

Chollas Creek Watershed Regional Park Existing Conditions Report

May 2025



Equity Forward seeks to plan for more equitable, healthy, and enjoyable places for all San Diegans. The policies, plans, and processes under Equity Forward are intended to create more equitable opportunities and investments in San Diego. By acknowledging the effects of policy decisions that have resulted in inequitable outcomes, Equity Forward seeks to rely on the diversity of voices in our city to plan for better communities for all San Diegans. For more information, visit: www.sandiego.gov/equity-forward.

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01

BACKGROUND AND OVERVIEW

Introduction

The 22-square-mile Chollas Creek Watershed is centered around Chollas Creek and is located in the southeastern region of the City of San Diego. A watershed is defined by topography and the drainage patterns of an area after it rains. An area where stormwater drains in a similar pattern towards a major river, creek, or stream, encompasses that water body's watershed. The Chollas Creek Watershed falls within the jurisdictions of the City of San Diego, the City of Lemon Grove, and the City of La Mesa. Specifically in the City of San Diego, the Chollas Creek Watershed includes the community planning areas of North Park, Mid-City, Greater Golden Hill, Barrio Logan, Southeastern San Diego, Encanto Neighborhoods (Encanto) and Skyline-Paradise Hills. Most of these neighborhoods are highly urbanized, with some of the oldest inland neighborhoods in the City. Chollas Creek and its tributaries have a rich history in this region and have been a key resource in the community for connecting with open spaces, stormwater management, recreation, and community development.

In 2002, the City Council adopted the Chollas Creek Enhancement Program, laying out a visionary path to improve the Chollas Creek Watershed guided by the community's vision at that time. This comprehensive program includes policies, design guidelines, and an implementation strategy, all of which were developed with City staff, community leaders, and community members. Working together, the vision was developed by identifying opportunities for improvements and restoration areas through the creation of nature-based solutions and enjoyable public spaces accessible to all. Some of the projects that were implemented as a result of the Chollas Creek Enhancement Program include creek restoration along sections of Imperial

Avenue, Market Street, and Euclid Avenue, and the development of Southcrest Trails Park, Wightman Street Neighborhood Park, and Charles Lewis III Memorial Park. The major storm event in January 2024 had a significant impact on several parks and public spaces throughout the area. Many parks experienced flooding, erosion, and damage to amenities, requiring extensive cleanup and repairs to restore them to their original condition.

On September 14, 2021, the San Diego City Council formally designated the Chollas Creek Watershed Regional Park (Regional Park) under Ordinance Number 21372. To realize the community's vision and implement the recently adopted Parks Master Plan, the City Planning Department will closely coordinate with diverse communities and stakeholders to develop the Chollas Creek Watershed Regional Park Master Plan (Chollas Creek Park Master Plan). Since the City of San Diego's authority is limited to its jurisdiction, the Chollas Creek Park Master Plan and this Existing Conditions Report focus exclusively on the portion of the Chollas Creek Watershed within the city's boundaries. References to the watershed in this report pertain solely to this area. However, while the Regional Park encompasses only a part of the watershed, this report examines the entire watershed to gain a comprehensive understanding of the community's needs and the possible future impacts of the Chollas Creek Park Master Plan. The Chollas Creek Park Master Plan aims to build on the Chollas Creek Enhancement Program, aligning the Regional Park's future with current information, needs, challenges, and opportunities. The Chollas Creek Park Master Plan will guide the development of a sustainable and resilient Regional Park that serves as a destination for all who live, work, and play in San Diego, as well as those who visit.

The Existing Conditions Report provides a qualitative and quantitative analysis of the current conditions within the watershed. It includes an overview of the existing assets, constraints, and opportunities within the Regional Park and analyzes the assets, constraints, and opportunities within the watershed's urban environment that may affect how visitors access or experience the Regional Park. The Existing Conditions Report also offers a visual analysis of various physical, environmental, and economic factors that will inform the development of the Chollas Creek Park Master Plan.

- Chollas Creek Watershed
- Chollas Creek Watershed Regional Park
- Chollas Creek





Chollas Creek Park Master Plan Goals

Protect and enhance the
Regional Park's ecology
and natural habitats



Improve the Regional
Park's sustainability and
resilience to climate
change impacts



Increase outdoor
recreational and
educational opportunities
for residents and visitors



Embrace community
values and preserve
community identity



Promote safe and
enjoyable walking/rolling
and biking within the
Regional Park and to
adjacent neighborhoods



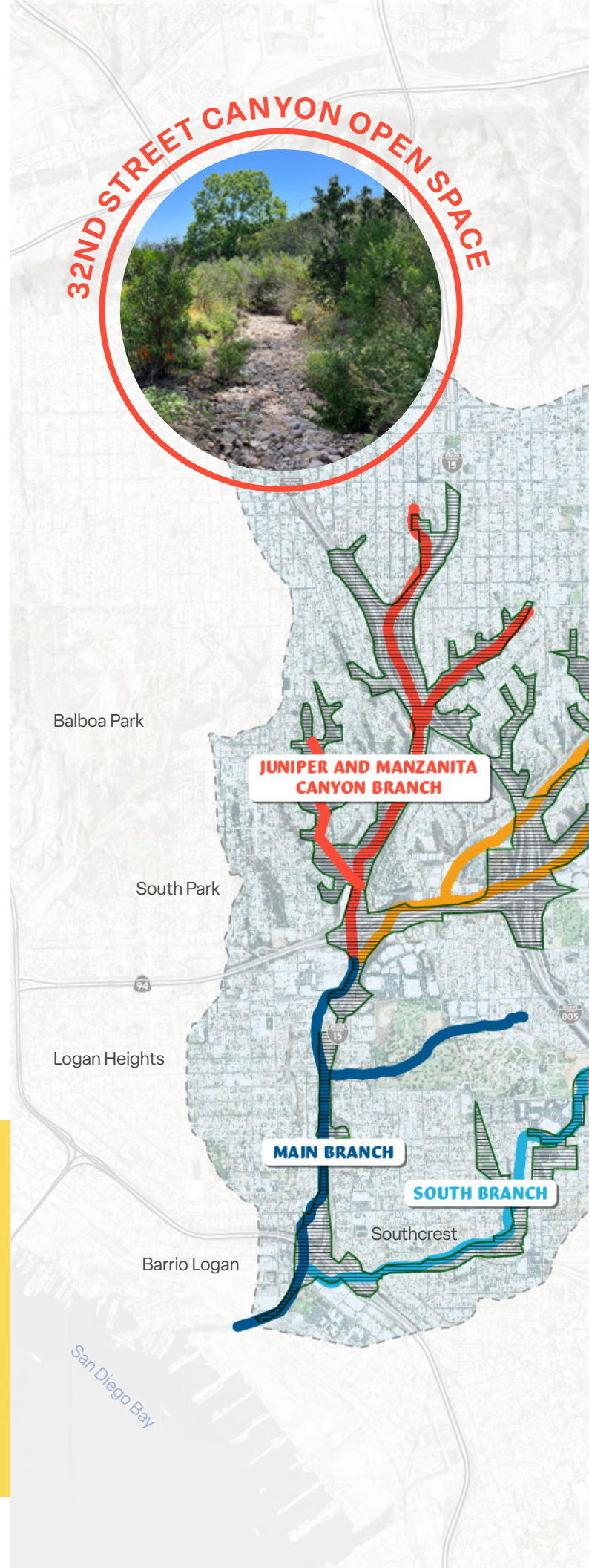
Foster a sense of
ownership and
connection to the
Regional Park among
community members

Chollas Creek Watershed Regional Park

Urban watersheds provide a distinctive natural framework for protecting, managing, and enhancing open space systems that provide recreational space, connections, and unique educational opportunities for local communities. The Chollas Creek Watershed Regional Park encompasses the area surrounding Chollas Creek and its tributaries, and existing adjacent parkland or open space. The Regional Park includes undeveloped parkland and underutilized public spaces which could be targeted for future recreational opportunities within the Chollas Creek Park Master Plan. While the Chollas Creek Park Master Plan will only guide the development of parks and recreational opportunities within the designated boundary of the Regional Park, this report analyzes the lands surrounding the Regional Park within the Chollas Creek Watershed to fully understand the needs of this unique Regional Park. Unlike a traditional large, contiguous park, the Chollas Creek Regional Park consists of six distinct branches spanning a wide area, as detailed in the Chollas Creek Facts box. This branching yet interconnected geography creates opportunities for a diverse range of users to access and enjoy the park. Therefore, it is essential for the Existing Conditions Report and ultimately the Chollas Creek Park Master Plan to consider the needs of all neighborhoods touched by the watershed.

Chollas Creek Facts

- 51** linear miles of Creek
- 22** square miles of Watershed within SD
- 4** square miles of Regional Park
- 212,594** People Live within the Watershed
- 2,078** Species of Plants and Animals Live in the Watershed Region (iNaturalist, n.d.)



CHOLLAS LAKE PARK



Chollas Creek Watershed

- Chollas Creek Drainage Basin
- City of San Diego Boundary
- Chollas Creek Watershed within the City of San Diego (Watershed)
- Chollas Creek Watershed Regional Park (Regional Park)
- Juniper and Manzanita Canyon Branch
- Auburn Creek and Oak Park Branch
- Emerald Hills Branch
- Encanto Branch
- South Branch
- Main Branch

City Heights

La Mesa

El Cerrito

AUBURN CREEK AND
OAK PARK BRANCH

EMERALD HILLS BRANCH

Lemon Grove

Oak Park

ENCANTO BRANCH

Encanto

CHOLLAS CREEK PARK



MARIE WIDMAN MEMORIAL PARK

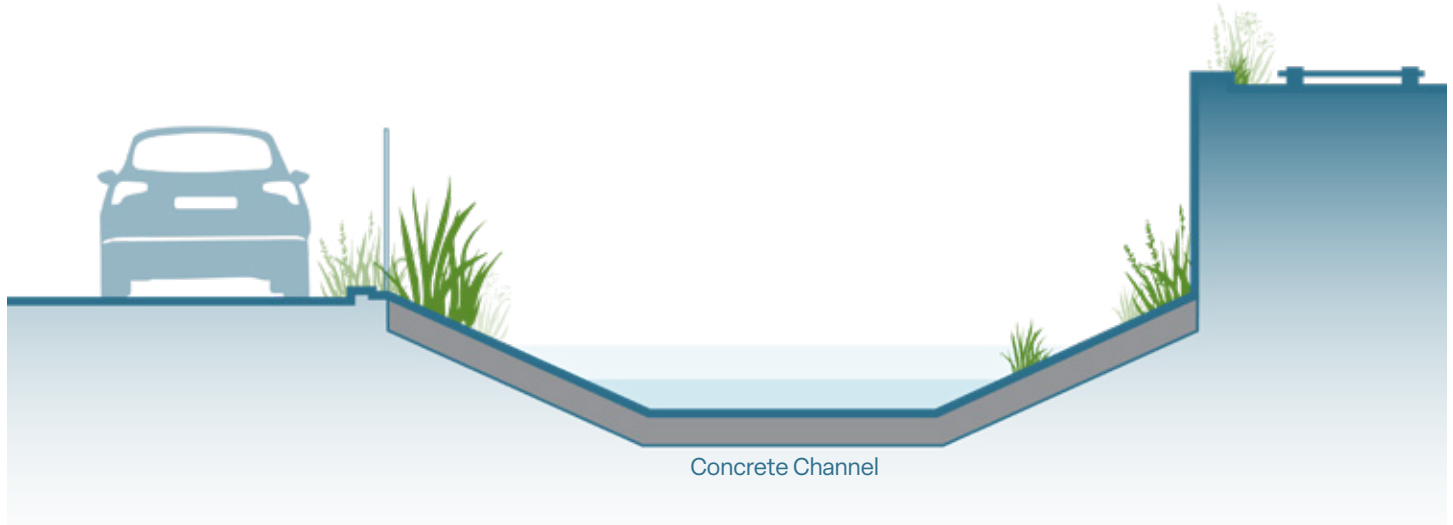


Creek Channels

Chollas Creek serves as the central waterway within the Regional Park which takes on many forms, from natural riverbanks to fully concrete-lined channels. Chollas Creek only has flowing water at certain times of the year,

making it an ephemeral waterbody. While largely dry in the hotter months, it becomes a thriving watercourse during the rainy season, collecting stormwater runoff and nourishing wetlands throughout the Regional Park.

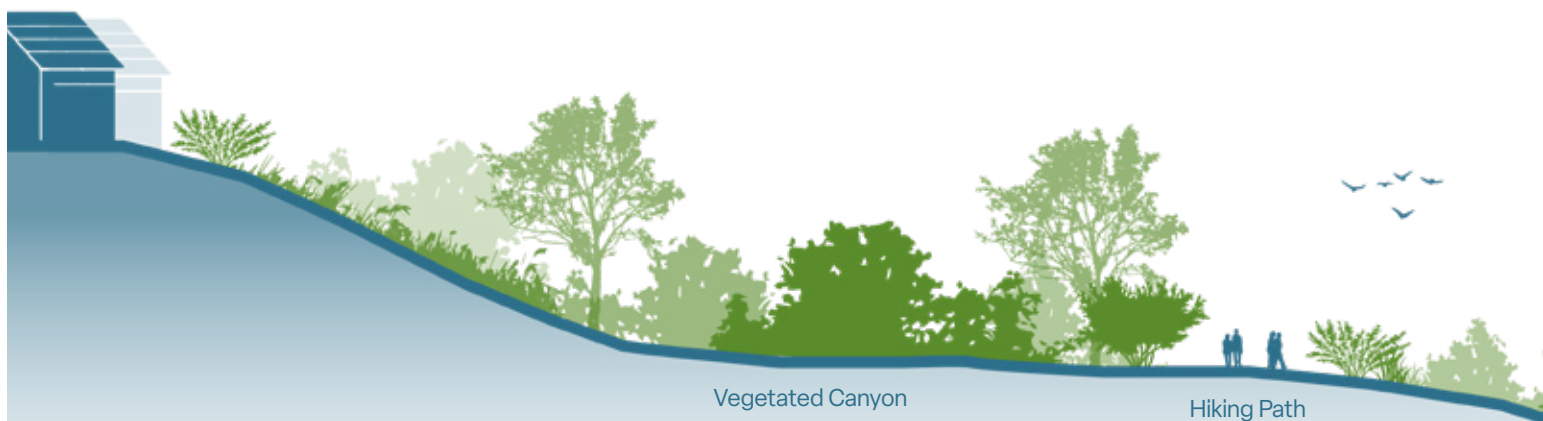
Concrete-Lined Channel



Scale: NTS

Concrete-lined channels typically have a street on one side and train tracks on the other, isolating it from the surrounding community. These concrete-lined channels can be found in areas such as the Main Branch in Logan Heights or Encanto along Imperial Avenue.

Earthen Channel

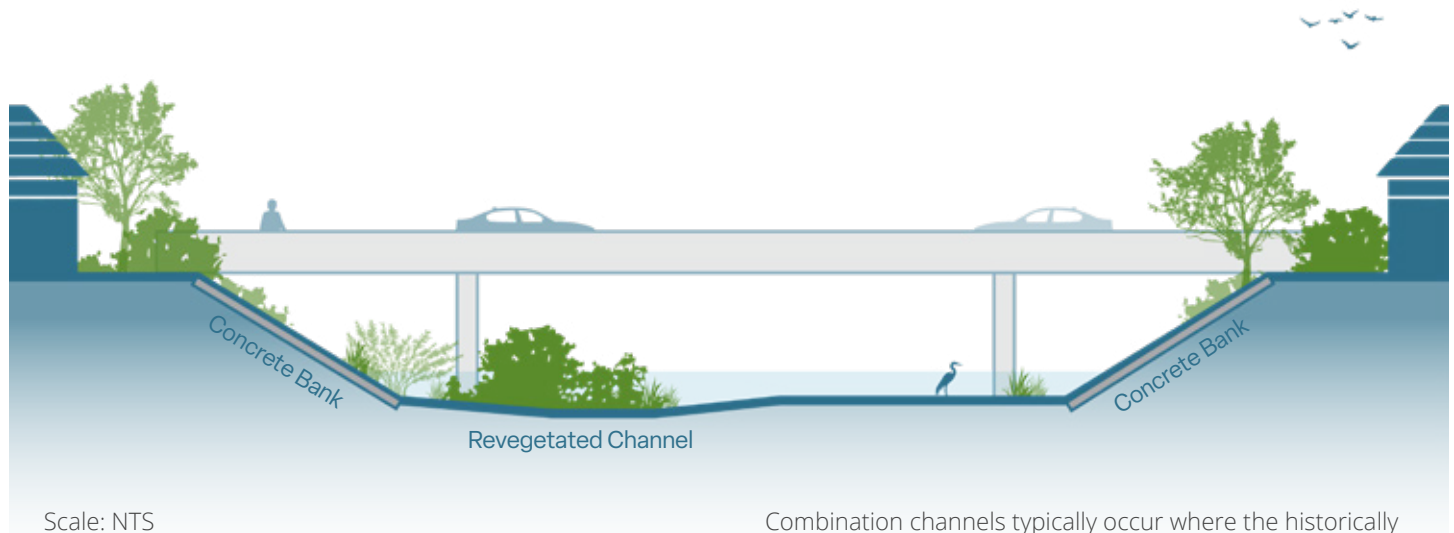


Scale: NTS

While Chollas Creek passes through many neighborhoods, it is largely inaccessible due to fencing along adjacent private ownerships, eroded cliff sides, roads, and freeways.

Below is a series of typical channel cross-sections showing the conditions of Chollas Creek. A map showing the locations of these different conditions can be found in Chapter 6, Hydrology, Water Quality and Flooding.

Combination Channel



Combination channels typically occur where the historically channelized creek bed has eroded to reveal the natural riverbed where sediment, seeds, and plants now collect and grow. The combination of earthen and concrete-lined channels can be found throughout the Regional Park, such as at the South Branch near Southcrest Trails Park.



Earthen channels typically are more natural in that they have never been developed or altered. The original watercourses have been preserved and are home to a mixture of native and non-native plants and animals. Earthen Channels can be found in the many canyons within North Park, Oak Park, and Encanto.

Branches of Chollas Creek

Chollas Creek consists of six main tributaries and can be categorized into the following Branches based on their locations, as shown on the map on pages 8 and 9:



MAIN BRANCH

The Main Branch stretches through the neighborhoods of Logan Heights and Barrio Logan. It is mostly a concrete-lined channel which flows through highly urbanized areas before draining into San Diego Bay. This Branch is located outside of the Multi-Habitat Planning Area (MHPA). The MHPA is the City's planned habitat preserve within the Multiple Species Conservation Program Subarea. The MHPA sets specific conservation goals based on the project's location and land ownership, allowing limited development within the area.



SOUTH BRANCH

The South Branch starts from Valencia Park. It ends at Interstate 5, meeting the Main Branch, and flows through Southcrest and Lincoln Park neighborhoods. The Chollas Creek Enhancement Program identifies the South Branch for Phase I implementation. The condition of Chollas Creek varies along this branch, from fully or partially concrete-lined channels to natural edges. This Branch is located outside of the MHPA.



ENCANTO BRANCH

The Encanto Branch is Chollas Creek's easternmost Branch. It is a mix of concrete-lined and earthen channels, with the concrete channels running along Imperial Avenue. Portions of this Branch are located inside the MHPA.



EMERALD HILLS BRANCH

The Emerald Hills Branch stretches from the headwaters in Lemon Grove to Valencia Park, connecting to the South Branch. It has designated open spaces that are sensitive habitats protected under the City's Multiple Species Conservation Program. Portions of this Branch are located inside the MHPA.



AUBURN CREEK AND OAK PARK BRANCH

The Auburn Creek and Oak Park Branch includes two northern branches within the Oak Park neighborhood. These Branches consist largely of non-channelized canyons surrounded by residential neighborhoods. Portions of these Branches are located inside the MHPA.



JUNIPER AND MANZANITA CANYON BRANCH

The Juniper and Manzanita Canyon Branch flows through City Heights, North Park, and South Park neighborhoods. This Branch consists of various vegetated urban canyons that abut residential backyards. Many trails have been established throughout these areas. Portions of this Branch are located inside the MHPA.

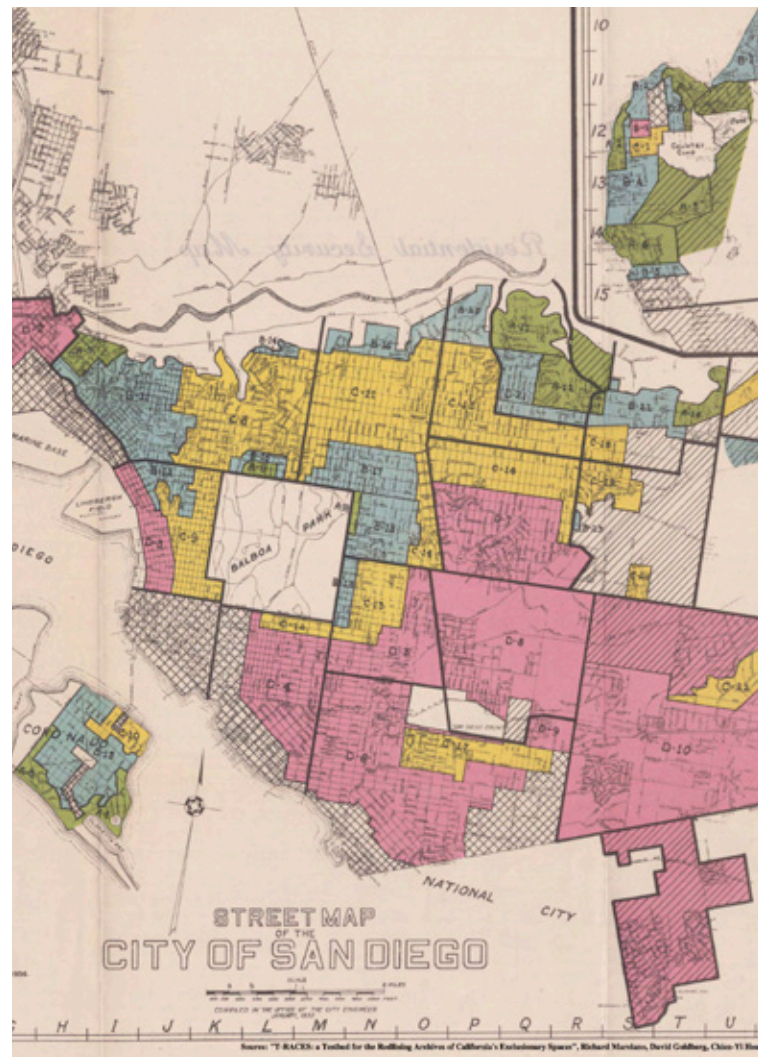
History of the Region

Chollas Creek has been a vital resource for millennia, starting with the Kumeyaay people, the original inhabitants. The Kumeyaay were divided into two main groups with distinct dialects: the Ipai in the north, from Escondido to the coast, and the Tipai in the south, including present-day Mission Valley and northern Baja California. They lived in numerous villages and migrated seasonally during harvest to access various food resources (Dyett & Bhatia, 2014). Chollas Creek was a vital water source for the Kumeyaay, archaeological evidence suggests that part of the creek was initially exploited for shellfish and later developed as the ethnographic village of Matt Xtaat or “place of the cactus” (or needles), the existence of this village is part of the communal history of the Kumeyaay (Felix-Ibarra, 2021). Matt Xtaat was occupied year-round, long-term and had an increasing population, this was facilitated by the diverse ecosystem of Chollas Creek which include “terrestrial, estuary, marsh, riverine, and bay resources” (Brodie et al., 2014). The Kumeyaay managed the land with controlled burning and used local vegetation for homes, food, and medicine. Despite Spanish contact devastating their population, Kumeyaay descendants still inhabit their ancestral lands in Baja California and Southern California today (Wilken-Robertson, 2017).

The development of Southeastern San Diego began with Mexican land grants, specifically the Pueblo Lands and Ex-Mission Rancho de San Diego de Alcalá. American settlement started in 1850 and accelerated in 1867 when Alonzo Horton initiated real estate development. In the 1870s, the area was subdivided by entrepreneurs from larger Pueblo Lands blocks. Attracting the California Southern Railroad in 1885 tripled the city's population and sparked a building boom. However, settlement lagged behind land sales. Residential development, focused west of 28th Street, continued into the early twentieth century due to the area's proximity to downtown, rail lines, and the bay. Housing ranged from modest workers' cottages to grand estates built by San Diego's elite. Encanto and Chollas Valley remained rural in the late 19th and early 20th centuries, in contrast to the suburban development of the western area. Encanto was platted in 1891, but active development started in 1907, attracting residents with promises of suburban living and small-scale agriculture. It thrived as a self-sufficient



A Traditional Kumeyaay House in 1924, by Edward S. Curtis
(Photo Credit: Library of Congress)



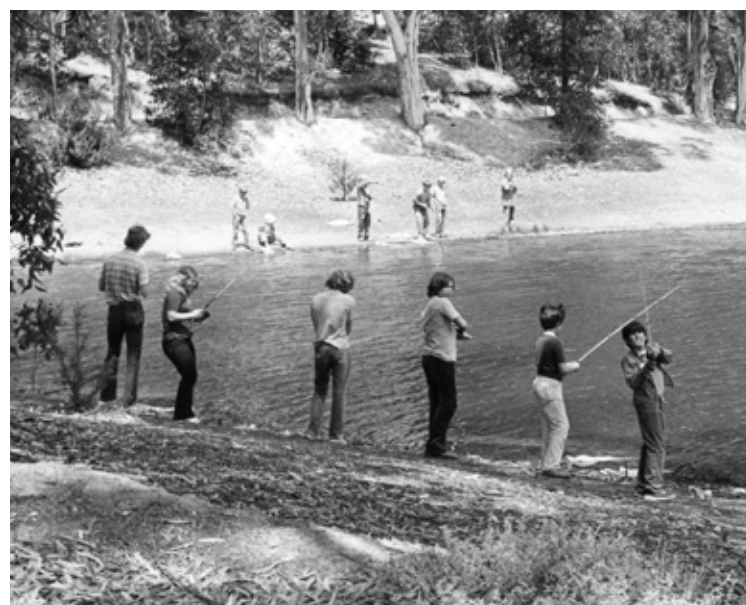
1936 Map of San Diego from the Home Owner's Loan Corporation
(Photo Credit: Testbed for the Redlining Archives of California's Exclusionary Spaces)



Demolition for Interstate 5, through Logan Heights, 1962
(Photo Credit: San Diego Union)



Demolition for State Route 94, through Sherman Heights, 1957
(Photo Credit: San Diego Tribune)



Youth Fishing at Lake Chollas in 1972, by Bob Brown
(Photo Credit: City of San Diego Digital Archives)

town, connected to San Diego by rail but insulated from speculative land ventures. In 1916, it became part of the City of San Diego (Dyett & Bhatia, 2014).

City Heights' development began in the late 19th century with investments from Abraham Klauber and Samuel Steiner in a 240-acre tract northeast of Balboa Park. It became East San Diego in 1912, later annexed by San Diego in 1923. To prevent flooding, University Avenue was constructed on a raised dike. Draining small lakes, diverting water flow

along Chollas Creek, and filling floodplains created land for development. (San Diego History Center, n.d.). Today, flooding exacerbated by channelization, development, and climate change, remains a challenge for the area (City Heights History, n.d.).

The 1915 Panama-California Exposition and World War I military buildup brought international attention and new residents to San Diego, many settling in Southeastern San Diego. During the 1920s and 1930s, the area experienced denser and more ethnically diverse residential development. During World War II and the postwar era, Southeastern San Diego experienced significant growth and demographic shifts. The military buildup brought a population boom, causing a severe housing shortage. The rapid development led to a school shortage, with initial portable buildings later replaced by permanent structures. Restrictive zoning and discriminatory covenants elsewhere in the city reinforced segregation, making the area home to many of San Diego's poor and non-white residents. Some integration occurred, particularly in Encanto and Valencia Park, where many African-Americans moved from Logan Heights in the 1950s and 1960s, finding opportunities for homeownership (Dyett & Bhatia, 2014).

The construction of four freeways - State Route 15, State Route 94, Interstate 5, and Interstate 805 - during the 1950s and 1960s dramatically changed the neighborhoods in the watershed. These freeways destroyed historic buildings, displaced families and businesses, and worsened social problems. They increased segregation of lower-income and minority groups, reduced affordable housing, and separated communities from essential services like stores, churches, and schools, making life harder for many residents (Dyett & Bhatia, 2014). From the 1970s to the 1990s, City Heights welcomed Southeast Asian and Somali refugees attracted by low rents amid disinvestment, fostering a large low-income population and contributing to its diverse demographic. Today, these neighborhoods remain some of the most ethnically diverse neighborhoods in the Chollas Creek Watershed.

MID-CITY

Located in the northwest corner of the Chollas Creek Watershed, the Mid-City area comprises a diverse profile of neighborhoods at various income levels. The Mid-City Community Planning Areas consist of Mid-City: Normal Heights (Normal Heights), Mid-City: Kensington-Talmadge (Kensington-Talmadge), Mid-City: City Heights (City Heights) and Mid-City: Eastern Area (Eastern Area). Each Community Planning Area has its distinct identity. Past redlining and single-family zoning practices excluded low-income families and people of color, making affordable housing unavailable and limiting access to high-quality education and employment opportunities. The Mid-City experienced rapid growth from 1980 to 2000, leading to overcrowded homes, schools, and community facilities. This period saw a significant influx of immigrant communities, contributing to a rich tapestry of cultures and languages within the watershed. Over 80% of City Heights' population is non-white, followed by 70% in the Eastern Area, and around 50% in Kensington-Talmadge and Normal Heights. Additionally, over 30% of City Heights residents over age 5 have limited English proficiency, compared to 19% in the Eastern Area and about 10% in Kensington-Talmadge and Normal Heights. However, after 2000, the Mid-City's population began to decline, particularly among Black, White, and Indigenous populations.



Normal Heights

City Heights

South Park

Logan Heights

Southcrest

SOUTHEASTERN SAN DIEGO

Southeastern San Diego's deep historical roots and adjacency to downtown San Diego define the community. Its streets and buildings reflect the area's rich history and heritage. Racially restrictive covenants enforced neighborhood segregation in the early 20th century throughout the City, and many poor and non-white residents settled in the Southeastern Community Planning Area as early as the 1920s. As a result, nearly all the neighborhoods in the region have a population of less than 10% identifying as White alone, not Hispanic or Latino, according to the 2020 U.S. Census. The Southeastern San Diego Community Planning Area served as a hub for civil rights movements and has a rich history of activism (City of San Diego, 2015).

City Heights Placemaking Event by Circulate San Diego, 2015



Chollas Creek: 20 Neighborhoods

Chollas Creek flows through more than **20** distinct neighborhoods surrounding the Regional Park. It is home to **212,594** people, and as many as **35** languages or dialects are spoken in local schools (AGU Thriving Earth Exchange, 2020). The majority of the watershed is located in the Southeastern San Diego, Mid-City and Encanto Neighborhoods Community Planning Areas.

El Cerrito

La Mesa

Lemon Grove

Oak Park

Encanto

Black Arts & Culture District on Imperial Avenue



Market Creek Plaza, Jacobs Center



ENCANTO NEIGHBORHOODS

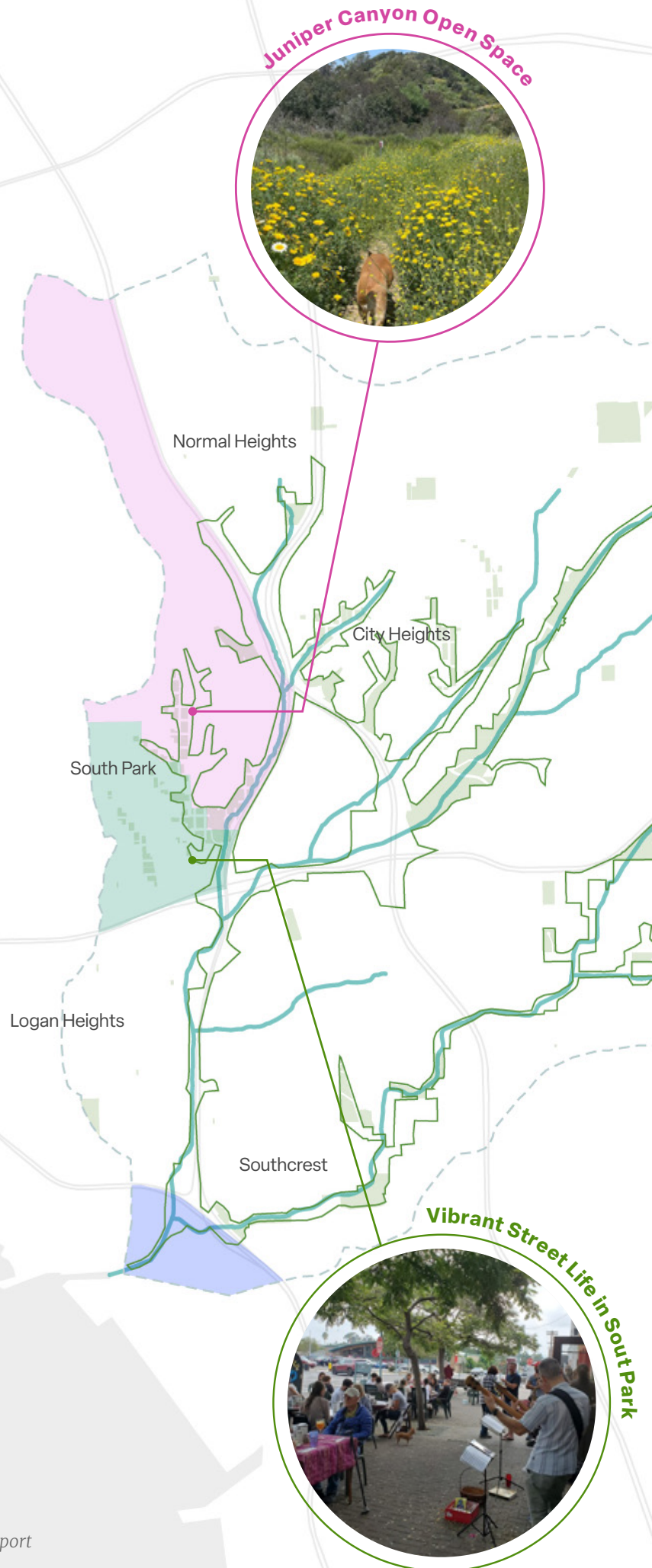
Encanto was one of San Diego's first planned communities where African Americans, Mexican Americans and Asian Americans could attain homeownership. Today, it remains a diverse neighborhood that is predominantly low-density residential, with 92% of the population identifying as African American, Hispanic, Asian American and other ethnic communities (SANDAG, 2020). The City of San Diego recently designated nine blocks of Imperial Avenue in Encanto as the Black Arts & Culture District to celebrate the neighborhood's history and create a cultural hub for the local Black community (Garrick, 2022). The natural landscape is a defining feature of the area, with creeks, rolling hills, mesa tops and canyons running through the neighborhoods.

NORTH PARK

The community of North Park encompasses approximately 2,258 acres located in the central portion of the City of San Diego. North Park is bordered by the communities of Uptown on the west, Mission Valley on the north, the Mid-City communities of Normal Heights and City Heights on the east, and Golden Hill to the south. Balboa Park abuts the community on the southwest. The majority of North Park's topography is relatively flat or gently sloping. North Park is a historic neighborhood and one of the older urbanized communities in the City of San Diego, with original subdivisions recorded just after the turn of the 20th century. The built environment of North Park includes vibrant commercial corridors surrounded by multi-family residential with single-family neighborhoods concentrated in the northern and southern portions of the community. The North Park Community Planning Area includes Montclair Park and a portion of Juniper Canyon Open Space.

GREATER GOLDEN HILL

The Greater Golden Hill Community Planning Area is an urbanized community consisting of approximately 746 acres east of downtown San Diego and adjacent to Balboa Park. The 32nd Street Canyon, Juniper Canyon, 34th Street Canyon, and Cedar Ridge Park Canyon open spaces are included in the Greater Golden Hill Community Planning Area. The community has a long-standing development history within the region and encompasses the historic Golden Hill and South Park neighborhoods as well as several adjacent areas such as Choate's addition and Brooklyn Heights. The area's topography comprises a series of gently rolling marine terraces broken by four steeply sloping canyon areas. The community has a long and colorful history which is visible in the eclectic mix of architectural styles, many of which are comparatively rare in San Diego today. The distinctive qualities of these traditional buildings contribute to the community's overall scale, character, and identity.



Juniper Canyon Open Space

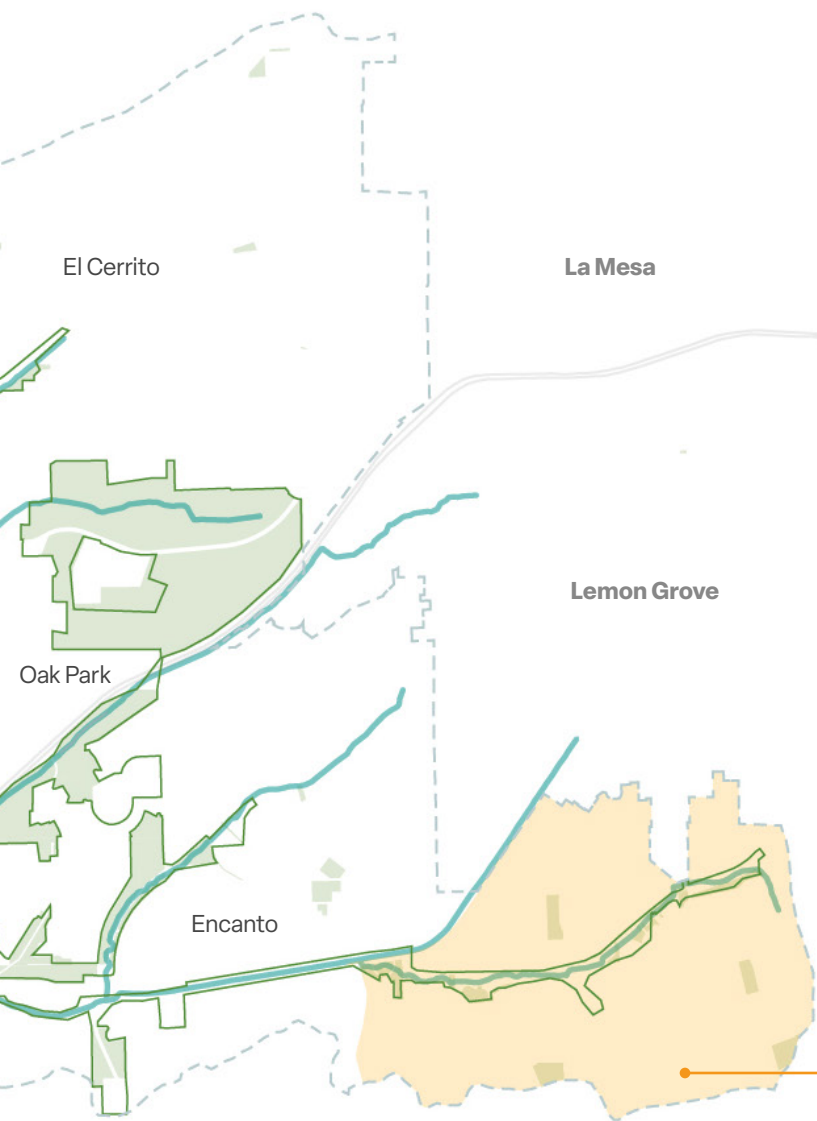


Vibrant Street Life in South Park



SKYLINE-PARADISE HILLS

The Skyline-Paradise Hills Community is approximately 4,500 acres in area and is located in the southeastern portion of the City of San Diego. The community is bordered by Lemon Grove and the Southeastern San Diego Community Planning Area to the north, State Route 54 and an unincorporated area of San Diego County to the south, National City and the Southeastern San Diego Community Planning Area to the west, and an unincorporated area of San Diego County to the east. This community includes the neighborhoods of Skyline, Paradise Hills, South Bay Terraces, North Bay Terraces, Lomita and Jamacha. The Skyline-Paradise Hills Community Planning Area is predominantly a low-density single-family residential community. The geography of the community includes hills and canyons affording views of downtown San Diego, San Diego Bay, Coronado and the Pacific Ocean. The Skyline-Paradise Hills Community Planning Area includes Skyline Hills Park, Marie Widman Memorial Park, Christopher Wilson Park, Keller Park, Lomita Park, and the Jamacha Canyon and Encanto Expressway Open Spaces.



New Skyline Hills Branch Library



BARRIO LOGAN

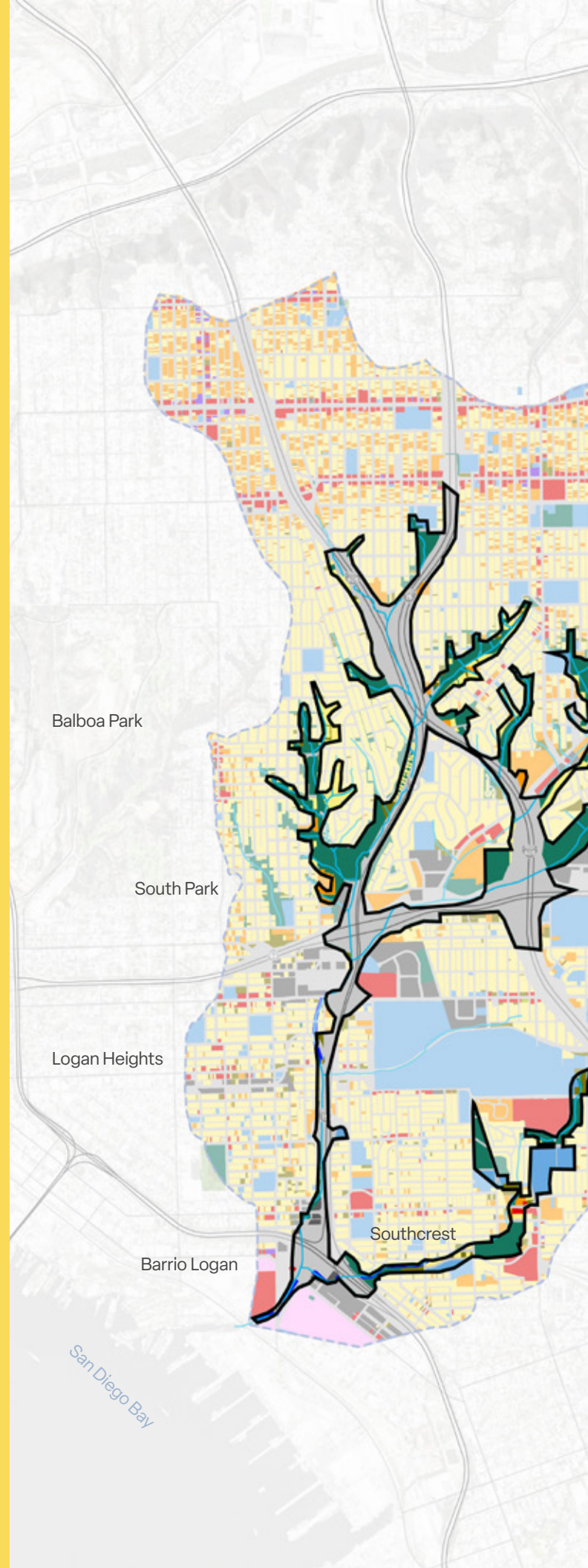
Barrio Logan comprises approximately 1,000 acres south of Downtown San Diego including the final convergence of the Main Branch and South Branch of Chollas Creek before it reaches San Diego Bay. The Port of San Diego and Naval Station San Diego cover more than half of the land within the Community Planning Area. Barrio Logan is one of the oldest and most culturally rich urban neighborhoods in San Diego. From historic beginnings in the latter part of the 19th century to the vibrant mix of uses and people who reside and work in Barrio Logan, the neighborhood has played a vital role in the City's development.

02

LAND USE AND REGULATORY FRAMEWORK

The Chollas Creek Watershed is highly urbanized and one of the densest regions in San Diego County. Nearly half of the total land area is designated for residential use, with approximately 40% of the land zoned for single-family homes. 28% of the watershed is used for transportation, such as highway corridors and neighborhood streets, communication, and other utilities. Commercial and mixed-use land use makes up about 4% of the total land use, while 7% is dedicated to recreation and open space.

The current land ownership within the Regional Park varies, involving public and private ownership. While this complexity can present challenges, it also offers opportunities for diverse and innovative spaces and development options.

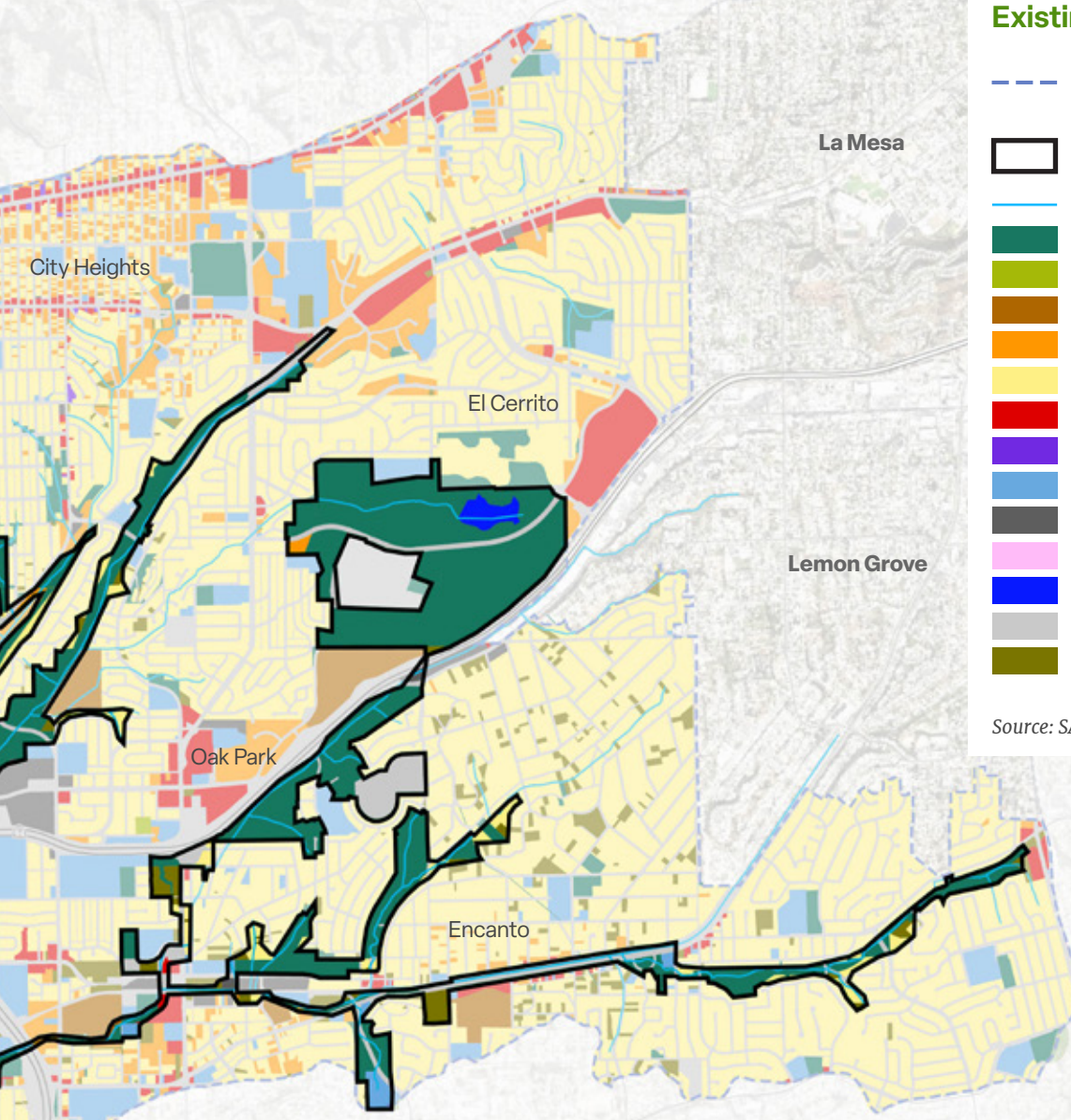




Existing Land Use

- Chollas Creek Watershed within the City of San Diego (Watershed)
- ▭ Chollas Creek Watershed Regional Park (Regional Park)
- Chollas Creek
- Parks and Open Space
- Agriculture
- Residential - Mobile Home Park
- Residential - Multiple Family
- Residential - Single Family
- Commercial
- Mixed Use
- Institutions and Education
- Industrial
- Military
- River, Lake, Bay
- Transportation, Communications, Utilities
- Undeveloped

Source: SANDAG Land Use, 2020



Land Ownership within the Regional Park

Land ownership within the Regional Park is sporadic and unevenly divided between private and public ownership. Among parcels within and intersecting the Regional Park's boundary, 1,375 acres are publicly-owned, and 841 acres are held privately. The Emerald Hills Branch is near large City-owned parcels, including major parks and open spaces such as Chollas Lake Park. On the other hand, areas along the South Branch and Encanto Branch, northern parts of the Juniper and Manzanita Canyons Branches, and Auburn Creek & Oak Park Branches are primarily under varied private ownership.

Vacant land plays a pivotal role in the master planning process. Vacant land presents opportunities for new green spaces, recreational facilities, and conservation areas throughout the Regional Park. Developable land can provide amenities such as playgrounds, trails, and visitor centers, enhancing the park's accessibility and recreational value. Understanding the constraints of undevelopable land, such as wetlands or steep slopes, ensures that these natural areas are protected and integrated into the Regional Park's ecological framework. By carefully considering both developable and undevelopable land, the Chollas Creek Park Master Plan can balance the needs to enhance community member and visitor experiences and preserve the ecological integrity of the Regional Park.

Within the Regional Park

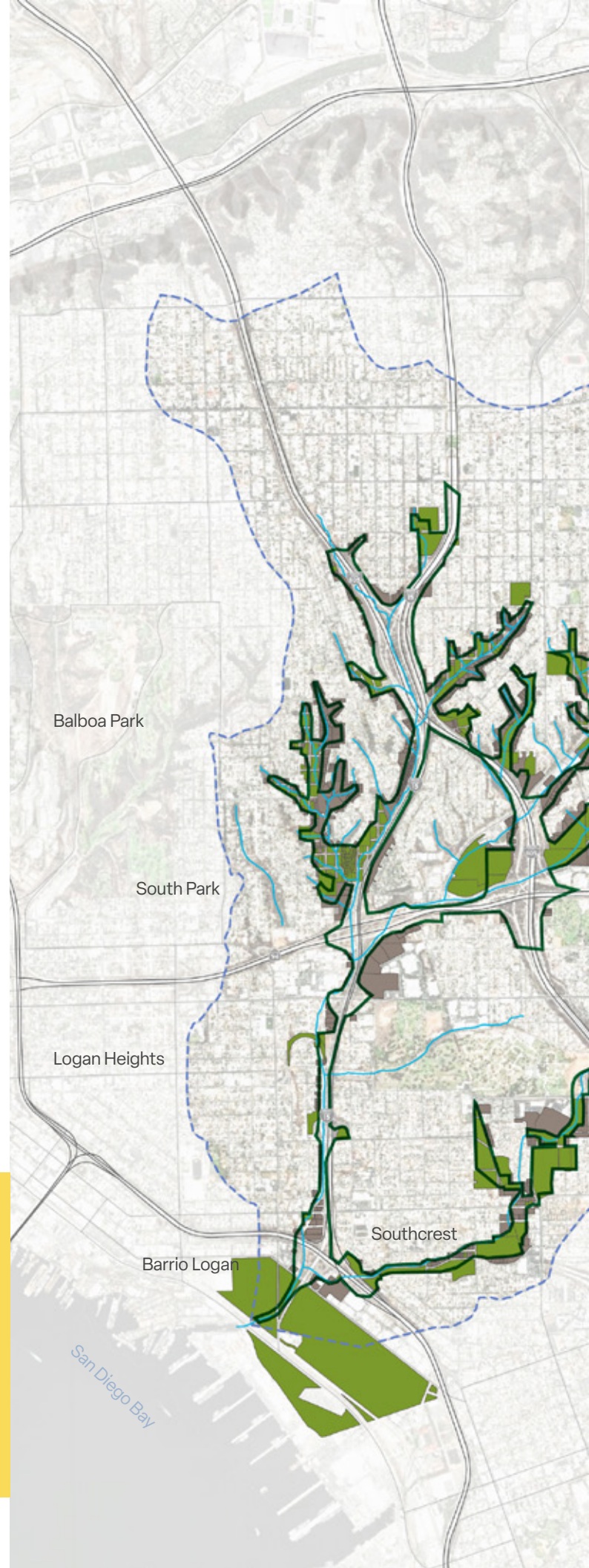
1,375 acres of Land are Publicly Owned

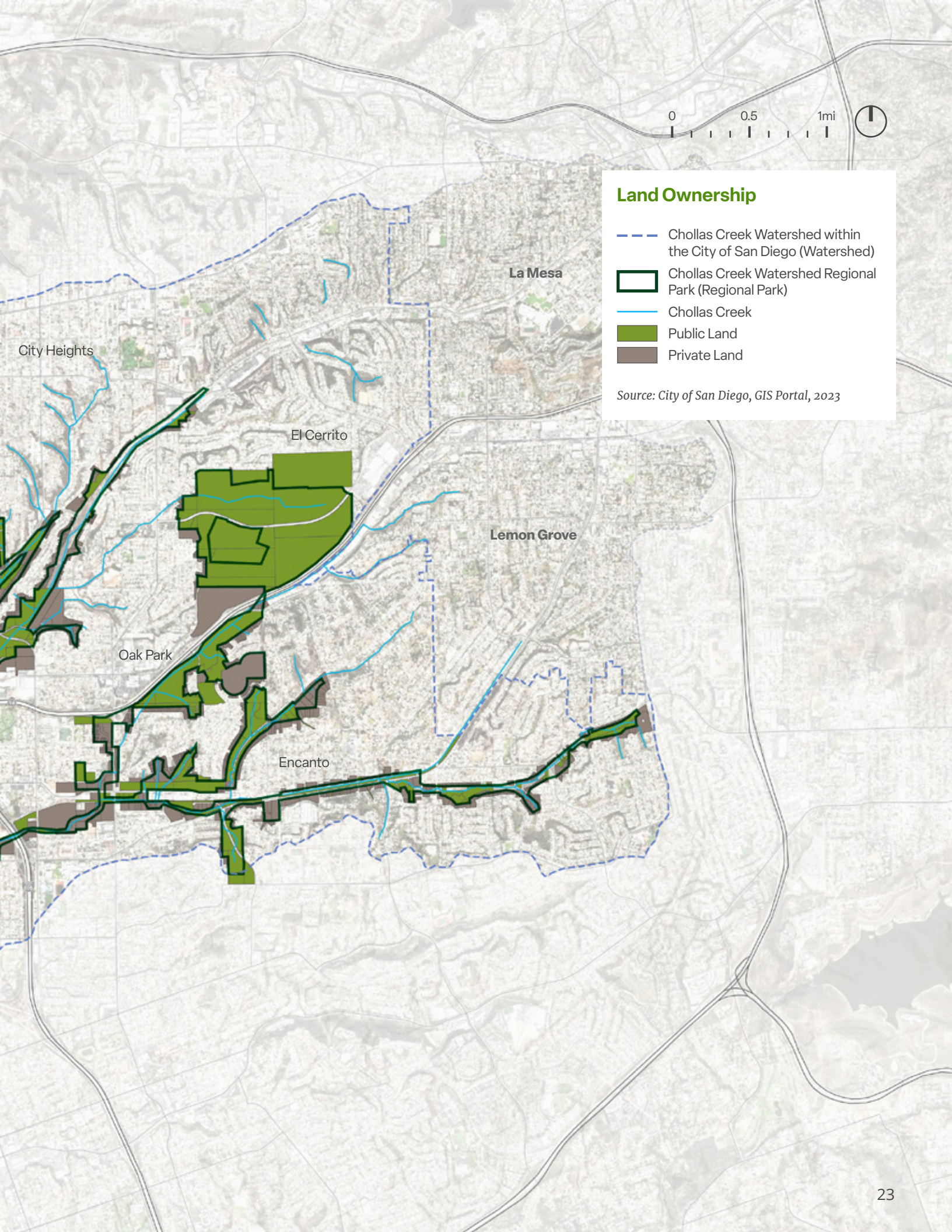
841 acres of Land are Privately Owned,

comprised of **2015** Parcels Owned by

1807 Private Landowners with a Median

Size of **0.18** acre.





Land Ownership

- Chollas Creek Watershed within the City of San Diego (Watershed)
- ▭ Chollas Creek Watershed Regional Park (Regional Park)
- Chollas Creek
- Public Land
- Private Land

Source: City of San Diego, GIS Portal, 2023



Chollas Creek Park

Regulations and Regulatory Agencies

Public Agencies

Working within the Regional Park boundary requires cooperation between various local, state, and federal agencies. Federal and state agencies may require additional permits for projects that potentially impact natural resources within the Chollas Creek ecosystem. These agencies include U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), California Regional Water Quality Control Board (CRWQCB), California Coastal Commission (CCC), and California Department of Fish and Wildlife (CDFW).

U.S. Fish and Wildlife Service (USFWS)

The USFWS is the only agency in the federal government whose primary responsibility is the conservation and management of fish, wildlife, plants and their habitats. It helps ensure a healthy environment for people to enjoy the outdoors and shared natural heritage. The primary mechanism USFWS utilizes to regulate impacts to sensitive species and habitats is through the enforcement of Section 7 of the Endangered Species Act of 1973 (ESA). Impacts to species or the habitats they rely on that have been given special conservation status by

USFWS under the ESA require a take permit and compliance with national environmental laws and regulations.

U.S. Army Corps Of Engineers (USACE)

The Chollas Creek Watershed falls within the jurisdictional boundaries of the Los Angeles District of the USACE. The USACE administers and enforces Section 10 of the Rivers and Harbors Act of 1899, Section 404 of the Clean Water Act of 1972, as amended, and Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972. Under Section 10 of the Rivers and Harbors Act, a USACE permit is required for work or structures in, over or under navigable waters of the United States. Under Section 404 of the Clean Water Act, a USACE permit is required for the discharge of dredged or fill material into waters of the United States. Several water bodies and wetlands in the nation are waters of the United States and are subject to the USACE's Section 404 regulatory authority (Los Angeles District, n.d.).

Regional Water Quality Control Board (RWQCB)

RWQCB is a regional governing body

responsible for administering Section 401 of the federal Clean Water Act. In May 2013, the RWQCB issued a new Municipal Separate Storm Sewer System (MS4) Permit for the region. Stormwater regulations for San Diego County are governed by the Watershed Protection, Stormwater Management and Discharge Control Ordinance which builds on the requirements set forth in the MS4 Permit. These requirements provide guidance for all development projects to meet source control, site design, water quality, flow-control and sediment supply requirements. Design requirements for land development and public improvement projects are included in the City's Engineering & Capital Projects Department's Best Management Practice Design Manual. The Manual focuses on project design requirements and post-construction requirements. Projects must provide Best Management Practices (BMPs) to the Maximum Extent Practicable (MEP) to reduce pollutant discharges to the extent necessary to bring the discharge into compliance.

California Coastal Commission

The Coastal Commission's Enforcement Program aims to uphold the requirements of the California Coastal Act of 1972. The Act mandates the protection of coastal resources, including coastal habitats, coastal public access and recreation, and other coastal resources. The Enforcement Program works to ensure that all non-exempt development along the California coast undergoes the Act's independent permit review process and secures the required Coastal Development Permit (CDP) within the coastal zone. The Commission oversees compliance with the Coastal Act, remedies violations of the Coastal Act by issuing enforcement actions to remove unpermitted development, funds the restoration of sites to native habitat and authorizes restoration to mitigate unavoidable impacts. The Coastal Commission has jurisdiction over areas identified within the Coastal Overlay zone, which includes the Main and Southern Branches (State of California - Ca. Coastal Commission, n.d.) of Chollas Creek. The Coastal Overlay Zone in San Diego County generally falls to the west of Interstate 5.

California Department of Fish and Wildlife (CDFW)

CDFW administers the Lake and Streambed Alteration Program which, under Fish and Game Code Section 1602, requires any person, state or local governmental agency, or public utility to notify CDFW prior to beginning any activity that may do one or more of the following: (1) divert or obstruct the natural flow of any river, stream, or lake; (2) change the bed, channel, or bank of any river, stream, or lake; (3) use material from any river, stream, or lake; or (4) deposit or dispose of material into any river, stream, or lake (California Department of Fish and Wildlife, n.d.).

Multiple Species Conservation Program (MSCP)

The MSCP is a comprehensive habitat conservation planning program for southwestern San Diego County. A goal of the MSCP is to preserve a network of habitat and open spaces, thereby protecting biodiversity, while streamlining environmental permitting for development. Local jurisdictions, including the City, implement their portions of the MSCP through subarea plans, which describe specific implementing mechanisms. The City's MSCP Subarea Plan was approved in March 1997. The MSCP Subarea Plan is a plan and process for the issuance of permits under the federal and state Endangered Species Act and the California Natural Communities Conservation Planning Act of 1991. The primary goal of the MSCP Subarea Plan is to conserve viable populations of sensitive species and to conserve regional biodiversity while allowing for reasonable economic growth.

In July 1997, the City entered into an Implementing Agreement with USFWS and CDFW. The Implementing Agreement identifies the roles and responsibilities of the parties to implement the MSCP and Subarea Plan. The agreement became effective on July 17, 1997 and allows the City to issue Incidental Take Authorizations under the provisions of the MSCP, subject to the requirement that all required mitigation is provided. Applicable state and federal permits are still required for wetlands and listed species that are not covered by the MSCP.



Nasturtium Growing at the 32nd St. Canyon Open Space

Multi-Habitat Planning Areas (MHPA)

The City's MHPA represents a hard line preserve in which boundaries have been specifically determined. It is considered an urban preserve constrained by existing or approved development and includes linkages connecting several large areas of habitat.

The MHPA is the area within which the permanent MSCP preserve is planned to be assembled and managed for its biological resources. The MHPA contains specific conservation goals and objectives based on a project's specific location within the MHPA and whether the land is public or private. Within the MHPA, limited development may occur.

Approximately 470 acres of the Chollas Creek Watershed Regional Park are located inside the City of San Diego's MHPA. Proposed developments in areas containing sensitive biological resources are subject to compliance with the City's Environmentally Sensitive Lands Regulations in the Land Development Code.

Environmentally Sensitive Land Regulations

The purpose of the Environmentally Sensitive Lands Regulations (San Diego Municipal Code Chapter 14, Article 3, Division 1) is to protect, preserve and, where damaged, restore environmentally sensitive lands and the viability of the species supported by those lands. The Environmentally Sensitive Lands Regulations apply to all proposed development when environmentally sensitive lands, including sensitive biological resources, steep hillsides, floodplains, or coastal bluffs, are present. The regulations are designed to ensure that development occurs in a manner that protects natural resources and the natural and topographic character of the area and retains biodiversity and interconnected habitats.

Together with the City's Biology Guidelines (2018a), the ESL Regulations require that impacts to wetlands should be avoided, and unavoidable impacts should be minimized to the maximum extent practicable. A wetland buffer is required to be maintained around all



City Heights Loop Trail (San Diego Canyonlands, 2017)

remaining wetlands as appropriate to protect the functions and values of the wetland. Specific mitigation requirements are set forth for any impacts to environmentally sensitive land. These mitigation requirements apply regardless of the permit process or the level of environmental review.

California Environmental Quality Act (CEQA) Guidelines

The California Environmental Quality Act (CEQA) requires environmental review for public agency decisions that could result in significant environmental impacts. Significant environmental impacts must either be avoided or mitigated to the extent feasible. The City of San Diego, as a responsible or lead agency, will review future site-specific projects in accordance with CEQA under the Chollas Creek Park Master Plan.

Past and Ongoing Planning Efforts

Development of the Chollas Creek Park Master Plan builds upon decades of advocacy and planning efforts, as well as implementation of those efforts.

Chollas Creek Enhancement Program

In 2002, the San Diego City Council adopted the Chollas Creek Enhancement Program, laying out a visionary path for the Chollas Creek Watershed guided by the community's vision. The Chollas Creek Park Master Plan will build off the work from the Chollas Creek Enhancement Program. This comprehensive program includes policies, design guidelines and an implementation strategy, all of which were developed collaboratively with City staff, community leaders and community members. Together, they identified opportunities for improvement and watershed restoration through nature-based solutions and creating enjoyable public spaces accessible to all. The main goals of the enhancement program are:

- Blending natural and built environments
- Fostering identity for each tributary and branch
- Creating spaces along Chollas Creek where water is accessible and enjoyable to people of all ages and abilities
- Directing private and public investments to Chollas Creek's development
- Creating economic opportunities through Chollas Creek's development
- Providing design excellence and continuity throughout Chollas Creek and well-connected neighborhoods
- Incorporating public art throughout the Chollas Creek corridor

Chollas Creek South Branch Implementation Program

The Chollas Creek Enhancement Program identifies the South Branch for Phase I implementation. In 2002, the San Diego City Council adopted the Chollas Creek South



Branch Implementation Program. The purpose of this Implementation Program is to serve as a baseline planning document to enhance water and wetland quality in the urban Chollas Creek area. Its main objective is to document and preserve remaining wetlands while allowing for development. It includes strategies to enhance existing wetlands, create new ones, and integrate these resources with the community. The overarching goal is to improve environmental and economic conditions in central San Diego communities, creating a sustainable creek environment. The South Branch is divided into eight segments, each with specific recommendations for wetland restoration, trail development, landscaping, channel reconstruction, interpretive programs, and art projects.

Chollas Creek Watershed Opportunities Plan

The Chollas Creek Watershed Opportunities Plan was prepared by Groundwork San Diego - Chollas Creek (Groundwork) in 2016. It was presented to the Chollas Creek Watershed Advisory Group, which consists local, state

and federal representatives. Groundwork prepared the plan with the intention to build upon the Enhancement Program to help advance regional conservation, restoration, recreation, and climate action goals within the Chollas Creek Watershed area. While not an adopted City plan, the Opportunities Plan provided additional information that informed the ultimate designation of the Chollas Creek Watershed Regional Park and detailed goals and strategies to address water quality, add parks, trails, and greenbelt opportunities, and climate adaptation goals.

San Diego Parks Master Plan

Adopted in 2021, the Parks Master Plan outlines policies and strategies to improve San Diego's park system by creating safe, accessible, and meaningful public spaces. It addresses various aspects of the parks system, such as programming, safe access, activation, resilience, funding, and community-building priorities, all with a focus on equity. The Parks Master Plan's goals and policies reflect the overarching principles that seek to elevate the City's parks, facilities, and programs into a world-class park system of the future. These goals will be the guiding principles of the development of the Chollas Creek Park Master Plan.

Chollas Blue Green Collaborative and Infrastructure Plan

In 2024, Groundwork San Diego-Chollas Creek launched the Chollas Blue Green Vision Campaign to promote Blue Green Infrastructure and stormwater investments in the Chollas Creek Watershed. As part of the initiative, the Chollas Blue Green Collaborative was formed in partnership with San Diego Canyonlands. Composed of residents, landowners, City planning agencies, regulators, developers, and industry leaders, this group will develop a comprehensive Blue Green Infrastructure Plan for the watershed.

Additional City Efforts

Regional Parks play a dynamic role in the City of San Diego by providing multiple benefits to their surrounding communities and the city at large including climate resilience,

promoting an active lifestyle, protecting the natural environment, and providing a variety of recreational opportunities across a large area. Given the multidisciplinary nature of regional parks, it's crucial the Chollas Creek Park Master Plan is developed in line with planning initiatives that will direct adjacent and overlapping uses to the Regional Park. Listed below are some of the planning initiatives that are anticipated to influence future developments in the Regional Park. These include community plans; climate adaptation and mitigation plans; and plans targeting specific uses such as the Bicycle Master Plan.

Multiple Species Conservation Program Subarea Plan

The Multiple Species Conservation Program (MSCP) is a comprehensive, long-term habitat conservation planning program adopted in 1997 to preserve native habitat for multiple species. This is accomplished by identifying areas planned to be conserved in perpetuity, referred to as the Multi-Habitat Planning Area (MHPA), to achieve a workable balance between new development and species conservation. Approximately 480 acres of MHPA are included in the Chollas Creek Regional Park Master Plan, and any future improvements within the Regional Park would be required to conform to the MSCP Guidelines.

Vernal Pool Habitat Conservation Plan

The adopted City of San Diego Vernal Pool Habitat Conservation Plan (HCP) is intended to provide an effective framework to protect, enhance, and restore vernal pool resources within the City of San Diego, while improving and streamlining the environmental permitting process for impacts to threatened and endangered species associated with vernal pools. The Vernal Pool HCP would provide coverage for seven threatened and endangered vernal pool species that do not currently have federal coverage under the City of San Diego's MSCP Subarea Plan. The Vernal Pool HCP is compatible with the MSCP and expands upon the City's existing MHPA to conserve additional lands with vernal pool resources.

Pedestrian Master Plan

The 2006 adopted Pedestrian Master Plan includes a comprehensive analysis of each community's existing pedestrian conditions and needs and identifies pedestrian routes to activity centers and infrastructure improvement projects along these routes. The Pedestrian Master Plan will be used as a reference to reinforce prioritization for pedestrian improvements within the Regional Park.

Bicycle Master Plan

In 2024, the Sustainability and Mobility Department launched the Bicycle Master Plan Update (BMPU), which is a citywide effort that will result in an overarching update to the 2013 Bicycle Master Plan. The BMPU will refresh the City's bicycle facility recommendations and prioritization of active transportation projects to meet the City's Strategic Plan and Climate Action Plan goals with increased emphasis on equity and serving areas with the greatest needs. The Chollas Creek Park Master Plan will cite the BMPU as a reference to guide future bicycle improvements within the Regional Park.

Urban Forestry Program - Five Year Plan

The Urban Forestry Program - Five Year Plan, adopted in 2017, establishes the City's urban forestry program to bring together existing city policy and guidelines, community planning, and best urban forestry management practices to create a comprehensive, long-term urban forest program. Various components of the Urban Forestry Program are managed by several city departments based on their respective core functions and areas of expertise. The Chollas Creek Park Master Plan will cite the Urban Forestry Program- Five Year Plan as a guide for directing future improvements to the City's urban forest.

Skyline-Paradise Hills Community Plan, Updated 1987;
Encanto Neighborhoods Community Plan, Updated 2015;
Southeastern San Diego Community Plan, Updated 2015;
Greater Golden Hill Community Plan, Updated 2016;

North Park Community Plan, Updated 2016;
Barrio Logan Community Plan, Updated 2021;

These community plans outline the defining characteristics and future growth of these community planning areas, which all overlap to varying degrees with the Chollas Creek Watershed. The Chollas Creek Park Master Plan will build on the recreation elements within these community plans.

Mid-City Communities Plan

The Mid-City Communities Plan Update currently in process aims to identify opportunities for new homes, businesses and infrastructure to benefit everyone in Mid-City. The Mid-City Communities Plan includes four communities: City Heights, Eastern Area, Kensington-Talmage and Normal Heights. The update to the Mid-City Communities Plan was launched in 2024 and will serve as the 30-year vision for history and place, sustainability and climate resilience, land use, design, mobility, and parks, public facilities, and open space. A large portion of the Chollas Creek Watershed falls within the Mid-City Communities Planning Area, and the Chollas Creek Park Master Plan will be cited in the updated community plan's recreation element.

Vision Zero

Vision Zero is a strategy to eliminate all traffic fatalities and severe injuries associated with transportation. The Vision Zero 2020-2025 Strategic Plan evaluates what has been accomplished since the adoption of the Vision Zero policy in 2015 and charts strategies and actions for the next 5 years and beyond to continue progress towards zero. The Chollas Creek Park Master Plan will further the goals of Vision Zero by promoting safe modes of access and transportation to and through the Regional Park.

General Plan

The General Plan guides future development across the City through citywide policies addressing land use, mobility, urban design, economic prosperity, recreation, conservation, noise, historic preservation, public spaces, services and safety. *Environmental Justice* is

a new element added to the General Plan in 2024 to further the City's efforts to advance the equitable distribution of benefits and limit environmental burdens in the city to promote healthy and livable communities for all San Diegans. A large area of the Chollas Creek Watershed is identified in the Element as Environmental Justice Communities, and the Chollas Creek Park Master Plan will cite and build off policies included in the Element specific to this region to utilize the Regional Park as a resource to combat environmental justice issues. The goals and policies of the General Plan's *Recreation Element* have been developed to take advantage of the City's natural environment and resources, to build upon existing recreation facilities and services, to help achieve an equitable balance of recreational resources, and to adapt to future recreation needs. The Recreation Element was updated in 2021 following the adoption of the Parks Master Plan to incorporate the vision, goals, and policies outlined in the Parks Master Plan into the Recreation Element. The Chollas Creek Park Master Plan is an implementation action from the Parks Master Plan.

Climate Action Plan

The 2022 Climate Action Plan establishes a community-wide goal of net zero by 2035, committing San Diego to an accelerated trajectory for greenhouse gas reductions. Achieving net-zero emissions will improve the air we breathe, the communities we live in, and our overall quality of life. The Chollas Creek Park Master Plan will support the goals of the Climate Action Plan by promoting climate mitigation and resilience in the future Regional Park improvements while also promoting active modes of transportation to reduce reliance on greenhouse gas-based transportation.

Climate Resilient SD

Climate Resilient SD, adopted in 2021, serves as the City's comprehensive plan to prepare for and respond to climate change hazards that threaten our communities, including wildfires, drought, extreme heat, sea level rise, and flooding. The Chollas Creek Park Master Plan will support and integrate climate adaptation, resilience, and hazard mitigation in policies and

design recommendations to integrate climate resilience in future developments within the Regional Park.

Mobility Master Plan

The Mobility Master Plan is a comprehensive transportation planning effort to create a balanced, equitable, and sustainable mobility system for the City of San Diego. It will combine community, mode, and objective-specific planning into one comprehensive document to prioritize mobility projects and to identify programs that will have the largest benefit in our communities and on the environment. Once adopted, the Mobility Master Plan will ultimately lead to enhanced access to and through the Regional Park. On April 22, 2025 the City Council adopted the Mobility Master Plan.

Citywide Trails Master Plan

The Citywide Trails Master Plan is a new planning initiative launched in 2024 identified as an implementation action in the Parks Master Plan. The Trails Master Plan will provide a comprehensive plan for both natural and urban trails and pathways to connect communities with safe and enjoyable walking/rolling and biking connections while respecting and enhancing the overall natural environment. The Chollas Creek Park Master Plan will reference the Trails Master Plan to guide future trail improvements within the Regional Park.

Street Design Manual

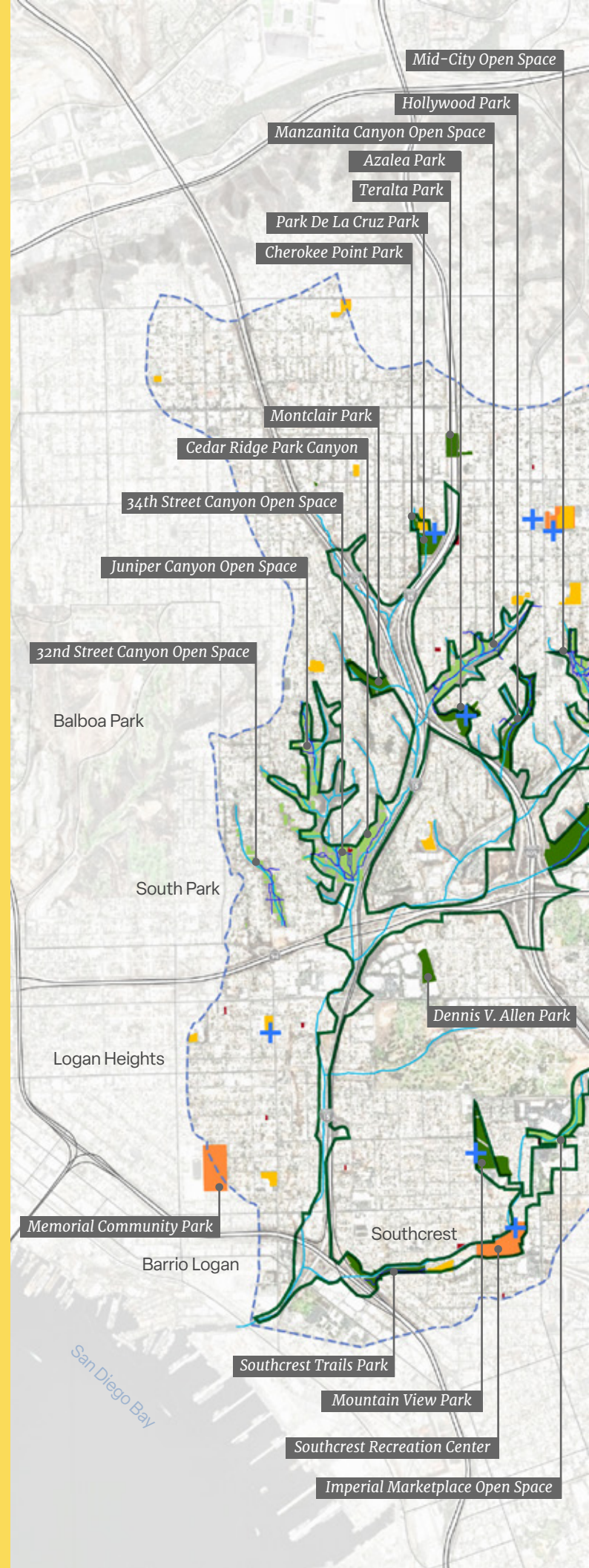
Adopted in 2002, the City of San Diego Street Design Manual provides information and guidance for the design of the public right-of-way. The Street Design Manual is intended to assist in the implementation of the special requirements established through community plans, specific plans, precise plans, or other City Council adopted policy and/or regulatory documents. The Street Design Manual is being updated to reflect current mobility planning standards and to incorporate a complete streets design framework, which will ultimately enhance mobility and stormwater management within the Regional Park.

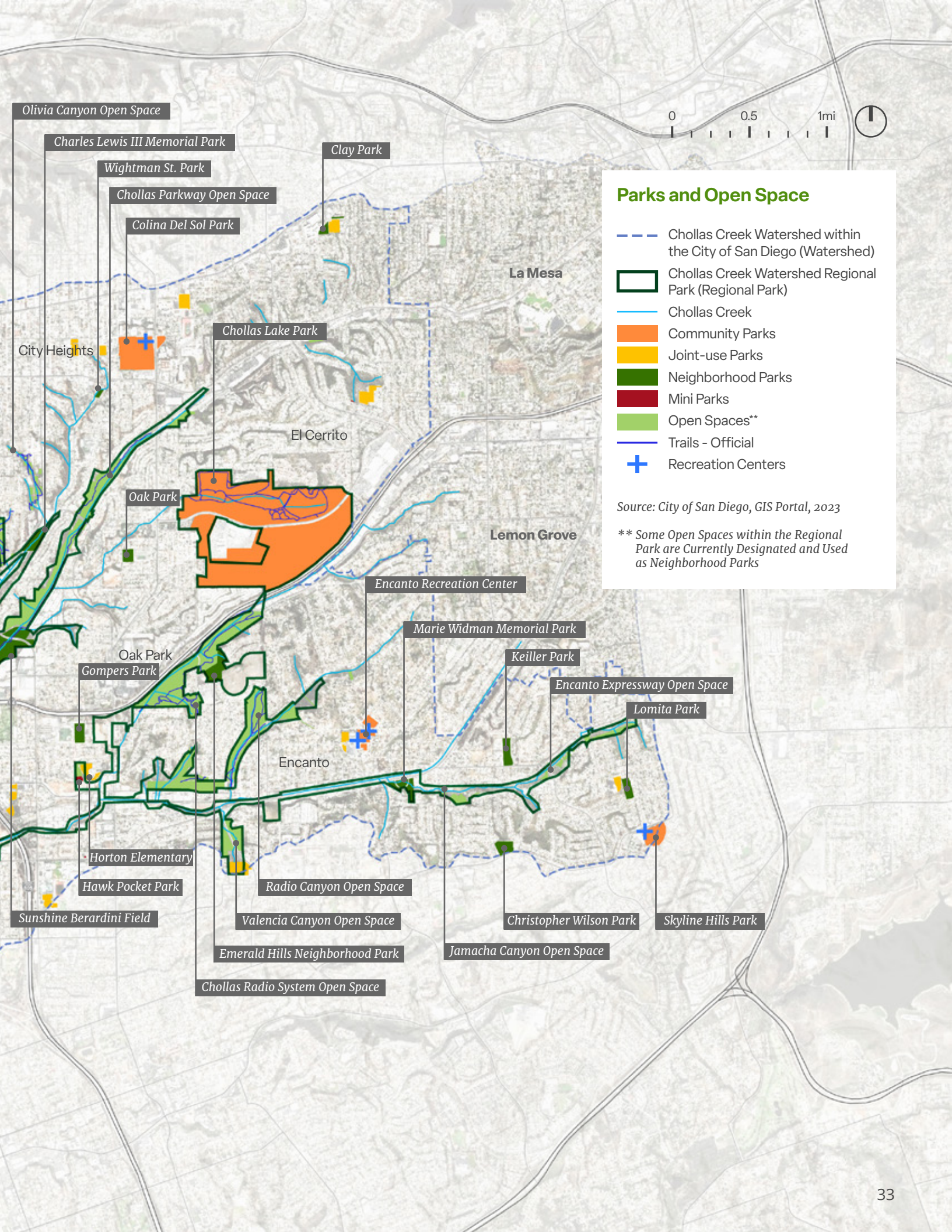
03

PARKS, OPEN SPACE AND PROGRAMS

Parks are invaluable environmental and social assets for communities. They provide flexible, vibrant, green, and enjoyable public spaces for community members and visitors. Great parks build great cities by providing healthy and fun places to enjoy the outdoors with friends and family. In the Chollas Creek Watershed area, there are 80 designated parks and open spaces. These parks are also rich in biodiversity and contribute to climate resilience. Many of these spaces are integrated within the Chollas Creek Watershed Regional Park boundary, ranging from undeveloped canyons to programmed City-operated parks (City of San Diego, n.d.).

The Chollas Creek Park Master Plan will further highlight the social, ecological and recreational values that these parks and open spaces offer. This Existing Conditions Report documents parks within the watershed beyond the Regional Park boundary to serve as a baseline for understanding how the Chollas Creek Park Master Plan can promote connections between these parks to the Regional Park and serve the communities within this ecosystem.





Parks and Open Space

- Chollas Creek Watershed within the City of San Diego (Watershed)
- Chollas Creek Watershed Regional Park (Regional Park)
- Chollas Creek
- Community Parks
- Joint-use Parks
- Neighborhood Parks
- Mini Parks
- Open Spaces**
- Trails - Official
- + Recreation Centers

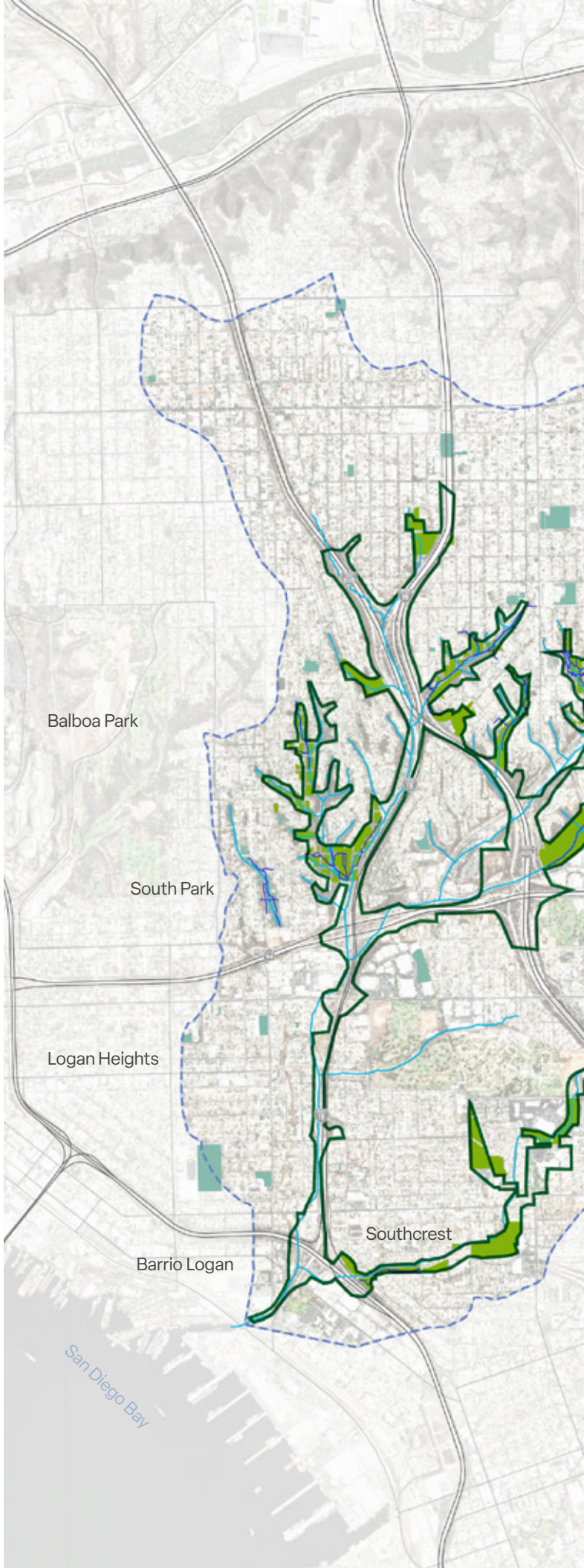
Source: City of San Diego, GIS Portal, 2023

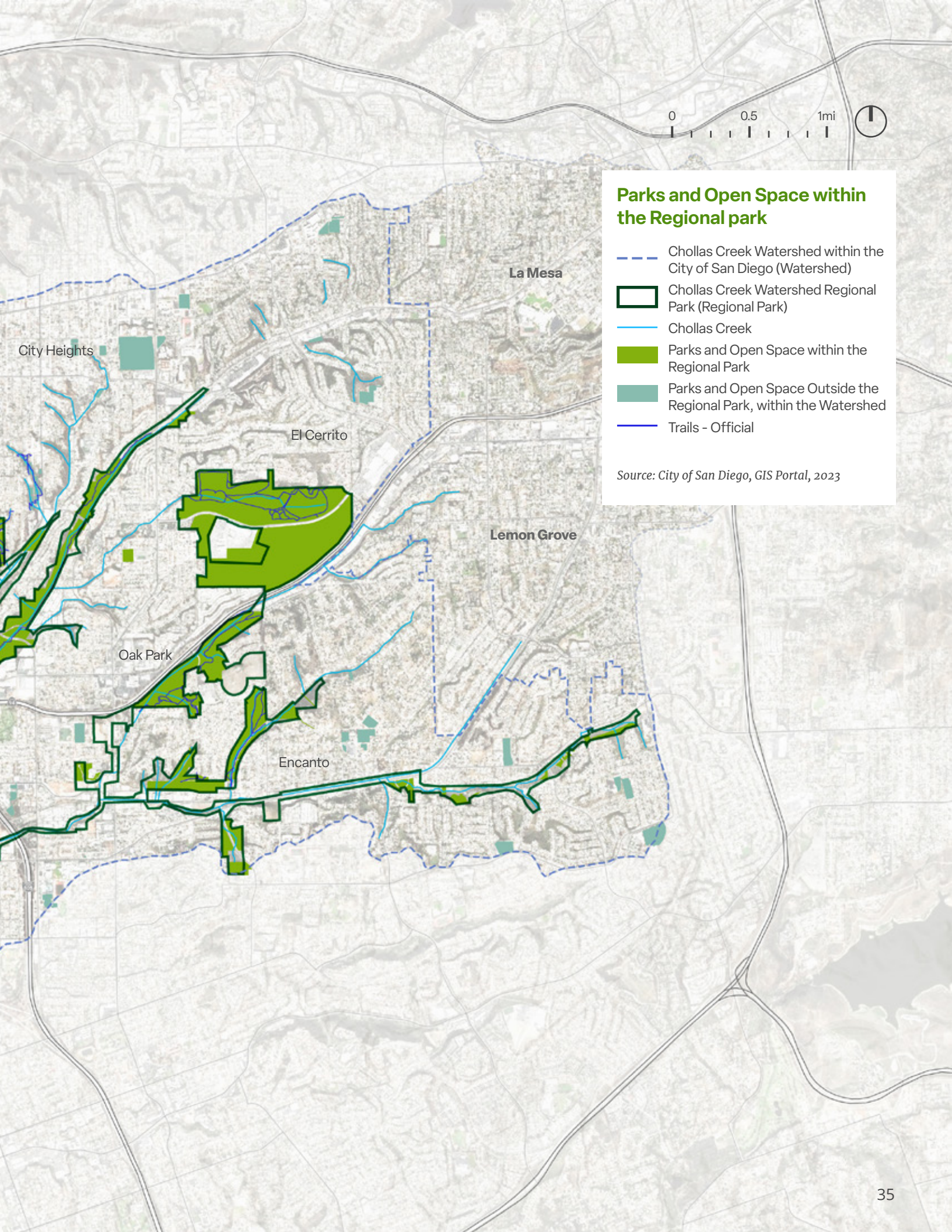
** Some Open Spaces within the Regional Park are Currently Designated and Used as Neighborhood Parks

By fostering connections between neighborhood and community-based parks and the larger Regional Park, the Chollas Creek Park Master Plan will provide policies and design guidelines to unite the diverse communities in the watershed, with the Regional Park serving as a shared resource for recreation and community-building. Through careful planning and phased integration, the Chollas Creek Park Master Plan will explore the potential of the Chollas Creek Watershed Regional Park and outline a strategy for developing climate-resilient recreational spaces and programs that are healthy and fun for people of all age groups and abilities.

Existing Parks Network	Acreage Within the Regional Park Boundary
Community Parks	337.0
Neighborhood Parks	158.3
Mini Parks	1.2
Joint Use Parks	9.8
Open Space	292.9
Total	799.2

Existing Parks Network	Acreage Outside the Regional Park Boundary (within the Watershed)
Community Parks	86.7
Neighborhood Parks	47.2
Mini Parks	2.7
Joint Use Parks	60.3
Open Space	33.9
Total	230.8





Parks and Open Space within the Regional park

- Chollas Creek Watershed within the City of San Diego (Watershed)
- Chollas Creek Watershed Regional Park (Regional Park)
- Chollas Creek
- Parks and Open Space within the Regional Park
- Parks and Open Space Outside the Regional Park, within the Watershed
- Trails - Official

Source: City of San Diego, GIS Portal, 2023

Park Types

Parks and open space each serve different purposes and provide specific amenities and benefits for the surrounding communities and habitats. The Parks Master Plan formalized the different definitions and typologies that encompass park amenities in the City and the population these different amenities are expected to serve. In this report, the following terminology will be used to describe the parks and open spaces within the Regional Park and are consistent with the Parks Master Plan (City of San Diego, 2022b):



Mini Parks

Mini Parks are small, easily accessible parks near or in residential areas with features like picnic areas, play spaces and multi-purpose fields. Approximately one to three acres in size, mini parks can be accessed by bicycling, walking, rolling and public transit.

Photo: 41st Street Mini Park

Neighborhood Parks

Medium-sized parks that serve smaller populations (within approximately a 0.5-mile radius) and are accessible by bicycling, walking/rolling, and public transit. Typical components of a neighborhood park include recreation centers, multi-purpose fields, aquatic centers, multi-purpose courts, restrooms, and walkways.

Photo: Southcrest Trails Park



Community Parks

Community Parks are larger-sized parks that typically have recreation centers, aquatic complexes, multi-purpose fields, and sport courts. These spaces typically feature diverse recreation amenities including playgrounds for different age groups, skate parks, off-leash dog areas and arts and cultural venues. Community parks are often enjoyed by people from multiple communities.

Photo: Chollas Lake Park

Joint-use Parks

The City partners with other public-serving entities such as school districts to provide joint use parks as a recreation opportunity for the community. Joint use parks provide access to multi-use fields and sports facilities located on school campuses to the larger public outside school hours.

Photo: McKinley Elementary Joint-use Park



Open Space

Open spaces include canyons, mesas, and other natural landform that are protected to conserve sensitive habitats, plants, and animals. Open spaces can support compatible recreation amenities such as trails, staging areas, outlooks, viewpoints and picnic areas. Uses planned inside or adjacent to the MHPA must be consistent with the MSCP.

Photo: Oak Park Trail

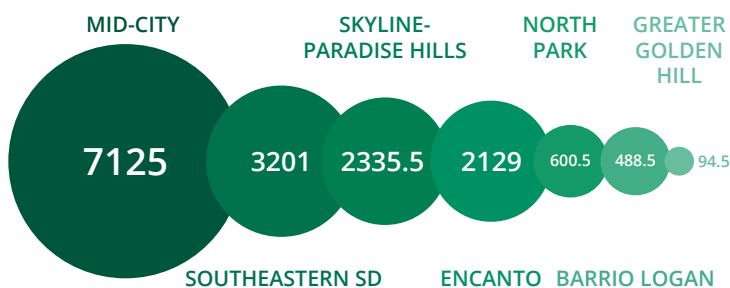
Park Inventory Data

The Parks Master Plan established a new system for determining the recreational value of parks and open space. It called for the City to take inventory of all its park and recreation facilities and assign scores, or recreation value points, based on the criteria outlined in the Parks Master Plan. Points are assigned based on the park's size, accessibility, and other various categories of amenities. Displayed below is the data for the Community Planning Areas that intersect the watershed. The numbers reflect park points for the entire

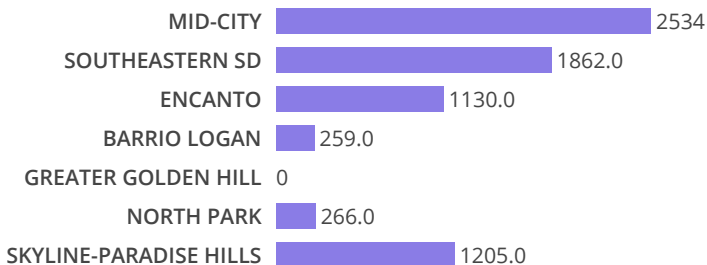
Community Planning Area. See Appendix D in the Parks Master Plan for references.

This data provides a baseline for understanding the recreation needs within the communities that are directly connected to the Regional Park. This data will guide the development of the Chollas Creek Park Master Plan. The master plan will bring forward goals and policies that can shape the infrastructure improvements within the Regional Park to address the communities' needs.

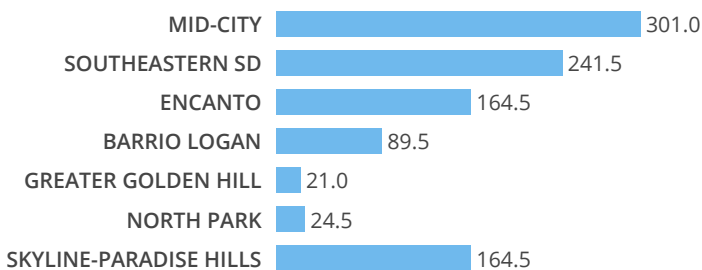
Total Park Points



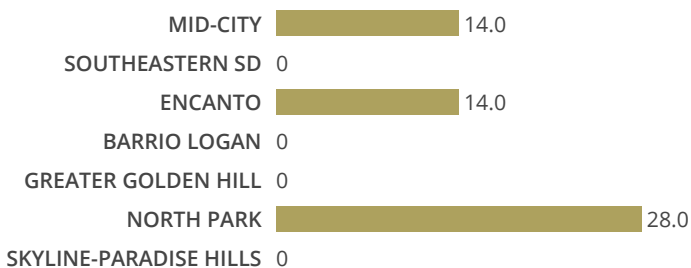
Health/Fitness/Sports



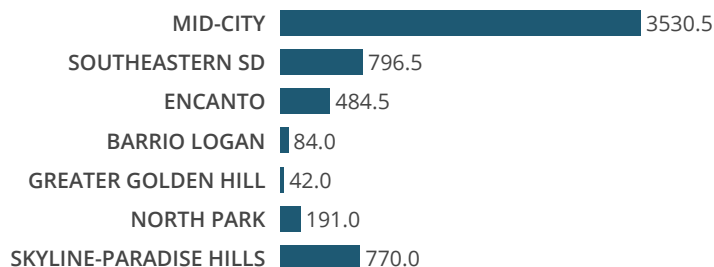
Site Amenities



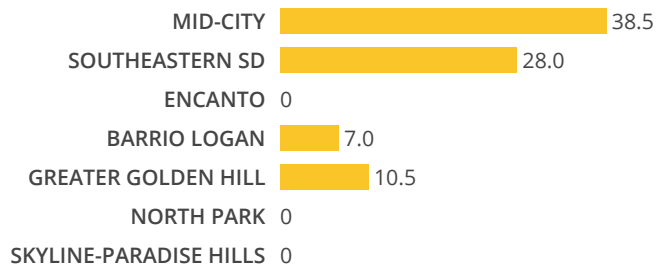
Activation & Engagement



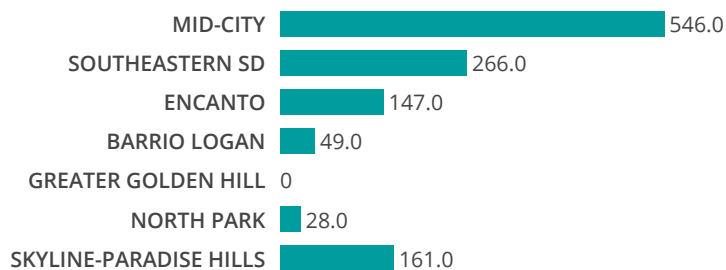
Park Acreage (Points)



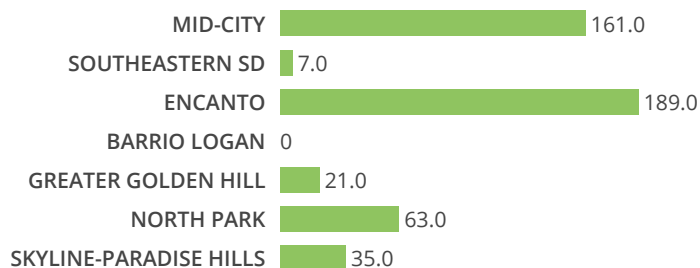
Social Spaces



Access/Connectivity



Regional/Open Space Recreation



Park Programs and Organizations

The City's Parks and Recreation Department manages the City's park system, oversees the operations of parks and recreation facilities, and provides programs and services that occur in these facilities. Most of the programs take place at recreation centers and pools, with activities such as youth and adult sports leagues and events for older adults. The City's Park and Recreation Department coordinates with community-based organizations to provide additional park programming and other educational and recreational opportunities within the watershed.

Art, Design and Representation

The Chollas Creek Enhancement Program called for public art to be integrated into all improvements along Chollas Creek. Interactive and engaging art can be incorporated into a variety of projects. Collaborating with local artists and involving the community to highlight an artistic identity fosters a stronger sense of pride and ownership in these spaces. It encourages people to connect with the park and feel a deeper attachment to their neighborhoods. Below are some art themes and prevalent pieces currently on display along Chollas Creek:



Southcrest Recreation Center



Oak Park Trails Walk Audit

Black Arts and Culture District

This vibrant nine-block corridor nestled within Encanto is a celebration of Black culture. Its diverse mix of commercial, residential, and art spaces highlights the beauty and creativity of the region's Black community.

Commemorative Art

The Southcrest Trails Park commemorates the community's struggle to stop the construction of a freeway through the neighborhood and the redevelopment of the park. The art piece *A Place to Call Home* is at the center of Southcrest Trail. It consists of cast concrete portraits representing community members speaking the four names that have identified the area over time - Southcrest, Shelltown, Chollas Creek, and Home. The piece represents the community's determination to reclaim their land and identity. The January storm caused flooding, erosion, and damage throughout the park. Extensive cleanup and repairs were required to restore them.

Environmental Art

Environmental themes are present in the art along Chollas Creek. For example, the entrance gate at Chollas Creekside Park features metal branches holding up the park signage that artistically represents the branches of Chollas Creek.

Native Art

Kenneth Banks created *Coyote Tracks* paying tribute to the Kumeyaay people. As a symbol of cultural resilience and revival, the sawil (basket) is decorated with traditional motifs.



Coyote Tracks by Kenneth Bank, 2012



Famous Civil Rights Leaders Mural at the Black Arts and Culture District



A Place to Call Home by Ingram Ober and Marisol Rendón-Ober, 2018



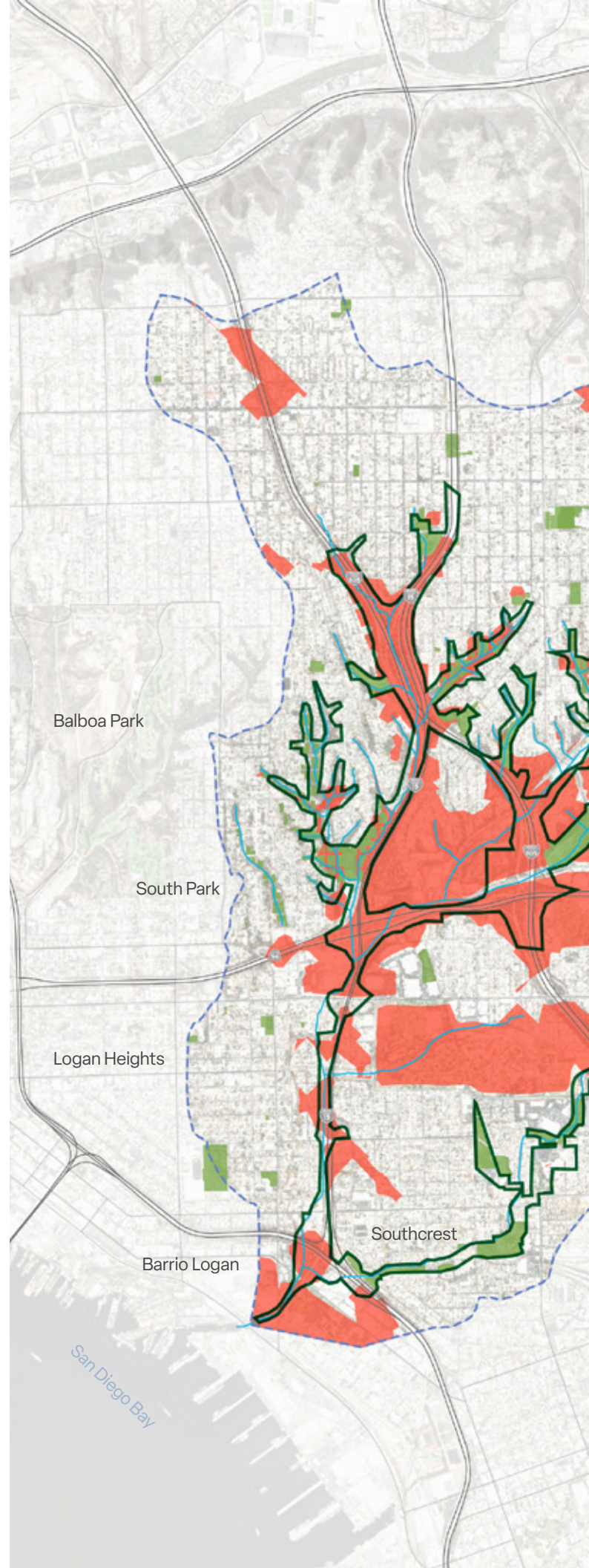
Chollas Creek Park Gateway by Roman de Salvo. 2019

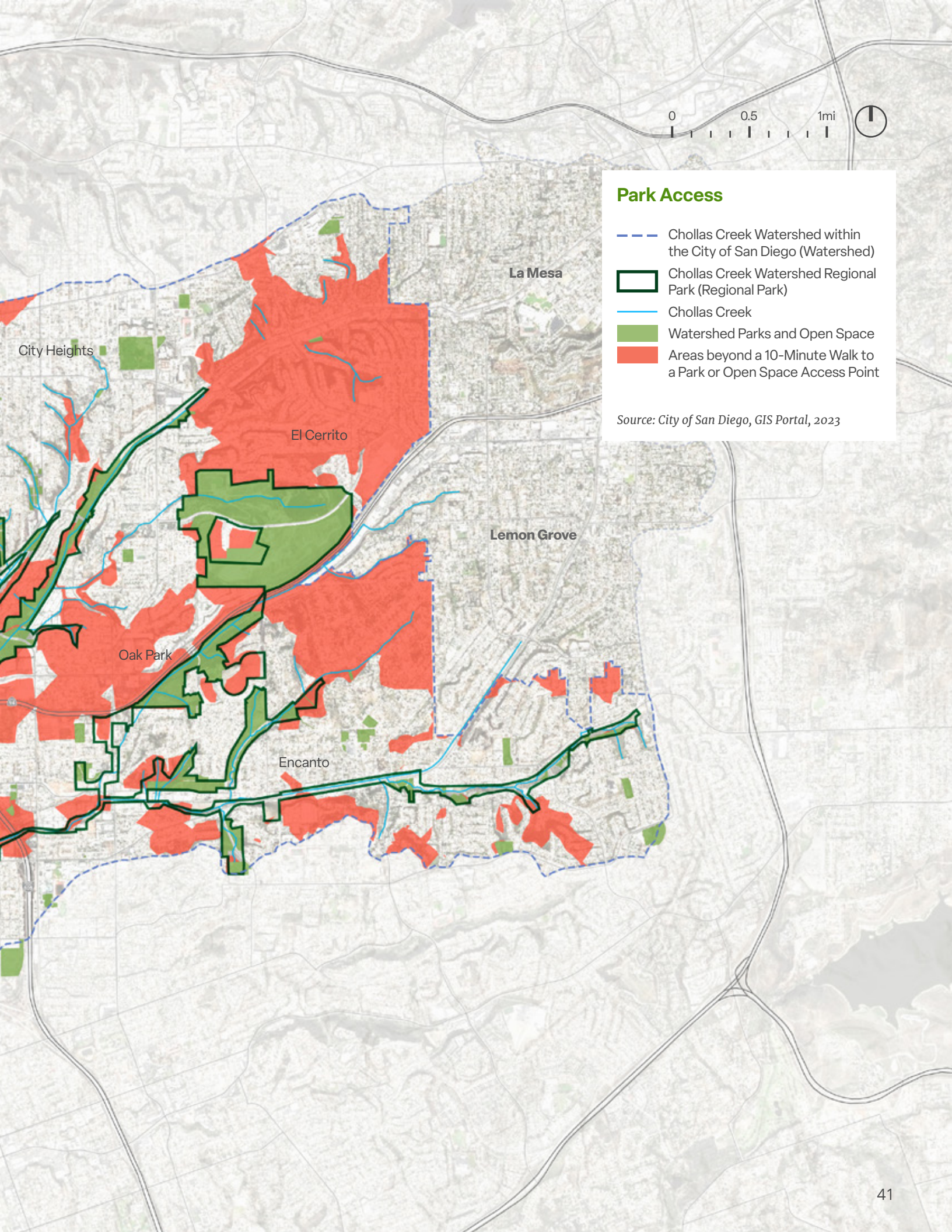
Park Access in the Chollas Creek Watershed

High-quality, well-maintained parks promote mental, physical, and environmental health. Easy access is crucial for communities' health, cohesion, and stability. It is estimated that 81% of San Diegans can walk to a park within 10 minutes (Trust for Public Land, 2023). However, many neighborhoods within the watershed fall outside of that range. This issue is most prevalent in City Heights, Eastern Area, Encanto, Barrio Logan, and Southeastern San Diego. The Regional Park is divided by Interstate 805, State Route 15, and State Route 94, creating harsh barriers that make access difficult and unsafe. Improving access to public spaces is essential to fostering a healthy community. Additionally, areas immediately adjacent to Chollas Creek, including those near freeways, could be explored as potential sites for future park development, creating more accessible public spaces.

Inequities in the planning process have resulted in an uneven distribution of parks and recreational facilities across San Diego. It has left marginalized communities with inadequate and poorly maintained options. The City is currently developing a Park Needs Index to address this disparity. The Park Needs Index will identify areas with significant park needs by incorporating metrics beyond the number of parks and park acreage, including factors such as quality, safety, accessibility, and overall need based on the City's standards (City of San Diego, 2023a).

Ongoing studies, such as the Parks Needs Index, will emphasize the urgency of implementing the Chollas Creek Park Master Plan and prioritizing areas with the greatest need to ensure equitable access to recreational opportunities essential for the health and well-being of community members of all age groups and abilities.





Park Access

- Chollas Creek Watershed within the City of San Diego (Watershed)
- ▭ Chollas Creek Watershed Regional Park (Regional Park)
- Chollas Creek
- Watershed Parks and Open Space
- Areas beyond a 10-Minute Walk to a Park or Open Space Access Point

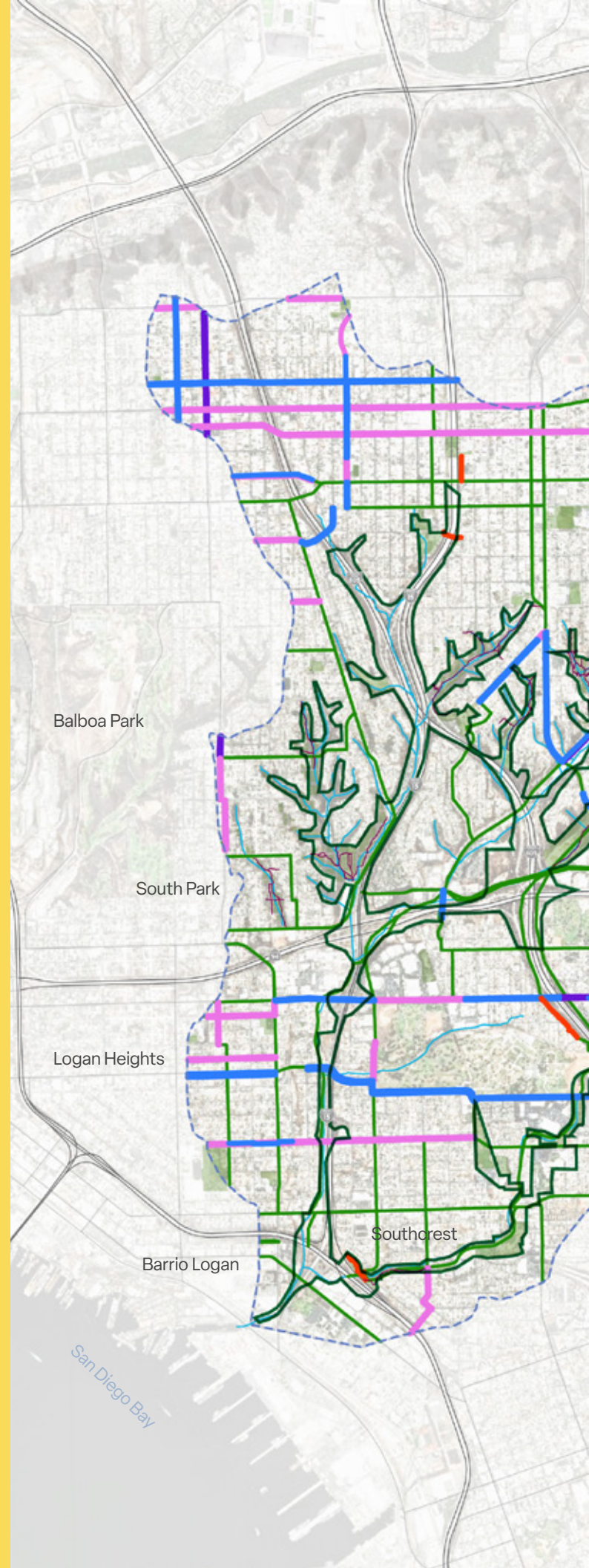
Source: City of San Diego, GIS Portal, 2023

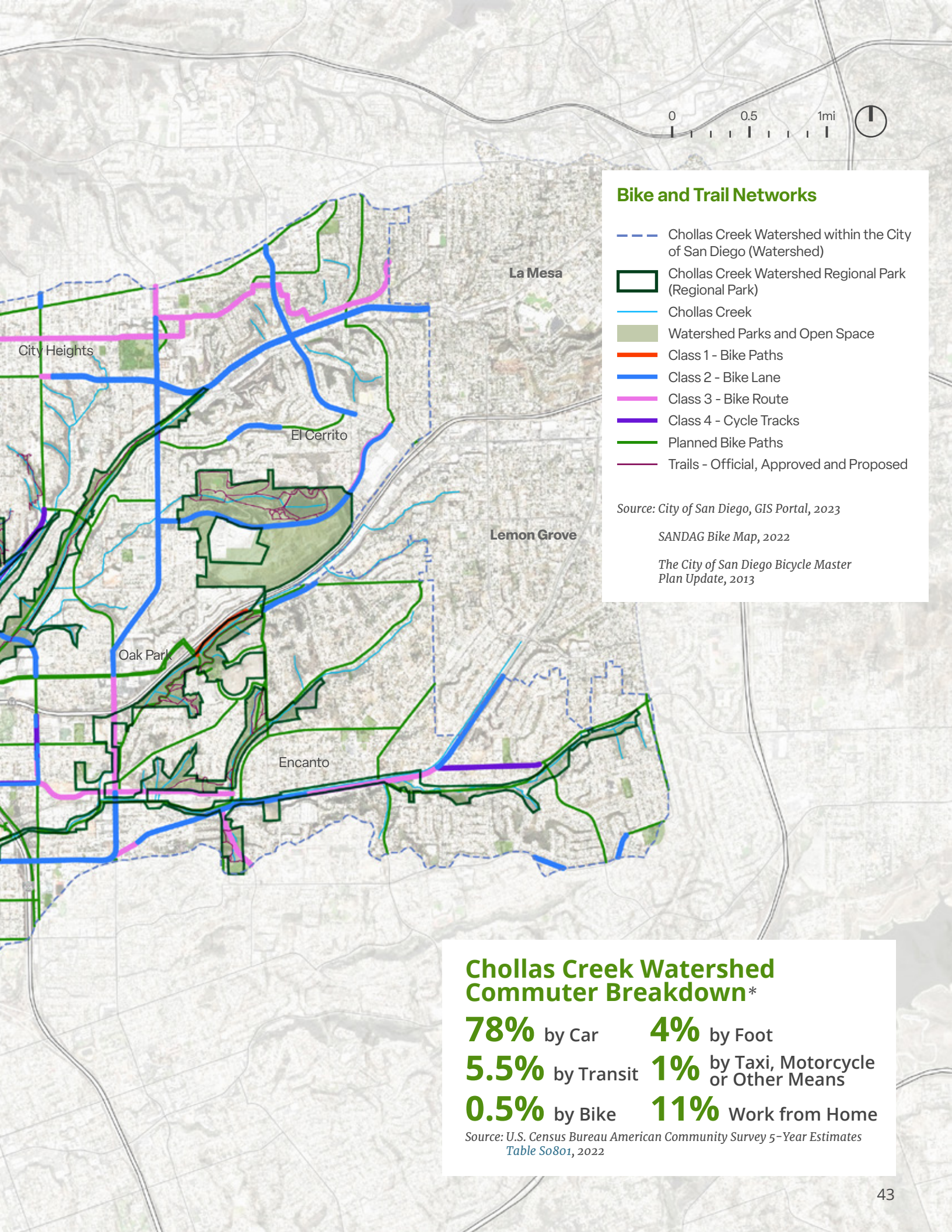
04

TRANSPORTATION AND CONNECTIONS

As the eighth-largest city in the United States, San Diego relies on its transportation network to support its growing industries and economy. This system of interconnected roadways, highways, light rail lines, bus routes, bicycle facilities, sidewalks, and recreational trails provides diverse travel options. Nearly 70% of San Diego's residents depend on cars for their daily commutes. Around 8% opt for shared rides or carpools, 3% use public transportation, while 2% rely on taxicabs, motorcycles, and other means of transportation. Only 3% of the community members walk to work, and approximately 1% prefer biking. In addition, 14% of San Diegans work from home (City of San Diego, 2023c). The significant dependence on cars stems from various factors. Current transit challenges such as lower frequencies and number of connections required result in lower ridership. Furthermore, past traditional suburban land use patterns require individuals to travel longer distances for daily activities, increasing dependence on cars.

The City has set ambitious goals to shift these patterns. The 2022 Climate Action Plan sets the targets of 25% walking, 10% cycling and 15% public transit for all San Diego residents' trips (City of San Diego, 2022a). The Climate Action Plan underscores the importance of enhancing accessibility to natural resources in ways that promote travel options such as walking/rolling, biking and taking public transit to travel from home, school, work, recreation, grocery shopping and other day-to-day activities.





Bike and Trail Networks

- Chollas Creek Watershed within the City of San Diego (Watershed)
- ▭ Chollas Creek Watershed Regional Park (Regional Park)
- Chollas Creek
- ▭ Watershed Parks and Open Space
- Class 1 - Bike Paths
- Class 2 - Bike Lane
- Class 3 - Bike Route
- Class 4 - Cycle Tracks
- Planned Bike Paths
- Trails - Official, Approved and Proposed

Source: City of San Diego, GIS Portal, 2023

SANDAG Bike Map, 2022

The City of San Diego Bicycle Master Plan Update, 2013

**Chollas Creek Watershed
Commuter Breakdown***

78% by Car	4% by Foot
5.5% by Transit	1% by Taxi, Motorcycle or Other Means
0.5% by Bike	11% Work from Home

Source: U.S. Census Bureau American Community Survey 5-Year Estimates
Table So801, 2022

Walking/Rolling and Biking Paths

The watershed currently contains 18 miles of trails, with 16 miles within the Regional Park. However, certain areas, particularly the southwest regions of Southeastern San Diego and the Encanto neighborhood, lack any trails.

There are 40 miles of bikeways within the watershed, of which 9 miles fall within the Regional Park. Most bikeways are located in the northern portion of the watershed, concentrated in the City Heights and Eastern Area Community Planning Areas.

The SANDAG 2021 Regional Plan proposed the establishment of an additional 9 miles of bikeways in the future. An additional 20 miles are being proposed to bridge the significant gaps in the current bike network (SANDAG, 2021). Despite these planned extensions, significant improvements are still needed, especially in the midwestern and southeastern sections of the watershed.

Types of Bike Infrastructure

The City of San Diego classifies bike infrastructure as listed below:



Bike Paths - Class 1

These shared-use paths are paved routes exclusively for bicycles, pedestrians, and other non-motorized travel. Separated from vehicle traffic, they provide important connections where roads are unavailable or unsuitable for bikes.



Bike Lanes - Class 2

Bike lanes are dedicated lanes on roadways, marked by striping and signage, that provide one-way bicycle travel on each side of the street. These lanes are typically enhanced with warning or wayfinding signage to ensure cyclist safety and route connectivity.



Bike Routes - Class 3

Bike routes are shared lanes where cyclists and vehicles travel together, marked by signs and special road symbols like sharrows. These routes connect to other bike facilities and mark preferred cycling paths through high-traffic areas.



Cycle Tracks - Class 4

Dedicated bicycle lanes that are physically separated from vehicular travel lanes by barriers or buffers, ensuring they are exclusively used for bicycle travel.

Type of Trails

The City classifies trails into four categories: Primitive Trails, Moderate-Use Trails, Circulation Trails, and Utility Access Path/Park Management Trails/High-Use Recreational Trails (City of San Diego Parks and Recreation Department, 2019). The City has 237 miles of Multi-use Trails designated for cyclists, equestrians, and pedestrians. Almost all trails within the watershed are Multi-use Trails.

Trail Accessibility

More than 60 access points in the Regional Park connect community members with existing trails and open spaces. However, some access points lack sufficient signage, causing uncertainty about whether the area is accessible to the public or privately owned.

An entrance to Mid-City open space trails is located behind residential properties (see photo). This phenomenon is prevalent in this area, and signs are often difficult to identify due to overgrown vegetation obscuring any existing signage. Adding wayfinding features and branding materials can significantly improve usage. These improvements can encourage community members to better access the trails and open spaces within the Regional Park. Trail planning inside the MHPA would be consistent with the MSCP and all Environmentally Sensitive Lands Regulations.



Lack of Signage at Mid-City Open Space Trails (45th St. & Maple St.)

Pedestrian and Bicyclist Injuries and Deaths

Between the years 2011 and 2022, road accidents within the watershed resulted in the deaths of 85 pedestrians and 7 cyclists (Safe Transportation Research and Education Center, University of California, Berkeley, 2023). Additionally, 224 pedestrians and 36 cyclists were severely injured. Most of these incidents happen at specific intersections, which include University Avenue and State Route 15, Fairmount Avenue and University Avenue, State Route 15 and State Route 94, and Federal Boulevard and Euclid Avenue.

While all bikeways help build a more sustainable transportation system through a connected cycling network, studies have revealed that Class 1 and Class 4 bikeways are the safest choices for cyclists (National Association of City Transportation Officials, 2014) as they both provide ample separation between cyclists and motorized vehicles.



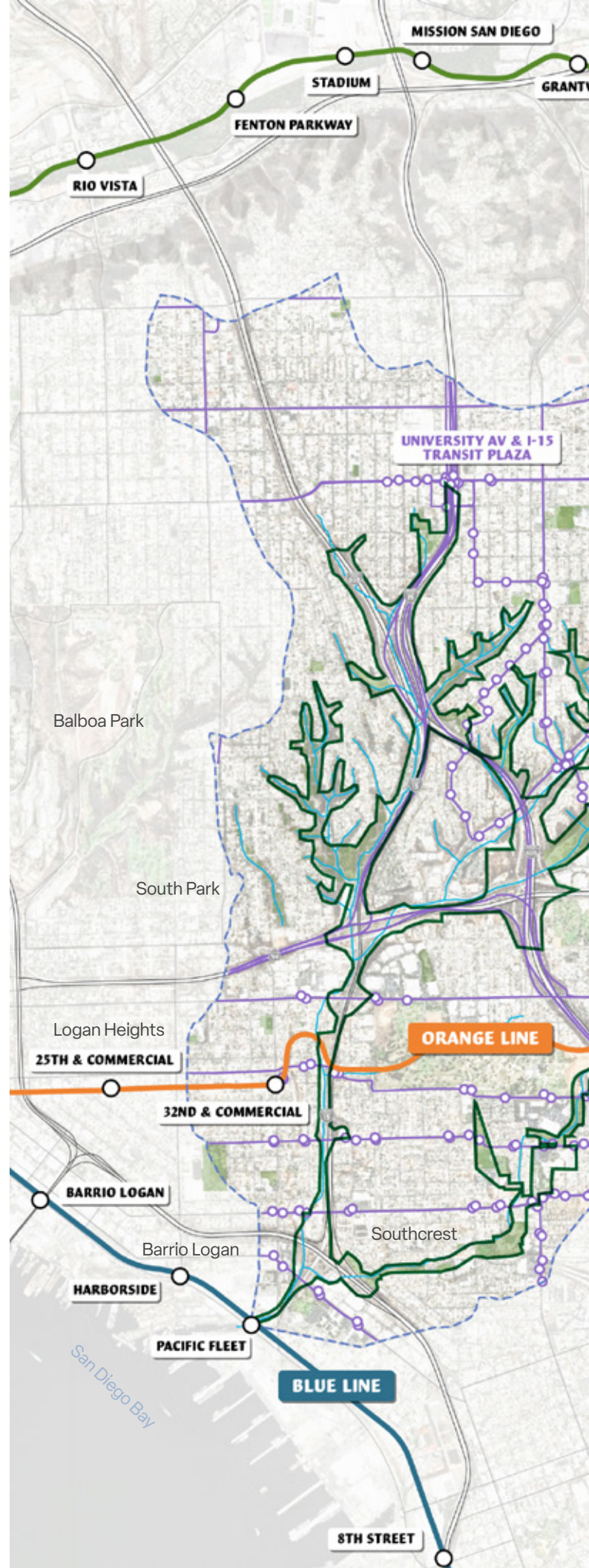
"Ghost Bikes" Memorials for Cyclist Victims in Road Accidents

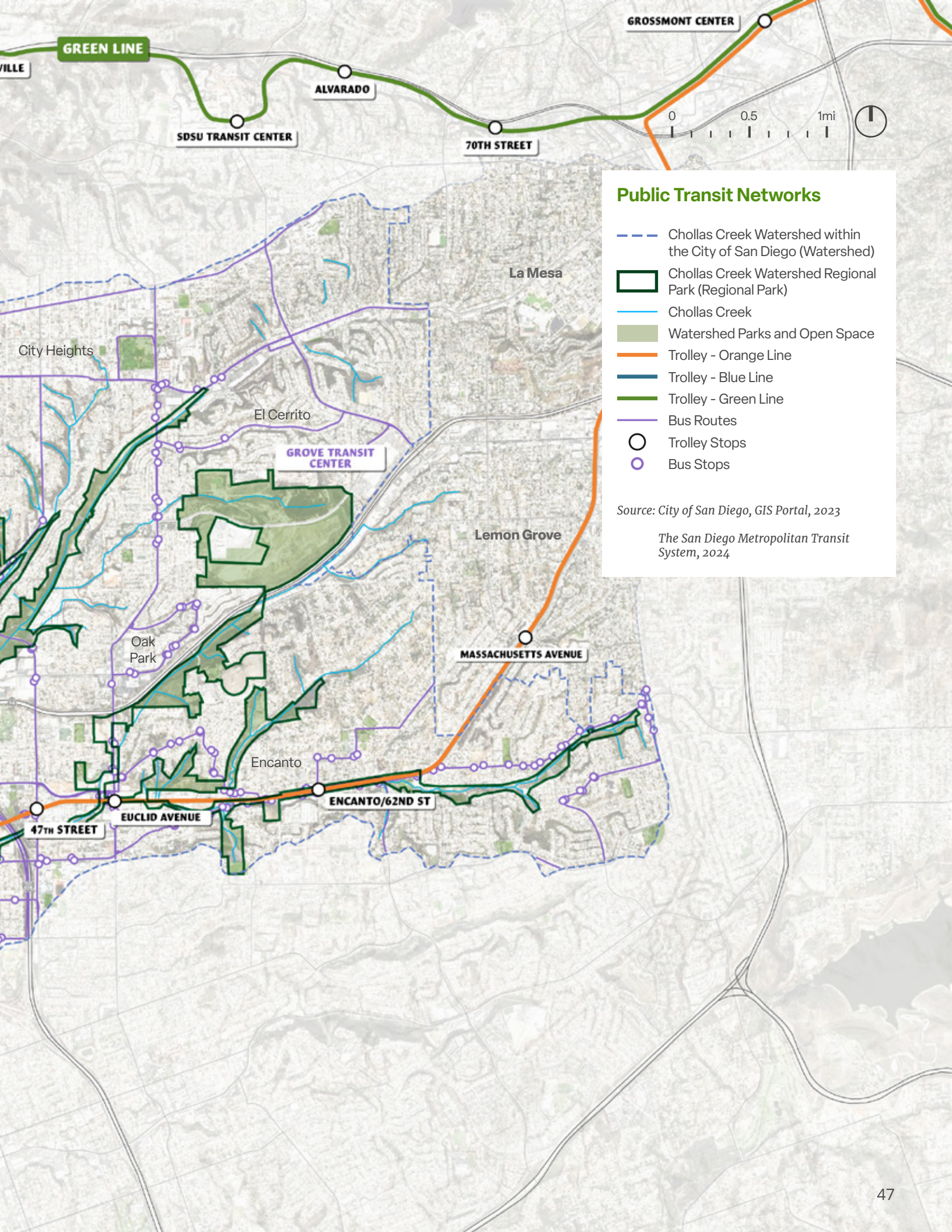
Public Transportation Networks

Two of the three MTS trolley lines provide transit coverage within the watershed. The Orange Line crosses the watershed from east to west, with two stations in the Regional Park and four stations in the watershed. Meanwhile, the Blue Line intersects the Regional Park in the southwest section, offering a single station at Pacific Fleet. Both lines run through the Regional Park, with only the Orange Line connecting with existing bikeways. It is also the only connection to existing trails in the Encanto neighborhood. However, several proposed bike routes are identified in the City's Bicycle Master Plan. Once implemented, they would connect to the Blue and Orange Lines and other walking/rolling and biking facilities.

The watershed has over 20 bus routes and 450 bus stops within its boundaries. More than 250 of the bus stops are located within a 5-minute walk from the park, and over 50 are situated within a 5-minute walk from one of the existing trails. Additionally, almost 300 bus stops are connected to an existing bikeway. With several bikeway projects underway, this number could soon increase by approximately 30%.

Finally, there are three Park and Ride lots available along the Orange Line stations within the watershed, and the San Diego Paratransit service offers on-demand transportation throughout the area.





Public Transit Networks

- Chollas Creek Watershed within the City of San Diego (Watershed)
- Chollas Creek Watershed Regional Park (Regional Park)
- Chollas Creek
- Watershed Parks and Open Space
- Trolley - Orange Line
- Trolley - Blue Line
- Trolley - Green Line
- Bus Routes
- Trolley Stops
- Bus Stops

Source: City of San Diego, GIS Portal, 2023

The San Diego Metropolitan Transit System, 2024

05

NATURAL HABITAT AND CLIMATE RESILIENCE

Like cities worldwide, San Diego is grappling with the consequences of climate change. The region is experiencing extreme heat, rising sea levels, drought, rapid rain bursts, flash floods, and frequent wildfires. Underserved communities are often the most impacted, as their neighborhoods often experience a lack of infrastructure investment, inadequate housing, and high utility costs. These communities frequently suffer from urban heat island effects due to a lack of tree canopy and green spaces. These risks are anticipated to increase as extreme weather conditions occur more frequently.

The Chollas Creek Watershed is a vital habitat for various living species, including some that are threatened or endangered. It provides a nourishing environment for local plants and animals. Chollas Creek acts as a natural filter for stormwater, helps in controlling floodwater, replenishes groundwater, and supports the growth of surrounding vegetation.

Planning for Climate Change

The City of San Diego's 2022 Climate Action Plan contains six strategies to reduce fossil fuel consumption and lower greenhouse gas emissions to meet ambitious goals of net zero emissions by 2035. Of these strategies, two are particularly relevant to the Chollas Creek Park Master Plan:

Strategy 3: Mobility and Land Use

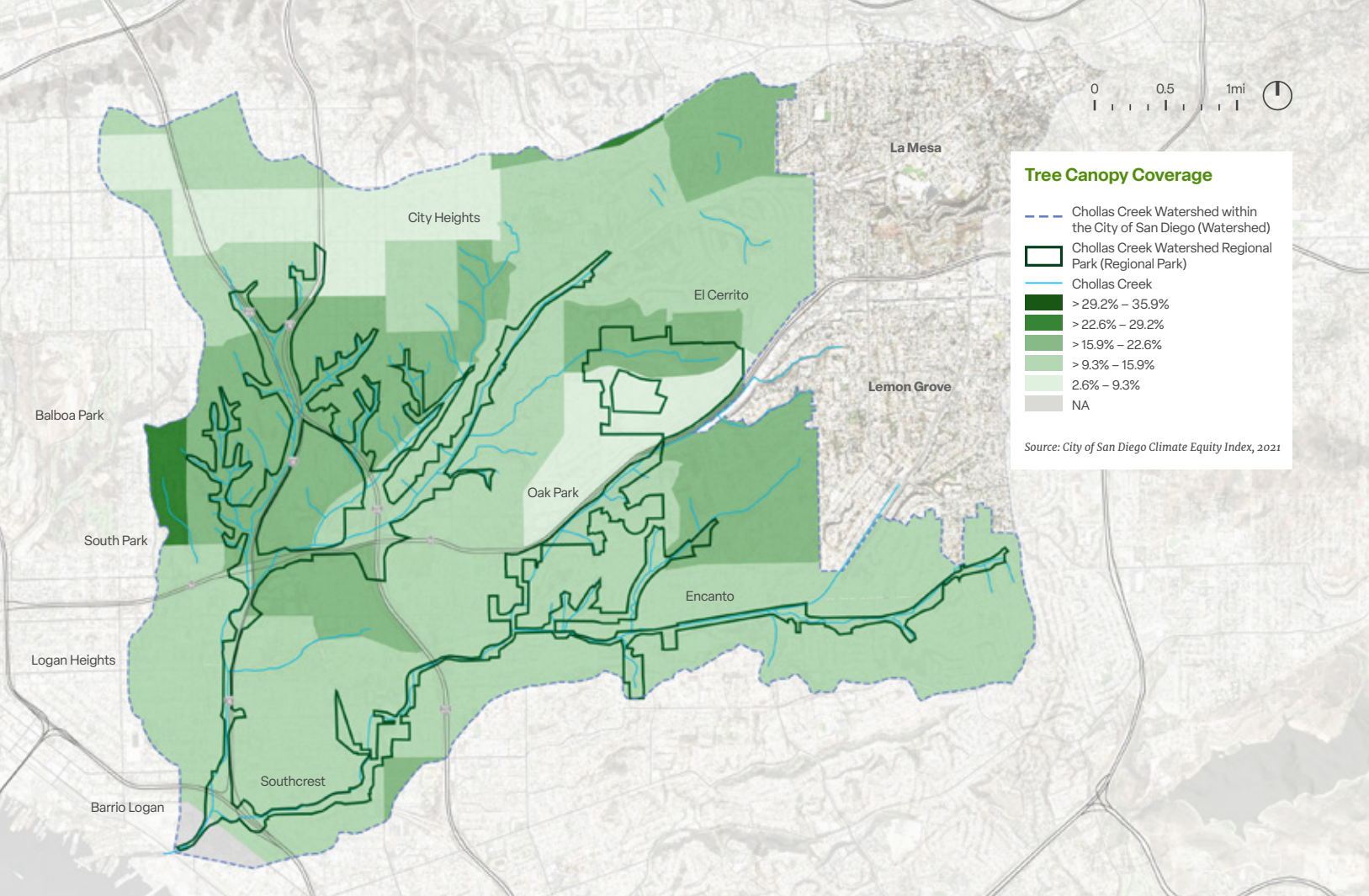
This strategy focuses on reducing dependence on cars by promoting options such as walking/rolling, biking and transit.

Strategy 5: Resilient Infrastructure and Healthy Ecosystems

This strategy aims to build resilient infrastructure and promote healthy ecosystems by protecting and restoring canyons, tree canopies, habitat patches, wetlands, and farmland.

The City has also adopted Climate Resilient SD, a comprehensive climate adaptation and resilience plan addressing extreme heat, extreme rainfall or drought, wildfires and sea level rise (City of San Diego, 2021). Climate Resilient SD sets goals that are highly relevant to the Chollas Creek Park Master Plan, particularly those addressing resilience and equity. They include the following:

- Ensure communities are connected and informed to be best prepared for climate change
- Plan for and build a resilient and equitable city
- Safeguard, preserve and protect historic and tribal cultural resources from the effects of climate change
- Support and prioritize thriving natural environments and enhance adaptability
- Maintain and ensure minimal disruption to all critical city services in the face of climate change hazards



Tree Canopy Coverage

Extensive research has shown that trees are highly beneficial for urban communities. When asked about the three most important benefits of trees during the development of the Urban Forestry Program Five Year Plan, the top three responses from the community were, clean the air by absorbing pollutants, create more pleasant neighborhoods and business districts, and reduce greenhouse gases, summer temperatures and address climate change (City of San Diego, 2017). Urban areas with heat-absorbing surfaces, such as asphalt and little greenery, may experience higher temperatures due to the high absorption and radiation of heat on these surfaces. The presence of plants helps to offset these effects by physically providing shade and relief from the sun, but also through the natural process of evapotranspiration, in which plants release a small amount of water vapor through their leaves, thereby cooling the surrounding air (United States Environmental Protection Agency, 2023).

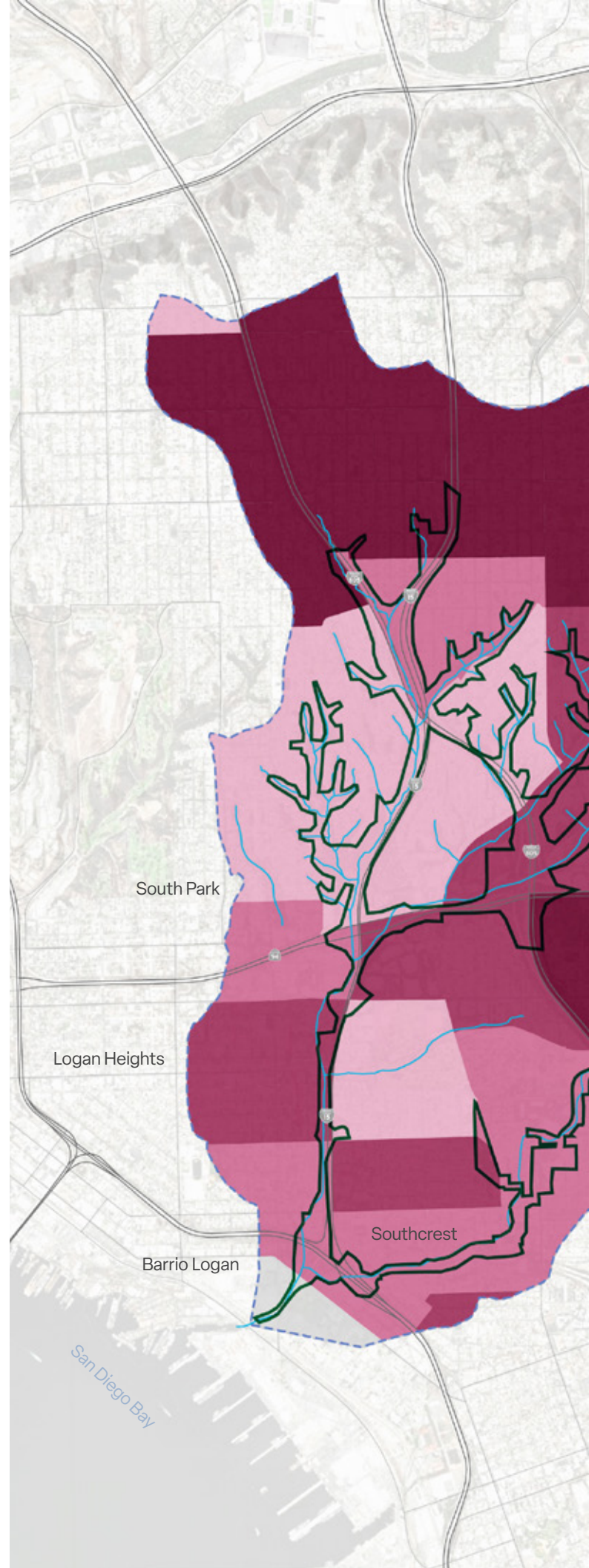
Although the benefits of trees are widely recognized, their distribution is unequal across neighborhoods, with some areas lacking green spaces and mature tree canopies. Narrow sidewalks and overhead power lines further limit planting spaces and hinder tree growth, posing challenges for future expansion. These infrastructure constraints are often more prevalent in low-income communities, making it more difficult to establish and sustain healthy tree coverage.

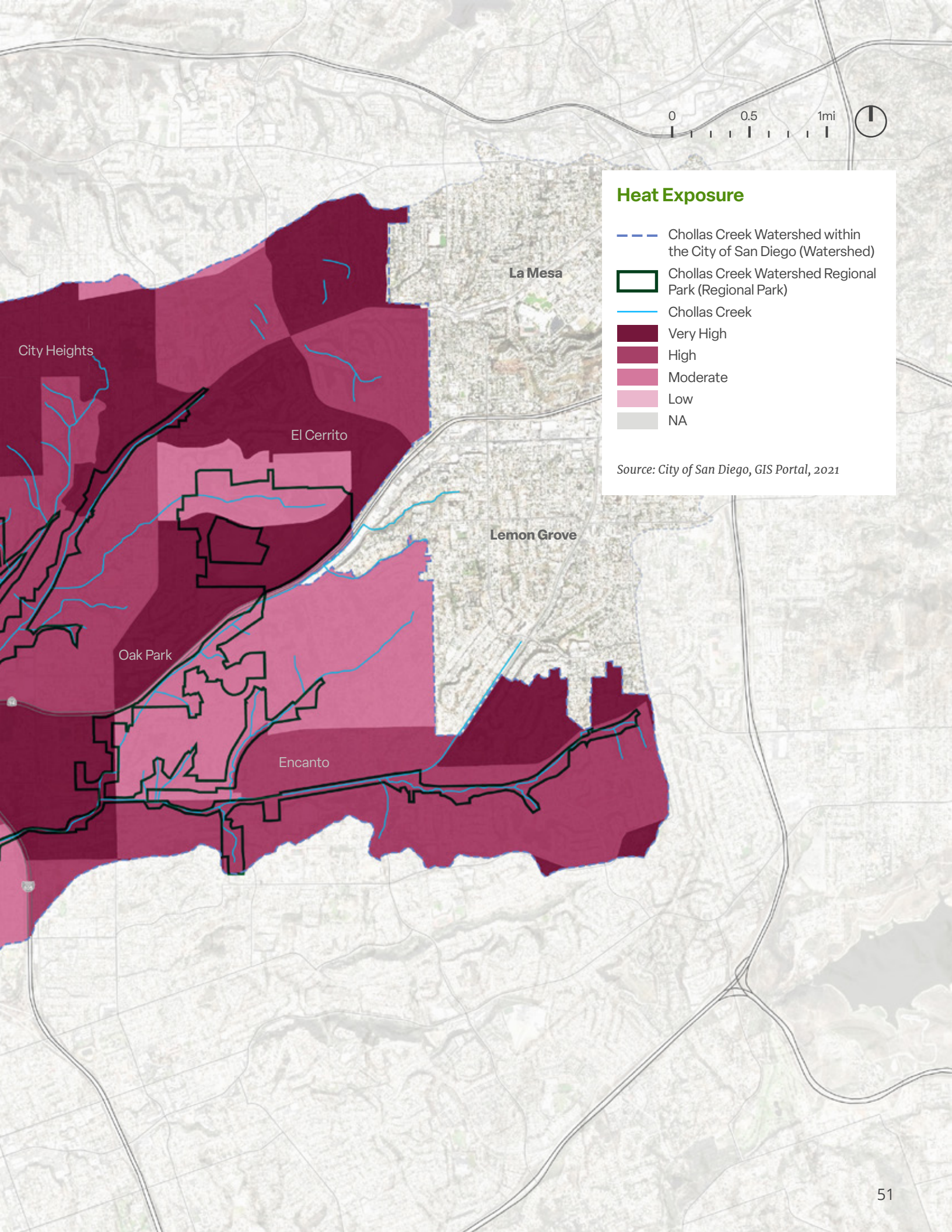
The map above shows the percentage of tree canopy coverage for each census tract across all land use categories within the watershed using a 2014 Light Detection and Ranging (LiDAR) analysis (City of San Diego, 2019). Balboa Park and its surrounding neighborhoods boast the highest tree canopy coverage, while areas such as City Heights, Barrio Logan, and Oak Park have the lowest canopy coverage within the watershed.

Heat Exposure

Urbanization and rising global temperatures have increased exposure to heat, causing significant concerns for cities and their inhabitants. Extreme heat can lead to heat-related morbidity and higher energy costs. Heat-related hospitalizations and mortality have risen in San Diego and other large cities. Vulnerability to heat-related illnesses is associated with age, pre-existing health conditions, and socioeconomic status. The burden of urban heat is not distributed equally. The burden of urban heat disproportionately impacts communities with lower incomes and communities of color (NASA Earth Science Applied Sciences, 2021).

The map on the right identifies the average summer heat exposure levels for each census tract from 2015 to 2020. Various factors, such as the presence of trees, geographical location, and development density, significantly influence land surface temperature. Heat exposure in Mid-City, Encanto and Skyline-Paradise Hills are higher due to their distance from the ocean. Inland homes generally experience less cooling than those who reside along the coast. These areas also have high impervious surfaces and low tree canopy, partly due to the presence of Interstate 805 and State Route 15 (NASA DEVELOP, 2021).





Heat Exposure

- Chollas Creek Watershed within the City of San Diego (Watershed)
- ▬ Chollas Creek Watershed Regional Park (Regional Park)
- Chollas Creek
- Very High
- High
- Moderate
- Low
- NA

Source: City of San Diego, GIS Portal, 2021

Habitat and Plant Communities

San Diego County is a hotspot for biodiversity, owing much of its ecological richness to the unique Mediterranean climate with mild, wet winters and warm, dry summers (The Nature Conservancy, n.d.). This climate contributes to this region being home to high numbers of rare and endangered species, making it the most biologically diverse county in the continental United States. Many canyons within the watershed are living examples of the vibrant ecosystem that once spanned the entire region (Groundwork San Diego, 2014). The plant communities within the Chollas Creek Watershed include:

Diegan Coastal Sage Scrub

Coastal sage scrub, a shrubland community with characteristic plants such as California Sagebrush (*Artemisia californica*) and California Buckwheat (*Eriogonum fasciculatum*), commonly inhabits slopes near the coast in San Diego County, especially in fog-prone areas of the region. This plant community can be found on the undeveloped slopes of canyons within the Regional Park. However, development and the introduction of invasive species threaten the remaining pockets of this vegetation type.

Wetlands

Freshwater and estuarine wetlands are vital plant communities within the Regional Park. Freshwater marshes, sustained by pooling water and runoff, persist year-round in some areas, while others are ephemeral and disappear during the hotter, drier months. Estuarine wetlands, located where the ocean meets rivers, support salt-tolerant plants such as Pacific Pickleweed (*Salicornia pacifica*) and Saltwort (*Batis maritima*). Urbanization has heavily impacted these habitats, creating opportunities for habitat restoration efforts.

Riparian Woodlands and scrub

These plant communities are found throughout California. They grow densely along streams, floodplains, and canyon bottoms. They depend

on the hydrologic cycle and flood events for nutrients and reproduction. Common plant types in these areas include coast live oaks, willows, cottonwoods, sedges, mule fat, and many more.



Diegan Coastal Sage Scrub



Wetlands



Riparian woodlands and Scrub

Threatened Plants and Animals

The habitat along Chollas Creek remains a refuge for a diverse range of native plants and animals. Chollas Creek supports habitat for several listed species, including the coastal California gnatcatcher (*Polioptila californica*), the Least Bell's vireo (*Vireo bellii*) and seven other plant species that are currently under threat - some of which are pictured here.



Coastal California Gnatcatcher



Least Bell's Vireo



California Adolphia



Coast Cholla



Otay Tarplant

Habitat Connectivity

In San Diego County, canyons, creek beds and drainage channels are vital links for wildlife, connecting them to essential resources and other populations. Natural slopes and topography provide food and shelter. In developed areas like the watershed, these corridors are crucial for the survival of local animal species, including birds and mammals.

Critical Wildlife Connections

San Diego River

The river and its associated park system provide a crucial riparian habitat corridor across the City.

Mission Trails Regional Park

Mission Trails Regional Park is one of the largest urban park systems in the United States. It contains a variety of habitats, including coastal sage scrub, chaparral, riparian areas and grasslands.

Balboa Park

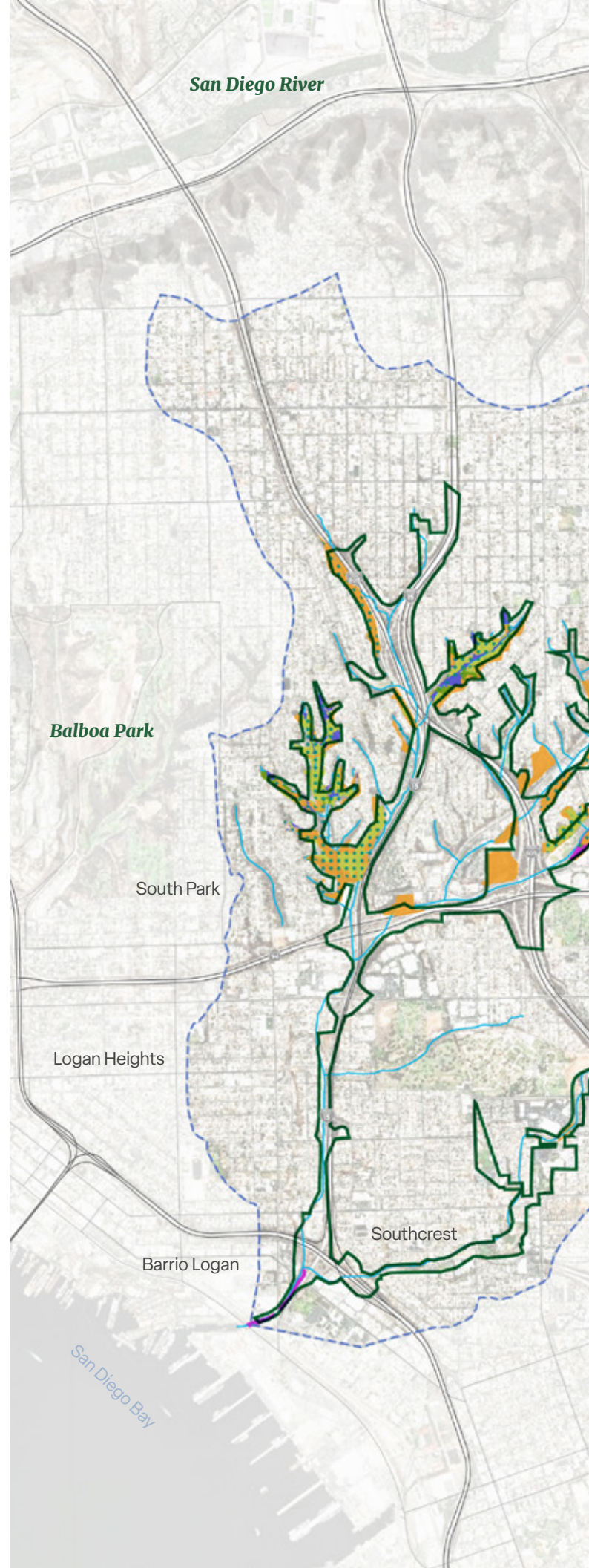
This park, hosting 18 museums and the San Diego Zoo, holds gardens that contain plants from all over the world. While not primarily native vegetation, natural canyons and trails surround the main programmed park areas, providing habitat connectivity throughout the park.

San Diego National Wildlife Refuge

12,445 acres from Jamul to Spring Valley and eastern Chula Vista, is part of the U.S. Fish and Wildlife Service's effort through the Multiple Species Conservation Program to balance habitat and species preservation with development.

San Diego Bay National Wildlife Refuge

Located in the southern part of San Diego Bay, this National Wildlife Refuge, managed by the U.S. Fish and Wildlife Service, consists of salt marsh habitats. It's home to several endangered species, including the light-footed Ridgway's rail and the California least tern.



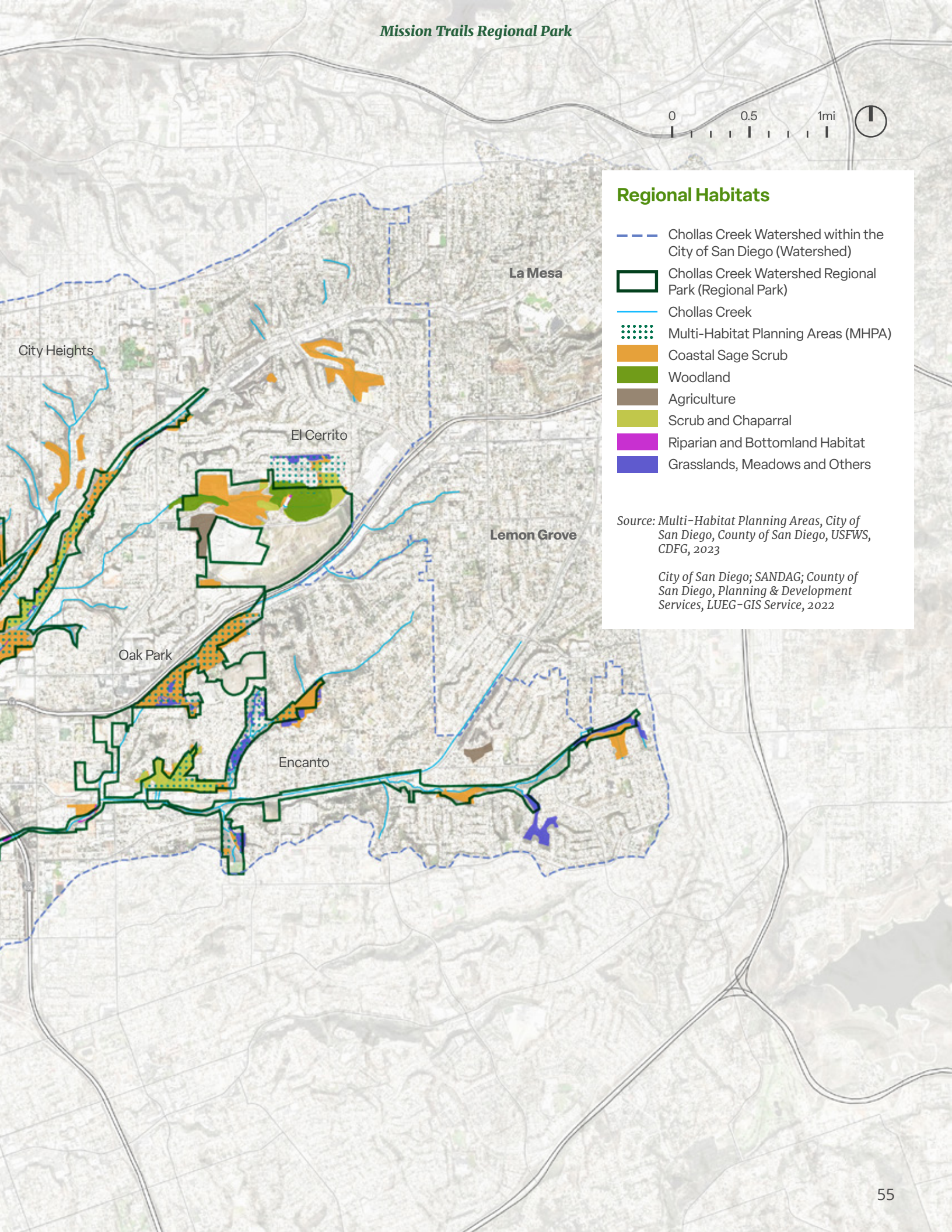


Regional Habitats

- Chollas Creek Watershed within the City of San Diego (Watershed)
- Chollas Creek Watershed Regional Park (Regional Park)
- Chollas Creek
- Multi-Habitat Planning Areas (MHPA)
- Coastal Sage Scrub
- Woodland
- Agriculture
- Scrub and Chaparral
- Riparian and Bottomland Habitat
- Grasslands, Meadows and Others

Source: Multi-Habitat Planning Areas, City of San Diego, County of San Diego, USEWS, CDFG, 2023

City of San Diego; SANDAG; County of San Diego, Planning & Development Services, LUEG-GIS Service, 2022



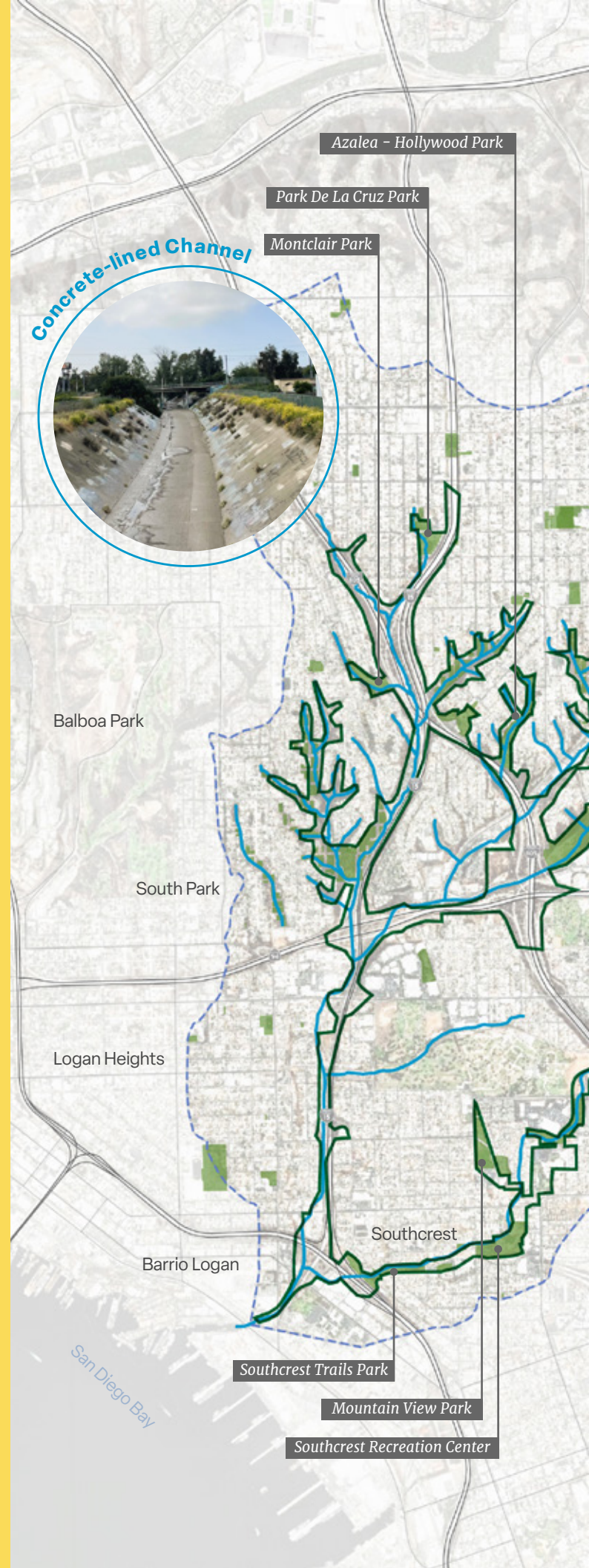
06

HYDROLOGY, WATER QUALITY AND FLOODING

The Regional Park revolves around the area's hydrological system. The quality of water, geography, stormwater discharge and groundwater systems all impact the overall well-being of the Chollas Creek ecosystem.

The watershed covers around 22 square miles of urban and parkland areas. Chollas Creek consists of tributaries with various channel types, such as concrete-lined and earthen channels and culvert/underground conveyances. It combines Interstate 5 and Main Street discharge before emptying into the San Diego Bay. Chollas Creek is classified as an urban creek with very little native vegetation (San Diego, 2002). However, large portions of Chollas Creek flow through developed parkland. Portions of Chollas Creek's floodplain provide wildlife habitat, with some of its tributaries integrated with public parks.

Chollas Creek has been deemed impaired by the United States Environmental Protection Agency (US EPA) due to exceeding water quality standards for copper, lead, zinc, diazinon, bacteria and sediment toxicity (San Diego Phase I municipal separate storm sewer systems [MS4s] Permit, Order No. R9-2013-0001).



Culvert



0 0.5 1mi



Creek Hydrology

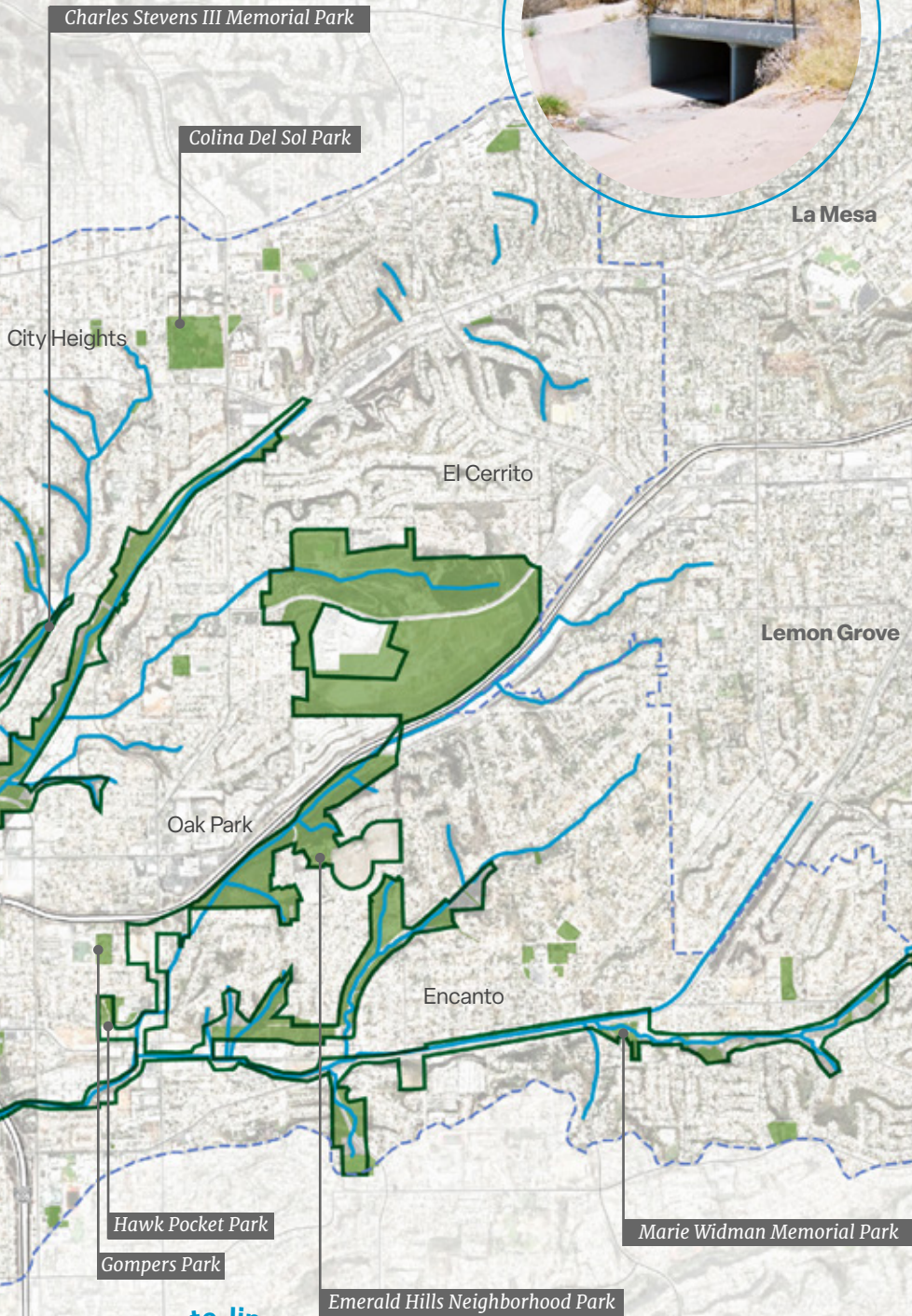
- Chollas Creek Watershed within the City of San Diego (Watershed)
- Chollas Creek Watershed Regional Park (Regional Park)
- Chollas Creek
- Watershed Parks and Open Space

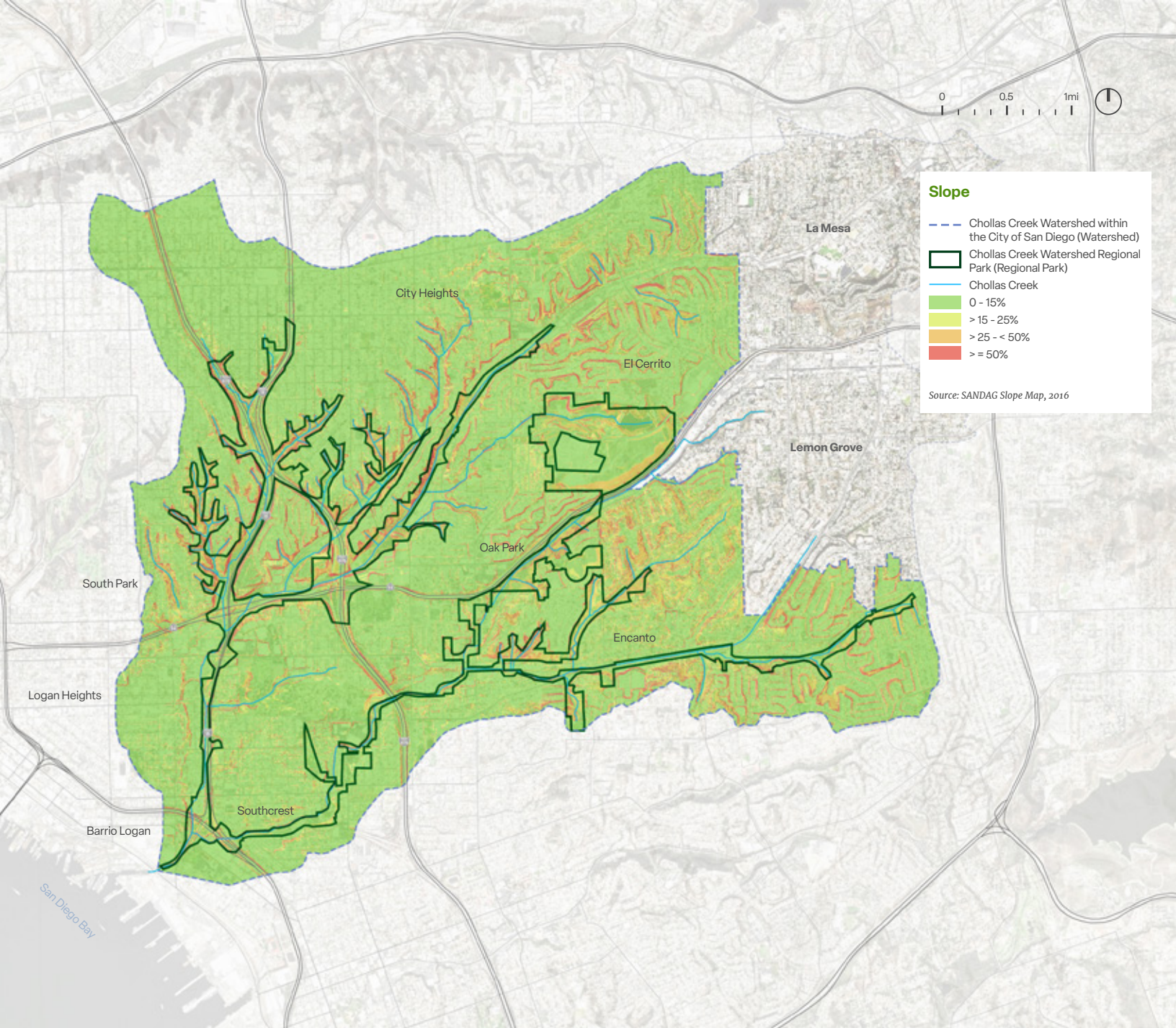
Source: City of San Diego, GIS Portal, 2023

Earthen Channel



Combination of Concrete-lined and Earthen Channel

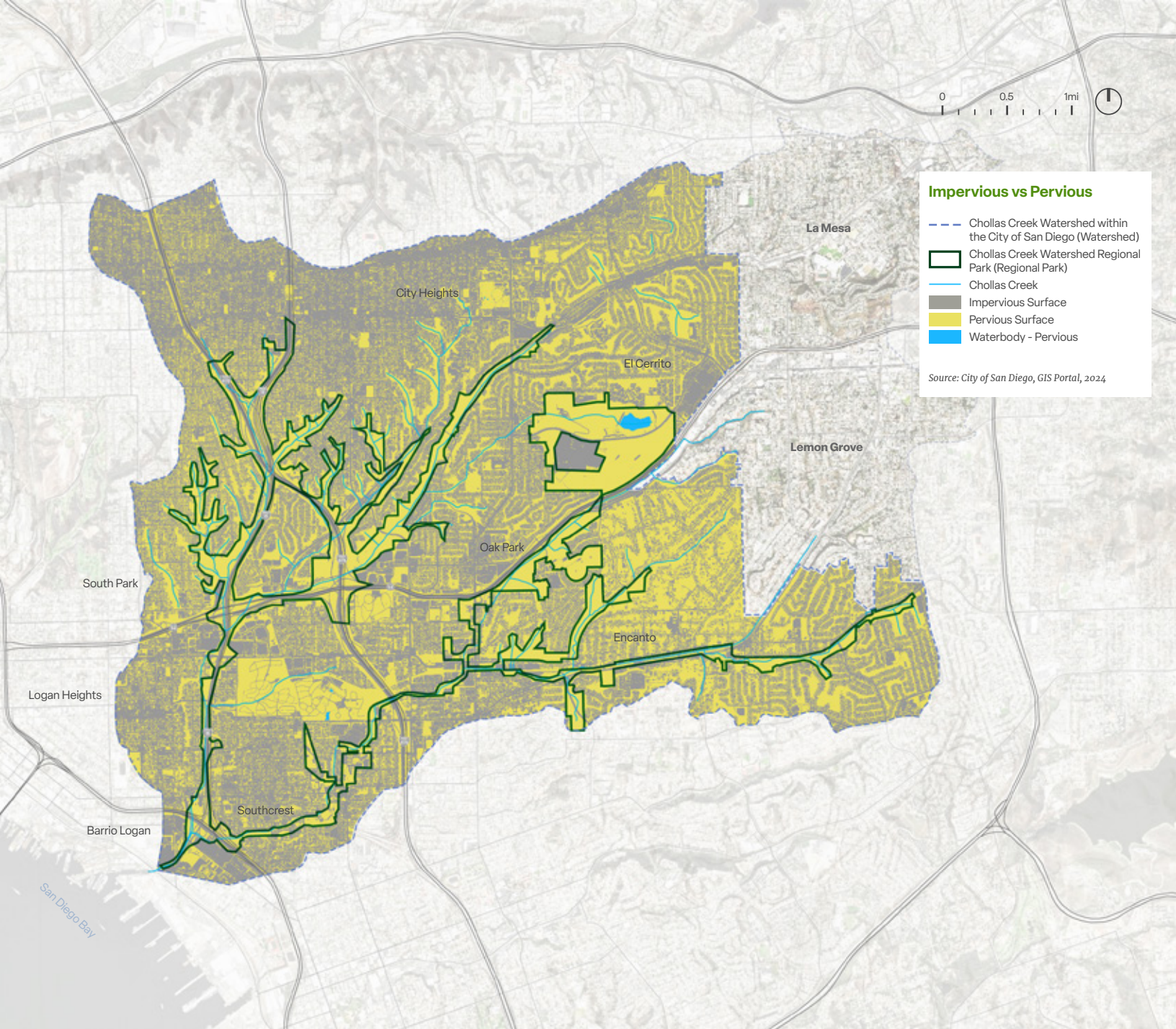




Surface Flows

While most of the watershed has moderate topography, the map above shows that the creek embankments and adjacent areas have slopes of 15% and above, with some over 50%. Steep slopes result in higher rates of surface flow and require stabilization in the long run. Impervious surfaces along Chollas Creek and its tributaries, as well as high-velocity surface flows, all lead to more sedimentation discharge, higher flow rates at the channel bottom, and erosion on the top of the channel banks.

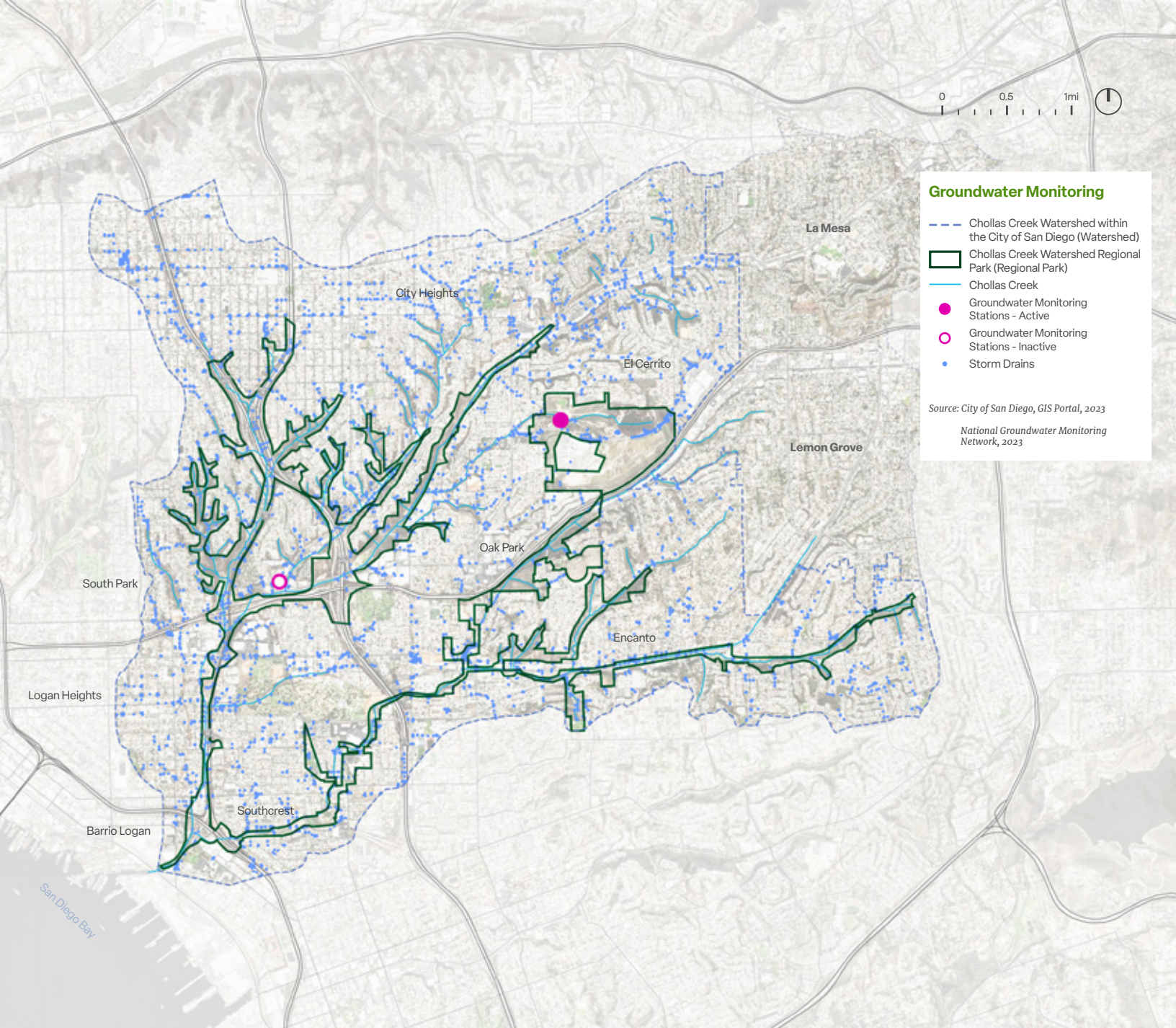
The watershed is mostly covered by impervious surfaces, including densely populated residential areas, business districts, transportation infrastructure (roads, freeways, and trolley lines), in addition to parks and open spaces. There are limited permeable surfaces and vegetated areas in this area. There are large open spaces surrounding Chollas Lake Park, which is located near the South Branch. Several park spaces are also scattered along the North Branch. In areas dominated by impervious surfaces, such as concrete or



asphalt, stormwater runoff is not filtered by vegetative buffers.



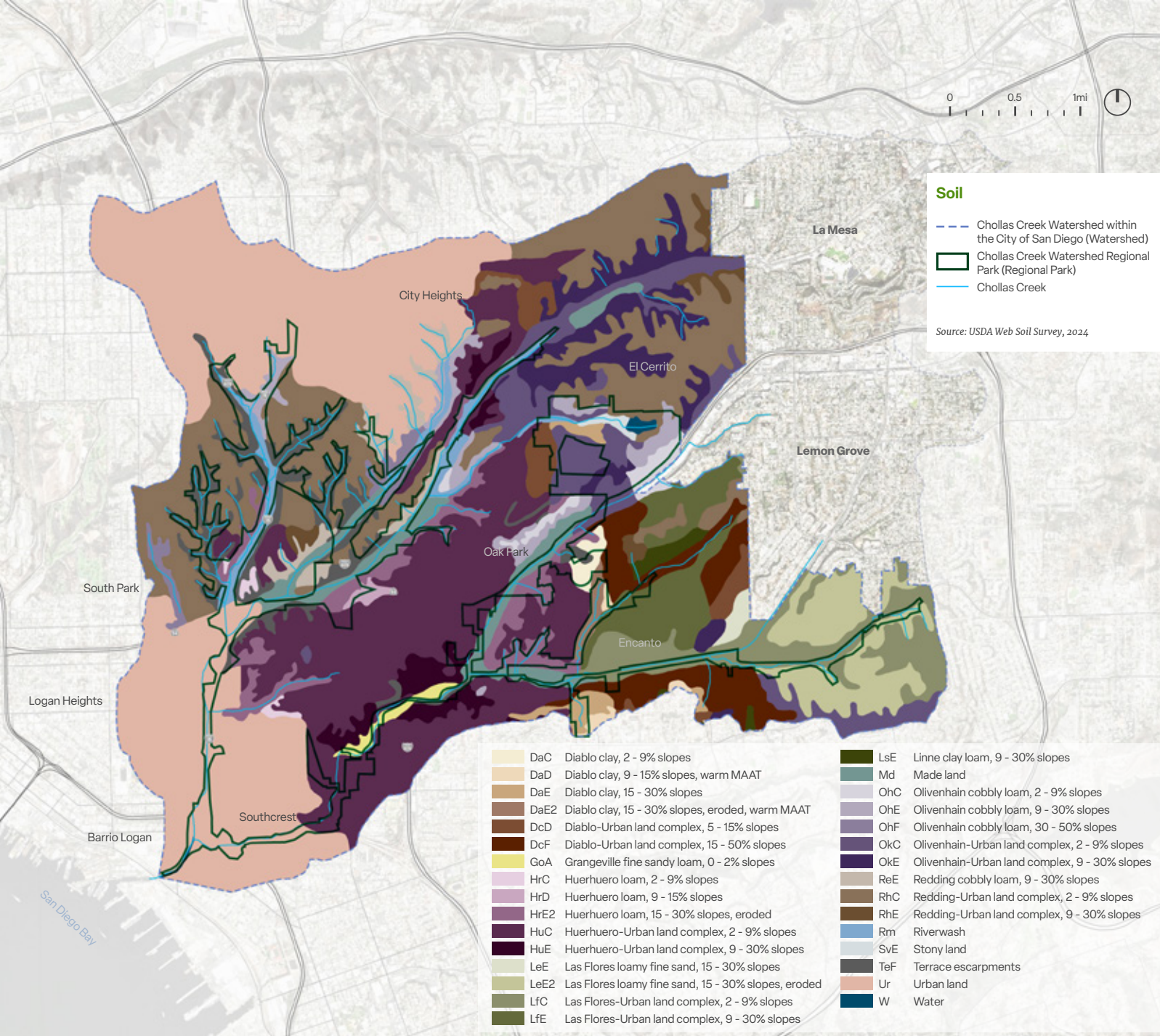
Example of bank erosion found within channel beds



Groundwater and Soil

The United States Geological Survey (USGS), in conjunction with the National Groundwater Monitoring Network, has a collection of groundwater monitoring wells across the country that provide current and historical groundwater data, including water levels, water quality, lithology and well construction. There are two monitoring wells within the watershed: one inactive (since 2021) site in the Mission Valley district north of Interstate 8 and one active site approximately 1.5 miles west of the Chollas Creek Reservoir. They are indicated

in the map above (National Groundwater Monitoring Network, n.d.). Data at both wells shows a steady drop in groundwater elevations between 2004 and 2020. The most recent groundwater data for the Mission Valley well, obtained in November 2021, shows an average depth of 17.5 feet below the NAVD88 ground surface. Elevations in 2012 were closer to 13 feet, indicating that the groundwater level dropped 4.5 feet within ten years. The most recent groundwater data for the Chollas Creek Reservoir well, obtained in August 2023,



shows an average depth of 117.5 feet below the NAVD88 ground surface. Elevations in 2012 were closer to 83 feet below the NAVD88 ground surface, indicating a 34.5-foot drop in groundwater levels in ten years.

not ideal for diverse plantings and vegetation but make an adequate landscape for parks and open spaces containing grass cover.

The United States Department of Agriculture (USDA) 's Web Soil Survey contains soil classifications across the watershed. Generally, the watershed consists of urban land with sand, silt and clay dispersed throughout (USDA, 2023). The soil conditions of the watershed are

Flood and Drainage

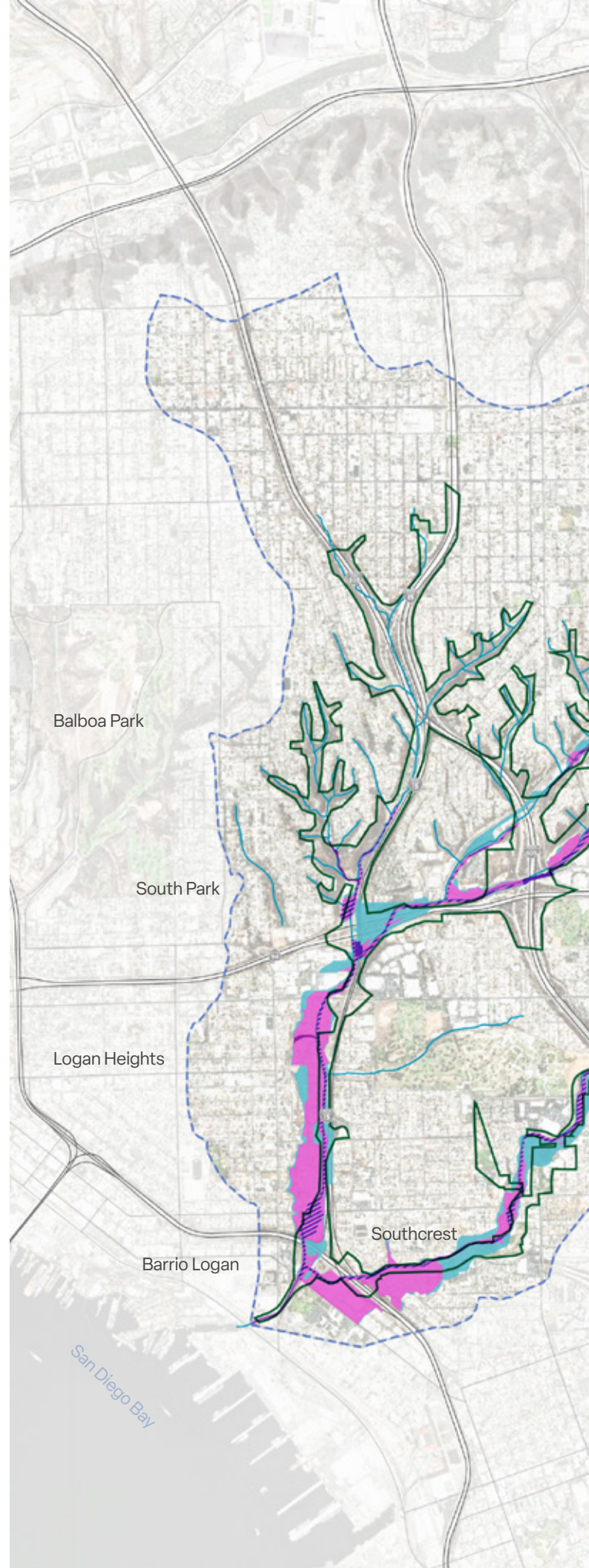
Significant portions of the channels and adjacent land along Chollas Creek are in flood zones identified by the Federal Emergency Management Agency (FEMA). Heavy rains often cause flooding in the region. The map to the right shows the locations of the distinct flood zones within the watershed. In addition to significant impacts to homes and businesses, the storms that occurred in January 2024 caused significant damage to several parks and public spaces in the watershed area. Many were flooded and required extensive cleanup and repairs to bring them back to their original condition. It is essential to have stormwater and flood control infrastructure in place to protect both lives and properties. Green infrastructure can effectively reduce the adverse effects of extreme rainfall while simultaneously improving water quality and biodiversity in the watershed region. There may also be instances where traditional or conventional flood control infrastructure is appropriate and needed to protect life and property in extreme flooding events. Taking steps to prioritize resilient infrastructure while devising feasible plans to mitigate climate change will benefit the well-being of local communities in both the near and far future.

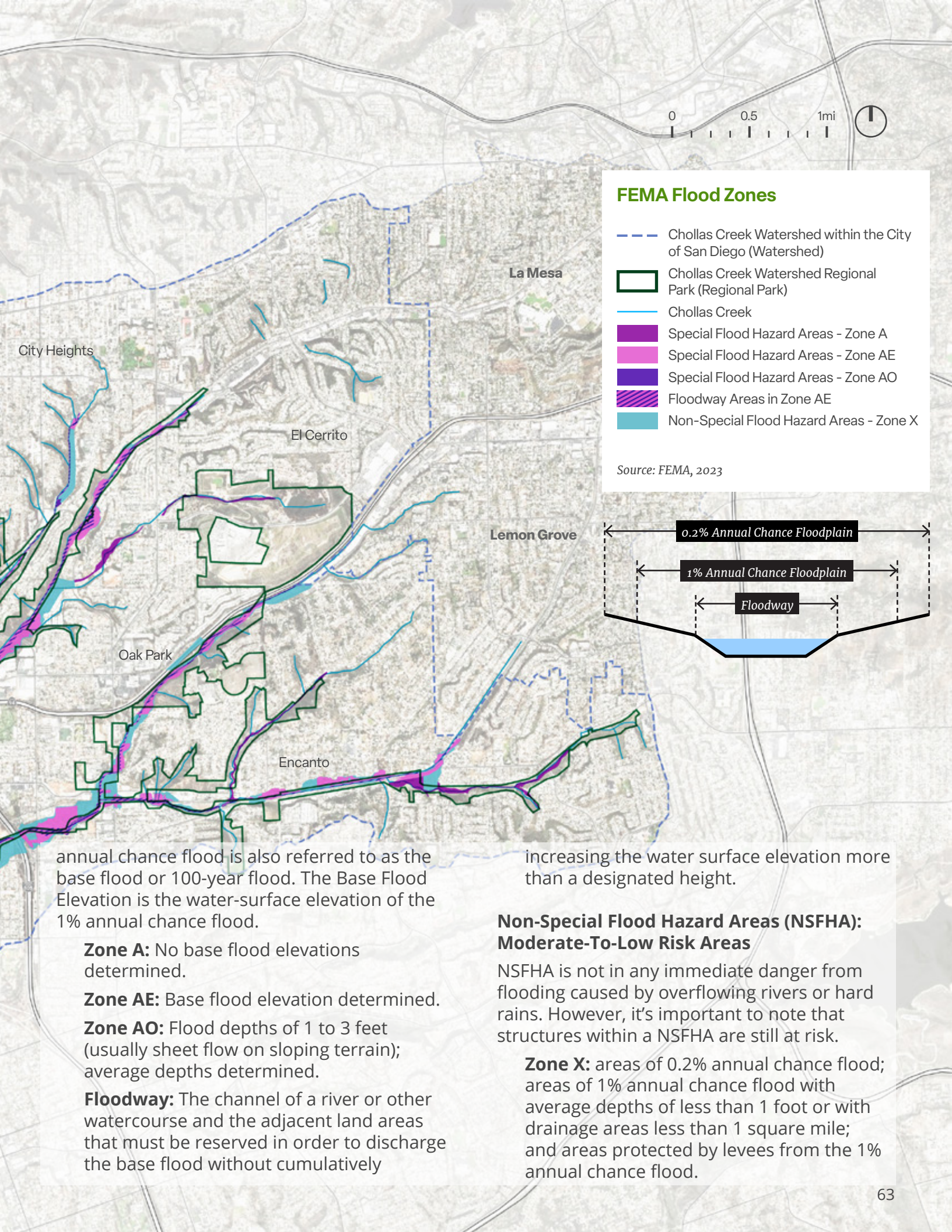
The Community Flood Assessment completed by the City's Stormwater Department (2020) identified critical deficiencies in stormwater infrastructure across the watershed, leading to an elevated flood risk. The southern area of the watershed is notably more affected, particularly where the creek flows under Interstate 805 and near the Southcrest Trails Park.

FEMA Flood Zones

Special Flood Hazard Areas: High Risk Areas

Special Flood Hazard Areas (SFHAs) are defined as the areas that will be inundated by the flood event, having a 1% chance of being equaled or exceeded in any given year. The 1%

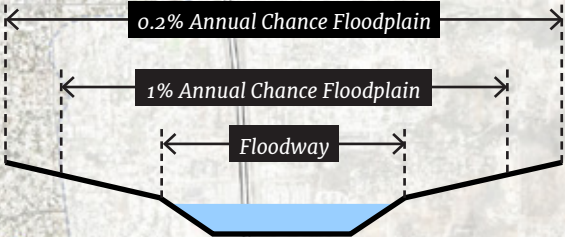




FEMA Flood Zones

- Chollas Creek Watershed within the City of San Diego (Watershed)
- Chollas Creek Watershed Regional Park (Regional Park)
- Chollas Creek
- Special Flood Hazard Areas - Zone A
- Special Flood Hazard Areas - Zone AE
- Special Flood Hazard Areas - Zone AO
- Floodway Areas in Zone AE
- Non-Special Flood Hazard Areas - Zone X

Source: FEMA, 2023



annual chance flood is also referred to as the base flood or 100-year flood. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

increasing the water surface elevation more than a designated height.

- Zone A:** No base flood elevations determined.
- Zone AE:** Base flood elevation determined.
- Zone AO:** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
- Floodway:** The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively

**Non-Special Flood Hazard Areas (NSFHA):
Moderate-To-Low Risk Areas**

NSFHA is not in any immediate danger from flooding caused by overflowing rivers or hard rains. However, it's important to note that structures within a NSFHA are still at risk.

Zone X: areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from the 1% annual chance flood.

07

DEMOGRAPHICS, SOCIAL VULNERABILITY AND NEEDS

Social vulnerability is determined by a collection of measures identifying groups of people who may struggle to respond to, manage, and bounce back from external stressors. These stressors can take the form of either natural or man-made disasters. A person's social vulnerability can be impacted by various factors, such as socioeconomic status, exposure to environmental risks, and access to healthcare.

Identifying opportunities that can support community development on all levels is crucial. The Regional Park is an excellent location for programs and amenities that can provide community empowerment and resilience opportunities. By evaluating social vulnerabilities, the Chollas Creek Park Master Plan will prioritize actions to facilitate the allocation of resources to areas with the most significant immediate and long-term needs.

Total Population (2020 Census)

CITY OF SAN DIEGO
1,369,483

**CHOLLAS CREEK
WATERSHED**
212,594

**MID-CITY:CITY
HEIGHTS**
68,595

**SKYLINE-
PARADISE HILLS**
67,718

**SOUTHEASTERN
SAN DIEGO**
54,445

**ENCANTO
NEIGHBORHOODS**
47,558

NORTH PARK
46,580

**MID-CITY:
EASTERN AREA**
40,355

**MID-CITY:
NORMAL
HEIGHTS**
15,295

**MID-CITY:
KENSINGTON-
TALMADGE**
14,683

**GREATER
GOLDEN HILL**
12,679

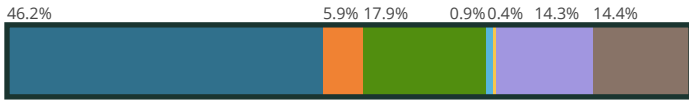
**BARRIO
LOGAN**
4,698



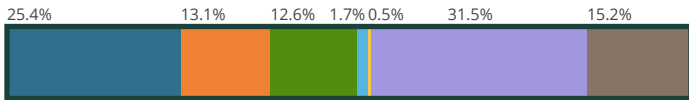
- 1 North Park
 - 2 Mid-City: Normal Heights
 - 3 Mid-City: Kensington-Talmadge
 - 4 Greater Golden Hill
 - 5 Mid-City: City Heights
 - 6 Mid-City: Eastern Area
 - 7 Barrio Logan
 - 8 Southeastern San Diego
 - 9 Encanto Neighborhoods
 - 10 Skyline-Paradise Hills
- Chollas Creek Watershed Regional Park
- Chollas Creek Watershed within San Diego

Race (2020 Census)

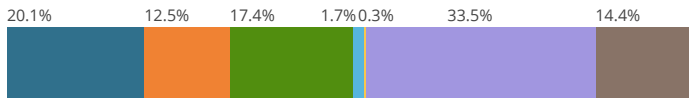
■ White alone
 ■ Asian alone
 ■ American Indian and Alaska Native alone
 ■ Black or African American alone
 ■ Native Hawaiian and Other Pacific Islander alone
 ■ Some Other Race alone
 ■ Two or More Races



SAN DIEGO



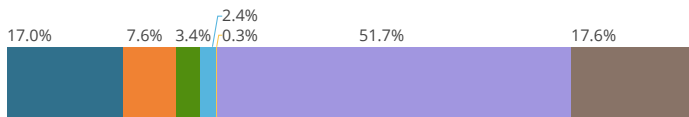
CHOLLAS CREEK WATERSHED



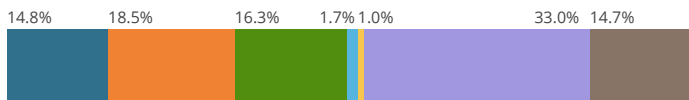
MID-CITY: CITY HEIGHTS



SKYLINE-PARADISE HILLS



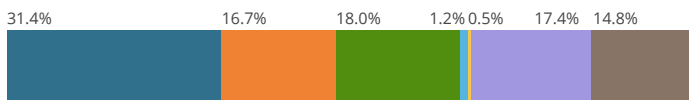
SOUTHEASTERN SAN DIEGO



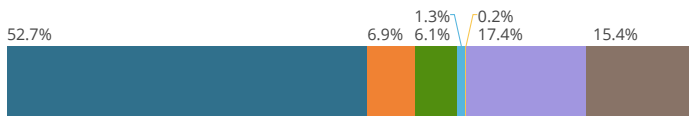
ENCANTO NEIGHBORHOODS



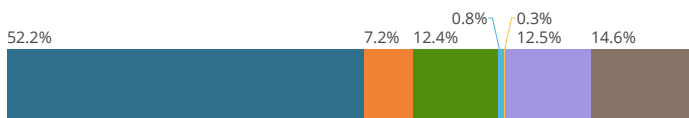
NORTH PARK



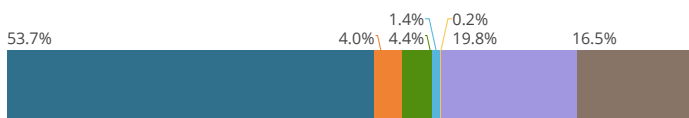
MID-CITY: EASTERN AREA



MID-CITY: NORMAL HEIGHTS



MID-CITY: KENSINGTON-TALMADGE

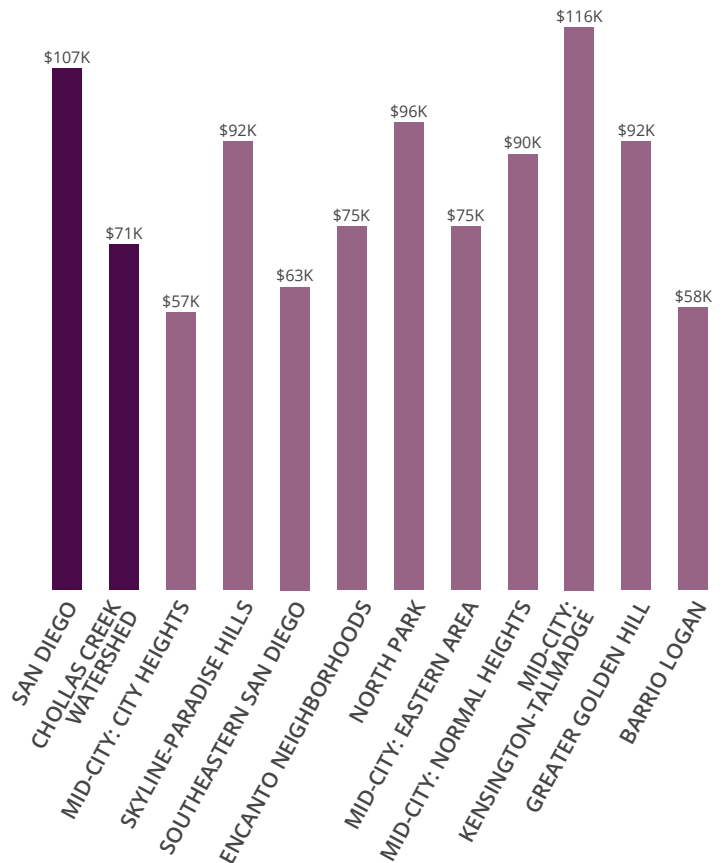


GREATER GOLDEN HILL

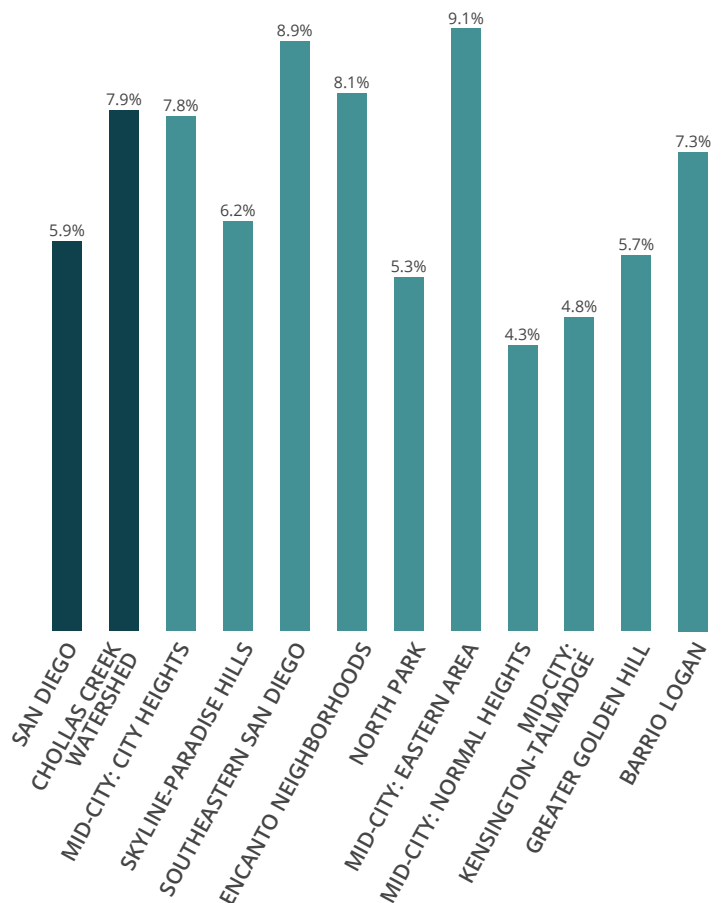


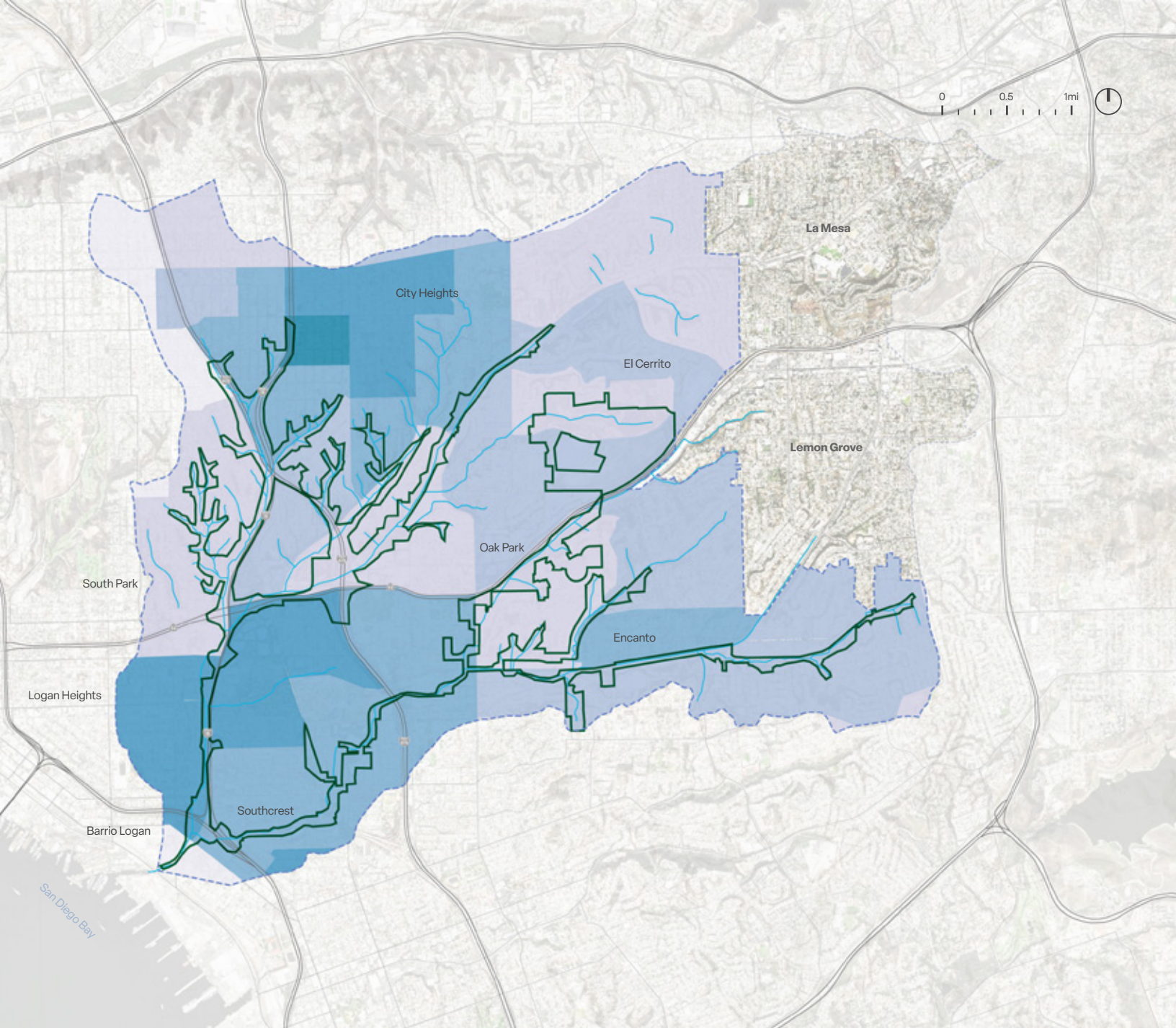
BARRIO LOGAN

Median Household Income (2022 ACS)



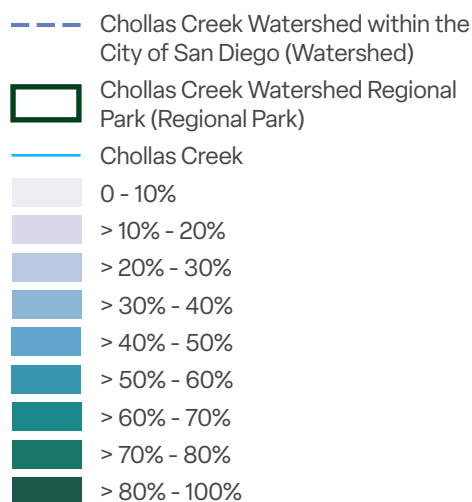
Unemployment Rate (2022 ACS)



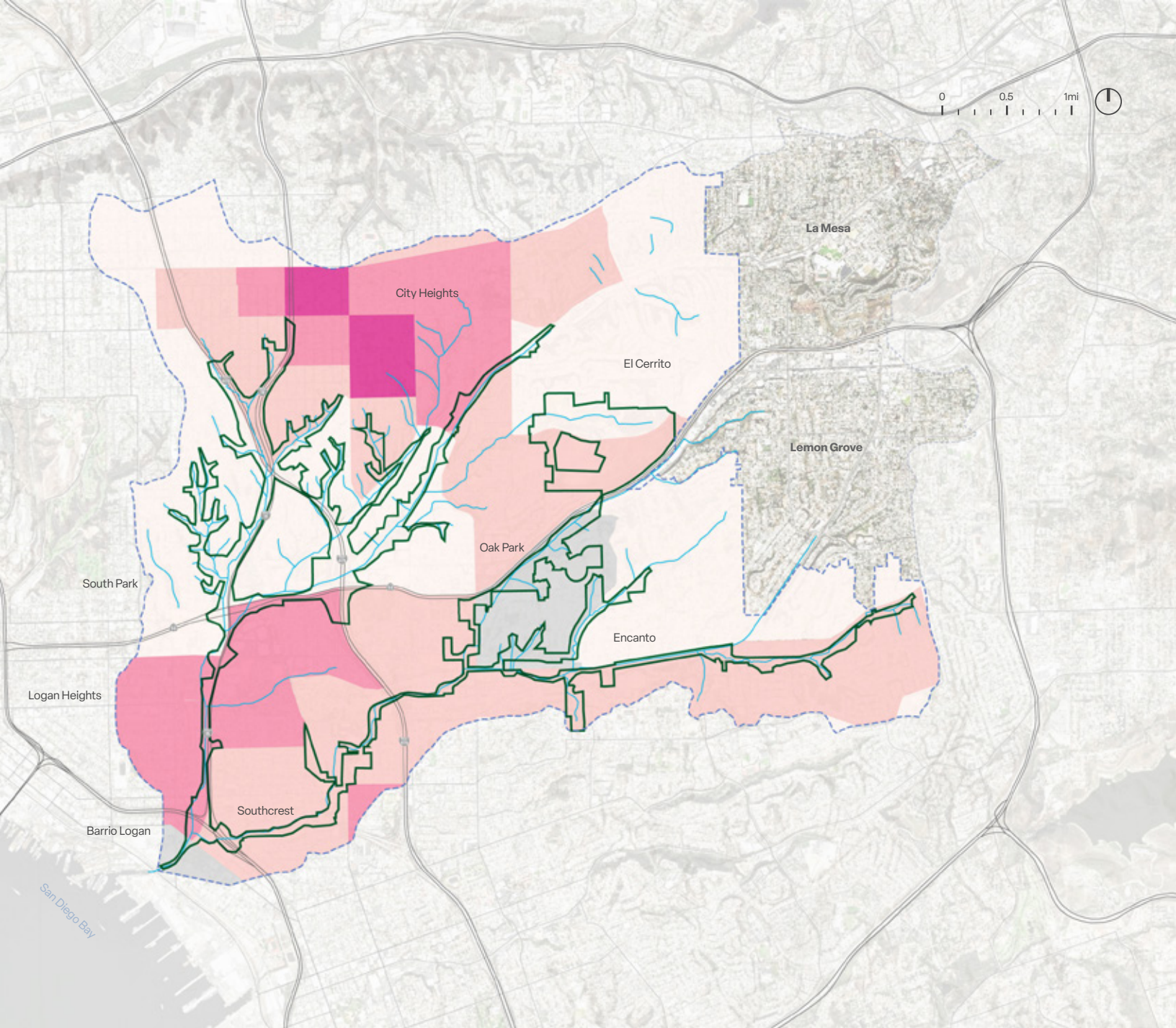


Educational Attainment

This map represents the percentage of the population over the age of 25 with less than a high school education (5-year estimate, 2015-2019). Research indicates that individuals with lower educational attainment are more likely to experience adverse health effects from air pollution (California Office of Environmental Health Hazard Assessment, 2021).

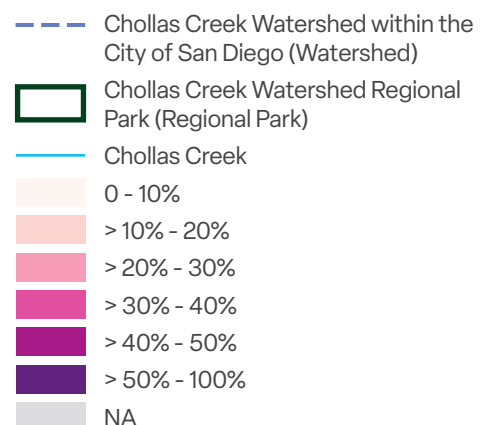


Source: CalEnviroScreen 4.0, 2021



Linguistic Isolation

Linguistic isolation is a term used by the U.S. Census Bureau for limited English-speaking households. The map above represents the percentage of limited English-speaking households (2015-2019). People not proficient in English often have difficulty communicating with those who offer social services and medical care. In an emergency such as natural disasters, linguistically isolated households may be unable to hear or understand important information (California Office of Environmental Health Hazard Assessment, 2021).



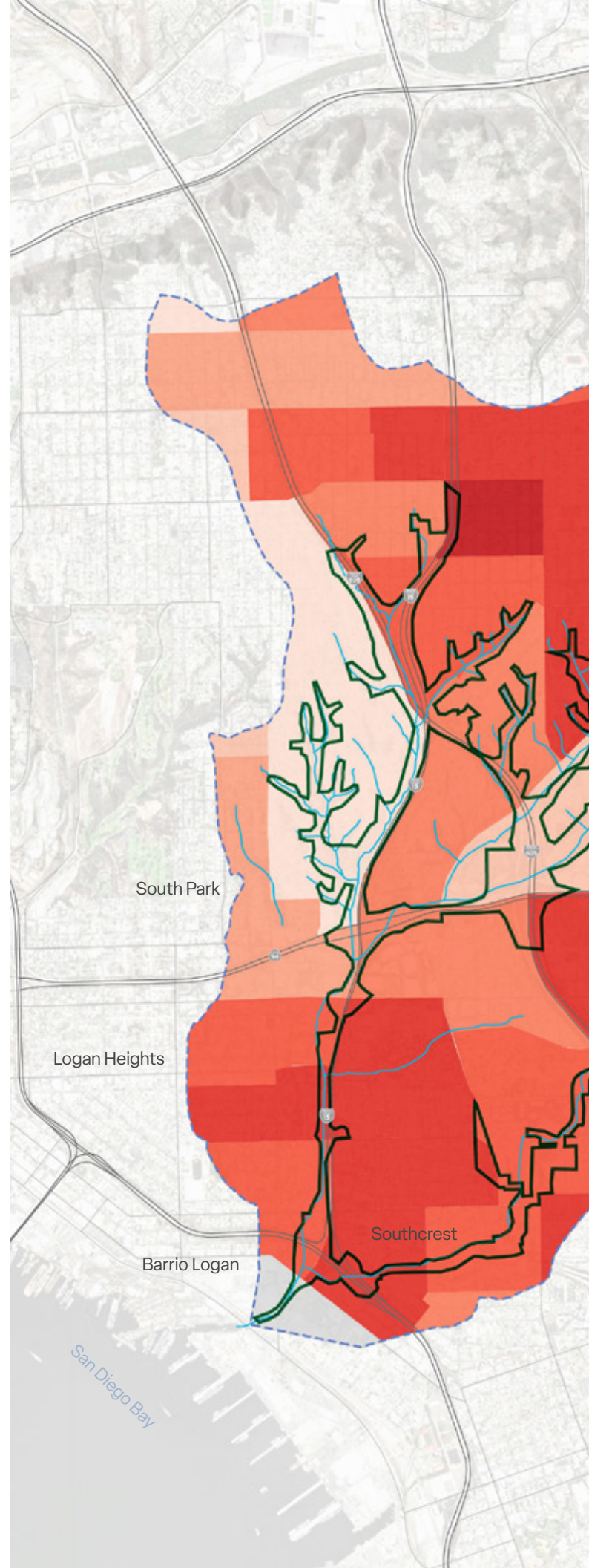
Source: CalEnviroScreen 4.0, 2021

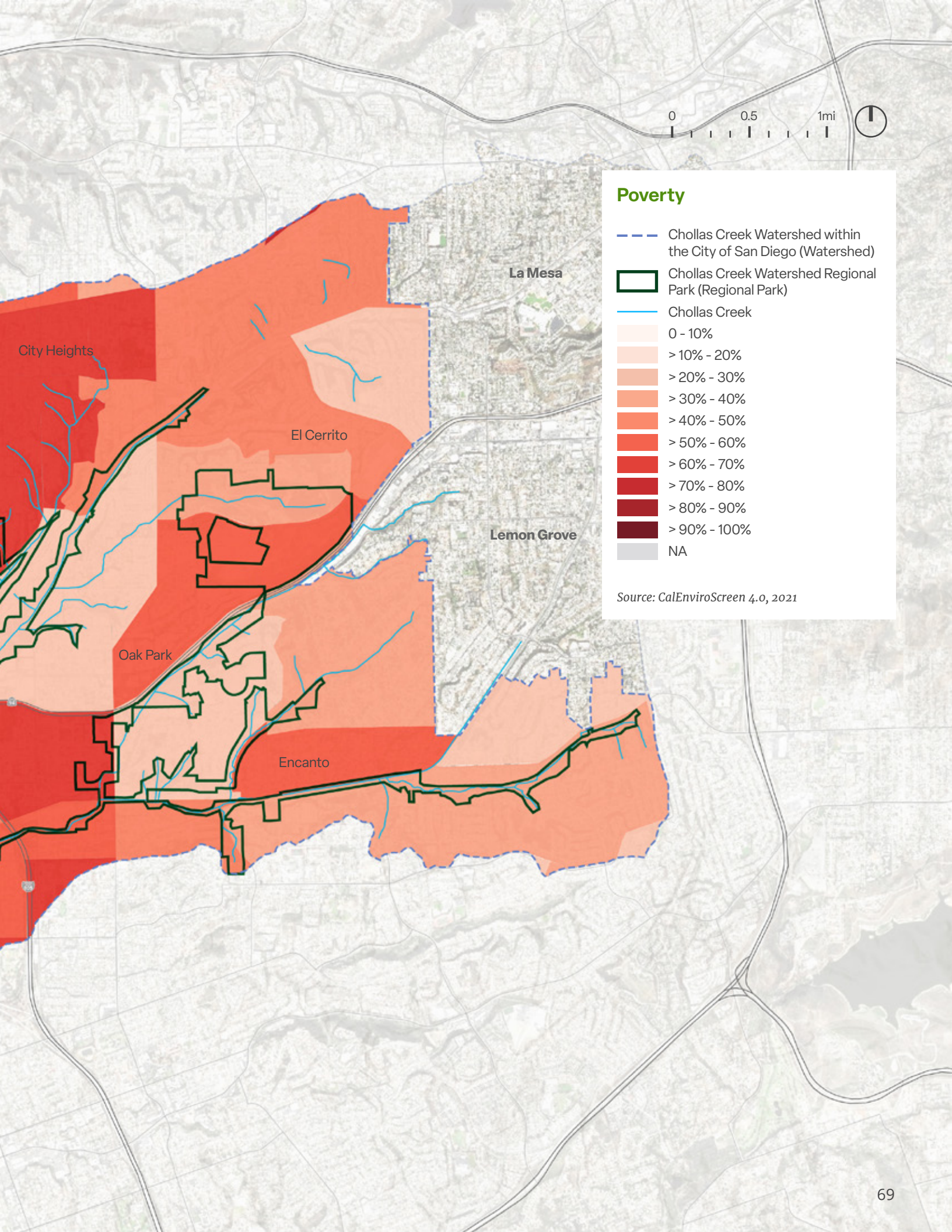
Poverty Rate

The availability and quality of parks are negatively correlated with poverty rates, revealing stark disparities between low-income communities and wealthier areas. Low-income neighborhoods often have significantly less access to public spaces and fewer well-maintained or well-programmed parks. These inequities, combined with barriers to accessing high-quality healthcare and educational opportunities, contribute to poorer health outcomes and limited academic achievement for individuals and families living below the poverty line.

The Federal Poverty Level, determined annually by the U.S. Census Bureau, considers household size and the ages of family members. The map on the right illustrates the percentage of the population living below twice the federal poverty level (5-year estimate, 2015–2019). People in these areas are more likely to face poor living and working conditions, exposure to pollution, vulnerability to public health crises, and heightened risks during natural disasters (California Office of Environmental Health Hazard Assessment, 2021).

City Heights has the highest poverty rate within the Chollas Creek Watershed, with several census tracts around the Regional Park reporting approximately 50% of the population living below the poverty line. These neighborhoods demand greater attention, investment, and initiatives to create equitable opportunities and improve quality of life.





Poverty

- Chollas Creek Watershed within the City of San Diego (Watershed)
- ▬ Chollas Creek Watershed Regional Park (Regional Park)
- Chollas Creek
- 0 - 10%
- > 10% - 20%
- > 20% - 30%
- > 30% - 40%
- > 40% - 50%
- > 50% - 60%
- > 60% - 70%
- > 70% - 80%
- > 80% - 90%
- > 90% - 100%
- NA

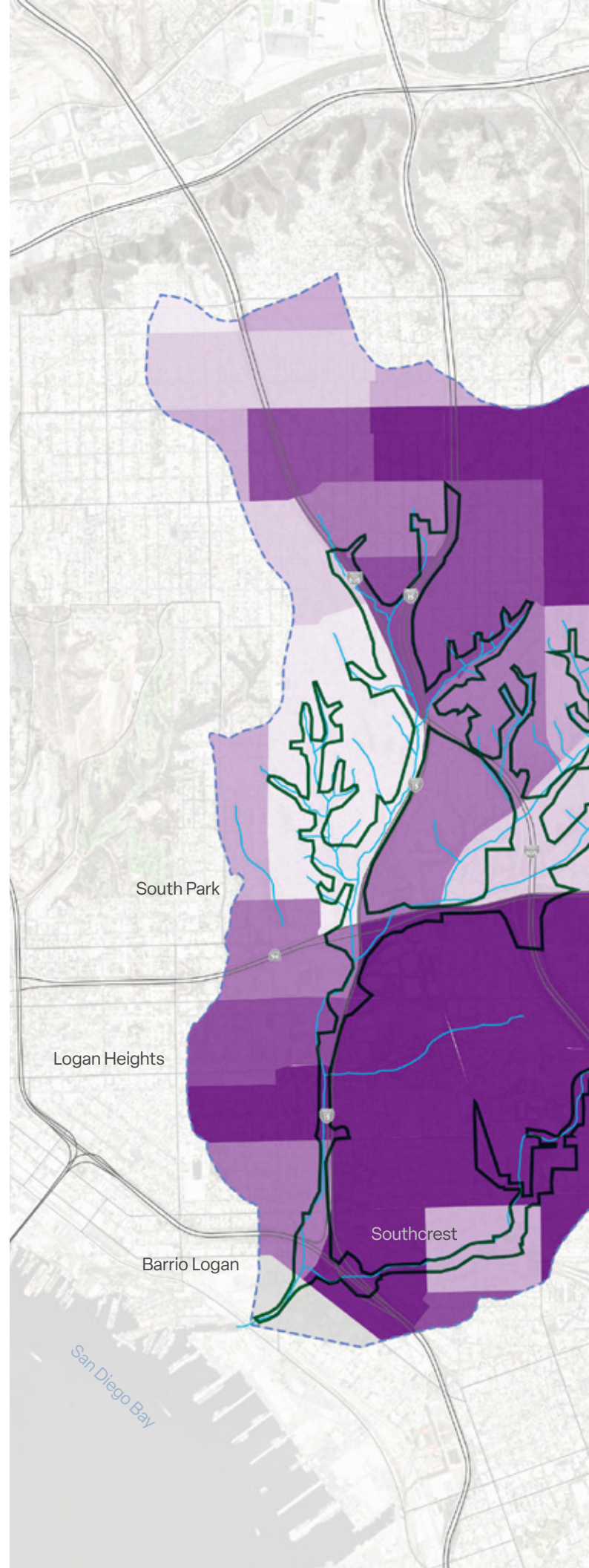
Source: CalEnviroScreen 4.0, 2021

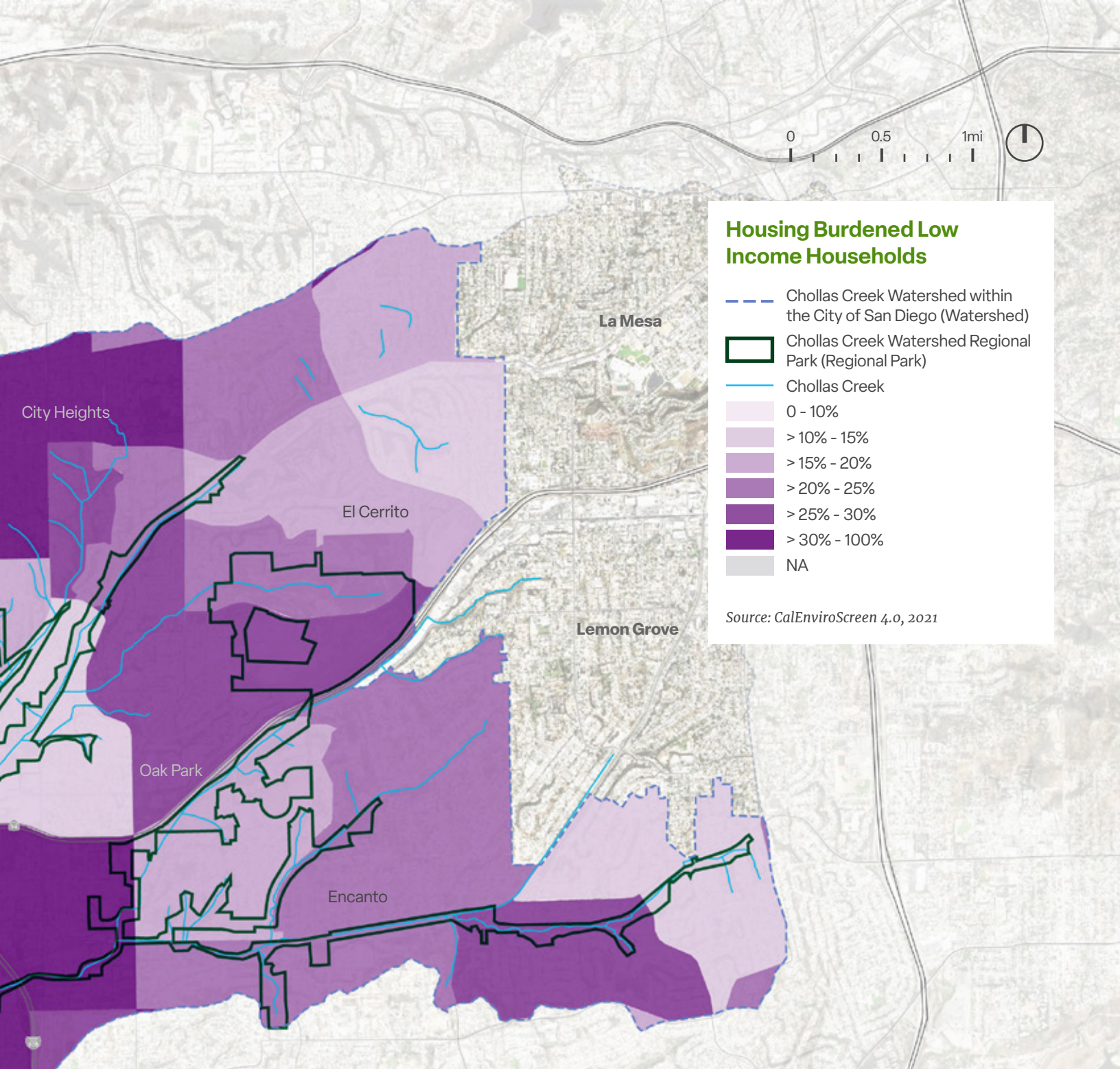
Housing and Rent Burden

Housing is a fundamental necessity, and access to affordable, appropriate housing is especially critical for low-income communities. In California, where housing costs are among the highest in the country, San Diego faces significant challenges, including rising rental costs, an aging housing stock, and increasing pressure on affordability for both homeowners and renters. For example, during the pandemic, monthly rents for single-family homes in San Diego rose by up to 17%, while average homeowner mortgage payments increased by \$2,200 between 2021 and 2022 (Joint Center for Housing Studies of Harvard University, 2022). These sharp increases in housing costs, driven by nationwide price surges, have exacerbated displacement pressures in low-income neighborhoods.

According to CalEnviroScreen 4.0 (2021), Housing Burdened Low-Income Households are defined as those earning less than 80% of the county's median family income and spending more than 50% of their income on housing. The map highlights that neighborhoods such as Fairmont Village, Teralta West, Colina del Sol, Southcrest, and Mountain View have the highest rates of housing burden within the watershed. In these areas, over 90% of households are classified as Housing Burdened Low-Income Households, nearly double the citywide average.

A recent study further reveals stark disparities among racial groups. Among major metropolitan areas, Black renters in San Diego are the most burdened, spending 52.6% of their income on rent. Hispanic renters follow at 39.2%, while White renters spend 33.7% and Asian renters 33.4% (Zillow Research, 2021). The U.S. Department of Housing and Urban Development and the Census Bureau classify households as cost-burdened if they spend more than 30% of their gross income on rent, mortgage payments, or other housing needs.





In San Diego, all racial groups studied exceed this threshold, highlighting the widespread and disproportionate impact of housing costs on vulnerable communities.

Green Gentrification

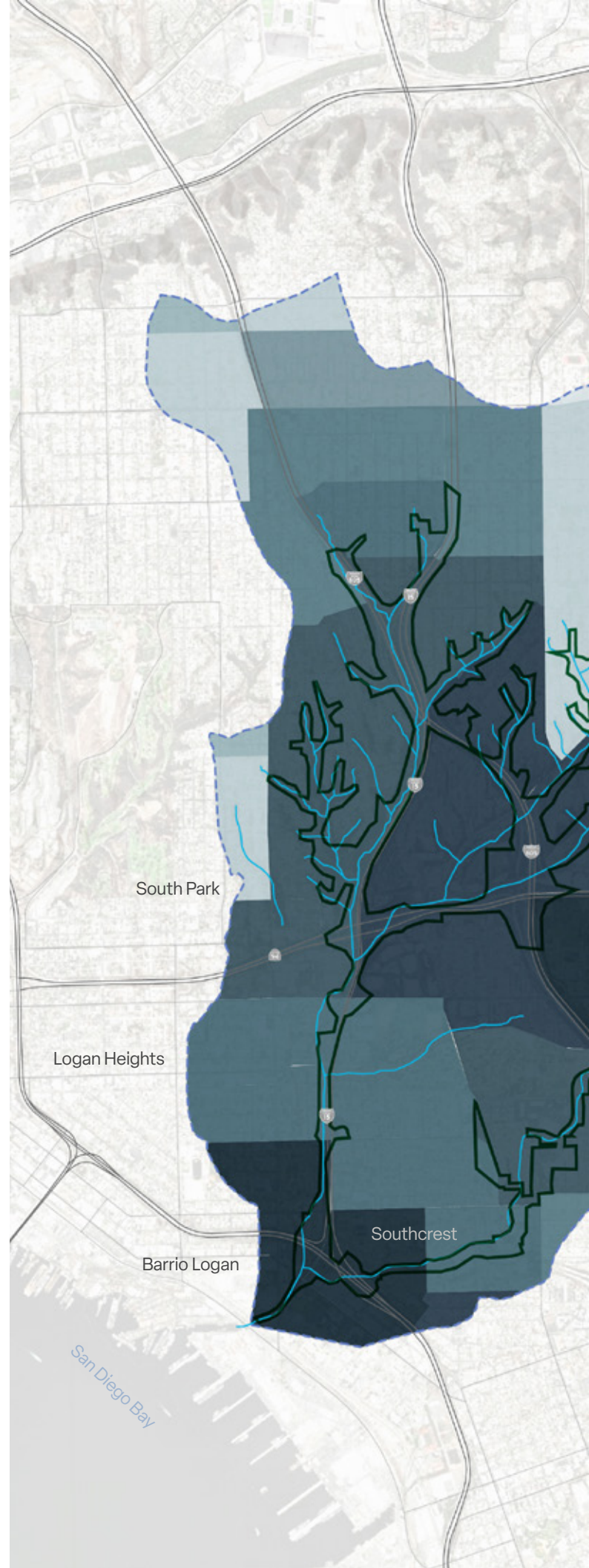
It is critical to be mindful of the effects of green gentrification on neighborhoods already dealing with high housing costs. It is the increase in housing prices and the influx of wealthier, typically white households in

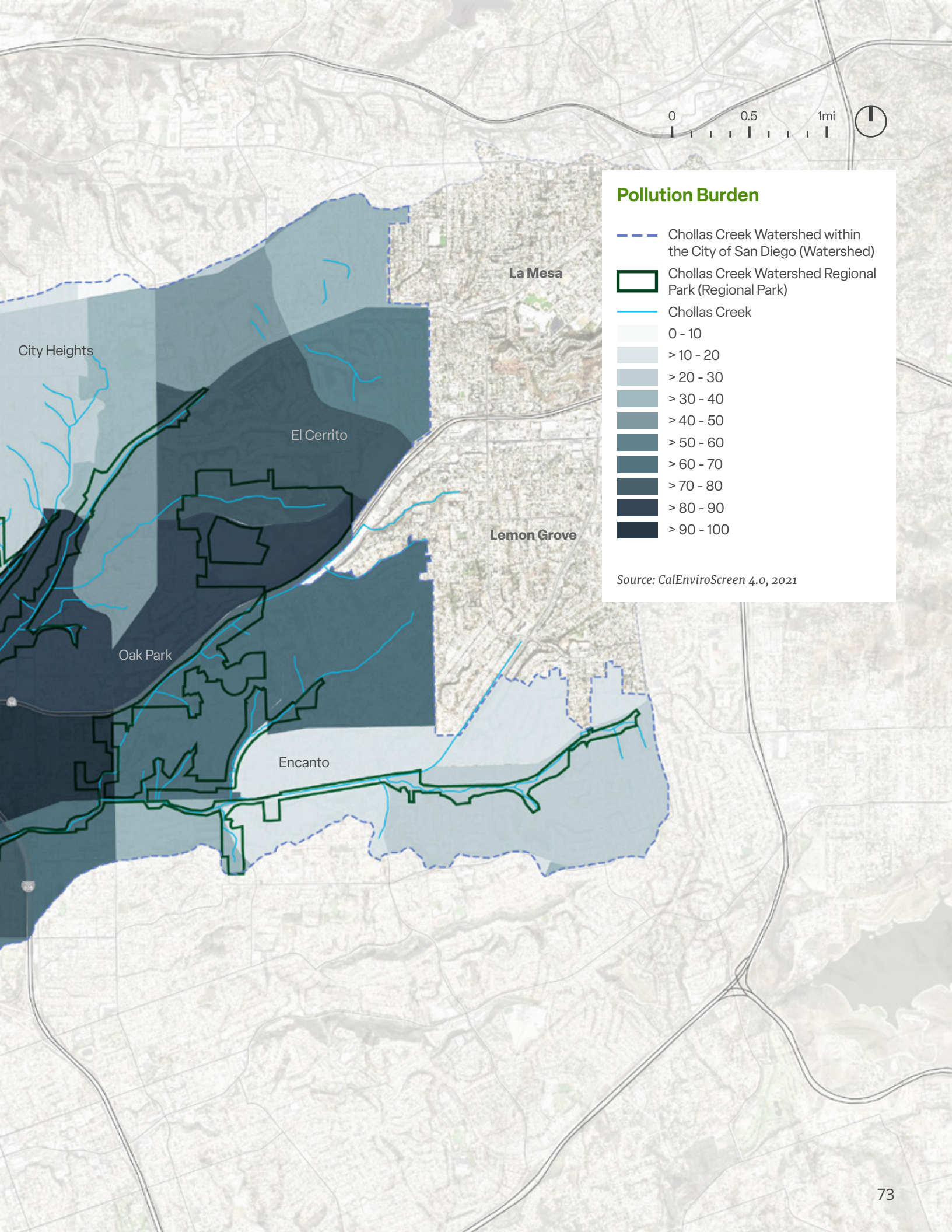
low-income communities of color due to the development of parks and other green infrastructure. Without anti-displacement strategies and policies in place, green gentrification can lead to the displacement of longtime community members, and the parks and public spaces that were designed to serve them can end up with unintended consequences. Any efforts to create green spaces should consider benefits to the existing local communities in connection with the potential for displacement.

Pollution Burden

Considering pollution burdens is essential when evaluating an area's overall environmental health. This measure accounts for factors such as air quality, pesticide use and traffic density, as well as exposure to hazardous waste facilities and groundwater threats. Analyzing these factors makes it possible to better understand the potential risks and take steps to mitigate them for the benefit of all.

Exposure to pollution often leads to negative health outcomes, with marginalized communities disproportionately affected due to past policies and planning decisions (Boyd-Barrett, 2019). This map provides an overall evaluation of the Pollution Burden in the watershed area. The scores incorporate indicators from the Environmental Effects and Exposure components, such as ozone and PM2.5 concentrations, toxic releases from facilities, traffic densities, groundwater threats, and hazardous wastes (California Office of Environmental Health Hazard Assessment, 2021). Burden represents the potential exposure to pollutants and the adverse environmental conditions caused by pollution. Pollution burden is particularly high in areas facing high-frequency traffic corridors, especially in neighborhoods adjacent to State Route 94 and near industrial areas around Barrio Logan and the Port of San Diego.





Pollution Burden

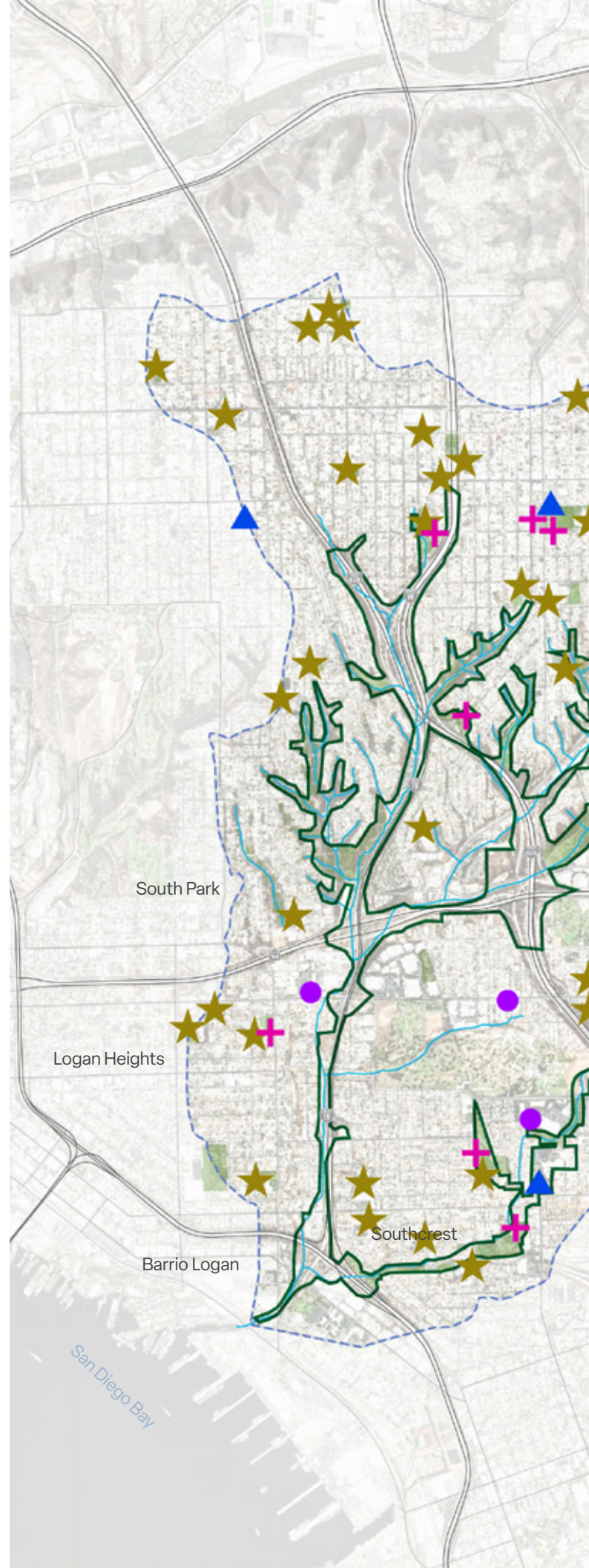
- Chollas Creek Watershed within the City of San Diego (Watershed)
- ▬ Chollas Creek Watershed Regional Park (Regional Park)
- Chollas Creek
- 0 - 10
- > 10 - 20
- > 20 - 30
- > 30 - 40
- > 40 - 50
- > 50 - 60
- > 60 - 70
- > 70 - 80
- > 80 - 90
- > 90 - 100

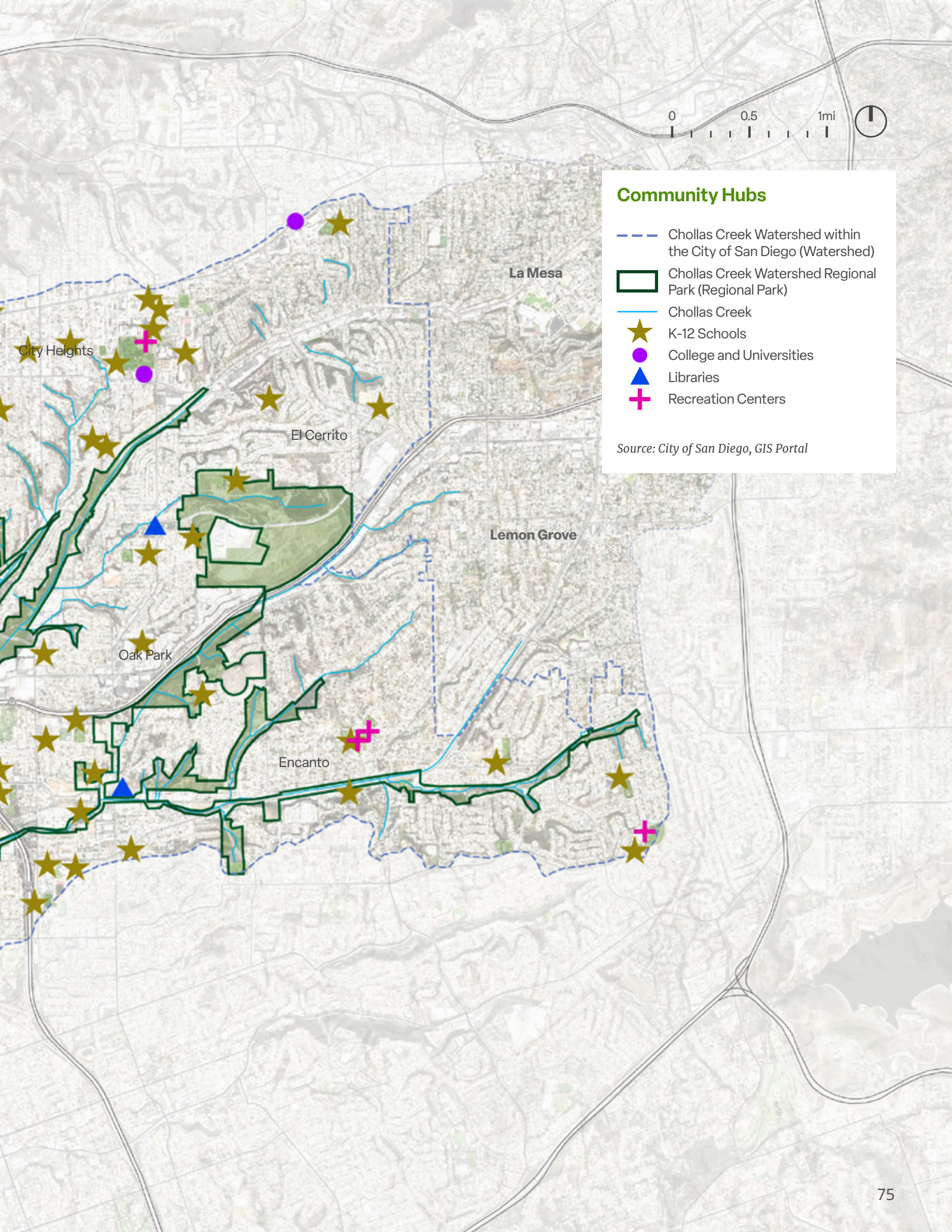
Source: CalEnviroScreen 4.0, 2021

Community Hubs

Social infrastructure refers to the essential facilities and structures that enhance the quality of life within communities. It includes sectors such as education, healthcare, and social services, along with institutions like schools, hospitals, libraries, and community centers. These institutions play a vital role in supporting daily life while fostering a sense of unity and belonging among community members.

The map on the right illustrates the locations of K-12 schools, colleges, libraries, and recreation centers, highlighting essential cultural and educational facilities owned and operated by public agencies and organizations such as San Diego Unified, Universities and the City of San Diego. Areas such as Oak Park and Encanto reveal noticeable gaps in access to recreation centers and libraries.





Community Hubs

- Chollas Creek Watershed within the City of San Diego (Watershed)
- ▭ Chollas Creek Watershed Regional Park (Regional Park)
- Chollas Creek
- ★ K-12 Schools
- College and Universities
- ▲ Libraries
- ✚ Recreation Centers

Source: City of San Diego, GIS Portal

08

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