CONSERVATION AND OPEN SPACE ELEMENT

Hiking Quail Hill Park and Trail

CONTENTS

The City's commitment to the preservation and conservation of open space is an iconic feature of Irvine. Conservation is the sustainable use, management, and preservation of natural resources (e.g., land, water, ecosystem services, and living resources) to assure their continued availability and viability. Open space is any parcel or area of land or water that provides value in an essentially undeveloped condition and is devoted to open space use.

Together, these elements guide the comprehensive and long-range preservation of open space lands that are important to the conservation of the City's natural resources through:

- Providing mechanisms for ensuring a balance between the urban and natural environments within the City;
- Recognizing natural and human-made hazards that might potentially affect the community if development were to occur; and
- Providing specific policies and implementation measures for preserving, managing, and using natural and human-made resources as well as creating and promoting an awareness of our natural community.

This Conservation and Open Space Element works in coordination with the Land Use, Environmental Protection and Climate Action, and Safety Elements to guide conservation and development, balancing community needs with environmental preservation.

Taking in the view at Serrano Ridge

VISIONING THROUGH OPEN SPACE AND CONSERVATION

Quail Hill Park and Trail in the City of Irvine

Aerial view of Spectrum terrace in the City of Irvine
Source: Irvine Community Connection

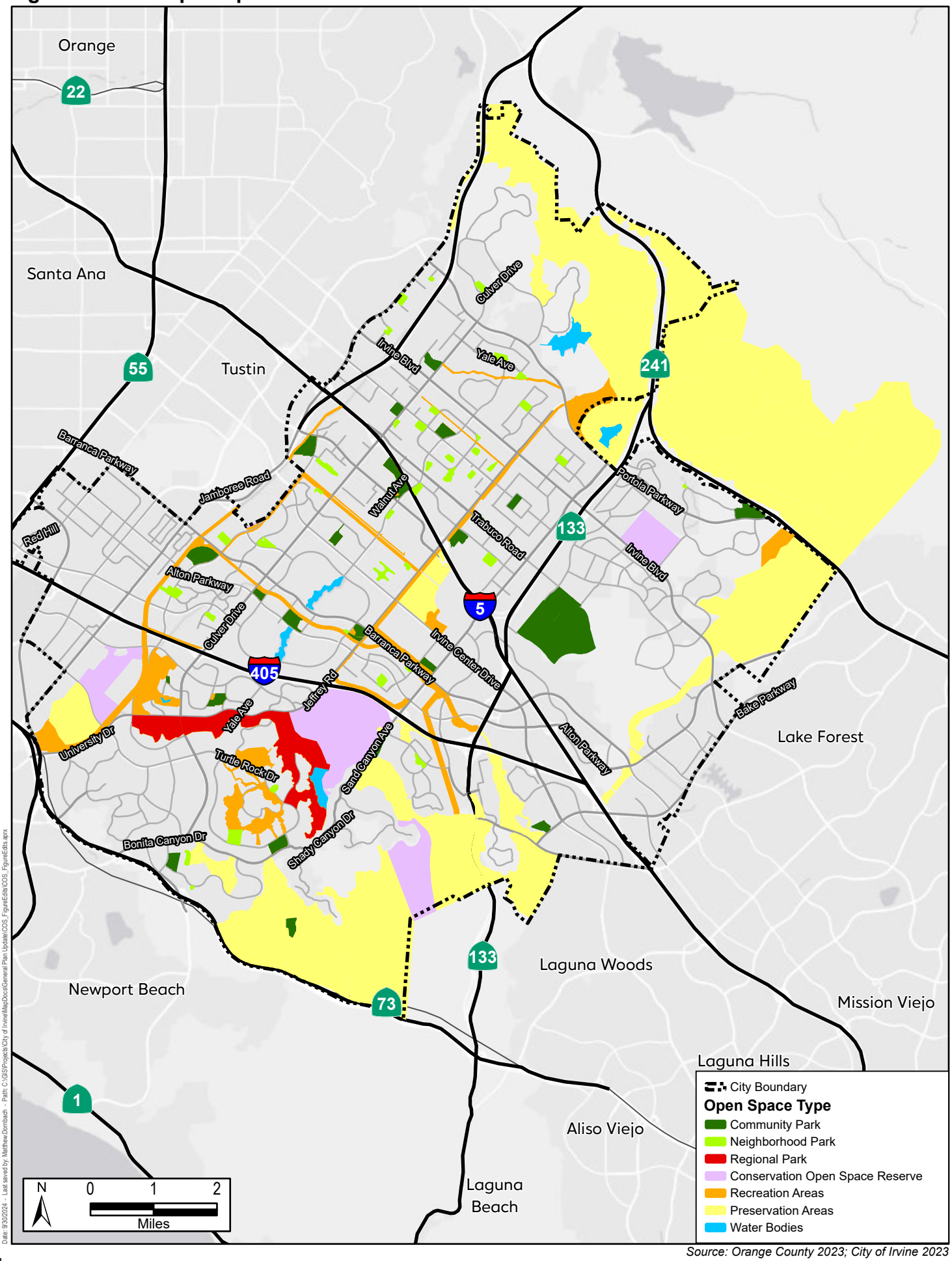
A comprehensive vision for open space and conservation can contribute to the establishment of cultural and recreational hubs, connecting residents with nature and providing spaces for community engagement. This approach not only enhances the aesthetics of a city, but also contributes to a sense of place and identity. In essence, integrating open space and conservation into the urban fabric requires a forward-thinking, collaborative approach. Envisioning a city where green spaces are woven seamlessly into the urban tapestry creates resilient, vibrant, and sustainable communities that stand the test of time.

Figure 1. Existing Open Space by Type identifies the open space resources in the City.

Preserving open space has been a longstanding priority in Irvine, tracing back to the early stages of the Irvine Ranch and its subsequent evolution into an urban community. The City has been meticulous in safeguarding these expansive open spaces, recognizing their inherent value and the numerous benefits they bring. Over four decades since incorporation, these extensive open areas not only serve as vital habitats for various species, but also distinguish Irvine from many contemporary urban locales.

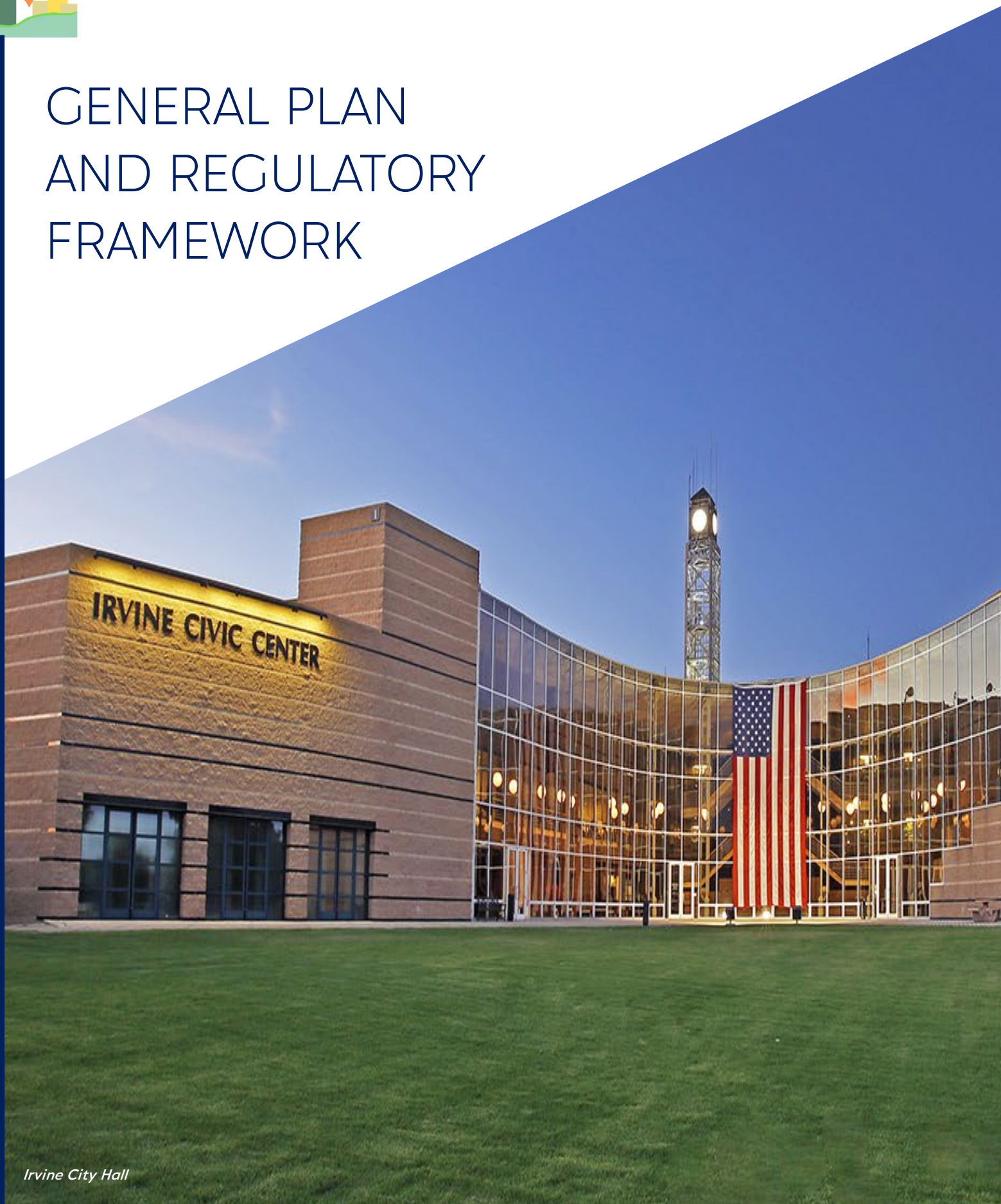
Since the 1970s, California law has mandated the inclusion of an Open Space and Conservation Element in general plans to protect natural resources benefiting the environment and communities. Reflecting this commitment, this Conservation and Open Space Element addresses key resources, including biological resources (habitat areas for diverse plant and wildlife species), cultural resources (preservation of paleontological, archaeological, and cultural sites), natural resources (agricultural lands, groundwater recharge areas, and significant mineral deposits), and visual resources (scenic lands for outstanding views and passive recreation).

Figure 1. Irvine Open Space Area



Source: Orange County 2023; City of Irvine 2023

GENERAL PLAN AND REGULATORY FRAMEWORK



Irvine City Hall

Since conservation of resources and open space are so closely related, these two required components of the General Plan are combined into one element. This element meets the State requirements concerning the Conservation and Open Space Elements as defined in Sections 65302(d) and 65302(e) of the Government Code as well as Government Code Section 65565.5 created by Senate Bill 1425 (2023).

STATE GENERAL PLAN REQUIREMENTS

For **Open Space**, state law mandates local general plans to inventory and acknowledge the utilization of open space regarding the following:

Natural Resources

Managed Production of Resources

Outdoor Recreation

Public Health and Safety

Military Support*

Tribal Resources

For **Conservation**, state law mandates local general plans to acknowledge the conservation of natural resources including:

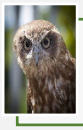
Water and Hydraulic Force

Forests

Soils

Rivers and other Waters

Harbors and Fisheries*



Wildlife

Minerals and other Natural Resources

*This element does not discuss harbors and fisheries as the City does not contain these natural resources nor does it discuss open space for military support as the City does not have this open space resource.

RELATIONSHIP TO OTHER ELEMENTS

The Irvine 2045 General Plan prioritizes a proactive response to open space and conservation as a guiding principle. This element identifies objectives, policies, and programs dedicated to integrating open resource and conservation considerations into City decisions. Additionally, various sections of the General Plan elaborate on how the City intends to address open space and conservation across key areas such as land use, transportation, housing, safety, infrastructure, and economic development. A summary of open space and conservation related policies in the 2045 General Plan is outlined below:

- Land Use Element – Policies include promoting the creation of walkable neighborhoods close to retail and services and encourage land use development that preserves the natural environment. Additionally, policies look to ensure new development occurring close to the Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) implementation areas are consistent with the NCCP and/or implementing agreement, strike a balance between landscape and built form by providing sufficient planting space around buildings and within internal spaces, and promote sustainable development through energy and water conservation, reduced reliance on non-renewable resources, and the use of native trees, shrubs, and grasses with low maintenance costs. The NCCP/HCP is a comprehensive, long-term multi-party conservation and development plan and associated permit from the federal and state wildlife regulatory agencies under both the state and federal Endangered Species Acts, to which the City is a permit holder and is responsible for maintaining its enrolled lands compliant with the terms, conditions, and obligations of the permit and Implementation Act. Most of the City's Open Space Preserve (except for a section of Quail Hill) is enrolled in the NCCP/HCP.
- Housing Element – Policies include encouraging developments that provide community benefits, preserving existing open space in the City, developing partnerships with existing community organizations to expand accessibility to community amenities (such as community centers, parks, trails, and other recreational uses), and encouraging development that brings new community amenities and resources including community meeting spaces.
- Environmental Protection and Climate Action – Policies include encouraging, protecting, expanding, and enhancing native trees and plants, open space, and vegetation, improving access to locally-produced food, and reducing food waste through the encouragement of urban farming practices.
- Safety Element – Policies include encouraging collaboration with partner agencies and municipalities to align green infrastructure projects (projects that allow for filtration of stormwater where it falls) and develop regulations for watersheds across jurisdictions to reduce impervious hard surfaces. Policies also aim to support efforts of other organizations and academic institutions to inventory and map vegetation on hillsides with a specific focus on improving hillside stability in the case of extreme rainfall and seasonal erosion and promote the application of nature-based solutions (greenways, tree trenches) to improve resilience and preserve biodiversity.
- Circulation Element – Policies include designing roadways to follow the natural terrain and the least environmentally damaging routes, particularly in hillside areas, visually enhancing the appearance of roadways and parking areas through design techniques and landscaping and designing and locating land uses to encourage access to them by nonautomotive means.

General Plan Element objectives related to the Conservation and Open Space Element are as follows:

Circulation Element: C-2, C-3, C-4, C-5, C-6, C-8, C-9, C-10, C-11, C-12, C-13, C-14, C-15	**Safety Element: S-2, S-3, S-4, S-5, S-6**
Housing Element: HE-A, HE-C, HE-E, HE-F, HE-L, HE-M	**Noise Element: N-1, N-2**
EPCA Element: EPCA-1, EPCA-2, EPCA-3, EPCA-4, EPCA-5, EPCA-6, EPCA-7, EPCA-8, EPCA-9, EPCA-10, EPCA-11	**Land Use Element: LU-1, LU-4, LU-6, LU-7, LU-8, LU-9, LU-10, LU-11, LU-12, LU-13, LU-14**

SENATE BILL 1425

Passed in 2022, Senate Bill 1425 requires all jurisdictions to review and update its local open space element by January 1, 2026. The update shall include plans and an action program, as required by Section 65564, that address the following:

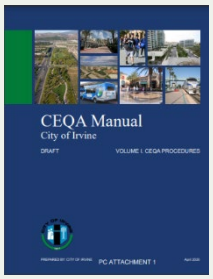
CA State Capitol
Source: CalMatters

- Creates Government Code Section 65565.5, which requires all cities and counties to update their local open-space plans to include social, economic, and racial equity relating to environmental justice by January 1, 2026. (Gov. Code § 65565.5(a)).
- Requires plan updates to include climate resilience and other benefits of open space, correlated with the safety element by January 1, 2026. (Gov. Code § 65565.5(a)).
- Requires plan updates to include rewilding opportunities, which are considered habitat, recreation, natural resource, historic and tribal resources, water management and aesthetics by January 1, 2026. (Gov. Code § 65565.5(a) and (b)).

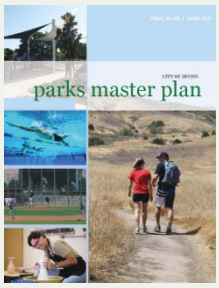
The City's discussion in the *Senate Bill 1000* and *Climate Resilience* sections as well as the goals, objectives, policies, implementation measures, discussed in the Goals, Objectives and Policies and Implementation Measures sections of this element, are designed to fulfill these requirements.

OTHER PLANNING AND REGULATORY DISCIPLINES

Other planning and regulatory disciplines that have and continue to help shape the City's response to open space and conservation include:



City of Irvine CEQA Manual – The California Environmental Quality Act (CEQA), a state statutory framework, requires public agencies to analyze and address potential significant environmental effects of proposed projects, emphasizing the preservation of historic environmental qualities. It mandates environmental review for public or state-approved projects, with comprehensive studies and consideration of alternative plans and mitigation measures for projects with potential significant impacts. The City regularly updates its CEQA Manual, to reflect these principles.

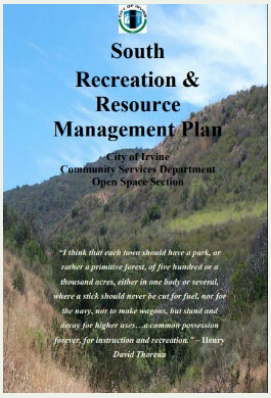


Irvine Parks Master Plan – The City Council of Irvine officially endorsed the Parks Master Plan on June 13, 2017, concluding an extensive community engagement process. This plan is designed to guide the maintenance, expansion, and operation of the City's parks and recreation system for the next decade, addressing evolving resident needs. Before this, parks were developed based on a 1988 Community Parks Master Plan, which became outdated as 2020 approached. The 2017 Parks Master Plan aligns with the Conservation and Open Space Element, ensuring optimal use of open space to meet current and future resident needs.

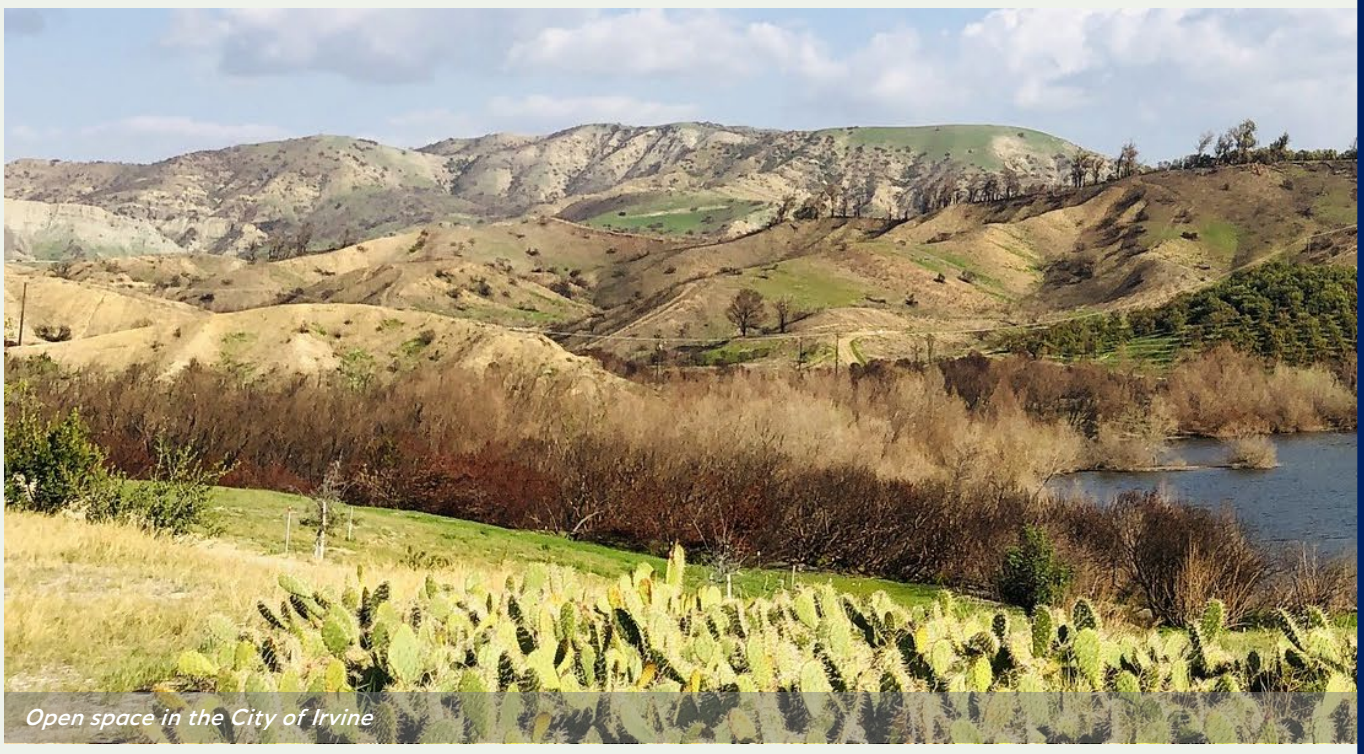
Great Park Framework Plan – Great Park, located on the former Marine Corps Air Station (MCAS) El Toro, preserves Orange County's agricultural and military history within its vast 1,300-acre area. With over 500 acres developed and 300 acres in planning, the park seamlessly integrates recreation, sports, parkland, and environmental elements. The Great Park Framework Plan aims to position it as a premier metropolitan destination, featuring projects like a botanic garden, veterans memorial park, live music amphitheater, cultural spaces, Sports Complex improvements, specialty food options, Bosque Trail enhancements, and the addition of a lake feature.

Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) – The City of Irvine, in alignment with the Conservation and Open Space Element of the General Plan and deed restrictions for Preservation Areas, has committed to safeguarding 6,665 acres in the Irvine Open Space Preserve under the California Natural Community Conservation Planning (NCCP) Act of 1991. The NCCP/HCP is a comprehensive, long-term multi-party conservation and development plan and associated permit from the federal and state wildlife regulatory agencies under both the state and federal Endangered Species Acts, to which the City is a permit holder and is responsible for maintaining its enrolled lands compliant with the terms, conditions, and obligations of the permit and Implementation Act. Most of the City's Open Space Preserve (except for a section of Quail Hill) is enrolled in the NCCP/HCP. The Natural Communities Coalition (NCC) is the primary coordinating entity for NCCP/HCP implementation. As a permit holder, the City has a permanent seat on the NCC board. The NCCP/HCP requires "no net loss of habitat value over time" as the standard of care for lands enrolled in the Open Space Preserve. Refer to Figure 3, Biological Resources and NCCP Areas, for a depiction of open space areas subject to the NCCP/HCP.

Recreation and Resource Management Plans – Under the NCCP/HCP, the City must establish policies and programs for land activities following an "adaptive management" approach. This flexible, iterative method involves ongoing monitoring and new information to adapt policies, programs, and infrastructure in the Irvine Open Space Preserve, maintaining a sustainable balance between habitat conservation and public enjoyment. The implementation of the detailed Recreation and Resource Management Plans for the southern and northern portions of the Irvine Open Space Preserve, approved by the Natural Communities Coalition, California Department of Fish and Wildlife, and U.S. Fish and Wildlife Service, are annually reviewed through an Annual Work Plan and Progress Report, ensuring consistency and assessing the impact of public access and infrastructure on target species and habitats.



Conservation/Open Space Dedication Program – In June 1988, Irvine voters approved Initiative Resolution 88-1, known as the "Open Space Initiative," leading to the establishment of the Conservation/Open Space Program. This program aims to achieve public ownership of approximately 9,000 acres of open space by exchanging development opportunities to more suitable areas. By consolidating open space for preservation and permitting development in areas of lesser open space value, the program effectively protects vital open space resources. Following Resolution 88-1's approval, the City and the Irvine Company collaborated to implement the open space program and create the Phased Dedication and Compensating Development Opportunities Program (Dedication/Development Program). This program divided City areas into lettered "Implementation Districts," including designated open space dedication areas and corresponding development.



Open space in the City of Irvine

View of the Irvine Business Complex

IRVINE BUSINESS COMPLEX CONSIDERATIONS

The Irvine Business Complex (otherwise referred to as "IBC") is a distinct section of Irvine, originally designated for commercial and industrial purposes in the 1970s. The boundaries of the Irvine Business Complex, located on the southwestern portion of the City of Irvine, are well defined. John Wayne Airport forms the northwestern boundary and San Diego Creek forms the southeastern boundary, with two arterial roads – Barranca Parkway and Campus Drive – forming the northeast and southwest boundaries of the IBC area. Lying on the southwestern edge of the City and adjacent to the cities of Tustin, Santa Ana and Newport Beach, the IBC is a regional hub within Orange County. The IBC extends over 2,700 acres, making it the largest business complex in Orange County.

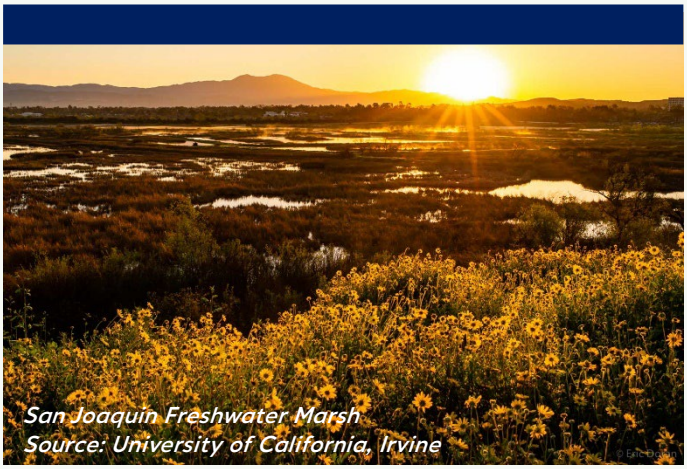
Anticipating a significant increase in residential units within the IBC, the City identified a need for a comprehensive Vision Plan and adopted such a plan back in 2010. The complex was originally designed as the bustling working machine for the City, creating a unique environment for economic growth and vitality.

The Vision Plan aimed to provide a comprehensive strategy guiding the urban design framework for future IBC development, emphasizing sustainable built-up neighborhoods, new streets, and open spaces. The Vision Plan, coupled with the Irvine Business Complex Residential Mixed-Use (IBCRMU) Overlay Zone, set the framework for a long-term vision, and coordinates public and private initiatives to create a quality, mixed-use community in the IBC.

Over the past 20 years, the IBC has transitioned from predominantly non-residential uses to a more urban, mixed-use center, including residential, commercial, industrial, and retail spaces.

Under the City's 2000 General Plan, the IBC had a maximum of 15,000 units. Following the certification of the 6th Cycle Housing Element and as a part of this 2045 General Plan, the Land Use Element and the Zoning Ordinance will be amended to add overlays to the IBC to allow for an additional 15,000 units. The IBC also features open space elements that feature prominently in the lives of both residents and employees.

Regional Open Space


San Joaquin Freshwater Marsh
Source: University of California, Irvine

The San Diego Creek and the San Joaquin Freshwater Marsh, which lie adjacent to the IBC, are part of the wider open space system adjacent and easily accessible to the IBC. This open space system is a mosaic of habitats ranging from wetlands and coastal sage scrub and includes an important ecologically diverse ecosystem.

The San Diego Creek, which runs along the southeastern boundary of the IBC, provides an important connection to a comprehensive system of parks and open space developed within the City. The San Diego Creek ranks as one of Irvine's most valuable natural assets. It defines the eastern boundary of the IBC while also serving as an integral component of the regional open space network – connecting the Great Park, Irvine Open Space Preserve, and the Upper Newport Bay Ecologic Reserve.

The San Joaquin Wildlife Sanctuary, which abuts the IBC, offers 10 miles of trails for walkers, joggers, and bikers. The San Diego Creek Trail (also known as the "Mountains to the Sea" trail), a 22-mile network of hiking, biking, and riding trails, connecting the historical Irvine Ranch and the northern foothills, to Upper Newport Bay and the Pacific Ocean, runs along the eastern side of the San Diego Creek.

Parks and Open Spaces

Several private, internal recreation facilities have been developed as part of the residential developments within the IBC. These facilities are predominantly gated or indoor facilities serving individual developments.

The Bill Barber Marine Corps Memorial Park, located adjacent to the IBC, serves the area for Community Park outdoor recreation facilities as well as the San Joaquin Freshwater Marsh and San Diego Creek Trail.


Colonel Bill Barber Marine Corps Memorial Park

Parks in the City of Irvine are provided at five acres of park land or fee in-lieu of per 1,000 residents. Within the IBC, Community Park dedication shall only be provided through payment of in-lieu fees at the required two acres per 1,000 population. Neighborhood Parks in the City of Irvine are provided at three acres per 1,000 population. The City's 2017 Parks Master Plan also identified the following considerations for the development of future IBC Neighborhood Parks:

- *Site Selection and Context – Given that IBC parks tend to be smaller than other neighborhood parks and are located in a high density, heavily traveled area, park siting guidelines should be established. Surrounding uses should be considered when selecting a location for the park(s), as park users will be drawn from adjacent residential, office and/or retail areas. At least one site edge should front an interior public street; ideally not an arterial roadway to provide a neighborhood scale and accessible entry. Access to on-street parking should be considered, along with users' ability to reach the park via walking or cycling paths. If feasible, a neighborhood park could be sited along San Diego Creek in order to provide an entryway to the trail network, and to synergize activities with those existing amenities.*
- *Dry Streambed and Nature Experience – An artificial "dry streambed" feature could wind through the site, providing an area for native and drought tolerant planting, opportunities for environmental education and nature play. This feature could be used to help manage stormwater on the site.*
- *Children's Play Area – Play features and/or elements, such as small climbing sculptures, provide programming and play options for children. Given the park's urban context, a nature-themed or "urban jungle" play experience may also provide interesting design opportunities.*
- *Central Plaza and Gathering Area – A central plaza, gathering area and/or spray ground could be designed to accommodate multiple uses, ranging from small group gatherings to neighborhood events and performances.*
- *Regional Trail Connections – As mentioned above, it may be possible to link the park site with adjacent trail networks. In lieu of providing a large suburban-style community park in the IBC (as has been suggested by the IBC Vision Plan), the City could consider opportunities for linking IBC neighborhoods with San Marco and San Carlo Parks, and ultimately Colonel Bill Barber Marine Corps Memorial Park, via bike and pedestrian bridges across Jamboree and San Diego Creek.*
- *Shaded Social Space – Small spaces shaded by pergolas and/or shade sails could create areas for park visitors to escape the hustle and bustle of surrounding streets.*

The land use dynamics in the IBC area have undergone a significant transformation, shifting from conventional commercial and industrial purposes to a more pronounced emphasis on residential and mixed-use developments. Accordingly, there is an increased demand for the incorporation of greenspace into existing and new retail and enhanced connectivity, necessitating the creation of pathways for pedestrians and cyclists.


Irvine Business Complex

Encouraging retail that incorporates greenspace is key as new residents and potentially additional employees join the community. Greenspaces offer residents and workers an opportunity to connect with nature, fostering a healthier and more vibrant urban environment. Beyond the immediate aesthetic appeal, such integrated spaces promote community engagement, provide

recreational opportunities, and contribute to a sustainable and resilient cityscape. Emphasizing greenspace within retail developments not only aligns with Irvine's commitment to urban livability but also addresses the evolving needs of a growing and dynamic population.

The City will explore mechanisms to encourage retail owners to include greenspaces and plazas in the development of new retail and/or existing retail establishments, in alignment with IBC ordinances and design standards.

Enhanced Connectivity will be explored further through feasibility study efforts like the Jamboree Pedestrian Bridge Study. Approved by City Council in late 2023, the study will explore the feasibility of constructing a bridge over Jamboree in the northern part of the IBC, creating additional connectivity for pedestrians to access and move throughout the IBC, separated from vehicular traffic.

Aerial view of Irvine Business Complex
Source: Los Angeles Times

EXISTING CONDITIONS

Hillside view of the City of Irvine

LANDFORMS

Quail Hill Park and Trail in the City of Irvine

The City lies within the coastal and foothill region of central Orange County. The major landforms are: 1) Santiago Hills; 2) Northern Flatlands; 3) Central Flatlands; and 4) San Joaquin Hills. The major characteristics of the four landform areas and their associated biotic and societal systems are briefly discussed below.

Santiago Hills

The Santiago Hills form the City's northern sphere of influence boundary. They consist of moderately steep-to-steep unbuildable slopes, canyons, plateaus, and narrow ridges, which obtain an elevation of 1,700 feet. A series of eroded sandstone gorges known as the "sinks" are the most significant physical feature and are in the southeast corner of the Santiago Hills. Other important features are the canyons, which include Aqua Chignon, Bee, Hicks, Little Joaquin, Rattlesnake, and Round. The Santiago Hills, except for several unimproved dirt roads and limited agricultural activities, have retained most of their natural biotic character. Examples of biotic communities within this area are listed below:

- Freshwater marsh – Riparian
- Coastal sage scrub – Chaparral
- Oak woodland – Agricultural
- Introduced grassland – Urban

The topography and biotic systems of the Santiago Hills have been minimally disturbed by human activity, except for Frank Bowerman Landfill (Class III facility), the Eastern Transportation Corridor, and a few flood control basins. Other important societal features of this area include extensive archaeological, historical, and paleontological resources, as well as agricultural (orchards) and grazing lands.

Northern Flatlands

The flatlands extend from the Santiago Hills to the Santa Ana Freeway (Interstate-5). This area, known as the Tustin Plain, is nearly flat and gradually slopes from the northeast to the southeast. Agua Chignon Wash, Bee Canyon Wash, Borrego Canyon Wash, Hicks Canyon Wash, and Peters Canyon Wash traverse this area. These streams are a part of the San Diego Creek watershed that originates in the Santiago Hills.

The Northern Flatlands natural biotic communities have been altered by agricultural activities and urban development. As a result, this area's two biotic communities, Farmland/Rural and Urban, are mostly environmentally simple and artificially managed. This area hosts orchards and row crops, eucalyptus windrows and non-native ornamental vegetation. Notable societal features of this area include former MCAS El Toro, residential developments, agricultural lands, historical resources, and Rattlesnake, Siphon, and Lambert reservoirs.

Sunset Point, City of Irvine

Central Flatlands

The Central Flatlands are also a portion of the Tustin Plain between the Santa Ana Freeway (Interstate-5) and the San Diego Freeway (Interstate-405). San Diego Creek and Peters Canyon Wash cross this area. The Flatlands natural biotic communities have been altered by agricultural activities and urban development and primarily consist of farmland/rural, urban, and riparian (along the San Diego Creek). Overall, the biotic communities are ecologically simple and have been modified by human activities and development, except for the riparian community along the San Diego Creek. The Central Flatlands contain the City's core development area, and as such, have experienced the greatest amount of interaction among the built and environmental systems.

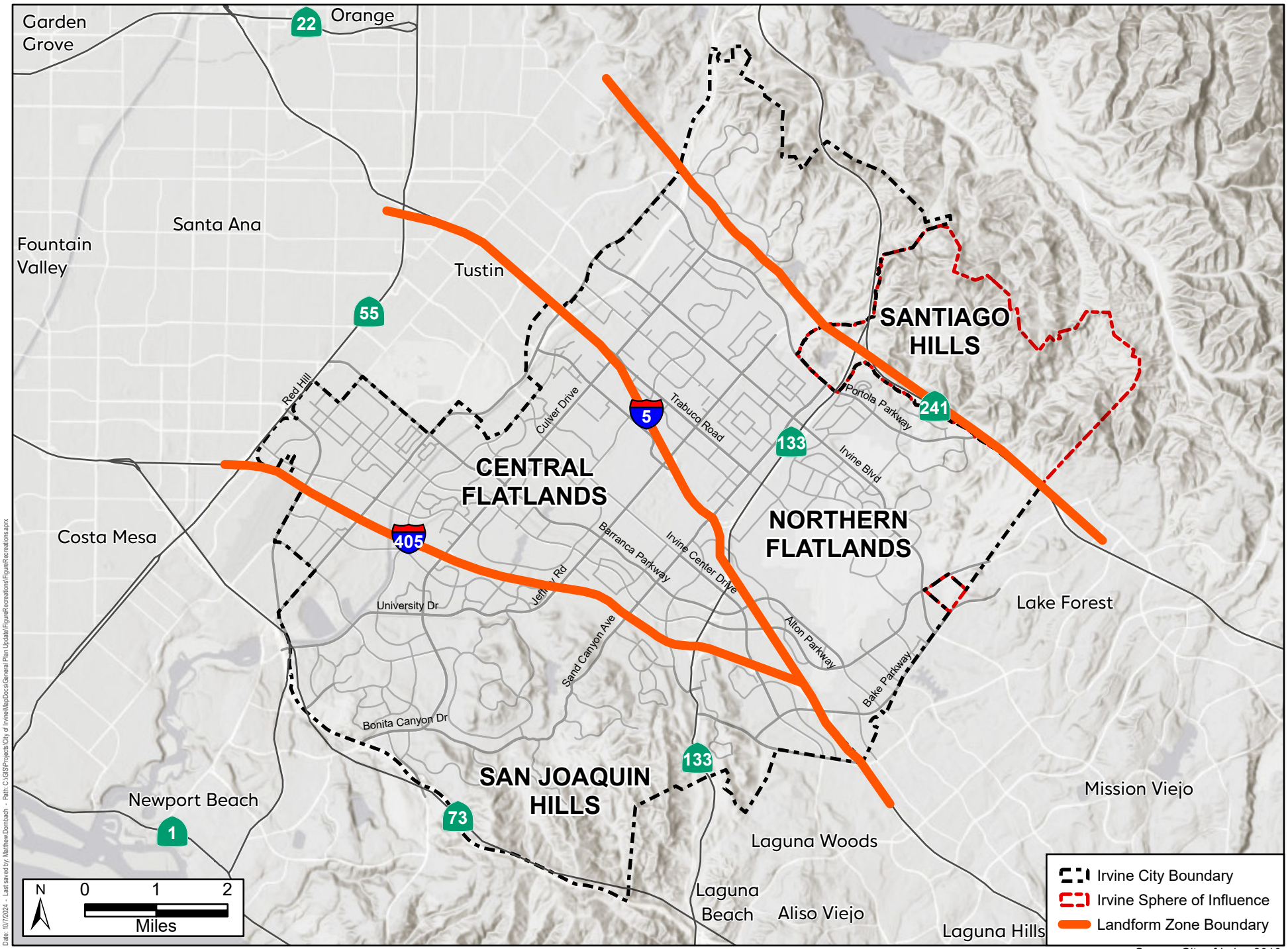
San Joaquin Hills

The San Joaquin Hills parallel the Pacific Ocean and form the City's southern boundary. This area consists of rolling terrain with moderately steep slopes, canyons, and narrow ridges. Other significant geophysical features are spectacular rock outcroppings, many of which contain eroded sandstone caves; the Shady Canyon fault; Bommer, Coyote, and Shady Canyons; and Quail Hill. Because of development in this area, some native habitats have been modified while others, in the steeper hills and canyon bottoms, remain undisturbed. However, unique concentrations of animals, such as Canada Geese, occur in the San Joaquin Marsh and Sand Canyon Wash. In addition, the San Joaquin Hills provide an important link to larger regional habitat areas including Laguna Canyon, Laurel Canyon, Crystal Cove State Park, and the Irvine coastal dedication area. This area contains biotic communities such as those listed below:

- Freshwater marsh – Riparian
- Coastal sage scrub – Chaparral
- Oak woodland – Agricultural
- Introduced grassland – Urban

Key societal features are regenerated open space in the former Coyote Canyon landfill area; University of California, Irvine; archaeological, historical, and paleontological resources; agricultural row crops; residential and industrial development; and San Joaquin Marsh, adjacent to the Upper Newport Bay Ecological Reserve. Figure 2. Landform Zones identifies the major landforms existing within the City.

Figure 2. Landform Zones



Source: City of Irvine 2016.

RESOURCES

Biological

The natural resource areas in the City feature significant landforms, valleys, canyons, and diverse natural spaces rich in biological resources, including sensitive species. These areas also offer possibilities for passive recreation.

Vegetation and Land Cover Types – The City's vegetation and land cover types are depicted in **Figure 3. Vegetation and Land Cover Types**. These vegetation and land cover types, identified through the latest vegetation mapping from the Nature Reserve of Orange County in 2015, reveal the presence of 17 different types within the City which include:

- Annual Grassland
- Perennial Grassland
- Annual Grassland/Perennial Grassland
- Coastal Oak Woodland
- Mixed Chaparral
- Coastal Scrub
- Lacustrine
- Riverine
- Barren
- Riverine, Barren
- Estuarine, Lacustrine, Riverine
- Valley Foothill Riparian
- Eucalyptus
- Fresh Emergent Wetland
- Saline Emergent Wetland
- Orchard-Vineyard, Evergreen Orchard, Irrigated Row And Field Crops
- Urban

Irvine Open Space Preserve – This natural resource area encompasses vast acres of native habitat, creating connections between natural resources in the area, such as the Cleveland National Forest, the San Joaquin Marsh, and the Laguna Coast Wilderness Park, among others. This preserve features a diverse range of native habitats, including chaparral shrub thickets, riparian wetlands, native grass meadows, oak woodlands, and the exceptionally rare coastal sage scrub. Serving as a wildlife sanctuary, it provides a home to various species, including deer, bobcats, mountain lions, coyotes, and numerous endangered birds, mammals, and reptiles. Additionally, the preserve offers a unique recreational experience for Irvine's residents and visitors, allowing them to engage in activities like hiking, biking, equestrian excursions, painting, participation in stewardship and restoration programs, or simply enjoying peaceful solitude.

American avocet at San Joaquin Marsh Reserve
Source: Natural Reserve System

Shady Canyon, Bommer Canyon, and Quail Hill – Irvine's southern boundary features three expansive natural regions—Quail Hill, Shady Canyon, and Bommer Canyon—all within the Orange County Central/Coastal Subregion NCCP/HCP area. These spaces provide extensive natural landscapes, with trails for hiking, walking, and cycling, and diverse native flora and fauna. These regions harbor various habitats and species, some of which are afforded protection under the NCCP/HCP for the Irvine Preserve. **Figure 3. Biological Resources and NCCP Areas** identifies NCCP habitat reserves and special linkages within the City.

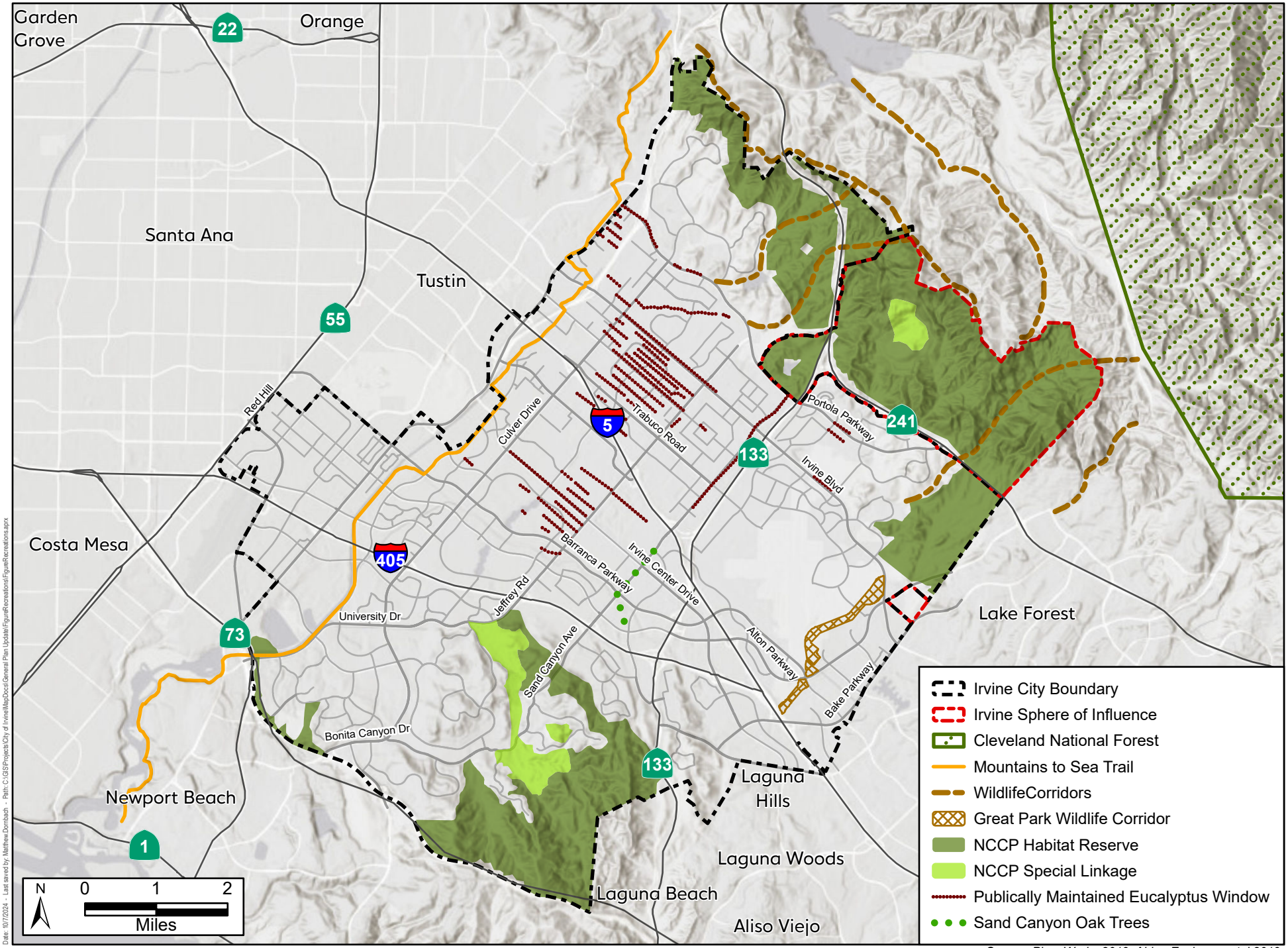
Butterfly on a flower

Irvine Wildlife Corridor – A wildlife corridor serves as a land area linking diverse wildlife habitats, such as refuges, parks, and rivers, which might otherwise be fragmented by human development. These corridors enable animals to travel between locations, safeguarding habitat integrity and species preservation. Irvine and its surrounding area boast multiple wildlife corridors, including Hicks Canyon, Rattlesnake Canyon, Loma Ridge, Limestone Canyon, and upper Borrego Canyon, extending to the Cleveland National Forest. Preserved wildlife corridors are also present along the Eastern Transportation Corridor at Agua Chinon and the State Route-241/133 interchange. In 2013, the Irvine City Council endorsed the Irvine Wildlife Corridor Plan, a crucial step toward establishing a corridor linking protected lands in the Laguna Coast to wilderness areas encompassing the Cleveland National Forest, Whiting Ranch, and Limestone Canyon. This collaborative plan emerged from the joint efforts of the Great Park Neighborhoods developer and environmental coalitions.

Black-necked Stilt

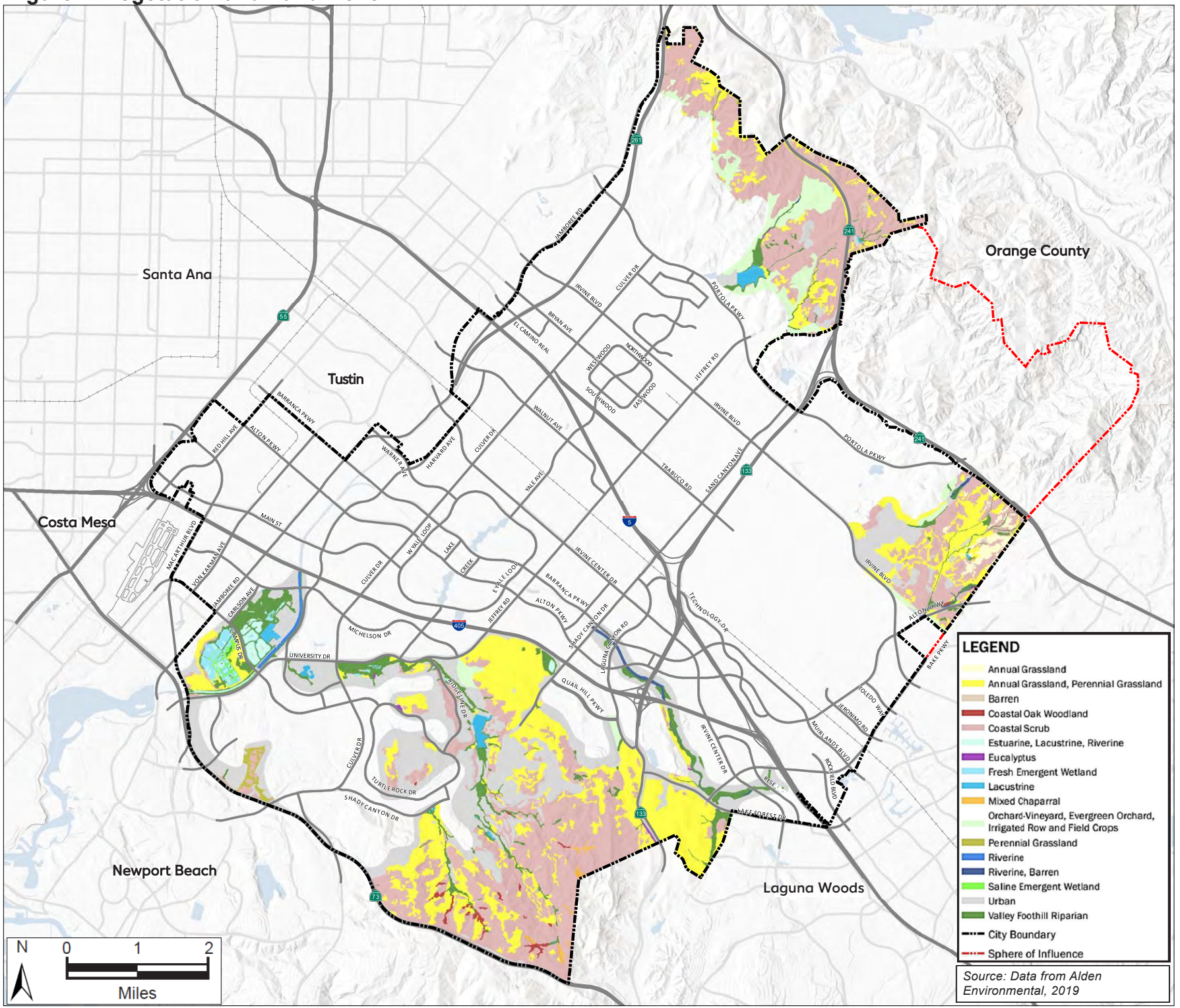
Numerous biological resources have been identified or have the potential to exist within the City, as indicated by historical data for the region obtained through a search of the California Natural Diversity Database (CNDDB) and US Fish and Wildlife Service (USFWS) database, the National Hydrography Dataset, and/or the identification of potentially suitable habitat within the City. **Figure 5. Special Status Plant and Wildlife Species and Critical Habitat** delineates the potential biological resources present in the City.

Figure 3. Biological Resources and NCCP Areas



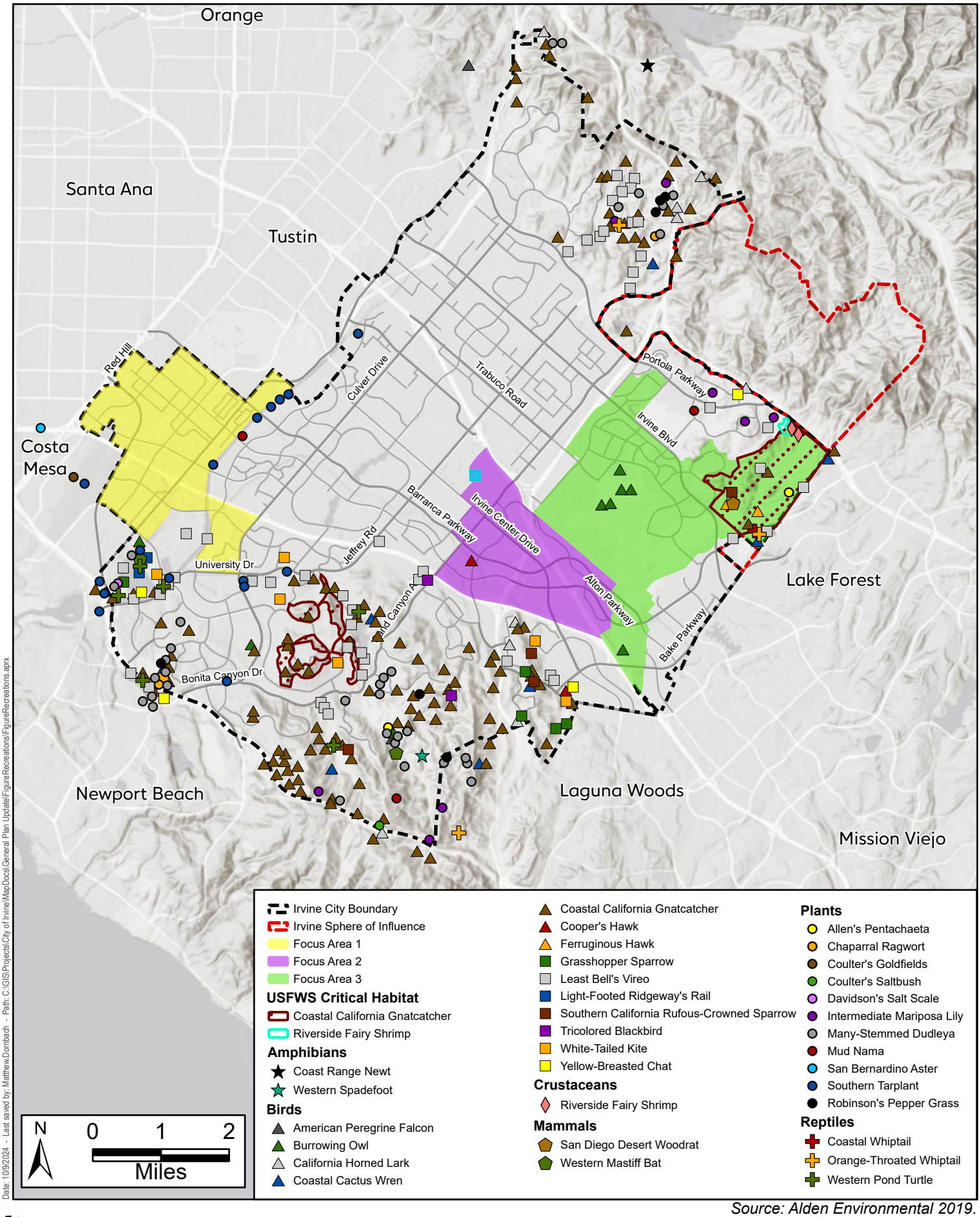
Source: PlaceWorks 2019; Alden Environmental 2019.

Figure 4. Vegetation and Land Cover



Source: Data from Alden Environmental, 2019

Figure 5. Special Status Plant and Wildlife Species and Critical Habitat



Source: Alden Environmental 2019.

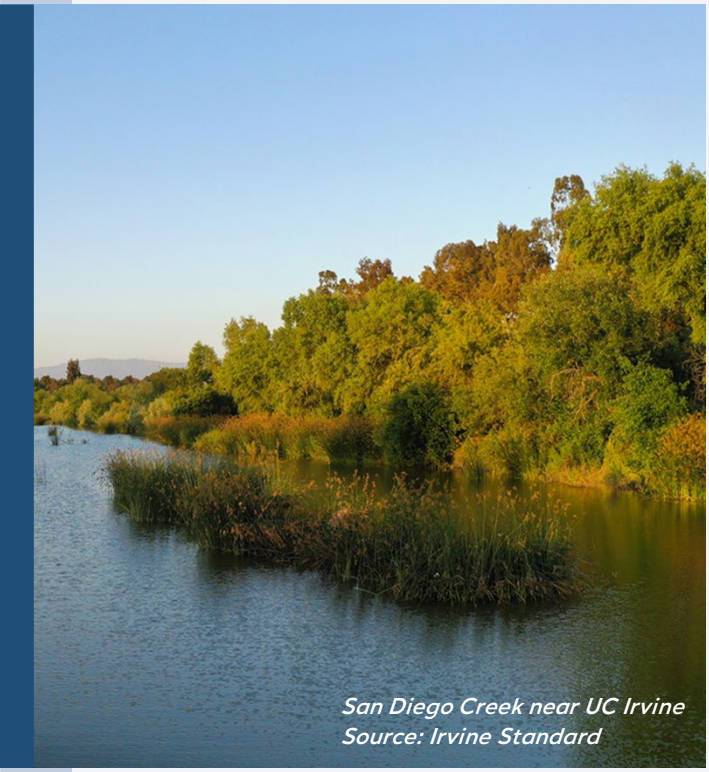
Water

The City is situated within the Newport Bay Watershed, bordered by the Loma Ridge and Santa Ana Mountains to the northeast and the San Joaquin Hills to the southeast. The flat Tustin Plain lies between these mountain ranges, historically known as the Swamp of the Frogs. Runoff from the northern hills travels through flood control channels into the San Diego Creek Channel, across the Tustin Plain, and into the Upper Newport Bay estuary. Although Irvine has comparatively limited surface water resources, they play a crucial role for native and inhabiting plant and animal species. The City features intermittent streams, lakes, reservoirs, channels, marshes, and other water resources that support various wildlife species, including sensitive ones, for nesting, feeding, and migratory activities.

Table 1. Water Resources Serving Wildlife provides an example of water features serving as habitats for fish and wildlife within the City.

Table 1. Water Resources Serving Wildlife

Type of Water Feature	Location of Water Feature
Creek	San Diego Creek
Wash	Agua Chignon, Bee Canyon, Borrego Canyon, Hicks Canyon, Peters Canyon, Sand Canyon
Marsh	San Joaquin Marsh
Lake	Woodbridge Lakes, William R. Mason Regional Park Lakes (human-made)
Reservoir	Syphon and Rattlesnake



San Diego Creek near UC Irvine
Source: Irvine Standard

Creeks, Streams, and Other Waterways – Irvine is predominantly located within the San Diego Creek Watershed, spanning 118 square miles in central Orange County. The main watercourse, San Diego Creek, originates from the Santiago Hills and flows into the Upper Newport Bay. The City is intersected by over a dozen smaller tributaries, such as Serrano Creek, Borrego Canyon Wash, Agua Chinon Wash, Bee Canyon Wash, Peters Canyon Wash, and Sand Canyon Wash, which flow from higher elevations to lower areas.

The Santa Ana Regional Water Quality Control Board (RWQCB) has developed a Basin Plan for the region, outlining: 1) designated beneficial uses for surface waters and ground waters; 2) narrative and numeric objectives to safeguard these beneficial uses, aligning with the state's anti-degradation policy; and 3) implementation programs to protect all waters. As many segments are affected by pollution, the Santa Ana RWQCB has established total maximum daily loads for each segment and mandated compliance with various programs to achieve water quality goals.

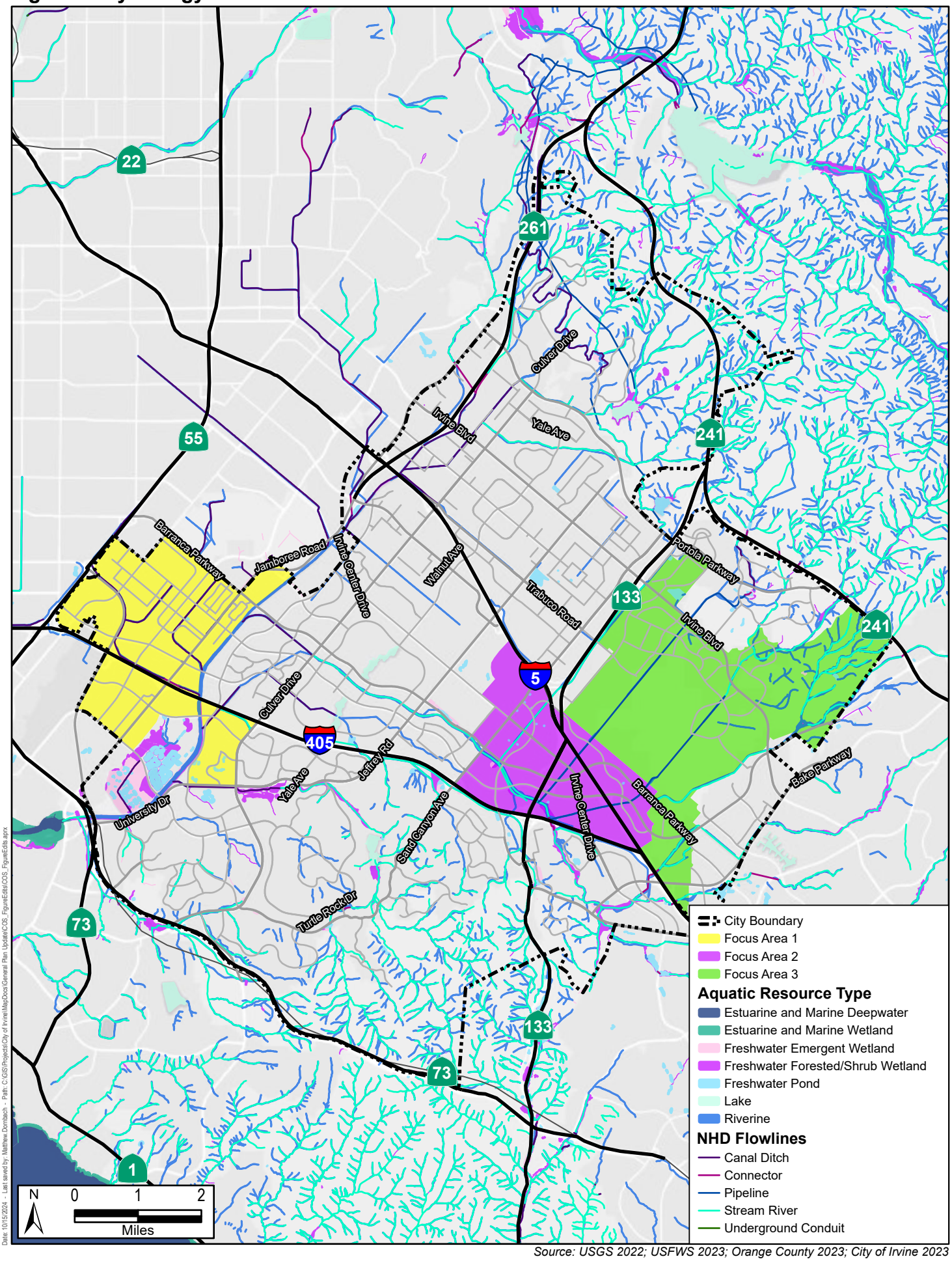
Source: Irvine Standard

San Joaquin Marsh Wildlife Sanctuary – At over 300 acres, the San Joaquin Marsh Wildlife Sanctuary stands as a remnant of the original 5,300-acre wetland ecosystem near the Santa Ana River and San Diego Creek, predating flood control alterations. Comprising marshlands, shallow ponds, and channel networks enclosed by earthen dikes, the sanctuary also hosts a surviving coastal sage scrub community along its periphery. Serving as a vital connection between upland riparian habitats and estuarine environments in the Upper Newport Bay Ecological Reserve, the San Joaquin Marsh is a crucial waystation for over 100 migratory bird species following the Pacific Flyway.

Additionally, the marsh plays a vital role in the Irvine Ranch Water District's Natural Treatment System, acting as a natural filter for urban runoff from San Diego Creek and contributing to the safeguarding of the environmentally delicate Upper Newport Bay. This sanctuary has documented sightings of more than 200 bird species, including two resident endangered species: the light-footed clapper rail and the California least tern.

Figure 6. Hydrology and Water Features displays the surrounding watershed areas, major creeks, channels, and water bodies in Irvine.

Figure 6. Hydrology and Water Features



Source: USGS 2022; USFWS 2023; Orange County 2023; City of Irvine 2023

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Cultural

Cultural resources encompass the tangible remnants of Irvine's history, comprising historical, archaeological, and paleontological elements. Historical resources, dating from 1542 AD onward, hold significance in history, architecture, or culture. Archaeological sites, generally predating 1750 AD, bear physical evidence of pre-modern human activities. Paleontological resources involve plant, and animal remains preceding the geological Holocene, often in fossil form.

Prehistoric archaeological resources, predominant in Irvine, face threats from developmental activities, resulting in the loss of numerous sites. Preserved sites, like Tomato Springs, enable ongoing research. The most substantial concentrations of archaeological sites are found in the Upper Newport Bay and the Santiago and San Joaquin Hills, reflecting the historical presence of the Tongva people over 3,000 years ago. Several hundred cultural resource investigations have occurred within Irvine's incorporated boundaries, primarily documented in environmental impact reports for the City's planning areas. Ongoing assessments are limited unless development occurs, particularly in protected open space areas.

Information on cultural resources from recorded site files reveal a minimum of 506 cultural resources identified in or near Irvine. These records, housed at the South-Central Coastal Information Center (SCCIC), include early Orange County sites, encompassing isolated finds and standing structures. Additional records from the Office of Historic Preservation (OHP) in Sacramento identify 14 resources not covered in the SCCIC files.

Table 2. Cultural Resources by Type – City of Irvine identifies 379 previously recorded cultural resources located within City boundaries.

Table 2. Cultural Resources by Type – City of Irvine

Resources Type	Quantity
Prehistoric Site	216
Prehistoric isolate	85
Multi-component Site	9
Multi-component Isolate	1
Unknown Isolate	1
Historic resources	62
Historic Site	2
Historic Isolate	3
Total	379

Source: Irvine CEQA Manual, Volume II, 2020

Paleontological and Archaeological Resources – Paleontological studies reveal Irvine's past as a marine environment, particularly in the Santiago Hills and San Joaquin Hills, known for abundant scientifically important fossil deposits. The City, overall, is sensitive to paleontological resources, with varying levels of sensitivity across different areas.

The IBC area, for example, is recognized for significant fossil deposits from the Pleistocene Epoch, featuring a diverse range of fossils, including herbivores, carnivores, rabbits, rodents, birds, reptiles, and amphibians. Herbivores comprise mammoth, mastodon, giant ground sloth, bison, camel, llama, horse, tapir, peccary, deer, pronghorn, and dwarf pronghorn. Carnivores include bear, sabertoothed cat, whale, jaguar, bobcat, dire wolf, coyote, gray fox, raccoon, weasel, badger, skunk, and sea otter.

Irvine is categorized into four zones based on the likely occurrence of significant paleontological resources, considering local information, rock groups, and past fossil production:

- No Sensitivity: Areas with exposed volcanic rocks not likely to contain intact fossils.
- Low Sensitivity: Zones with altered or geologically young rocks, having a low likelihood of intact fossils.
- Moderate: Areas with sedimentary rocks and limited histories of significant fossils.
- High Sensitivity: Zones with sedimentary rocks known for containing significant fossils.

Recent discoveries indicate scientifically important fossils found at depths exceeding six feet below the surface, emphasizing the need for updated assessments. Deeper sediments are also recognized for yielding significant fossils.

Historical Resources– The California Office of Historic Preservation has identified several resources in Irvine, including but not limited to the following:

- Old Town Irvine (Landmark Plaque Number 1004): Designated NPS (National Park Service) Code "1CL," eligible for the National Register of Historic Places and listed in the California Register of Historic Resources.
- Irvine Bean and Grain Growers Building (Landmark Plaque Number N1411): Assigned NPS Codes "1S" and "2S3," listed in the National Register, and automatically listed in the California Register. Qualifies under Criterion C for architecture.
- Irvine Blacksmith Shop (Landmark Plaque Number N1432): Assigned NPS Code "1S," considered eligible for the National Register and California Register under Criteria A, B, and C for association with significant events, persons, and architecture, respectively.

Building in Old Town Irvine

Native American artifacts on display at Portola Springs Sentinel Ribbon Cutting in the City of Irvine

Portola Springs campsite
Source: Irvine Standard

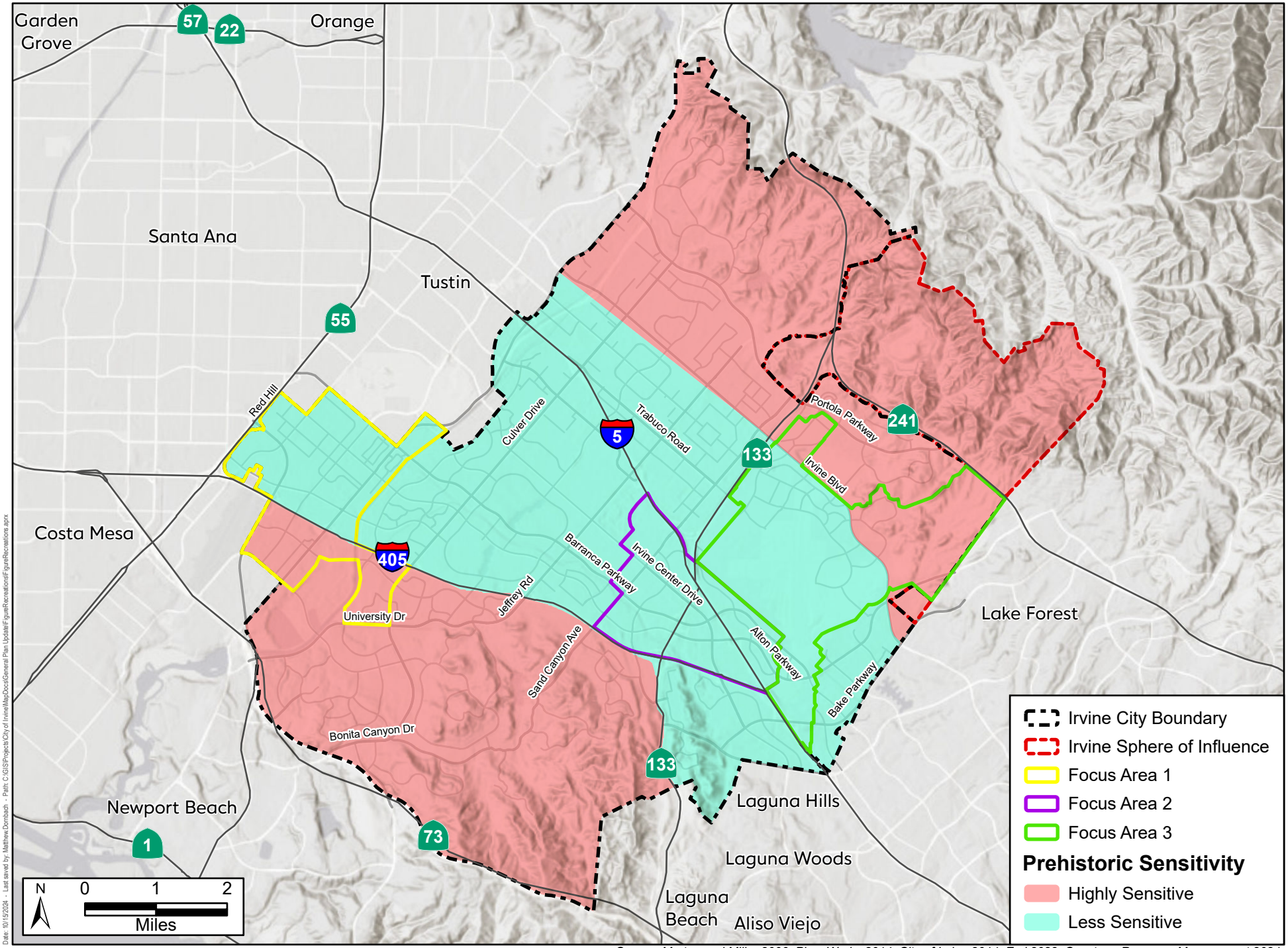
Portola Springs Sentinel Ribbon Cutting

Tribal Resources – In 2015, amendments to CEQA established that a project with the potential to cause a substantial adverse change in the significance of a tribal cultural resource is deemed to have a significant environmental effect. A "tribal cultural resource" includes sites, features, places, cultural landscapes, sacred places, or objects of cultural value to a California Native American Tribe. To assess this potential effect, the lead agency must engage in consultation with any California Native American tribe traditionally affiliated with the project's geographic area. This consultation is a prerequisite to determining the necessity of a negative declaration, mitigated negative declaration, or environmental impact report for the project.

Tribal Resources are notably concentrated in the San Joaquin Marsh area and San Joaquin Hills, situated to the south of Interstate 405. Abundant sites are also found along what were then considered permanent water sources, such as creeks and springs northeast of Irvine Boulevard. The plain between Interstate-405 and Irvine Boulevard hosts only ten known sites. Consequently, the regions south of Interstate-405 and north of Irvine Boulevard are classified as highly sensitive, while the plain in between is regarded as less sensitive.

Figure 7. Prehistoric Sensitivity identifies prehistoric sensitivity areas in Irvine, and **Figure 8. Historic Sensitivity** identifies areas of historical resources.

Figure 7. Prehistoric Sensitivity



Source: Morton and Miller 2006; PlaceWorks 2014; City of Irvine 2014; Esri 2023; Cogstone Resource Management 2024.

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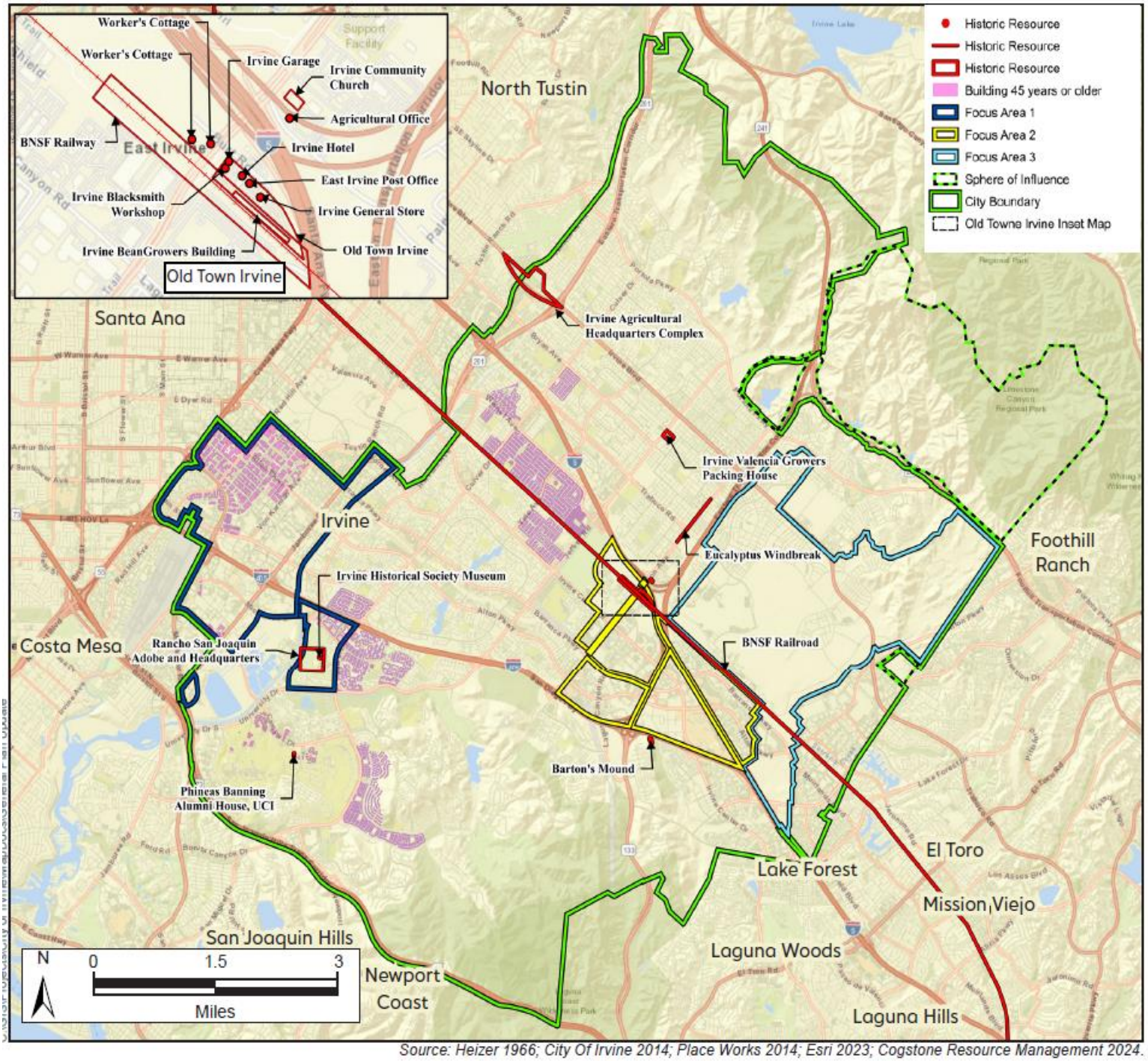
Figure 8. Historic Sensitivity



Source: Heizer 1966; City Of Irvine 2014; Place Works 2014; Esri 2023; Cogstone Resource Management 2024.

Agricultural Resources

Irvine boasts a rich agricultural history. However, agricultural resources have experienced a substantial decline in recent decades. Factors such as escalating land costs, heightened housing demand, competition from larger agricultural operations, and other influences have contributed to the gradual transformation of agricultural land for alternative purposes.

View of crop fields

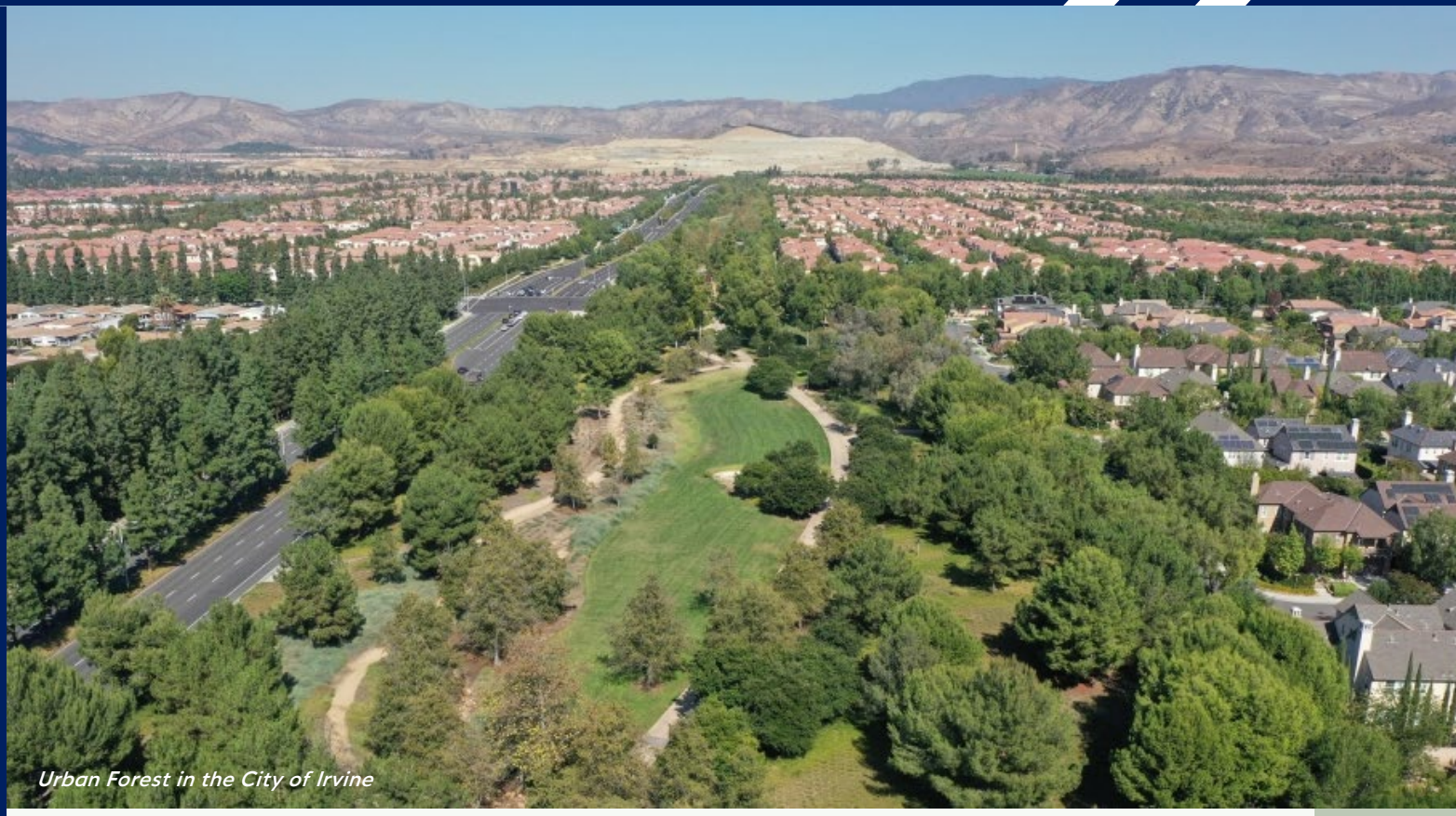
Agricultural resources in Irvine have undergone a significant reduction over time, now primarily concentrated in small areas, particularly in the central and eastern sections, as illustrated in **Figure 9. Agricultural Resources**. The 2000 Irvine General Plan designates 711.93 acres with an Agriculture land use designation. Additionally, other areas in Irvine contribute to agricultural purposes, falling under a Preservation land use designation in regions beyond the NCCP/HCP jurisdiction. In alignment with the 2021-2029 Housing Element, the City intends to develop 30.42 acres of agricultural land over the next eight years into residential development. The sites Assessor's Parcel Numbers (APNs) as identified in the Housing Element are 591-073-22, 591-073-23, and 591-073-19, all of which are in the Great Park Planning Area 51. It is important to note that agricultural activities on these sites are interim uses, as development on these properties was previously contemplated but temporarily restricted due to their proximity to the MCAS El Toro base and associated height/development restrictions. Following the closure of this base, the City's 2021-2029 Housing Element identified them as potential housing sites. The General Plan itself will not result in any land use designation or zoning changes from agricultural uses to nonagricultural uses on these sites or any others in the City and does not contemplate any specific development projects on agricultural sites.

Table 3. Existing Farmland provides a summary of remaining agricultural uses in Irvine based on the Farmland Mapping Program by the Department of Conservation. As of 2023, the City of Irvine encompasses 3,996.2 acres designated for various agricultural uses. The Orange County Board of Supervisors has decided against designating any Farmland of Local Importance for Orange County. Since 1989, no agricultural land has remained under the Williamson Act contract provisions outlined in Section 51230 of the Government Code.

Table 3. Existing Farmland

Type of Farmland	Acres of Land
Prime Farmland	1,070.5
Farmland of Statewide Importance	207.2
Unique Farmland	1,061.9
Grazing	1,656.6
Total	3,996.2

Source: California Department of Conservation Farmland Mapping and Monitoring Program, 2023



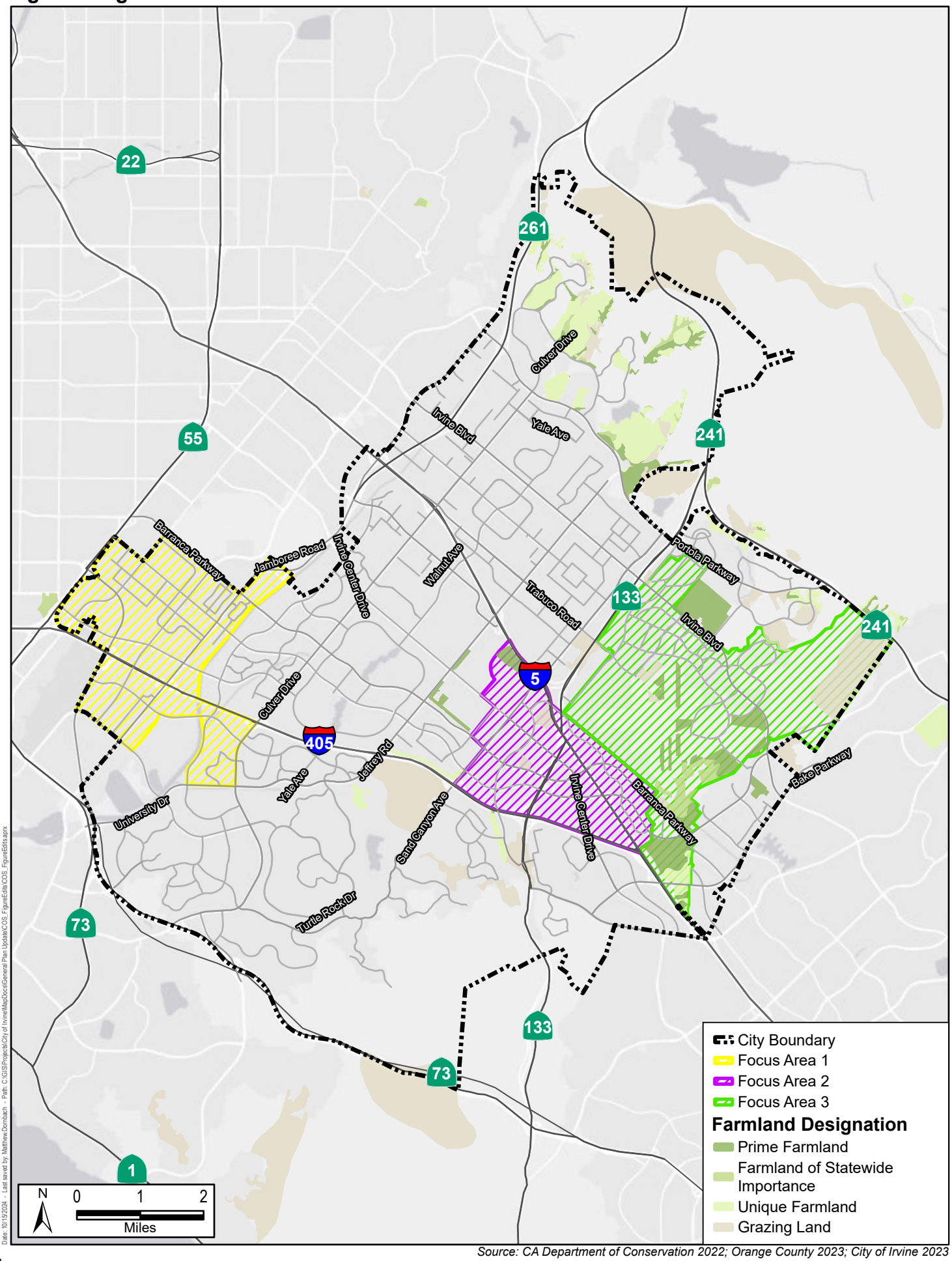
Urban Forest in the City of Irvine

Forests

In alignment with the forest land classification outlined in Public Resources Code (PRC) §12220, certain parts of the City encompass forest land resources, including the Santiago Hills and areas in the northern flatlands, central flatlands, and San Joaquin Hills. These areas often fall under designations such as Eucalyptus Windrows, Sand Canyon Oak Trees, and NCCP Habitat Reserve, as identified in **Figure 3. Biological Resources and NCCP Areas**. The City has instituted programs like the Eucalyptus Windrow Maintenance and Protection Plan for Lower Peters Canyon and the Urban Forestry Ordinance.

Figure 9 illustrates the locations of agricultural uses in Irvine. Due to the diminishing availability of land for agricultural purposes, Irvine aims to support small-scale "metro-farming" ventures and initiatives on public lands, focusing on agricultural activities suitable for urban environments. These may include specialty farming, model farming, heritage farming, and community service or educational farming.

Figure 9. Agricultural Resources



Source: CA Department of Conservation 2022; Orange County 2023; City of Irvine 2023

Soil

The majority of soils comprise unconsolidated and semi-consolidated alluvial sediments. Every part of the City is composed of sedimentary rocks and soils dating back to the Cenozoic Era, spanning from 65 million years ago to the present day. Soil composition is key in determining the types of habitats and supporting diverse plant and animal life found in open spaces within the City, preventing erosion that can degrade open spaces and impact recreational use, sustaining water resources, and preserving cultural and historical resources. Therefore, soil type distribution is a major component of planning related to the Conservation and Open Space Element.

Sprout emerging from the soil.

Surface soil textures within the City are comprised of:

- Clay – This surface soil texture, with its dense and compacted structure due to predominance of clay particles near the surface, impacts soil properties such as water retention, drainage, and nutrient availability. Despite its tendency for waterlogging and compaction when dry, proper management can harness clay soil's nutrient retention capacity, making it fertile for plant growth.
- Clay Loam – This surface soil texture refers to a type of soil where clay, silt, and sand particles are present in relatively balanced proportions, with a slightly higher concentration of clay. This soil texture typically exhibits properties of both clay and loam soils, offering good water retention, nutrient availability, and drainage characteristics.
- Loam – This surface soil texture refers to a type of soil that contains a balanced mixture of sand, silt, and clay particles, with neither one predominating. Loam soils are often considered ideal for plant growth because they provide good drainage, sufficient water retention, and aeration for root development. They also tend to be fertile and workable, making them suitable for various agricultural and gardening purposes.
- Loamy Sand – This surface soil texture refers to a type of soil that is predominantly composed of sand particles, with a smaller proportion of silt and clay. This soil texture is characterized by its gritty feel and ability to drain water quickly due to the high sand content. However, the presence of some silt and clay provides some nutrient retention and fertility, making it suitable for certain types of crops or plants when managed appropriately.
- Sandy Loam – This surface soil texture refers to a type of soil that contains a relatively balanced mixture of sand, silt, and clay particles, with a higher proportion of sand compared to silt and clay. Sandy loam soils are characterized by their loose, well-draining structure, which allows for good water infiltration and root development. They offer a balance between drainage and water retention, making them suitable for a wide range of plants and crops.
- Silt Loam – This surface soil texture refers to a type of soil that contains a significant proportion of silt particles, along with some sand and clay. Silt loam soils typically have a smooth, fine texture and are known for their ability to retain moisture while still providing good drainage. They are often fertile and suitable for a wide range of crops, making them valuable for agricultural purposes.

- **Beaches and Riverwash** – These soils found along beaches or riverbanks that have been influenced by the action of water, including erosion, sediment deposition, and the movement of sand or gravel. These soils may vary widely in texture depending on factors such as the composition of the parent material, the intensity of water flow, and the degree of sorting (separation of particles by size). For example, beach soils may be sandy with coarse particles due to wave action, while riverwash soils may contain a mix of sand, silt, and gravel carried by the river.

Mineral

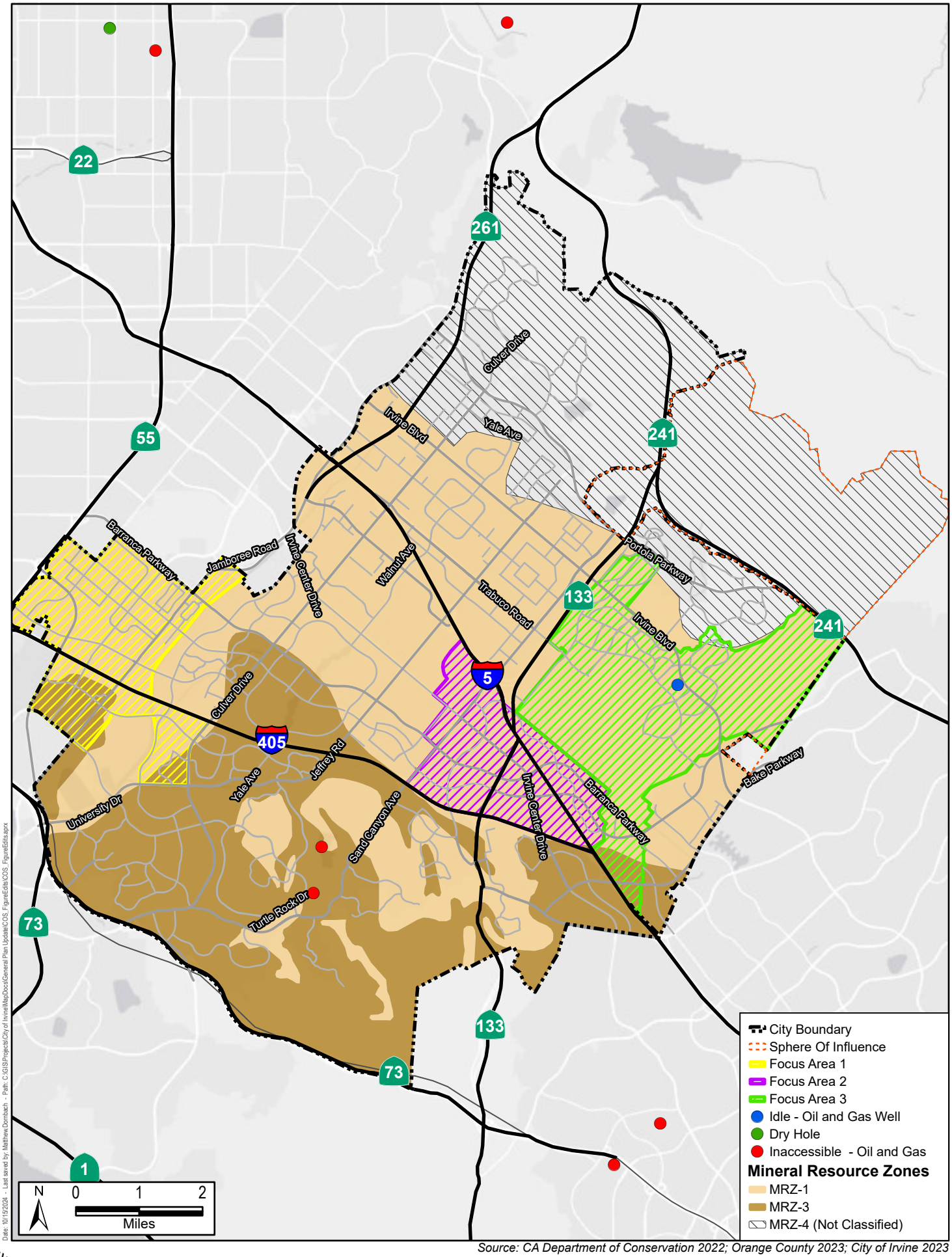
Mineral resources encompass vital construction materials such as sand, gravel, and crushed rock, integral for the production of construction materials like portland cement and asphaltic concrete. Additionally, nonfuel mineral resources include metals like gold, silver, iron, copper, as well as industrial metals such as boron compounds, rare-earth elements, clays, limestone, gypsum, salt, and dimension stone. Classification of the significance of mineral resources in Irvine adheres to the California Surface Mining and Reclamation Act of 1975, empowering the State Mining and Geology Board to designate lands with mineral deposits of regional or statewide importance. Lands are classified according to the following Mineral Resource Zones (MRZ):

MRZ 1
• Adequate information indicates that no significant mineral deposits are present or likely to be present, or where it is judged that little likelihood exists for their presence
MRZ 2
• Adequate information indicates that significant mineral deposits are present, or likely to be present, and development should be controlled.
MRZ 3
• The significance of mineral deposits cannot be determined from the available data.
MRZ 4
• There is insufficient data to assign any other MRZ designation.

Lands classified as MRZ-2 hold the utmost significance to California, indicating areas underlain by proven mineral resources or where data suggests substantial measured or indicated resources exist. MRZ-2 areas are acknowledged as "regionally significant" by the state board, necessitating that land use decisions consider the importance of the mineral resource to the region or state, beyond the lead agency's jurisdiction. Irvine's MRZ classification areas, mainly MRZ-1 and MRZ-3, are depicted in the California Geological Survey mineral resources map of Orange County, known as the "Generalized Mineral Land Classification of Orange County, California: Aggregate Resources Only." No areas in Irvine have been designated MRZ-2 or as regionally significant mineral deposits.

While gas and oil exploration have occurred in Irvine, the City did not yield significant reserves compared to other locales. Irvine currently has no known gas, oil, or geothermal fields. However, the Department of Conservation estimates there are 24 oil and gas wells in Irvine, with all but three existing as capped and abandoned. The remaining wells are currently inactive. As there are no mineral resources in the City, no goals, objectives, policies, or implementation actions with respect to this subject area have been included in this element. **Figure 10. Mineral, Oil, and Gas Resources** illustrates the locations of mineral resource zones and oil and gas wells designated by the Department of Conservation in Irvine.

Figure 10. Mineral, Oil, and Gas Resources



Source: CA Department of Conservation 2022; Orange County 2023; City of Irvine 2023

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Bommer Canyon preserve in the City of Irvine

Visual Resources

Aesthetics encompass the visual elements, both natural and human-made, and the overall perception of the visual environment. These features are diverse, found in settings ranging from urban centers to rural landscapes and wildlands. Examples include open spaces, vegetation/landscaping, topographic or geologic features, natural water features, structures with architectural or historic significance, and scenic views from roadways. Despite being an urban community, Irvine's unique setting between foothills and ocean, its varied topography, and its built environment contribute to a rich array of natural areas, scenic roadways, and visually significant structures.

- **Natural Features** – Irvine's landscape encompasses distinctive elements like the Santiago Hills, northern flatlands, central flatlands, and San Joaquin Hills. The ridgelines of these hills are observable from numerous locations across the City and provide exceptional views of the valley plain and the Pacific Ocean from their peaks. Within these natural areas, there are notable rock outcroppings with visually significant qualities, and many of these areas benefit from protection under the NCCP/HCP.
- **Water Courses and Trails** – The San Diego Creek, along with several drainage courses within the community, especially in less developed or natural areas, holds scenic significance for Irvine. The City's open space spine network, featuring two north-south spines (including Jeffrey Spine) and six east-west spines (Hicks Canyon, Venta Spur Trail, Edison easement, San Diego Creek, and University Drive/Mason Regional Park), provides views highly appreciated by the community.
- **Scenic Highways** – State scenic highways are either officially recognized by the California Department of Transportation or eligible for such designation as per the Streets and Highway Code, Section 260 of the California Scenic Highway Program. In Irvine, Caltrans has not designated state scenic highways or listed eligible segments. While no City roadways hold the official state scenic highway designation, State Routes 241 and 261, provide panoramic views of the hillsides and the Pacific Ocean.

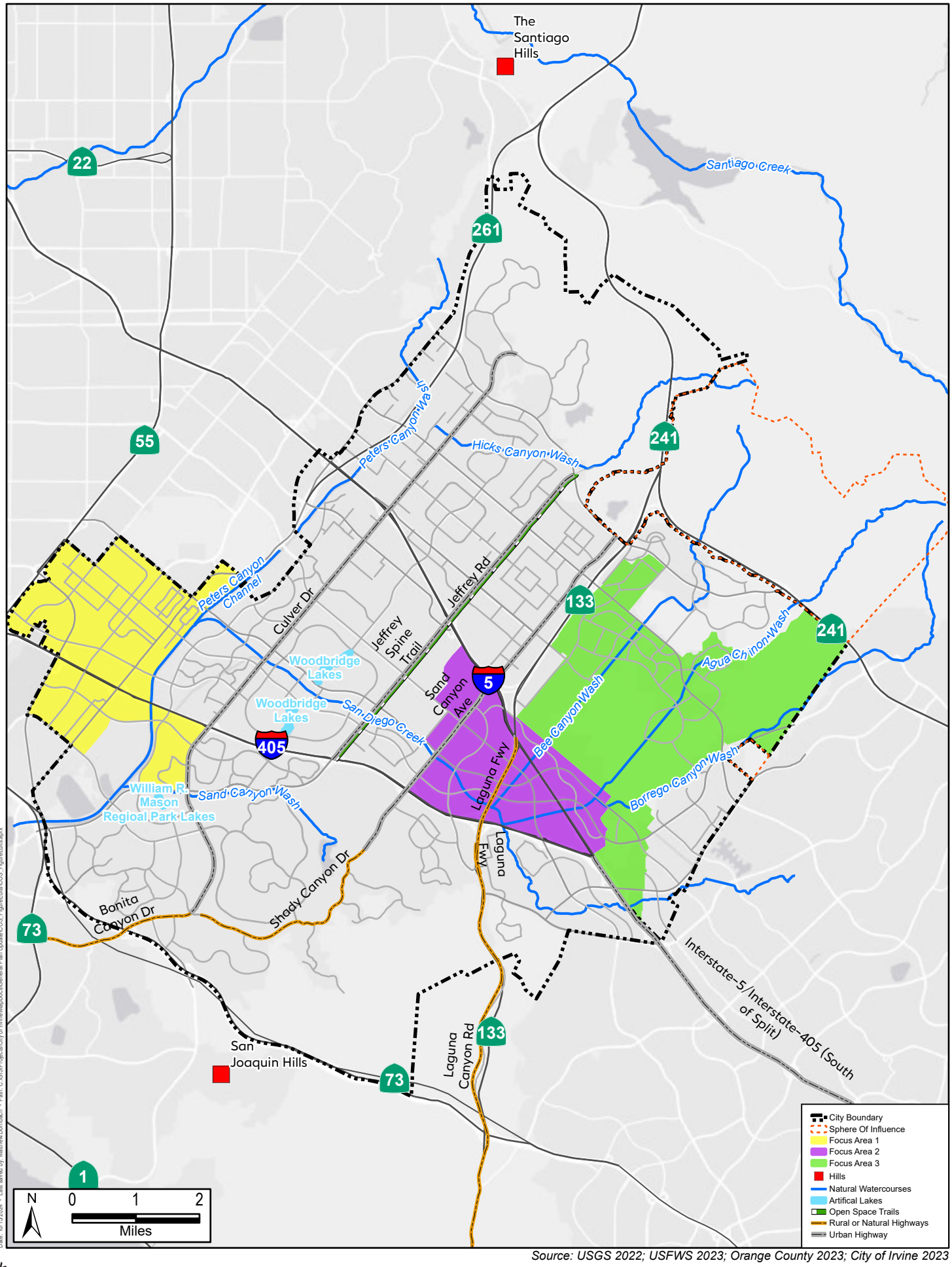
Table 4. Examples of Notable Visual Resources in Irvine provides examples of notable visual resources in Irvine. **Figure 11. Notable Visual Resources** identifies the locations of these notable visual resources.

Table 4. Examples of Notable Visual Resources in Irvine

Type of Resource	Examples in Irvine
Hills	The Santiago Hills and San Joaquin Hills, including canyons, plateaus, narrow ridges, and rock outcroppings
Natural Watercourses	San Diego Creek, Agua Chinon Wash, Bee Canyon Wash, Borrego Canyon Wash, Hicks Canyon Wash, Peters Canyon Wash, Sand Canyon Wash, and San Joaquin Freshwater Marsh
Artificial Lakes	Woodbridge Lakes and the William R. Mason Regional Park lakes

Sources: 2020 CEQA Manual, City of Irvine; Orange County Central/Coastal Subregion Natural Community Conservation Plan/Habitat Conservation Plan

Figure 11. Visual Resources



Source: USGS 2022; USFWS 2023; Orange County 2023; City of Irvine 2023

OPEN SPACE, PARKS, AND RECREATION

Irvine provides its residents and visitors with:

Over 11,000 Acres Dedicated to Open Space/Parkland		
22 Community Parks	***40+ Neighborhood Parks***	***6,500 Acres of Preserved Open Space***

Figure 12. Existing Parks and Open Spaces provide a visual of these resources.

Open Space – Across its developmental trajectory, Irvine has prioritized the conservation of its natural assets and wildlife habitats. Presently, Irvine encompasses over 6,665 acres of wetlands, oak woodlands, grasslands, and coastal sage scrub. While a significant portion of the City's open space are not open for daily self-guided access due to the sensitive habitat conditions under the NCCP/HCP, while other areas are open for daily access, areas that do not have daily self-guided access are nevertheless currently open for monthly Wilderness Access Days conducted by the City, as well as frequent volunteer docent-led hiking, biking, equestrian, and special subject activities and programs. Key open space areas in Irvine encompass the Jeffrey Open Space Trail, Southern Open Space Preserve, Northern Open Space Preserve, and Turtle Rock Open Space.

Community Parks – Community parks function as central, multipurpose hubs for the entire community, acting as essential gathering places. Ranging from 10 to 48 acres, these parks offer diverse recreational opportunities and feature specialized facilities such as sports fields and courts, thematic playgrounds, and community centers. Serving as key locations for athletic activities in Irvine, community parks support organized recreation programs, host special events, and accommodate large-group gatherings. Community parks are owned and maintained by the City, developed with facilities Citywide in scope, and intended to serve multiple residential villages. Colonel Bill Barber Marine Corps Memorial Park, Heritage Community Park, Harvard Community Park, and Turtle Rock Community Park are examples of community parks in the City.

Neighborhood Parks – Neighborhood parks, smaller in size, offer green spaces and essential recreational amenities primarily for residents within walking or biking distance. Spanning from one to 10 acres, these parks feature facilities like playgrounds and picnic areas, catering to small group gatherings and spontaneous use. Larger neighborhood parks extend their offerings to include athletic fields, basketball courts, volleyball courts, and similar recreational facilities. Orchard Park, San Carlo Park, and Chaparral Park are examples of public neighborhood parks. Private neighborhood parks are intended to serve the immediate development or specific planned community in which they are located. These parks are owned and maintained by the homeowner associations or maintenance districts they serve and are developed and oriented toward serving adults.

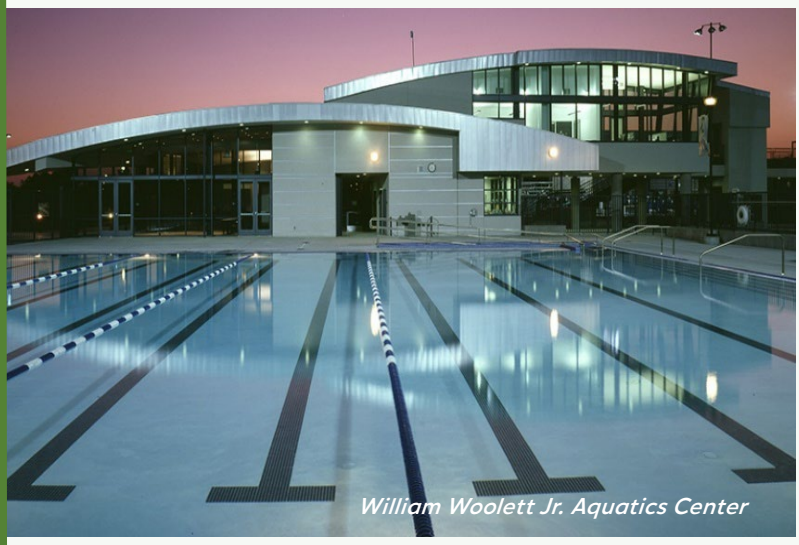
A neighborhood park in the City of Irvine

Regional Parks – In addition to Community and Neighborhood Parks, various regional parks are also available to residents of and visitors to the City. Regional parks are large open spaces and/or recreational facilities provided either partially or wholly by the County of Orange. They serve the needs of people throughout Orange County and can act as active or passive parks. Regional parks have no mandated dedication standard or required park size and often offer a mix of amenities like biking paths, wilderness hiking areas, and athletic fields. William R. Mason Regional Park and portions of the Irvine Ranch Open Space are examples of regional parks in the City.

Cycling through the Irvine Open Space Preserve

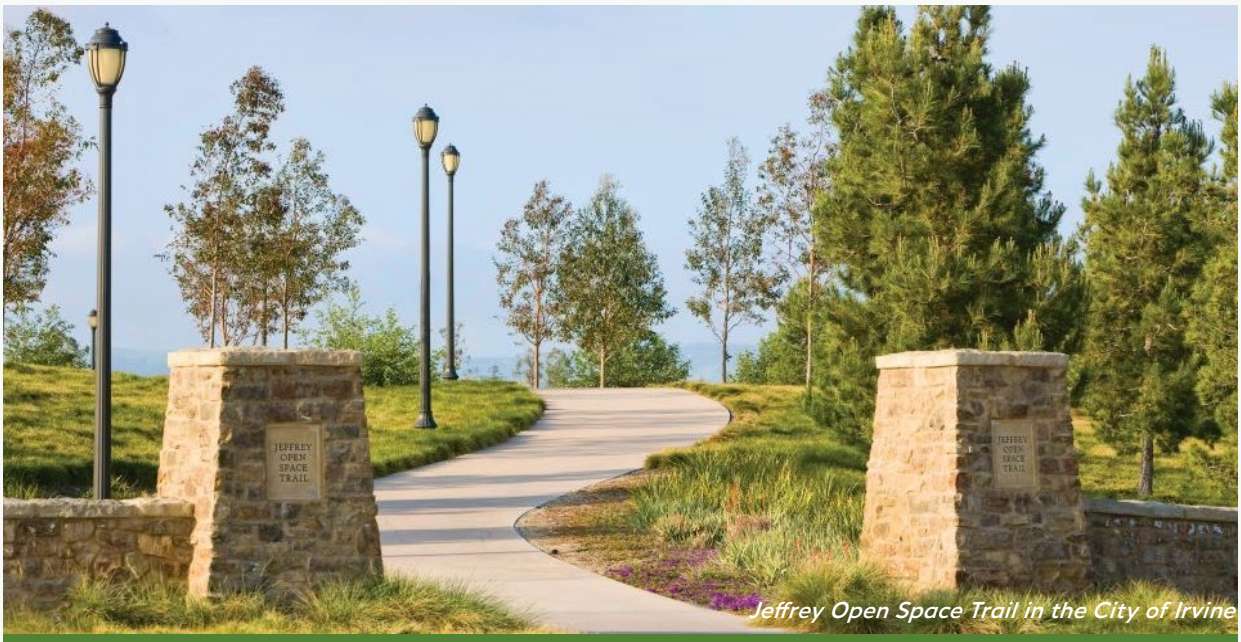
Special Use Sites – Special use sites present distinctive amenities and independent facilities that cater to a citywide audience. Illustrations include the Irvine Animal Care Center and Sepulveda Vista Point.

Regional Trails – Irvine boasts a comprehensive network of bike paths and trails, providing opportunities for exploration on foot, wheels, or horseback. Regional trails, featuring dedicated rights-of-way, offer safe routes for joggers, cyclists, skaters, and other enthusiasts.



William Woolett Jr. Aquatics Center

Additional Resources – Beyond the municipal park system, Irvine residents benefit from a wide array of parks and recreation resources made available by the City, school districts, homeowners associations, and the County of Orange. Private entities, including gyms, golf courses, and commercial recreation providers offering activities like dance, yoga, or martial arts, further enrich the variety of programs accessible to residents. Notable third-party providers include County Parks like William R. Mason Regional Park, schools, colleges, universities, private neighborhood parks, and private facilities. Collaborating with school districts, local colleges, and various organizations, the City strategically maximizes community access to park and facility resources. A joint-use agreement with the Irvine Unified School District also allows sports leagues to utilize school fields and indoor gymnasia, while high school students utilize William Woollett Jr. Aquatics Center at Heritage Community Park situated next to Irvine High School. The proximity of many City park facilities to schools enhances the availability of recreational amenities and open grass areas for residents.



Jeffrey Open Space Trail in the City of Irvine

In 2023, the City of Irvine's park system ranked No. 1 in California and achieved the No 4. spot in the nation on the Trust for Public Land's ParkScore Index. Notably, the City achieved a perfect 100th percentile in the Investment category, reflecting a strong financial commitment to maintaining high-quality parks and open spaces for residents.


Bill Barber Park in the City of Irvine

THE GREAT PARK

Located in the heart of the City of Irvine, the Great Park has a rich history of importance to the region and serves as a demonstration of the City's commitment to efficient use and provision of greenspace for residents. Encompassing the previously active World War II-era MCAS El Toro, the Great Park offers a multitude of open spaces and recreational, cultural, and entertainment amenities to residents of, and visitors to, the City alike. Spanning over 500 developed acres as of 2023 with plans to develop its full 1,300 acres, the park will continue to evolve to grow its capacity to serve the community, connect residents, and preserve natural spaces. **Figure 13. Great Park Framework Plan** identifies the planned development of the Great Park.

The Great Park in the City of Irvine

Current Amenities – The Great Park offers attractions and activities for families, outdoor enthusiasts, and those seeking a fulfilling cultural experience. Families can enjoy the Great Park Balloon, a tethered helium balloon capable of flying 400 feet above the park, and the Great Park Carousel. Outdoor enthusiasts can enjoy the 280,000 square-foot ice and sports facility, Great Park Ice & FivePoint Arena, and the Great Park Sports Complex, one of the largest sports complexes in the nation. Covering 194 acres, the Great Park Sports Complex hosts a Championship tennis court, a 2,500-seater soccer stadium, sand volleyball court, baseball stadium, and softball stadium. The Sports Complex also contains tennis courts, soccer and lacrosse fields, sand volleyball courts, basketball courts, ball diamonds, and a multipurpose recreation area.

Visitors to the park can also enjoy the Palm Court Arts Complex, a cultural campus that supports interdisciplinary public art programs via the Great Park Gallery and Great Park Artist Studios, and the Historic Hangar 24, which houses multiple World War II-era planes. The Great Park provides additional opportunities for community connectivity through a demonstration garden that offers hands-on gardening experiences, and a Farmers Market.

Future Amenities, Focus on Phase 1 – The Great Park has established itself as a community gathering space defined by its multitude of amenity offerings. The park's offerings will continue to grow as the Great Park Framework Plan ("Framework Plan"), approved by the City in 2022, is executed. The Framework Plan will serve as a guide for the future development of the Great Park, beginning with 300 acres in Phase 1.

The Great Park is evolving into a diverse community space with various amenities. Its expansion, guided by the Framework Plan, will see the development of different zones, including the Heart of the Park, Great Meadow, Amphitheatre, Botanic Gardens, Veteran's Memorial Garden, Cultural Terrace West, Bosque Park, Forest/Arboretum, and a linear park and trail system. These developments aim to enhance accessibility, connectivity, and recreational opportunities within the park, with plans including the addition of a Library and multiple lakes.

Preservation – Development of the Great Park will follow principles of conservation to ensure the efficient use, management, and preservation of natural resources to ensure their continued availability and viability. For example, the City has installed electric vehicle (EV) chargers within the Great Park to promote the use of environmentally friendly transportation and will seek to reduce overall driving needs through an expansion of the pedestrian network and multi-modal bridges that will provide multiple transportation options for people to get around the park, and a tram system that will allow for easy transport throughout the grounds without the need for additional driving. Water conservation efforts are provided in the Framework Plan via the use of 100% recycled water in two lakes planned for development and the use of California native, climate-appropriate, and drought-tolerant plants and vegetation.

Strategic planning and landscaping will reduce the occurrence of heat islands (areas that experience higher temperatures than outlying areas) while maximizing carbon sequestration, promoting diverse ecologies, and benefiting pollinators. The City also aims to promote the sustainable development of the Great Park through the strategic use of materials that mitigate adverse environmental impacts of heat island effects and flooding while minimizing embodied carbon, a significant source of greenhouse gas emissions that arise from the manufacturing, transportation, installation, maintenance, and disposal of building materials. The City will implement sustainable capital improvement maintenance practices to minimize financial and environmental costs.

The Great Park in the City of Irvine

GATEWAY PRESERVE

The Gateway Preserve spans approximately 711 acres, extending from the planned endpoint of Jeffrey Road in the south to the State Route 241 Toll Road in the north, encompassing the residential village of Orchard Hills to the west. Gateway Preserve will be a regional Open Space resource in the North of Irvine, similar to Bommer Canyon and Cattle Camp in the South and will offer the potential to connect to broader open space areas such as Limestone Canyon and the Cleveland National Forest subject to the access policies and programs of those areas not owned by the City.

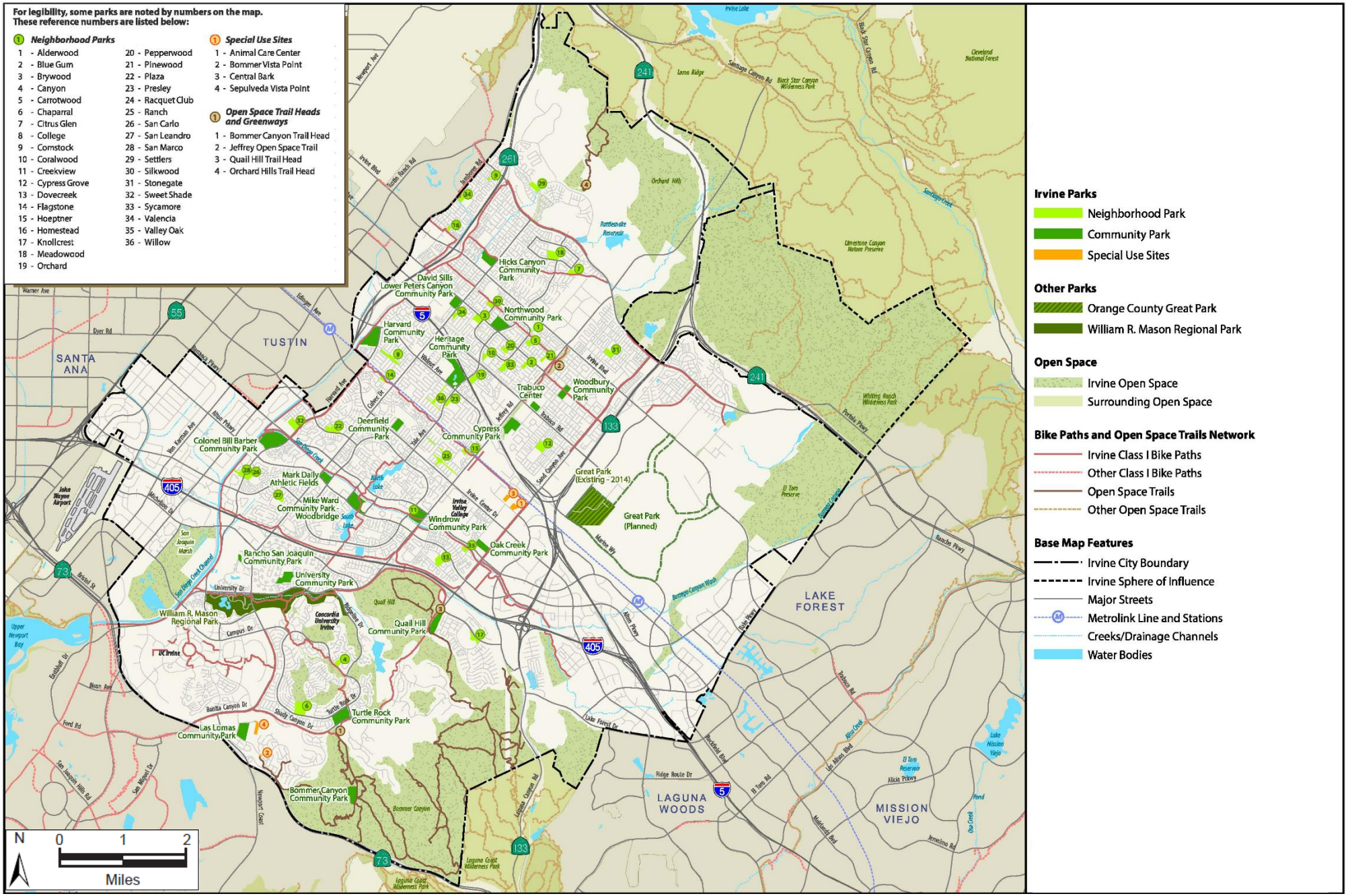
The realization of Gateway Preserve is, in part, attributed to the acquisition and subsequent closure of the All American Asphalt Plant. This 11-acre site will undergo transformation, becoming an integral part of the Preserve and featuring a park, interpretive area, and staging ground for hikes within the open space. The Gateway Preserve encompasses approximately 375 acres of property, slated for preservation as open space. This new property will combine with nearly 300 acres of existing City-owned open space, culminating in the creation of the Gateway Preserve.

Former All American Asphalt Plant in the City of Irvine

Next to the Gateway Preserve lies an additional 91-acre parcel known as the Gateway Land. A section of the Gateway Land will be retained to facilitate the extension of Jeffrey Open Space Trail (JOST). This extension will span Portola Parkway through a new pedestrian bridge, continuing along Jeffrey Road to connect with the Gateway Preserve's entrance. Following the allocation of land for the JOST extension, the City acquired an additional 70-acre portion of land at the northeast corner of Jeffrey Road and Portola Parkway. Subject to appropriate environmental studies, this parcel is under consideration for entitlement as the City's newest residential village.

Envisioned as part of the master plan for the North Irvine area, the Gateway Land is expected to include a collection of homes that complement the community. It aims to introduce various housing options to the area, contributing to the diversity of residential choices. Positioned uniquely with an extension of JOST and adjacent to the planned Gateway Preserve, the Gateway Land offers a distinctive lifestyle against the backdrop of the North Irvine hills, providing convenient access to community amenities.

Figure 12. Existing Parks and Open Space



Source: City of Irvine 2016; OCTA 2016; OC Parks 2016.

Figure 13. Great Park Framework Plan

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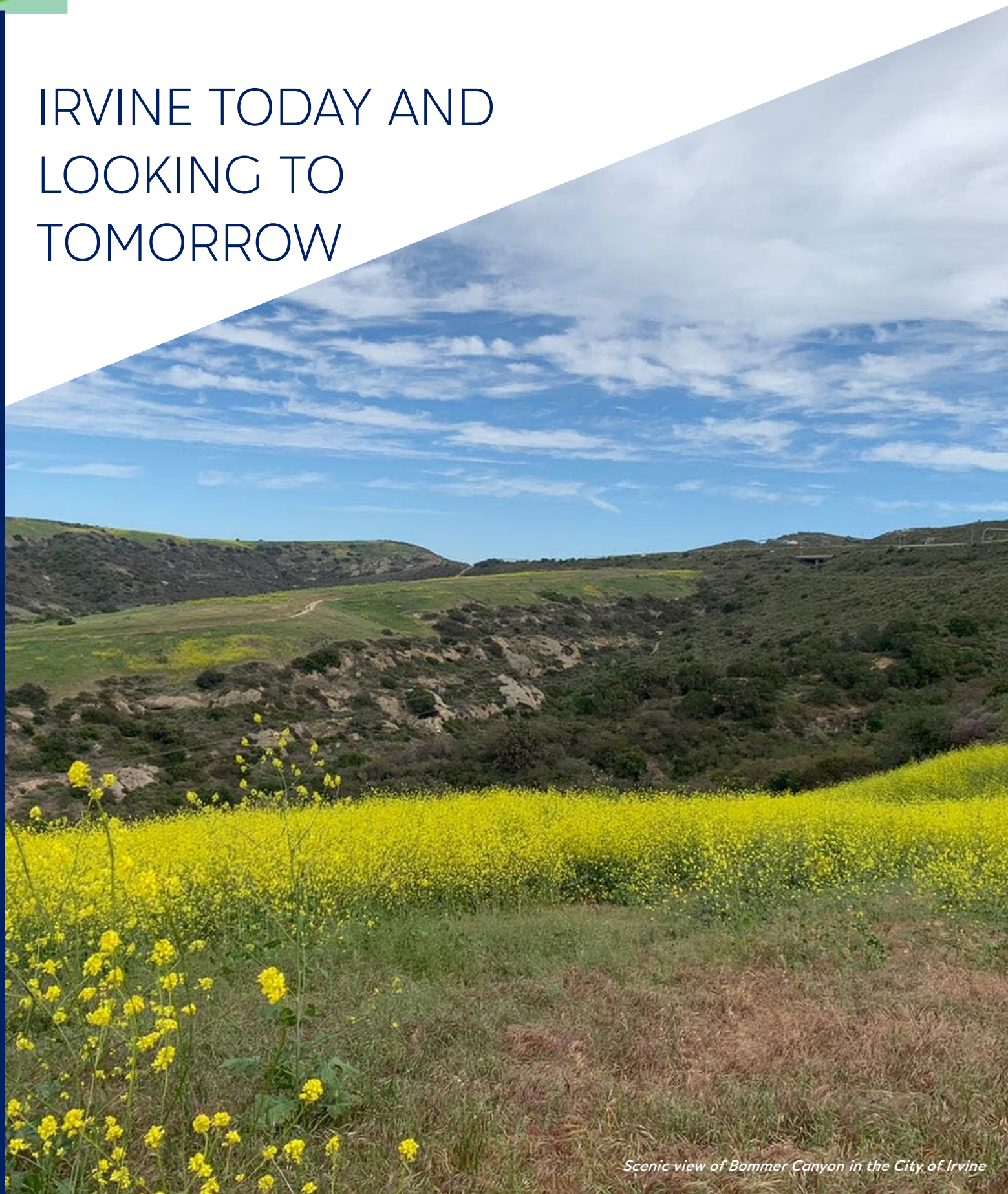
Source: City of Irvine 2024.

IRVINE TODAY AND LOOKING TO TOMORROW



Scenic view of Bommer Canyon in the City of Irvine

In the lead-up to the City's incorporation in 1971, decades of rapid development and urbanization in Orange County led to the loss of biodiversity and disruptions to critical environmental systems like watersheds and wildlife corridors. The diminishing open space heightened public awareness, emphasizing the imperative to manage land development thoughtfully to safeguard the region's sensitive biological resources. Consequently, Irvine's development philosophy has been shaped by the principle of conservation, emphasizing the prudent use, management, and preservation of natural resources to ensure their ongoing availability and viability. Considerations of today's Irvine and the Irvine of tomorrow and the impact on open space and conservation efforts include:

Residential Development – The certified 2021-2029 6th Cycle Housing Element identifies sites for 57,656 residential units, addressing regional housing needs allocation (RHNA) and housing statutes. While it is likely that non-residential uses will convert to residential development in the coming years, conservation efforts will remain key in preventing urban sprawl and/or loss of natural features as residential development takes place within three Focus Areas:

- Focus Area 1 – the Greater Irvine Business Complex Area (Planning Area 36 [Irvine Business Complex] and Planning Area 19 [Rancho San Joaquin]);
- Focus Area 2 – Greater Spectrum Area (Planning Area 12 [Oakcreek], Planning Area 13 [Irvine Spectrum 4], Planning Area 31 [Irvine Spectrum 6], Planning Area 32 [Irvine Spectrum 3], and Planning Area 33 [Irvine Spectrum Center]; and
- Focus Area 3 – Great Park Neighborhood Transit Village (Planning Area 51 [Great Park Neighborhoods]).

Economic Development – With carefully planned employment centers like the Irvine Spectrum, Irvine Business Complex (IBC), and University Research Park (URP), and the emerging health care hub adjacent to the Spectrum and Great Park (including a new City of Hope campus and Hoag hospital in proximity to a regional Kaiser Permanente hospital in the Spectrum area) alongside other business hubs, Irvine has become a magnet for leading research and technology companies. This robust economic base makes the City an attractive destination for other businesses alike. As economic development continues within the City, leading to an increase in commercial and industrial development, employees residing in the City, and in some cases, an increase in tourism, policies and programs will be key in mitigating urban sprawl and ensuring the availability of open space and conservation of this open space is sufficient to meet the needs of residents, employees, and wildlife within the City.

Park trail in the City of Irvine

Connectivity – Most residents reside within a quarter-mile walking distance of a public or private park and within a half-mile walking distance of a community park. Nevertheless, certain areas like the IBC, Spectrum, and parts of northeast and southwest Irvine lack convenient access to community parks. As the City becomes more developed, the Parks Master Plan will direct upcoming park and recreation priorities.

Continued development of the Great Park (Planning Area 51) will enhance the connectivity of residential communities within and around this area through the expansion of pedestrian linkages in the park and between neighborhoods, recreational opportunities, and amenities that stimulate increased pedestrian activity. Additional Planning Areas and communities, including multiple Irvine Villages ("Villages") surrounding the Great Park, will also benefit from enhanced connectivity arising from the Phase 1 development.

Rewilding Opportunities – Rewilding and microrewilding represent innovative approaches to conservation and ecological restoration, gaining prominence as essential strategies for enhancing biodiversity and fostering sustainability in urban and suburban environments. Rewilding, at its core, involves the large-scale restoration of natural processes and habitats, often reintroducing native species and allowing ecosystems to flourish with minimal human intervention. On a more localized level, microrewilding focuses on introducing wild elements into smaller urban spaces, such as parks, gardens, or even individual yards. Both concepts share a common goal: to reconnect communities with nature, promote biodiversity, and create resilient ecosystems.

- Green Roofs and Walls – Green roofs and walls incorporate vegetation and provide habitat for birds, insects, and other wildlife. Green infrastructure helps reduce the urban heat island effect, improves air quality, and enhances the aesthetic appeal of the City.
- Urban Wildlife Corridors – Wildlife corridors or green pathways connect fragmented natural areas within the City. These corridors facilitate the movement of wildlife, promoting genetic diversity and supporting urban biodiversity.


Edwards Life Sciences Parking Structure, City of Irvine

- Community Gardens with Native Plants – Community gardens use native plant species to attract local pollinators and provide habitat for urban wildlife. Involving residents in gardening activities fosters a sense of community engagement and connection to nature.
- Pocket Parks and Microhabitats – Small-scale pocket parks or microhabitats within neighborhoods introduce native plants, trees, and features like bird baths or insect hotels, which contribute to local biodiversity and provide residents with accessible green spaces.
- Pollinator Pathways – Pollinator-friendly pathways plant native flowering plants along sidewalks, road medians, or urban greenways with a goal of supporting pollinators like bees and butterflies, which contributes to local ecosystem health and enhances urban biodiversity.
- Urban Forest Restoration – Tree planting initiatives and restoring urban forests with well adapted tree species provide habitat for birds, improve air quality, and contribute to climate resilience by capturing carbon.
- Wildlife-Friendly Infrastructure – Designing and retrofitting urban infrastructure to be wildlife-friendly, such as creating safe passages for animals under roads or incorporating nesting sites in urban structures, minimizes barriers to wildlife movement and integrates features that support urban wildlife.

As the City looks to balance future development in the IBC, the Great Park, and Greater Spectrum Area with environmental stewardship, rewilding and microrewilding emerge as powerful tools to transform the industrial urban core and increased buildout of these areas, enriching the lives of residents and contributing to the overall health of the City.


Child learning to skateboard

Special Use Parks and Features – Irvine is known for its commitment to green spaces and a high quality of life. The City could benefit from various special use parks that cater to the diverse needs and interests of its residents. In looking to increase parks in denser areas like the IBC, Great Park, and Greater Spectrum Planning Areas, special-use parks can make efficient use of the reduced space and opportunity placement of parks. Examples of park types and features to add to existing parks for consideration by the City include:

- Dog Parks – Dedicated off-leash dog parks provide spaces for residents to socialize with their pets and promote a sense of community among dog owners. Agility courses, shaded areas, and seating can enhance the overall experience.
- Community Gardens – Community gardens offer residents the opportunity to cultivate their own fruits, vegetables, and flowers. These spaces promote sustainable practices, and community engagement, and can serve as educational hubs for gardening and environmental awareness.
- All-Wheel Parks – Accommodates various wheeled sports and activities, including skateboarding, rollerblading, scootering, and biking. These parks typically feature a combination of ramps, rails, bowls, jumps, and other obstacles tailored to different skill levels and disciplines.
- Pump Track – Offering designated areas for cyclists, skateboarders, and other wheeled sports enthusiasts for tricks, jumps, and ramps, these parks provide a safe and controlled environment for skating enthusiasts of all skill levels.
- Universally Accessible Playgrounds – Recreational areas designed to be inclusive and accessible to people of all ages and abilities, including those with disabilities featuring equipment and layouts that accommodate various physical, sensory, and cognitive needs, ensuring that everyone, regardless of their abilities, can participate and enjoy the play experience.


Dog on a leash near the Great Park in the City of Irvine

By incorporating a mix of these special-use parks and features into existing parks, Irvine can create a well-rounded and inclusive recreational environment that aligns with the diverse interests of its residents.

Community gardens like the Food + Farm Lab at the Great Park, serve as valuable green spaces that enhance the aesthetic appeal of neighborhoods, foster community engagement and social cohesion, and promote environmental sustainability through urban agriculture practices.

Activities at Great Park Farm + Food Lab in the City of Irvine

SENATE BILL 1000

California State Capitol Building

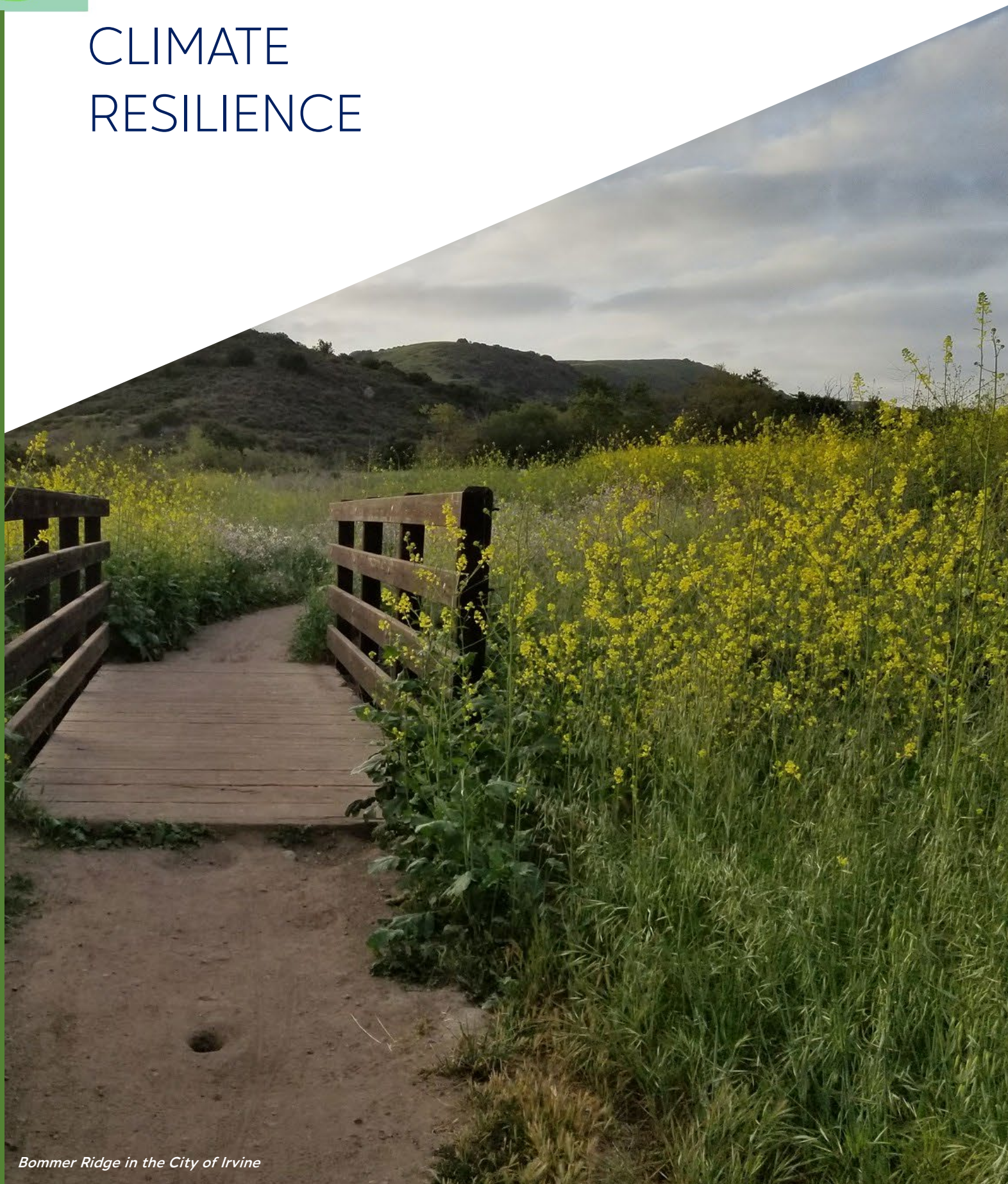
Irvine's core values underscore its dedication to ensuring equal access for all residents of Irvine to resources and opportunities like healthy environments, nutritious foods, parks, recreational facilities, and civic engagement, all of which play a key role in the well-being of residents. To help further these efforts the City is committed to reducing pollution, increasing public investments in the community, and ensuring community input is considered in decision-making processes. State law, as enacted through Senate Bill 1000 (2016), mandates that all cities and counties update public policies to address environmental justice.

The City has addressed legislation through goals, objectives, policies, and implementation measures detailed in the Environmental Protection and Climate Action (EPCA) Element. These goals, objectives, policies, and implementation measures are designed to reduce the unique and compounded health risks to communities who may be environmentally disadvantaged, promote civic engagement, and prioritize improvements that address the needs of disadvantaged communities.

An environmentally disadvantaged community is one with a heightened vulnerability to pollution exposure, primarily from vehicular emissions and daily commercial activities, which exacerbate existing socioeconomic and health disparities among residents. Such areas often face unequal opportunities for a healthy and prosperous life. The California Office of Environmental Health and Hazard Assessment (OEHHA) developed CalEnviroScreen (CES, Version 4.0), a mapping tool, to pinpoint vulnerable regions based on 21 indicators measuring pollution exposure and quality of life. CalEnviroScreen was released in October 2021, but does not reflect updated demographic data from the 2020 Census.

The CalEnviroScreen 4.0 Mapping Tool designates the Portola Springs and Great Park areas as a disadvantaged community due to their proximity to the closed MCAS El Toro and its prior use. The closure of MCAS El Toro in 1999 led to land transfers, with the majority going to the City for development, including the Orange County Great Park. The Navy has conducted initial cleanup to industrial standards, with ongoing remediation efforts underway. Additionally, the Great Park Neighborhood area has been further cleaned to residential standards. As noted above, CalEnviroScreen 4.0 is based on demographic data from Census 2010 and does not reflect the appropriate demographic datasets associated with Census 2020. Reclassification of Portola Springs and Great Park communities is underway and expected to remove the disadvantaged community designation, however, OEHHA will not remove the designation until the U.S. Navy completes their clean-up responsibilities and submits a final report.

CLIMATE RESILIENCE



Bommer Ridge in the City of Irvine

Climate change policies align closely with the concept of sustainability. The former focuses on reducing greenhouse gases, while the latter centers on the responsible stewardship of shared natural resources. Sustainability, defined as meeting the present needs of the community without compromising the ability to do so for future generations, rests on three foundational pillars:

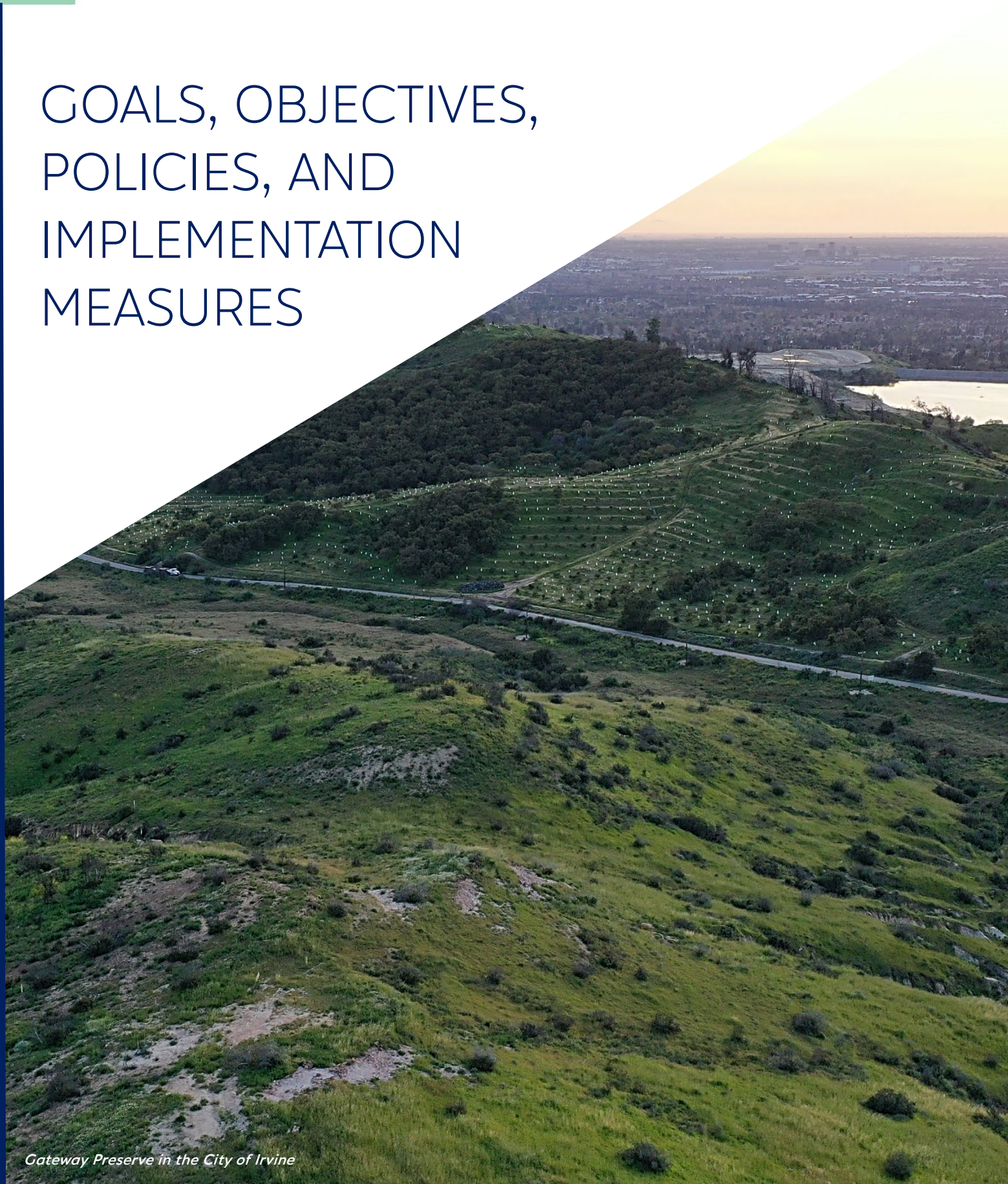
- Living harmoniously with the environment involves protecting, restoring, managing, and conserving land, water, air, and biological resources.
- An economy that meets residents' needs through environmentally responsible businesses with local roots, contributing to their communities and creating value for everyone.
- Achieving social equity by providing access to services, transportation, education, jobs, housing, and recreation for all residents, fostering a just and fair society where everyone can participate, prosper, and reach their full potential.

Woodbridge South Lake in the City of Irvine

Strategies to live and grow more sustainably complement those addressing climate change. Both aim to conserve non-renewable resources and reduce waste, employing a decision-making process that considers the long-term consequences of actions. They recognize that living in harmony with the environment encompasses social and economic dimensions. For instance, while a healthy economy may generate numerous jobs, the environmental and societal impacts of employees commuting alone from distant areas, including increased fuel consumption, traffic congestion, and air quality degradation, highlight the interconnectedness of these factors.

In 2006, California lawmakers enacted AB32 and SB375, coordinated initiatives aimed at lowering greenhouse gas emissions to 1990 levels from 'business-as-usual' levels by 2020, representing an approximate 30% overall reduction. These objectives are reinforced by Executive Orders issued by the Governor's Office in 2005 and 2015, targeting reducing greenhouse gas emissions to 80% below 1990 levels by 2050 (S-3-05) and 40% below 1990 levels by 2030 (B-30-15).

GOALS, OBJECTIVES, POLICIES, AND IMPLEMENTATION MEASURES



Gateway Preserve in the City of Irvine

The open space resources and conservation efforts in Irvine stand out as highly valued amenities, setting the City apart from other urban communities. As part of these efforts, the City has identified the following issues for consideration:

- **How can conservation and open space objectives be balanced with development objectives?**
- **How can conservation and open space areas be integrated into urban development?**
- **How can public access and enjoyment of conservation and open space areas be provided?**
- **How can the environmental systems be maintained and preserved?**
- **How can significant hazards and resource areas be identified and managed to protect the public's safety, health, and welfare?**
- **How can an effective and realistic policy program provide for the permanent preservation and management of conservation and open space areas be established?**
- **How can the City continue park maintenance and rehabilitation at current standards and respond to the changing needs over time?**

The goals, objectives, policies, and implementation measures outlined on the following pages work to build upon opportunities and mitigate constraints in helping the City stay aligned with open space and conservation efforts that serve as cornerstones of the City's development.

Goal 1. Ensure the permanent protection and preservation of designated conservation and open space areas amidst the development of commercial, industrial, institutional, and residential zones.

Objective COS-1: Continue the implementation of programs that effectively integrate the protection and preservation of conservation and open space areas with the development of designated zones.

POLICIES:

Policy (a): Continue to prioritize the identification and delineation of conservation and open space areas within the city's planning framework.

Policy (b): Require developers to conduct comprehensive environmental assessments to identify potential impacts on designated conservation and open space areas during project planning.

Policy (c): Encourage the adoption of land use zoning regulations that incorporate buffer zones around conservation and open space areas to mitigate adverse impacts from adjacent development.

Policy (d): Facilitate partnerships between public agencies, private developers, and conservation organizations to acquire, manage, and maintain designated conservation and open space areas.

Policy (e): Implement incentives such as density bonuses or development credits for projects that contribute to the enhancement or restoration of conservation and open space areas.

IMPLEMENTATION MEASURES:

- Conduct regular assessments to identify designated conservation and open space areas and monitor their condition amidst surrounding development.
- Develop and enforce zoning regulations and land use policies that prioritize the preservation of designated conservation and open space areas during the planning and approval process for new developments.
- Establish conservation easements or acquire land rights to ensure the permanent protection of identified conservation and open space areas.
- Collaborate with developers to incorporate designated conservation and open space areas into site designs and development plans through clustering techniques and landscape preservation strategies.
- Implement public education and outreach programs to raise awareness about the importance of designated conservation and open space areas and encourage community involvement in their preservation.
- Allocate dedicated funding sources for the acquisition, maintenance, and enhancement of designated conservation and open space areas through municipal budgets or grants.
- Establish partnerships with conservation organizations, land trusts, and governmental agencies to leverage resources and expertise for the preservation and management of designated conservation and open space areas.

Goal 2. Implement the Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) agreement and program to accomplish multi-species and multi-habitat conservation.

Objective COS-2: Continue to effectively implement the Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) agreement and program to achieve comprehensive conservation goals, including the preservation and management of diverse species and habitats across the designated area, ensuring long-term ecological sustainability and biodiversity conservation.

POLICIES:

Policy (a): Review project proposals within the reserve system to assure consistency with the NCCP/HCP implementation agreement and program.

Policy (b): Assure that nonparticipating landowners provide evidence of payment of mitigation fees.

Policy (c): Manage all City open space lands enrolled in the NCCP/HCP Reserve System consistent with the terms, conditions and obligations of the NCCP/HCP permit and Implementation Agreement and associated Recreation and Resource Management Plan (RRMPs), including the City's obligation to restore Coastal Sage Scrub (CSS) habitat in exchange for development of the open space trail system authorized in the RRMP.

Policy (d): Use the NCCP as a Program Environmental Impact Report for purposes of consistency with the California Environmental Quality Act, applying the Coastal Sage Scrub (CSS) mitigation measures applicable to planned activities.

Policy (e): Adopt fuel modification ordinances and standards consistent with the Fuel Modification Zones established in the NCCP/HCP.

Birds of Coastal Sage Scrub at Bommer Canyon
Source: Irvine Ranch Natural Landmarks

Policy (f): Encourage and avoid adverse impacts to viable wildlife movement corridors connecting the Santa Ana Mountains to the coast open space areas of Bommer and Shady Canyons, Laguna Coast Wilderness Park, and Crystal Cove State Park.

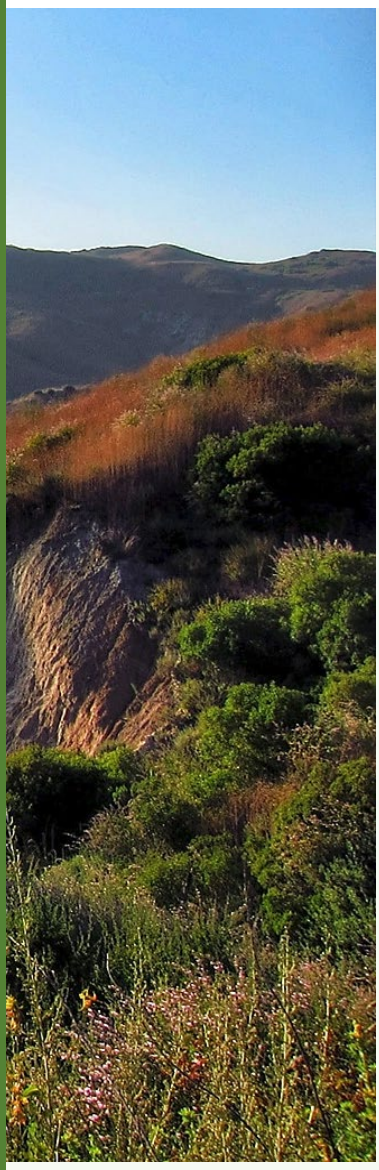
IMPLEMENTATION MEASURES:

- Prioritize acquisition and protection of key habitats identified in the NCCP/HCP agreement through land purchases, conservation easements, and habitat restoration projects.
- Coordinate with landowners, developers, and local communities to integrate NCCP/HCP conservation objectives into land use planning, development projects, and zoning regulations.
- Implement habitat enhancement and restoration projects to improve habitat quality and connectivity for target species identified in the NCCP/HCP agreement.
- Facilitate public outreach and education programs to raise awareness about the importance of multi-species and multi-habitat conservation efforts outlined in the NCCP/HCP agreement and foster community support for conservation initiatives.
- Secure funding from governmental grants, private foundations, and mitigation fees to support the implementation of the NCCP/HCP agreement and program, including habitat restoration, monitoring, and enforcement activities.
- Establish adaptive management strategies to allow for flexibility in implementing the NCCP/HCP agreement and program, enabling adjustments based on changing environmental conditions, scientific knowledge, and stakeholder feedback.

Open space and wildlife in the City of Irvine

Goal 3. Use and preserve geophysical resources, including, but not limited to, ridgelines, hillsides, and waterways, as part of the City's land use pattern.

Objective COS-3: Effectively utilize and safeguard geophysical resources, encompassing ridgelines, hillsides, and waterways, within the City's land use framework to maintain ecological integrity, enhance aesthetic value, and promote sustainable development practices that harmonize with the natural landscape.



POLICIES:

Policy (a): Implement development strategies that prioritize the preservation and minimal disturbance of the City's hillsides through clustering, landscaping, and grading techniques.

Policy (b): Coordinate resource information at the General Plan level to assess potential impacts on natural resources.

Policy (c): Encourage the creation of flood control channels, preferring natural swale designs where feasible, and promote the development of small lakes for public use while preserving their natural edges.

Policy (d): Conduct studies on existing drainage channels to determine suitable preservation measures, integrating them into surrounding development designs.

Policy (e): Minimize alterations to major creek courses and ensure no net loss in the quantity or quality of surface and subsurface water flow into the San Joaquin Marsh resulting from development activities.

Policy (f): Prioritize minimal alteration of natural topography during necessary modifications, locating buildings to minimize grading and preserve native vegetation (except for fire trails).

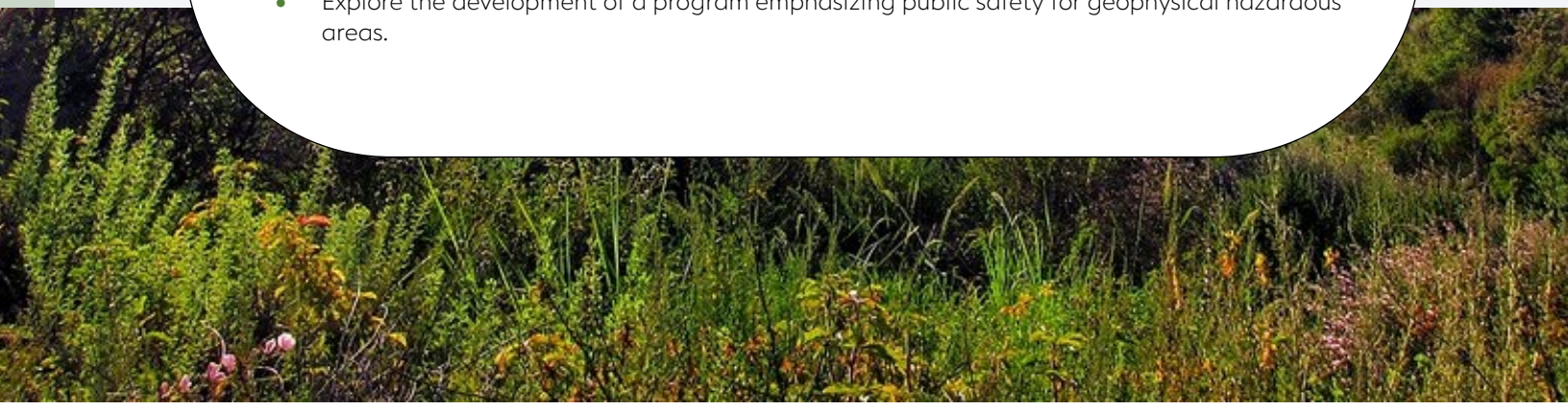
Policy (g): Implement access roads or highways through hillside areas with the least environmentally damaging feasible alternative, minimizing impacts on ecological and aesthetic characteristics.

Policy (h): Ensure proposed developments in hillside areas minimize flood hazard and runoff impacts on both lowlands and hillsides.

Policy (i): Minimize the danger to life and property from geophysical hazards, including, but not limited to, unstable soils, liquefaction, steep slopes, and floodways.

IMPLEMENTATION MEASURES:

- Encourage development clustering approaches, landscaping, and grading techniques to minimize physical and visual impacts on the City's valuable hillsides.
- Coordinate General Plan level resource information to determine the level and type of resource(s) potentially within any proposed development.
- Promote the development of a flood control channel to handle projected floodwaters of the San Diego and Peters Canyon Washes. Where practicable, require that the channel be a natural swale channel with grass or other natural planting as an integral part of its design as opposed to a concrete design.
- Develop small lakes around existing waterways, where possible and promote the development of all lakes and reservoirs for the public use and do not allow residential development at their edge.
- Study, where possible and practicable, the appearance and ecology of certain existing natural drainage channels to determine which channels or portions of the channels, conservation measures shall be applied to. Channels or portions of channels determined to be suitable for preservation purposes may be modified to enhance their ecology, long-term viability and maintenance. Those channels or portions of channels shall be integrated into the design of the surrounding development.
- Minimize alternations of major creek courses and bottoms.
- Allow no net loss quantity or quality of surface and subsurface water flow into the San Joaquin Marsh to occur because of development.
- Ensure that no significant change in the general configuration of the topography occurs where modifications of the natural topography are necessary.
- Locate buildings on sites which minimize the need for grading or removal of native plant material (except for fire trails).
- Ensure that any access roads or highways that must pass through hillside areas are the least environmentally damaging, feasible alternative which minimizes the impacts to the hillside ecological and/or aesthetic characteristics.
- Ensure that any proposed development in hillside areas is the least environmentally damaging feasible alternative and minimizes flood hazard and runoff impacts to the lowlands and hillsides.
- Continue to coordinate General Plan level hazard information (i.e., Safety Element) to determine the level of hazardous condition(s) potentially affecting any proposed development.
- Consider land which is unsuitable for development because of hazards to public health, safety, and welfare for an open space use.
- Explore the development of a program emphasizing public safety for geophysical hazardous areas.



Goal 4. Use and maintain societal resources, including, but not limited to, archaeological, historical, and paleontological resources, as part of the City's land use pattern.

Objective COS-4: To effectively utilize and preserve societal resources, encompassing archaeological, historical, and paleontological assets, within the City's land use framework, ensuring their integration and maintenance in alignment with conservation and open space goals.

Artifacts on display at the Portola Springs Sentinel Ribbon Cutting in the City of Irvine

POLICIES:

Policy (a): Continue to coordinate General Plan level resource information to determine the level and type of resource(s) potentially impacted by proposed development.

Policy (b): Consider land that contains significant resource(s) for an open space use.

Policy (c): Promote public awareness and appreciation of cultural resources by participating in educational programs and by helping to display artifacts that illuminate past cultures and by encouraging private development to include historic and archaeological displays where feasible and appropriate.

IMPLEMENTATION MEASURES:

- Conduct regular surveys and assessments of archaeological, historical, and paleontological resources within the City's boundaries to identify significant sites and resources worthy of preservation.
- Develop and enforce zoning regulations and land use policies that protect identified societal resources from destruction or degradation due to development activities, ensuring their long-term preservation.
- Establish guidelines and standards for the management and conservation of archaeological, historical, and paleontological sites, including protocols for excavation, documentation, and interpretation to maintain their integrity and educational value.
- Collaborate with local historical societies, preservation organizations, and academic institutions to promote public awareness and appreciation of societal resources, offering educational programs, guided tours, and interpretive signage at key sites.
- Incorporate societal resources into urban planning and development processes by integrating them into green space design, trail systems, and recreational amenities to enhance community engagement and cultural identity.
- Establish funding mechanisms, grants, and incentives to support the restoration, maintenance, and adaptive reuse of archaeological, historical, and paleontological resources, leveraging public-private partnerships and philanthropic contributions.
- Maintain partnerships with tribal nations, indigenous communities, and descendant groups to ensure respectful stewardship of cultural heritage sites and facilitate meaningful consultation and engagement in decision-making processes related to their preservation and management.

Goal 5. Maintain and preserve large, contiguous areas which contain significant multiple hazards and resources.


San Joaquin Marsh & Wildlife Sanctuary

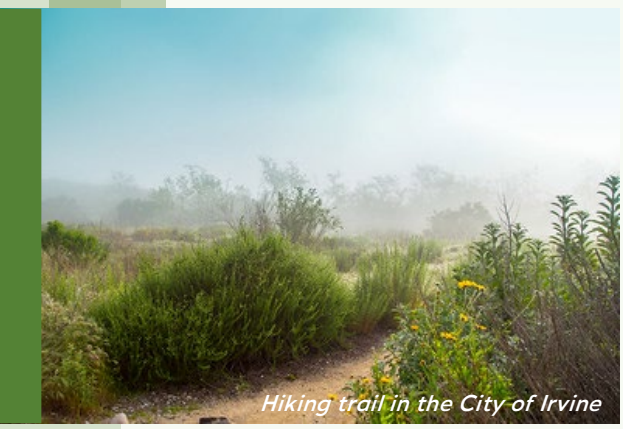
Objective COS-5: Continue to safeguard and conserve large, contiguous areas housing significant and diverse hazards and resources, ensuring their preservation and maintenance to mitigate environmental risks and support ecological sustainability within the City's conservation and open space framework.

POLICIES:

Policy (a): Explore options to obtain lands through grant and/or easements for transition areas adjacent to preservation areas as shown in the Conservation and Open Space Element and Land Use Element.

Policy (b): Permit agricultural activities and other compatible uses within preservation areas until they are transferred to public ownership, ensuring adherence to the NCCP/HCP Implementation Agreement and related Resource and Recreation Management Plans.

Policy (c): Permit landform, vegetation, and drainage modifications pursuant to all allowable uses except in riparian vegetation areas and the NCCP/HCP Reserve unless permitted under the Implementation Agreement.


Hiking trail in the City of Irvine

Policy (d): Ensure that riparian vegetation is not significantly modified, except as necessary to provide fire protection, access roads, and flood control, drainage, water, sewer, and utility facilities, and except where habitat is to be enhanced as part of a mitigation program approved by the California Department of Fish and Wildlife or Implementation of the NCCP/HCP.

Policy (e): Participate in cooperative efforts with federal, state, and county agencies and landowners in planning, managing, and restoring regionally significant conservation and open space areas within the City and its sphere of influence (Loma Ridge, Bommer and Shady Canyons, and San Joaquin Marsh).

Policy (f): Explore the possibility and feasibility of joint-use agreements or other similar concepts to develop and maintain large regional wilderness areas/parks in preservation areas such as the Loma Ridge and Bommer and Shady Canyon areas with adjacent public landowners and managers.

Policy (g): Maintain significant riparian areas within preservation areas as natural corridors, sources of shelter, and water for wildlife.

Policy (h): Minimize intensive human use in preservation areas which sustain rare or endangered species, including migratory birds and rare plant species. Ensure use patterns and levels remain consistent with the NCCP/HCP and associated Recreation and Resource Management Plan (RRMPs).

Policy (i): Preserve and enhance the San Joaquin Marsh as a habitat resource and mitigation bank through implementation of the "San Joaquin Marsh Habitat Enhancement and Wetlands Creation Program."

Policy (j): Seek the least environmentally damaging and feasible alternatives where modifications of the natural topography are necessary in preservation area. Ensure that all impacts to preservation areas enrolled in the NCCP/HCP reserve system are consistent with the Implementation Agreement and associated RRMPs.

Policy (k): Ensure that any public road, arterial highway, transportation corridor, or utility that must pass through preservation areas outside the NCCP/HCP Reserve is the least environmentally damaging feasible alternative to the preservation area's environmental characteristics.

Policy (l): Ensure continuity and continued enhancement of the Agua Chinon and Wildlife Corridor in Planning Area 51.

Policy (m): Encourage special linkages for wildlife corridors, when feasible, viable, and suitable, within the City and sphere of influence as well as in non NCCP/HCP Reserve areas containing "target and identified species."

IMPLEMENTATION MEASURES:

- Conduct regular monitoring and assessment of large contiguous areas to identify potential hazards and significant resources, including geological features, wildlife habitats, and cultural sites.
- Develop and implement land management plans that prioritize the preservation and conservation of identified hazards and resources, utilizing strategies such as habitat restoration, erosion control, and wildfire management.
- Establish buffer zones and protective measures around sensitive areas within large contiguous areas to minimize the impact of external threats, such as urban development, pollution, and invasive species.
- Collaborate with relevant stakeholders, including government agencies, conservation organizations, and local communities, to coordinate conservation efforts and leverage resources for the long-term protection of large contiguous areas.
- Implement public education and outreach programs to raise awareness about the importance of preserving large contiguous areas and promote responsible stewardship among residents and visitors.
- Develop partnerships with neighboring jurisdictions to facilitate cross-boundary conservation initiatives and ensure the integrity of ecological corridors and wildlife migration routes.
- Secure funding through grants, bonds, and other financial mechanisms to support ongoing maintenance and preservation efforts, including habitat restoration, wildlife monitoring, and public access improvements.

Goal 6. Establish and maintain a network of parks and recreational areas that offer a wide range of leisure opportunities while promoting their sustainable development and maintenance.

Objective COS-6: Maintain and enhance the City's network of parks and recreational areas that provide a variety of recreational opportunities, and which link and integrate other conservation and open space areas into the land use fabric of the City.

Bill Barber Park in the City of Irvine

POLICIES:

Policy (a): Continue to coordinate parks and recreational opportunities through the General Plan and Parks Master Plan to ensure adequate and timely development of parks and recreational areas.

Policy (b): Expand opportunities and places for casual nature-related recreation and leisure (e.g., the Jeffrey Open Space Trail) that are distinct from turf parks and protected wildlands.

Policy (c): Provide appropriate public access to open space lands for recreation activities while protecting and restoring the natural ecosystems and minimizing environmental damage, as appropriate, consistent with the NCCP/HCP Implementation Agreement and associated RRMPs.

Policy (d): Provide for a broad spectrum of recreational opportunities and park facilities, in either public or private ownership, to accommodate a variety of types and sizes of functions and provide safe and easy access for their intended users.

Policy (e): Ensure that Irvine's park system is developed, maintained, and rehabilitated in a manner that is cost-effective and consistent with the community's needs and ability to pay.

Policy (f): Require developers of residential land to dedicate park land and/or improvements/amenities, and/or pay fees in lieu of dedication, at a rate of five (5) acres per thousand (1,000) population, consistent with the Quimby Act, Subdivision Map Act, Irvine Subdivision and Zoning Ordinances and General Plan standards.

Great Park in the City of Irvine

IMPLEMENTATION MEASURES:

- Encourage the development of special areas in community parks that will enhance recreational and leisure opportunities in the City, such as the Interpretive Center in Turtle Rock Community Park and the senior centers in Rancho San Joaquin and Woodbridge and the fine arts center in Heritage Park.
- Provide neighborhood parks that respond to recreational needs at a local level.
- Strongly advocate the creation of homeowners' associations as a way to encourage the ownership and maintenance of private neighborhood parks.
- Support and work with the County of Orange and the state in the development of regional and state parks.
- Encourage citizen participation in the planning of park facilities to ensure new developments and attributes are reflective of the needs of the community.
- Update the Parks Master Plan every ten years.
- Purchase and improve park and recreation facilities consistent with the availability of capital improvement funds.
- Pursue state and federal funding sources to acquire park facilities in addition to those dedicated to the City.
- Adopt guidelines to permit the leasing of public parkland for use by private enterprises for commercial recreational purposes.
- Require review by the Community Services Commission and/or the Planning Commission, as appropriate, of all land and facilities proposed for park dedication.
- Use the adopted Community Parks Master Plan as a guideline for future development of community parks.
- Require that applications requiring subdivision maps under the Subdivision Map Act for residential development include a park program which identifies the following:
    - Adaptability of the land for park and recreation use.
    - Suitability of proposed facilities to meet the recreation needs of residents the park is to serve.
    - Responsible agency and costs of maintenance.
    - Location of the park or facilities for convenient access to housing, school, and employment centers.
- Require park land dedicated by developers to meet minimum improvement standards to ensure a functional use of land. Use the Local Park Code as the standard for design and siting of neighborhood parks.
- Grant credit for private neighborhood park facilities to those facilities identified in the City's Local Park Code.
- Allow developers of low- and moderate-income housing to dedicate less park land and amenities subject to review by the Planning Commission or other approving body.
- Ensure parks developed in new residential communities, including areas to be annexed, include a balance of amenities comparable to facilities provided in existing neighborhoods with private and public facilities. Such amenities may include, but are not limited to, swimming pools, club houses, and tennis courts.

- Require proposed park locations to be reviewed at the time of tentative tract approval to ensure safe and easy access for occupants of surrounding land uses.
- Locate parks adjacent to school sites and other public facilities when feasible to reduce development and operating costs.
- Use the latest adopted Community Parks Master Plan as a guideline for future siting of community parks:
    - Locate parks and recreation uses adjacent to public trails and in urban areas.
    - Trail linkages should serve to create a connected park system.
    - Link parks and trails to other open space.
- Pursue all possible methods to generate revenue for the maintenance and rehabilitation of parks, such as maintenance districts, commercial leasing, user fees and other available private and public funding sources.
- Maintain and rehabilitate the City's public parks consistent with the Strategic Business Plan and the availability of capital improvement funds.
- Require that all public neighborhood parks be maintained and rehabilitated by the City to ensure their continued availability and use for residents.
- Require maintenance and rehabilitation of all private neighborhood parks by the responsible homeowners' association through a recorded agreement requiring the perpetual private ownership and maintenance of these parks.
- Pursue and maintain joint use agreements with the Irvine and Tustin Unified School District and other educational entities.
- Initiate discussions with local colleges and universities for joint-use of recreational facilities located on the campuses of these educational institutions.


Beacon Park


Cadence Park


Parasol Park

Goal 7. Encourage the maintenance of agriculture in undeveloped areas of the City until the time of development, and in areas not available for development.

Objective COS-7: To promote the preservation and sustenance of agricultural activities in undeveloped areas of the City until their eventual development, and in areas where development is not feasible or permitted, ensuring the continued vitality of agricultural landscapes and practices within the community.

Kids activity at Great Park Farm + Food Lab in the City of Irvine

POLICIES:

Policy (a): Encourage farming opportunities in the community, where feasible and appropriate, to facilitate limited scale agricultural operations and programs on public lands. This may include components such as edible landscape, metro-farming, heritage farming, model farming, educational and community service farming and other farm or farm market programs.

Policy (b): Maintain and enhance community gardens and urban farms as an educational and interactive resource for the enrichment and enjoyment of all age groups.

Policy (c): Encourage agricultural uses on land that is unsuitable for building because it is within flood plains, or is subject to hazards to public health, safety, and welfare or similar constraints precluding development. Conversion from agricultural uses may be allowed where the identified hazard conditions have been eliminated.

Policy (d): Encourage and permit agriculture uses, on an interim basis, on land designated for development.

Policy (e): Encourage and support federal and state legislation proposed for the purpose of preservation of agricultural lands which are compatible with the City's goals and objectives.

Policy (f): Allow for conversion of interim and permanent agricultural uses to development to provide land for the construction of housing units consistent with the Land Use and Housing Elements, and the development of commercial and industrial buildings consistent with the provision of job opportunities as described in the Land Use Element, where such conversion does not conflict with other LU-10 policies.

Policy (g): Encourage and support the establishment and maintenance of community gardens within the City by exploring the following:

- Identifying and designating suitable public and private spaces for community garden development with an emphasis placed on vacant lots, unused public lands, and underutilized spaces with adequate sunlight and accessibility.

- Establishing partnerships with local community organizations, non-profits, and gardening associations to facilitate the planning, implementation, and ongoing management of community gardens.
- Encouraging collaboration between local government, schools, and businesses to support community garden initiatives.
- Developing educational programs to promote sustainable gardening practices, organic farming methods, and water conservation.
- Conducting outreach campaigns to inform residents about the benefits of community gardens and how to get involved.
- Integrating community garden considerations into urban planning and development processes to ensure their inclusion in future neighborhood designs.
- Encouraging mixed-use developments incorporate communal green spaces with the potential for community gardening.

IMPLEMENTATION MEASURES:

- Establish agricultural zoning regulations and incentives to support the continuation of farming activities in undeveloped areas, including tax incentives, land lease programs, and streamlined permitting processes for agricultural operations.
- Explore innovative land use planning strategies, such as agricultural clustering and agri-tourism initiatives, to diversify farm income sources and promote sustainable agriculture in undeveloped areas.
- Conduct periodic reviews of the City's comprehensive plan and zoning ordinances to ensure alignment with goals and objectives related to the maintenance of agriculture in undeveloped areas, making necessary adjustments to zoning designations and land use policies as needed.

Goal 8. Enhance open space in the Irvine Business Complex.

Objective COS-8: Higher density neighborhoods need parks and urban space to offset building intensity and provide space for informal activities. The vision is to continue to develop a system of new public parks, urban plazas, open spaces, and private or public recreation areas that are interconnected by streets, bikeways, and trails. Well-crafted and programmed public space encourages people gathering and neighborhood events.

A business park in the City of Irvine

POLICIES:

Policy (a): Contribute fees to new community park within or adjacent to the IBC that serves new residents and provides a variety of amenities.

Policy (b): Provide smaller, neighborhood scale parks and urban open space within and between projects that provide local park areas for residents.

Policy (c): Provide private on-site recreational facilities and open space for use by neighborhood residents in meeting recreation, health, and wellness needs.

Policy (d): Require additional private open space in the form of patios, courtyards, and balconies for most dwellings, in addition to the park and recreational requirement.

Policy (e): Provide a balance between landscape and built form by providing sufficient planting space around buildings and within internal spaces.

IMPLEMENTATION MEASURES:

- Conduct a comprehensive assessment of existing neighborhoods to identify areas experiencing higher population density and lacking adequate access to parks and open spaces.
- Develop a prioritization plan to determine the locations and types of new public parks, urban plazas, and open spaces needed in high-density neighborhoods, considering factors such as population density, proximity to existing parks, and community feedback.
- Engage residents, community groups, and stakeholders through public forums, surveys, and workshops to gather input on park design preferences, recreational amenities, and programming options to ensure the creation of vibrant and inclusive public spaces.
- Collaborate with developers and landowners to integrate private or publicly accessible recreation areas within new residential developments, incorporating provisions for green spaces, playgrounds, and community gardens to enhance neighborhood livability.
- Design interconnected streets, bikeways, and pedestrian trails to facilitate seamless connectivity between parks, plazas, and open spaces, promoting walkability, cycling, and active transportation within high-density neighborhoods.
- Implement innovative design strategies and placemaking initiatives to activate public spaces, including the installation of public art, interactive installations, and cultural events to foster a sense of community pride and social interaction.
- Establish maintenance plans and funding mechanisms to ensure the long-term sustainability and upkeep of new public parks and urban spaces, allocating resources for landscaping, infrastructure maintenance, and programming initiatives to meet the diverse needs of residents.

Goal 9. Enhanced utilization of open space in existing development and new development projects.

Objective COS-9: Promote and, when suitable, mandate the incorporation of open space areas in multi-family, mixed-use, and office developments to supplement the available open space and recreational facilities in the City. Optimize the utilization of current public open space assets on a neighborhood scale and explore possibilities for private development to enrich neighborhood open space resources.

POLICIES:

Policy (a): Continue to enforce zoning regulations mandating accessibility to open space for new residential, retail, and commercial developments.

Policy (b): Explore the potential for developers to contribute to the enhancement of existing open space accessibility through a fee payment instead of mandatory on-site parks provision for new developments, with the fee going towards enhancing access to existing open space.

Policy (c): Promote the creation of rooftop open areas in denser residential, mixed-use, and commercial developments. Ensure that the design of these spaces minimizes potential impacts on nearby properties, such as noise, privacy, and light concerns.

Overview of the Great Park in the City of Irvine.

Policy (d): Encourage the establishment of incentives for incorporating publicly accessible open space into private development initiatives.

Policy (e): Promote rewilding opportunities through the creation of public plazas, tree-lined streets, community gardens, farmers markets, residential commons, rooftop areas, and similar spaces that serve as open space alternatives in urbanized sections of the City, particularly in designated growth areas with limited natural open space, such as the Greater Spectrum and Irvine Business Complex areas.

Policy (f): Promote enhancements to open spaces, whether on public or private land, when opportunities arise. This could involve dedicating areas not able to be developed due to building purposes or lot size, or improving sites for green spaces, as well as upgrading pathways and connections to function as neighborhood landscaping and recreational amenities.

Policy (g): Promote the integration of compact public open spaces in transit-oriented development, including plazas and small parks linked to transit stations.

Policy (h): Encourage public access areas within private joint developments at transit station locations.

IMPLEMENTATION MEASURES:

- Maintain a comprehensive inventory and assessment of existing open spaces within the City, including parks, greenways, and natural areas, to identify underutilized or overlooked spaces ripe for enhancement.
- Develop guidelines and design standards for integrating open spaces into new development projects, ensuring that open space elements are integrated seamlessly into the urban fabric and contribute to the overall quality of life for residents.
- Encourage developers to incorporate innovative open space designs, such as pocket parks, rooftop gardens, and community gathering spaces, into their projects through incentives such as density bonuses or expedited permitting processes.
- Facilitate public-private partnerships to leverage resources and expertise for the enhancement and activation of underutilized open spaces, including collaborations with local businesses, community organizations, and non-profit entities.
- Prioritize the creation and maintenance of multi-functional open spaces that serve diverse community needs, such as recreational activities, ecological preservation, stormwater management, and social gatherings, to maximize the benefits of limited land resources.
- Implement outreach and engagement initiatives to solicit input from residents and stakeholders on their preferences and priorities for open space amenities and programming, ensuring that enhancements reflect the unique character and needs of each neighborhood.
- Develop maintenance and management plans for enhanced open spaces, outlining responsibilities, funding mechanisms, and performance metrics to ensure long-term sustainability and usability of the improved areas.

Goal 10. Enhanced open space accessibility and utilization, and conservation efforts of resources.

Objective COS-10: The City commits to creating and fostering well-integrated and sustainable open space resources available to City residents and visitors.

Rendering of Great park in the City of Irvine

POLICIES:

Policy (a): Provide a variety of public and private parks to meet residents' needs.

Policy (b): Ensure that the City's park, recreation, and open space system is accessible to all residents, including users of different abilities and demographic characteristics.

Policy (c): Encourage the creation of dynamic parks as special and unique places, adding or incorporating art and historic resources, innovative features, diverse landscaping, nature, varied color palettes, and welcoming amenities.

Policy (d): Balance access to open space for outdoor passive and active recreation with conservation needs consistent with City's Open Space management obligations and permit conditions such as the NCCP/HCP.

Policy (e): Consider integration of the Great Park into the planning of new park development, recognizing it as a valuable resource that will effectively address the diverse park and passive and active recreation needs of various community segments.

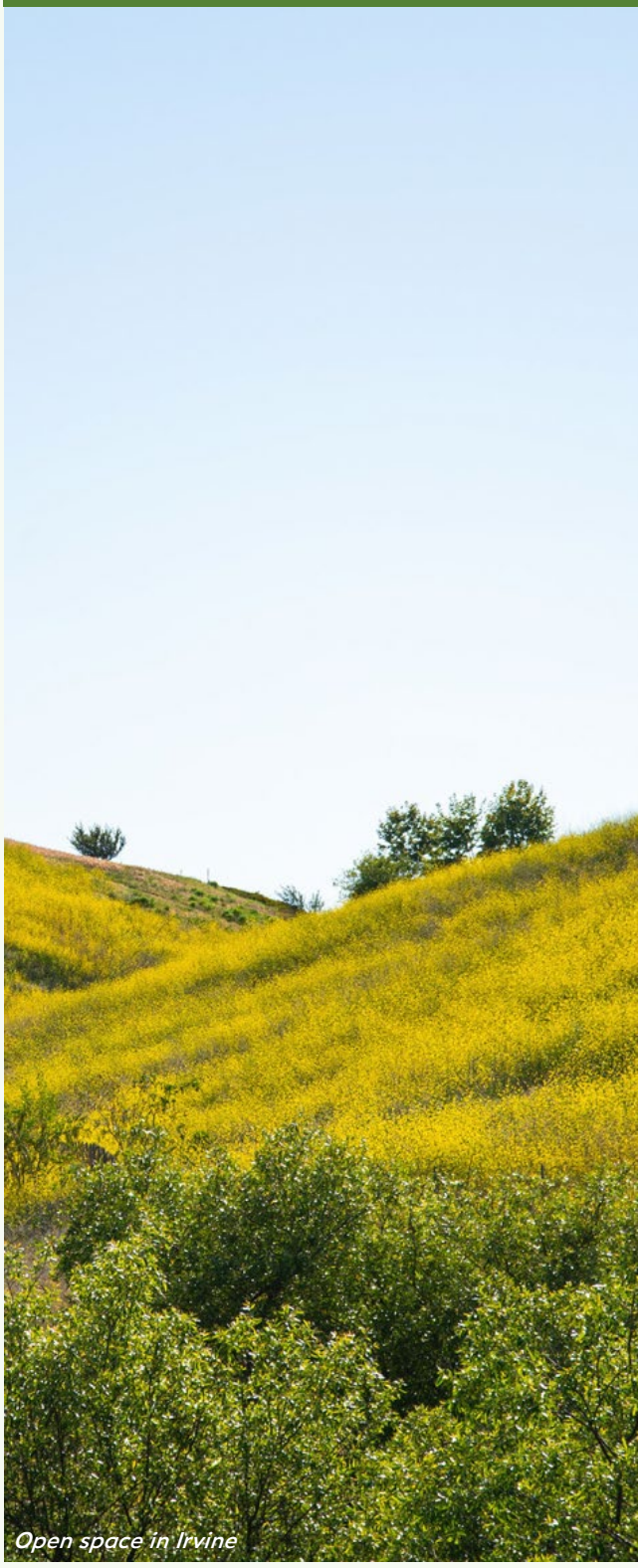
Policy (f): Ensure that choices related to future development, capital projects, and resource management align with the City's climate objectives, encompassing goals for reducing greenhouse gas emissions and fostering adaptation.

Policy (g): Coordinate conservation efforts in alignment with Environmental Protection and Climate Action Elements objectives and against the degradation of soil that supports open spaces and passive and active recreational use, the sustainability of water resources, and preservation of cultural and historical resources.

Policy (h): Coordinate conservation efforts of forestry in alignment with the City's planned Urban Forests Master Plan.

Policy (i): Coordinate conservation of water resources in alignment with Environmental Protection and Climate Action Elements objectives and policies to encourage the integration of existing and future water sources (reservoirs, lakes, and drainage courses) into development.

Policy (j): Safeguard and maintain biotic communities and habitats within designated conservation and open space areas in alignment with Environmental Protection and Climate Action Element, NCCP/HCP and Resource Management Plans, including the protection of native flora and fauna, restoration of degraded habitats, and management practices aimed at enhancing biodiversity and ecological resilience.



Open space in Irvine

Hiking in Irvine

IMPLEMENTATION MEASURES:

- Conduct a comprehensive assessment of existing open spaces and natural resources to identify areas with limited accessibility or underutilization.
- Develop and implement strategies to enhance accessibility to open spaces, including the creation of new pedestrian and bicycle pathways, improved signage, and the removal of physical barriers.
- Collaborate with community organizations, non-profits, and local businesses to organize outreach programs and events that promote the utilization of open spaces and raise awareness about conservation efforts.
- Establish partnerships with educational institutions and environmental groups to conduct educational programs and workshops on the importance of conservation and sustainable land use practices.
- Implement habitat restoration projects in collaboration with environmental experts and volunteers to enhance the ecological value of open spaces and preserve native flora and fauna.
- Integrate technology solutions, such as mobile applications and interactive maps, to provide real-time information about open space amenities, trail conditions, and environmental conservation initiatives.
- Allocate funding and resources for the maintenance and improvement of open spaces, including regular maintenance activities, vegetation management, and infrastructure upgrades to enhance visitor experience and safety.
- Develop policies and incentives to encourage sustainable land management practices among property owners and developers, such as green building standards, native landscaping requirements, and conservation easements.
- Establish monitoring and evaluation mechanisms to track the effectiveness of accessibility and conservation efforts, including visitor counts, ecological surveys, and community feedback, and adjust strategies accordingly.