allow the City to identify strategies to address them.

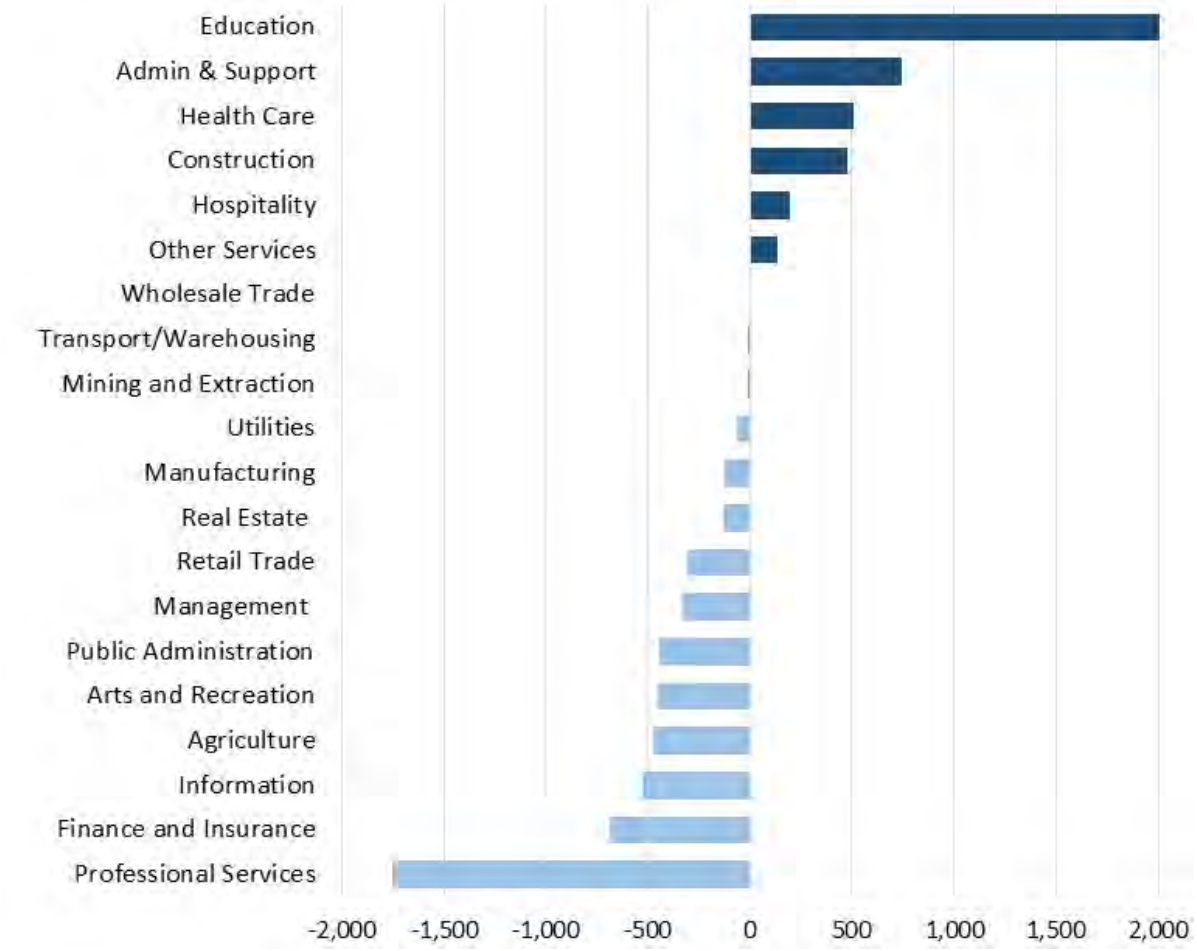
Table 8-6 Resident Employment By Industry

Industry Sector	San Marcos # (2017)	San Marcos Share	San Marcos % Ch. '10-'17	Trade Area [1] # (2017)	Trade Area [1] Share	Trade Area [1] % Ch. '10-'17	San Diego County # (2017)	San Diego County Share	San Diego County % Ch. '10-'17
Total Primary Jobs	**35,450**	**100%**	**44%**	**246,482**	**100%**	**19%**	**1,300,656**	**100%**	**12%**
Goods-Producing									
Agriculture, Forestry, Fishing and Hunting	521	1%	28%	3,639	1%	3%	10,523	1%	2%
Mining, Quarrying, and Oil and Gas Extraction	8	0%	-47%	87	0%	-27%	475	0%	-25%
Utilities	161	0%	-11%	1,198	0%	-19%	6,364	0%	-5%
Construction	2,201	6%	64%	15,664	6%	50%	73,890	6%	45%
Manufacturing	4,152	12%	29%	26,010	11%	16%	105,757	8%	10%
Subtotal	**7,043**	**20%**	**36%**	**46,598**	**19%**	**22%**	**197,009**	**15%**	**19%**
Service-Producing									
Wholesale Trade	1,988	6%	45%	13,332	5%	17%	55,224	4%	17%
Retail Trade	3,623	10%	43%	25,719	10%	14%	129,741	10%	11%
Transportation and Warehousing	694	2%	55%	5,244	2%	32%	32,960	3%	29%
Information	768	2%	31%	5,042	2%	2%	28,750	2%	-2%
Finance and Insurance	1,151	3%	51%	7,932	3%	15%	47,251	4%	8%
Real Estate and Rental and Leasing	665	2%	43%	4,893	2%	12%	26,529	2%	10%
Professional, Scientific, and Technical Services	3,158	9%	48%	21,376	9%	16%	129,213	10%	10%
Management of Companies and Enterprises	532	2%	57%	3,825	2%	29%	22,809	2%	26%
Admin & Support, Waste Mgmt and Remediation	2,148	6%	39%	15,494	6%	17%	82,297	6%	16%
Educational Services	3,460	10%	40%	21,478	9%	13%	123,597	10%	0%
Health Care and Social Assistance	3,912	11%	64%	29,007	12%	35%	166,844	13%	28%
Arts, Entertainment, and Recreation	815	2%	50%	6,045	2%	16%	30,459	2%	-2%
Accommodation and Food Services	3,544	10%	64%	26,101	11%	38%	141,684	11%	29%
Other Services (excluding Public Administration)	1,189	3%	18%	8,438	3%	1%	46,110	4%	-10%
Public Administration	760	2%	3%	5,958	2%	-14%	40,179	3%	-21%
Subtotal	**28,407**	**80%**	**46%**	**199,884**	**81%**	**19%**	**1,103,647**	**85%**	**11%**

[1] Trade Area is the cities of Carlsbad, Escondido, Oceanside, San Marcos, and Vista

Source: LEHD; Economic & Planning Systems

Figure 8-2 Difference in Jobs By Industry held by San Marcos Workers versus San Marcos Residents



Source: LEHD; EPS

8.3.3 Wages

The median wage earned by City residents is slightly higher than the Trade Area and slightly lower than the County, although all three are within a $1,600 range (see Table 8-7). Industries in which City residents earn more than County residents include wholesale trade, transportation/warehousing, finance and insurance, and professional services, among others. The growth in the number of City residents employed in these industries specifically has also outpaced the growth in employed City residents overall. These trends together correspond with the City's household income growth described in the previous section.

It is also notable that City and Trade Area residents earn more than workers countywide in both industries that traditionally require higher levels of educational attainment (such as professional services and finance and insurance) and those that do not necessarily require post-secondary, or in some cases even high school degrees (such as wholesale trade and transportation/warehousing). This data shows that in many sectors, the Trade Area is offering better paying jobs relative to the County.

Table 8-7 Median Wage by Industry for Resident Workforce

Industry	San Marcos Median Wage	San Marcos % of Workers	Trade Area [1]	San Diego County
Professional, scientific, and technical services	$99,966	8.2%	$88,680	$81,959
Utilities	$80,750	0.8%	$96,725	$86,168
Public administration	$80,167	2.6%	$73,272	$69,833
Wholesale trade	$80,125	2.9%	$56,895	$52,406
Information	$74,537	1.9%	$77,860	$78,974
Finance and insurance	$74,188	3.0%	$69,463	$66,461
Educational services	$73,662	7.9%	$63,542	$59,687
Manufacturing	$62,803	12.7%	$61,357	$66,995
Transportation and warehousing	$62,655	2.5%	$53,568	$48,555
Median Annual Wage	**$51,882**	**-**	**$51,319**	**$52,923**
Real estate and rental and leasing	$51,641	2.7%	$58,810	$53,690
Arts, entertainment, and recreation	$51,382	2.9%	$48,339	$40,229
Construction	$43,311	6.8%	$45,407	$50,420
Retail trade	$42,031	10.4%	$37,856	$37,786
Health care and social assistance	$41,143	12.0%	$46,072	$50,990
Accommodation and food services	$30,313	8.2%	$28,383	$28,919
Other services except public administration	$29,763	6.2%	$32,828	$35,495
Admin and support and waste mgmt services	$27,933	6.7%	$32,414	$35,134
Agriculture, forestry, fishing and hunting	$26,397	1.3%	$29,971	$26,590
Mining, quarrying, and oil and gas extraction	-	0.2%	$150,804 [2]	$53,686
Management of companies and enterprises	-	0.1%	$112,739 [3]	$102,346

Source: U.S. Census; American Community Survey; Economic & Planning Systems

[1] Trade Area is the cities of Carlsbad, Escondido, Oceanside, San Marcos, and Vista. Value shown represents a weighted average of the median wages for each city, weighted by total number of employees in each industry by city.

[2] Incomplete wage data reported by ACS for all cities within trade area; value shown is for Carlsbad only, which is home to 31 percent of all Trade Area employees in this industry.

[3] Incomplete wage data reported by ACS for all cities within trade area; value shown incorporates wage data for Vista and Oceanside only, which are home to 16 percent and 28 percent of all Trade Area employees in this industry respectively.

8.3.4 Job Growth Projections

SANDAG projects a nearly 30 percent increase in jobs in San Marcos over the next 20 years—faster than the Trade Area and County, and faster than growth seen between 2010 and 2017. Realizing this growth will require the City to pursue policies that support both an appropriately-skilled and educated workforce to fill the jobs of the future, as well as land use patterns that allow for the space needs of these jobs. These policies will be addressed in the Economic Development Element of the General Plan.

Table 8-8 Projected Employment Growth, 2020 to 2040

Employment	San Marcos	Trade Area [1]	San Diego County
2020	45,783	265,897	1,520,180
2040	59,106	304,088	1,715,156
% Change from 2020 to 2040	29%	14%	13%

[1] Trade Area is the cities of Carlsbad, Escondido, Oceanside, San Marcos, and Vista

Source: SANDAG 2012-2050 Growth Forecast; Economic & Planning Systems

8.4 RESIDENTIAL REAL ESTATE MARKET

This chapter provides an overview of the residential real estate market in San Marcos. The makeup of the City's housing stock and trends in housing affordability is a physical manifestation of the demographic characteristics discussed in the previous chapter.

8.4.1 Composition of Housing Stock

Like the rest of the Trade Area and County, the City's housing stock consists primarily of owner-occupied single-family homes. As shown in Table 8-9, this product type makes up 49 percent of all housing units in the City, the same proportion as the Trade Area and slightly higher than the County overall. The City's proportion of units within multifamily buildings—which includes duplexes and four-plexes as well as larger apartment buildings—is 26 percent, below the proportion of similar unit types in the Trade Area and the County. Although the City has also a relatively high proportion of housing units defined as "Other," which primarily includes mobile homes, a more affordable option for homeownership, these units have declined over time.

While housing in San Marcos is mostly owner-occupied—61 percent versus 39 percent renter-occupied—the proportion of owner-occupied units has been decreasing since 2000. A similar trend can be seen in the Trade Area and County. Most of this shift has occurred in single-family homes. An increasing number of these homes have shifted to renter-occupied, likely a reflection both of the challenges that many households face in attaining home ownership, as well as a consequence of many households losing their homes during the Recession.

Paralleling population trends, the City's housing stock has grown faster than the Trade Area and the County since 2000—around 3.5 percent growth annually over the 18-year period—although it slowed considerably between 2010 and 2018 (see Table 8-10). In the same period, the City's vacancy rate remained flat, relatively low (below five percent), and below the Trade Area and County. In other words, the City has generally been successful in absorbing its new housing stock over the past two decades, even during the Recession.

Table 8-9 Trends in Tenure by Housing Type, Occupied Units, 2000-2018

Category	2000 San Marcos	2000 Trade Area [1]	2000 San Diego County	2010 San Marcos	2010 Trade Area [1]	2010 San Diego County	2018 San Marcos	2018 Trade Area [1]
Percent Tenure								
Owner-Occupied	66%	60%	55%	63%	60%	56%	61%	56%
Renter-Occupied	34%	40%	45%	37%	40%	44%	39%	44%
Percent Type								
Single-Family	**56%**	**61%**	**61%**	**62%**	**64%**	**62%**	**61%**	**63%**
Owner-Occupied	*47%*	*51%*	*48%*	*51%*	*51%*	*48%*	*49%*	*49%*
Renter-Occupied	*9%*	*11%*	*13%*	*11%*	*12%*	*14%*	*12%*	*15%*
Multifamily	**25%**	**31%**	**35%**	**27%**	**30%**	**34%**	**26%**	**31%**
Owner-Occupied	*1%*	*3%*	*4%*	*2%*	*3%*	*5%*	*2%*	*3%*
Renter-Occupied	*23%*	*28%*	*31%*	*25%*	*27%*	*29%*	*24%*	*28%*
2-4 Units	*3%*	*7%*	*7%*	*4%*	*6%*	*7%*	*4%*	*6%*
5+ Units	*22%*	*25%*	*27%*	*23%*	*24%*	*27%*	*22%*	*25%*
Other [2]	**19%**	**7%**	**4%**	**12%**	**6%**	**4%**	**13%**	**6%**
Owner-Occupied	*18%*	*6%*	*4%*	*11%*	*5%*	*3%*	*11%*	*5%*
Renter-Occupied	*2%*	*1%*	*1%*	*1%*	*1%*	*1%*	*2%*	*1%*

[1] Trade Area is the cities of Carlsbad, Escondido, Oceanside, San Marcos, and Vista

[2] "Other" housing types include mobile homes, boats, RVs, and vans

Source: U.S. Census; American Community Survey; Economic & Planning Systems

Table 8-10 Trends in Housing Units and Vacancy, 2000-2018

Item	2000	2010	2018	Ann. % Chg. '00-'18	Ann. % Chg. '10-'18
San Marcos					
Total Units	18,862	26,818	30,639	3.5%	1.8%
Vacancy Rate	4.0%	4.5%	4.8%		
Trade Area [1]					
Total Units	187,105	211,840	223,977	1.1%	0.7%
Vacancy Rate	4.4%	7.0%	5.9%		
San Diego County					
Total Units	1,040,149	1,154,874	1,204,884	0.9%	0.5%
Vacancy Rate	4.4%	8.1%	7.1%		

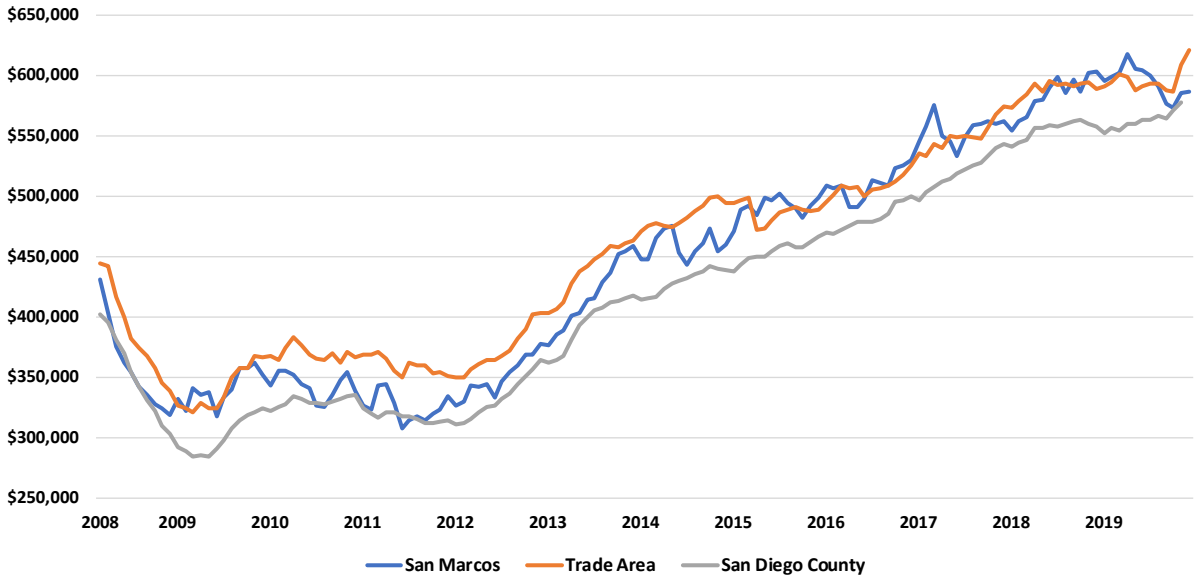
[1] Trade Area is the cities of Carlsbad, Escondido, Oceanside, San Marcos, and Vista

Source: U.S. Census; American Community Survey; Economic & Planning Systems

8.4.2 Housing Price and Rent Trends

After suffering a dip during the Recession, home prices in the City, Trade Area, and County have been on a strong upward trajectory since 2012. As shown in Figure 8-3, the City and Trade Area's median home sale prices have remained relatively close over that period, with the Trade Area median about five percent higher than the City's on average in 2019. Both areas have generally had higher median sale prices than the County overall—about five to six percent higher in 2019.

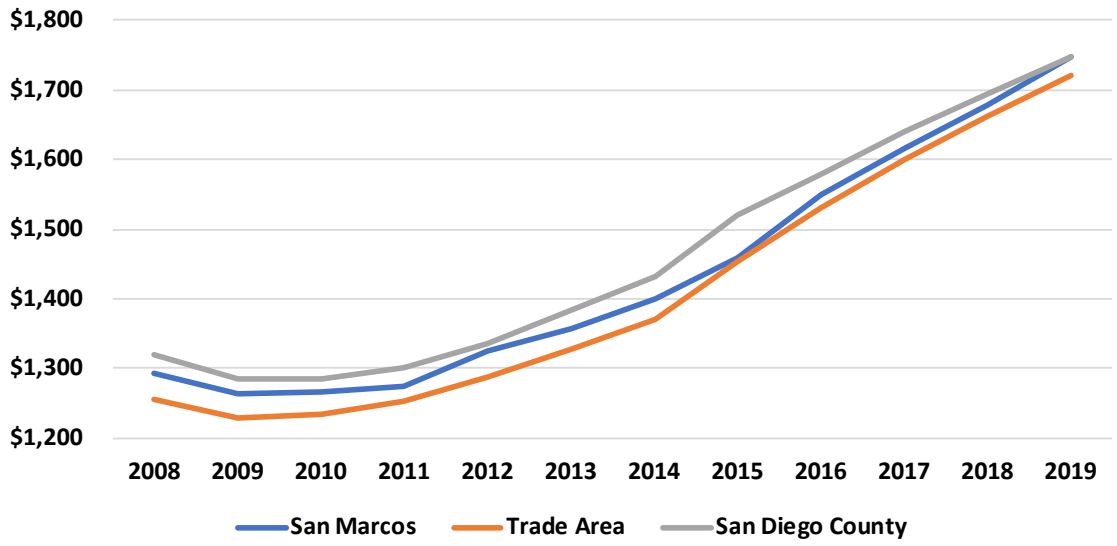
Figure 8-3 Median Home Sale Price in San Marcos, Trade Area, and San Diego County (2008-2019)



Trade Area is the weighted average of the median home sales prices of Carlsbad, Escondido, Oceanside, San Marcos, and Vista, weighted by number of home sales.
Source: Zillow; Economic & Planning Systems

Average asking rents in the City, Trade Area, and County started on a steady upward trajectory in 2010, and rents in 2019 are over 35 percent above 2010 levels in all three geographies, as shown in Figure 8-4. While rents in the County overall have generally been above the City and Trade Area, they have all been within $100 of each other throughout the 2008-2019 period. In 2019, the City's average asking rent was the same as the County, about $1,750 per month.

Figure 8-4 Average Asking Rents in San Marcos, Trade Area, and San Diego County (2008-2019)



Trade Area includes cities of Carlsbad, Escondido, Oceanside, San Marcos, and Vista.
Source: CoStar; Economic & Planning Systems

Strong and growing housing prices and rents in San Marcos, which are in line with regional and statewide trends, have also contributed to a high proportion of households that are considered cost-burdened.[2] As shown in Table 8-11, about one-third of homeowners in the City are cost-burdened, including 13 percent who are severely cost-burdened. Additionally, over half of renter households are cost-burdened, with 30 percent being severely cost-burdened. It is likely that some of these households include students not living in campus housing, whose cost-burdened status may be considered temporary, although still of concern. For those cost-burdened households including working professionals, it will be important for the City to consider strategies to facilitate the development of more housing supply, including deed-restricted affordable housing, in order to alleviate cost pressures and remain a city accessible to a wide range of households.

Table 8-11 Household Cost Burden Status By Tenure for San Marcos (2018)

Cost Burden (% of Income Spent on Housing Costs)	San Marcos
Owner-Occupied	
Not Cost Burdened (<30%)	56%
Cost Burdened (30%+)	33%
Severely Cost Burdened (50%+)	*13%*
Renter-Occupied	
Not Cost Burdened (<30%)	39%
Cost Burdened (30%+)	56%
Severely Cost Burdened (50%+)	*30%*

Source: U.S. Census; American Community Survey; EPS

[2] The Department of Housing and Urban Development (HUD) categorizes households as cost-burdened if they spend 30 percent or more of their income on housing costs, and severely cost-burdened if they spend 50 percent of more of their income on housing costs.

8.5 COMMERCIAL REAL ESTATE MARKET

8.5.1 Overview

The commercial real estate sector represents a physical manifestation of the San Marcos economy. This chapter provides an overview of the primary commercial real estate sectors in the City in terms of total inventory. Industrial uses represent the most predominant commercial real estate product type in the City terms of square feet, followed by retail, office, and flex space (see Table 8-12).

Table 8-12 Overview of San Marcos Commercial Real Estate Sector

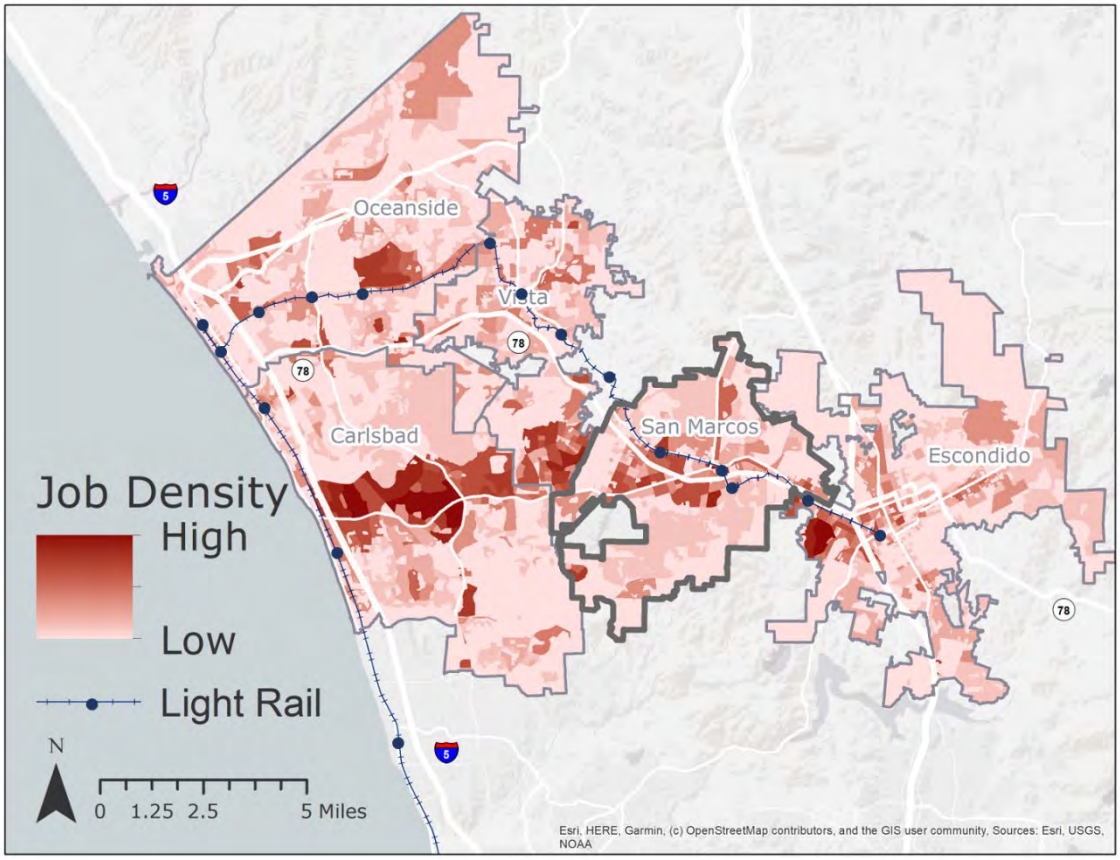
Real Estate Product Type	Total Building Square Feet (as of Q4 2019)	
	Amount	% of Total
Office	1,668,479	11%
Industrial	8,040,105	51%
Flex [1]	1,115,708	7%
Retail	4,833,660	31%
Total	15,657,952	100%

[1] Flex includes buildings that accommodate a mix of industrial, R&D, and office uses.

Source: CoStar; EPS

Figure 8-5 shows the density of jobs located throughout the Trade Area in 2017, which provides insight into the distribution of commercial development. Jobs in the region are concentrated around major transportation corridors, including Route 78, Route 76, and Interstate 5. There are also several job clusters adjacent to the Area's light rail system. A number of the City's Specific Plan areas that are targeted for more development, including the University District and San Marcos Creek areas, are already areas of higher job density, suggesting they are well-positioned as sites of further economic growth.

Figure 8-5 2017 Trade Area Jobs Density (with Light Rail Lines/Stations)



A further description of the market dynamics in the City's commercial real estate sectors is provided below. As with demographic and housing metrics, comparison statistics are included for the Trade Area and for San Diego County.

8.5.2 Industrial

Industrial space in San Marcos accounts for more than half of all commercial space in the City, and 17 percent of all industrial space in the Trade Area, as shown in Table 8-13. The space is primarily clustered in several industrial/business parks along Route 78, with an additional cluster along La Costa Meadows Drive in the southern part of the City which includes the headquarters of Hunter Industries, one of the City's largest employers.

Table 8-13 Industrial Space Trends

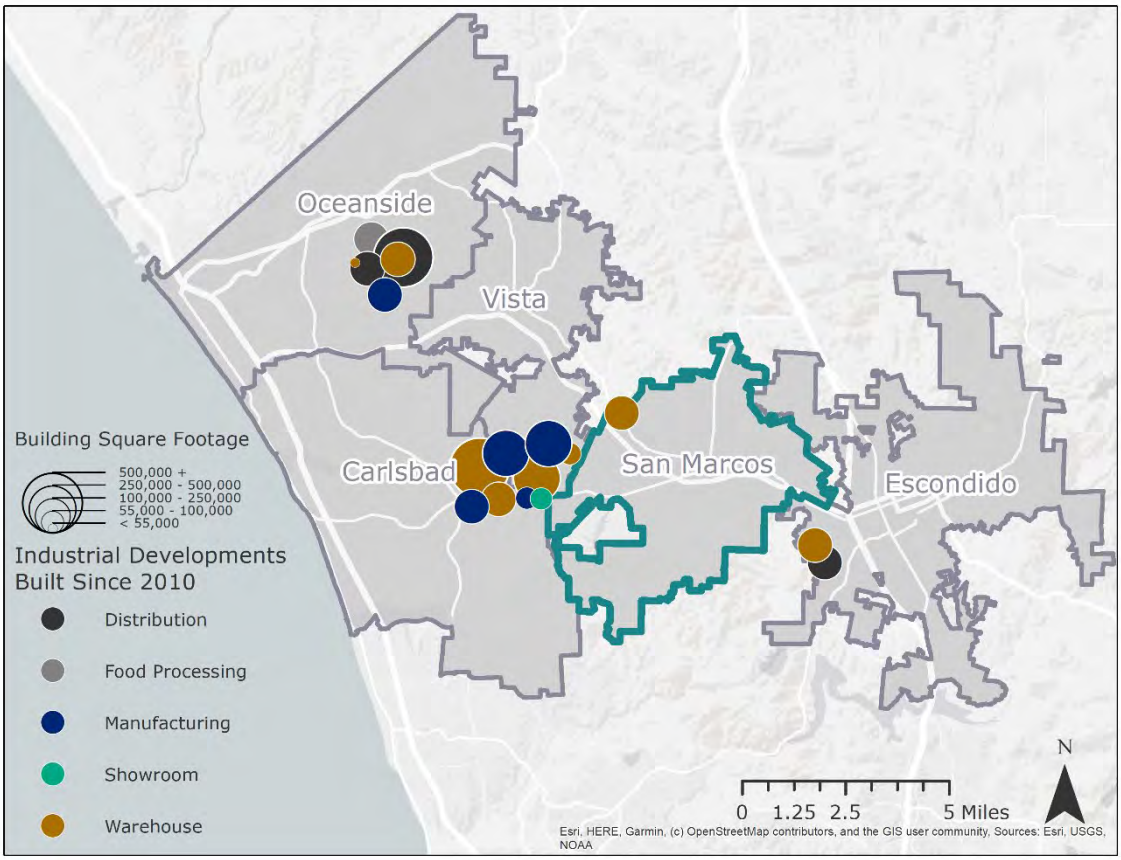
Item (as of Q4 2019)	San Marcos	Trade Area [1]	San Diego County
Performance			
NNN Rent per Square Foot	$11.32	$11.43	$11.78
Vacancy	8.4%	7.5%	4.7%
Inventory			
Square Feet	8,040,105	46,688,718	146,001,804
Share of Trade Area	17%	-	-
Share of County	5.5%	32%	-
Growth 2010 - Q4 2019			
Net New Inventory	222,028	3,990,446	6,172,366
% of Total Inventory	2.8%	8.5%	4.2%
Share of Trade Area	5.6%	-	
Share of County	3.6%	64.7%	

[1] Trade Area includes the cities of Carlsbad, Escondido, Oceanside, San Marcos, and Vista.

Source: CoStar; EPS

The City added about 222,000 square feet of industrial space to its inventory over the past decade, an increase of less than three percent. All of the space was in a single four-building industrial campus on Bosstick Boulevard (the *production* development by RAF Pacifica Group). At the same time, industrial inventory in the Trade Area overall grew by 8.5 percent. Much of this new space has been built in Oceanside and Carlsbad, primarily in warehouse and distribution facilities (see Figure 8-6). This corresponds with regional growth in the transportation and warehousing sector, where jobs grew by nearly 30 percent in the Trade Area since 2010. The new industrial inventory in the Trade Area accounts for almost two-thirds of all new industrial space built in the County, reflecting that the Trade Area's locational advantages near major regional transportation corridors and existing land use patterns and development supporting industrial uses are attractive to developers of these facilities.

Figure 8-6 Trade Area Industrial Space Built Since 2010



At the same time that inventory is being added, industrial space vacancy rates in the City and Trade Area have been increasing, particularly over the past five years, and are higher than for the County overall. In the Trade Area, net absorption of industrial space has been also been positive during the same time period. So although new space is not being absorbed as fast as it is being built, the trajectory suggests that it will continue to be absorbed.

San Marcos, on the other hand, has seen net negative absorption of its industrial space over the past five years, and less than half of the space at the *production* campus is currently listed as leased. While the City has seen increases in the number of wholesale trade and transportation and warehousing jobs—jobs typically housed in industrial space—it has seen a decline in its manufacturing jobs. At the same time, manufacturing jobs are growing Trade Area-wide, as are jobs in other sectors utilizing newer format industrial spaces, such as life sciences and breweries. These statistics suggest that there is and will be opportunity for the City to capture the industrial space demands in the future, a fact confirmed by a number of proposed and in process development projects in the City that include new industrial space.

8.5.3 Flex

Although flex space is closely related to industrial space, it is a distinct use and tends to be associated more closely with research and development and light industrial/ manufacturing uses. Flex space makes up seven percent of commercial space in the City and ten percent of space in the Trade Area. While flex space rents in the City and Trade Area are below those of the County, they are higher than industrial rents across the board (see Table 8-14). The City also has a lower flex vacancy rate than the Trade Area and County, although it has not added any new space in this category over the past ten years.

Table 8-14 Flex Space Trends

Item (as of Q4 2019)	San Marcos	Trade Area [1]	San Diego County
Performance			
NNN Rent per Square Foot	$12.40	$14.96	$25.89
Vacancy	6.5%	9.1%	7.7%
Inventory			
Square Feet	1,115,708	11,008,561	49,764,410
Share of Trade Area	10%	-	-
Share of County	2.2%	22%	-
Growth 2010 - Q4 2019			
Net New Inventory	0	367,777	2,605,636
% of Total Inventory	0.0%	3.3%	5.2%

[1] Trade Area includes the cities of Carlsbad, Escondido, Oceanside, San Marcos, and Vista.

Source: CoStar; EPS

8.5.4 Retail

Retail is the second largest commercial real estate sector in the City, comprising over 30 percent of the overall space. While the City's retail space has higher vacancy rates than the Trade Area and County, it has also been adding inventory at a faster rate. Retail rents in the City are comparable to the Trade Area overall but lower than rents in the County (see Table 8-15).

Table 8-15 Retail Space Trends

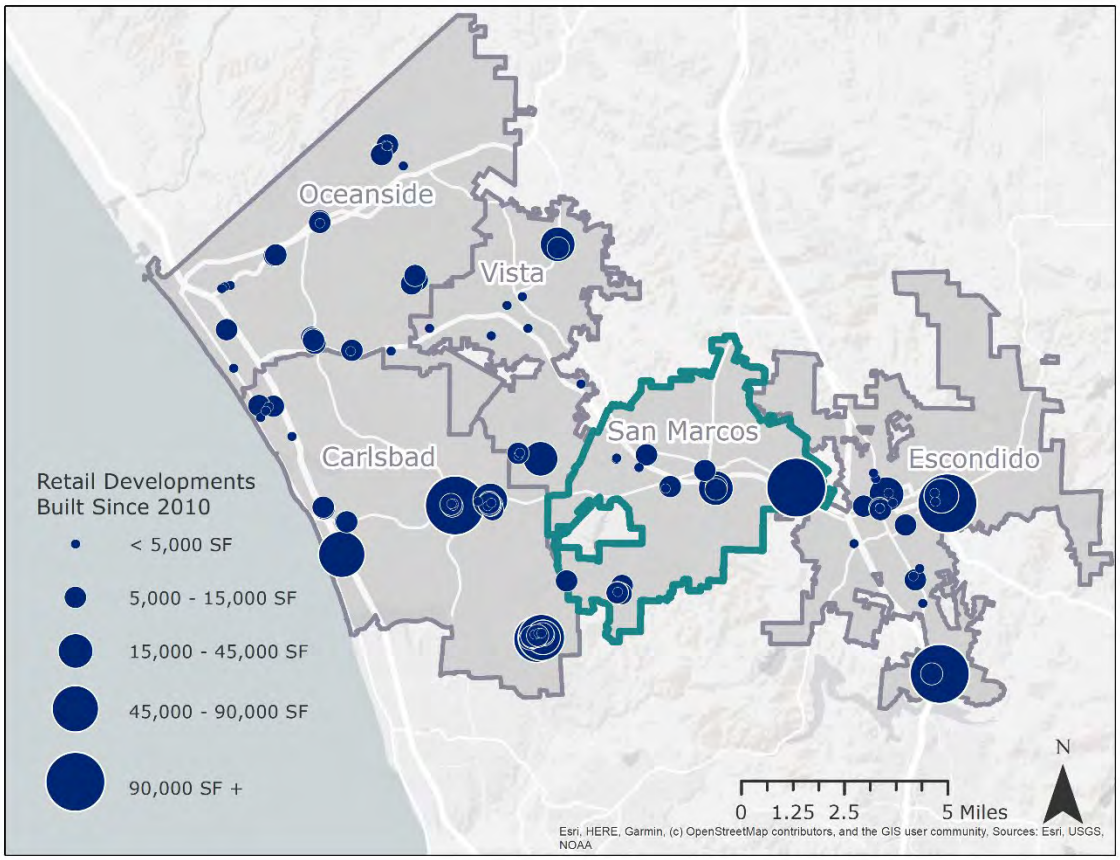
Item (as of Q4 2019)	San Marcos	Trade Area [1]	San Diego County
Performance			
NNN Rent per Square Foot	$19.83	$19.64	$24.27
Vacancy	6.3%	4.5%	3.8%
Inventory			
Square Feet	4,833,660	33,039,904	140,988,798
Share of Trade Area	15%	-	-
Share of County	3.4%	23%	-
Growth 2010 - Q4 2019			
Net New Inventory	266,863	1,486,865	5,374,242
% of Total Inventory	5.5%	4.5%	3.8%
Share of Trade Area	17.9%		
Share of County	5.0%	27.7%	

[1] Trade Area includes the cities of Carlsbad, Escondido, Oceanside, San Marcos, and Vista.

Source: CoStar; EPS

While other Trade Area cities have seen more retail development since 2010, particularly Carlsbad and Escondido (see Figure 8-7), there have been some notable retail additions in the City. Most of the new retail space built in the City since 2010 was contained in a new Costco store, but there were also space additions in North City at The Quad and Block C developments and at the San Elijo Town Center, both of which are mixed-use residential/retail projects. The completed projects in North City, a planned mixed-use "urban village" located near CSUSM and within the University District Specific Plan area, represent just a fraction of 700,000 square feet of mixed-use retail space proposed for that Specific Plan area.

Figure 8-7 Trade Area Retail Space Built Since 2010



Retail Leakage

Comparing San Marcos's taxable sales per capita by major business type categories with the Trade Area and San Diego County can provide a useful benchmark for assessing the City's relative retail strengths and weaknesses. As illustrated in Table 8-16, San Marcos sees sales "leakage" as compared to the Trade Area and County in the categories of motor vehicles and parts, clothing stores, gas stations, food and beverage stores, and food and drinking places.[3] Some of this leakage can be attributed to clustering of certain uses—for example, auto dealerships tend to co-locate in "auto mall" areas, which in North County are located in Carlsbad and Escondido. Similarly, clothing stores often locate in regional malls and lifestyle centers, none of which are located in San Marcos.

Other categories suggest growth opportunities. For example, while the City's per capita leakage in sales at food and beverage stores and food and drinking places is not large, it does suggest potential for further growth. These are also retail types that lend themselves to mixed-use environments, particularly food and drinking places. Additionally, there are several categories where the City has greater average per capita sales than the Trade Area and County, including home furnishings and appliances, general merchandise, and building

[3] Leakage is defined as per capita retail sales that fall below the overall per capita sales for the Trade Area or County.

materials and garden equipment, suggesting that the City is home to regional clusters of these retail types.

Table 8-16 Taxable Sales per Capita per Category, Calendar Year 2018

Category	San Marcos	Trade Area [1]	San Diego County	San Marcos vs. Trade Area	San Marcos vs. SD County
Population (2018)	**94,709**	**634,991**	**3,302,833**		
Total Retail and Food Services	**$12,657**	**$13,657**	**$12,682**	($1,000)	($25)
Motor Vehicle and Parts Dealers	$1,167	$3,507	$2,313	($2,339)	($1,146)
Home Furnishings and Appliance Stores	$1,786	$672	$747	$1,114	$1,039
Building Material and Garden Equipment	$1,738	$1,221	$920	$517	$818
Food and Beverage Stores	$716	$841	$759	($125)	($43)
Gasoline Stations	$1,107	$1,476	$1,303	($369)	($196)
Clothing and Clothing Accessories Stores	$603	$1,049	$1,156	($445)	($553)
General Merchandise Stores	$2,414	$1,787	$1,544	$628	$870
Food Services and Drinking Places	$1,969	$2,021	$2,422	($51)	($453)
Other Retail Group	$1,157	$1,085	$1,518	$72	($361)
All Other Outlets	**$3,469**	**$4,155**	**$5,194**	($686)	($1,725)
Total All Outlets	**$16,126**	**$17,812**	**$17,876**	($1,686)	($1,750)

[1] Trade Area includes the cities of Carlsbad, Escondido, Oceanside, San Marcos, and Vista.

Source: California Board of Equalization; EPS

It is important to note that the overall positive net absorption of retail space in the City and Trade Area over the past five years, coupled with low vacancy rates, would typically imply a market approaching a supply equilibrium and signal an opportunity for new construction. However, the pronounced and ongoing structural shift in retail at the national level has partially undermined this traditional growth model. In particular, the growth of e-commerce presents a significant threat to brick and mortar retail expansion, particularly in categories such as consumer electronics, appliances, clothing and clothing accessories, and books and music.

One approach to combatting online retail sales erosion is for developers and retail operators to create services and environments that cannot be replicated online. This can be accomplished by retail environments with a strong sense of place, special programming to encourage repeat visits, and other forms of in-person experience, coupled with a mix of other uses. The concept of North City is a prime example of this model, one that can serve not only as a regional destination for dining, entertainment, and shopping, but as a center of activity that attracts and retains residents and businesses. The General Plan's Economic Development Element will further consider the changing landscape of the retail economy over time and incorporate policy-level direction to enable San Marcos to support additional efforts to stay competitive in the regional retail and commercial environments.

8.5.5 Office

While the San Marcos office sector is relatively small, accounting for about 11 percent of commercial space, it is also the fastest growing, with almost 10 percent of the City's inventory built since 2010. The City's office vacancy rate is half that of the Trade Area, even with comparable rents, as shown in Table 8-17. At the same time, both the City and Trade Area have had positive net absorption of office space, indicating that the City is absorbing its new office space more successfully than the Trade Area as a whole.

Table 8-17 Office Space Trends

Item (as of Q4 2019)	San Marcos	Trade Area [1]	San Diego County
Performance			
Gross Rent per Square Foot	$27.44	$28.43	$33.66
Vacancy	6.2%	12.2%	8.5%
Inventory			
Square Feet	1,668,479	15,359,299	116,253,094
Share of Trade Area	11%	-	-
Share of County	1.4%	13%	-
Growth 2010 - Q4 2019			
Net New Inventory	161,202	1,402,643	7,202,821
% of Total Inventory	9.7%	9.1%	6.2%
Share of Trade Area	11.5%		
Share of County	2.2%	19.5%	

[1] Trade Area includes the cities of Carlsbad, Escondido, Oceanside, San Marcos, and Vista.

Source: CoStar; EPS

Common office-oriented sectors such as professional services, real estate, finance and insurance, and information represent less than ten percent of all jobs in the City, and growth in those sectors made up just 2.5 percent of new jobs added from 2010 to 2017. However, more than half of all office space in the City, and nearly all of the new space added since 2010, is for medical office use. This includes the PIMA Medical Institute building in North City and the Kaiser Permanente Medical Center. This is accompanied by an increase of 2,000 jobs in the City's health care sector since 2010, over 30 percent of all jobs added in that time period.

The healthcare sector will likely continue to drive growth in office space, particularly with the recently-announced Kaiser Permanente hospital and expansion of Scripps Health facilities. However, the City does have a resident workforce with the skills to work in other office-oriented sectors, as illustrated by the large number of residents who commute out

of the City to jobs in professional services, finance and insurance, and information. This may present the City with an opportunity to attract more of these jobs, particularly if it can support the development of in-demand office space formats as part of a dynamic, mixed-use environment.

8.5.6 Hospitality

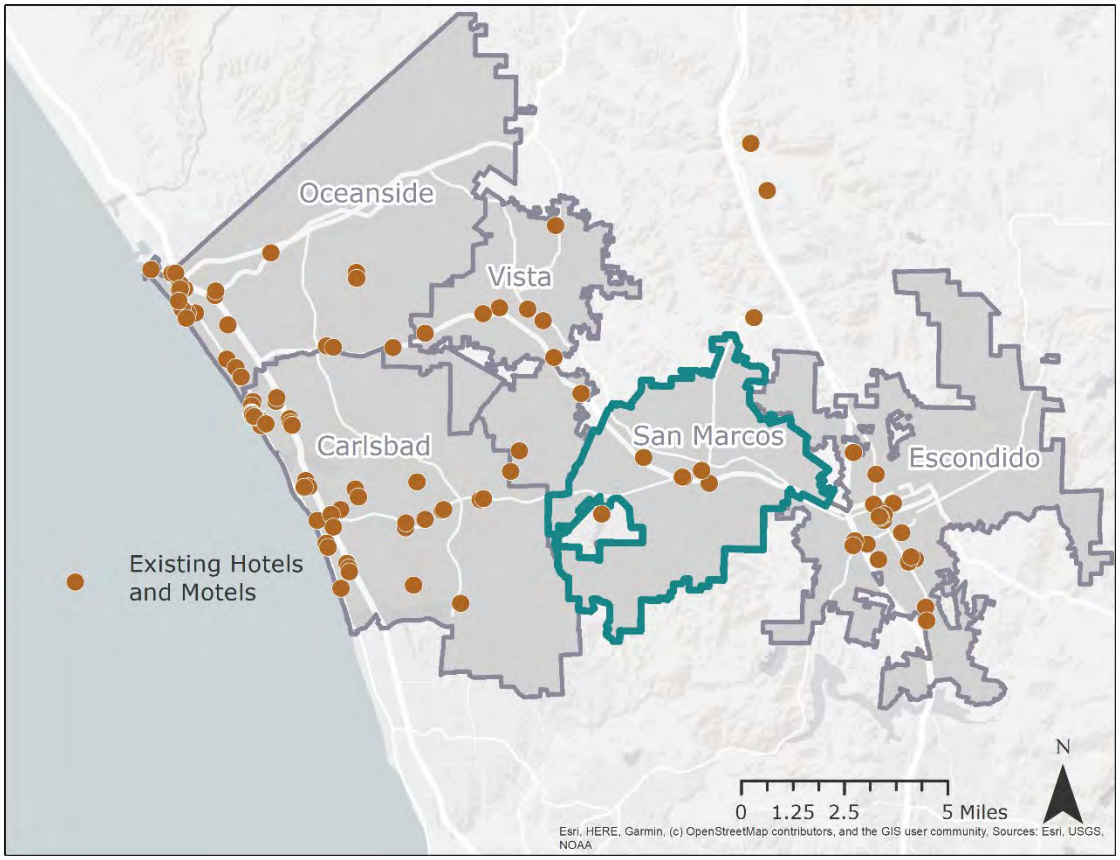
Within the context of the Trade Area, hotel development in San Marcos is limited. The City has about 600 rooms across seven hotels, representing less than seven percent of all rooms in the Trade Area (see Table 8-18). As shown in Figure 8-8, the majority of the Trade Area hotels and rooms are in Carlsbad, followed by Oceanside, reflecting the larger tourist economies of those beach cities.

Table 8-18 Hotel Inventory in San Marcos and Trade Area

Name	Number of Rooms	Year Built	Star Rating
San Marcos Hotels			
Hampton Inn	69	-	3
Golden Door Spas	40	1958	1
Lakehouse Hotel & Resort	142	-	3
Residence Inn	112	2010	3
Fairfield Inn & Suites San Diego North	85	2017	3
Ramada Inn Limited	85	-	3
Days Inn	84	-	3
Total	**617**		
Trade Area		**Most Recent**	
One-Star Hotels	114	1978	N/A
Two-Star Hotels	1,435	2015	N/A
Three-Star Hotels	5,948	2018	N/A
Four-Star Hotels	1,071	2019	N/A
Five-Star Hotels	478	2017	N/A
Total	**9,046**		
San Marcos Share	**6.8%**		

Source: CoStar; TripAdvisor; Economic and Planning Systems

Figure 8-8 Location of Hotels in Trade Area



The City's low inventory of hotel rooms, while not surprising given its lack of tourist attractions, has implications for the City's budget. In 2018 the City collected approximately $1.3 million in transient occupancy tax (TOT)—the lowest amount among the five Trade Area cities.[4] However, TOT levels in the City have been on an upward trajectory over the past decade. The City's major industries, particularly higher education and healthcare, do typically have a need for lodging facilities, and planned expansions of the City's major employers in those industries present an opportunity for future growth in this real estate sector. That said, the hospitality sector is expected to be the hardest hit by the coronavirus pandemic, which may limit investment and expansion in the near term.

[4] Visit California, "California Travel Impacts: 2000-2018p," April 2019.

8.6 FISCAL TRENDS

The General Plan Update can alter the trajectory of the City's budget resources and needs, particularly through changes in land use growth patterns, service standards, and facility needs. Changes and growth in land use in the City will impact both the major revenue sources for the General Fund, including property and sales taxes, and the major services funded by the General Fund, including public safety and public works. The analysis in this chapter will identify the current distribution of and trends in those sources and uses, and identify areas of fiscal opportunities or challenges that will be affected by the General Plan.

An additional consideration is the funding of public improvements needed to support new growth and development projected in the General Plan. This funding does not generally come from the General Fund, but rather via other financing mechanisms. As part of the General Plan process, EPS will produce a memo that identifies and evaluates a set of available financing tools and resources that the City may use to address one-time and/or on-going costs related to public improvements associated with the General Plan.

8.6.1 Revenue and Expenditure Categories

This section looks at the distribution of revenues and expenditures in the City's fiscal year 2018-19 projected budget (as reported in the FY 2019-20 adopted budget), focusing on categories that will be most directly impacted by the land use decisions made through the General Plan process.

General Fund Revenues

Revenues sources that are most impacted by changes in land use include property tax, sales tax, transient occupancy tax, and license and permit fees. In San Marcos, property taxes are the single largest contributor to the City's General Fund, representing 28 percent of revenue, followed closely by sales tax at 21 percent, as shown in Figure 8-9. Transient occupancy tax is a relatively low contributor, representing just two percent of revenues, as are licenses and permits, representing six percent. Key factors affecting potential growth in these sources include the following:

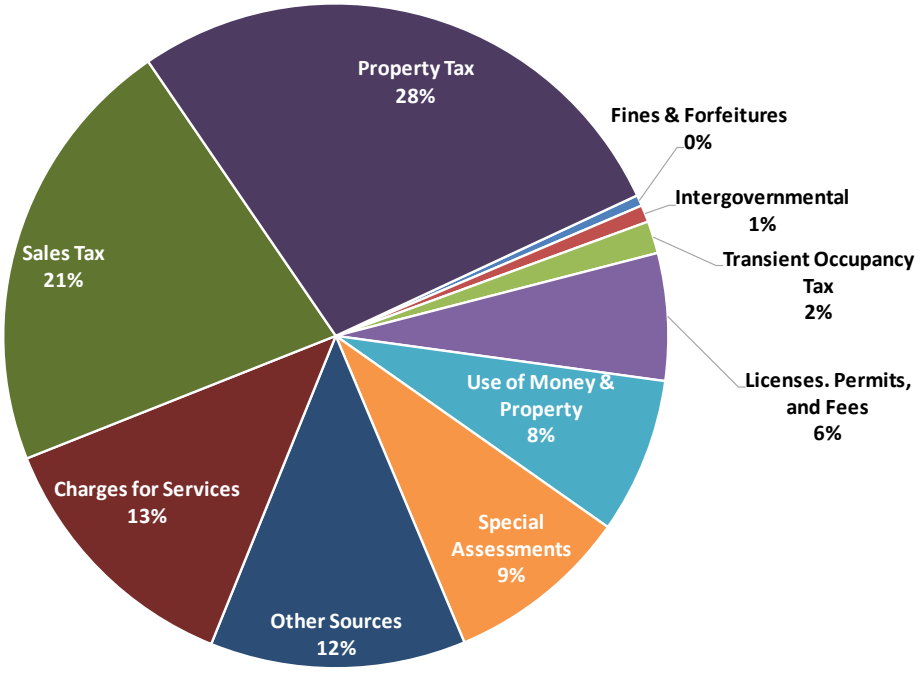
- **Property Tax**: San Marcos receives an average of about 7 percent of total property tax revenue collected within the City limits, a relatively modest allocation compared to the Countywide average of 16 percent allocation. While the General Plan Update can consider opportunities to grow the City's assessed value, it faces strong limitations in changing the property tax rate or tax allocation factor, which is regulated by State law. Growth in property assessed value is limited to 2 percent per year absent a market transaction or physical alteration. Consequently, annual growth in property tax above 2 percent generally requires new development or investment property and/or turn-over from market transactions. While the General Plan can have a direct impact on the former, its influence on the latter is more nuanced.
- An additional consideration for the City as it relates to property tax revenues is the fact that its large employers in the education sector (such as CSUSM and Palomar College) and hospitals such as the new Kaiser Hospital are largely tax-exempt. Additional growth of these institutions will have overall economic benefits to the City but will not necessarily contribute to municipal revenue growth.

- **Sales Tax**: While San Marcos has a relatively healthy retail sector, substantial Trade Area competition and national changes in consumer behavior stemming from e-commerce and other factors will affect long-term growth in taxable sales. The General Plan can provide a variety of incentives, tools, and policies that can help this sector strategically adapt to these external forces.
- **Transient Occupancy Tax**: As noted in the previous chapter, the City's hotel sector is quite modest, and TOT is a minor contributor to the General Fund. Opportunities for new hotel demand and development are likely to be driven by the needs of the City's large and growing education and healthcare industries. The General Plan can play an important role in both through land use policy, initiatives that expand the local economy, and the provision and support of attractive community amenities that complement hospitality uses.
- **License and Permit Fees**: The license and permit fee category includes franchise fees (primarily paid by utility companies), business permit and license fees, and developer fees. New development and business activity drive these fees, so while land use plans that involve new development will have a positive impact on this source, these revenues will slow as the City becomes increasingly built out.

General Fund Expenditures

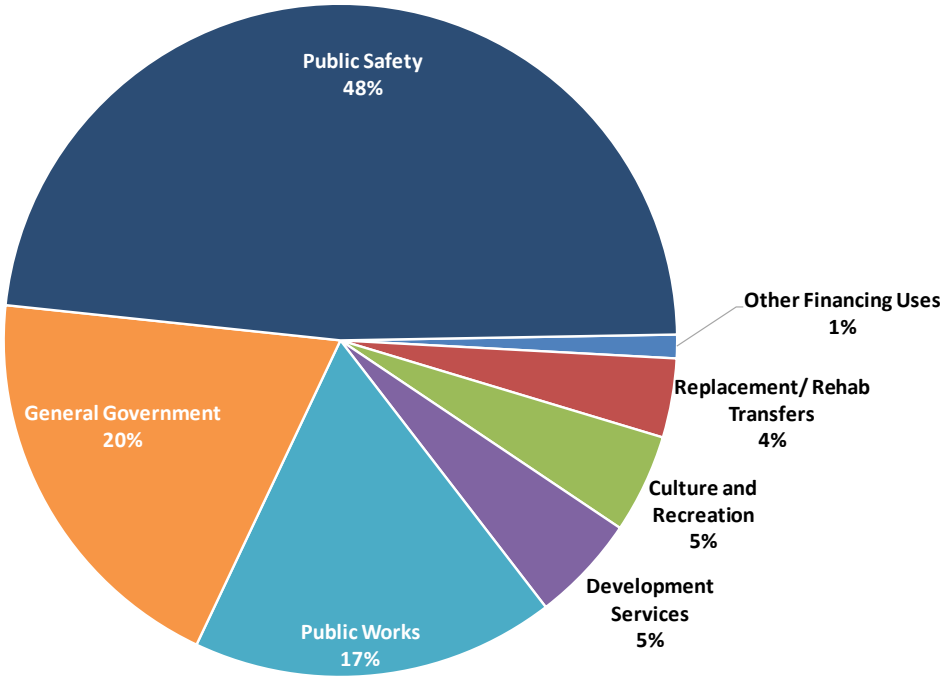
The General Fund is the primary fund to pay for basic city services, programs, and daily operations of the City. General fund expenditures by category are shown in Figure 8-10. In FY 2018-2019, nearly half of the general fund budget was allocated to public safety, including police and fire services; about 20 percent was allocated to general government; and 17 percent was allocated to public works. Public safety and public works in particular are categories significantly impacted by changes and growth in land use patterns. New development and new populations put additional burden on law enforcement, fire departments, and public infrastructure, particularly if the growth involves a larger service area. An important consideration for the General Plan is land use patterns which promote density and infill can mitigate, although not eliminate, this burden.

Figure 8-9 San Marcos General Fund Revenue Distribution by Category, FY18-19 (Projected)



Note: Excludes revenues categorized as "miscellaneous"
Source: City of San Marcos Adopted Annual Operations and Capital Budget, FY2019-20

Figure 8-10 San Marcos General Fund Expenditure Distribution by Category, FY18-19 (Projected)

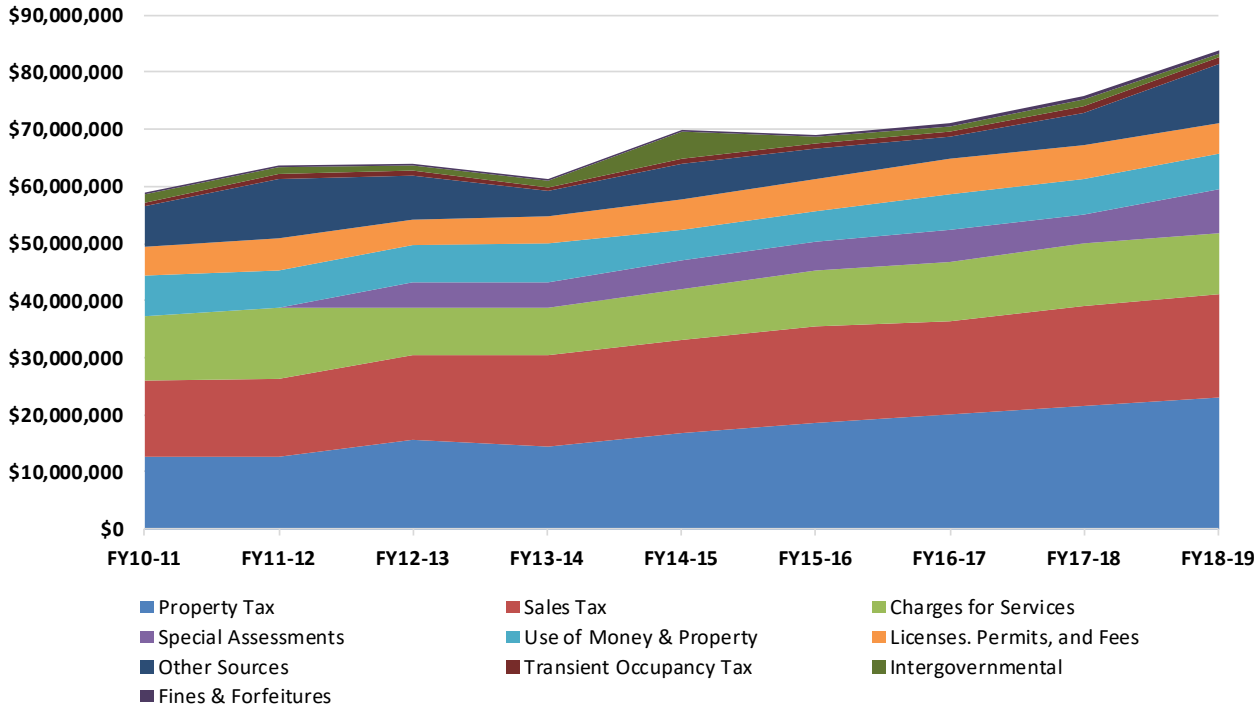


Source: City of San Marcos Adopted Annual Operations and Capital Budget, FY2019-20

8.6.2 Revenue and Expenditure Trends

Other than a big spike in expenditures in fiscal year 2014-15, due to several one-time investments by the City, San Marcos's General Fund revenues and expenditures have been on a steady upward trajectory from 2010 through 2019. Revenues overall increased by 42 percent—an annual growth rate of four percent, faster than regional inflation in the same period. For the past five years, property tax has been the largest revenue contributor to the General Fund, overtaking sales tax and demonstrating the positive fiscal impacts of new development. Most other sources have remained generally stable in their relative contributions over the past decade.

Figure 11 Trend in San Marcos General Fund Revenues, FY10/11 to FY18/19[5]

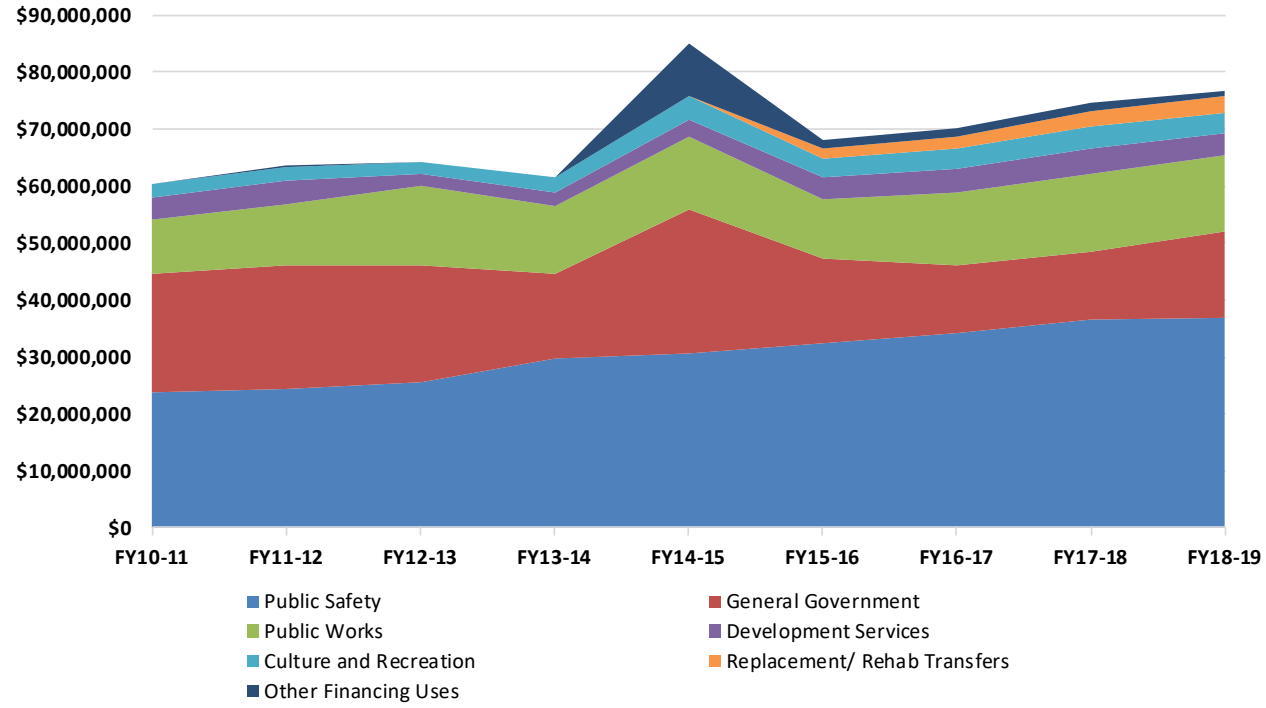


Source: City of San Marcos Adopted Budgets

[5] Graph excludes Miscellaneous revenues. Property Tax includes Property Tax in-lieu of Motor Vehicle License Fund revenues. Licenses, Permits, and Fees includes Developer Fees. General Fund Transfers to Rehab and Replacement funds began in FY 15/16.

Expenditures have grown more slowly than revenues—27 percent, or 2.7 percent on average annually—although still faster than regional inflation. Budget expenditures for public safety have grown the most, followed by public works expenditures. General government expenditures had the most decline. As discussed above, more growth will bring more needs in these largest expenditure categories. In most cases, growth will also contribute to increased property tax revenues, although increased growth and service needs among the City's tax-exempt employers may pose a fiscal challenge.

Figure 8-12 Trend in San Marcos General Fund Expenditures, FY10/11 to FY18/19[6]



Source: City of San Marcos Adopted Budgets

[6] Public Works includes Stormwater and Program Management expenditures.

8.7 KEY MARKET FINDINGS

This section summarizes the key findings related to recent trends and potential future opportunities impacting the City's demographic and economic makeup, residential and non-residential land uses, and fiscal position. In addition to relying on the analysis contained in this chapter, the key findings below also reflect important demographic trends presented in Chapter 1.

In general, the City has seen substantial growth in population, jobs, and development since 2000, although growth was faster from 2000 to 2010 than from 2010 to 2018. The City is expected to see more population and jobs growth over the next two decades (with corresponding demand for housing and commercial space), albeit at a more modest rate than the last two decades. The General Plan process will allow the City to identify and support the types of new development that will best position it to maintain a strong economy and high quality of life.

1. **San Marcos's growth in population and affluence over the past decade has outpaced that of the Trade Area and County, and regional projections suggest it will continue to grow, although at a more modest pace. At the same time, despite being the home of two large institutions of higher learning, the City's proportion of residents in the young and mid-career professional age groups (aged 20-44 years) has fallen more than its comparison geographies.** San Marcos's population grew by 72 percent from 2000 to 2018, and by 20 percent in just the past decade, compared to 9 to 10 percent growth in the Trade Area and County. Median household income in the City also grew by 10 percent in real (2018$) dollars since 2010, while Trade Area and County households saw no growth. Projections by regional agencies suggest that the City could see an additional 15 percent growth in population over the next 20 years.

   The City's median age is in the middle of the Trade Area cities, and has increased slightly over the past ten years. This has been accompanied by a decline in the proportion of residents younger than 45 years old and a growth in the proportion over 55 years old. A loss of residents in these prime working age groups can have an impact on economic growth, and San Marcos should consider strategies to help grow this population in the future. In particular, the City should capitalize on opportunities to retain recent graduates of its large regional institutions of higher education.
2. **City residents have higher levels of educational attainment than the Trade Area overall, and lower unemployment than the Trade Area and County. However, many residents working in higher-earning industries are commuting out of the City for those jobs.** Nearly 45 percent of City residents hold an associate's, bachelor's, or graduate/professional degree, and the City's school district has a 95 percent graduation rate, metrics which are attractive to future residents and employers. The City's unemployment rate is just 4.5 percent, and the number of employed residents has increased by nearly 45 percent since 2010. However, even though the City itself is jobs-rich, over 85 percent of residents commute out of the City for work. An industry-by-industry comparison highlights clear areas of mismatch between the types of jobs that residents hold and the types of jobs available in the City, with particular disparities in the education and professional services sectors.

3. **Job growth in the City since 2010 has been faster than in the Trade Area and County, a trend projected to continue over the next 20 years. More than half of that growth has been in the education and healthcare sectors, with more growth in those sectors expected in the future.** Overall, the number of jobs in the City grew by over 20 percent from 2010 to 2017. Industry sectors that grew faster than overall job growth included office-focused industries such as management, healthcare, administration, and education; service-sector jobs in accommodations and food service; and industrial-focused jobs in wholesale trade. However, the City lagged behind the Trade Area and County in creation of jobs in professional services, which is typically a higher-paying sector and employs nine percent of City residents.

   The City's three largest employers are all in the education sector and represent a quarter of total City jobs. The education sector not only provides jobs across a spectrum of skills and wages, but can also support jobs in a variety of industries, as well as new development activity. There has also been significant growth in the City's healthcare sector, which is the second-largest sector in the City. Thirty percent of all new jobs added since 2010 were in healthcare, and the new Kaiser Permanente Hospital is projected to add several hundred more.

4. **Along with its population and jobs, the City has added housing units at a faster rate than the Trade Area and County. Demand for housing in the City remained strong throughout the past 20 years, even during the Recession, and home prices and rents have been on an upward trajectory since 2011.** Even as the City grew its housing inventory by more than 60 percent over the past 20 years, it maintained a relatively low (below five percent) vacancy rate that was also consistently lower than the Trade Area and County. This demonstrates a continued strong demand for housing in the City, further underlined by steady growth in City home prices and rents in the post-Recession period. Median home prices in the City are 5-6 percent higher than in the County and almost double their 2011 levels, and average City rents today are the same as the County and 35 percent above 2010. These increases have economic and fiscal benefits, but they have also likely contributed to the high proportion of households that are cost-burdened (paying more than 30 percent of their income towards housing costs). Like cities throughout California, San Marcos will have to consider ways to address its housing affordability levels and encourage the production of units that are accessible to lower- and moderate-income households.
5. **While industrial space is the dominant nonresidential land use in the City, there are market opportunities for growth in targeted types of retail and office space in strategic locations. There may also be long-term opportunities for the City to see growth in hospitality uses, which could in turn provide a boost for municipal revenues.** While industrial space is the dominant nonresidential land use in the City, it has also seen slower growth and net absorption than the Trade Area over the past decade. Most new growth in Trade Area industrial space has been in warehouse and distribution uses, capitalizing on the Area's proximity to major regional transportation corridors. Manufacturing jobs are also growing Trade Area-wide. These trends represent an opportunity for the City to position itself to capture future industrial space demands.

   Retail and office space inventory in the City has grown faster than industrial inventory since 2010. Economic trends suggest opportunity for continued growth in both land

uses. For retail, the City's move towards promoting denser, mixed-use developments in core areas such as the University District Specific Plan align with changing preferences for shopping and dining, and will allow the City to capture greater shares of retail spending by residents in both the City and Trade Area. Office space growth has primarily involved medical office space, and the strength of that sector will likely continue with the addition of the new Kaiser Hospital. The production of new general office space, particularly in the context of mixed-use development, can also support the attraction of job sectors that are currently lacking in the City, such as professional services.

The City's hotel sector is relatively small, representing just seven percent of all hotel rooms in the Trade Area. Yet, the sector has impacts on both spending in the City and the diversity of the City's municipal revenue sources, through transient occupancy tax (TOT). While the City does not have a strong tourism economy like some of its neighbors, there are lodging demands driven by the education and healthcare industries that can drive additional hospitality development in the long-term. That said, the hospitality sector is expected to be the hardest hit by the coronavirus pandemic, which may limit investment and expansion in the near future.

The City's General Fund revenues have increased faster than expenditures over the past ten years, with both outpacing inflation. Property and sales tax are the primary revenue contributors to the fund, with public safety, general government and public works representing most of the expenditures. The General Plan will have implications for future growth and needs in all of these categories. The General Plan's land use plan will impact revenues collected and costs borne by the City. Revenues sources that are most impacted by changes in land use include property tax and sales tax, which together represent almost half of the City's General Fund revenues; and transient occupancy tax (TOT) and license and permit fees, which today are small contributors to the General Fund. Since expanded property tax and fee revenues are linked to new development, the City may want to position itself to have a mix of other sources if growth slows. The exact pact and timeframe for recovery from the COVID-19 pandemic remains unclear, and the impact of COVID-19 on this issue is unknown/yet to be seen.

Growth also brings increased service needs. The City already allocates half of its General Fund to public safety and over 15 percent to public works. New development and new populations put additional burden on these services, particularly if the growth involves a larger service area. While corresponding growth in revenues may offset these additional costs, an important consideration for the General Plan is to ensure land use patterns and public service standards that can mitigate this burden.

CHAPTER 9
REGULATORY FRAMEWORK

9 REGULATORY ENVIRONMENT

The vast range of topics addressed in the General Plan are informed by – and respond to – existing regulatory structures at the federal, state, and local levels. This section presents an overview of the myriad of programs and policies that impact the way San Marcos addresses its General Plan topics. The material below is organized by Existing Conditions Report section topics, but a number of regulations inform more than one topic area and may appear more than once.

9.1 DEMOGRAPHICS, LAND USE AND COMMUNITY CHARACTER

State Regulatory Framework

Land Use

California General Plan Law

Government Code Section 65300 requires that each county and city adopt a General Plan "for the physical development of the county or city, and any land outside its boundaries which bears relation to its planning."

The General Plan is a comprehensive long-term plan for the physical development of the county or city and is considered a "blueprint" for development. The General Plan provides a statement of the community's development, economic, circulation, and environmental goals and includes diagrams and text setting forth objectives, standards, policies, and programs. The General Plan must contain seven State-mandated elements: Land Use, Open Space, Conservation, Housing, Circulation, Noise, and Safety. It may also contain any other elements that the City wishes to include. The land use element designates the general location and intensity of designated land uses to accommodate housing, business, industry, open space, education, public buildings and grounds, recreation areas, and other land uses.

For the past several years, the Governor's Office of Planning and Research (OPR) has been engaged in a process to update the State General Plan Guidelines (GPG). After multiple drafts and public reviews, the GPG update was released on August 2, 2017. This guidance is the first comprehensive update in fourteen years and includes legislative changes, new technical advisories, guidance documents, and additional resources. The GPG serves as the "how to" resource for drafting a general plan. For mandatory and common optional elements of the general plan, the GPG sets out each statutory requirement in detail, provides OPR recommended policy language, and includes online links to city and county general plans that have adopted similar policies. The San Marcos General Plan will be prepared in accordance with all applicable laws and regulations, including the latest GPG.

Land Use

California Environmental Quality Act

The California Environmental Quality Act (CEQA) was developed to protect the quality of the environment, and the health and safety of persons from adverse environmental effects. Discretionary projects are required to be reviewed consistent with the requirements of CEQA to determine if there is potential for the project to cause a significant adverse effect on the environment. Depending on the type of project and its potential effects, technical traffic, noise, air quality, biological resources, and geotechnical reports may be needed. If potential adverse effects can be mitigated, a mitigated negative declaration is required. If potentially adverse effects cannot be mitigated, an environmental impact report is required. These documents have mandated content requirements and public review times. Preparation of CEQA documents can be costly and, despite maximum time limits set forth in the Public Resources Code, can extend the processing time of a project by a year or longer.

Land Use

Subdivision Code

A subdivision is any division of land for the purpose of sale, lease or finance. The State of California Subdivision Map Act (Government Code § 66410) regulates subdivisions throughout the state. The goals of the Subdivision Map Act are as follows:

- To encourage orderly community development by providing for the regulation and control of the design and improvement of a subdivision with proper consideration of its relationship to adjoining areas.
- To ensure that areas within the subdivision that are dedicated for public purposes will be properly improved by the subdivider so that they will not become an undue burden on the community.
- To protect the public and individual transferees from fraud and exploitation.

The Map Act allows cities some flexibility in the processing of subdivisions. San Marcos controls this process through the subdivision regulations in the Municipal Code. These regulations ensure that minimum requirements are adopted for the protection of the public health, safety and welfare; and that the subdivision includes adequate community improvements, municipal services and other public facilities. Lathrop's subdivision provisions support the Subdivision Map Act and, in so doing, also support implementation of the City's General Plan.

Local Regulatory Framework

Land Use

Local Agency Formation Commission of San Diego County

In 1963, the State Legislature created a local agency formation commission (LAFCO) for each county, with the authority to regulate local agency boundary changes. Subsequently, the State has expanded the authority of a LAFCO. The goals of a LAFCO include preserving agricultural and open space land resources and providing for efficient delivery of services. The San Diego County LAFCO has authority over land use decisions in San Diego County affecting local agency boundaries. Its authority extends to the incorporated cities, including annexation of County lands into a city, and special districts within the County. The City San Marcos is within San Diego County.

In addition, LAFCO conducts Municipal Service Reviews (MSRs) for services within its jurisdiction. An MSR typically includes a review of existing municipal services provided by a local agency and its infrastructure needs and deficiencies. It also evaluates financing constraints and opportunities, management efficiencies, opportunities for rate restructuring and shared facilities, local accountability and governance, and other issues.

Land Use

San Diego County General Plan

San Diego County revised its General Plan on August 3, 2011. The County's General Plan provides a comprehensive set of goals, policies, and implementing actions to guide the County's growth. The County's General Plan includes the following elements:

- Land Use
- Mobility
- Conservation and Open Space
- Housing
- Safety
- Noise

The County's General Plan also includes a chapter dedicated to Implementation of the General Plan and another chapter which serves as the Glossary.

Land Use

City of San Marcos General Plan

The City's current General Plan was adopted on February 14, 2012. In accordance with applicable state regulations, the City of San Marcos more recently updated the Housing Element of its General Plan and adopted the City's Housing Element in June, 2013. Land uses in San Marcos have been developed based on the Land Use Map, along with the goals, policies, and strategies established by the City of San Marcos General Plan.

Housing element law (Government Code Sections 65580 through 65589.8) requires local governments to adopt a Housing Element that addresses existing and projected housing needs, including their share of the regional housing need. A Housing Element must include an analysis of existing and projected housing needs, identification of governmental and non-governmental constraints to the provision of housing, an inventory of sites appropriate to accommodate the City's housing needs, identification of resources available to assist with meeting housing needs, a review of the effectiveness of the previous Housing Element, and a plan to address the identified housing needs and constraints.

Land Use

City of San Marcos Zoning Ordinance

The City of San Marcos Zoning Ordinance carries out the policies of the General Plan by classifying and regulating the uses of land and structures within the city, consistent with the General Plan. The Zoning Ordinance is adopted to protect and promote the public health, safety, comfort, convenience, prosperity, and general welfare of residents, and businesses in the city.

Zoning provides a legal mechanism for local government regulation of the land uses described in the General Plan Land Use Map. In addition to providing specific regulations related to minimum lot size, building heights, setbacks, lot coverage, etc., for each zoning district, the Zoning Code also lists the uses that would be acceptable or could be considered in each district, as well as those that would be considered unacceptable. For some uses, further regulations are established. Zoning regulations designate the process to be used when a permit must be applied for in order to consider approval of a particular land use in a district.

9.2 MOBILITY

Federal Regulatory Framework

Americans with Disabilities Act

The Americans with Disabilities Act of 1990 (ADA) provides comprehensive rights and protections to individuals with disabilities. The goal of the ADA is to assure equality of opportunity, full participation, independent living, and economic self-sufficiency. To implement this goal, the United States Access Board has created accessibility guidelines for public rights-of-way. The guidelines address various issues, including roadway design practices, slope and terrain issues, pedestrian access to streets, sidewalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of public rights-of-way.

The City of San Marcos works to ensure that people with disabilities have access to City programs, services, activities, and facilities. In all of its services, programs, events, activities, facilities, and public meetings, the City strives to eliminate any barriers that prohibit people with disabilities from full access to facilities.

Federal Highway Administration

The Federal Highway Administration (FHWA) is a federal agency that focuses on national highway programs. FHWA administers and manages federal highway programs and establishes national standards. The FHWA publishes the Manual on Uniform Traffic Control Devices (MUTCD) which specifies the standards for street markings, traffic signals, and street signs in the United States. The California Department of Transportation (Caltrans) developed the California MUTCD based on the FHWA MUTCD.

State Regulatory Framework

California Department of Transportation

Caltrans is the primary state agency responsible for transportation issues. One of its duties is the construction and maintenance of the state highway system. Caltrans has established

standards for roadway traffic flow and developed procedures to determine if State-controlled facilities require improvements. For projects that may physically affect facilities or require access to a state highway, Caltrans requires encroachment permits before such activity may be undertaken. For projects that would not physically affect facilities but may influence traffic flow and levels of services at such facilities, Caltrans may recommend measures to mitigate the traffic impacts of such projects.

Additionally, the following Caltrans procedures and directives are relevant to transportation improvements in San Marcos:

- Level of Service Target. Caltrans maintains a target level of service at the transition between level of service (LOS) C and LOS D for all of its facilities.[1] Where an existing facility is operating at less than the LOS C/D threshold, the existing measure of effectiveness should be maintained.[2]
- Caltrans Project Development Procedures Manual. This manual outlines pertinent statutory requirements, planning policies, and implementing procedures regarding transportation facilities. It is continually and incrementally updated to reflect changes in policy and procedures. For example, the most recent revision incorporates the Complete Streets policy from Deputy Directive 64-R1, which is detailed below.
- Caltrans Deputy Directive 64 (2001). This directive requires Caltrans to consider the needs of non-motorized travelers, including pedestrians, bicyclists, and persons with disabilities, in all programming, planning, maintenance, construction, operations, and project development activities and products. This includes incorporation of the best available standards in all of the Department's practices.
- Caltrans Deputy Directive 64-R1 (2014). This directive requires Caltrans to provide for the needs of travelers of all ages and abilities in all planning, programming, design, construction, operations, and maintenance activities and products on the state highway system. Caltrans supports bicycle, pedestrian, and transit travel with a focus on "complete streets" that begins early in system planning and continues through project construction, maintenance, and operations.
- Caltrans Director's Policy 22 (2001). This policy establishes support for balancing transportation needs with community goals. Caltrans seeks to involve and integrate community goals in the planning, design, construction, and maintenance and operations processes, including accommodating the needs of bicyclists and pedestrians.
- Environmental Assessment Review and Comment. Caltrans, as a responsible agency under the California Environmental Quality Act (CEQA), is available for early consultation on a project to provide guidance on applicable transportation analysis methodologies or other transportation related issues, and responsible for reviewing the traffic impact study for errors and omissions pertaining to the state highway facilities. Caltrans published the *Guide for the Preparation of Traffic Impact Studies* (December 2002), which established the Measures of Effectiveness as described under "Level of Service Target" above. The Measures of Effectiveness is used to determine significant impact on state facilities. The Guide also mandates that the traffic analysis includes mitigation measures to lessen the potential project impacts on state facilities and the project's fair share responsibility for the impacts. However,

[1] Level of service is explained further in the Study Roadway Segments and Study Intersections subsections.

[2] California Department of Transportation, *Guide for the Preparation of Traffic Impact Studies,* December 2002.

the ultimate mitigation measures and their implementations are to be determined upon consultation between Caltrans, the City, and the project proponent.

OPR General Plan Guidelines

The Governor's Office of Planning and Research (OPR) publishes General Plan Guidelines as a "how to" for cities and counties developing their general plans. OPR releases updated guidelines periodically, which include legislative changes, new guidance, policy recommendations, external links to resource documents, and additional resources. For each general plan element, the guidelines discuss statutory requirements in detail, provide recommended policy language, and include examples of city and county general plans that have adopted similar policies.

Annual Progress Report Memo

All counties and general law cities in the state are required to submit an annual report on the status of their general plan and progress in its implementation per Government Code Section 65400. The General Plan Annual Progress Report (APR) is due on April 1 and covers the previous year's 12-month reporting period.[3]

Assembly Bill 32, Senate Bill 32, and Senate Bill 375

Assembly Bill (AB) 32, also known as the Global Warming Solutions Act of 2006, committed California to reducing greenhouse gas (GHG) emissions to 1990 levels by 2020. The California Air Resources Board (ARB), which is coordinating the response to comply with AB 32, is currently on schedule to meet this deadline. In 2016, Senate Bill (SB) 32 added a new target: reducing statewide emissions to 40 percent below 1990 levels by 2030.

SB 375 provides guidance for curbing emissions from cars and light trucks to help California comply with AB 32. There are five major components to SB 375:

- ARB will guide the adoption of GHG emission targets to be met by each Metropolitan Planning Organization (MPO) in the state.
- MPOs are required to create a Sustainable Communities Strategy (SCS) that provides a plan for meeting these regional targets. The SCS must be consistent with the Regional Transportation Plan (RTP).
- Regional housing elements and transportation plans must be synchronized on eight-year schedules. Also, the SCS and Regional Housing Needs Assessment (RHNA) must be consistent with each other.
- CEQA is streamlined for preferred development types such as mixed-use projects and transit-oriented developments (TODs) if they meet specific requirements.
- MPOs must use transportation and air emission modeling methodologies consistent with California Transportation Commission (CTC) guidelines.

California Complete Streets Act of 2008 (AB 1358)

Originally passed in 2008, California's Complete Streets Act took effect in 2011 and requires local jurisdictions to plan for land use transportation policies that reflect a "complete streets" approach to mobility. "Complete streets" comprises a suite of policies and street design guidelines which provide for the needs of all road users, including pedestrians, bicyclists, transit operators and riders, children, the elderly, and the disabled. From 2011 onward, any local jurisdiction—county or city—that undertakes an update of the circulation element of its general plan must plan for the development of multimodal transportation networks.[4] In 2010,

[3] This can be either a calendar or fiscal year, depending on the policy of each jurisdiction. For more detailed information regarding the submission of an APR, please see OPR's guide, accessible through: http://opr.ca.gov/docs/20190426-APR_Memo_Post.pdf

[4] Assembly Bill 1358, Chapter 657, Statutes 2008.

OPR released guidelines for compliance with this legislation which provide direction on how circulation elements can best plan for a variety of travel modes such as transit, walking, bicycling, and freight. This document is titled *Update to the General Plan Guidelines: Compete Streets and the Circulation Element*.

Senate Bill 743

On September 27, 2013, Senate Bill (SB) 743 was signed into law.[5] The Legislature found that with the adoption of the Sustainable Communities and Climate Protection Act of 2008 (SB 375), the State had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT) and thereby contribute to the reduction of greenhouse gas emissions (GHG), as required by the California Global Warming Solutions Act of 2006 (AB 32). Additionally, the Complete Streets Act (AB 1358), requires local governments to plan for a balanced, multimodal transportation network that meets the needs of all users. To further the State's commitment to the goals of SB 375, AB 32, and AB 1358, SB 743 adds Chapter 2.7, Modernization of Transportation Analysis for Transit-Oriented Infill Projects, to Division 13 (Section 21099) of the Public Resources Code.

SB 743 started a process that fundamentally changes transportation impact analysis as part of CEQA compliance. These changes include the elimination 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 California (if not statewide). Further, parking impacts will not be considered significant impacts on the environment for select development projects within infill areas with nearby frequent transit service. SB 743 includes amendments that revises the definition of "in-fill opportunity zones" to allow cities and counties to opt out of traditional LOS standards established by congestion management programs (CMPs) and requires OPR to update the CEQA Guidelines and establish "criteria for determining the significance of transportation impacts of projects within transit priority areas."[6] As part of the new CEQA Guidelines, the new criteria "shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." OPR presented alternative metrics in a preliminary discussion draft in summer of 2014 and released its final advisory in November 2017. Key guidance includes:

- VMT is the most appropriate metric to evaluate a project's transportation impact.
- OPR recommends tour- and trip-based travel models to estimate VMT, but ultimately defers to local agencies to determine the appropriate tools.
- OPR recommends measuring VMT for residential and office projects on a "per rate" basis. Specifically, OPR recommends VMT per capita for residential projects and VMT per employee for office projects.
- OPR's recommend impact threshold for residential and office projects is VMT per capita fifteen percent below the city or regional average (whichever is applied). In other words, an office project that generates VMT per employee that is more than 85 percent of the regional VMT per employee could result in a significant impact. This threshold is in line with statewide greenhouse gas emission reduction targets.

[5] An act to amend Sections 65088.1 and 65088.4 of the Government Code, and to amend Sections 21181, 21183, 21186, 21187, 21189.1, and 21189.3 of, to add Section 21155.4 to, to add Chapter 2.7 (commencing with Section 21099) to Division 13 of, to add and repeal Section 21168.6.6 of, and to repeal and add Section 21185 of, the Public Resources Code, relating to environmental quality.

[6] A "transit priority area" is defined in as an area within one-half mile of an existing or planned major transit stop. A "major transit stop" is defined in Public Resources Code Section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

- For retail projects, OPR recommends measuring the net decrease or increase in VMT in the study area with and without the project. The recommended impact threshold is any increase in total VMT.
- Lead agencies ultimately have the discretion to set or apply their own significance thresholds, provided they are based on significant evidence.
- Cities and counties still have the ability to use metrics such as LOS for other plans, studies, or network monitoring. However, LOS and similar metrics cannot constitute the sole basis for CEQA impacts.

For land use and transportation projects, SB 743-compliant CEQA analysis become mandatory on July 1, 2020. The City of San Marcos has adopted transportation impact analysis guidelines consistent with the requirements of SB 743.

Assembly Bill 417

In October 2013, AB 417 created a statutory CEQA exemption for bicycle plans in urbanized areas. Before the passage of this bill, cities and counties that prepared bicycle plans were required to carry out a CEQA review. AB 417 exempts the following types of bicycle projects in an urbanized area:

- Restriping of streets and highways
- Bicycle parking and storage
- Signal timing to improve intersection operations
- Signage for bicycles, pedestrians, and vehicles

However, not all bicycle plans are exempt if certain conditions are met (e.g., a new Class I bicycle trail through a sensitive natural area).

9.3 UTILITIES AND COMMUNITY SERVICES

This chapter addresses utilities and community services within the City of San Marcos. Utility services include the provision of water services, wastewater (sewer) services, stormwater and drainage, solid waste disposal, electricity, and natural gas. Community services include fire protection, law enforcement, parks and recreation, schools, libraries, and other public facilities. This section addresses the regulations associated with these topics.

Federal Regulatory Framework

Stormwater and Drainage

Clean Water Act (CWA)

The CWA, initially passed in 1972, regulates the discharge of pollutants into watersheds throughout the nation. Section 402(p) of the act establishes a framework for regulating municipal and industrial stormwater discharges under the NPDES Program. Section 402(p) requires that stormwater associated with industrial activity that discharges either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.

The State Water Resources Control Board (SWRCB) is responsible for implementing the Clean Water Act and does so through issuing NPDES permits to cities and counties through regional water quality control boards. Federal regulations allow two permitting options for storm water discharges (individual permits and general permits). Pursuant to Section 402 of the CWA and the Porter-Cologne Water Quality Control Act, municipal stormwater discharge in the City of San Marcos is subject to the Waste Discharge Requirements (WDRs) of the MS4 Permit (Order Number R4-2012-0175-A01) as amended by State Water Board Order WQ-2015-0075 and NPDES Permit No. CAS004001.

Stormwater and Drainage

National Pollutant Discharge Elimination System (NPDES)

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges to navigable waters of the United States, which includes any discharge to surface waters,

including lakes, rivers, streams, bays, oceans, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.).

The Regional Water Quality Control Board (RWQCB) issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the EPA Regional Administrator (EPA Region 9). The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti-degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less, and therefore must be updated regularly. To expedite the permit issuance process, the RWQCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes.

Solid Waste

Resource Conservation and Recovery Act (RCRA)

The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. After several amendments, the current Act governs the management of solid and hazardous waste and underground storage tanks (USTs). RCRA was an amendment to the Solid Waste Disposal Act of 1965. RCRA has been amended several times, most significantly by the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA is a combination of the first solid waste statutes and all subsequent amendments. RCRA authorizes the Environmental Protection Agency (EPA) to regulate waste management activities. RCRA authorizes states to develop and enforce their own waste management programs, in lieu of the Federal program, if a state's waste management program is substantially equivalent to, consistent with, and no less stringent than the Federal program.

State Regulatory Framework

Water Services

California Department of Health Services

The Department of Health Services, Division of Drinking Water and Environmental Management, oversees the Drinking Water Program. The Drinking Water Program regulates public water systems and certifies drinking water treatment and distribution operators. It provides support for small water systems and for improving their technical, managerial, and financial capacity. It provides subsidized funding for water system improvements under the State Revolving Fund ("SRF") and Proposition 50 programs. The Drinking Water Program also oversees water recycling projects, permits water treatment devices, supports and promotes water system security, and oversees the Drinking Water Treatment and Research Fund for MTBE (Methyl Tertiary Butyl Ether) and other oxygenates.

Water Services

Consumer Confidence Report Requirements

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminant levels set by regulation, violations and actions taken to correct them, and

opportunities for public participation in decisions that may affect the quality of the water provided.

Water Services

Urban Water Management Planning Act

The Urban Water Management Planning Act has as its objectives the management of urban water demands and the efficient use of urban water. Under its provisions, every urban water supplier is required to prepare and adopt an urban water management plan. An "urban water supplier" is a public or private water supplier that provides 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. The plan must identify and quantify the existing and planned sources of water available to the supplier, quantify the projected water use for a period of 20 years, and describe the supplier's water demand management measures. The urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The Department of Water Resources (DWR) must receive a copy of an adopted urban water management plan.

Water Services

Senate Bill (SB) 610 and Assembly Bill (AB) 901

The State Legislature passed SB 610 and AB 901 in 2001. Both measures modified the Urban Water Management Planning Act. SB 610 requires additional information in an urban water management plan if groundwater is identified as a source of water available to an urban water supplier. It also requires that the plan include a description of all water supply projects and programs that may be undertaken to meet total projected water use. SB 610 requires a city or county that determines a project is subject to CEQA to identify any public water system that may supply water to the project and to request identified public water systems to prepare a specified water supply assessment. The assessment must include, among other information, an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and water received in prior years pursuant to these entitlements, rights, and contracts.

AB 901 requires an urban water management plan to include information, to the extent practicable, relating to the quality of existing sources of water available to an urban water supplier over given time periods. AB 901 also requires information on the manner in which water quality affects water management strategies and supply reliability. The bill requires a plan to describe plans to supplement a water source that may not be available at a consistent level of use, to the extent practicable. Additional findings and declarations relating to water quality are required.

Water Services

Senate Bill (SB) 221

SB 221 adds Government Code Section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within five days of the subdivision application being accepted as complete for processing by the city or county. It also adds Government Code Section 66473.7, establishing detailed requirements for establishing whether a "sufficient water supply" exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring availability of a sufficient water supply. The applicable public water system must provide proof of availability. If there is no public water system, the city or county must undertake the analysis described in Government Code Section 66473.7. The analysis must include consideration of effects on other users of water and groundwater.

Wastewater

State Water Resources Control Board (SWRCB)/Regional Water Quality Control Board (RWQCB)

In California, all wastewater treatment and disposal systems fall under the overall regulatory authority of the State Water Resources Control Board (SWRCB) and the nine California

Regional Water Quality Control Boards (RWQCBs), who are charged with the responsibility of protecting beneficial uses of State waters (ground and surface) from a variety of waste discharges, including wastewater from individual and municipal systems. The City of San Marcos falls within the jurisdiction of the Santa Ana RWQCB.

The RWQCB's regulatory role often involves the formation and implementation of basic water protection policies. These are reflected in the individual RWQCB's Basin Plan, generally in the form of guidelines, criteria and/or prohibitions related to the siting, design, construction, and maintenance of on-site sewage disposal systems. The SWRCB's role has historically been one of providing overall policy direction, organizational and technical assistance, and a communications link to the State legislature.

The RWQCBs may waive or delegate regulatory authority for on-site sewage disposal systems to counties, cities, or special districts. Although not mandatory, it is commonly done and has proven to be administratively efficient. In some cases, this is accomplished through a Memorandum of Understanding (MOU), whereby the local agency commits to enforcing the Basin Plan requirements or other specified standards that may be more restrictive. The RWQCBs generally elect to retain permitting authority over large and/or commercial or industrial on-site sewage disposal systems, depending on the volume and character of the wastewater.

Stormwater and Drainage

California Water Code

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and each of the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a Water Quality Control Plan (Basin Plan) for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

Stormwater and Drainage

State Water Resources Control Board (State Water Board) Storm Water Strategy

The Storm Water Strategy is founded on the results of the Storm Water Strategic Initiative, which served to direct the State Water Board's role in storm water resources management and evolve the Storm Water Program by a) developing guiding principles to serve as the foundation of the storm water program, b) identifying issues that support or inhibit the program from aligning with the guiding principles, and c) proposing and prioritizing projects that the Water Boards could implement to address those issues. The State Water Board staff created a strategy-based document called the Strategy to Optimize Management of Storm Water (STORMS). STORMS includes a program vision, missions, goals, objectives, projects, timelines, and consideration of the most effective integration of project outcomes into the Water Board's Storm Water Program.

Solid Waste

California Integrated Waste Management Act (AB 939 and SB 1322)

The California Integrated Waste Management Act of 1989 (AB 939 and SB 1322) requires every city and county in the state to prepare a Source Reduction and Recycling Element to its Solid Waste Management Plan that identifies how each jurisdiction will meet the mandatory state waste diversion goals of 25% by 1995 and 50% by 2000. The purpose of AB 939 and SB 1322 is to "reduce, recycle, and re-use solid waste generated in the state to the maximum

extent feasible." The term "integrated waste management" refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment. The Act has established a waste management hierarchy, as follows: Source Reduction; Recycling; Composting; Transformation; and Disposal.

Solid Waste

California Integrated Waste Management Board Model Ordinance

Subsequent to the Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB 939. The California Solid Waste Re-use and Recycling Access Act of 1991 (§42900-42911 of the Public Resources Code) directs the California Integrated Waste Management Board (CIWMB) to draft a "model ordinance" relating to adequate areas for collecting and loading recyclable materials in development projects. The model ordinance requires that any new development project, for which an application is submitted on or after September 1, 1994, include "adequate, accessible, and convenient areas for collecting and loading recyclable materials." For subdivisions of single family detached homes, recycling areas are required to serve only the needs of the homes within that subdivision.

Solid Waste

California's Mandatory Commercial Recycling Law (AB 341)

Assembly Bill (AB) 341 directed CalRecycle to develop and adopt regulations for mandatory commercial recycling. CalRecycle initiated formal rulemaking with a 45-day comment period beginning Oct. 28, 2011. The final regulation was approved by the Office of Administrative Law on May 7, 2012. The purpose of AB 341 is to reduce GHG emissions by diverting commercial solid waste to recycling efforts, and to expand the opportunity for additional recycling services and recycling manufacturing facilities in California.

Beginning on July 1, 2012, businesses have been required to recycle, and each jurisdiction has implemented programs that include education, outreach, and monitoring. Jurisdictions were required to start reporting on their 2012 Electronic Annual Report (due Aug. 1, 2013) on their initial education, outreach, and monitoring efforts, and, if applicable, on any enforcement activities or exemptions implemented by the jurisdiction.

In addition to Mandatory Commercial Recycling, AB 341 sets a *statewide* goal for 75 percent disposal reduction by the year 2020. This is not written as a 75 percent diversion mandate for each jurisdiction. The 50 percent disposal reduction mandate still stands for cities, counties, and State agencies (including community colleges) under AB 939. CalRecycle continues to evaluate program implementation as it has in the past through the Annual Report review process for entities subject to either AB 939.

Electricity and Natural Gas

Public Utilities Commission

The California Public Utilities Commission (PUC) is the primary State agency that regulates privately owned public utilities in California. These utilities include telecommunications, electricity, natural gas, water, railroad, rail transit, and passenger transportation companies. A primary role of the PUC is to authorize utility rate changes. It also establishes service standards and safety rules, monitors the safety of utility and transportation operations, prosecutes unlawful marketing and billing activities, and oversees the merger and restructure of utility corporations.

Electricity and Natural Gas

Bioenergy Action Plan – Executive Order #S-06-06

Executive Order #S-06-06 establishes targets for the use and production of biofuels and biopower, and directs State agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The executive order establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20% of its biofuels within California by 2010, 40% by 2020, and 75% by 2050. The executive order also

calls for the State to meet a target for use of biomass electricity, including biomass cogeneration facilities.

Electricity and Natural Gas

Senate Bill 14 and Assembly Bill 64

Prior to the passage of SB 14 and AB 64 in 2009, California law required investor-owned utilities (IOUs) and energy service providers (ESPs) to increase their existing purchases of renewable energy by 1% of sales per year such that 20% of their retail sales, as measured by usage, are procured from eligible renewable resources (including biomass cogeneration) by December 31, 2010. This is known as the Renewable Portfolio Standard (RPS).

SB 14 and AB 64 require IOUs, publicly-owned utilities (POUs), and ESPs to increase their purchases of renewable energy such that at least 33% of retail sales are procured from renewable energy resources by December 31, 2020. For IOUs and ESPs, this is required only if the PUC determines that achieving these targets will result in just and reasonable rates.

Electricity and Natural Gas

Title 24

Title 24, Part 6, of the California Code of Regulations is also known as California's Energy Efficiency Standards for Residential and non-residential Buildings. Title 24 was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2008 Energy Efficiency Standards went into effect on January 1, 2010. Title 24, Part 11, of the California Code of Regulations establishes the California Green Building Standards Code (CalGreen). Initially, the code requirements were voluntary; however, CalGreen became mandatory in 2011. CalGreen addresses five areas of green building: 1) planning and design, 2) energy efficiency, 3) water efficiency and conservation, 4) material conservation and resources efficiency, and 5) environmental quality. The mandatory requirements are separated into non-residential and residential projects. CalGreen also includes two optional tiers: Tier 1 and Tier 2. The tiers employ higher thresholds that jurisdictions may adopt or that projects may meet voluntarily.

Fire Protection

California Occupational Safety and Health Administration

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment," the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

Fire Protection

Office of Emergency Services

The State of California passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

Parks and Recreation

Quimby Act

The Quimby Act (California Government Code Section 66477) states that "the legislative body of a city or county may, by ordinance, require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative or parcel map." Requirements of the Quimby Act apply only to the acquisition of new parkland and do not apply to the physical development of new park facilities or associated operations and maintenance costs. The

Quimby Act seeks to preserve open space needed to develop parkland and recreational facilities; however, the actual development of parks and other recreational facilities is subject to discretionary approval and is evaluated on a case-by-case basis with new residential development.

Schools, Libraries, and Other Public Facilities

Leroy F. Greene School Facilities Act of 1998 (SB 50)

The "Leroy F. Greene School Facilities Act of 1998," also known as Senate Bill No. 50 or SB 50 (Chapter 407, Statutes of 1998), governs a school district's authority to levy school impact fees. This comprehensive legislation, together with the $9.2 billion education bond act approved by the voters in November 1998 known as "Proposition 1A," reformed methods of school construction financing in California. SB 50 instituted a new school facility program by which school districts can apply for State construction and modernization funds. It imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development, and provided the authority for school districts to levy fees at three different levels:

- Level I fees are the current statutory fees allowed under Education Code 17620. This code section provides the basic authority for school districts to levy a fee against residential and commercial construction for the purpose of funding school construction or reconstruction of facilities. These fees vary by district for residential construction and commercial construction, and are increased biannually.
- Level II fees are outlined in Government Code Section 65995.5, allowing school districts to impose a higher fee on residential construction if certain conditions are met. These conditions include having a substantial percentage of students on multi-track year-round scheduling, having an assumed debt equal to 15–30% of the district's bonding capacity (percentage is based on revenue sources for repayment), having at least 20% of the district's teaching stations housed in relocatable classrooms, and having placed a local bond on the ballot in the past four years which received at least 50% plus one of the votes cast. A Facility Needs Assessment must demonstrate the need for new school facilities for unhoused pupils is attributable to projected enrollment growth from the construction of new residential units over the next five years.
- Level III fees are outlined in Government Code Section 65995.7. If State funding becomes unavailable, this code section authorizes a school district that has been approved to collect Level II fees to collect a higher fee on residential construction. This fee is equal to twice the amount of Level II fees. However, if a district eventually receives State funding, this excess fee may be reimbursed to the developers or subtracted from the amount of State funding.

Schools, Libraries, and Other Public Facilities

The Kindergarten-University Public Education Facilities Bond Act of 2002 (Prop 47)

This act was approved by California voters in November 2002 and provides for a bond issue of $13.05 billion to fund necessary education facilities to relieve overcrowding and to repair older schools. Funds will be targeted at areas of greatest need and must be spent according to strict accountability measures. Funds will also be used to upgrade and build new classrooms in the California Community Colleges, the California State University, and the University of California in order to provide adequate higher education facilities to accommodate growing student enrollment.

Schools, Libraries, and Other Public Facilities

California Department of Education

The California Department of Education (CDE) School Facilities Planning Division (SFPD) prepared a School Site Selection and Approval Guide that provides criteria for locating appropriate school sites in the State of California. School site and size recommendations were changed by the CDE in 2000 to reflect various changes in educational conditions, such as lowering of class sizes and use of advanced technology. The expanded use of school buildings

and grounds for community and agency joint use, and concern for the safety of the students and staff members also influenced the modification of the CDE recommendations.

Specific recommendations for school size are provided in the School Site Analysis and Development Guide. This document suggests a ratio of 1:2 between buildings and land. CDE is aware that in a number of cases, primarily in urban settings, smaller sites cannot accommodate this ratio. In such cases, the SFPD may approve an amount of acreage less than the recommended gross site size and building-to-ground ratio.

Certain health and safety requirements for school site selection are governed by State regulations and the policies of the SFPD relating to:

- Proximity to airports, high-voltage power transmission lines, railroads, and major roadways;
- Presence of toxic and hazardous substances;
- Hazardous facilities and hazardous air emissions within one-quarter mile;
- Proximity to high-pressure natural gas lines, propane storage facilities, gasoline lines, pressurized sewer lines, or high-pressure water pipelines;
- Noise;
- Results of geological studies or soil analyses; and
- Traffic and school bus safety issues.

Local Regulatory Framework

Water

Vallecitos Water District 2015 Urban Water Management Plan (UWMP)

Vallecitos Water District 2015 Urban Water Management Plan (UWMP) was prepared in fulfillment of the requirements of the Urban Water Management Planning Act that was adopted in 1983 and may be found in the California Water Code, §§10610-10656. The UWMP was also prepared in compliance with the Guidebook to Assist Water Suppliers in the Preparation of a 2010 Urban Water Management Plan as provided by the California Department of Water Resources (DWR).

In addition to compliance with state mandate, the Vallecitos Water District 2015 UWMP is a living document whose contents fulfill a variety of planning, informational, and legal requirements. A UWMP serves as an important source document for cities and counties as they update their General Plans. Conversely, General Plans are source documents as water suppliers update their UWMPs. Vallecitos Water District coordinated with local stakeholders and internal City departments to elicit comments relative to producing an accurate and complete UWMP.

Water

Vista Irrigation District 2015 Urban Water Management Plan (UWMP)

Vista Irrigation District 2015 Urban Water Management Plan (UWMP) was prepared in fulfillment of the requirements of the Urban Water Management Planning Act that was adopted in 1983 and may be found in the California Water Code, §§10610-10656. The UWMP was also prepared in compliance with the Guidebook to Assist Water Suppliers in the Preparation of a 2010 Urban Water Management Plan as provided by the California Department of Water Resources (DWR).

In addition to compliance with state mandate, the Vista Irrigation District 2015 UWMP is a living document whose contents fulfill a variety of planning, informational, and legal requirements. A UWMP serves as an important source document for cities and counties as they update their General Plans. Conversely, General Plans are source documents as water suppliers update their UWMPs. Vista Irrigation District coordinated with local stakeholders and internal City departments to elicit comments relative to producing an accurate and complete UWMP.

Wastewater

Vallecitos Water District 2018 Water, Wastewater, and Recycled Water Master Plan

The Vallecitos Water District updated its Water, Wastewater, and Recycled Water Master Plan to outline the existing resources and conditions of its existing sewer system. The updated Master Plan identifies areas for necessary upkeep and provides a detailed overview of the types of facilities available to the City of San Marcos for the use of handling wastewater.

Stormwater and Drainage

City of San Marcos Master Draingage Plan

The City of San Marcos is responsible for managing the public storm drain system within San Marcos' limits and ensuring that an adequate level of service is provided to protect the public from excessive surface flooding conditions. Stormwater within the City of San Marcos is primarily tributary to San Marcos Creek, discharging to Lake San Marcos located within the Carlsbad Watershed. Lake San Marcos is privately owned by Pacifica Enterprises, which is a property developer and manager. The overall watershed is comprised of six hydrologic basins: San Marcos Creek – North Basin, San Marcos Creek – East Basin, San Marcos Creek – Main Basin, Las Posas Basin, North Outlying Basin and South Outlying Basin.

Stormwater and Drainage

San Diego County 2014 Low Impact Development Handbook

The County of San Diego 2014 Low Impact Development (LID) Handbook is designed to comply with the requirements of the NPDES MS4 Permit for stormwater and non-stormwater discharges from the MS4 within the coastal watersheds of San Diego County. The LID Handbook provides guidance for the implementation of stormwater quality control measures in new development and redevelopment projects in unincorporated areas of San Diego County, with the intention of improving water quality and mitigating potential water quality impacts from stormwater and non-stormwater discharges.

Stormwater and Drainage

Municipal NPDES Permit Waste Discharge Requirements (San Diego Regional Water Quality Control Board Order R9-2013-0001, as amended by Order Nos. R9-2015-0001 and R9-2015-0100)

In response to the Federal Clean Water Act, the West Valley Clean Water Program regulates waste dischargers under a National Pollutant Discharge Elimination System (NPDES) Permit administered by the appropriate Regional Water Quality Control Board. Specifically, the municipalities are regulated with regard to their jurisdiction over and/or maintenance responsibility for municipal storm drain systems and watercourses that they own or operate. The NPDES Permit is concerned primarily with regulating trash, pollutants of concern, and excessive hydrologic runoff which can carry sediment and cause flooding.

As stated above, pursuant to Section 402 of the CWA and the Porter-Cologne Water Quality Control Act, municipal stormwater discharge in the City of San Marcos is subject to the WDRs of the MS4 Permit (San Diego Regional Water Quality Control Board Order R9-2013-0001, as amended by Order Nos. R9-2015-0001 and R9-2015-0100).

In order to comply with the updated MS4 Permit, a "Low Impact Development (LID) Handbook" was developed by San Diego County (2014) in advance of the final permit that details actions for compliance with the LID regulations, such as land development policies pertaining to LID, and hydromodification for new development and significant redevelopment projects. The term "hydromodification" refers to the changes in runoff characteristics from a watershed caused by changes in land use condition. More specifically, hydromodification refers to "the change in the natural watershed hydrologic processes and runoff characteristics (i.e., interception, infiltration, overland flow, interflow, and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport." The use of LID Best Management Practices (BMPs) in project planning and design

is to preserve a site's predevelopment hydrology by minimizing the loss of natural hydrologic processes such as infiltration, evapotranspiration, and runoff detention. LID BMPs try to offset these losses by introducing structural and non-structural design components that restore these water quality functions into the project's land plan.

Parks and Recreation

City of San Marcos Parks Master Plan

The City's Parks Master guides the orderly development, renovation, and improvement of parks, recreation facilities, programs, and services. Physical inventory assessments of the existing parks were taken during numerous site visits to the parks, and community programming information was gathered from publications provided by the City.

9.4 HAZARDS, SAFETY, AND NOISE

Federal Regulatory Framework

Hazardous Materials and Waste

Comprehensive Environmental Response, Compensation & Liability Act (CERCLA)

This act, commonly associated with the term "Superfund," established:

- Regulations concerning closed and abandoned hazardous waste sites
- Liability of parties responsible for any releases of hazardous waste at these sites
- Funding for cleanup when responsible parties cannot be identified

Hazardous Materials and Waste

Resource Conservation and Recovery Act (RCRA)

This act established the Environmental Protection Agency's (EPA) "cradle to grave" control (generation, transportation, treatment, storage, and disposal) over hazardous materials and wastes. In California, the Department of Toxic Substances Control (DTSC) has RCRA authorization.

Hazardous Materials and Waste

Clean Air Act

According to the Clean Air Act, the EPA has established National Emissions Standards for Hazardous Air Pollutants. Exceeding the emissions standard for a given air pollutant may cause an increase in illnesses and/or fatalities.

Hazardous Materials and Waste

Clean Water Act (CWA)

The CWA, which amended the Water Pollution Control Act (WPCA) of 1972, sets forth the §404 program to regulate the discharge of dredged and fill material into waters of the U.S., and the §402 National Pollutant Discharge Elimination System (NPDES) to regulate the discharge of pollutants into waters of the U.S. The §401 Water Quality Certification program establishes a framework of water quality protection for activities requiring a variety of Federal permits and approvals (including CWA §404, CWA §402, FERC Hydropower and §10 Rivers and Harbors).

Air Traffic

Aviation Act of 1958

The Federal Aviation Act resulted in the creation of the Federal Aviation Administration (FAA). The FAA was charged with the creation and maintenance of a National Airspace System.

Air Traffic

Federal Aviation Regulations (CFR, Title 14)

The Federal Aviation Regulations (FAR) establish regulations related to aircraft, aeronautics, and inspections and permitting.

Fire Hazards

FY 2001 Appropriations Act

Title IV of the Appropriations Act required the identification of "Urban Wildland Interface Communities in the Vicinity of Federal Lands that are at High Risk from Wildfire" by the U.S. Departments of the Interior and Agriculture.

Fire Hazards

Disaster Mitigation Act (2000–present)

Section 104 of the Disaster Mitigation Act of 2000 (Public Law 106-390) enacted Section 322, Mitigation Planning of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, which created incentives for state and local entities to coordinate hazard mitigation planning and implementation efforts and is an important source of funding for fuels mitigation efforts through hazard mitigation grants.

Fire Hazards

National Incident Management System (NIMS)

The City adopted NIMS, which provides a systematic, proactive approach to guide government agencies, nongovernmental organizations, and the private sector to work together to prevent, respond to, recover from, and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life and property and harm to the environment. NIMS improves the City's ability to prepare for and respond to potential incidents and hazard scenarios.

National Fire Plan (NFP) 2000

Fire Hazards

The summer of 2000 marked a historic milestone in wildland fire records for the United States. Dry conditions (across the western United States), led to destructive wildfire events on an estimated 7.2 million acres, nearly double the 10-year average. Costs in damages including fire suppression activities were approximately 2.1 billion dollars. Congressional direction called for substantial new appropriations for wildland fire management. This resulted in action plans, interagency strategies, and the Western Governor's Association's "A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment - A 10-Year Comprehensive Strategy - Implementation Plan," which collectively became known as the National Fire Plan. This plan places a priority on collaborative work within communities to reduce their risk from large-scale wildfires.

Fire Hazards

Healthy Forest Initiative (HFI) 2002/Healthy Forest Restoration Act (HFRA) 2003

In August 2002, the Healthy Forests Initiative (HFI) was launched with the intent to reduce the severe wildfires risks that threaten people, communities, and the environment. Congress then passed the Healthy Forests Restoration Act (HFRA) on December 3, 2003 to provide the additional administrative tools needed to implement the HFI. The HFRA strengthened efforts to restore healthy forest conditions near communities by authorizing measures such as expedited environmental assessments for hazardous fuels projects on federal land. This Act emphasized the need for federal agencies to work collaboratively with communities in developing hazardous fuel reduction projects and places priority on fuel treatments identified by communities themselves in their Community Wildfire Protection Plans.

Flooding

Federal Emergency Management Agency (FEMA)

FEMA operates the National Flood Insurance Program (NFIP). Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by the California Department of Water Resources to insure the proper implementation of FEMA floodplain management regulations.

Flooding

Rivers and Harbors Appropriation Act of 1899

One of the country's first environmental laws, this Act established a regulatory program to address activities that could affect navigation in waters of the United States.

Flooding

Water Pollution Control Act of 1972

The Water Pollution Control Act (WPCA) established a program to regulate activities that result in the discharge of pollutants to waters of the United States.

Flooding

Clean Water Act of 1977

The CWA, which amended the WPCA of 1972, sets forth the §404 program to regulate the discharge of dredged and fill material into waters of the U.S., and the §402 National Pollutant Discharge Elimination System (NPDES) to regulate the discharge of pollutants into waters of the U.S. The §401 Water Quality Certification program establishes a framework of water quality protection for activities requiring a variety of Federal permits and approvals (including CWA §404, CWA §402, FERC Hydropower and §10 Rivers and Harbors).

Flooding

Flood Control Act

The Flood Control Act (1917) established survey and cost estimate requirements for flood hazards in the Sacramento Valley. All levees and structures constructed per the Act were to be maintained locally but controlled federally. All rights-of-way necessary for the construction of flood control infrastructure were to be provided to the Federal government at no cost.

Federal involvement in the construction of flood control infrastructure, primarily dams and levees, became more pronounced upon passage of the Flood Control Act of 1936.

Flooding

National Flood Insurance Program (NFIP)

Per the National Flood Insurance Act of 1968, the NFIP has three fundamental purposes: better indemnify individuals for flood losses through insurance; reduce future flood damages through State and community floodplain management regulations; and reduce Federal expenditures for disaster assistance and flood control.

While the Act provided for subsidized flood insurance for existing structures, the provision of flood insurance by FEMA became contingent on the adoption of floodplain regulations at the local level.

Flooding

Flood Disaster Protection Act (FDPA)

The FDPA of 1973 was a response to the shortcomings of the NFIP, which were experienced during the flood season of 1972. The FDPA prohibited Federal assistance, including acquisition, construction, and financial assistance, within delineated floodplains in non-participating NFIP communities. Furthermore, all Federal agencies and/or federally insured and federally regulated lenders must require flood insurance for all acquisitions or developments in designated Special Flood Hazard Areas (SFHAs) in communities that participate in the NFIP.

Improvements, construction, and developments within SFHAs are generally subject to the following standards:

- All new construction and substantial improvements of residential buildings must have the lowest floor (including basement) elevated to or above the base flood elevation (BFE).
- All new construction and substantial improvements of non-residential buildings must either have the lowest floor (including basement) elevated to or above the BFE or dry-floodproofed to the BFE.
- Buildings can be elevated to or above the BFE using fill, or they can be elevated on extended foundation walls or other enclosure walls, on piles, or on columns.
- Extended foundation or other enclosure walls must be designed and constructed to withstand hydrostatic pressure and be constructed with flood-resistant materials, and contain openings that will permit the automatic entry and exit of floodwaters. Any enclosed area below the BFE can only be used for the parking of vehicles, building access, or storage.

Noise

Federal Highway Administration (FHWA)

The FHWA has developed noise abatement criteria that are used for federally funded roadway projects or projects that require federal review. These criteria are discussed in detail in Title 23 Part 772 of the Federal Code of Regulations (23CFR772).

Noise

Environmental Protection Agency (EPA)

The EPA has identified the relationship between noise levels and human response. The EPA has determined that over a 24-hour period, an Leq of 70 dBA will result in some hearing loss. Interference with activity and annoyance will not occur if exterior levels are maintained at an Leq of 55 dBA and interior levels at or below 45 dBA. Although these levels are relevant for planning and design, and useful for informational purposes, they are not land use planning criteria because they do not consider economic cost, technical feasibility, or the needs of the community.

The EPA has set 55 dBA Ldn as the basic goal for residential environments. However, other federal agencies, in consideration of their own program requirements and goals, as well as difficulty of actually achieving a goal of 55 dBA Ldn, have generally agreed on the 65 dBA Ldn level as being appropriate for residential uses. At 65 dBA Ldn activity interference is kept to a minimum, and annoyance levels are still low. It is also a level that can realistically be achieved.

The Department of Housing and Urban Development (HUD) was established in response to the Urban Development Act of 1965 (Public Law 90-448). HUD was tasked by the Housing and Urban Development Act of 1965 (Public Law 89-117) "to determine feasible methods of reducing the economic loss and hardships suffered by homeowners as a result of the depreciation in the value of their properties following the construction of airports in the vicinity of their homes."

HUD first issued formal requirements related specifically to noise in 1971 (HUD Circular 1390.2). These requirements contained standards for exterior noise levels along with policies for approving HUD-supported or assisted housing projects in high noise areas. In general, these requirements established the following three zones:

- 65 dBA Ldn or less - an acceptable zone where all projects could be approved.
- Exceeding 65 dBA Ldn but not exceeding 75 dBA Ldn - a normally unacceptable zone where mitigation measures would be required and each project would have to be individually evaluated for approval or denial. These measures must provide 5 dBA of attenuation above the attenuation provided by standard construction required in a 65 to 70 dBA Ldn area and 10 dBA of attenuation in a 70 to 75 dBA Ldn area.
- Exceeding 75 dBA Ldn - an unacceptable zone in which projects would not, as a rule, be approved.

HUD's regulations do not include interior noise standards. Rather a goal of 45 dBA Ldn is set forth and attenuation requirements are geared towards achieving that goal. HUD assumes that using standard construction techniques, any building will provide sufficient attenuation so that if the exterior level is 65 dBA Ldn or less, the interior level will be 45 dBA Ldn or less. Thus, structural attenuation is assumed at 20 dBA. However HUD regulations were promulgated solely for residential development requiring government funding and are not related to the operation of schools or churches.

The federal government regulates occupational noise exposure common in the workplace through the Occupational Health and Safety Administration (OSHA) under the EPA. Noise exposure of this type is dependent on work conditions and is addressed through a facility's or construction contractor's health and safety plan. With the exception of construction workers involved in facility construction, occupational noise is irrelevant to this study and is not addressed further in this document.

State Regulatory Framework

Hazardous Materials and Waste

California Health & Safety Code

Division 20 of the Health and Safety Code establishes Department of Toxic Substances Control (DTSC) authority and sets forth hazardous waste and underground storage tank regulations.

In addition, the division creates a State superfund framework that mirrors the Federal program.

Division 26 of the Health and Safety Code establishes California Air Resources Board (CARB) authority. The division designates CARB as the air pollution control agency per Federal regulations and charges the Board with meeting Clean Air Act requirements.

Hazardous Materials and Waste

Food and Agriculture Code

Division 6 of the California Food and Agricultural Code (FAC) establishes pesticide application regulations. The division establishes training standards for pilots conducting aerial applications as well as permitting and certification requirements.

Hazardous Materials and Waste

Water Code

Division 7 of the California Water Code, commonly referred to as the Porter-Cologne Water Quality Control Act, created the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCB). In addition, water quality responsibilities are established for the SWRCB and RWQCBs.

Hazardous Materials and Waste

California Code of Regulations

Title 3 of the CCR pertains to the application of pesticides and related chemicals. Parties applying regulated substances must continuously evaluate application equipment, the weather, the treated lands, and all surrounding properties. Title 3 prohibits any application that would:

- Contaminate persons not involved in the application
- Damage non-target crops or animals, or any other public or private property
- Contaminate public or private property, or create health hazards on said property

Title 8 of the CCR establishes California Occupational Safety and Health Administration (Cal OSHA) requirements related to public and worker protection. Topics addressed in Title 8 include materials exposure limits, equipment requirements, protective clothing, hazardous materials, and accident prevention. Construction safety and exposure standards for lead and asbestos are set forth in Title 8.

Title 14 of the CCR establishes minimum standards for solid waste handling and disposal.

Title 17 of the CCR establishes regulations relating to the use and disturbance of materials containing naturally occurring asbestos.

Title 22 of the CCR sets forth definitions of hazardous waste and special waste. The section also identifies hazardous waste criteria and establishes regulations pertaining to the storage, transport, and disposal of hazardous waste.

Title 26 of the CCR is a medley of State regulations pertaining to hazardous materials and waste that are presented in other regulatory sections. Title 26 mandates specific management criteria related to hazardous materials identification, packaging, and disposal. In addition, Title 26 establishes requirements for hazardous materials transport, containment, treatment, and disposal. Finally, staff training standards are set forth in Title 26.

Title 27 of the CCR sets forth a variety of regulations relating to the construction, operation, and maintenance of the State's landfills. The title establishes a landfill classification system and categories of waste. Each class of landfill is constructed to contain specific types of waste (household, inert, special, and hazardous).

Air Traffic

Aeronautics Act (Public Utilities Code §21001)

The Caltrans Division of Aeronautics bases the majority of its aviation policies on the Aeronautics Act. Policies include permits and annual inspections for public airports and hospital heliports, and recommendations for schools proposed within two miles of airport runways.

Air Traffic

Airport Land Use Commission Law (Public Utilities Code §21670 et seq.)

The law, passed in 1967, authorized the creation of Airport Land Use Commissions (ALUC) in California. Per the Public Utilities Code, the purpose of an ALUC is to protect *public health, safety, and welfare by encouraging orderly expansion of airports and the adoption of land use measures that minimizes exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses* (§21670). Furthermore, each ALUC must prepare an Airport Land Use Compatibility Plan (ALUCP). Each ALUCP, which must be based on a twenty-year planning horizon, should focus on broadly defined noise and safety impacts.

Fire Hazards

California Strategic Fire Plan

This statewide plan is a strategic document, which guides fire policy for much of California. The plan is aimed at reducing wildfire risk through pre-fire mitigation efforts tailored to local areas through assessments of fuels, hazards, and risks.

Fire Hazards

California State Multi-Hazard Mitigation Plan

The purpose of the State Multi-Hazard Mitigation Plan (SHMP) is to significantly reduce deaths, injuries, and other losses attributed to natural- and human-caused hazards in California. The SHMP provides guidance for hazard mitigation activities emphasizing partnerships among local, state, and federal agencies as well as the private sector.

Fire Hazards

California Government Code

California Government Code Section 65302.5 requires the State Board of Forestry and Fire Protection to provide recommendations to a local jurisdiction's General Plan fire safety element at the time that the General Plan is amended. While not a direct and binding fire prevention requirement for individuals, General Plans that adopt the Board's recommendations will include goals and policies that provide for contemporary fire prevention standards for the jurisdiction.

California Government Code Section 51175 defines Very High Fire Hazard Severity Zones and designates lands considered by the State to be a very high fire hazard.

California Government Code Section 51189 directs the Office of the State Fire Marshal to create building standards for wildland fire resistance. The code includes measures that increase the likelihood of a structure withstanding intrusion by fire (such as building design and construction requirements that use fire-resistant building materials), provides protection of structure projections (such as porches, decks, balconies, and eaves), and structure openings (such as attics, eave vents, and windows).

Fire Hazards

California Public Resources Code

The State's Fire Safe Regulations are set forth in Public Resources Code §4290, which include the establishment of State Responsibility Areas (SRA).

Public Resources Code §4291 sets forth defensible space requirements, which are applicable to anyone that …owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material (§4291(a)).

Public Resources Code § 4292-4296 and 14 CCR 1256: Fire Prevention for Electrical Utilities address the vegetation clearance standards for electrical utilities. They include the standards for clearing around energy lines and conductors, such as power-line hardware and power poles. These regulations are critical to wildland fire safety because of the substantial number of power lines in wildlands, the historic source of fire ignitions associated with power lines, and the extensive damage that results from power line caused wildfires in severe wind conditions.

Fire Hazards

Assembly Bill 337

Per AB 337, local fire prevention authorities and the California Department of Forestry and Fire Protection (CalFire) are required to identify "Very High Fire Hazard Severity Zones" (VHFHSZ) in Local Responsibility Areas (LRA). Standards related to brush clearance and the use of fire resistant materials in fire hazard severity zones are also established.

Fire Hazards

Uniform Fire Code

The Uniform Fire Code (UFC) establishes standards related to the design, construction, and maintenance of buildings. The standards set forth in the UFC range from designing for access by firefighters and equipment, and minimum requirements for automatic sprinklers and fire hydrants, to the appropriate storage and use of combustible materials.

Fire Hazards

CA Code of Regulations Title 8

In accordance with CCR, Title 8, §1270 and §6773 (*Fire Prevention* and *Fire Protection and Fire Equipment*), the Occupational Safety and Health Administration (Cal OSHA) establishes fire suppression service standards. The standards range from fire hose size requirements to the design of emergency access roads.

Fire Hazards

CA Code of Regulations Title 14 (Natural Resources)

Division 1.5 (Department of Forestry and Fire Protection), Title 14 of the CCR establishes a variety of wildfire preparedness, prevention, and response regulations.

Fire Hazards

CA Code of Regulations Title 19 (Public Safety)

Title 19 of the CCR establishes a variety of emergency fire response, fire prevention, and construction and construction materials standards.

Fire Hazards

CA Code of Regulations Title 24 (CA Building Standards Code)

The California Fire Code is set forth in Part 9 of the Building Standards Code. The CA Fire Code, which is pre-assembled with the International Fire Code by the ICC, contains fire-safety building standards referenced in other parts of Title 24.

Fire Hazards

CA Health and Safety Code and Uniform Building Code (UBC) Section 13000 et seq.

State fire regulations are set forth in §13000 et seq. of the California Health and Safety Code, which is divided into "Fires and Fire Protection" and "Buildings Used by the Public." The regulations provide for the enforcement of the UBC and mandate the abatement of fire hazards.

The code establishes broadly applicable regulations, such as standards for buildings and fire protection devices, in addition to regulations for specific land uses, such as childcare facilities and high-rise structures.

Fire Hazards

CA Health and Safety Code Division 11 (Explosives)

Division 11 of the Health and Safety Code establishes regulations related to a variety of explosive substances and devices, including high explosives and fireworks. Section 12000 et seq. establishes regulations related to explosives and explosive devices, including permitting, handling, storage, and transport (in quantities greater than 1,000 pounds).

Fire Hazards

CA Health and Safety Code Division 12.5 (Buildings Used by the Public)

This Division establishes requirements for buildings used by the public, including essential services buildings, earthquake hazard mitigation technologies, school buildings, and postsecondary buildings.

Fire Hazards

CA Vehicle Code §31600 (Transportation of Explosives)

Establishes requirements related to the transportation of explosives in quantities greater than 1,000 pounds, including licensing and route identification.

Flooding

Assembly Bill 162

This bill requires a general plan's land use element to identify and annually review those areas covered by the general plan that are subject to flooding as identified by flood plain mapping prepared by the Federal Emergency Management Agency (FEMA) or the Department of

Water Resources (DWR). The bill also requires, upon the next revision of the housing element, on or after January 1, 2009, the conservation element of the general plan to identify rivers, creeks, streams, flood corridors, riparian habitat, and land that may accommodate floodwater for purposes of groundwater recharge and stormwater management. By imposing new duties on local public officials, the bill creates a State-mandated local program.

This bill also requires, upon the next revision of the housing element, on or after January 1, 2009, the safety element to identify, among other things, information regarding flood hazards and to establish a set of comprehensive goals, policies, and objectives, based on specified information for the protection of the community from, among other things, the unreasonable risks of flooding.

Flooding

Assembly Bill 70

This bill provides that a city or county may be required to contribute its fair and reasonable share of the property damage caused by a flood to the extent that it has increased the State's exposure to liability for property damage by unreasonably approving, as defined, new development in a previously undeveloped area, as defined, that is protected by a State flood control project, unless the city or county meets specified requirements.

Flooding

CA Government Code

The Senate and Assembly bills identified above have resulted in various changes and additions to the California Government Code. California Government Code §8589.4, commonly referred to as the Potential Flooding-Dam Inundation Act, requires owners of dams to prepare maps showing potential inundation areas in the event of dam failure. A dam failure inundation zone is different from a flood hazard zone under the National Flood Insurance Program (NFIP). NFIP flood zones are areas along streams or coasts where storm flooding is possible from a "100-year flood." In contrast, a dam failure inundation zone is the area downstream from a dam that could be flooded in the event of dam failure due to an earthquake or other catastrophe. Dam failure inundation maps are reviewed and approved by the California Office of Emergency Services (OES). Sellers of real estate within inundation zones are required to disclose this information to prospective buyers.

Climate Change and Resiliency Planning

Assembly Bill 2140

Under the Federal Disaster Mitigation Act of 2000, each municipality must develop a Local Hazard Mitigation Plan (LHMP) or participate in a multi-jurisdictional LHMP in order to be eligible for pre-disaster mitigation grants or post-disaster recovery assistance from the federal government. AB 2140 authorizes local governments to adopt their LHMP's with the safety elements of their general plans. Integration or incorporation by reference is encouraged through a post-disaster financial incentive which authorizes the State to use available California Disaster Assistance Act funds to cover local shares of the 25% non-federal portion of grant-funded post-disaster projects. The City of San Marcos is part of the County's Multi-jurisdictional Hazard Mitigation Plan per the state requirements.

Climate Change and Resiliency Planning

Senate Bill 379

As California confronts climate change impacts, local governments are now required, in accordance with Senate Bill 379, to include a climate change vulnerability assessment, measures to address vulnerabilities, and comprehensive hazard mitigation and emergency response strategy within their Land Use and Safety Elements. Communities may use the safety element as a vehicle for defining "acceptable risk" and the basis for determining the level of necessary mitigation. Policies may include methods of minimizing risks, as well as ways to minimize economic disruption and expedite recovery following disasters.

Wildlife Hazards

Section 1801 of the Fish and Game Code

Section 1801 of the Fish and Game Code establishes state policy regarding wildlife resources. The ultimate goal of this policy is to maintain sufficient wildlife populations to accomplish the following goals:

- To provide for the beneficial use and enjoyment of wildlife by all citizens of the state;
- To perpetuate all species for their intrinsic and ecological values;
- To provide for aesthetic, educational, and non-appropriative uses;
- To maintain diversified recreational uses of wildlife including sport hunting;
- To provide for economic contributions to the citizens of the state through the recognition that wildlife is a renewable resource; and,
- To alleviate economic losses or public health and safety problems caused by wildlife.

To alleviate economic losses or public health and safety problems caused by wildlife.

Noise

California Department of Transportation (Caltrans)

Caltrans has adopted policy and guidelines relating to traffic noise as outlined in the Traffic Noise Analysis Protocol (Caltrans 2011). The noise abatement criteria specified in the protocol are the same as those specified by Federal Highway Administration (FHWA).

Noise

Governor's Office of Planning and Research (OPR)

OPR has developed guidelines for the preparation of general plans (Office of Planning and Research, 2017). The guidelines include land use compatibility guidelines for noise exposure.

Local Regulatory Framework

Air Traffic

McClellan-Palomar Airport Land Use Compatibility Plan (ALUCP)

The McClellan-Palomar Airport Land Use Compatibility Plan (ALUCP), prepared for McClellan-Palomar Airport, is the fundamental tool used by the San Diego County Regional Airport Authority (SDCRAA), acting in its capacity as the San Diego County Airport Land Use Commission (ALUC), in fulfilling its purpose of promoting airport land use compatibility. Specifically, this Compatibility Plan: (1) provides for the orderly growth of the Airport and the area surrounding the Airport; and (2) safeguards the general welfare of the inhabitants within the vicinity of the Airport and the public in general (Pub. Util. Code §21675(a)). In essence, this Compatibility Plan serves as a tool for the ALUC to use in fulfilling its duty to review land use plans and development proposals within the Airport Influence Area (AIA) at the Airport. In addition, this Compatibility Plan provides compatibility policies and criteria applicable to local agencies in their preparation or amendment of general plans and to landowners in their design of new development. (Please note that this Compatibility Plan defines general plans to include any general plan, community plan, specific plan, zoning ordinance, building regulation, land use policy document, or implementing ordinance. See Policy 2.2.21.)

Fire Hazards

County of San Diego 2017 Consolidated Fire Code

The fire protection districts within the boundaries of San Diego County collaborated to adopt by an ordinance for each district, the 2016 California Fire Code and amendments applicable to each district. The 2017 Consolidated Fire Code consists of the County's 2017 Fire Code as amended and adopted in Title 9, Division 6, Chapter 1 of the County Code, and the amendments of each fire protection district to the Building Standards Code based upon their respective determinations as to what amendments are reasonably necessary because of local climatic, geological, and topographical conditions within the district.

Fire Hazards

City of San Marcos Municipal Code

Title 8 – Health & Sanitation; this section of the San Marcos Municipal Code discusses non-compliance liability and the accumulation and storage of flammable waste material and storage of combustible materials.

Title 10 – Public Safety, Morals and Welfare; this title discusses property maintenance such as landscaping and vegetation that are fire hazards, are considered a nuisance and are declared to be unlawful.

Title 17 – Building, Construction, and Related Activities; this section provides direction on the numbering of buildings, flammable roofs, fences, fire codes, fire zones, and very high fire

hazard severity zone regulations. It includes the adoption by the City Council of the 2016 California Fire Code and Title 24, Part 9 of the California Code of Regulations, except such portions as deleted or modified by the San Marcos Municipal Code.

Title 19 – Subdivisions; this section addresses development capacity as it relates to fuel modification zones or green belts required by city ordinance for fire safety purposes.

Title 20 – Zoning; this title provides for supplemental standards for the development of hillside areas of the City. It includes fire hazard standards, access requirements, water supply, perimeter protection, fire-resistant design and material guidelines, landscaping, etc. Title 20 also includes a section on the preservation, protection, and removal of trees.

Noise

City of San Marcos Municipal Code

The City of San Marcos Municipal Code contains ordinances that are designed to protect people from non-transportation noise sources such as construction activity; commercial, industrial, and agricultural operations; machine and pumps; amplified sound, and air conditioners. Enforcement of the Code ensures that adjacent properties are not exposed to excessive noise from stationary noise sources. Enforcing the Code includes requiring proposed development projects to show compliance with the Code, including operating in accordance with noise levels and hours of operations limits placed on the project site. The City also requires construction activity to comply with established work schedule limits. The Noise Code also establishes allowable interior and exterior noise levels for residential and commercial areas.

Climate Planning

City of San Marcos Climate Action Plan

The City of San Marcos developed a Climate Action Plan (CAP) as part of its General Plan update process in 2013. The City initiated an update to its CAP in 2017 in order to comply with the State's SB 32 requirements to reduce GHG emissions to 40 percent below the 1990 levels by 2030. The City adopted the updated CAP (2020 CAP) in December 2020. The CAP identifies GHG baselines, projections, and reduction targets, strategies, and measures, including monitoring the progress by participating in SANDAG's biennial update of its local GHG inventory.

Flooding

City of San Marcos Municipal Code

Chapter 20.255 (Flood Damage Prevention Overlay Zone) of the City of San Marcos Municipal Code provides standard provisions for flood hazard reduction for flood-prone areas within San Marcos. It includes floodplain management regulations to promote the public health, safety, and general welfare of the public, and to minimize the potential for private losses due to flood conditions.

9.5 CONSERVATION AND NATURAL RESOURCES

Federal Regulatory Framework

Cultural Resources

National Historic Preservation Act

The National Historic Preservation Act (NHPA) is the primary federal law governing the preservation of cultural and historic resources in the United States. The law establishes a national preservation program and a system of procedural protections which encourage the identification and protection of cultural and historic resources of national, state, tribal, and local significance. A primary component of the act requires that federal agencies take into consideration actions that could adversely affect historic properties listed or eligible for listing on the National Register of Historic Places, known as the Section 106 Review Process.

Cultural Resources

National Register of Historic Places

The National Register of Historic Places is the nation's official list of buildings, structures, objects, sites, and districts worthy of preservation because of their significance in American history, architecture, archeology, engineering, and culture. The National Register recognizes

resources of local, state, and national significance which have been documented and evaluated according to uniform standards and criteria.

Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect historic and archeological resources. The National Register is administered by the National Park Service, which is part of the U.S. Department of the Interior.

To be eligible for listing in the National Register, a resource must meet at least one of the following criteria:

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

B. Is associated with the lives of persons significance in our past.

C. Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction.

D. Has yielded, or may be likely to yield, information important in history or prehistory.

Cultural Resources

American Indian Religious Freedom Act and Native American Graves and Repatriation Act

The American Indian Religious Freedom Act recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects shall be protected and preserved. Additionally, Native American remains are protected by the Native American Graves and Repatriation Act of 1990.

Cultural Resources

Other Federal Legislation

Historic preservation legislation was initiated by the Antiquities Act of 1966, which aimed to protect important historic and archaeological sites. It established a system of permits for conducting archaeological studies on Federal land, as well as setting penalties for noncompliance. This permit process controls the disturbance of archaeological sites on Federal land. New permits are currently issued under the Archeological Resources Protection Act (ARPA) of 1979. The purpose of ARPA is to enhance preservation and protection of archaeological resources on public and Native American lands. The Historic Sites Act of 1935 declared that it is national policy to "preserve for public use historic sites, buildings, and objects of national significance."

Biological Resources

Federal Endangered Species Act

The Federal Endangered Species Act, passed in 1973, defines an endangered species as any species or subspecies that is in danger of extinction throughout all or a significant portion of its range. A threatened species is defined as any species or subspecies that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Once a species is listed it is fully protected from a “take” unless a take permit is issued by the United States Fish and Wildlife Service. A take is defined as the harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting of wildlife species or any attempt to engage in such conduct, including modification of its habitat (16 USC 1532, 50 CFR 17.3). Proposed endangered or threatened species are those species for which a proposed regulation, but not a final rule, has been published in the Federal Register.

Migratory Bird Treaty Act

To kill, posses, or trade a migratory bird, bird part, nest, or egg is a violation of the Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., §703, Supp. I, 1989), unless it is in accordance with the regulations that have been set forth by the Secretary of the Interior.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC Section 668) protects these birds from direct take, and prohibits the take or commerce of any part of these species. The USFWS administers the act, and reviews Federal agency actions that may affect these species.

Biological Resources

Clean Water Act – Section 404

Section 404 of the Clean Water Act (CWA) regulates all discharges of dredged or fill material into waters of the U.S. Discharges of fill material includes the placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. §323.2(f)].

Waters of the U.S. include lakes, rivers, streams, intermittent drainages, mudflats, sandflats, wetlands, sloughs, and wet meadows [33 C.F.R. §328.3(a)]. Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 C.F.R. §328.3(b)]. Waters of the U.S. exhibit a defined bed and bank, and ordinary high water mark (OHWM). The OHWM is defined by the U.S. Army Corps of Engineers (USACE) as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [33 C.F.R. §328.3(e)].

The USACE is the agency responsible for administering the permit process for activities that affect waters of the U.S. Executive Order 11990 is a Federal implementation policy, which is intended to result in no net loss of wetlands.

Biological Resources

Clean Water Act - Section 401

Section 401 of the CWA (33 U.S.C. 1341) requires an applicant who is seeking a 404 permit to first obtain a water quality certification from the Regional Water Quality Control Board. To obtain the water quality certification, the Regional Water Quality Control Board must indicate that the proposed fill would be consistent with the standards set forth by the State.

Biological Resources

Department of Transportation Act - Section 4(f)

Section 4(f) has been part of Federal law since 1966. It was enacted as Section 4(f) of the Department of Transportation (DOT) Act of 1966 and set forth in Title 49 United States Code (U.S.C.), Section 1653(f). In January 1983, as part of an overall recodification of the DOT Act, Section 4(f) was amended and codified in 49 U.S.C. Section 303. This law established policy on Lands, Wildlife, and Waterfowl Refuges, and Historic Sites as follows:

> *It is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites. The Secretary of Transportation shall cooperate and consult with the Secretaries of the Interior, Housing and Urban Development, and Agriculture, and with the States, in developing transportation plans and programs that include measures to maintain or enhance the natural beauty of lands crossed by transportation activities or facilities. The Secretary of Transportation may approve a transportation program or project (other than any project for a park road or parkway under section 204 of title 23) requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of a historic*

site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if: a) There is no prudent and feasible alternative to using that land; and b) The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Air Quality

U.S. Environmental Protection Agency

At the Federal level, the EPA has been charged with implementing national air quality programs. The EPA's air quality mandates are drawn primarily from the Federal Clean Air Act (FCAA), which was enacted in 1963. The FCAA was amended in 1970, 1977, and 1990.

The FCAA required the EPA to establish primary and secondary national ambient air quality standards (NAAQS). The FCAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The Federal Clean Air Act Amendments of 1990 (FCAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The EPA has responsibility to review all state SIPs to determine conformity to the mandates of the FCAAA and determine if implementation will achieve air quality goals. If the EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area that imposes additional control measures. Failure to submit an approvable SIP or to implement the plan within the mandated timeframe may result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

Air Quality

Federal Hazardous Air Pollutant Program

Title III of the FCAA requires the EPA to promulgate national emissions standards for hazardous air pollutants (NESHAPs). The NESHAP may differ for major sources than for area sources of HAPs (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 emissions standards are to be promulgated in two phases. In the first phase (1992–2000), the EPA developed technology-based emission standards designed to produce the maximum emission reduction achievable. These standards are generally referred to as requiring maximum available control technology (MACT). These Federal rules are also commonly referred to as MACT standards, because they reflect the Maximum Achievable Control Technology. For area sources, the standards may be different, based on generally available control technology. In the second phase (2001–2008), the EPA is required to promulgate health risk-based emissions standards where deemed necessary to address risks remaining after implementation of the technology-based NESHAP standards. The FCAAA required the EPA to promulgate vehicle or fuel standards containing reasonable requirements that control toxic emissions, at a minimum to benzene and formaldehyde. Performance criteria were established to limit mobile-source emissions of toxics, including benzene, formaldehyde, and 1,3-butadiene. In addition, §219 required the use of reformulated gasoline in selected U.S. cities (those with the most severe ozone nonattainment conditions) to further reduce mobile-source emissions.

Greenhouse Gases

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: national ambient air quality standards (NAAQS) for criteria air pollutants, hazardous air pollutant standards, state attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The EPA is responsible for administering the FCAA. The FCAA requires the EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the U.S. Department of Transportation (USDOT), is responsible for establishing additional vehicle standards and for revising existing standards.

Since 1990, the fuel economy standard for new passenger cars has been 27.5 mpg. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is determined on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the U.S. The Corporate Average Fuel Economy (CAFE) program, which is administered by the EPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The EPA calculates a CAFE value for each manufacturer based on city and highway fuel economy test results and vehicle sales. Based on the information generated under the CAFE program, the USDOT is authorized to assess penalties for noncompliance.

Greenhouse Gases

Energy Policy Act of 1992 (EPAct)

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. EPAct requires certain federal, state, and local government, and private fleets, to purchase a percentage of light duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are included in EPAct. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs.

Greenhouse Gases

Energy Policy Act of 2005

The Energy Policy Act of 2005 was signed into law on August 8, 2005. Generally, the act provides for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for a clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Greenhouse Gases

Intermodal Surface Transportation Efficiency Act (ISTEA)

ISTEA (49 U.S.C. § 101 et seq.) promoted the development of intermodal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that metropolitan planning organizations (MPOs), such as the Southern California Association of Governments (SCAG), were to address in developing transportation plans and programs, including some energy-related factors. To meet the ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values that were to guide transportation decisions in that metropolitan area. The planning process was then to address these policies. Another requirement was to consider the consistency of transportation planning with federal, state, and local energy goals. Through this requirement, energy consumption was expected to become a criterion, along with cost and other values that determine the best transportation solution.

Greenhouse Gases

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)

SAFETEA-LU (23 U.S.C. § 507), renewed the Transportation Equity Act for the 21st Century (TEA-21) of 1998 (23 U.S.C.; 49 U.S.C.) through FY 2009. SAFETEA-LU authorized the federal surface transportation programs for highways, highway safety, and transit. SAFETEA-LU addressed the many challenges facing our transportation system today—such as improving safety, reducing traffic congestion, improving efficiency in freight movement, increasing intermodal connectivity, and protecting the environment—as well as laying the groundwork for addressing future challenges. SAFETEA-LU promoted more efficient and effective federal surface transportation programs by focusing on transportation issues of national significance, while giving state and local transportation decision makers more flexibility to solve transportation problems in their communities. SAFETEA-LU was extended in March of 2010 for nine months, and expired in December of the same year. In June 2012, SAFETEA-LU was replaced by the Moving Ahead for Progress in the 21st Century Act (MAP-21), which will take effect October 1, 2012.

Greenhouse Gases

U.S. Federal Climate Change Policy

The U.S. EPA published the latest version of the *Climate Change Indicators* report in 2016, in collaboration with more than 40 government agencies, academic institutions, and other organizations, to compile a key set of indicators related to the causes and effects of climate change. The U.S. EPA also currently administers multiple programs that encourage voluntary GHG reductions, including "ENERGY STAR," "Climate Leaders," and Methane Voluntary Programs. However, as of this writing, there are no adopted federal plans, policies, regulations, or laws directly regulating GHG emissions.

Geology, Soils, and Seismicity

International Building Code (IBC)

The purpose of the International Building Code (IBC) is to provide minimum standards to preserve the public peace, health, and safety by regulating the design, construction, quality of materials, certain equipment, location, grading, use, occupancy, and maintenance of all buildings and structures. IBC standards address foundation design, shear wall strength, and other structurally related conditions.

Hydrology and Water Quality

Clean Water Act (CWA)

The Federal Water Pollution Control Act, also known as the Clean Water Act (CWA), is the primary statute governing water quality. The CWA establishes the basic structure for regulating the discharges of pollutants into the waters of the United States and gives the US Environmental Protection Agency (EPA) the authority to implement pollution control programs. The statute's goal is to regulate all discharges into the nation's waters and to restore, maintain, and preserve the integrity of those waters. The CWA sets water quality standards for all contaminants in surface waters and mandates permits for wastewater and stormwater discharges. The CWA also requires states to establish site-specific water quality standards for navigable bodies of water, and regulates other activities that affect water quality, such as dredging and the filling of wetlands. The following CWA sections assist in ensuring water quality for the water of the United States:

- CWA Section 208 requires the use of best management practices (BMPs) to control the discharge of pollutants in stormwater during construction.

- CWA Section 303(d) requires the creation of a list of impaired water bodies by states, territories, and authorized tribes; evaluation of lawful activities that may impact impaired water bodies; and preparation of plans to improve the quality of these water bodies. CWA Section 303(d) also establishes total maximum daily loads (TMDLs), which is the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards.

- CWA Section 404 authorizes the US Army Corps of Engineers to require permits that will discharge dredge or fill materials into waters in the US, including wetlands.

In California, the EPA has designated the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs) with the authority to identify beneficial uses and adopt applicable water quality objectives.

Hydrology and Water Quality

National Pollutant Discharge Elimination System (NPDES)

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, oceans, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the EPA Regional Administrator (EPA Region 9). The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti-degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

NPDES permitting authority is administered by the California State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCB). The Plan Area is in a watershed administered by the Los Angeles Regional Water Quality Control Board (LARWQCB). Individual projects in the city that disturb more than one acre would be required to obtain NPDES coverage under the California General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit). The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) describing Best Management Practices (BMP) the discharger would use to prevent and retain storm water runoff. The SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a waterbody listed on the 303(d) list for sediment.

State Regulatory Framework

Cultural Resources

California Register of Historic Resources (CRHR)

The California Register of Historical Resources (CRHR) is a listing of all properties considered to be significant historical resources in the state. The California Register includes all properties listed or determined eligible for listing on the National Register, including properties evaluated under Section 106, and State Historical Landmarks number 770 and above. The California Register statute specifically provides that historical resources listed, determined eligible for listing on the California Register by the State Historical Resources Commission, or resources that meet the California Register criteria are resources which must be given consideration under CEQA (see above). Other resources, such as resources listed on local registers of historic registers or in local surveys, may be listed if they are determined by the State Historic Resources Commission to be significant in accordance with criteria and procedures to be adopted by the Commission, and are nominated; their listing in the California Register is not automatic.

Resources eligible for listing include buildings, sites, structures, objects, or historic districts that retain historical integrity and are historically significant at the local, state, or national level under one or more of the following four criteria:

1) It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
2) It is associated with the lives of persons important to local, California, or national history;
3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or
4) It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired, or significant individuals made their important contributions. Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of significance.

Alterations to a resource or changes in its use over time may have historical, cultural, or architectural significance. Simply, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the California Register, if, under Criterion 4, it maintains the potential to yield significant scientific or historical information, or specific data.

Cultural Resources

Public Resources Code Section § 5097.5

Section 5097.5: No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological, or historical feature, situated on public lands (lands under state, county, city, district or public authority jurisdiction, or the jurisdiction of a public corporation), except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor. As used in this section, "public lands" means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.

Cultural Resources

California Environmental Quality Act (CEQA)

CEQA requires that lead agencies determine whether projects may have a significant effect on archaeological and historical resources. This determination applies to those resources which meet specific criteria qualifying them as "unique," "important," listed on the California Register of Historic Resources (CRHR), or eligible for listing on the CRHR. If the agency determines that a project may have a significant effect on a significant resource, the project is determined to have a significant effect on the environment, and these effects must be addressed. If a cultural resource is found not to be significant under the qualifying criteria, it need not be considered further in the planning process.

CEQA emphasizes avoidance of archaeological and historical resources as the preferred means of reducing potential significant environmental effects resulting from projects. If avoidance is not feasible, an excavation program or some other form of mitigation must be developed to mitigate the impacts. In order to adequately address the level of potential impacts, and thereby design appropriate mitigation measures, the significance and nature of the cultural resources must be determined. The following are steps typically taken to assess and mitigate potential impacts to cultural resources for the purposes of CEQA:

- Identify cultural resources;
- Evaluate the significance of the cultural resources found;

- Evaluate the effects of the project on cultural resources; and
- Develop and implement measures to mitigate the effects of the project on cultural resources that would be significantly affected.

Treatment of paleontological resources under CEQA is generally similar to treatment of cultural resources, requiring evaluation of resources in a project's area of potential affect, assessment of potential impacts on significant or unique resources, and development of mitigation measures for potentially significant impacts, which may include monitoring combined with data recovery and/or avoidance.

Cultural Resources

State Laws Pertaining to Human Remains

Section 7050.5 of the California Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission. CEQA Guidelines (Section 15064.5) specify the procedures to be followed in case of the discovery of human remains on non-Federal land. The disposition of Native American burials falls within the jurisdiction of the Native American Heritage Commission.

Several sections of the California Public Resources Code protect paleontological resources.

Section 5097.5 prohibits "knowing and willful" excavation, removal, destruction, injury, and defacement of any "vertebrate paleontological site, including fossilized footprints," on public lands, except where the agency with jurisdiction has granted express permission. "As used in this section, 'public lands' means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof."

California Public Resources Code, Section 30244 requires reasonable mitigation for impacts on paleontological resources that occur as a result of development on public lands.

The sections of the California Administrative Code relating to the State Division of Beaches and Parks afford protection to geologic features and "paleontological materials" but grant the director of the State park system authority to issue permits for specific activities that may result in damage to such resources, if the activities are in the interest of the State park system and for State park purposes (California Administrative Code, Title 14, Section 4307 – 4309).

Cultural Resources

Senate Bill 18 (Burton, Chapter 905, Statutes 2004)

SB 18, authored by Senator John Burton and signed into law by Governor Arnold Schwarzenegger in September 2004, requires local (city and county) governments to consult with California Native American tribes to aid in the protection of traditional tribal cultural places ("cultural places") through local land use planning. This legislation, which amended §65040.2, §65092, §65351, §65352, and §65560, and added §65352.3, §653524, and §65562.5 to the Government Code, also requires the Governor's Office of Planning and Research (OPR) to include in the General Plan Guidelines advice to local governments on how to conduct these consultations. The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. These consultation and noticing requirements apply to adoption and amendment of both general plans (defined in Government Code §65300 et seq.) and specific plans (defined in Government Code §65450 et seq.).

Cultural Resources

Assembly Bill 52

Assembly Bill (AB) 52, approved in September 2014, creates a formal role for California Native American tribes by creating a formal consultation process and establishing that a substantial

adverse change to a tribal cultural resource has a significant effect on the environment. Tribal cultural resources are defined as:

1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
   A) Included or determined to be eligible for inclusion in the CRHR.
   B) Included in a local register of historical resources as defined in PRC Section 5020.1(k).
2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1 (c). In applying the criteria set forth in PRC Section 5024.1 (c) the lead agency shall consider the significance of the resource to a California Native American tribe.

A cultural landscape that meets the criteria above is also a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. In addition, a historical resource described in PRC Section 21084.1, a unique archaeological resource as defined in PRC Section 21083.2(g), or a "non-unique archaeological resource" as defined in PRC Section 21083.2(h) may also be a tribal cultural resource if it conforms with above criteria.

AB 52 requires a lead agency, prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project, to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation.

Cultural Resources

California Administrative Code, Title 14, Section 4307

This section states that "No person shall remove, injure, deface, or destroy any object of paleontological, archeological, or historical interest or value."

Cultural Resources

Mills Act

Under California Government Code Section 50280 et seq., the City is authorized to enter into contracts with the owners of qualified historical properties to provide for the appropriate use, maintenance, and rehabilitation so that such properties retain their historic characters. As an incentive to entering the contract, the provisions of the Act allow the County Tax Assessor to assess the property using a different formula which typically results in a lower tax bill.

Biological Resources

Fish and Game Code §2050-2097 - California Endangered Species Act

The California Endangered Species Act (CESA) protects certain plant and animal species when they are of special ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. CESA established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats.

CESA was expanded upon the original Native Plant Protection Act and enhanced legal protection for plants. To be consistent with Federal regulations, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the Act as threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Under State law, plant and animal species may be formally designated by official listing by the California Fish and Game Commission.

Biological Resources

Fish and Game Code §1900-1913 - California Native Plant Protection Act

In 1977 the State Legislature passed the Native Plant Protection Act (NPPA) in recognition of rare and endangered plants of the State. The intent of the law was to preserve, protect, and enhance endangered plants. The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare, and to require permits for collecting, transporting, or selling such plants. The NPPA includes provisions that prohibit the taking of plants designated as "rare" from the wild, and a salvage mandate for landowners, which requires notification of the CDFW 10 days in advance of approving a building site.

Biological Resources

Fish and Game Code §3503, 3503.5, 3800 - Predatory Birds

Under the California Fish and Game Code, all predatory birds in the order Falconiformes or Strigiformes in California, generally called “raptors,” are protected. The law indicates that it is unlawful to take, posses, or destroy the nest or eggs of any such bird unless it is in accordance with the code. Any activity that would cause a nest to be abandoned, or cause a reduction or loss in a reproductive effort, is considered a take. This generally includes construction activities.

Biological Resources

Fish and Game Code §1601-1603 - Streambed Alteration

Under the California Fish and Game Code, CDFW has jurisdiction over any proposed activities that would divert or obstruct the natural flow or change the bed, channel, or bank of any lake or stream. Private landowners or project proponents must obtain a “Streambed Alteration Agreement” from CDFW prior to any alteration of a lake bed, stream channel, or their banks. Through this agreement, the CDFW may impose conditions to limit and fully mitigate impacts on fish and wildlife resources. These agreements are usually initiated through the local CDFW warden and will specify timing and construction conditions, including any mitigation necessary to protect fish and wildlife from impacts of the work.

Biological Resources

Public Resources Code § 21000 - California Environmental Quality Act

The California Environmental Quality Act (CEQA) identifies that a species that is not listed on the Federal or State endangered species list may be considered rare or endangered if the species meets certain criteria. Under CEQA public agencies must determine if a project would adversely affect a species that is not protected by FESA or CESA. Species that are not listed under FESA or CESA, but are otherwise eligible for listing (i.e., candidate or proposed) may be protected by the local government until the opportunity to list the species arises for the responsible agency.

Species that may be considered for review are included on a list of “Species of Special Concern,” developed by the CDFW. Additionally, the California Native Plant Society (CNPS) maintains a list of plant species native to California 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. List 1A contains plants that are believed to be extinct. List 1B contains plants that are rare, threatened, or endangered in California and elsewhere. List 2 contains plants that are rare, threatened, or endangered in California, but more numerous elsewhere. List 3 contains plants where additional information is needed. List 4 contains plants with a limited distribution.

Biological Resources

Public Resources Code § 21083.4 - Oak Woodlands Conservation

In 2004, the California legislature enacted SB 1334, which added oak woodland conservation regulations to the Public Resources Code. This new law requires a county to determine whether a project, within its jurisdiction, may result in a conversion of oak woodlands that will have a significant effect on the environment. If a county determines that there may be a significant effect to oak woodlands, the county must require oak woodland mitigation alternatives to mitigate the significant effect of the conversion of oak woodlands. Such mitigation alternatives include: conservation through the use of conservation easements; planting and maintaining an appropriate number of replacement trees; contribution of funds

to the Oak Woodlands Conservation Fund for the purpose of purchasing oak woodlands conservation easements; and/or other mitigation measures developed by the county.

Biological Resources

California Oak Woodland Conservation Act

The California Legislature passed Assembly Bill 242, known as the California Oak Woodland Conservation Act, in 2001 as a result of widespread changes in land use patterns across the landscape that were fragmenting oak woodland character over extensive areas. The Act created the California Oak Woodland Conservation Program within the Wildlife Conservation Board. The legislation provides funding and incentives to ensure the future viability of California's oak woodland resources by maintaining large scale land holdings or smaller multiple holdings that are not divided into fragmented, nonfunctioning biological units. The Act acknowledged that the conservation of oak woodlands enhances the natural scenic beauty for residents and visitors, increases real property values, promotes ecological balance, provides habitat for over 300 wildlife species, moderates temperature extremes, reduces soil erosion, sustains water quality, and aids with nutrient cycling, all of which affect and improve the health, safety, and general welfare of the residents of the State.

Biological Resources

California Wetlands Conservation Policy

In August 1993, the Governor announced the "California Wetlands Conservation Policy." The goals of the policy are to establish a framework and strategy that will:

- Ensure no overall net loss and to achieve a long-term net gain in the quantity, quality, and permanence of wetland acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property.
- Reduce procedural complexity in the administration of State and Federal wetland conservation programs.
- Encourage partnerships to make landowner incentive programs and cooperative planning efforts the primary focus of wetland conservation and restoration.

The Governor also signed Executive Order W-59-93, which incorporates the goals and objectives contained in the new policy and directs the Resources Agency to establish an Interagency Task Force to direct and coordinate administration and implementation of the policy.

Air Quality

California Air Resources Board (CARB)

CARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA), which was adopted in 1988. The CCAA requires that all air districts in the State endeavor to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. The act specifies that districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources, and provides districts with the authority to regulate indirect sources.

CARB is primarily responsible for developing and implementing air pollution control plans to achieve and maintain the U.S. National Ambient Air Quality Standards (NAAQS). CARB is primarily responsible for statewide pollution sources and produces a major part of the State Implementation Plan (SIP). Local air districts are still relied upon to provide additional strategies for sources under their jurisdiction. The CARB combines this data and submits the completed SIP to EPA.

Other CARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control and air quality management districts), establishing CAAQS (which in many cases are more stringent than the NAAQS), determining and updating area designations and maps, and setting emissions standards for new mobile sources, consumer products, small utility engines, and off-road vehicles.

Air Quality

Transport of Pollutants

The California Clean Air Act, Section 39610 (a), directs the CARB to "identify each district in which transported air pollutants from upwind areas outside the district cause or contribute to a violation of the ozone standard and to identify the district of origin of transported pollutants." The information regarding the transport of air pollutants from one basin to another was to be quantified to assist interrelated basins in the preparation of plans for the attainment of State ambient air quality standards. Numerous studies conducted by the CARB have identified air basins that are impacted by pollutants transported from other air basins (as of 1993). Among the air basins affected by air pollution transport from the South Coast Air Basin (SCAB) are the South Central Coast Air Basin, the Mojave Desert Air Basin, the Salton Sea Air Basin, and the San Diego County Air Basin. The SCAB was also identified as an area impacted by the transport of air pollutants from the South Central Coast region (CARB, 2001).

Air Quality

State Toxic Air Contaminant Programs (TAC)

California regulates toxic air contaminants (TACs) primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. To date, CARB has identified over 21 TACs, and adopted the EPA's list of HAPs as TACs. Most recently, diesel exhaust particulate was added to the CARB list of TACs. Once a TAC is identified, CARB then adopts an Airborne Toxics Control Measure for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate best available control technology (BACT) to minimize emissions. None of the TACs identified by CARB have a safe threshold.

The Hot Spots Act requires that existing facilities that emit toxic substances above a specified level:

1. Prepare a toxic emission inventory;
2. Prepare a risk assessment if emissions are significant;
3. Notify the public of significant risk levels; and
4. Prepare and implement risk reduction measures.

CARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors and generators). In February 2000, CARB adopted a new public transit bus fleet rule and emission standards for new urban buses. These new rules and standards provide for: 1) more stringent emission standards for some new urban bus engines beginning with 2002 model year engines, 2) zero-emission bus demonstration and purchase requirements applicable to transit agencies, and 3) reporting requirements with which transit agencies must demonstrate compliance with the urban transit bus fleet rule. Upcoming milestones include the low sulfur diesel fuel requirement, and tighter emission standards for heavy-duty diesel trucks (2007) and off-road diesel equipment (2011) nationwide. Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially less TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, and diesel PM) have been reduced significantly over the last decade, and will be reduced further in California through a progression of regulatory measures (e.g., Low Emission Vehicle/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies. With implementation of CARB's Risk Reduction Plan, it is expected that diesel PM concentrations will be reduced by 85% in 2020 from the estimated year 2000 level. Adopted regulations are also expected to continue to reduce formaldehyde emissions from cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

Greenhouse Gases

Assembly Bill 1493

In response to AB 1493, CARB approved amendments to the California Code of Regulations (CCR) adding GHG emission standards to California's existing motor vehicle emission standards. Amendments to CCR Title 13 Sections 1900 (CCR 13 1900) and 1961 (CCR 13 1961), and adoption of Section 1961.1 (CCR 13 1961.1), require automobile manufacturers to meet fleet average GHG emission limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty passenger vehicle weight classes beginning with the 2009 model year. Emission limits are further reduced each model year through 2016. For passenger cars and light-duty trucks 3,750 pounds or less loaded vehicle weight (LVW), the 2016 GHG emission limits are approximately 37 percent lower than during the first year of the regulations in 2009. For medium-duty passenger vehicles and light-duty trucks 3,751 LVW to 8,500 pounds gross vehicle weight (GVW), GHG emissions are reduced approximately 24 percent between 2009 and 2016.

CARB requested a waiver of Federal preemption of California's Greenhouse Gas Emissions Standards. The intent of the waiver is to allow California to enact emissions standards to reduce carbon dioxide and other greenhouse gas emissions from automobiles in accordance with the regulation amendments to the CCRs that fulfill the requirements of AB 1493. The EPA granted a waiver to California to implement its greenhouse gas emissions standards for cars.

Greenhouse Gases

California Executive Orders S-3-05 and S-20-06, and Assembly Bill 32

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010, 2) 1990 levels by 2020, and 3) 80% below 1990 levels by 2050.

In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that CARB create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs State agencies to begin implementing AB 32, including the recommendations made by the State's Climate Action Team.

Greenhouse Gases

Assembly Bill 1007

Assembly Bill 1007 (Pavley, Chapter 371, Statutes of 2005) directed the CEC to prepare a plan to increase the use of alternative fuels in California. As a result, the CEC prepared the State Alternative Fuels Plan in consultation with State, Federal, and local agencies. The plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce greenhouse gas emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Greenhouse Gases

Bioenergy Action Plan – Executive Order #S-06-06

Executive Order #S-06-06 establishes targets for the use and production of biofuels and biopower, and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The executive order establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050. The executive order also calls for the state to meet a target for use of biomass electricity.

Greenhouse Gases

Governor's Low Carbon Fuel Standard (Executive Order S-01-07)

Executive Order (EO) S-01-07 establishes a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 through establishment of a

Low Carbon Fuel Standard. The Low Carbon Fuel Standard is incorporated into the State Alternative Fuels Plan and is one of the proposed discrete early action GHG reduction measures identified by CARB pursuant to AB 32.

Greenhouse Gases

Executive Order B-30-15

On April 29, 2015, Governor Jerry Brown issued Executive Order (EO) B-30-15, which establishes a State GHG reduction target of 40 percent below 1990 levels by 2030. The new emission reduction target provides for a mid-term goal that would help the State to continue on course from reducing GHG emissions to 1990 levels by 2020 (per AB 32) to the ultimate goal of reducing emissions 80 percent under 1990 levels by 2050 (per EO S-03-05). This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2 degrees Celsius – the warming threshold at which scientists say there will likely be major climate disruptions. EO B-30-15 also addresses the need for climate adaptation and directs State government to:

- Incorporate climate change impacts into the State's Five-Year Infrastructure Plan;
- Update the Safeguarding California Plan, the State climate adaptation strategy, to identify how climate change will affect California infrastructure and industry, and what actions the State can take to reduce the risks posed by climate change;
- Factor climate change into State agencies' planning and investment decisions; and
- Implement measures under existing agency and departmental authority to reduce GHG emissions.

Greenhouse Gases

Climate Action Program at Caltrans

Caltrans prepared a Climate Action Program in response to new regulatory directives. The goal of the Climate Action Program is to promote clean and energy efficient transportation, and provide guidance for mainstreaming energy and climate change issues into business operations. The overall approach to lower fuel consumption and CO_2 from transportation is twofold: (1) reduce congestion and improve efficiency of transportation systems through smart land use, operational improvements, and Intelligent Transportation Systems; and (2) institutionalize energy efficiency and GHG emission reduction measures and technology into planning, project development, operations, and maintenance of transportation facilities, fleets, buildings, and equipment.

The reasoning underlying the Climate Action Program is the conclusion that "the most effective approach to addressing GHG reduction, in the short-to-medium term, is strong technology policy and market mechanisms to encourage innovations. Rapid development and availability of alternative fuels and vehicles, increased efficiency in new cars and trucks (light and heavy duty), and super clean fuels are the most direct approach to reducing GHG emissions from motor vehicles (emission performance standards and fuel or carbon performance standards)."

Greenhouse Gases

Senate Bill 97

Senate Bill 97 (Chapter 185, 2007) required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the State CEQA Guidelines for addressing greenhouse gas emissions. OPR prepared its recommended amendments to the State CEQA Guidelines to provide guidance to public agencies regarding the analysis and mitigation of greenhouse gas emissions, and the effects of greenhouse gas emissions, in draft CEQA documents. The Amendments became effective on March 18, 2010.

Greenhouse Gases

Senate Bill 375

SB 375 requires CARB to develop regional greenhouse gas emission reduction targets to be achieved from the automobile and light truck sectors for 2020 and 2035. The 18 metropolitan

planning organizations (MPO) in California will prepare a "sustainable communities strategy" to reduce the amount of greenhouse gas emission in their respective regions and demonstrate the ability for the region to attain CARB's reduction targets. CARB would later determine if each region is on track to meet their reduction targets. In addition, cities would have extra time -- eight years instead of five -- to update housing plans required by the State.

Greenhouse Gases

Senate Bill 32

An update to Assembly Bill 32 was passed in August 2016, which extends the state's targets for reducing greenhouse gases from 2020 to 2030. Under Senate Bill (SB) 32, the state would reduce its greenhouse gas emissions to 40 percent below 1990 levels by 2030.

Geology, Soils, and Seismicity

California Building Standards Code

Title 24 of the California Code of Regulations, known as the California Building Standards Code (CBSC) or simply "Title 24," contains the regulations that govern the construction of buildings in California. The CBSC includes 12 parts: California Building Standards Administrative Code, California Building Code, California Residential Building Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Historical Building Code, California Fire Code, California Existing Building Code, California Green Building Standards Code (CALGreen Code), and the California Reference Standards Code. Through the CBSC, the State provides a minimum standard for building design and construction. The CBSC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control.

Geology, Soils, and Seismicity

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 sets forth the policies and criteria of the State Mining and Geology Board, which governs the exercise of governments' responsibilities to prohibit the location of developments and structures for human occupancy across the trace of active faults. The policies and criteria are limited to potential hazards resulting from surface faulting or fault creep within Earthquake Fault Zones, as delineated on maps officially issued by the State Geologist. Working definitions include:

- Fault – a fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side;
- Fault Zone – a zone of related faults, which commonly are braided and sub parallel, but may be branching and divergent. A fault zone has a significant width (with respect to the scale at which the fault is being considered, portrayed, or investigated), ranging from a few feet to several miles;
- Sufficiently Active Fault – a fault that has evidence of Holocene surface displacement along one or more of its segments or branches (last 11,000 years); and
- Well-Defined Fault – a fault whose trace is clearly detectable by a trained geologist as a physical feature at or just below the ground surface. The geologist should be able to locate the fault in the field with sufficient precision and confidence to indicate that the required site-specific investigations would meet with some success.

"Sufficiently Active" and "Well Defined" are the two criteria used by the State to determine if a fault should be zoned under the Alquist-Priolo Earthquake Fault Zoning Act.

Geology, Soils, and Seismicity

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, passed in 1990, addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically-induced landslides. Under the Act, seismic hazard zones are to be mapped by the State Geologist to assist local governments in

land use planning. The program and actions mandated by the Seismic Hazards Mapping Act closely resemble those of the Alquist-Priolo Earthquake Fault Zoning Act (which addresses only surface fault-rupture hazards) and are outlined below:

- The State Geologist is required to delineate the various "seismic hazard zones."
- Cities and counties, or other local permitting authority, must regulate certain development "projects" within the zones. They must withhold the development permits for a site within a zone until the geologic and soil conditions of the site are investigated and appropriate mitigation measures, if any, are incorporated into development plans.
- The State Mining and Geology Board provides additional regulations, policies, and criteria to guide cities and counties in their implementation of the law. The Board also provides guidelines for preparation of the Seismic Hazard Zone Maps and for evaluating and mitigating seismic hazards.
- Sellers (and their agents) of real property within a mapped hazard zone must disclose that the property lies within such a zone at the time of sale.

Geology, Soils, and Seismicity

Caltrans Seismic Design Criteria

The California Department of Transportation (Caltrans) has Seismic Design Criteria (SDC), which is an encyclopedia of new and currently practiced seismic design and analysis methodologies for the design of new bridges in California. The SDC adopts a performance-based approach specifying minimum levels of structural system performance, component performance, analysis, and design practices for ordinary standard bridges. The SDC has been developed with input from the Caltrans Offices of Structure Design, Earthquake Engineering and Design Support, and Materials and Foundations. Memo 20-1 Seismic Design Methodology (Caltrans 1999) outlines the bridge category and classification, seismic performance criteria, seismic design philosophy and approach, seismic demands and capacities on structural components, and seismic design practices that collectively make up Caltrans' seismic design.

Mineral and Energy Resources

Surface Mining and Reclamation Act of 1975

The California Department of Conservation Surface Mining and Reclamation Act of 1975 (§ 2710), also known as SMARA, provides a comprehensive surface mining and reclamation policy that permits the continued mining of minerals, as well as the protection and subsequent beneficial use of the mined and reclaimed land. The purpose of SMARA is to ensure that adverse environmental effects are prevented or minimized, and that mined lands are reclaimed to a usable condition and readily adaptable for alternative land uses. The production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, wildlife, range, and forage, as well as aesthetic enjoyment. Residual hazards to public health and safety are eliminated. These goals are achieved through land use planning by allowing a jurisdiction to balance the economic benefits of resource reclamation with the need to provide other land uses.

If a use is proposed that might threaten the potential recovery of minerals from an area that has been classified mineral resource zone 2 (MRZ-2), SMARA would require the jurisdiction to prepare a statement specifying its reasons for permitting the proposed use, provide public notice of these reasons, and forward a copy of the statement to the State Geologist and the State Mining and Geology Board (Cal. Pub. Res. Code Section 2762). Lands classified MRZ-2 are areas that contain identified mineral resources.

Hydrology and Water Quality

California Fish and Wildlife Code

The California Department of Fish and Wildlife (CDFW) protects streams, water bodies, and riparian corridors through the streambed alteration agreement process under Section 1600 to 1616 of the California Fish and Game Code. The California Fish and Game Code establishes that "an entity may not substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river stream, or lake" (Fish and Game Code Section 1602(a)) without notifying the CDFW, incorporating necessary mitigation and obtaining a streambed alteration agreement. The CDFWs jurisdiction extends to the top of banks and often includes the outer edge of riparian vegetation canopy cover.

Hydrology and Water Quality

California Water Code

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and each of the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a Water Quality Control Plan (Basin Plan) for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

Hydrology and Water Quality

State Updated Model Landscape Ordinance

Under Assembly Bill (AB) 1881, the updated Model Landscape Ordinance requires cities and counties to adopt landscape water conservation ordinances by January 31, 2010 or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Ordinance (MO). The San Marcos Municipal Code includes a section addressing landscaping water use standards (SMMC Chp. 20.330).

Hydrology and Water Quality

California Department of Health Services

The Department of Health Services, Division of Drinking Water and Environmental Management, oversees the Drinking Water Program. The Drinking Water Program regulates public water systems and certifies drinking water treatment and distribution operators. It provides support for small water systems and for improving their technical, managerial, and financial capacity. It provides subsidized funding for water system improvements under the State Revolving Fund ("SRF") and Proposition 50 programs. The Drinking Water Program also oversees water recycling projects, permits water treatment devices, supports and promotes water system security, and oversees the Drinking Water Treatment and Research Fund for MTBE and other oxygenates.

Hydrology and Water Quality

Consumer Confidence Report Requirements

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminant levels set by regulation, violations and actions taken to correct them, and

opportunities for public participation in decisions that may affect the quality of the water provided.

Hydrology and Water Quality

Urban Water Management Planning Act

The Urban Water Management Planning Act has as its objectives the management of urban water demands and the efficient use of urban water. Under its provisions, every urban water supplier is required to prepare and adopt an urban water management plan. An "urban water supplier" is a public or private water supplier that provides 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. The plan must identify and quantify the existing and planned sources of water available to the supplier, quantify the projected water use for a period of 20 years, and describe the supplier's water demand management measures. The urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The Department of Water Resources must receive a copy of an adopted urban water management plan.

Hydrology and Water Quality

Senate Bill (SB) 610 and Assembly Bill (AB) 901

The State Legislature passed SB 610 and AB 901 in 2001. Both measures modified the Urban Water Management Planning Act.

SB 610 requires additional information in an urban water management plan if groundwater is identified as a source of water available to an urban water supplier. It also requires that the plan include a description of all water supply projects and programs that may be undertaken to meet total projected water use. SB 610 requires a city or county that determines a project is subject to CEQA to identify any public water system that may supply water to the project and to request identified public water systems to prepare a specified water supply assessment. The assessment must include, among other information, an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and water received in prior years pursuant to these entitlements, rights, and contracts.

AB 901 requires an urban water management plan to include information, to the extent practicable, relating to the quality of existing sources of water available to an urban water supplier over given time periods. AB 901 also requires information on the manner in which water quality affects water management strategies and supply reliability. The bill requires a plan to describe plans to supplement a water source that may not be available at a consistent level of use, to the extent practicable. Additional findings and declarations relating to water quality are required.

Hydrology and Water Quality

Senate Bill (SB) 221

SB 221 adds Government Code Section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within five days of the subdivision application being accepted as complete for processing by the city or county. It also adds Government Code Section 66473.7, establishing detailed requirements for establishing whether a "sufficient water supply" exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring availability of a sufficient water supply. The applicable public water system must provide proof of availability. If there is no public water system, the city or county must undertake the analysis described in Government Code Section 66473.7. The analysis must include consideration of effects on other users of water and groundwater.

Visual Resources and Community Image

California Department of Transportation – California Scenic Highway Program

California's Scenic Highway Program was created by the Legislature in 1963 to preserve and protect scenic highway corridors from change, which would diminish the aesthetic value of lands adjacent to highways. The State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq.

The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the Streets and Highways Code. A list of California's scenic highways and map showing their locations may be obtained from the Caltrans Scenic Highway Coordinators.

If a route is not included on a list of highways eligible for scenic highway designation in the Streets and Highways Code Section 263 et seq., it must be added before it can be considered for official designation. A highway may be designated scenic depending on the extent of the natural landscape that can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

When a local jurisdiction nominates an eligible scenic highway for official designation, it must identify and define the scenic corridor of the highway. A scenic corridor is the land generally adjacent to and visible from the highway. A scenic highway designation protects the scenic values of an area. Jurisdictional boundaries of the nominating agency are also considered, and the agency must also adopt ordinances to preserve the scenic quality of the corridor, or document such regulations that already exist in various portions of local codes. These ordinances make up the scenic corridor protection program.

To receive official designation, the local jurisdiction must follow the same process required for official designation of State Scenic Highways. The minimum requirements for scenic corridor protection include:

- Regulation of land use and density of development;
- Detailed land and site planning;
- Control of outdoor advertising (including a ban on billboards);
- Careful attention to and control of earthmoving and landscaping; and
- Careful attention to design and appearance of structures and equipment.

Local Regulatory Framework

Air Quality

San Diego Air Pollution Control District – Annual Air Quality Monitoring Network Plan

The San Diego Air Pollution Control District (SDAPCD) is the overseeing regulatory body for the San Diego Air Basin (SDAB). The SDAPCD consists os all of San Diego County. Each year, the SDAPCD develops a network plan, consistent with the air quality monitoring requirements of relevant state and federal agencies. The document provides data on the status of the air quality within the region, and presents an overview of the most recent network assessment and establishes monitoring programs.

Air Quality

San Marcos Climate Action Plan

The City of San Marcos developed a Climate Action Plan (CAP) as part of its General Plan update process in 2013. The City initiated an update to its CAP in 2017 in order to comply with the State's SB 32 requirements to reduce GHG emissions to 40 percent below the 1990 levels by 2030. The City adopted the updated CAP (2020 CAP) in December 2020. The CAP identifies GHG baselines, projections, and reduction targets, strategies, and measures,

including monitoring the progress by participating in SANDAG's biennial update of its local GHG inventory.

Hydrology and Water Quality

City of San Marcos Municipal Code

The City of San Marcos is required to implement procedures with respect to the entry of non-stormwater discharges into its municipal stormwater system. The City of San Marcos regulates stormwater discharge in accordance with the NPDES permit through the San Marcos Municipal Code, Chapter 14 – Storm Water Management and Discharge Control.

Illegal Discharges Prohibit, as described in Section 14.15.030, and Reduction of Pollutants in Storm Water, as described in Section 14.15.050. of the San Marcos Municipal Code, are required during all construction activities and/or as part of the applicant's legal requirements to obtain coverage under the applicable NPDES General Construction Activities Stormwater Permit and State Water Board 401 Water Quality Certification. The NPDES permit requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) identifying BMPs to control surface runoff, erosion, and sedimentation.

Hydrology and Water Quality

San Diego Regional Water Quality Control Board (SDRWQCB) – Basin Plan

The SDRWQB governs water quality in the City of San Marcos and the entirety of San Diego County. The SDRWQB sets quality standards for the San Diego region by establishing objectives and implementation plans to protect the beneficial uses of local waters.

Hydrology and Water Quality

City of San Marcos Drainage Master Plan

The Drainage Master Plan was written to assess the quality and performance of local storm drain infrastructure, as well as to implement programs to address deficiencies within the system. As part of the Drainage Master Plan, the City of San Marcos also developed a Capital Improvement Program (CIP) to produce infrastructure improvements based on the assessment provided within the document.

9.6 COMMUNITY HEALTH

Federal Regulatory Framework

Access to Health Care and Health Facilities

Affordable Care Act

The Affordable Care Act (ACA) is a comprehensive federal health care reform law that was enacted in March of 2010. The ACA expanded the Medicaid program to cover more adults by adjusting income requirements and provides consumers with subsidies that lower costs for households with incomes between 100% and 400% of the federal poverty level. Consumer subsidies are paid in the form of "premium tax credits". The Internal Revenue Servic (IRS) is responsible for tax provisions of the current ACA law and the Center for Consumer Information and Insurance Oversight (CCIIO) is responsible for overseeing the implementation of current private health insurance legislation within the ACA.

Access to Health Care and Health Facilities

Medicaid/Medicare

Medicaid is a federal program that provides health coverage to Americans. Medicaid was established in July 1965, authorized by Title XIX of the Social Security Act. The program is a federal program that also functions at the state level. Each state uses unique financial eligibility guidelines to determine if you are eligible for Medicaid coverage. In general, the Medicaid program is intended to provide health coverage for people with limited income and assets. There are Medicaid funded programs for various subgroups of people including; Older

adults, People with disabilities, Children, Pregnant people, and Parents and/or caretakers of children.

Medicare is a federal health insurance program established under Title XIX in July of 1965. Medicare insurance benefits are intended for:

- People who are 65 and older
- Certain younger people with disabilities
- People with End-Stage Renal Disease

Different components of Medicare help cover specific health-related services. These services include: hospital Insurance (Medicare Part A), medical Insurance (Medicare Part B), and prescription drug coverage (Medicare Part D).

Food Access

Supplemental Nutrition Assistance Program (SNAP)

SNAP is a federal aid program administered by the United States Department of Agriculture under the Food and Nutrition Service (FNS) agency. Benefits are distributed in the form of basic nutritional needs to low-income persons who qualify. SNAP benefits are administered through electronic debit cards (EBT), which may be used to purchase groceries at authorized SNAP retailers. The regulation is targeted toward at-risk citizens within the United States, and eligibility is limited based on income. SNAP is administered by the states, which may adapt the program to best meet their needs.

State/Regional Regulatory Framework

Food Access

The California Healthy Food Financing Initiative (CHFFI)

The CHFFI was established in 2011 to increase access to grocery stores and healthy food retailers for underserved communities. Governor Brown signed AB 581 into law, formally creating the California Healthy Food Financing Initiative (CHFFI). The law establishes an advisory group under the California Department of Food and Agriculture to develop recommendations for measures to increase healthy food accessibility within the State. In addition, the law functions as a private-public partnership program. The program includes the CHFFIC Fund within the State Treasurer's Office, which incorporates public and private funds to provide financing for grocery stores and other forms of healthy food retail.

Local Regulatory Framework

Access to Health Care and Health Facilities

San Diego County – Public Health Services

Public Health Services is a San Diego County agency focused on broad community health within San Diego County. One component of Public Health Services (PHS) is assuring quality and accessibility of health services throughout the County. PHS is a component of the County of San Diego Health and Human Services Agency (HHSA). HHSA was developed in 1998 to provide health and social services across the County. The PHS branch of HHSA provides assessments of the local public health care system, offers services and programs related to public health, and implements local policies to improve healthcare outcomes.

9.7 ENVIRONMENTAL JUSTICE

Federal Regulatory Framework

Environmental Justice

California Environmental Quality Act

The California Environmental Quality Act (CEQA) was developed to protect the quality of the environment, and the health and safety of persons from adverse environmental effects. Discretionary projects are required to be reviewed consistent with the requirements of CEQA to determine if there is potential for the project to cause a significant adverse effect on the environment. Depending on the type of project and its potential effects, vehicle miles traveled (VMT), noise, air quality, biological resources, and geotechnical reports may be needed. If potential adverse effects can be mitigated, a mitigated negative declaration is required. If potentially adverse effects cannot be mitigated, an environmental impact report is required. These documents have mandated content requirements and public review times. Preparation of CEQA documents can be costly and, despite maximum time limits set forth in the Public Resources Code, can extend the processing time of a project by a year or longer.

Environmental Justice

SB 1000

Senate Bill 1000, also known as *The Planning for Healthy Communities Act*, is a comprehensive state legislation that requires California cities to include an Environmental Justice element or a set of environmental justice policies into their General Plans. The Bill was established as a state regulation on September 24, 2016, with the goal of improving the health of California cities and addressing pertinent issues of environmental justice related to community wellness. SB 1000 outlines strategies to promote the protection of sensitive land uses within the state, and simultaneously mandates that cities address the needs of disadvantaged communities. Through this bill, environmental justice is a mandated consideration in all city's local land-use planning. SB 1000 was authored by Senator Connie Leyva and co-sponsored by the California Environmental Justice Alliance (CEJA) and the Center for Community Action and Environmental Justice (CCAEJ).

Water Quality

National Pollutant Discharge Elimination System (NPDES)

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, oceans, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the EPA Regional Administrator (EPA Region 9). The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti-degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

NPDES permitting authority is administered by the California State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCB). The Plan Area is in a watershed administered by the San Diego Regional Water Quality Control Board. Individual projects in the city that disturb more than one acre would be required to obtain NPDES coverage under the California General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit). The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) describing Best Management Practices (BMP) the discharger would use to prevent and retain storm water runoff. The SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a waterbody listed on the 303(d) list for sediment.

State/Regional Regulatory Framework

Air Quality

San Diego Association of Governments Climate Action Plan

The San Diego Association of Governments (SANDAG) represents 18 cities in San Diego County (which includes the City of San Marcos) as well as the San Diego County Board of Supervisors. In 2010, members adopted the SANDAG Climate Action Strategy, which serves as a guide to help policymakers address climate change as they make decisions to meet the needs of the region's growing population, maintain and enhance quality of life, and promote economic stability. It does so in the context of the significant action on climate change happening in California, and the need for national and international attention to address what is ultimately a global problem. The Strategy identifies goals, objectives, and policy measures in the areas of transportation, land use, buildings, and energy use. Also addressed are measures and resources to help local governments reduce emissions from their operations and in their communities.

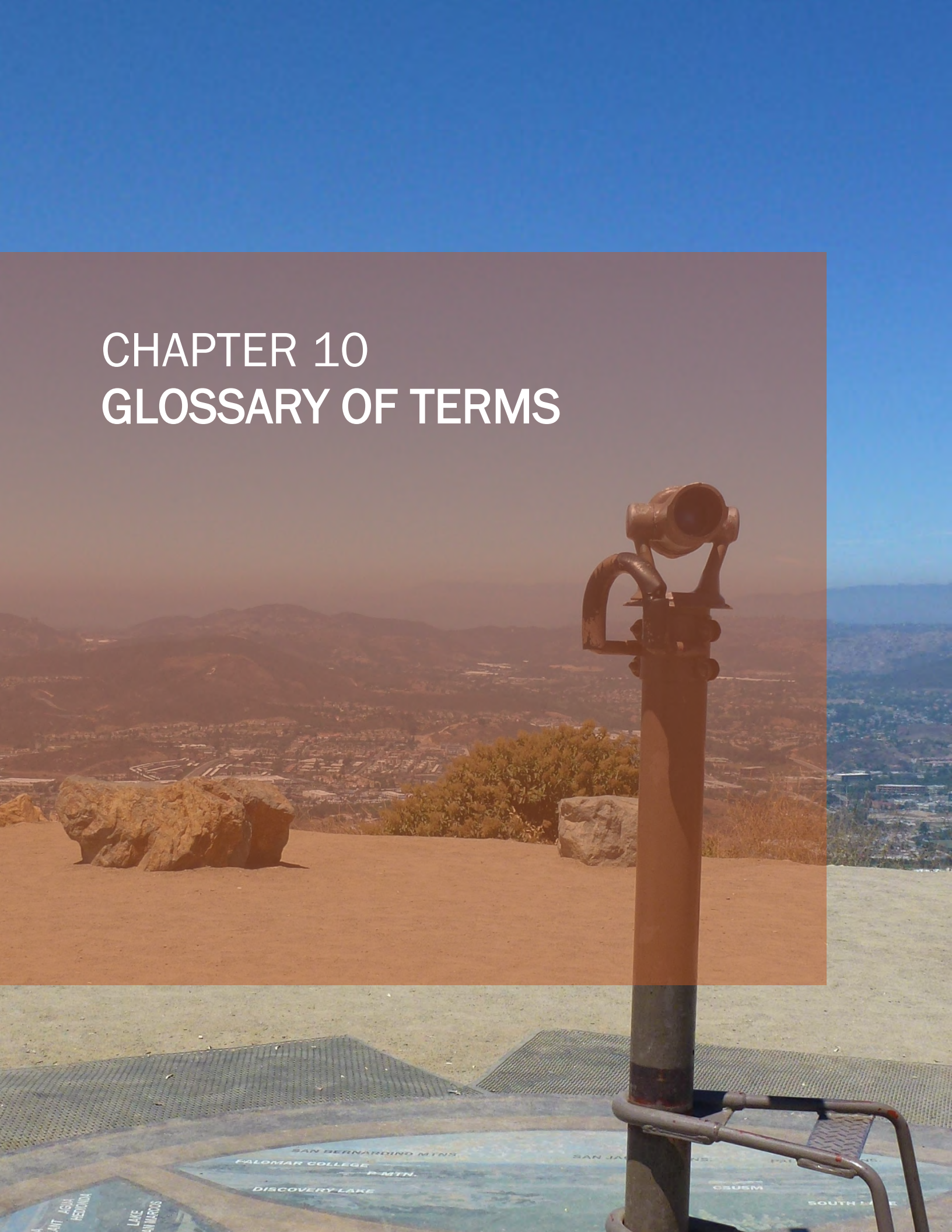
Local Regulatory Framework

Public Facilities

City of San Marcos Parks Master Plan

The City's Parks Master guides the orderly development, renovation, and improvement of parks, recreation facilities, programs, and services. Physical inventory assessments of the existing parks were taken during numerous site visits to the parks, and community programming information was gathered from publications provided by the City.

CHAPTER 10
GLOSSARY OF TERMS



10 GLOSSARY OF KEY TERMS

Term	Definition
Acoustics	The science of sound.
Acre feet	The volume of one acre of water to a depth of one foot. Each acre-foot of water is equal to 325,851.4 gallons.
Ambient Noise	The distinctive acoustical characteristics of a given area consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Archaeology	The study of historic or prehistoric peoples and their cultures by analysis of their artifacts and monuments.
Attenuation	The reduction of noise.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
BGS	Below ground surface.
Cfc	Cubic feet per second.
City Limits	The City Limits includes the area within the city's corporate boundary, over which the City exercises land use authority and provides public services.
Class I landfill	A landfill that accepts for disposal 20 tons or more of municipal solid waste daily (based on an annual average); or one that does not qualify as a Class II or Class III municipal solid waste landfill.
Class II landfill	A landfill that (1) accepts less than 20 tons daily of municipal solid waste (based on an annual average); (2) is located on a site where there is no evidence of groundwater pollution caused or contributed by the landfill; (3) is not connected by road to a Class I municipal solid waste landfill, or, if connected by road, is located more than 50 miles from a Class I municipal solid waste landfill; and (4) serves a community that experiences (for at least three months each year) an interruption in access to surface transportation, preventing access to a Class I landfill, or a community with no practicable waste management alternative.
Class III landfill	A landfill that is not connected by road to a Class I landfill or a landfill that is located at least 50 miles from a Class I landfill. Class III landfills can accept no more than an average of one ton daily of ash from incinerated municipal solid waste or less than five tons daily of municipal solid waste.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Complex	A patterned grouping of similar artifact assemblages from two or more sites, presumed to represent an archaeological culture.
Decibel or dB	Fundamental unit of sound, defined as ten times the logarithm of the ratio of the sound pressure squared over the reference pressure squared.
Effluent	In the context of wastewater treatment plants, effluent is wastewater that has been through a treatment process to remove pollution and undesirable constituents from the water.
Ethnography	The study of contemporary human cultures.
Frequency	The measure of the rapidity of alterations of a periodic acoustic signal, expressed in cycles per second or Hertz.
GPD	Gallons per day.
GPM	Gallons per minute.

Term	Definition
Groundwater	Water that is underground and below the water table, as opposed to surface water, which flows across the ground surface. Water beneath the earth's surface fills the spaces in soil, gravel, or rock formations. Pockets of groundwater are often called "aquifers" and are the source of drinking water for a large percentage of the population in the United States. Groundwater is often extracted using wells which pump the water out of the ground and up to the surface. Groundwater is naturally replenished by surface water from precipitation, streams, and rivers when this recharge reaches the water table.
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Hydric Soils	One of the three wetland identification parameters, according to the Federal definition of a wetland, hydric soils have characteristics that indicate they were developed in conditions where soil oxygen is limited by the presence of saturated soil for long periods during the growing season. There are approximately 2,000 named soils in the United States that may occur in wetlands.
Hydrophytic Vegetation	Plant types that typically occur in wetland areas. Nearly 5,000 plant types in the United States may occur in wetlands. Plants are listed in regional publications of the U.S. Fish and Wildlife Service (USFWS) and include such species as cattails, bulrushes, cordgrass, sphagnum moss, bald cypress, willows, mangroves, sedges, rushes, arrowheads, and water plantains.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
L(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50 percent of the time during the one hour period.
LACSD	Sanitation Districts of Los Angeles County. The Sanitation Districts are a partnership of 24 independent special districts that serve the wastewater and solid waste management needs of approximately 5.5 million people in Los Angeles County (County). The Sanitation Districts' service area covers approximately 824 square miles and encompasses 78 cities and unincorporated territory within the County. Within the Sanitation Districts' service area, there are approximately 9,500 miles of sewers that are owned and operated by the cities and County that are tributary to the Sanitation Districts' wastewater collection system. The Sanitation Districts own, operate, and maintain approximately 1,400 miles of sewers, ranging from 8 to 144 inches in diameter, that convey approximately 500 million gallons per day of wastewater to 11 wastewater treatment plants. Included in the Sanitation Districts' wastewater collection system are 48 active pumping plants located throughout the County.
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
Loudness	A subjective term for the sensation of the magnitude of sound.
MCL	Maximum contaminant limit
MGD	Million gallons per day.
Midden	A deposit marking a former habitation site and containing such materials as discarded artifacts, bone and shell fragments, food refuse, charcoal, ash, rock, human remains, structural remnants, and other cultural leavings.
Noise	Unwanted sound.

Term	Definition
Paleontology	The science of the forms of life existing in former geologic periods, as represented by their fossils.
Planning Area	For the purposes of the San Marcos General Plan Update, the Planning Area is defined as the area within the City's Sphere of Influence that is included in the analysis and planning for the approximate 20-year horizon of the City's General Plan Update.
Scenic Highway Corridor	The area outside of a highway right-of-way that is generally visible to persons traveling on the highway.
Scenic Highway/Scenic Route	A highway, road, drive, or street that, in addition to its transportation function, provides opportunities for the enjoyment of natural and human-made scenic resources and access or direct views to areas or scenes of exceptional beauty (including those of historic or cultural interest). The aesthetic values of scenic routes often are protected and enhanced by regulations governing the development of property or the placement of outdoor advertising. Until the mid-1980's, General Plans in California were required to include a Scenic Highways Element.
SEL	A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy into a one-second event
Sensitive Natural Community	A sensitive natural community is a biological community that is regionally rare, provides important habitat opportunities for wildlife, is structurally complex, or is in other ways of special concern to local, State, or Federal agencies. CEQA identifies the elimination or substantial degradation of such communities as a significant impact. The California Department of Fish and Wildlife (CDFW) tracks sensitive natural communities in the California Natural Diversity Database (CNDDB).
Sphere of Influence	A Sphere of Influence (SOI) is the probable physical boundary and service area of a local agency, as adopted by a Local Agency Formation Commission (LAFCO). An SOI may include both incorporated and unincorporated areas within which a city or special district will have primary responsibility for the provision of public facilities and services. San Marcos' SOI extends past its City Limits.
Surface water	Water collected on the ground or from a stream, river, lake, wetland, or ocean. Surface water is replenished naturally through precipitation but is lost naturally through evaporation and seepage into soil.
Surface Water	Water collected on the ground or from a stream, river, lake, wetland, or ocean. Surface water is replenished naturally through precipitation, but is lost naturally through evaporation and seepage into soil.
Transfer station	A facility for the temporary deposition of some wastes. Transfer stations are often used as places where local waste collection vehicles will deposit their waste cargo prior to loading into larger vehicles. These larger vehicles will transport the waste to the end point of disposal or treatment.
TVMWD	Three Valley Municipal Water District
View Corridor	A view corridor is a highway, road, trail, or other linear feature that offers travelers a vista of scenic areas within a city or county.
VOC	Volatile Organic Compounds
Waste Management Plan	A Waste Management Plan (WMP) is a completed WMP form, approved by the City, submitted by the applicant for any covered project. A WMP must be completed and approved to obtain a building permit. Prior to project start, the WMP shall identify the types of construction and demolition (C&D) debris materials that will be generated for disposal and recycling. A completed WMP contains actual weight or volume of the material disposed recycled receipts.

Term	Definition
Waters of the U.S	The Federal government defines waters of the U.S. as "lakes, rivers, streams, intermittent drainages, mudflats, sandflats, wetlands, sloughs, and wet meadows" [33 C.F.R. §328.3(a)]. Waters of the U.S. exhibit a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the USACE as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” [33 C.F.R. §328.3(e)].
Wetlands	Wetlands are ecologically complex habitats that support a variety of both plant and animal life. The Federal government defines wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [33 C.F.R. §328.3(b)]. Wetlands require wetland hydrology, hydric soils, and hydrophytic vegetation. Examples of wetlands include freshwater marsh, seasonal wetlands, and vernal pool complexes that have a hydrologic link to waters of the U.S.