

Final Draft

WEST SAN GABRIEL VALLEY AREA PLAN

Environmental Resources + Climate Change Considerations Background Brief

Prepared for
Los Angeles County Department of Regional Planning

December 2023



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I. Introduction

In 2015, Los Angeles County (County) adopted a comprehensive update to its General Plan with the horizon year of 2035. The General Plan is intended to serve as the foundation for community-based planning initiatives and provides goals and policies to achieve countywide planning objectives for the unincorporated areas. The Planning Areas Framework in the General Plan is made up of 11 Planning Areas, including the West San Gabriel Valley Planning Area (Planning Area). The purpose of the Planning Areas Framework is to provide a mechanism for local communities to work with the County to develop plans that respond to their unique needs and diverse character. The West San Gabriel Valley Area Plan (WSGVAP) focuses on land use and policy issues specific to the Planning Area, while community plans cover smaller geographic areas within the Planning Area at the neighborhood and/or community level.

The WSGVAP is a long-range policy document that will be used to guide the long-term growth of the West San Gabriel Valley (WSGV) by providing a guiding vision, goals, and implementation actions for the unincorporated communities in the WSGV. The WSGVAP serves as an extension of the General Plan and focuses on the unique needs and diverse characteristics of the eight unincorporated communities within the WSGV including Altadena, East Pasadena-East San Gabriel, Kinneloa Mesa, La Crescenta-Montrose, San Pasqual, South San Gabriel, South Monrovia Islands, and Whittier Narrows.

Purpose of the Report

The purpose of this background brief is to identify current conditions, issues, and opportunities to support preparation of the Land Use Element and the Open Space and Conservation Element. This report will help inform where to preserve/sustain land, how to protect community health and safety, and identify areas suitable for growth. This report will also help to identify issues and opportunities to improve, restore, and maintain the health of environmental resources, increase community and environmental resilience, increase adaptation capacity, reduce greenhouse gases, and enhance access and connection to the natural environment. Each section will be approached through the lens of climate change and equity to consider how climate change has and will impact the resource, who/what is most vulnerable and how to achieve equity in decision making moving forward. This background report focuses on both the existing conditions as well as historic trends, to understand how conditions have improved or deteriorated overtime, and to ensure that the proper actions are taken to put the community on course to achieve its vision and goals.

Organization and Content of the Report

This report is organized by resource topic, beginning with an introduction and summary of existing conditions and trends in the WSGV, followed by a description of the existing plans, programs, and ordinances applicable to the Planning Area, and then a summary of key findings, issues, opportunities, and recommendations for the County to consider as part of the area plan effort.

II. Agricultural Resources

Introduction

Agricultural land is an important resource in California and in Los Angeles County. While Los Angeles County was a leading agricultural producer in the early 20th century, the region's economy changed dramatically after World War II (Surls 2010). Land uses changed from farms to new homes, schools, shopping centers, parks, and freeways. Today, according to the General Plan, much of the agricultural land in Los Angeles County has been developed. The remaining agricultural land is now viewed as a nonrenewable resource that needs to be protected from conversion and encroachment of incompatible uses (General Plan).

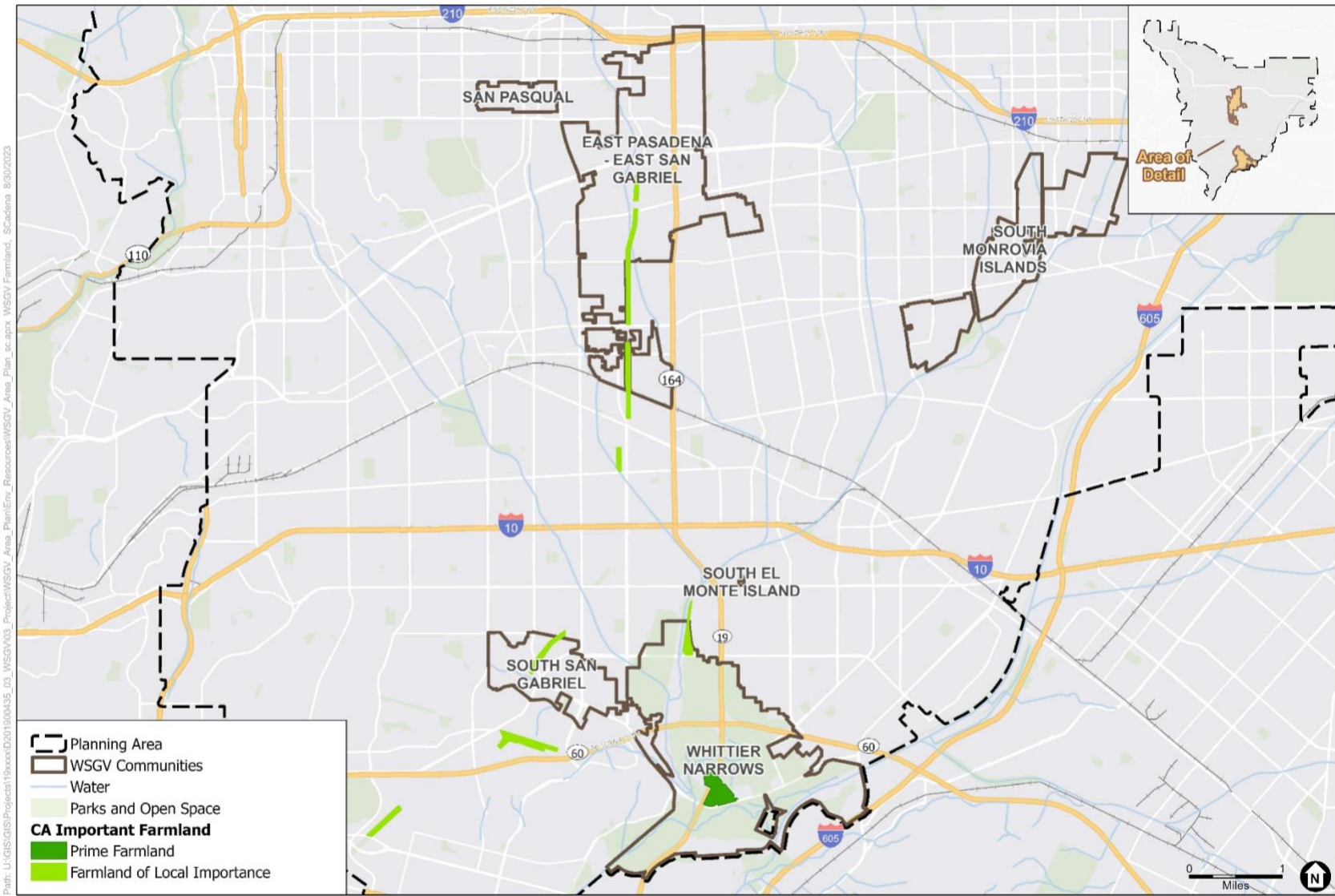
This section describes the agricultural resources in Los Angeles County and specifically the communities in the Planning Area. Important farming land, regional trends in agricultural production, and County efforts to promote home gardening and urban agricultural are detailed below. Existing policies and programs related to agricultural resources are also identified here. The information presented is intended to provide an overview of the agricultural resource conditions in the Planning Area and ultimately assist in the formation of policies for future development and decision making.

Existing Conditions and Trends

The Farmland Mapping and Monitoring Program (FMMP) provides data to decision makers for use in planning for the present and future use of California's agricultural land resources. The data is a current inventory of agricultural resources and was developed for general planning purposes. The California Important Farmland map, which comes from the FMMP, shows the relationship between the quality of soils for agricultural production and the land's use for agricultural, urban, or other purposes. In the California Important Farmland map, agricultural land is rated according to soil quality and irrigation status; based on these characteristics farmland is categorized with various levels of significance with Prime Farmland being the best.

In Whittier Narrows, there is land that has been classified as Prime Farmland (see **Figure 1**). This small area of land, located near the Whittier Narrows Recreation Area, is one of the only pieces of Prime Farmland in Los Angeles County. The General Plan land use designations for this area include public and semipublic land, water, and parks and recreation.

There is land that is designated as Farmland of Local Importance in East Pasadena-East San Gabriel, South San Gabriel, and Whittier Narrows. Current use of this land is dedicated to nurseries, which are run by various companies. There are a significant number of nurseries in WSGV when compared to the County as a whole, which sees them irregularly dispersed. The General Plan land use designations for this area include public and semipublic land, water, and parks and recreation.



SOURCES: CA DOC; ESA 2023

West San Gabriel Valley Area Plan

Figure 1
 East Pasadena-East San Gabriel, South San Gabriel, and Whittier Narrows California Important Farmland

According to the Los Angeles County Crop Report, Los Angeles County produced over \$178 million in agriculture products in 2019. In that year, the top commodities were those produced at nurseries, comprising 55.4% of the total economic value of agricultural products. The second highest commodity value was vegetable crops, at 21.3%. Other growing commodities include dairy and livestock as well as **apiary** products. As nursery products are the largest agricultural commodity in Los Angeles County, the nurseries in the WSGV play a role in the regional agricultural industry. **Table 1** summarizes the dollar value of the crops and farm products produced.

An **apiary** is a location where beehives of honeybees are kept.

**TABLE 1
DOLLAR VALUE OF THE CROPS AND FARM PRODUCTS PRODUCED IN LOS ANGELES COUNTY**

Commodity	2017	2018	2019
Nursery Products	\$84,210,000	\$92,804,000	\$98,440,000
Flowers & Foliage	\$7,500,000	\$8,448,000	\$5,089,000
Fruit & Nut Crops	\$3,920,000	\$4,847,000	\$4,102,000
Vegetable Crops	\$25,672,000	\$35,799,000	\$37,770,300
Field Crops	\$12,820,000	\$16,811,000	\$12,600,000
Dairy & Livestock	\$10,000,000	\$8,558,000	\$13,130,000
Apiary Products	\$2,790,000	\$3,583,000	\$6,479,000
Forest Products	\$4,970	\$3,250	\$2,000
Total	\$146,916,970	\$170,853,250	\$177,612,300

SOURCE: Los Angeles County Department of Agricultural Commissioner/Weights and Measures 2019

In 2007, the U.S. Census of Agriculture identified a total of 1,734 farms on a total of 108,463 acres in Los Angeles County (General Plan). Since then, the number of farms and the acreage of land used for farming has significantly decreased in the county. In 2017, the U.S. Census of Agriculture identified a total of 1,035 farms on a total of 57,809 acres in Los Angeles, representing a 40% reduction in the number of farms over a ten-year period.

In addition to agricultural commodities, the County is proactive about supporting and providing other agricultural resources, including farmers markets, urban farming, and home gardening education.

There are many farmers markets located throughout Los Angeles County, with one located in the WSGV Planning Area. Altadena has a weekly farmers’ market. The market is a part of the community supported agriculture program with vegetables and other fresh produce from regional farmers. Altadena is also home to the Altadena Community Garden. The Altadena Community Garden, spanning two and a half acres with 82 garden plots, is operated by a self-supporting non-profit organization in partnership with the Los Angeles County Department of Parks and Recreation (LACDPR). The garden is governed by the non-profit's bylaws and supported by LACDPR services. Also located in Altadena are a handful of privately owned apiaries.

Los Angeles County Public Works operates a Smart Gardening program. The Smart Gardening Program consists of online modules prepared by LA County where community members can learn about backyard and worm composting, water-wise gardening, grasscycling, and other gardening techniques. Additionally, there are workshops held throughout the County that community members can attend to learn about composting and gardening, however none of these in person workshops are held in close proximity to the WSGV communities.

The Los Angeles County Urban Agriculture Incentive Zone (UAIZ) Program aims to put into action the UAIZ Act from the California Government Code. The goal is to boost urban agriculture by encouraging property owners in the County's urban areas to use their vacant or undeveloped land for small-scale farming. Eligible property owners can partner with the County to support urban farming and, in return, receive lower property tax assessments as per the California Revenue and Taxation Code Section 422.7. This program ultimately aims to improve food access and promote healthy eating (Los Angeles County Code of Ordinances 2023).



Fresh produce at an LA County event.
Source: Los Angeles County CEO Countywide Communications, 2022.

Existing Plans, Programs, and Ordinances

This section provides an overview of various existing plans and programs that currently guide decision making in the Planning Area. The following plans and programs will help establish an understanding of the County's approach to managing agricultural resources.

General Plan Chapter 9, Conservation and Natural Resources Element

To manage agricultural resources, the County has incorporated specific policies into the Conservation and Natural Resources Element. Relevant policies include the following.

Policy C/NR 8.1: Protect Agricultural Resource Areas (ARAs), and other land identified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance by the California Department of Conservation, from encroaching development and discourage incompatible adjacent land uses.

Policy C/NR 8.2: Discourage land uses in ARAs, and other land identified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance by the California Department of Conservation, that are incompatible with agricultural activities.

Policy C/NR 9.1: Support agricultural practices that minimize and reduce soil loss, minimize pesticide use, and prevent water runoff from leaching pesticide and fertilizer into groundwater and affecting water, soil, and air quality.

Policy C/NR 9.2: Support innovative agricultural practices that conserve resources and promote sustainability, such as drip irrigation, hydroponics, organic farming, and the use of compost.

Policy C/NR 9.3: Support farmers markets, farm stands, and community-supported agriculture.

Policy C/NR 9.4: Support countywide community garden and urban farming programs.

Policy C/NR 9.5: Discourage the conversion of native vegetation¹ to agricultural uses.

The Los Angeles County Agricultural Commissioner/Weights and Measures

The Los Angeles County Agricultural Commissioner/Weights and Measures ensures that consumers receive the full weight, volume, count, or other measurement of commodities for which they pay. This department regulates all petroleum fuel meters, utility submeters, odometers, taximeters, liquefied petroleum gas meters, and all grocery, butcher, jewelry, postal, vehicle, luggage, and shipping scales. Additionally, there are inspectors who perform undercover purchases at grocery and retail stores, gasoline stations, and recycling outlets to compare prices charged to advertised and shelf prices and to monitor appropriate use of scales and meters. The Agricultural Commissioner/Weights and Measures department also oversees apiary and beekeeping activities in Los Angeles County.

Our County, Los Angeles Countywide Sustainability Plan, 2019

The LA County Sustainability Plan includes a goal to create “A sustainable and just food system that enhances access to affordable, local, and healthy food.” The County outlines a set of actions that are focused on achieving this goal. Actions relevant to agriculture are as follows:

- **Action 129:** Expand access to affordable, locally grown produce by increasing the participation of farmers markets and community-serving food retailers in nutrition assistance programs such as CalFresh and Market Match.
- **Action 130:** Support the use of public and private land for urban and peri-urban agriculture, such as community gardens, by measures such as identifying available public parcels, streamlining permitting and leasing processes, and incentivizing the conversion of vacant property to agricultural use.
- **Action 132:** Implement Good Food Purchasing Policy and/or other model policies that promote local, fair, and sustainable production of agricultural products and seafood, prioritizing vendors with certifications for sustainable agricultural practices related to water, public health, energy use, pesticides, and workers' rights.
- **Action 135:** Support local farmers and urban agriculture entrepreneurs in adopting regenerative agricultural practices, including those that sequester carbon, such as by offering

¹ See Section III, *Biological Resources*, for more detail on native vegetation in Los Angeles County and the WSGV.

training, technical assistance, and/or financing and adopting County policies that support regenerative agriculture.

Key Issues, Opportunities, and Recommendations

Key Issues

Agricultural Land Conservation: Following World War II up to the present day, Los Angeles County has experienced extensive development, leading to the transformation of much of its agricultural land. Given that most of this agricultural land has now been developed, the General Plan strongly advocates for the conservation of the remaining farmlands.

Opportunities

Preserving Prime Farmland: The Prime Farmland located in Whittier Narrows can be preserved, in alignment with the General Plan, by limiting the development of residential or other incompatible land uses in the surrounding area. Future updates to General Plan Land Use designations in the area surrounding this Prime Farmland should continue to be compatible with agriculture.

Preserving Farmland of Local Importance: The Farmland of Local Importance, located in East Pasadena-East San Gabriel, South San Gabriel, and Whittier Narrows, which is currently used for nurseries can be preserved from development.

Localized Agriculture: Urban agriculture and home gardening can be expanded.

Recommendations

Preserving Farmland

- **Re-zoning:** Evaluate existing zoning for parcels designated as Prime Farmland, Farmland of Local Importance. Where there are inconsistencies consider re-zoning to ensure these remaining lands are protected and conserved.
- **Southern California Association of Governments (SCAG) Natural and Farm Lands Conservation Working Group:** Consider ways to encourage and promote participation in SCAG's working group, which provides a forum to share best practices and develop recommendations for natural and agricultural land conservation throughout the region. These recommendations can be used to foster informed decision making and further County efforts related to agricultural land preservation (SCAG 2023).

Expanding Urban Agriculture and Home Gardening:

- **Build On Existing Programs:** Policies in the WSGV Area Plan can build on the existing programs that support local agriculture, urban farming, and home gardening in order to promote localized food systems. Existing efforts to build on include but are not limited to the Los Angeles County Urban Agriculture Incentive Zone Program, the Smart Gardening Program, Parks and Recreation Element policies, and Our County: Los Angeles Countywide Sustainability Plan actions.

- **In-Person Workshops:** Hold in person Smart Garden workshops in WSGV to ensure that community members have access to the programming.
- **Preserve and Expand Community Gardens:** Collaboration with the Altadena Community Garden can be continued to ensure the preservation of the garden. Exploring options for expanding the garden's capacity to meet high demand could be considered. Additionally, opportunities for developing community gardens in other WSGV communities can be pursued by the County.
- **Support Apiaries:** Continue the Los Angeles County Department of Agricultural Commissioner/Weights & Measures' BeeKeeper/Apiary program to ensure that existing and future apiaries have access to and are compliant with relevant regulations and beekeeping information.

III. Biological Resources

Introduction

Biological resources include the living organisms of our natural environment, such as plants and animals, as well as other aspects of nature such as water and habitat that are critical to the survival of these organisms and the important ecological contributions they provide (e.g., pollination). Biological resources are critical to protect as every organism plays an important role in the interwoven fabric of our environment, each intimately intertwined in the survival and success of other species. They have an inherent place and right to exist on the planet we all call home. Additionally, many of these organisms benefit people: creating beautiful natural landscapes that are enjoyed for recreation, providing vital oxygen and shade, managing pests, etc. So, protecting these resources is also critical for our communities' well-being and health.

California's Mediterranean climate, characterized by mild, wet winters and long, dry summers, supports some of the highest species richness in the state. Only slightly more than 2% of the earth's surface has the Mediterranean-type climate found in Southern California. The physical environment of unincorporated areas within the West San Gabriel Valley (WSGV) is diverse, with varying soils, geology, topography, elevation ranges, and microclimates that support a unique and varied collection of biological resources, including habitats and species that do not occur anywhere else in the world. All these different species of organisms constitute what is collectively known as biodiversity.

Los Angeles County is part of the California Floristic Province, which has been designated by Conservation International as one of the world's top 36 hotspots of biodiversity. While the WSGV contains large areas of open space and undeveloped land with identified biological resources, these areas have become threatened due to development and are further stressed by climate change impacts including wildfires, mudslides, droughts, and increasing temperatures.

This section will first describe what biological resources are present within WSGV including: hydrologic features and wetlands, plant communities, special-status species, designated Critical Habitat, designated Significant Ecological Areas (SEA), and regional habitat linkages. Fire risks to the WSGV's biodiversity will also be addressed. Then, the existing plans, programs and ordinances section will describe the current policies surrounding biological resources within the WSGV. Lastly, this section will summarize key issues and identify opportunities and recommendations resulting from the analysis.

Existing Conditions and Trends

The Planning Area is bordered to the north by the Angeles National Forest, Downtown Los Angeles to the south, generally following the Arroyo Seco in the west and generally follows Interstate 605 (I-605) to the east. The Planning Area includes portions of the San Gabriel Mountains, Angeles National Forest, and San Rafael Hills; Hahamongna Park and Devil's Gate Reservoir; Santa Fe Dam; and Whittier Narrows, and it provides a large range of open space and recreational opportunities for residents in the area. Additionally, the San Gabriel River flows

north to south along the Planning Area’s eastern border and I-605. The Planning Area is located approximately 15 miles north of the Pacific Ocean.

The topography within the WSGVAP ranges between 177 and 2,600 feet above mean sea level (amsl) (USGS 2023b). The majority of the open space is limited to the mountainous terrain bounding the perimeter of the San Gabriel Valley and Mountains. Much of the development associated with these communities occurs in the lowlands, while many of the mountainous terrains bounding the perimeter of the San Gabriel Mountains remain undeveloped, primarily because these areas are within the Angeles National Forest. The main types of biological resources located in the WSGV areas are discussed in detail below and include the following:

- Hydrologic features and wetlands²
- Plant communities:
 - Riparian habitats, streams, and wetlands³
 - Woodlands⁴
 - Chaparral⁵
 - Coastal sage scrub⁶
 - Grasslands⁷
- Special-status species⁸
- Designated Critical Habitat⁹
- Designated Significant Ecological Areas (SEAs)¹⁰
- Regional habitat linkages:¹¹
 - Wildlife corridors
 - Migration corridors
 - Essential habitat connectivity

² Wetlands and the majority of other hydrologic features are legally protected.

³ Riparian habitats, streams, and wetlands are hydrologic/aquatic features that are legally protected.

⁴ Certain types of native woodlands, such as oak woodlands, are legally protected.

⁵ Certain types of chaparral, coastal sage scrub, and grassland communities are considered sensitive natural communities protected under CEQA.

⁶ Ibid.

⁷ Ibid.

⁸ Special status species are legally protected and include, but are not limited to, state and federally listed species (e.g., endangered, threatened, etc.).

⁹ Critical habitat designated for federally endangered and threatened species are legally protected.

¹⁰ SEAs are protected under CEQA.

¹¹ Regional habitat linkages and wildlife corridors are protected under CEQA and some are protected under other regulations.

Fire risk is an important factor that can impact biological resources, especially in the mountainous areas of the Planning Area. Though fire risk is not a biological resource, it is included in this discussion because it can have a significant negative impact on biological resources.

The distribution of biological resources is affected by topography and geology, which influence the types of habitats that occur in a given area. Thus, understanding key hydrologic features in the WSGV is critical to the conservation of biodiversity. This section describes the location and connection between the major hydrologic features within WSGV and highlights the location of wetland areas, which will be described in more detail within the plant community description in the next section.

Waters originate from rain and snowmelt that primarily falls within the Angeles National Forest. These waters either seep into the ground and replenish groundwater, vital to the WSGV communities, or flows as runoff into streams and rivers that ultimately condense and drain into larger water bodies, creating a watershed. The majority of the WSGVAP occurs within the Los Angeles River Watershed, with the San Gabriel River Watershed bordering the eastern extent of the WSGVAP. The Los Angeles River headwaters originate in the Simi Hills, Santa Susana Mountains, and San Gabriel Mountains, emptying into the Pacific Ocean approximately 55 miles south of its origin at San Pedro Bay. Although the mainstem of the Los Angeles River does not overlap with the WSGVAP, the Arroyo Seco and Rio Hondo are major tributaries that flow into the Los Angeles River within the WSGVAP. The San Gabriel River headwaters originate in the San Gabriel Mountains and empty into the Pacific Ocean approximately 58 miles south of its origin between Long Beach and Seal Beach. The San Gabriel River flows along the eastern border of the WSGVAP. The Rio Hondo River provides a hydrological connection between the Los Angeles River and San Gabriel River watersheds at the Whittier Narrows Reservoir (primarily during heavy storm events). The upper reaches of the Los Angeles River and San Gabriel River Watershed systems allow for seasonal flows that support natural habitats, while downstream portions of these same river systems have been engineered to protect homes and businesses from flooding and for water conservation.

Various channels called washes direct runoff from the San Gabriel Mountains (e.g., Santa Anita Wash, Arcadia Wash, Eaton Wash) and move snowmelt and rain from the mountains into the basin. These waters are collected in reservoirs, like the Devil's Gate Reservoir in La Canada Flintridge, or flow into the various lakes situated along the Rio Hondo stream and San Gabriel River. A series of lakes were created just downstream of the Santa Fe Dam, along the San Gabriel River. Various lakes and reservoirs also occur in the eastern side of WSGV, southeast of Mayflower Village.

The Santa Anita Wash flows down the San Gabriel Mountains south between Sierra Madre and Monrovia down Santa Anita Canyon into the Rio Hondo.

The Arcadia Wash flows south from Sierra Madre into Arcadia and eventually into the Rio Hondo, slightly downstream from the Santa Anita Wash outflow.



Arroyo Seco

The Eaton Wash flows down from the San Gabriel Mountains to the southeast, in between the Altadena and Kinneloa Mesa communities. There are large sections of freshwater ponds, freshwater emergent wetlands, and riparian forest/scrub that ultimately pool in Eaton Canyon just south of Kinneloa Mesa, next to Eaton Canyon Golf Course. The Eaton Wash later connects to the Rio Hondo downstream of the Arcadia Wash.

The Arroyo Seco is a major water feature in WSGV, located between Altadena and La Canada Flintridge. At the foothills, water collects in the Devil's Gate Reservoir and the Hahamongna Watershed Park, as well as within freshwater ponds, wetlands, and riparian areas. Water continues to flow downstream, past Linda Vista, under the Ventura Freeway (State Route 134) and out of WSGV along Arroyo Seco Parkway (State Route 110).

The Rio Hondo is formed from the flood control basin at Peck Road Water Conservation Park in El Monte. The perimeters host wetland habitats and is formed by the Santa Anita and Sawpit Washes.

Within WSGV, there are wetland features along the washes and other hydrologic features described above, many of which are currently protected by federal and state regulations, but should also be protected by County policies. There are a series of wetland features that are located on the boundary of La Canada Flintridge and Altadena, at the beginning of the Arroyo Seco, which then flows south out of WSGV and eventually into the Los Angeles River. The last set of major hydrologic features is at the Whittier Narrows Golf Course where there are wetlands on the banks of the San Gabriel River and lakes within Whittier Narrows Recreation Area (USFWS

2023c; USGS 2023). Other small, isolated patches of wetlands occur throughout WSGV along other washes. It is important to understand where hydrologic features are as these provide critical water sources and habitat for various wildlife.

The hydrologic features and wetlands found in each of the eight unincorporated communities within the WSGV are described in more detail below.

Kinneloa Mesa

The unincorporated community of Kinneloa Mesa contains the Sierra Madre Villa Debris Basin, which supports small portions of both freshwater pond and freshwater emergent wetland habitat. It also contains small patches of freshwater pond and freshwater emergent wetlands along the series of washes that flow down from the San Gabriel Mountains (USGS 2023; USFWS 2023c).

Altadena

The unincorporated community of Altadena contains various small freshwater ponds, especially close to the foothills of the San Gabriel Mountains. Small washes host riparian forest/scrub habitat within the mountains. The largest basin is the Rubio Wash Basin, which contains freshwater pond, freshwater emergent wetland, and freshwater forested/scrub wetland habitat (USGS 2023; USFWS 2023c). The Rubio Wash Basin eventually flows south down the Rubio Canyon into the pond next to the Altadena Golf Course.

La Crescenta-Montrose

Major water features in the unincorporated community of La Crescenta-Montrose include the Pickens Canyon Channel and Eagle Canyon Channel. Both channels move water from the San Gabriel Mountains riparian areas into the community and hosts freshwater ponds and wetland habitats (USGS 2023; USFWS 2023c).

San Pasqual

The unincorporated community of San Pasqual does not contain any major hydrologic features (USGS 2023; USFWS 2023c).

East Pasadena-East San Gabriel

The unincorporated community of East Pasadena-East San Gabriel contains a basin of freshwater, adjacent to the Eaton Wash, and two other freshwater basins north of Huntington Drive (USGS 2023; USFWS 2023c). Its major hydrologic feature is Eaton Wash which flows south through the community.

South San Gabriel

The unincorporated community of South San Gabriel has one freshwater pond located in the southwestern portion of the community, north of Sunside Drive (USGS 2023; USFWS 2023c).

Whittier Narrows

The unincorporated community of Whittier Narrows hosts a variety of major hydrologic features including the Rio Hondo, San Gabriel River, several washes, and riparian/wetland habitat (USGS 2023; USFWS 2023c). The Rio Hondo is a major source of outflow of runoff from the San Gabriel Mountains that flows into Whittier Narrows. When the Alhambra Channel meets the Rio Hondo, a large wetland area is created west of the Whittier Narrows Recreation Area.

The San Gabriel River also hosts a variety of these riparian, wetland, and pond habitats as it flows into the eastern portion of Whittier Narrows. First, these waters meet the San Jose Creek Diversion Channel and downstream, a channel that offshoots the San Gabriel River meets the Rio Hondo, creating a series of riparian scrub/forests and wetland habitat within the Whittier Narrows Natural Area.

At the center of Whittier Narrows is Whittier Narrows Recreation Area, which contains Legg Lake and Mission Creek. These water bodies are hydrologically connected and contain several patches of wetland habitat. Mission Creek eventually feeds into the Rio Hondo.

South Monrovia Islands

The unincorporated community of South Monrovia Islands contains fewer major hydrologic features and is further broken down into three neighborhoods: North El Monte, Mayflower Village, and Bradbury (USGS 2023; USFWS 2023c).

The North El Monte neighborhood does not contain major hydrologic features.

The Santa Anita Wash borders the western perimeter of the Mayflower Village neighborhood and contains segments of the Sawpit Wash in the eastern portion of the neighborhood. Otherwise, this neighborhood contains no major hydrologic features.

The Bradbury neighborhood does not contain major hydrologic features.

South El Monte Island

South El Monte Island does not contain any major hydrologic features (USGS 2023; USFWS 2023c).

Plant Communities

The Angeles National Forest contains the largest area of dedicated open space in Los Angeles County; and thus, supports a vast number of wildlife species for protection, foraging, and breeding. Other open space areas within the WSGV include the Sante Fe Dam Recreation Area, Hahamongna Watershed Park, Peck Road Water Conservation Park, and Whittier Narrows Recreation Area, as well as several golf courses. The general habitat types within the Angeles National Forest and these open space areas include riparian habitats, streambeds, wetlands, chaparral, coastal sage scrub, woodlands, and grasslands. These communities are described in detail below.

Riparian Habitats, Streambeds, and Wetlands



Riparian Habitat

Riparian habitat in the WSGV is prevalent within the foothills of the Angeles National Forest, Whittier Narrows Recreation Area, Hahamongna Watershed Park, and associated with portions of Eaton Wash, Arroyo Seco, Santa Anita Wash, Arcadia Wash, Rio Hondo, and the San Gabriel River.

Riparian habitats are typically adjacent to **streambeds** and feature specific plant communities. Both riparian habitats and streambeds serve as important wildlife corridors (connecting upstream ecosystems and adjacent habitat with ecosystems downstream) and contribute to the quality of habitat linkages. Additionally, riparian habitats and streambeds provide critical value to migratory birds and play a crucial role in maintaining surface and subsurface water quality. Important streambeds in the WSGV include Eaton Wash, Arroyo Seco, Santa Anita Wash, Arcadia Wash, Rio Hondo, and the San Gabriel River.

Riparian habitats are composed of vegetation and other physical features that typically occur on stream banks and flood plains associated with rivers, streams, lakes, and other water bodies and are shaped by the presence of water.

Streambeds are the topographic features that water typically flows through, either perennially or after rain events.

Wetlands include swamps, marshes, bogs, vernal pools, and playa lake areas. They can also remain dry for long periods of time, making them potentially difficult to identify. Wetlands are important in the overall health of watersheds, contributing to water quality by slowing water flow, decreasing erosion, filtering water runoff, and providing habitat for many endangered plant and animal species. Los Angeles County has lost 95% of its original wetland areas due to human development; thus, the County is dedicated to preserving its remaining wetland areas as a part of its General Plan because these are critical to preserving the natural biodiversity and critical in providing ecological services like water purification and carbon capture.

Wetlands are areas that support water either at or near the soil's surface for varying periods of time during the year, and support vegetation typically adapted for life in wet soil conditions.

Riparian habitats, streambeds, and wetlands provide an important ecosystem for many plants and animals and play an important role in supporting biological diversity. They provide habitat for species to live, migrate, and an important water source required for their survival. The Los Angeles River Watershed and San Gabriel River Watershed systems allow for freshwater wetlands to occur in places where land is inundated and consists of areas with undisturbed riparian and woodland habitats primarily within its upper reaches. The streams within the mountains and foothills have earthen bottoms that support high-quality habitat, compared with the channelized portions of the stream within more heavily urbanized areas in the lower reaches.

Woodlands



Willow woodland

Woodlands are plant communities that are visually dominated by trees with open canopies that allow sunlight to reach the woodland floor, allowing plants to grow at ground level. Oaks are the most commonly dominant trees in California, with coast live oak (*Quercus agrifolia*) being the most common species of oak tree in Los Angeles County. The County's oak woodlands provide an abundance of aesthetic, ecological, and economic benefits to residents and are the most diverse

terrestrial ecosystems in California. Similarly, riparian woodlands, and California walnut woodlands occur within the WSGVAP and provide habitat for multiple species within a concentrated area. Woodlands occur along the foothills of the San Gabriel Mountains, San Rafael Hills, Whittier Narrows, and along the washes and San Gabriel River in the WSGVAP.

Chaparral



Chaparral

Chaparral consists of medium to tall woody, evergreen shrubs, usually with small, waxy leaves, that form a dense cover (i.e., too dense to walk through). Within the planning area, chaparral is mostly located on steep, north-facing slopes, generally below 5,000 feet. Different types of chaparral may be identified according to the dominant plant species in the plant community, including chamise (*Adenostoma fasciculatum*), buck brush (*Ceanothus cuneatus*), California scrub oak (*Quercus berberidifolia*), interior live oak (*Quercus wislizeni*), or birch-leaf mountain-mahogany (*Cercocarpus betuloides*). Other species often affiliated with chaparral habitat on south facing slopes include a variety of scrub oaks (*Quercus* spp.), California buckwheat (*Eriogonum fasciculatum*), chaparral yucca (*Hesperoyucca whipplei*), sugar bush (*Rhus ovata*), holly-leaved cherry (*Prunus ilicifolia*), holly-leaf redberry (*Rhamnus ilicifolia*), hoary-leaved ceanothus (*Ceanothus crassifolius*), black sage (*Salvia mellifera*), and sawtooth goldenbush (*Hazardia squarrosa*). Thick-leaved yerba santa (*Eriodictyon crassifolium*) is more prevalent along naturally and anthropogenically disturbed areas such as dirt roads and floodplains. Additionally, giant rye grass (*Elymus condensatus*), blue elderberry (*Sambucus mexicana*), sacapellote (*Acourtia microcephala*), and toyon (*Heteromeles arbutifolia*) may occur in the canyon bottoms, where groundwater levels are higher.

Coastal Sage Scrub



Coastal Sage Scrub

Coastal sage scrub is shorter in stature compared with chaparral plant community (i.e., scrub may often be walked through) and is dominated by semi-woody, drought-deciduous species, including California sagebrush (*Artemisia californica*), bush sunflower (*Encelia californica*), white sage (*Salvia apiana*), black sage, and California buckwheat. Other species commonly found within this plant community include chaparral yucca and chamise. Coastal sage scrub areas that are disked or cleared typically regrow as dense cover of oats (*Avena* spp.) and bromes (*Bromus* spp.), California poppy (*Eschscholzia californica*), fiddleneck (*Amsinckia* spp.), several species of lupine (*Lupinus* spp.), popcorn flower (*Plagiobothrys* spp.), comb-bur (*Pectocarya* spp.), and other native annuals that favor disturbance. Coastal sage scrub is more common in lower elevations and south-facing slopes.

Grasslands



Grasslands

Grasslands are prevalent in the valleys and foothills of most of California, generally occurring below 3,000 feet. Grasslands are dominated by a variety of annual grass species including bromes, oats, Bermuda grass (*Cynodon dactylon*), fescues (*Festuca* spp.), Mediterranean grass (*Schismus barbatus*), *Poa* spp., and barley (*Hordeum* spp.). Other species commonly found within this plant community include filaree (*Erodium* spp.), mustards (*Brassica* spp.), short-pod mustard (*Hirschfeldia incana*), sow thistle (*Sonchus* spp.), and cheeseweed (*Malva parviflora*). Similar to coastal sage scrub, grasslands are more common in lower elevations and south-facing slopes. Grasslands occur along the foothills of the Angeles National Forest, Whittier Narrows, and adjacent to developed areas in the WSGVAP.

Special-Status Species

The distribution of plant communities is key to understanding what fauna can be found throughout the WSGV. Species have adapted to specific habitats, utilizing specific plants for shelter and food. Many of the region's native plant communities have been displaced due to past grazing, agriculture, and urban development and almost all the native plant communities that remain contain sensitive, rare, or endangered flora and fauna. A total of 103 California special-status species,¹² including 13 state and federally threatened, endangered, and candidate species have been identified as occurring or potentially occurring in the Planning Area (CDFW 2023b;

¹² Special-status species include sensitive and state/federally listed species.

CNPS 2023). The taxonomic breakdown of special-status species known to historically occur within the area are as shown in **Table 2**.

**TABLE 2
TAXONOMIC BREAKDOWN OF SPECIAL-STATUS SPECIES KNOWN TO HISTORICALLY OCCUR IN THE
PLANNING AREA**

Taxa	Total Number of Sensitive Species	Number of Threatened and Endangered Species
Plants	61	4
Amphibians	4	2
Birds	11	6
Fish	3	1
Insects	3	1
Mammals	13	0
Mollusks	2	0
Reptiles	6	0
Grand Total	103	13

The Planning Area is also within the Pacific Flyway, a major migratory bird route, and provides an important stopover point for many migratory bird species. The area provides a variety of habitats, including streambeds, wetlands, riparian areas, grasslands, and woodlands, which offer birds water, food, and shelter during their long journey. Important bird areas (IBAs) within the Planning Area include the Angeles National Forest, San Gabriel Mountains, Whittier Narrows, and Los Angeles Flood Control Basins. IBAs are sites that support significant populations of birds, including threatened and endangered species. IBAs are important for bird conservation because they provide birds with the habitats they need to survive and thrive (Audubon California 2004; National Audubon Society 2008; National Audubon Society 2023).

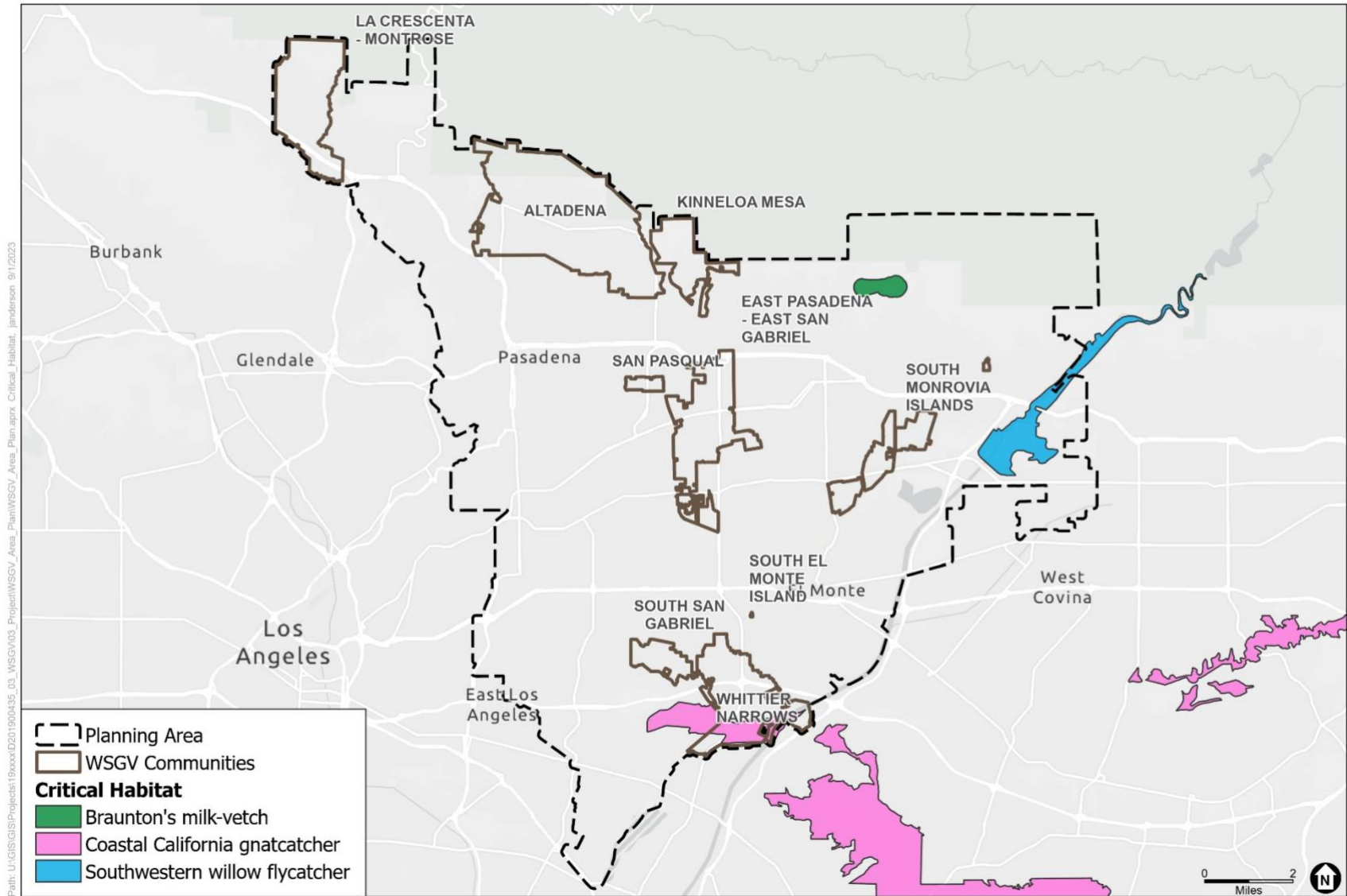
The Angeles National Forest and the San Gabriel Mountains are IBAs that provide habitat for a variety of bird species, including waterfowl, shorebirds, songbirds, and raptors. The Angeles National Forest is designated as a single IBA, while the San Gabriel Mountains contain several IBAs, including the Whittier Narrows IBA. The Whittier Narrows IBA encompasses the Whittier Narrows Recreation Area and the Whittier Narrows Wetlands in the Planning Area and helps to connect the Puente-Chino Hills IBA to other important bird habitats in the region. The Whittier Narrows IBA has a variety of habitats for over 300 bird species, including threatened and endangered species such as least Bell’s vireo and coastal California gnatcatcher (Whittier Narrows Nature Center 2023). Whittier Narrows is also important for its hydrologic connection to the Lower Los Angeles River, allowing birds to move easily between the two IBAs. The Los Angeles Flood Control Basins are comprised of a network of basins that protect the Los Angeles area from flooding and provide habitat for over 300 species of birds, including waterfowl, shorebirds, songbirds, and raptors. For example, the Sante Fe Dam supports a unique variety of birds due to its rare alluvial fan scrub habitat. And the Rio Hondo and San Gabriel River areas host riparian birds such as least bittern, marsh wren, and state-threatened tricolored blackbird. The basins in the Planning Area are an IBA that also connects to the Lower Los Angeles River,

another IBA downstream. The San Gabriel River itself is not an IBA, but the river's riparian habitat is important for birds. There are several IBA's along the river's course, including Whittier Narrows IBA in the Planning Area and the San Gabriel River Estuary IBA in the City of Long Beach, downstream of the Planning Area.

USFWS Designated Critical Habitat

Under the federal Endangered Species Act, to the extent feasible, the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) are required to designate Critical Habitat for endangered and threatened species. Designated Critical Habitat is defined as areas of land, water, and air space containing the physical and biological features essential for the survival and recovery of endangered and threatened species. Designated Critical Habitat includes sites for breeding and rearing, movement or migration, feeding, roosting, cover, and shelter. Designated Critical Habitat requires special management and protection of existing resources, including water quality and quantity, host animals and plants, food availability, pollinators, sunlight, and specific soil types. Designated Critical Habitat delineates all suitable habitat, occupied or not, essential to the survival and recovery of the species. Critical Habitat designations do not affect activities by private landowners if there is no federal "nexus" (e.g., no federal funding or permits are required to carry out the activity). However, when a federal permit or funding is necessary in these areas, the impact to designated Critical Habitat is considered during consultation with USFWS or NMFS.

WSGV contains USFWS-designated Critical Habitat for two federally listed bird species and one federally listed plant species: southwestern willow flycatcher (*Empidonax traillii extimus*), coastal California gnatcatcher (*Polioptila californica californica*), and Braunton's milk-vetch (*Astragalus brauntonii*) (see **Figure 2**). Whittier Narrows is the only unincorporated community that contains designated Critical Habitat, which is for coastal California gnatcatcher.



SOURCES: USFWS, 2023; ESA, 2023

Figure 2
USFWS-Designated Critical Habitat Areas within the WSGVAP

USFWS-designated Critical Habitat for the southwestern willow flycatcher, a federal and state endangered bird species, occurs along the San Gabriel River and within the Santa Fe Dam Open Space and Recreation Area in the eastern boundary of WSGV (USFWS 2023d). This subspecies of willow flycatcher requires dense riparian vegetation near surface water or saturated soils for breeding and has been declining due to habitat loss of dense, native riparian habitats from development, livestock grazing, fires, and parasitism by brown-headed cowbirds.



Southwestern Willow Flycatcher

USFWS-designated Critical Habitat for the coastal California gnatcatcher, a federally threatened bird species and species of special concern in the State of California, occurs in the unincorporated community of Whittier Narrows and extends west towards Montebello (USFWS 2023b). This small nonmigratory songbird is a year-round resident located only in Southern California and Baja California in or near coastal sage scrub habitat. This species has been in decline due to the loss of coastal sage scrub habitat from development and fire, habitat fragmentation, predation, and parasitism by brown-headed cowbirds.



Coastal California Gnatcatcher

USFWS-designated Critical Habitat for Braunton's milk-vetch, a federally endangered plant species, is located in the City of Monrovia's Hillside Wilderness Preserve and Hillside Recreation Area, north of Monrovia, in the Angeles National Forest within the San Gabriel Mountains (USFWS 2023a). This species is only found in mountains of Southern California in Ventura, Los Angeles, and Orange Counties. It requires carbonate soils derived from limestone in chaparral, coastal sage scrub, closed-cone forest, and grassland plant communities. This species is threatened by urban development and fire suppression activities (e.g., bulldozing), habitat fragmentation, and loss of pollinators. Additionally, much of the remaining habitat for this species is located on private land and threatened by future development.



Milk-Vetch (*Astragalus* sp. featured)

Los Angeles County Significant Ecological Areas

SEAs are officially designated areas in Los Angeles County that contain irreplaceable biological resources. Each individual SEA is sized to support sustainable populations of its component species and includes undisturbed or lightly disturbed habitat along with linkages and corridors that promote species movement. The SEA designated land in WSGV contains wildlife corridors and habitat linkages. Critical biological resources are maintained through habitat connectivity,

which sustains population genetic diversity, and provides refuge for migrant species. For example, the Puente Hills SEA serves as an important wildlife corridor that provides linkage to habitat beyond Los Angeles County into the adjacent Chino Hills to the east.

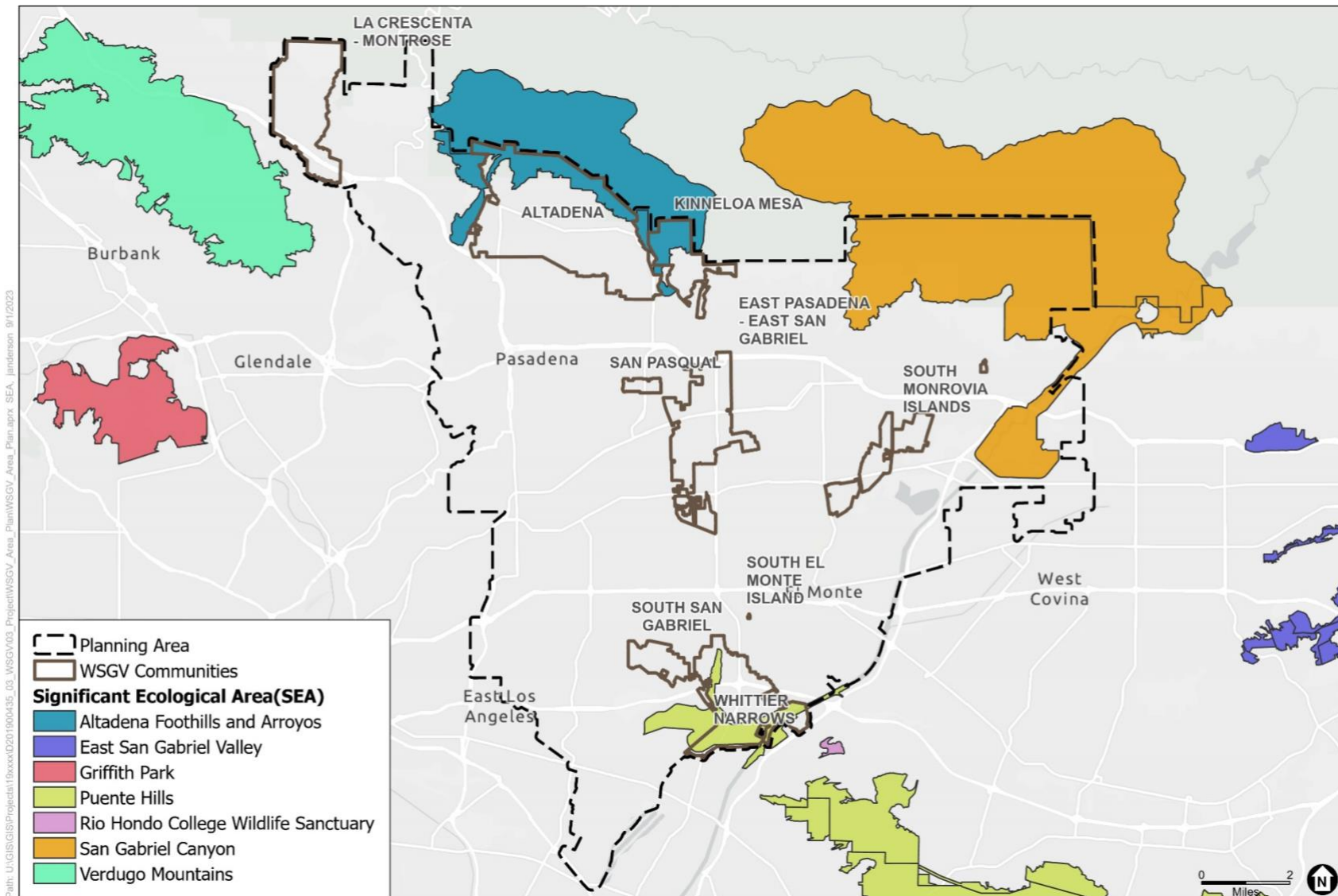
The WSGV overlaps with three SEAs designated for resource protection, primarily in the hillside areas: the Altadena Foothills and Arroyos SEA, San Gabriel Canyon SEA, and Puente Hills SEA (**Figure 3**). For a complete description of each of the SEA's, refer to Appendix E of the General Plan (LA County Planning 2022b).

Altadena Foothills and Arroyos SEA

The Altadena Foothills and Arroyos SEA overlaps with the Angeles National Forest and the northern segments of the unincorporated communities of Altadena and Kinneloa Mesa within the northern portion of the WSGVAP. It has steep terrain, connecting the valley and mountain biomes of the San Gabriel Mountains. Various drainages like the Arroyo Seco are used by wildlife, especially larger mammals such as black bear (*Ursus americanus*), mountain lion (*Puma concolor*), bobcat (*Lynx rufus*), mule deer (*Odocoileus hemionus*), and coyote (*Canis latrans*), to traverse between forest and foothill habitats. This SEA contains coastal sage scrub, chaparral, riparian oaks woodlands, canyon oak woodland, and coast live oak woodland. It also contains the locally endemic San Gabriel leather oak (*Quercus dumosa* var. *gabrielensis*). While there are no populations of sensitive species, this SEA is critical for conserving this unique area between the mountains and coastal plains that has been highly developed elsewhere due to urbanization (LA County Planning 2022c).

San Gabriel Canyon SEA

San Gabriel Canyon SEA is approximately 22,966 acres of grasslands, riparian shrublands, woodlands, and forests. There are ten major plant communities including bigcone spruce-canyon oak forest, white alder riparian forest, alluvial fan scrub, oak woodland, oak riparian forest, walnut woodland, southern willow scrub, chaparral, coastal sage scrub, and nonnative grassland. This area serves as a wildlife corridor for foothill and lower mountain habitats as well as riparian areas. This SEA is especially important in protecting sensitive oak woodland, walnut woodland, oak riparian woodland, southern willow scrub, coastal sage scrub, and alluvial fan scrub plant communities. Additionally, there are core populations of San Gabriel bedstraw (*Galium grande*) and San Gabriel Mountains dudleya (*Dudleya densiflora*). San Gabriel bedstraw is a sprawling shrub in the coffee family with yellow flowers and hairy stems. San Gabriel Mountains dudleya is a succulent plant with long, finger-like leaves that only grows in cracks of granite. The San Gabriel Canyon SEA is partially within the Angeles National Forest and is located outside of any of the eight unincorporated communities discussed, but within the northeastern portion of the WSGVAP. Medium to large mammals such as American black bear, mule deer, and coyote utilize the drainages to traverse between foothill and forest habitats seasonally. Additionally, migratory birds utilize the riparian habitats and visit these habitats along their migration routes (LA County Planning 2000a).



SOURCES: Los Angeles County, 2022; ESA, 2023

West San Gabriel Valley Area Plan

Figure 3
Significant Ecological Areas within the WSGVAP

Puente Hills SEA

Puente Hills SEA is approximately 13,421 acres of mostly undisturbed woodland, shrubland, and grassland communities that are representative of the Los Angeles Basin before urban development. This area still retains areas with significant open space and contains eight major plant communities: oak woodland, oak riparian forest, walnut woodland, southern willow scrub, chapparal, coastal sage scrub, freshwater marsh, and nonnative grassland. This SEA protects sensitive oak riparian woodland, walnut woodland, southern willow scrub, coastal sage scrub, and freshwater marsh throughout the area that are sensitive plant communities. The Puente Hills SEA also contains designated Critical Habitat for coastal California gnatcatcher. It also has a local population of coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*). This bird species is threatened by loss of cactus scrub habitat from human development. Wildlife has utilized the various undercrossings between habitat blocks of canyons that the SEA holds. Species such as bobcat, coyote, gray fox (*Urocyon cinereoargenteus*), and mule deer have been documented moving laterally (east and west) across this SEA. The Puente Hills SEA overlaps with Montebello and the unincorporated community of Whittier Narrows within the southeastern portion of the WSGV (LA County Planning 2000b).

Regional Habitat Linkages

Habitat linkages are defined as areas within the overall range of a species or suite of species that possess sufficient cover, food, forage, water, and other essential elements for their survival within one contiguous movement pathway, or between two or more larger areas of habitat. Depending on the species, linkages vary in size and may include **wildlife corridors**, **migration corridors**, and areas of essential habitat connectivity (including landscape blocks and smaller connective areas).

A functional network of connected open space areas is required to effectively support habitat linkages and corridors. The establishment of wildlife linkages is essential to support the biodiversity in the region and enables species to migrate as needed, including changing conditions from seasonal and global climate change. Often drainages, including riparian corridors, and the less densely populated hillside with natural open space areas serve as wildlife linkages to facilitate wildlife movement throughout an area. Unincorporated communities with drainages that could serve as wildlife corridors include Altadena and Whittier Narrows. The southern San Gabriel foothills are developed at a lower density than the valleys and plains, which are more heavily urbanized. As a result, these foothills function as urban/wildland interface and provide habitat linkages to river and stream corridors.

Wildlife corridors are areas of open space of sufficient width to permit larger, mobile species (such as foxes, bobcats, and coyote) to pass between larger areas of open space, or to disperse from one major open space region to another. Such areas are generally several hundred feet wide, unobstructed, and usually possess cover, food, and water.

Migration corridors are navigable pockets or strips of land that connect larger tracts of open space together, allowing them to function as a greater habitat complex. These “passages” can exist on a small scale, allowing wildlife to pass through or under an otherwise uninhabitable area, such as roadways, or housing developments, or through cities using drainage culverts, green belts, or waterways—or on a larger scale, providing opportunities for wildlife to skirt large topographical features (e.g., mountains, lakes, streams) by way of adjacent canyons, valleys, and upland swaths when migrating.

These foothill areas are in the unincorporated communities of La Crescenta-Montrose, Altadena, and Kinneloa Mesa as they border the southern portion of the San Gabriel Mountains.

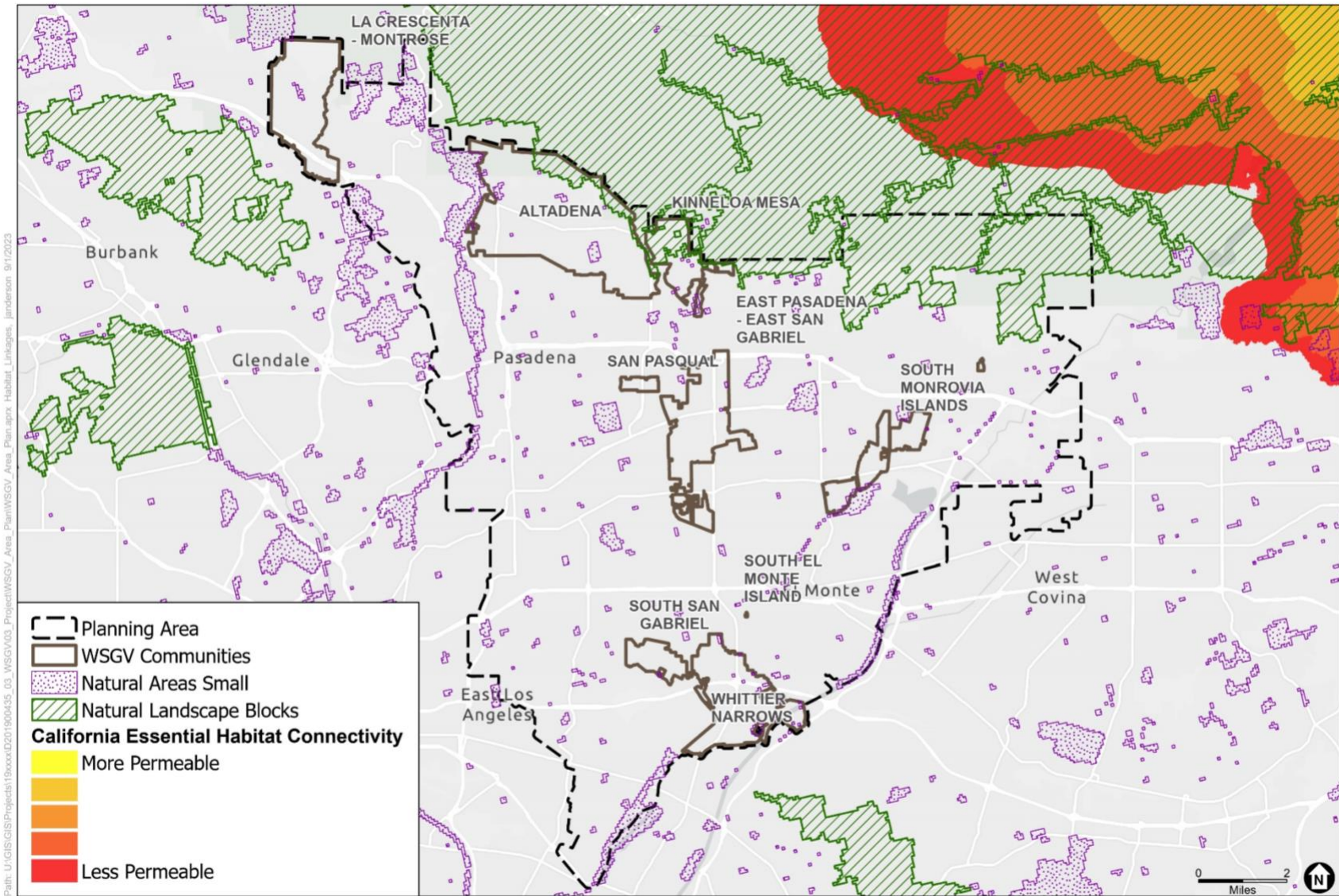


Wildlife Corridor with Mountain Lion

Larger tracts of natural habitat have been identified by the California Department of Fish and Wildlife and the California Department of Transportation (Caltrans) in the California Essential Habitat Connectivity database (CDFW 2023a; CNRA 2023). These areas are further categorized into natural landscape blocks and small natural areas that connect these larger tracts of habitat. Within the WSGV, the only natural landscape blocks present are in the northern portion of the Planning Area at the foothills of the San Gabriel Mountains and in the Angeles National Forest. These areas overlap with the unincorporated communities of Altadena and Kinneloa Mesa as well as Sierra Madre and Monrovia. Small natural areas are dispersed throughout WSGV, but most occur along natural washes and water features such as the Arroyo Seco and San Gabriel River. These areas are located in the unincorporated communities of South San Gabriel, Whittier Narrows, South Monrovia Islands, East Pasadena-East San Gabriel, Altadena, Kinneloa Mesa, and La Crescenta-Montrose (**Figure 4**).

Fire Risk

Many of the communities within the foothills of the WSGVAP are within a designated Very High Fire Hazard Severity (VHFHS) Zone and experience increased risk of wildfires and subsequent mudslides. The California Department of Forestry and Fire Protection (CAL FIRE) has a database of historic fire perimeters (CAL FIRE 2023). CAL FIRE is required to classify these zones where state and local authorities are responsible for fire management. They take into account an area's fire history, vegetation, predicted flame length, ember production and movement, topography and climate. Areas within a zone are given a score based on these criteria and then averaged across an entire zone to be classified as: moderate, high, or very high fire severity.



SOURCES: CDFW, 2014, 2017, 2018; ESA, 2023

West San Gabriel Valley Area Plan

Figure 4
Regional Habitat Linkages within WSGVAP

Within the WSGV, there have been many fires within the foothills. In the CAL FIRE database, there are records of fire in the area since 1878 in both incorporated and unincorporated communities. The incorporated communities of La Canada Flintridge, Briggs Terrace, Altacanyada, Linda Vista, Sierra Madre, Monrovia, Los Lomas, Kincaid, and Irwindale have had historic fires. Fires have also occurred in the unincorporated communities of Whittier Narrows, Altadena, Kinneloa Mesa, South Monrovia Islands, and La Crescenta-Montrose. These same unincorporated communities have been designated as VHFHS Zones (OSFM 2023).

In addition to considering historic fires, the western portion of Pasadena, Linda Vista, and La Canada Flintridge are also noted as areas of high fire severity risk by CAL FIRE as these areas are also adjacent to large swaths of open spaces in the foothills west of the WSGVAP (Figure 6, p. 46).

Existing Plans, Programs, and Ordinances

In recognition of known biological resources within the WSGV, Los Angeles County, in collaboration with Community Town Councils (e.g., Altadena Town Council), has developed programs to preserve the biodiversity found in the area. This section describes the existing plans and overarching guidance in how to protect biological resources in the WSGVAP.

Los Angeles County Significant Ecological Area Program

The SEA Program was established to conserve genetic and physical diversity within the County by designating biological resource areas capable of sustaining themselves into the future, and ultimately bettering the quality of life for those who live in Los Angeles County. The program serves as an important resource identification tool to indicate where important biological resources occur (LA County Planning 2022c). SEAs identify areas that the County deems important for biological resources and the balance between the natural world and development; however, these areas are not preserves.

SEA areas are designated by the General Plan, and are administered through the SEA Ordinance, which establishes the development standards, and review processes to permit development within SEA areas while balancing the interests of conserving the County's biodiversity with private property rights. Much of the land in SEAs is privately held, used for public recreation, or abuts developed areas. Therefore, privately owned, or recreational open space land use must ensure that the ecological function of the SEA is maintained. The SEA boundary map, goals, and policies were updated in the General Plan 2035. Although proposed development is governed by the SEA regulations, these regulations do not preclude development in these areas, but instead facilitate controlled growth as to not jeopardize the biodiversity and delicate balance between nature and population growth within the County. The SEA Conditional Use Permit requires that development activities proposed to occur in SEAs be reviewed by the Significant Ecological Area Technical Advisory Committee (SEATAC). Additional information regarding requirements within the SEA can be found on the Los Angeles County website, <https://planning.lacounty.gov/long-range-planning/significant-ecological-areas-program/>.

An update to the SEA program was approved by the Board of Supervisors in December 2019 and adopted in January 2020. The update included designation of new and expanded SEAs within the Planning Area and revised regulations for effective implementation. The expanded SEA designated areas contribute to additional land protected in the WSGV Planning Area. For a complete description of the SEA program, refer to the SEA program website, <https://planning.lacounty.gov/long-range-planning/significant-ecological-areas-program/>.

Altadena Community Plan

The Altadena Community Plan was adopted by the Los Angeles County Board of Supervisors on July 10, 1986, supersedes the previous Community Plan adopted in 1969, and establishes a framework of goals, policies, and program designed to provide guidance to policy makers regarding the character of Altadena, including the allocation of resources, pattern, density, and development (LA County Planning 1986). The community of Altadena is developed with a mature community of residences, commercial districts, schools, parks, churches, and other public uses. The principal objective of the Community Plan is the preservation of the existing residential character of the community during its anticipated growth. In 1986, approximately 3,000 acres (54%) of Altadena was developed, with 8% of the community located within the Angeles National Forest. Given the community's proximity to the Angeles National Forest, the Community Plan also addresses fire concerns.

The goals and policies from the Altadena Community Plan listed below are particularly relevant to open space, conservation, and natural resources planning needs, concerns, and goals in WSGV.

4.1 Issues: Land Use

- Future development of Altadena has the potential to change the land use pattern and character of the community.

4.2 Plan Goals: Land Use

- Maintain and enhance the quality and distribution of land uses that characterize Altadena making it an attractive environment to live, work, and recreate.

4.3 Policies: Land Use

Issue 1: Land Use Mix

1. Preserve existing environmental amenities.
2. Encourage new development that is compatible with and compliments the existing uses.
3. Allow land use that does not adversely impact the prevailing low-density character of Altadena.
4. Preserve and enhance existing land uses.

8.1 Issues: Public Services

- Given the proximity to the National Forest, the foothill areas and heavy vegetation in the community present the frequent threat of fire and flood.

8.2 Plan Goals: Public Services

- Maintain and improve fire protection services serving the community.

8.3 Policies: Public ServicesIssue 2: Fire Hazard

1. Continue the efficient level of fire protection commensurate with the population and values invested in the community.
2. Maintain brush clearance standards and require that new construction incorporate fire-retardant materials to reduce the risk of fire hazard.
3. Continue recommendations for fire safety per the County's Safety Element.

Issue 3: Recreation

5. Provide open space areas for both active and passive recreational use.

10.1 Issues: Environmental Resources

- The man-made and natural environmental quality available in Altadena is easily affected by air pollution, flooding, excessive grading, noise, dilapidated physical structures, and inappropriate land uses.

10.2 Plan Goals: Environmental Resources

- Maintain a high level of environmental quality for the community.

10.3 Policies: Environmental Resources

4. Provide that new development must be compatible with adjacent land uses and environmental resources.
5. Provide adequate setbacks, landscaping, walls, and other buffers between residential, commercial, industrial, and public uses.
9. Prevent adverse light and glare effects of land use on adjacent properties.
11. Prohibit the disruption of riparian corridor and other significant environmental habitats in the San Gabriel Mountain foothills.
12. Continue standards to minimize grading in foothill areas.
13. Require that new development in foothill areas minimize siltation to streams and canyons.

10.4 Implementation Measures: Environmental Resources

1. Rely on the County Zoning Ordinance to regulate the location, setbacks, heights, bulk, type and intensity of land uses which might impact environmental resources.
2. Mitigate project impacts to environmental resources in Altadena in accordance with the environmental review procedure (Appendix C for the Preliminary Evaluation of Environmental Effects associated with implementation of the proposed Community Plan).
3. Require compliance with state interior noise standards and Noise Element of the County-wide General Plan for sensitive land use.

General Plan Conservation and Natural Resources Element

The General Plan (2035, most recently updated in July 2022) provides an update to the County’s 1980 General Plan. The Conservation and Natural Resources Element of the County General Plan guides long-term conservation of natural resources and preservation of available open space areas. The goals and policies listed below are particularly relevant to open space, conservation, and natural resources planning needs, concerns, and goals in the WSGV.

Goal C/NR 1: Open space areas that meet the diverse needs of Los Angeles County

Policy C/NR 1.2: Open space preservation and conservation of natural areas. Protect and conserve natural resources, natural areas, and available open spaces.

Policy C/NR 1.4: Open space preservation and conservation of natural areas. Create, support, and protect an established network of dedicated open space areas that provide regional connectivity, between the southwestern extent of the Tehachapi Mountains to the Santa Monica Mountains, and from the southwestern extent of the Mojave Desert to Puente Hills and Chino Hills.

Policy C/NR 1.6: Open space preservation and conservation of natural areas. Prioritize open space acquisitions for available lands that contain unique ecological features, streams, watersheds, habitat types and/or offer linkages that enhance wildlife movements and genetic diversity.

Goal C/NR 3: Permanent, sustainable preservation of genetically and physically diverse biological resources and ecological systems including: habitat linkages, forests, coastal zone, riparian habitats, streambeds, wetlands, woodlands, alpine habitat, chaparral, shrublands, and SEAs.

Policy C/NR 3.1: Protection of Biological Resources. Conserve and enhance the ecological function of diverse natural habitats and biological resources.

Policy C/NR 3.2: Protection of Biological Resources. Create and administer innovative County programs incentivizing the permanent dedication of SEAs and other important biological resources as open space areas.

Policy C/NR 3.3: Protection of Biological Resources. Restore upland communities and significant riparian resources, such as degraded streams, rivers, and wetlands to maintain ecological function—acknowledging the importance of incrementally restoring ecosystem values when complete restoration is not feasible.

Policy C/NR 3.4: Protection of Biological Resources. Conserve and sustainably manage forests and woodlands.

Policy C/NR 3.7: Protection of Biological Resources. Participate in inter-jurisdictional collaborative strategies that protect biological resources.

Policy C/NR 3.8: Site Sensitive Design. Discourage development in areas with identified significant biological resources, such as SEAs.

Policy C/NR 3.9: Site Sensitive Design. Consider the following in the design of a project that is located within an SEA, to the greatest extent feasible:

- Preservation of biologically valuable habitats, species, wildlife corridors and linkages;
- Protection of sensitive resources on the site within open space;
- Protection of water sources from hydromodification in order to maintain the ecological function of riparian habitats;
- Placement of the development in the least biologically sensitive areas on the site (prioritize the preservation or avoidance of the most sensitive biological resources onsite);
- Design required open spaces to retain contiguous undisturbed open space that preserves the most sensitive biological resources onsite and/or serves to maintain regional connectivity;
- Maintenance of watershed connectivity by capturing, treating, retaining, and/or infiltrating storm water flows on site; and
- Consideration of the continuity of onsite open space with adjacent open space in project design.

Policy C/NR 3.10: Site Sensitive Design. Require environmentally superior mitigation for unavoidable impacts on biologically sensitive areas, and permanently preserve mitigation sites.

Policy C/NR 3.11: Site Sensitive Design. Discourage development in riparian habitats, streambeds, wetlands, and other native woodlands in order to maintain and support their preservation in a natural state, unaltered by grading, fill, or diversion activities.

Goal C/NR 4: Conserved and sustainably managed woodlands.

Policy C/NR 4.1: Woodland Preservation. Preserve and restore oak woodlands and other native woodlands that are conserved in perpetuity with a goal of no net loss of existing woodlands.

General Plan Implementation Programs

The County’s General Plan has highlighted implementation programs regarding open space, conservation, and biological resource planning needs countywide. The programs listed below are particularly relevant to the needs, concerns, and goals for the WSGV.

Native Woodlands Conservation Management Plan

Develop a conservation management plan, guidance document, and implementation ordinance for woodlands (other than oak) in Los Angeles County that are rare. Woodland types in need of conservation include but are not limited to walnut woodlands; cherry woodlands; bay tree woodlands; willow woodlands; mixed riparian woodlands with willow, cottonwood, and sycamore components; and California buckeye woodlands.

The WSGV has walnut woodlands and riparian woodland habitats, which is a particularly significant resource for preservation in WSGV.

Work with the Los Angeles Region Imagery Acquisition Consortium for the inclusion of infrared imagery acquisition that will help document existing woodlands (other than oak).

Oak Woodlands Conservation Management Plan Implementation

Implement the County’s Oak Woodlands Conservation Management Plan through the following actions:

- Develop a process for documenting oaks that are added by a property owner (“volunteer oaks”) as part of the Zoning Ordinance Update Program; and
- Work with the Los Angeles Region Imagery Acquisition Consortium to lobby for the inclusion of infrared imagery acquisition that will help document existing oak woodlands.

Habitat Conservation Plan

Prepare a Habitat Conservation Plan to identify and preserve biologically sensitive land and natural resources, including SEAs.

The Habitat Conservation Plan shall include the following:

- A review of best practices in Habitat Conservation Plans in other local jurisdictions; and
- A dedicated permanent source of funding for natural area conservation and preservation related efforts, including the routine study of biological resources.

Water Quality Initiatives

- Support multi-benefit outcomes, such as water quality benefits arising from ecosystem restoration efforts; and identify, attract, and create funds and resources to implement this initiative.
- Participate in Enhanced Watershed Management Programs and Watershed Management Programs in coordination with other agencies throughout Los Angeles County.
- Participate in Coordinated Integrated Watershed Monitoring Plans in coordination.

Watershed and Rivers Master Plans

- Participate with stakeholders in the preparation of Watershed Management Plans in response to the NPDES Municipal Separate Storm Sewer Systems (MS4) Permit by promoting multi-benefit outcomes, including, but not limited to new public access to natural resources, new recreational opportunities, enhanced aquatic habitats, and restored natural features, where appropriate, while maintaining necessary levels of flood protection.
- Identify, attract, and create funds and resources to implement these plans.

Mitigation Land Banking Program/Open Space Master Plan

Study the feasibility of creating a Mitigation Land Banking Program and an Open Space Master Plan with appropriate standards and criteria to allow eligible projects to purchase land within SEAs or other biologically sensitive areas as a mitigation measure for development in areas outside of SEAs. Encourage mitigation banking across watershed and jurisdictional boundaries to provide more opportunities for mitigation and avoid the creation of “postage stamp mitigation” or “orphan mitigation banks.” Postage stamp mitigation is a term used to describe mitigation that is small, fragmented, and scattered across the landscape. Postage stamp mitigation can be problematic because it is often difficult to manage and maintain, and can be less effective than larger, more contiguous mitigation areas. Orphan mitigation banks are mitigation banks that have been approved by a regulatory agency, but for which there are no permitted impacts that require mitigation. Orphan mitigation banks occur for a variety of reasons including the bank was developed in anticipation of future impacts, but those impacts never occurred or were later offset by other means. Orphan mitigation banks also occur when the bank is in an area where there is limited demand for mitigation credit. These mitigation approaches contribute to habitat fragmentation of dispersed, restored natural areas.

Considering the extent of the SEA designated lands in WSGV, the Mitigation Land Banking Program and Open Space Master Plan could be a valuable tool for restoring and protecting important habitats in SEAs within the Planning Area as mitigation. By providing a source of funding, coordinating and streamlining mitigation efforts, and ensuring that mitigation is done in a strategic and effective way, these programs could help to offset the impacts of development and protect the WSGV’s unique biodiversity in the SEAs or other biologically sensitive areas in the Planning Area.

Open Space Land Acquisition Strategy

Develop an open space land acquisition strategy that incorporates collaborative partners; identifies multi-use sites; explores all means of open space acquisition and preservation, such as inter-jurisdictional land swaps, mitigation banking, and other partnerships; and implements legal protections, such as deed-restrictions and easements.

Develop programs to improve education, awareness, and stewardship of open spaces, natural areas, and SEAs, recognizing and prioritizing opportunities to leverage County resources with those of other jurisdictions (such as when environmental improvements cross jurisdictional boundaries, but result in amplified improvements consistent with natural landscape boundaries/characteristics).

Urban Greening Program

- Work with the Community Development Commission and other stakeholders to expand community garden programs, and to identify County-owned parcels and other potential sites for community gardens.
- Create and implement an urban farming program.
- Conduct a tree inventory to identify tree deficient neighborhoods and target these areas for tree distribution and planting.
- Adopt tree planting requirements for new developments, as described in the Community Climate Action Plan.
- Explore joint-use agreements for green amenities for land under major utility corridor line easements.
- Amend the County Code, as applicable, to require 30% tree canopy coverage, at maturity, on new development to shade parking lots and structures in a manner that will reduce the urban heat island effect.
- Work with other jurisdictions to leverage County resources in ways that facilitate environmental improvements consistent with natural landscape characteristics.

SEA Preservation Program

Coordinate with programs for the preservation of natural resources, especially programs that identify financial incentives for the acquisition of SEA lands. Focus on targeting the following implementation actions to ensure that SEAs are specifically included:

- Transfer of Development Rights Program
- Habitat Conservation Plan
- Mitigation Land Banking Program/Open Space Master Plan
- Open Space Land Acquisition Strategy

Countywide Noise Assessment Survey/County Noise Ordinance Update

- Identify major sources of noise and noise issues in the County (Countywide Assessment Survey)
- Revise the County’s Noise Ordinance; update the vibration standard.

Countywide Noise Mapping

If determined to be feasible, prepare a map of detailed noise contours and associated land uses within the county.

Noise Abatement Program

Create guidelines to mitigate noise issues in development projects and at a countywide level. Plan transportation/parking features to have minimal noise impacts to natural resources.

Climate-Adapted Landscape Program

Develop model landscape design strategies for development projects that specify climate-adapted plants to appropriately address hazards while also supporting local biodiversity.

Dark Skies

Regulation of night lighting and providing places where residents can see the stars is a key element in resource conservation. The Rural Outdoor Lighting Districts in the Zoning Code establish regulations that conserve energy and resources and promote dark skies for the enjoyment and health of humans and wildlife, while permitting reasonable uses of outdoor lighting for nighttime safety and security. The Districts include limitations on allowable light trespass, fully shielding outdoor lighting, and imposes maximum heights of fixtures.

Key Issues, Opportunities, and Recommendations

The General Plan has highlighted key issues for open space and natural resources planning. The issues and recommendations listed below are particularly relevant to the needs, concerns, and goals for the WSGV. Additional issues have also been added to those listed in the General Plan.

Key Issues and Opportunities

Preservation of Biotic Diversity

Development continues to be the main cause of species decline in the Southern California region, where approximately 20% of the species on the federally endangered species list are found. In Southern California, over 400 species of plants and animals are considered endangered, threatened, or sensitive by government agencies and conservation groups (South Coast Wildlands 2008). The SEA Program provides guidance for planning decisions and encourages the conservation of core habitats and linkages. However, there are no mandates for conservation of biological resources on private property. The lack of legal protection for biological resources on private property is a major challenge for conservation efforts in Southern California. Many

important habitats are located on private land, and without legal protection, these habitats are at risk of destruction and species decline.

Habitat Fragmentation

Habitat loss and fragmentation are the leading threats to biodiversity worldwide, and nowhere is the risk more severe than in Southern California. Wide-ranging species like mountain lions, may be lost from even the largest areas if highways and urbanization isolate each major wildland. Roads and development are the major obstacles to wildlife movement. A key consideration is to reduce the impacts of transportation barriers (South Coast Wildlands 2008). Additional wildlife under/overpasses at key locations to facilitate movement needs to be implemented to counter impacts from highways and urbanization. Further, major wildlife corridors in the area such as the Arroyo Seco and San Gabriel River should be preserved and protected. These corridors of interest overlap with the unincorporated communities of La Crescenta-Montrose, Altadena, Kinneloa Mesa, and Whittier Narrows. Prioritizing the creation of wildlife corridors within the San Gabriel Mountains foothills, San Gabriel River, Whittier Narrows, and Rio Hondo River corridor will help prevent habitat fragmentation in WSGVAP.

Multi-jurisdiction Collaboration on Habitat Protection and Linkages

As SEAs and habitat areas cross jurisdictional boundaries, it is imperative for jurisdictions to work together to conserve and protect habitat areas and wildlife linkages. The SEAs, as mapped, extend into other jurisdictions where SEAs are not administered by the County. Working with other jurisdictions to create and enforce protections across jurisdictional boundaries would help to preserve and prevent fragmentation of remaining habitat areas and wildlife linkages, including SEA-designated lands and their adjacent jurisdictions. This need is especially heightened as climate change may shift and alter the remaining habitat areas, necessitating the continuity of wildlife linkages.

Climate Change Vulnerability

Climate change is expected to increase severity and prevalence of wildfires, flooding, and extreme heat. It is important to consider WSGV communities' risk to these natural disasters exacerbated by increasing temperatures. It is important to recognize underserved communities that are at greater risk of these events and understand how to mitigate that risk.

Recommendations

Prevent Habitat and Biodiversity Loss

- Develop a plan to preserve habitat quality (natural plant communities, including walnut woodlands, riparian habitats, oak woodlands, chaparral, and coastal sage scrub) and habitat connectivity, prioritizing SEAs, riparian vegetation, streambeds, wetlands, and designated Critical Habitat, especially as species may need to adapt to climate change. Require biological surveys and reports to be prepared for these important habitats prior to any development or changes in land use.

- Develop a framework to ensure coordination with other adjacent jurisdictions to conserve and protect habitat areas and wildlife linkages in SEAs that cross jurisdictional boundaries. Work with landowners and other stakeholders to implement management plans that include strategies for protection, restoration, and enhancement of these habitats.
- Conduct baseline biological surveys for SEAs, larger drainages, and other large tracts of habitat to identify areas that need to be restored and/or preserved for long-term species survival and develop a plan for long-term conservation.
- Develop a wildlife connectivity ordinance and reconnect fragmented remnants of habitat.
- Develop wildlife crossings along wildlife corridors and minimize wildlife conflicts across roads and highways.
- Concentrate development towards urban centers and away from natural spaces to minimize potential conflicts in the urban/wildland interface.
- Develop a plan to restore and enhance major drainages by removing concrete lined channels and replacing them with natural functioning streams if this does not pose significant flood risk to communities.
- Protect natural water sources that wildlife can access and utilize during drought years.
- Conduct a feasibility study to assess the potential benefits of creating a Mitigation Land Banking Program and an Open Space Master Plan for the WSGV. Develop a plan for implementing these programs, if feasible. Develop an open space land acquisition strategy for the WSGV that includes working with other organizations, identifying sites that can be used for multiple purposes, exploring different ways to acquire and preserve open space, and putting legal protections in place (such as deed restrictions and easements).
- Develop educational programs for private landowners of the presence and importance of nearby species and encourage the stewardship of natural habitats.
- Recognize and prioritize opportunities to leverage County resources with those of other jurisdictions.

Sustain Biodiversity in the Urban Environment

- Implement urban ecology in community planning and development projects.
- Survey main waterways and drainages for wildlife, vegetation, and use for wildlife corridors.
- Increase native vegetation and pollinator-friendly species in landscaping.
- Limit or restrict lighting towards natural areas at night to limit light pollution and disturbance to wildlife species.
- Work with Community Development Commission and other stakeholders to expand community garden programs, and to identify County-owned parcels and other potential sites for community gardens.
- Create and implement an urban farming program in the WSGV.

- Conduct a tree inventory to identify tree deficient neighborhoods and target these for tree distribution and planting.
- Collaborate with neighboring jurisdictions to protect and/or restore contiguous open space areas and native habitats.

Climate Change Mitigation and Adaptation

- Discourage development in high fire severity zones and keep new developments away from open spaces that are at higher risk of wildfire.
- Replant forests and restore damaged ecosystems to intake and store carbon dioxide (a prime greenhouse gas) while also contributing to habitat rehabilitation.
- Create green roofs and living walls on buildings to provide habitat for wildlife and to reduce the heat island effect.
- Design green space to aid in the absorption of rainwater to recharge groundwater supplies.
- Develop a plan to identify, restore, and conserve essential connections between wildland areas to support wildlife movement during climate change events.
- Adopt tree planting requirements for new developments in the WSGV, as described in the Community Climate Action Plan.

IV. Mineral Resources

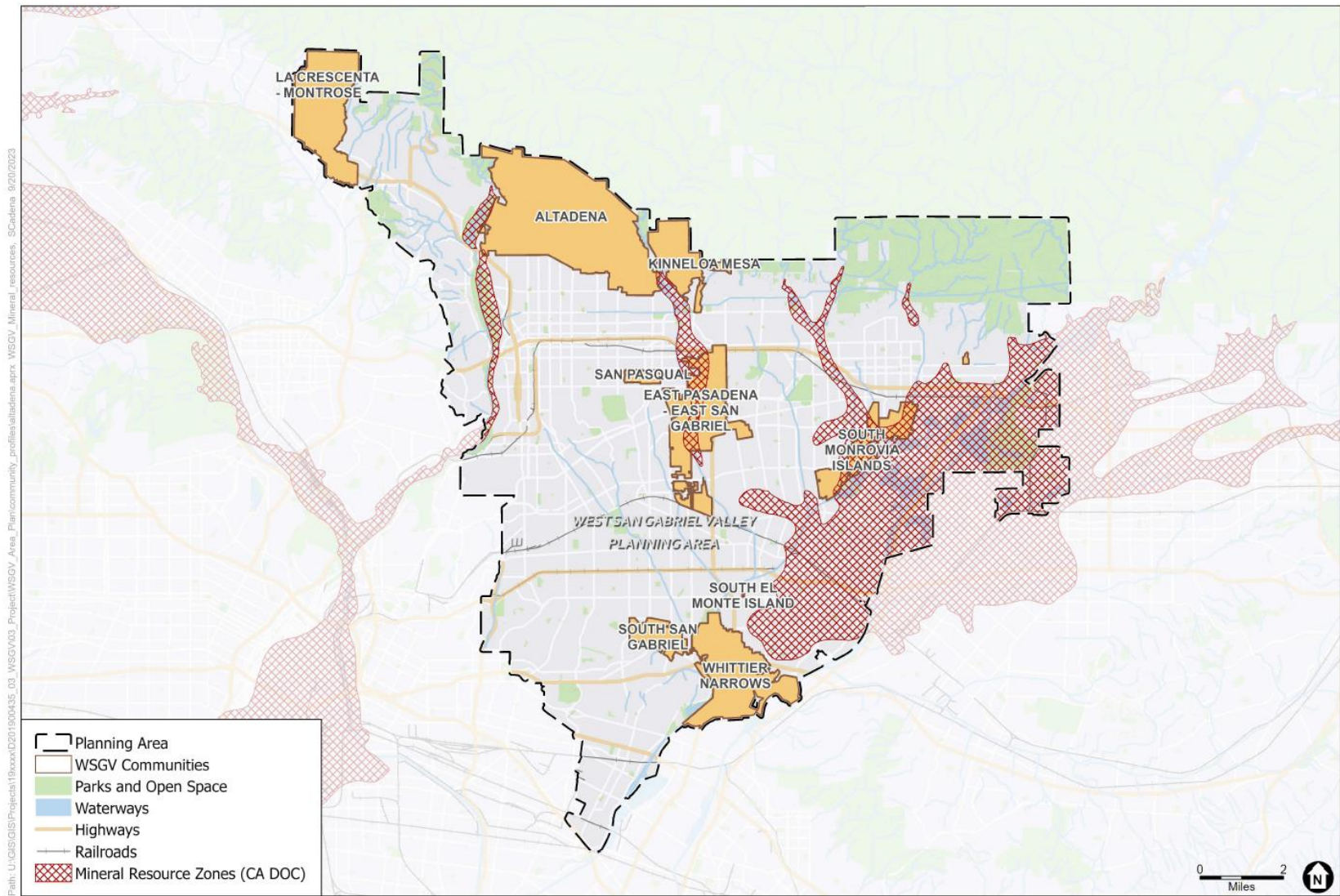
Introduction

Mineral resources are commercially-viable aggregate or mineral deposits, such as sand, gravel, and other construction aggregate. California is the largest consumer of sand and gravel in the country, but is also a major producer, generating approximately one billion dollars' worth of these mineral resources annually. The Los Angeles metropolitan area produces and consumes more construction aggregate than any other metropolitan area in the country. A continuous supply of aggregate materials for urban infrastructure is essential to the Southern California economy (General Plan).

This section describes the mineral resources in Los Angeles County and specifically the communities in the Planning Area. The importance of mineral resources in Los Angeles County is described along with the how the California Geological Survey designates significant aggregate resource areas. Existing policies and programs that regulate mineral resource extraction are also described. The information presented in this section is intended to provide an overview of the mineral resource conditions in the Planning Area and ultimately assist in the formation of policies for future development and decision making.

Existing Conditions and Trends

The County depends on the California Geological Survey to identify areas with regionally-significant aggregate resources. These clusters or belts of mineral deposits are designated as Mineral Resource Zones (MRZ-2s). MRZ-2s represent areas where mineral deposits have been identified rather than areas where extraction is occurring. In many cases these MRZ-2 zones have been developed for non-extraction uses. The county's MRZ-2s are shown in **Figure 5**. Four major MRZ-2s overlap with the unincorporated area boundaries of the West San Gabriel Valley (WSGV): Little Rock Creek Fan, Soledad Production Area, Sun Valley Production Area, and Irwindale Production Area. The Soledad and Little Rock Creek MRZ-2s contain significant deposits of aggregate materials that are estimated to provide for future needs through the year 2046. As seen in Figure 5, the MRZ-2s intersect with the unincorporated communities of Altadena, Kinneloa Mesa, East Pasadena-East San Gabriel, and South Monrovia Islands (General Plan). At present, none of the areas where MRZ-2s intersect with the WSGV communities are designated for mineral resource extraction. All areas where MRZ-2s overlap with the WSGV community have already been developed, with the exception of a small area in Eastern Altadena, which is currently zoned for residential and designated for residential in the General Plan, and a small area in western Kinneloa Mesa, which is currently zoned as open space and designated by the General Plan as Public and Semi-Public land. It's important to note that although these MRZ-2s overlap with the WSGV communities, there are no active mining operations taking place within the community boundaries. Furthermore, mining activities would not align with the existing and surrounding land uses in the area (Urban Footprint).



SOURCES:

CA DOC; LA County DPR; ESA; Urban Footprint, 2023.

Figure 5
Los Angeles County Mineral Resource Zones, MRZ-2s (Department of Conservation)

There is an area of land with a Mineral Resource (MR) General Plan land use designation in South San Gabriel (see Figure 5). The General Plan permits mineral extraction, processing, oil drilling, and production activities on lands with this MR designation. Notably, even though such activities are allowed, there are currently no mining operations in this specific part of South San Gabriel or in the broader Planning Area (General Plan). It is important to note that while there are no overlapping MRZ-2 zones in this portion of the Planning Area, the California Department of Conservation has identified oil and gas resources here and there are plugged and idle oil and gas wells in this area as well as in Whittier Narrows (CalGEM 2023).

Existing Plans, Programs, and Ordinances

The California Surface Mining and Reclamation Act of 1975

The California Department of Conservation protects mineral resources to ensure adequate supplies for future production. The California Surface Mining and Reclamation Act of 1975 (SMARA) was adopted to encourage the production and conservation of mineral resources, prevent or minimize adverse effects to the environment, and protect public health and safety. An important component of SMARA requires that all surface mines be reclaimed to a productive second use upon the completion of mining (Public Resources Code Subsections 2712(a), (b), and (c)) (General Plan).

In a joint regulatory effort, SMARA authorizes local governments to assist the State in issuing mining permits and monitoring site reclamation efforts. To manage mining resources, the County has incorporated mineral resource policies into the Conservation and Natural Resources Element. In addition to these policies, Title 22 of the County Code (Part 9 of Chapter 22.56) requires that applicants of surface mining projects submit a reclamation plan prior to receiving a permit to mine, which must describe how the excavated site will ultimately be reclaimed and transformed into another use (General Plan).

General Plan Chapter 9, Conservation and Natural Resources Element

The Mineral and Energy Resources section of the Conservation and Natural Resources Element addresses the use and management of valuable mineral resources in the unincorporated areas, and the importance of sustaining and maintaining these resources for future users. The demand for resources is high, and projected growth in the region will continue to strain the mineral supply. Los Angeles County has incorporated mineral resource policies into the Conservation and Natural Resources Element. Relevant policies include:

Policy C/NR 10.1: Protect MRZ-2s and access to MRZ-2s from development and discourage incompatible adjacent land uses.

Policy C/NR 10.5: Manage mineral resources in a manner that effectively plans for access to, development and conservation of, mineral resources for existing and future generations.

Policy C/NR 10.6: Require that new non-mining land uses adjacent to existing mining operations be designed to provide a buffer between the new development and the mining operations. The buffer distance shall be based on an evaluation of noise, aesthetics, drainage, operating conditions, biological resources, topography, lighting, traffic, operating hours, and air quality (General Plan).

Key Issues, Opportunities, and Recommendations

Key Issues and Opportunities

Incompatible Land Uses

There are identified mineral resources in the WSGV Planning Area, and any future extraction of mineral resources could lead to issues related to incompatible land uses near extraction sites. For example, mineral resource extraction and production can often garner community complaints due to environmental threats and surface operations.

Planning for Compatible Land Use

The characteristics of the communities in the Planning Area limit opportunities for mineral extraction operations as the residential development in these areas is not a compatible use. Any future extraction efforts can be strategically planned or avoided completely to prevent negative impacts to nearby residents.

Recommendations

Compatible Land Use Planning

Ensuring land use compatibility with the placement of any new mineral resource extraction operations is an important step in protecting existing residential development from the negative impacts of extraction operations.

Community Engagement

Incorporating robust community engagement in any future decisions regarding the establishment of mineral extraction sites in or near the Planning Area.

Buffers

Establishing buffer distances that are based on an evaluation of noise, aesthetics, drainage, operating conditions, biological resources, topography, lighting, traffic, operating hours, and air quality, as directed by the General Plan Policy C/NR 10.6, in order to limit impacts to residential communities.

V. Open Space Resources

Introduction

The open spaces, parks, and recreational amenities within Los Angeles County are crucial in supporting the overall well-being of both people and the environment. The County manages open spaces and parks in unincorporated regions and some cities within Los Angeles County. Especially significant is the role of open and green spaces in addressing the impacts of climate change, providing essential leisure and connection to nature, and fostering community health and resilience for a diverse population.

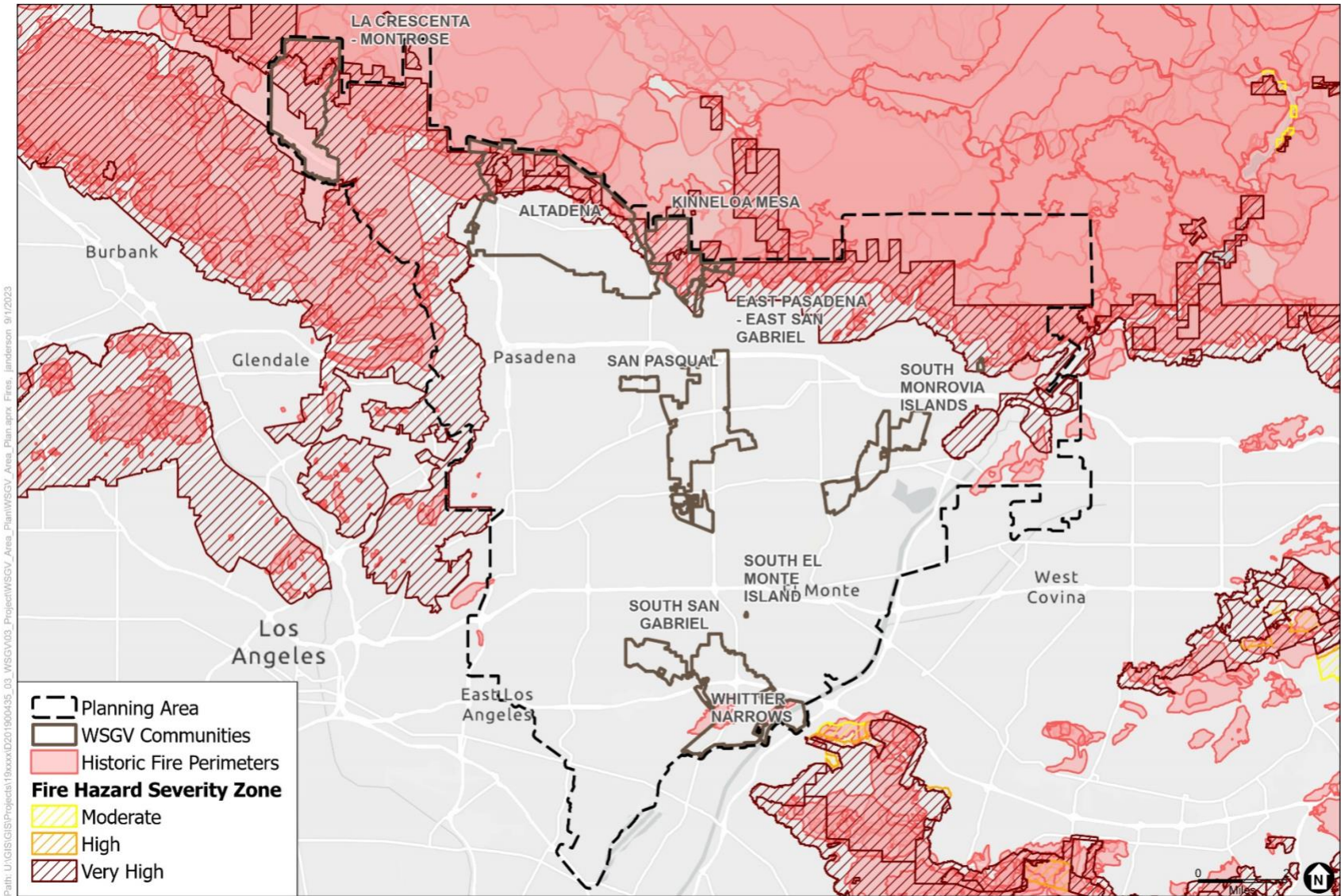
This section describes the existing parks, open spaces, and recreational facilities in the West San Gabriel Valley (WSGV); the existing plans and programs specific to open space resources; and key findings specific to the continued preservation and improvement of open space resources in the area. Conditions, policies, and findings by community in the WSGV are identified as applicable. This information is intended to provide a snapshot of the open space resource conditions and ultimately assist in the formation of guidance for development to ensure any future development conforms with the protection and enhancement of parks, open spaces, and recreational facilities.

Existing Conditions and Trends

Encompassing some foothills of the San Gabriel Mountains and portions of the Angeles National Forest, the WSGV provides residents with open spaces and recreational options, including community parks, recreational areas, sports facilities, wilderness preserves, nature centers, community gardens, cemeteries, and trailheads to the forest and mountains. The County's park system, including facilities under County ownership, operation, and maintenance, spans around 73,214 acres, and includes 3,540 acres of parks within WSGV (LACDPR 2021).

Additionally, protected public areas—lands protected for open space by federal, state, county, local governments, and nonprofits—cover roughly 900,000 acres in Los Angeles County (LACCSO n.d.), including 1,672 acres in WSGV (Los Angeles County 2022c). Land designated for parks and open space constitutes approximately 1.7% of total land in the WSGV. Each of these open space and recreational resources are detailed below and shown in **Figure 6**.

In the WSGV, several regions bordering the Angeles National Forest have been recognized as high-priority zones for conservation. Additionally, portions of El Monte, Irwindale, and unincorporated South El Monte have been identified as areas requiring restoration efforts due to their relatively poor environmental condition (Los Angeles County 2022c).



SOURCES: CAL FIRE, 2023; ESA, 2023

West San Gabriel Valley Area Plan

Figure 6
Historic Fires and Fire Severity within WSGVAP

Parks and Recreation Facilities

The County's parks and recreation options are categorized into two systems: the local park system and the regional park system. Of the 3,540 acres of parkland in WSGV, 56 acres are allocated for local parks and 3,484 acres for regional parkland (Los Angeles County 2022c). The County General Plan provides goals for the provision of park resources to serve all residents adequately. The County General Plan local parkland goal is to provide 4 acres per 1,000 people, and the regional parkland goal is to provide 6 acres per 1,000 people. Based on a population of 122,834 for the WSGV unincorporated communities, and 56 acres of local parkland in 2010, the WSGV unincorporated regions have a current local park deficit of 435 acres to reach the established goal. Based on a population of 915,196 for the entire WSGV Planning Area, and 3,484 acres of regional parkland, the WSGV has a current 4 acres of regional recreation parkland per 1,000 residents (Los Angeles County 2022c). Therefore, the WSGV has a regional park deficit of 2,007 acres. These figures emphasize the need for continued efforts to enhance and expand parkland resources to meet the community's and countywide residents' recreational needs and interests. However, addressing park space shortages is a challenge in light of other County concerns, including the need for more housing, etc.

Barriers to park use for residents in the WSVG include challenges such as heat, distance, inadequate transit options, limited park information, associated costs, safety concerns especially due to insufficient maintenance of parks and facilities, and a sense of not feeling welcome (Los Angeles County 2022c). In the WSGV, several areas were designated as having a "Very High Park Need" according to the 2016 Countywide Parks Needs Assessment. These identified regions encompass the City of El Monte and the Unincorporated areas of East San Gabriel and Unincorporated Arcadia. In contrast, the WSGV has the most substantial visitation to open spaces such as the Angeles National Forest, Santa Fe Dam Recreational Area, and Whittier Narrows Recreation Area (Los Angeles County 2022c).

Local Parks

County parks are categorized according to their size, intended purpose, and physical characteristics for effective planning. The local park system is comprised of community parks, neighborhood parks, pocket parks, and park nodes, catering to local requirements and offering daily recreational opportunities. Each of these park types are described below.

Community Parks. These parks, typically spanning 10 to 20 acres, cater to multiple neighborhoods within a 1- to 2-mile radius. They offer a variety of active and passive recreation opportunities and feature amenities suitable for group activities, like sports fields, picnic areas, courts, restrooms, and parking. One example of a community park is the Charles S. Farnsworth Park in the unincorporated community of Altadena. This park has a community building, a splash pad, various sports fields, and offers many recreational activities such as dance, cheerleading, soccer, and flag football.

Neighborhood Parks. Ranging from 3 to 10 acres in size, neighborhood parks serve residents within a half-mile radius, fostering social connections and recreational activities close to home. Their strategic placement ensures easy access and often includes play areas, picnic spots, courts, and restrooms. Pamela County Park is a neighborhood park located in the WSGV unincorporated

community of South Monrovia Islands. Pamela Park offers picnic areas, a basketball court, and a playground.

Pocket Parks. Compact spaces under 3 acres, pocket parks cater to specific needs within a quarter-mile radius. They serve residential and commercial areas, offering features like play equipment, seating, fountains, and pathways, and generally lack parking facilities. Michillinda Park and Mount Lowe Park, are pocket parks located in WSGV unincorporated communities.

Park Nodes. Small open spaces, park nodes function as gathering spots and connections, complementing urban landscapes, and linking various areas like waterways and trails. They provide rest areas, focal points, cultural exchanges, and hosting features such as plazas, playgrounds, landmarks, and public art. There are no park nodes in the WSGV unincorporated communities.

Regional Parks and Recreation Facilities

The regional park system in Los Angeles County aims to fulfill the recreational needs of residents and visitors. It includes community regional parks, regional parks, and special use facilities. Each of these are described below as they relate to the WSGV. Pockets of high regional recreation needs are found throughout the WSGV, including Duarte, El Monte, and Whittier communities, due to the presence of vulnerable populations and lower rates of visitorship (Los Angeles County 2022c).

Community Regional Parks. Typically spanning 20 to 100 acres within a 20-mile radius, community regional parks safeguard natural resources, offer unique recreational amenities not found in local parks, and provide sports fields, play areas, picnic spots, and more. They may include multiple sports facilities, aquatic centers, fishing lakes, community buildings, and scenic viewpoints. An example of a community regional park in the WSGV Planning Area would be the Arcadia Community Regional Park within the city of Arcadia. This regional park has a senior center, children’s play areas, community centers, multipurpose rooms, outdoor kitchens and picnic areas, barbecues, and restrooms (Los Angeles County 2022c). There are no community regional parks located within the WSGV unincorporated communities.



Arcadia Community Regional Park

Regional Parks. Covering over 100 acres with a 25-mile radius or more, regional parks encompass diverse features such as lakes, wetlands, campgrounds, and active recreational spaces found in smaller parks. They offer nature-related activities, serve as wildlife habitats, and contribute to ecological well-being. An example of a regional park in a WSGV unincorporated community would be the Eaton Canyon Natural Area and Nature Center, located at the base of the San Gabriel Mountains. Visitors can enjoy Eaton Canyon's vast hiking and equestrian trails, which include a staging area, seasonal streams, diverse native flora and fauna. Additionally, there is a nature center, live animals, classrooms, an auditorium, and a gift shop (Los Angeles County 2022c). Other regional parks in the WSGV communities include the Santa Fe Dam Recreational Area and Whittier Narrows Recreation Area.

Special Use Facilities. These purpose-driven facilities, like the Hollywood Bowl in the city of Los Angeles, cater to significant regional recreational and cultural needs. They require public access and buffers for protection. They can accommodate passive (e.g., historical sites, natural areas) and active (e.g., golf courses, water parks) use, serving the region without specific size or radius limitations. There are no special use facilities in the WSGV unincorporated communities.

Open Space and Trails

The WSGV's diverse trail opportunities provide connections to parks, open spaces, cultural sites, and wilderness areas. The County aims for multi-use trails accessible to pedestrians, equestrians, and mountain bikers, promoting inclusivity and nonmotorized recreation. However, the WSGV only has 0.16 miles of regional trails per 1,000 residents, well below the countywide average of 0.33 (Los Angeles County 2022c). In the WSGV, there are 149 miles of regional trails (Los Angeles County 2022c).

The Angeles National Forest, a federally managed though not a national park, offers additional outdoor trails for hiking. Public transportation provides access to 30% of the regional trailheads within the WSGV. However, individuals lacking a personal vehicle still face challenges in accessing the Angeles National Forest (Los Angeles County 2022c). Altadena, an unincorporated community in the WSGV, borders the northern edge of the Angeles National Forest and offers residents easy access to the forest's recreational opportunities. Trails and access points to the Angeles National Forest and other amenities are shown in **Figure 7**.

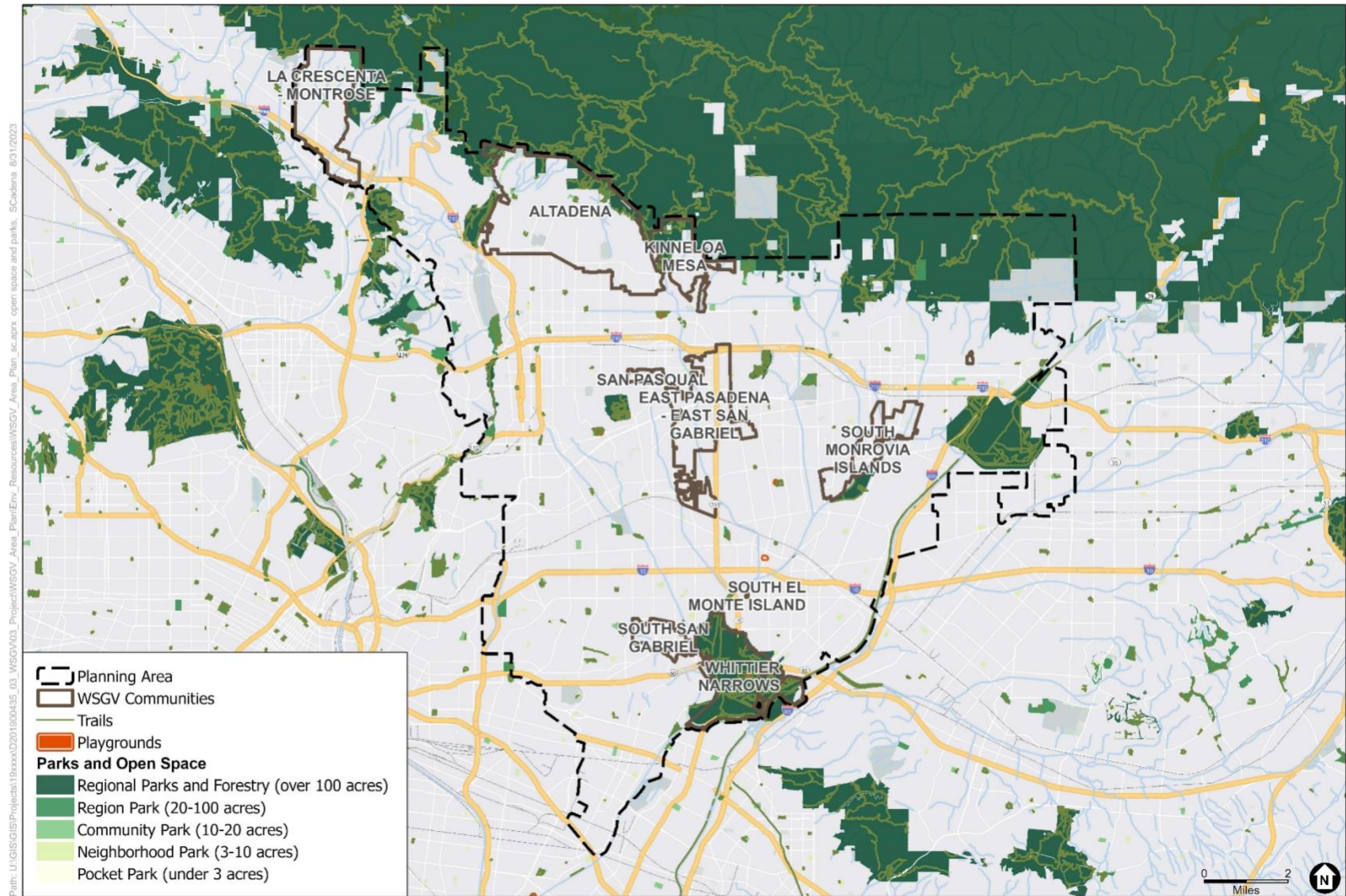
Parks and Recreation Programming

In addition to park access, providing a variety of recreational programs that meet the diverse backgrounds, ages, and interests of WSGV residents are essential for community health and well-being. The Los Angeles County Department of Parks and Recreation (LACDPR) provides a broad spectrum of programs catering to different age groups and households within the community. These programs include organized sports, classes, events, and leisure activities, fostering healthy lifestyles and positive use of leisure time. For example, the Eaton Canyon Natural Area and Nature Center hosts a variety of programming, such as the Young Naturalist After School Club, Nature Trails Docent Led Storytime Reading, and seasonal events.

However, it's important to note that while these programs aim to address diverse needs, the data regarding their effectiveness in fully meeting the diverse recreational requirements of the community remains unclear. Ensuring equitable distribution of resources to fulfill everyone's needs requires a systematic, holistic approach. To address this, the County has called for a comprehensive Parks and Recreational Master Plan. This plan will enable a more thorough assessment and strategic planning process, ensuring that recreational offerings are aligned with the community's needs.



Eaton Canyon Natural Area and Nature Center



SOURCES: TPL; UrbanFootprint; ESA, 2023

West San Gabriel Valley Area Plan

Figure 7
Parks and Open Space

Existing Plans, Programs, and Ordinances

This section provides an overview of various existing plans, programs, and ordinances that play a crucial role in maintaining and shaping the future of parks and recreation in Los Angeles County. These initiatives contain many goals, from enhancing community well-being and sustainability to ensuring equitable access to open spaces and recreational opportunities. The following plans and programs contribute to a comprehensive understanding of the County's commitment to accessible parks and recreation system.

The Parks Needs Assessment Plus (PNA+), 2022

Project's purpose is to add new information to the 2016 Parks Needs Assessment (PNA), including mapping, population vulnerability, environmental benefits, burdens, and priority areas for conservation, restoration, regional, and rural recreation.

General Plan Chapter 10, Parks and Recreation Element

This chapter offers policy guidance for enhancing and growing the County's parks and recreation network. Its core objective is to develop a unified parks and recreation framework that effectively serves residents' needs. The chapter's goals and policies are designed to address the evolving and diverse recreation demands of the County's communities.

Our County, Los Angeles Countywide Sustainability Plan, 2019

This Sustainability Plan outlines several key actions and goals for enhancing public spaces and promoting sustainability. These actions include the development of a comprehensive master plan for parks and open spaces and increasing the presence of native plants, trees, and pollinator-friendly landscapes. The plan focuses on increasing biodiversity, improving public access to open spaces, preserving ecological sites, and enhancing recreational and cultural offerings, particularly in underserved areas.

Southern California Association of Governments Connect SoCal: 2020–2045 Regional Transportation Plan/Sustainable Communities Strategies Plan, 2020

This plan prioritizes the preservation of natural lands, farmland, and habitat restoration. This approach strategically aims to decrease greenhouse gas emissions, enhance air quality, promote carbon sequestration, and reduce vehicle miles traveled (VMT) by conserving natural areas on the outskirts of urban and suburban development. This strategy's key components are encouraging infill development and concentrating on diverse land uses.

Unincorporated Los Angeles County Community Climate Action Plan 2020

This Climate Action Plan aims to enhance vegetation-covered open spaces. This plan involves restoring disturbed land, transforming unused urban and suburban areas into parks and forests, and supporting community-led restoration initiatives through funding and programs.

Quimby Act of 1975

The Quimby Act is a California state law that allows local governments to require developers to dedicate land or provide funds for the acquisition or development of public parks and recreational facilities as a condition of granting residential subdivisions or land development approvals. The Quimby Act aims to ensure that as new developments are built, there is a corresponding condition of open space and recreational opportunities for residents of those developments and the surrounding communities. The Act requires dedicating 3 acres of parkland for every 1,000 residents in subdivisions.

Key Issues, Opportunities, and Recommendations

This section provides an overview of the key findings related to open space in the WSGV, followed by a discussion about the issues faced in terms of limited space, accessibility, climate vulnerabilities, and maintenance shortcomings. Opportunities are also analyzed, which include the potential of existing spaces, engaging the public, and establishing trail connectivity. The section concludes with a set of strategic recommendations designed to enhance public open spaces, mitigate climate impact, and maximize inclusivity while addressing the constraints of limited space.

Key Issues

Limited Available Space in Communities: A key issue to increasing park and open space is the limited availability of land. There is a direct conflict between the WSGV's housing and park space shortages. The remaining available land or converted land uses must satisfy the diverse and conflicting needs.

Inadequate Accessibility and Inclusivity: The park planning issue revolves around the need to cater to a diverse range of recreational needs within a community. Vital factors to consider are the equitable distribution of parkland and accessibility for underrepresented and underserved groups, including low-income and transit-dependent communities. For example, the lack of access to a personal vehicle and inadequate public transit service have left many residents in the WSGV unable to reach nearby public lands in the Angeles National Forest (Los Angeles County 2022c). Another barrier includes inadequate facilities such as restrooms, seating, and shaded areas, which can make parks less accessible, particularly for individuals with mobility limitations or health concerns. Residents have expressed the need for increased shade, swimming facilities, affordable transportation options, accessible amenities, expanded trail networks, enhanced multilingual signage and information, communal gathering spaces, and affordable, open access to park programs and facilities (Los Angeles County 2022c).

Vulnerable to Climate Change: The 2021 Los Angeles County Climate Vulnerability Assessment outlines the potential impact of climate change on open spaces and parks. Los Angeles County's parks and open spaces are crucial for recreation, mental well-being, and cooling during hot periods. However, these areas are susceptible to extreme heat, harming vegetation and increasing insect infestations. This stressed vegetation also raises wildfire risk. Extreme heat disrupts park biodiversity, affecting species' range, life cycles, and habitat. It

endangers outdoor workers and impacts park infrastructure, especially in high-exposure areas with poor conditions. Heat and related pollution impacts also make outdoor recreation activities difficult for many residents during warmer months of the year (Los Angeles County 2022c).

Lack of Maintenance: Many existing parks and facilities may suffer from aging infrastructure, lack of maintenance, and deferred repairs, making them less safe and appealing for users. A lack of regular maintenance can lead to overgrown vegetation, litter, and unsafe conditions, making parks less inviting and usable.

Opportunities

Multi-Functional Spaces: Existing spaces can adopt flexible designs and uses. Designing flexible spaces that can accommodate various activities, such as concerts, farmers' markets, and community events, maximizes the utility of parks.

Public Engagement: Involving the local community in park planning and decision-making can lead to designs and developments that align with community needs and preferences. Public engagement can help decrease conflicts between different user groups, such as dog owners, cyclists, and picnickers, which can arise when parks are not properly designed to accommodate diverse activities.

Trail Connectivity: Establishing connections between existing trails and open spaces can create an integrated network that allows users to explore larger areas and encourages longer journeys. Designing accessible trails to accommodate various user groups, such as walkers, runners, cyclists, and wheelchair users, can further promote inclusivity and safe coexistence.

Recommendations

Enhancement of Public Open Space

- **Technology Integration:** Utilizing trail apps, QR codes, or interactive maps can enhance the user experience by providing real-time information and navigation assistance.
- **Community Gardens:** Designating areas for community gardens along trails, parks, and open spaces near and accessible from residential areas allows residents to grow their food and connect with nature.
- **Volunteer Programs:** Involving local volunteers in trail and open space maintenance, habitat restoration, and educational programs fosters community engagement and stewardship.
- **Art:** Integrating public art installations and aesthetically pleasing landscaping can enhance the visual appeal of trails and open spaces and can create more inviting environments.
- **Interpretive Signage and Education:** Installing interpretive signs and educational displays along trails and in parks can engage visitors and provide information about the local environment, history, and cultural significance.
- **Regular Maintenance Programs:** Establish and fund regular maintenance programs for parks and facilities to ensure ongoing upkeep, including repairs, cleaning, and landscaping.

- **User Feedback:** Solicit feedback from park users to identify maintenance and safety concerns and use this information to prioritize improvements.

Mitigation and Adaptation Strategies

- **Green Infrastructure:** Incorporate green infrastructure elements like permeable pavements, rain gardens, and bioswales along trails and in park design to manage stormwater runoff and reduce the heat island effect.
- **Native Plant Landscaping:** Use native plants that are drought tolerant and well-suited to the local climate, requiring less water and maintenance while promoting biodiversity and providing habitats for wildlife in parks and open spaces.
- **Water-Efficient Irrigation Systems:** Require the installation of water-efficient irrigation systems, such as drip irrigation, in parks to minimize water wastage.
- **Irrigation Scheduling:** Implement irrigation scheduling based on weather conditions and plant water needs to avoid overwatering.
- **Renewable Energy:** Install solar panels or other renewable energy sources in park facilities to reduce energy consumption and greenhouse gas emissions.
- **Sustainable Materials:** Choose sustainable and recycled materials for park construction and furnishings to reduce resource consumption and waste generation.
- **Heat Mitigation:** Plant shade trees, add shade structures such as gazebos for shaded picnic or rest areas, and install water features to reduce the heat island effect and provide cooling spaces for park visitors.
- **Monitoring and Research:** Regularly monitor climate impacts on park ecosystems and gather data to inform adaptive management strategies.
 - Collaborate with local schools and educational institutions to involve students in research projects that focus on park-related climate impacts such as temperature fluctuations, extreme weather events, changing precipitation patterns, and shifts in local ecosystems.
 - Integrate environmental education programs into parks to engage youth in learning about monitoring research, local ecosystems, conservation practices, and sustainability efforts.

Accessibility

- **Service Animal Facilities:** Provide areas for service animals to rest, drink water, and relieve themselves comfortably within the park.
- **Public Transportation:** Expand public transportation stops and accessible parking spaces to ensure easy transportation to open spaces such as parks, recreational areas, trails, farmers markets, and public facilities.
- **Universal Access:** Ensuring trails and open spaces are universally accessible with features like smooth surfaces, handrails, and gentle slopes enables people of all abilities to enjoy the outdoors.

- **Rest Areas and Seating:** Installing benches, picnic areas, and restrooms along trails and open spaces to enhance user comfort and encourage more extended visits.
- **Trail Connectivity Planning:** Developing a comprehensive trail connectivity plan to identify opportunities to link existing trails and open spaces into a cohesive network, considering natural features, community needs, and accessible designs.

Limited Space Strategies

- **Mixed-Use Zoning:** Implement mixed-use zoning policies that encourage the development of multi-functional areas where residential, commercial, and recreational spaces coexist.
- **Multi-Functional Spaces:** Identify spaces that can function as a multi-functional space, or where a multi-functional space or facility can be developed to allow for mixed-use and can host diverse activities, events, and temporary installations.
- **Multi-Use Infrastructure:** Invest in versatile infrastructure elements like multipurpose pavilions, stages, and open areas that can be easily configured for different activities.
- **Rooftop Parks:** Utilize vertical spaces such as rooftops and elevated platforms to create gardens, seating areas, and play zones. Vertical landscaping and rooftop parks can optimize space while providing a unique park experience.
- **Pocket Parks:** Develop small pocket parks on unused or underutilized plots of land, to provide residents with green spaces for relaxation and recreation. Consider a program to allow temporary pocket parks with a temporary use permit. on existing parking lots or underutilized spaces, with a pathway to turn temporary activations into long-term installations.
- **Green Streets and Alleys:** Convert streets or alleys into pedestrian-friendly spaces with landscaping, seating, and amenities, to provide safe and accessible pathways for residents.

VI. Scenic Resources

Introduction

The County recognizes scenic resources as valuable elements that give communities their unique identities. Scenic resources play a vital role in the development of community identity and contribute to a community's aesthetic value. These resources consist of but are not limited to things like designated scenic highways and corridors (or routes), hillsides, scenic viewsheds, vistas, ridgelines, unique landscape features, and scenic landforms, among other scenic elements. Such scenic attributes are not solely defined by their physical characteristics but are also tied to community preferences and perceptions, encompassing views of parks, open spaces, water bodies, and other natural features that contribute to a sense of beauty and harmony. Regulations across the nation underscore the importance of scenic resources in land and resource management, through measures such as revegetation, inconspicuous infrastructure placement, and harmonious design to mitigate potential visual disturbances.

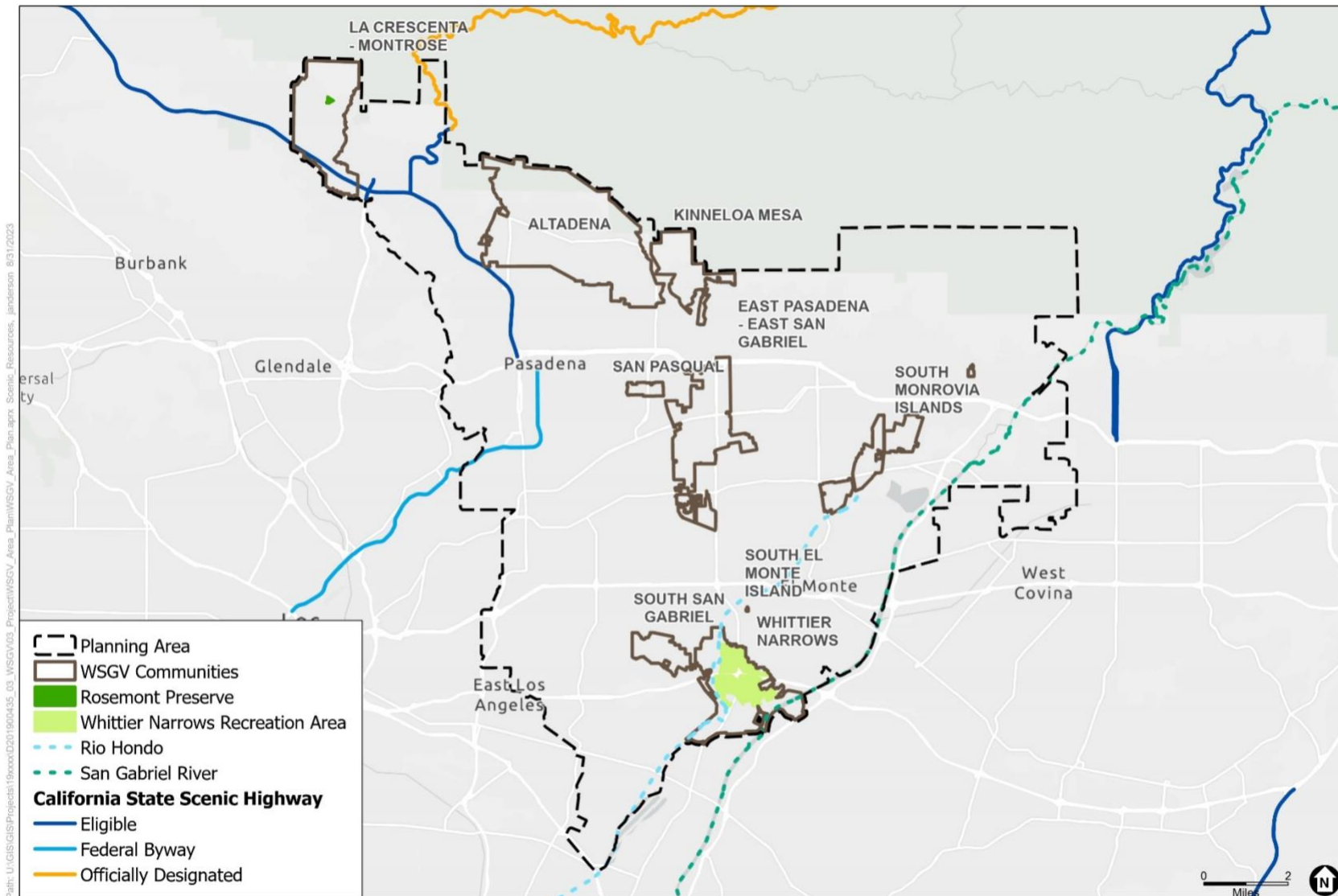
This section provides a description of the scenic resources found within the WSGV communities; the existing plans, programs, and ordinances in place to protect them; as well as issues, opportunities, and recommendations for improving and preserving the scenic quality of the WSGV.

Existing Conditions and Trends

The WSGV Planning Area contains a variety of scenic resources that include significant ridgelines, hillsides, rivers, and waterways, viewsheds and vistas, and scenic routes and corridors, among other scenic features in the landscape. These scenic resources are found within the sites identified in **Figure 8** and described in more detail below.

Dramatic population and demographic shifts in the San Gabriel Valley have impacted scenic resources in the WSGV. As a result, some of the region's scenic features have already been lost, degraded, and/or encroached upon by development, including, the damming of the Rio Hondo Channel of the San Gabriel River at Whittier Narrows. This resulted in not only in the degradation of natural habitats but also destroyed unique scenic elements of the riverbank. For this reason, it is important to identify remaining resources and ensure that measures of ecological protection are in place to protect and preserve them so they can be enjoyed by current and future generations. The absence of a scenic routes and corridors study in the WSGV is a significant gap, as such a study plays a vital role in acknowledging, protecting, and elevating the aesthetic, cultural, and historical attributes inherent to a region.

Many Significant Ecological Areas (SEA) have scenic resources and dedicated measures for preserving these resources. The WSGV contains parts of the Altadena Foothills and Arroyos SEA, the San Gabriel Canyon SEA, and the Puente Hills SEA. Furthermore, numerous foothill communities are designated Very High Fire Hazard Severity Zones, signifying the heightened risk of wildfires and the ensuing potential for mudslides in these areas, which could damage existing scenic resources (Los Angeles County 2022a). Altadena's proximity to the Angeles National Forest and inclusion of the Altadena Foothills and Arroyos SEA, provides this unincorporated



SOURCES: Caltrans, 2023; Los Angeles DPR, 2023; ESA, 2023

West San Gabriel Valley Area Plan

Figure 8
Scenic Resources

community with abundant nearby scenic resources. In contrast, communities like East Pasadena have more difficulty accessing these resources.

WSGV Community Scenic Resources

Scenic resources identified in the WSGV communities include: the San Gabriel River and Rio Hondo River channel, California Scenic Highway Route 5/Route 134, La Crescenta-Montrose Rosemont Preserve, and Whittier Narrows Recreation Area and Whittier Narrows Park. The scenic resource elements mentioned earlier—ridgelines, hillsides, rivers, and waterways, viewsheds and vistas, and scenic routes and corridors—are found in the scenic resource areas.

The San Gabriel River and Rio Hondo River channels are significant scenic resources in the WSGV, as they play a central role in the visual and environmental appeal of the area. Originating in the San Gabriel Mountains, the San Gabriel River, and the Rio Hondo River channel flow through the San Gabriel Valley. Parts of these rivers flow directly through and alongside parts of Whittier Narrows. The San Gabriel River and Rio Hondo River channel's presence and interaction with the Whittier Narrows are a cherished and integral part of the WSGV's identity and scenic appeal.

Route 5 (Near Tunnel Station)/Route 134 is eligible to become a California State Scenic Highway. The highway runs through unincorporated La Crescenta-Montrose in the WSGV and throughout the greater Planning Area. It offers views of the surrounding San Gabriel Mountains and foothills through the community. The route provides accessibility to local amenities and recreational sites.

La Crescenta-Montrose Rosemont Preserve lies within the unincorporated community of La Crescenta-Montrose. Operated by the Arroyos & Foothills Conservancy, the preserve is a dedicated natural space featuring rolling hills, native vegetation, wildflowers, and meandering trails. The preserve features oak and walnut trees, yerba santa plants, and



Alta Dena Crest Trail

and various animal species. This significant scenic resource offers visitors a chance to experience the beauty of the local ecosystem without having to venture far from the urban environment. The La Crescenta-Montrose Rosemont Preserve is a protected scenic area.

The Whittier Narrows Recreation Area and Whittier Narrows Park offers respite from the nearby urban environment as it includes water features, trails, and vast green spaces. Spanning 1,500 acres, the park's natural vegetation, including trees, grasslands, and wildlife, contributes to its aesthetic value and serves as a habitat for various species. Scenic resources within the park can be enjoyed by visitors from various walking trails, picnic areas, and sports facilities. Whittier



Whittier Narrows Recreation Area

Narrows Recreation Area is a protected area, based on the scenic resources that it provides.

Existing Plans, Programs, and Ordinances

Below is a discussion of the various existing plans and programs that currently guide decision making related to scenic resources in the Planning Area.

General Plan 2035 Goal C/NR 13

Protected Visual and Scenic Resources outlines specific policies to manage hillside development and maintain scenic resources. Specific policy topics include mitigating development impacts on the visual aesthetic of terrain and vegetation, minimizing light pollution, prohibiting advertising and billboards in areas that will obstruct scenic views, and encouraging rest stops and vista points in scenic areas.

The Los Angeles County Municipal Code, Title 22

The Los Angeles County Municipal code includes ordinances to protect SEAs including specific measures to protect scenic resources. Specifically, Title 22 includes requirements for development to protect resources contained in SEAs. Specific design measures to conserve land area and form and promote attractive development seek to complement hillside terrain by creating “scenic vista points at prominent locations such as hilltops and ridgelines, providing amenities at the points and making them accessible to the public” (Title 22; Division 5, Special Management Areas; Chapter 22.1202, Significant Ecological Areas; VI, Sensitive Hillside Design Measures; 1, Site Planning).

The 2022 Parks Needs Assessment Plus

The Parks Needs Assessment Plus (PNA+) by LACDPR in 2022 holds significant relevance for preserving and enhancing scenic resources. This assessment is instrumental in offering a comprehensive and updated understanding of the Planning Area’s parks and open spaces, ensuring that the management and conservation of scenic areas align with the evolving needs and priorities of the community.

Key Issues, Opportunities, and Recommendations

Key Issues

Balancing Development and Preservation: Finding a balance between developing and preserving scenic resources presents a significant issue. Addressing this challenge might involve implementing land use regulations, tackling light pollution concerns, and devising strategies to mitigate the impact of development on the aesthetic appeal of natural areas.

Variation in Access: Abundant natural resources exist either within or bordering the Planning Area; however, for some communities these are much more accessible than others. For instance, while Altadena enjoys access to scenic resources in the San Gabriel Mountains, communities like East Pasadena face greater difficulties reaching these areas. This equity issue highlights a disparity in access to natural resources based on geographical location. An unequal distribution of access to nature and scenic areas can lead to environmental and recreational inequalities, impacting the quality of life and well-being of residents in communities with limited access.

Scenic Routes and Corridors Study: The WSGV does not have a scenic routes and corridors study. Without a formal study, unique scenic and cultural resources might go unnoticed or be overlooked, leading to potential neglect or loss. A lack of knowledge about scenic and cultural resources can lead to inappropriate development that negatively impacts these valuable assets.

Opportunities

Model from Existing Plans: Existing plans such as the San Gabriel/Verdugo Mountains Scenic Preservation Specific Plan can be used to model preservation of scenic resources in other areas of the WSGV.

Equitable Access Enhancement: Addressing the variation in access to natural resources presents an opportunity to develop solutions in collaboration with community members and organizations to ensure all communities can enjoy the benefits of nearby scenic areas.

Recommendations

- Develop a scenic routes and corridors study in the WSGV Area plan to identify scenic resources for designation.
- Develop policies to mitigate encroaching development on scenic resources. Public views within the Planning Area should be protected to allow for widespread access to scenic views.
- Conduct a thorough assessment of the transportation needs and preferences of unincorporated communities in the WSGV to better understand the barrier of inequitable access to scenic resources.
- Expand awareness of abundant scenic resources and accessibility for public enjoyment. This can include placards to inform community members of important scenic areas.
- Tailor scenic resource enhancement solutions to respect the cultural diversity of the community, which can create welcoming and inclusive spaces for all residents.
- Improve signage and wayfinding systems that guide residents to scenic areas and initiatives to enhance safety measures along access routes.
- Establish and maintain accessible trails that cater to diverse user groups, including individuals with disabilities, to ensure everyone can experience and enjoy scenic areas.
- Ensure that scenic areas have proper facilities like restrooms, picnic areas, and seating, to make them more inviting and comfortable for visitors.
- Develop a project to investigate and pursue the transition of eligible scenic resources into designated scenic resources.

VII. Water Resources and Quality

Introduction

Water is an invaluable resource in the Los Angeles County area where the landscape is arid and semi-arid. Intentional management of the **watershed** and local water resources is crucial to sustaining the health and functions of the surrounding natural environment and the quality of life for residents and businesses.

A **watershed** (also known as a drainage area or catchment) is geographic area that, due to its terrain and topography, contributes to the flow of surface water, sediments, and transported materials from the land into a common river, lake, groundwater basin, ocean, or other water body.

The General Plan highlights the importance of improved watershed functions and utilization of a watershed-based planning approach as a method to protect, conserve and restore resources by utilizing or mimicking natural hydrologic processes. Improving surface water quality, including cleaning polluted waters, and improving water quality standards is a requirement and goal of the County to protect existing clean water bodies and restore impaired water bodies. The County goals surrounding groundwater primarily include prioritizing **groundwater recharge** operations to the maximum extent naturally and artificially, including through recycled water, to replenish the groundwater supply.

Groundwater recharge is the drainage process where water replenishes the groundwater bodies by draining through the soil.

This section describes the existing hydrologic setting of the Los Angeles River Watershed, along with surface and ground water conditions of the watershed; and water infrastructure in the West San Gabriel Valley (WSGV); the existing plans, programs, and ordinances specific to water resources and quality; and key findings specific to the continued preservation and improvement of water resources in the area. Conditions, policies, and findings by community in the WSGV are identified as applicable. This information is intended to provide a snapshot of the water resource conditions and ultimately assist in the formation of guidance for development to ensure any future development conforms with the protection of the watershed and water quality.

Existing Conditions and Trends

The San Gabriel Valley was once a wealth of wetlands and riparian habitat. The valley had high ground water, seeps, streams, wet meadows, and marshes, with waters that eventually flowed into the shifting course of the San Gabriel River and eventually connects to the Los Angeles River and to the Pacific Ocean. The water-influenced landscape changed drastically with the extractive economy brought by the westward migrants who settled the San Gabriel Valley in the 19th and 20th centuries. Water extracted to meet the booming population lowered the water table and limited the ability of the river and floodplains to support riparian and wetland habitat. **Figure 9** is an 1887 irrigation map that shows the extensive floodplains and stream meandering that represents the waterways characterizing the San Gabriel Valley prior to dams and channelization. In addition, development of the floodplain—including channelization of the rivers and creeks—resulted in extreme alteration of hydrology patterns, eliminating the formerly plentiful wetlands’

ecological benefits to water quality in the valley (see Figure 9). **Figure 10** is an excerpt from the LA River Master Plan video “Retracing The LA River” showing an aerial comparison of the LA River where it runs through East Los Angeles and the City of Vernon (river mile 18.3) between 1928 and 2018 and demonstrates the effect the channelization had on reducing the surrounding riparian habitat (Los Angeles County 2023a). The San Gabriel Valley floor has lost approximately 86% of its historical wetlands (LA County Planning 2023a).



West San Gabriel Valley Area Plan

Figure 10
Retracing The LA River: 1928–2018 Aerial Comparison Snapshot

Los Angeles River Watershed

The WSGV is located predominantly within the Los Angeles River Watershed, with a small portion on the eastern side of the Whittier Narrows community located in the San Gabriel Watershed. The Los Angeles River Watershed, west of the San Gabriel River Watershed, is approximately 824 square miles and has headwaters from the Santa Monica, Santa Susana, and San Gabriel Mountains. The western portion of the watershed is in the San Fernando Valley and the southeastern portion is in the San Gabriel Valley. Historically, devastating floods and rapid development in the early to mid-20th century led to the channelization of the LA River main waterway and altered the previously dynamic floodplain and wetland system. **Figure 11** shows the historical wetlands and river paths and areas that were at risk of inundation. Today, the Los Angeles River Watershed is approximately half forested and open space, part of the Angeles National Forest and half highly developed, encompassing large urban areas in the central and southeast portion of Los Angeles County. The main watercourse in this watershed is the Los Angeles River, which extends approximately 55 stream miles from Canoga Park (in the San Fernando Valley) through San Gabriel Valley and the Sepulveda Flood Control Basin to Long



West San Gabriel Valley Area Plan

Figure 11
Historical Flooding and River Paths (LA River Master Plan excerpt)

Beach and into the Pacific Ocean. The main tributaries to the river in the San Fernando Valley are the Pacoima Wash, Tujunga Wash (both drain portions of the Angeles National Forest in the San Gabriel Mountains), Burbank Western Channel and Verdugo Wash (both drain the Verdugo Mountains). **Figure 12** shows the hydrologic landscape of the San Gabriel Valley around the WSGV, including the two watersheds intersecting the WSGV, the surrounding mountain ranges, and the San Fernando and San Gabriel Valleys in relation to the Los Angeles River and its tributaries. The Los Angeles River has evolved from an uncontrolled, meandering river providing a valuable source of water for early inhabitants to a major flood protection waterway (LACPW 2023a). The river drains land and recharges groundwater tables in several basins in the San Fernando Valley area (CWB 2015). In the Los Angeles Basin, 34% of the water supply comes from groundwater. According to the LA Basin Water Supply Need evaluation in the LA River Master Plan, there is a higher need for groundwater basin water supply on the eastern portion of the WSGV (Los Angeles County 2023b).

East of the San Fernando Valley, the river is fed by springs and supports wildlife while intersecting the Hollywood Hills and Griffith and Elysian Parks, in an area known as Glendale Narrows. South of the Glendale Narrows, the river is contained in concrete-lined channels to Long Beach. The tributaries of the river are the Arroyo Seco (which drains areas of Pasadena and portions of the Angeles National Forest in the San Gabriel Mountains), the Rio Hondo, and Compton Creek. The south-flowing Los Angeles River is hydraulically connected to the San Gabriel River Watershed by the Rio Hondo through the Whittier Narrows Reservoir where their flows merge (CWB 2015). The Whittier Narrows Natural Area and Puente Hills are a designated Significant Ecological Area (SEA) and form the southeastern portion of the Planning Area (see Section III, *Biological Resources*, for more information on SEAs). A clear link exists between the health of this watershed and the quality of life for millions of Los Angeles County residents through surface and groundwater. The upper reaches of the Los Angeles River support wildlife and provide a myriad of recreational opportunities, but as the river flows through residential, industrial, and other urban land uses, the water quality is affected by the discharges of these uses. From the Arroyo Seco confluence and southward, the river flows through highly industrial and commercial areas where access to the river is limited and heavy contamination exists.

Watershed Management

The floor of the National Forests allows rainfall and snowmelt to replenish groundwater basins, which provides the unincorporated areas with approximately 13% of its annual water supply. Surface water runoff fills streams and rivers, which support riparian habitats and which, in the case of the Angeles National Forest, flow downstream into the channelized waterways of the Los Angeles River and its tributaries before reaching the Pacific Ocean. To protect these forest functions, the U.S. Forest Service has identified two-thirds of the National Forests in Los Angeles County as sensitive watershed areas (LA County Planning 2022a).



SOURCES: CA DOC; UrbanFootprint; ESA, 2023

West San Gabriel Valley Area Plan

Figure 12
Los Angeles River Watershed Hydrologic Landscape

Los Angeles County Public Works has a mission for the management of the Los Angeles Watershed, which aims to foster a balance between urban and natural resources. Management of the watershed focuses on restoring or revitalizing the watershed channels and creating recreation and aesthetic improvements for the Los Angeles Metropolitan area while maintaining the integrity of and protecting the Los Angeles Basin from major flooding (LACPW 2023a). Of the communities in the WSGV, some contain environmental resources and others face hazardous constraints.

Surface Water Quality Regulations

Throughout the watershed and the WSGV, surface water quality is typically better in the upper reaches and headwaters, near the communities of Altadena and La Crescenta–Montrose and declines as it receives urban and stormwater runoff in the lower waterbodies before discharging into the Pacific Ocean. In general, urban stormwater runoff occurs following precipitation events (also known as wet weather runoff), especially during the early phases of precipitation events called first-flush, with the volume of runoff flowing into the drainage system depending on the intensity and duration of the rain event. Urban runoff and waste discharged from treatment plants carry contaminants to the ocean and pollute the groundwater (CWB 2023). Under the Clean Water Act Section 303(d), states are required to submit to the United States Environmental Protection Agency (USEPA) a list identifying waters within its boundaries not meeting water quality standards (impaired waters) and the water parameter (i.e., pollutant) not being met. The waterways of the WSGV exceed total maximum daily loads and are among the Clean Water Act Section 303(d) listings. Major contaminant sources in WSGV waterways include industrial and domestic chemicals, automotive byproducts, urban runoff and chemicals and nutrients from agricultural management. The source contaminants are metals, pesticides, nitrates, trash, pH, and bacteria (CWB 2023). Treatments are needed to address water pollution issues to reduce pollutant concentrations, increase vegetation and ground permeability, and restore riparian ecosystems where possible to regain lost ecosystem services.

The County's Public Works Department Water Resources Core Service Area (CSA) is responsible for Countywide water resource management, including flood risk management, water supply, and watershed health. The Water Resources CSA is responsible for planning, operating, and maintaining infrastructure within the Los Angeles County Flood Control and Waterworks Districts and managing efforts to comply with stormwater quality regulations affecting unincorporated areas of the County and the Flood Control District (LACPW 2023c). The County is required to comply with the Municipal Separate Storm Sewer System (MS4) permit issued by the Los Angeles Regional Water Quality Control Board (LARWQCB). The MS4 permit requires the County to implement best management practices (BMP) that would improve water quality in the Los Angeles River and San Gabriel River Watershed Management Programs. Several Enhanced Watershed Management Program (EWMP) groups are active within the Los Angeles River Watershed, including the Upper Los Angeles River Watershed Group, the Los Angeles River Upper Reach 2 Sub-watershed, the Lower Los Angeles River Watershed, and the Rio Hondo/San Gabriel River Water Quality Group. Several other jurisdictions, including Compton, El Monte, Irwindale, San Fernando, and unincorporated South El Monte, are developing individual WMPs (LACPW 2023a).

Soils, Infiltration, and Groundwater

Groundwater contamination is a significant concern in the Planning Area. Four major superfund sites are found in the vicinity of the WSGV, and soil contamination from underground storage tanks is dispersed throughout the area, particularly in the southeastern portion of the WSGV (SWRCB 2023). Adherence to proper documentation and regulations, frequent leak detection, and applicable best leak prevention practices when managing underground storage tanks can help prevent environmental damage, threats to human health and safety and costly clean ups and repairs (USEPA 2023). Water treatment facilities are located in La Cañada, on the La Cañada Flintridge Country Club, and in Whittier Narrows (LACSD 2023). When precipitation and surface water infiltrate naturally into the ground, they first typically travel through an unsaturated soil zone until they reach the water table, which is the layer where the soil is saturated. This layer of soil saturation is called a groundwater basin or aquifer. Groundwater extraction accounts for nearly one-third of the water usage in the unincorporated areas (LA County Planning 2022a). The groundwater recharge area of the Central Basin encompassing the WSGV is a significant asset when it comes to water supply, including drinking water, and must be processed to remove the contaminants found. Measures to conserve potable water are in action at the Los Angeles-Glendale Water Reclamation Plant. The plant serves the east San Fernando Valley communities, including the La Crescenta-Montrose community, and recycles water for irrigation and industrial processes (LACSD 2023).

Water Infrastructure

At the base of the San Gabriel Mountains, four dams to control and capture downhill water flow, sediment basins, and large spreading grounds aid in groundwater recharge and sediment capture (LA County Planning 2023a). This infrastructure is primarily operated by the Los Angeles County Flood Control District and serves the dual functions of flood protection and water storage. These downstream facilities capture close to 80% of the runoff that flows from the mountains. Stored runoff collected during the storm season is later released at controlled rates throughout the year for downstream groundwater recharge.

Existing Plans, Programs, and Ordinances

Visions of restoring and improving the LA River and watershed back to a more naturalized form slowly began to enter the mainstream with the emergence of influential organizations like Friends of the Los Angeles River (FoLAR) starting in the 1980s. These visions were followed by sweeping structural improvements to the flood channel capacity of the LA River in the 1990s which reduced flood risk reduction significantly along the lower LA River. Plans such as the City of LA's LA River Revitalization Master Plan (2007) and the Lower LA River Revitalization Plan (2017) have since continued to contribute to and guide practical efforts to contribute to river and watershed health (LA County Planning 2022a). Goals and missions of the existing plans related to water resources and quality that are relevant to the WSGV are included below to guide the watershed management, completion of surface water quality goals, and water infrastructure recommendations for the Plan area. Continued opportunities to enforce or encourage the reduction of pollutants through operational updates at treatment plants and industrial facilities and reduce urban runoff pollution through public education on point source reduction could contribute

to improvement of surface water quality and groundwater conditions. These enforcement or encouragement methods could be applied to improved groundwater recharge operations. Additionally, opportunities to reduce permeable surfaces and restore to natural areas and improve habitat connectivity could contribute to future watershed, water quality and groundwater goals.

Los Angeles River Master Plan (2022)

Surface Water Quality Regulations

- **9.1.** Improve water quality and contribute to the attainment of water quality requirements to protect public and environmental health.

Watershed Management

- **9.3.** Coordinate with the Watershed Management Program and Enhanced Watershed Management Program (WMP and EWMP) Groups.
 - **9.3.3.** Actively coordinate with the Upper Los Angeles River, Los Angeles River Upper Reach 2, Rio Hondo, and Lower Los Angeles River watershed management groups to develop regional and distributed projects and programs that contribute to meeting goals for regional water quality improvement.
- **9.4.** Increase public awareness of river water quality and watershed health.

Soils, Infiltration, and Groundwater

- **8.1.** Capture and treat stormwater and dry weather flows before they reach the river channel for groundwater recharge, direct use, water recycling, or release for downstream beneficial uses.
- **8.5.** Continue measures to clean up the regional groundwater aquifers.

Los Angeles County Water Plan (Draft July 2023)

An updated LA County Water Plan is in development to lay out a path for sustainably achieving safe, clean, and reliable water resources for Los Angeles County and recommend outcomes for regional water resilience across Los Angeles County by 2045. The key focal areas of the Plan include regional water supply reliability, groundwater management and quality, small, at-risk system resilience and drinking water equity, and watershed sediment management (Los Angeles County 2023). Los Angeles County has drafted the 2023 LA County Water Plan for comment, the comment period closed September 18, 2023. When the final draft is available, the goals and policies from the update Plan will be incorporated into this background brief.

Los Angeles County General Plan

Surface Water Quality

- **Local Water Resources Goal C/NR 5:** Protected and usable local surface water resources.
 - Policy goals summary: May include but not be limited to development with hydrologic sensitivity at a regional and parcel-level scale; compliance with MS4, general

construction and point source National Pollutant Discharge Elimination System (NPDES) permits; stakeholder engagement in surface water preservation and restorations plans; manage septic systems to protect nearby surface water bodies; minimize source water pollution; design infrastructure to accommodate watershed protection goals

Watershed Management

- **Local Water Resources Goal C/NR 7:** Protected and healthy watersheds.

- Policy goals summary: May include but not be limited to support **low-impact development** (LID); protect natural groundwater recharge areas; stakeholder engagement in dispersing rainwater and stormwater infiltration best management practices at regional to parcel-level scales; prevent stormwater infiltration in inappropriate or unsafe areas.

- The General Plan recognizes the importance of utilizing a watershed-based planning approach as a method to protect, conserve and restore resources by utilizing or mimicking natural hydrologic processes. The path to improving local water resources is through improving watershed functions.

Low-impact development (LID) is a stormwater quality management strategy that seeks to mitigate the increase in pollution that enters into storm drains due to the development of urban hardscapes. LID seeks to mimic the hydrologic cycle of pre-development conditions by implementing various site designs, materials, and design structures that can slow, infiltrate, filter, store, or detain stormwater runoff close to its source and reduce the amount of runoff (County Planning 2022).

Soils, Infiltration, and Groundwater

- **Local Water Resources Goal C/NR 6:** Protected and usable local groundwater resources

- Policy goals summary: May include but not be limited to support LID; support preservation, restoration, and strategic acquisition of available land for open space to preserve hydrologic components necessary for the healthy function of watersheds; stakeholder engagement in LID philosophy in water planning, protection, and conservation efforts; promote multi-use regional facilities for stormwater quality, groundwater recharge, detention/attenuation, flood management, retaining nonstormwater runoff, and other compatible uses.

Integrated Regional Water Management Plan for Greater Los Angeles County

The purpose of the 2013 Integrated Regional Water Management (IRWM) Plan was to create a pathway for the sustainable management of water resources in the Greater Los Angeles County (GLAC) Region for the next 20 years. The Plan covers water supply and infrastructure, water quality, supply and demand, and regional water management (LACFCD 2014).

Upper Los Angeles River and Tributaries Revitalization Plan (2020)

The mission of the Upper Los Angeles River and Tributaries Revitalization Plan is to develop prioritized opportunities with the following components: nature based and watershed

management; open space; multiple benefits; safe access; alignment with community needs and feedback; alignment with funding sources; reduction and management of existing flood risks to communities; culture, arts, and education; and reconciliation with previous efforts. From the lens of two committees, People and Recreation and Water and Environment, created for the Revitalization Plan development, prioritized opportunities have been identified to enhance the quality of life for communities within the upper watershed (City of Los Angeles 2020). Goals from the Revitalization Plan include the following related to water resources: Support healthy, connected ecosystems; Improve local water supply reliability; and Reduce flood risk and improve resiliency.

Key Issues, Opportunities, and Recommendations

Watershed Impacts and Land Use

Rivers, streams, and people can be adversely affected by poorly designed land uses within a watershed. With urbanization comes impervious surfaces, channelizing water courses, filling wetlands, loss of vegetation, increased and polluted runoff, eroded streams, and impaired surface and groundwaters. A watershed-based planning approach integrated with site-level land use planning is needed to protect, conserve, and restore water resources through integration of multi-benefit projects that mimic the ecosystem services of the natural hydrologic cycle, when and where feasible. In any new or retrofitted development, including Opportunity Areas, LID measures, mimicking of the natural hydrologic cycle and post-construction stormwater infiltration should be considered, in addition to adherence to any regional Water Quality Control Plans (Basin Plans) goals that advise in the protection or restoration of the beneficial uses of inland waterbodies. Intentional management of water resources is crucial in areas with higher density of land uses, such as residential areas. If space is available, developing multi-benefit water quality improvement projects with improved existing or new active transportation trails and greenery would benefit existing vulnerable communities and habitat and reduce contamination levels. In addition, any watershed planning should consider maintaining or enhancing the urban-wildland interface with the Angeles National Forest and San Gabriel Mountains near the communities of Altadena and Kinneloa Mesa.

Surface Water Impairments

Clean Water Act Section 303(d) requires states to identify and establish a list of water bodies that do not meet applicable water quality standards. Those water bodies are considered “impaired” and are placed on the Clean Water Act Section 303(d) list. More than a dozen different stormwater and wastewater pollutants—including metals, nutrients, indicator bacteria, organics, pesticides, trash, and other contaminants—are found in the county’s water bodies in amounts significantly above established water quality standards. In the WSGV, the listed water bodies include Alhambra Wash, Legg Lake, Peck Road Park Lake, Puddingstone Reservoir, Puente Creek, Sawpit Creek, San Antonio Creek, Santa Fe Dam Park Lake, San Jose Creek, Walnut Creek Wash and a portion of the Arroyo Seco, San Gabriel River, and Rio Hondo. The Los Angeles River is also an impaired water body with multiple pollutant concentrations above federal standards. Planning should consider the ability to meet water quality requirements at a parcel-level to a regional scale to protect public and environmental health in coordination with

WMP and Enhanced WMP Groups. To comply with surface water quality regulations to protect existing clean water bodies and restore impaired water bodies, the County is implementing water pollution prevention programs appropriate for their jurisdiction. Public awareness or stakeholder engagement and operational changes regarding potentially hazardous materials could assist in the ongoing challenge of surface water quality improvements and contribute to the progress of water quality regulation and implementation programs to improve water quality.

Groundwater Impairment and Depletion

In urbanized areas, compacted soils and impervious surfaces impact the natural recharge process. In the foothills of the San Gabriel Mountains, downhill flow of snowmelt and rainwater recharge the groundwater recharge areas. With climate change and decreasing snowpack and rainfall, the recharge capacity of these areas becomes limited. In the foothill communities of the WSGV, the County could consider implementing policies aimed at reducing impervious surfaces, encouraging green building design, landscaping and bioswales, and other measures to improve groundwater recharge.

Dry weather and wet weather flows in the LA River present opportunities to develop and diversify local water resources to reduce dependence on imported water and increase the reliability and resiliency of the region's water supply. Any planning measures should incorporate efforts to capture and treat stormwater and dry weather flows, especially in areas and communities that are less developed where chances for runoff pollution is lesser. These planning measures should focus on improvements to groundwater impairment and depletion and consider reducing peak flood flows into the river, through effective infiltration or storing of runoff, to not exceed the downstream channel capacity and allow groundwater recharge facilities to effectively direct stormwater to local and regional spreading grounds, where the water can percolate into the groundwater basins for later use.

VIII. References

- Arroyos & Foothills Conservancy. 2022. Rosemont Preserve. Accessed August 3, 2023. <https://arroyosfoothills.org/land/la-crescenta-valley/rosemont-preserve/>. [Scenic Resources]
- CAL FIRE (California Department of Forestry and Fire Protection). 2023. California Fire Perimeters (all). California State Geoportal. Accessed August 17, 2023. <https://gis.data.ca.gov/datasets/CALFIRE-Forestry::california-fire-perimeters-all-1/explore?filters=eyJGSVJFX05BTUUiOlsiTkVMU09OI119&location=34.330725%2C-118.531033%2C13.00>. [Biological Resources]
- Cal Wild. n.d. San Gabriel Mountains. <https://www.calwild.org/portfolio/sangabriel/>. [Scenic Resources]
- CalGEM (California Department of Conservation, Geologic Energy Management Division). 2023. Well Finder. Powered by WellSTAR. <https://maps.conservation.ca.gov/doggr/wellfinder/>. [Mineral Resources]
- CDFW (California Department of Fish and Wildlife). 2023a. California Essential Habitat Connectivity Project. Accessed August 17, 2023. <https://wildlife.ca.gov/conservation/planning/connectivity/CEHC>. [Biological Resources]
- CDFW. 2023b. California Natural Diversity Database (CNDDDB) RareFind 5. CDFW's Electronic database, Sacramento, California. Accessed June 7, 2023. <https://www.dfg.ca.gov/biogeodata/cnddb>. [Biological Resources]
- City of Los Angeles. 2003. *San Gabriel/Verdugo Mountains Scenic Preservation Specific Plan*. Accessed August 4, 2023. https://planning.lacity.org/odocument/d7d9eb52-206e-4521-9cc2-69fac3b1f4cf/San_GabrielVerdugo_Mountains_Scenic_Preservation_Specific_Plan.pdf. [Scenic Resources]
- City of Los Angeles. 2020. *Upper Los Angeles River & Tributaries Revitalization Plan*. Accessed August 18, 2023. <https://upperlariver.konveio.com/>. [Water Resources and Quality]
- CNPS (California Native Plant Society). 2023. *Inventory of Rare and Endangered Plants*. Online edition, v7-09b. Sacramento, CA. Accessed August 17, 2023. <http://www.rareplants.cnps.org>. [Biological Resources]
- CNRA (California Natural Resources Agency). 2023. Natural Areas Small – California Essential Habitat Connectivity (CEHC) [ds1073]. Accessed August 17, 2023. <https://data.cnra.ca.gov/dataset/natural-areas-small-california-essential-habitat-connectivity-cehc-ds1073>. [Biological Resources]
- CWB (California Water Boards). 2015. Los Angeles River Watershed. Accessed August 18, 2023. https://www.waterboards.ca.gov/rwqcb4/water_issues/programs/regional_program/Water_Quality_and_Watersheds/los_angeles_river_watershed/la_summary.shtml. [Water Resources and Quality]
- CWB. 2023. The 303(d) List of Impaired Water Bodies. Accessed August 18, 2023. https://www.waterboards.ca.gov/rwqcb2/water_issues/programs/TMDLs/303dlist.html. [Water Resources and Quality]

- LA County Planning (Los Angeles County Department of Regional Planning). 1986. *Altadena Community Plan*. Accessed August 17, 2023. <https://planning.lacounty.gov/wp-content/uploads/2022/10/Altadena-Community-Plan.pdf>. [Biological Resources]
- LA County Planning. 2000a. *Biological Resources Assessment of the Proposed San Gabriel Canyon SEA*. Accessed August 16, 2023. https://planning.lacounty.gov/wp-content/uploads/2022/11/sea_2000-BRA-SanGabrielCanyon.pdf. [Biological Resources]
- LA County Planning. 2000b. *Biological Resources Assessment of the Proposed Puente Hills SEA*. Accessed August 16, 2023. https://planning.lacounty.gov/wp-content/uploads/2022/11/sea_2000-BRA-PuenteHills.pdf. [Biological Resources]
- LA County Planning. 2022a. *Los Angeles County 2035 General Plan*. Accessed August 18, 2023. <https://planning.lacounty.gov/long-range-planning/general-plan/general-plan/>. [Water Resources and Quality]
- LA County Planning. 2022b. *Los Angeles County 2035 General Plan*. Appendix E, Conservation and Natural Resources Element Resources. July 2022. https://planning.lacounty.gov/wp-content/uploads/2022/11/5.-gp_final-general-plan-appendix-E.pdf. [Biological Resources]
- LA County Planning. 2022c. *Los Angeles County 2035 General Plan*. Chapter 9, Natural Resources, Conservation, and Open Space Element. Accessed August 18, 2023. [Biological Resources]
- LA County Planning. 2023a. *East San Gabriel Valley Area Plan, Public Review Draft*. June 2023. Accessed August 18, 2023. https://planning.lacounty.gov/wp-content/uploads/2023/06/ESGVAP_RPC.pdf. [Water Resources and Quality]
- LA County Planning. 2023b. *Los Angeles County General Plan Appendixes*. Accessed August 16, 2023. <https://planning.lacounty.gov/long-range-planning/significant-ecological-areas-program/resources/>. [Biological Resources]
- LA County Planning. 2023c. *Significant Ecological Areas Program*. Accessed August 16, 2023. <https://planning.lacounty.gov/long-range-planning/significant-ecological-areas-program/resources/>. [Biological Resources]
- LACCSO (Los Angeles County Chief Sustainability Office). n.d. *OurCounty: Strategy 5B, Preserve and enhance open space, waterways, and priority ecological areas*. <https://ourcountyla.lacounty.gov/strategies/strategy-5b#>. [Open Space Resources]
- LACDPR (Los Angeles County Department of Parks and Recreation). 2021. *Department Operations Plan, July 1, 2021, to June 30, 2022*. https://file.lacounty.gov/SDSInter/dpr/1108547_DPROperationsPlan2021-22_06102021_Final.pdf. [Open Space Resources]
- LACFCD (Los Angeles County Flood Control District). 2014. *Integrated Regional Water Management Plan (IRWMP)*. Accessed August 18, 2023. <https://dpw.lacounty.gov/wmd/irwmp/About.aspx>. [Water Resources and Quality]
- LACPW (Los Angeles County Public Works). 2006. *San Gabriel River Master Plan*. Accessed August 18, 2023. <https://ladpw.org/wmd/watershed/sg/mp/>. [Water Resources and Quality]
- LACPW. 2023a. *Los Angeles River Watershed*. Accessed August 18, 2023. <https://dpw.lacounty.gov/wmd/watershed/LA/>. [Water Resources and Quality]

- LACPW. 2023b. Water Resources. Accessed August 18, 2023. <https://dpw.lacounty.gov/core-service-areas/water-resources/>. [Water Resources and Quality]
- LACPW. 2023c. What Is “Watershed Management?” Accessed August 18, 2023. <https://pw.lacounty.gov/wmd/whatis.cfm>. [Water Resources and Quality]
- LACSD (Los Angeles County Sanitation Districts). 2023. Facilities. Accessed August 18, 2023. <https://www.app.lacsd.org/facilities/>. [Water Resources and Quality]
- Los Angeles County. 2015. *Unincorporated Los Angeles County Community Climate Action Plan, 2020*. August 2015. Accessed August 30, 2023. https://planning.lacounty.gov/wp-content/uploads/2022/11/8.1_ccap_final-august2015.pdf. [Open Space Resources]
- Los Angeles County. 2000. Los Angeles County, Department of Regional Planning. Accessed August 17, 2023. [Biological Resources]
- Los Angeles County. 2020. Significant Ecological Areas (SEA) Ordinance Implementation Guide. Los Angeles County, Department of Regional Planning. January 16, 2020. [Biological Resources]
- Los Angeles County. 2022a. *Los Angeles County General Plan 2035*. Accessed August 4, 2023. <https://planning.lacounty.gov/long-range-planning/general-plan/general-plan/>. [Scenic Resources]
- Los Angeles County. 2022b. Parks Needs Assessment Plus (PNA+). Accessed August 30, 2023. <https://lacountyparkneeds.org/pnaplus-home/>. [Scenic Resources]
- Los Angeles County. 2022c. *Parks Needs Assessment Plus (PNA+)*. Appendix A, Regional Study Area Profiles. Accessed August 29, 2022. https://lacountyparkneeds.org/wpcontent/uploads/2022/09/AppA_RegionalProfiles_WestSanGabrielValley_090122.pdf. [Open Space Resources]
- Los Angeles County. 2023a. LA River Master Plan: History of the River. Accessed August 18, 2023. <https://larivermasterplan.org/about/river-history/>. [Water Resources and Quality]
- Los Angeles County. 2023b. LA River Master Plan: Improve local water supply reliability. Accessed August 18, 2023. <https://larivermasterplan.org/goals/improve-local-water-supply-reliability/>.
- Los Angeles County Municipal Code*. n.d. Title 22, Planning and Zoning. Division 5, Special Management Areas. Accessed August 4, 2023. https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances/354460?nodeId=TIT22PLZO_DIV5SPMAAR_CH22.102SIECAR. [Scenic Resources]
- Los Angeles County Code of Ordinances*. 2023. Chapter 22.192, Urban Agriculture Incentive Zone Program. [Agricultural Resources]
- Los Angeles County Department of Agricultural Commissioner/Weights and Measures. 2019. *2019 Los Angeles County Crop & Livestock Report*. https://file.lacounty.gov/SDSInter/acwm/1079785_2019CropReport-Web.pdf. [Agricultural Resources]
- OSFM (Office of the State Fire Marshall). 2023. Fire Hazard Severity Zones (FHSZ). Accessed August 17, 2023. <https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildfire-preparedness/fire-hazard-severity-zones/>. [Biological Resources]

- SCAG (Southern California Association of Governments). 2023. Regional Planning Working Groups. <https://scag.ca.gov/regional-planning-working-groups>. [Agriculture]
- South Coast Wildlands. 2008. *South Coast Missing Linkages: A Wildland Network for the South Coast Ecoregion*. Produced in cooperation with partners in the South Coast Missing Linkages Initiative. March 2008. <http://www.scwildlands.org>. [Biological Resources]
- Surls, R. A. 2010. *From Cows to Concrete: A History of Los Angeles Agriculture*. University of California Agriculture and Natural Resources. [Agricultural Resources]
- SWRCB (State Water Resources Control Board). 2023. State Water Resources Control Board GeoTracker. Accessed August 18, 2023. <https://geotracker.waterboards.ca.gov/>. [Water Resources and Quality]
- USEPA (U.S. Environmental Protection Agency). 2023. Frequent Questions about Underground Storage Tanks. Accessed August 18, 2023. <https://www.epa.gov/ust/frequent-questions-about-underground-storage-tanks#prev1>. [Water Resources and Quality]
- USFWS (U.S. Fish and Wildlife Service). 2023a. Braunton's Milkvetch. Accessed August 17, 2023. <https://www.fws.gov/species/brauntons-milkvetch-astragalus-brauntonii>. [Biological Resources]
- USFWS. 2023b. Coastal California Gnatcatcher. Accessed August 17, 2023. <https://www.fws.gov/species/coastal-california-gnatcatcher-polioptila-californica-californica>. [Biological Resources]
- USFWS. 2023c. National Wetland Inventory (NWI) Data Mapper. Accessed on August 17, 2023. <https://www.fws.gov/wetlands/Data/Mapper.html>. [Biological Resources]
- USFWS. 2023d. Southwestern Willow Flycatcher. Accessed August 17, 2023. <https://www.fws.gov/species/southwestern-willow-flycatcher-empidonax-traillii-extimus>. [Biological Resources]
- USGS (U.S. Geologic Service). 2023a. National Hydrography Dataset (NHD). Accessed August 17, 2023. <https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer>. [Biological Resources]
- USGS. 2023b. TopoView. Accessed August 28, 2023. <https://ngmdb.usgs.gov/topoview/>. [Biological Resources]