

4.15 PUBLIC SERVICES AND UTILITIES

This section evaluates impacts on public services and utilities that would result from implementation of the proposed Plan. Impacts of the proposed Plan on the San Diego region's water supply and water infrastructure are discussed in Section 4.18, *Water Supply*. Impacts of the Proposed Plan related to wildfire are discussed in Section 4.19, *Wildfire*; therefore, in terms of fire, this section only addresses environmental impacts related to fire protection services facilities.

4.15.1 EXISTING CONDITIONS

This section describes the existing conditions associated with public services, which include fire protection, police protection, schools, libraries, and recreational facilities. It also describes the existing conditions associated with utilities, which include wastewater collection and treatment facilities, stormwater drainage facilities, telecommunications services, electricity and natural gas facilities, and solid waste disposal and recycling facilities.

PUBLIC SERVICES

Fire Protection

Structural and wildfire protection in the San Diego region is the responsibility of fire protection agencies at the federal, State, county, city, and community levels. Eighteen cities in the San Diego region have a fire department that is responsible for fire protection and prevention within their respective city limits. Fourteen Fire Protection Districts (FPDs), five County Service Areas, and the California Department of Forestry and Fire Protection (CAL FIRE) provide fire and emergency services to unincorporated San Diego County. Volunteer fire protection companies supported by the San Diego County Fire Authority provide emergency services for six areas in the unincorporated County where no fire protection agency is established (see Tables 4.15-1 and 4.15-2).

CAL FIRE is the principle contractor for fire protection services in the County of San Diego, and is responsible for wildfire protection of State Responsibility Areas within the County, which comprise over 50 percent of the unincorporated County's total land area (see Figure 4.19-1 in Section 4.19). CAL FIRE operates 18 stations within the County, including one air attack base in Ramona. CAL FIRE also operates an emergency response air program with both aircraft and helicopters, as needed (CAL FIRE 2017). CAL FIRE has instated a Resource Management Program to help protect California's natural resources and wildlands. Prevention programs are also run by CAL FIRE, such as vegetation management, risk analysis, and public education (CAL FIRE 2018).

The U.S. Forest Service (USFS) is responsible for fire protection and prevention on federal lands (Federal Responsibility Areas) and private lands within the Cleveland National Forest. There are 12 USFS fire stations in San Diego County. The Department of Defense provides fire protection on military installations but may request assistance from other agencies at the federal, State, or local levels if needed. Tribal governments provide their own fire protection but also may provide mutual air fire services to surrounding areas.

The Harbor Police Department of the San Diego Unified Port District are cross-trained as marine fire fighters. Their jurisdiction includes the San Diego Bay, San Diego International Airport, and the tidelands within the cities of San Diego, Chula Vista, National City, Imperial Beach, and Coronado.

Automatic and mutual aid agreements exist between many of the aforementioned agencies to provide necessary support for emergencies. Table 4.15-1 identifies agencies responsible for fire protection in the San Diego region's cities. Table 4.15-2 identifies agencies responsible for providing fire protection in the unincorporated areas of San Diego County. A small portion of the unincorporated County is not served by any FPD. Rather, these areas rely upon neighboring FPDs or CAL FIRE to respond to fires and emergencies. The agency that responds to fires and emergencies in unprotected areas is decided on a case-by-case basis (County of San Diego 2011).

**Table 4.15-1
Fire Service Providers in the San Diego Region**

City	Fire Service Provider	Number of Stations	Dispatch
City of Carlsbad	Carlsbad Fire Department	6	North County JPA
City of Chula Vista	Chula Vista Fire Department	10	City of San Diego
City of Coronado	Coronado Fire Department	2	Heartland Dispatch
City of Del Mar	Del Mar Fire Department	1	North County JPA
City of El Cajon	El Cajon Fire Department	4	Heartland Dispatch
City of Encinitas	Encinitas Fire Department	6	North County JPA
City of Escondido	Escondido Fire Department	7	City of Escondido
City of Imperial Beach	Imperial Beach Fire Department	1	Heartland Dispatch
City of La Mesa	La Mesa Fire Department	3	Heartland Dispatch
City of Lemon Grove	Lemon Grove Fire Department	1	Heartland Dispatch
City of National City	National City Fire Department	3	Heartland Dispatch
City of Oceanside	Oceanside Fire Department	8	North County JPA
City of Poway	Poway Fire Department	3	City of San Diego
City of San Diego	San Diego Fire-Rescue Department	48	City of San Diego
City of San Marcos	San Marcos Fire Department	4	North County JPA
City of Santee	Santee Fire Department	2	Heartland Dispatch
City of Solana Beach	Solana Beach Fire Department	1	North County JPA
City of Vista	Vista Fire Department	6	North County JPA

Sources: City of Carlsbad 2021, City of Chula Vista 2021, City of Coronado 2020, City of Del Mar 2021, Heartland Fire and Rescue 2021, City of Encinitas 2021, City of Escondido 2021, City of Imperial Beach 2021, City of National City 2021, City of Oceanside 2021, City of Poway 2021, City of San Diego 2021.

**Table 4.15-2
Fire Service Providers in Unincorporated and Federal Lands in the San Diego Region**

Agency	Governance	Fire Service Provider	Number of Stations	Dispatch
Alpine Fire Protection District	Independent	District	1	Heartland JPA
Bonita-Sunnyside Fire Protection District	Independent	District	1	Heartland JPA
Borrego Springs Fire Protection District	Independent	District	1	CAL FIRE

Agency	Governance	Fire Service Provider	Number of Stations	Dispatch
<u>Campo Reservation Fire Protection District</u>	<u>Independent</u>	<u>District</u>	<u>1</u>	<u>Heartland JPA</u>
Deer Springs Fire Protection District	Independent	District/CAL FIRE	3	CAL FIRE
Julian-Cuyamaca Fire Protection District	Independent	District	2	CAL FIRE
Lakeside Fire Protection District	Independent	District	4	Heartland JPA
Lower Sweetwater Fire Protection District	Independent	National City	2	Heartland JPA
North County Fire Protection District	Independent	District	5	North County JPA
Pine Valley Fire Protection District	Independent	District/CAL FIRE	1	CAL FIRE
Rancho Santa Fe Fire Protection District	Independent	District	6	North County JPA
San Marcos Fire Protection District	Dependent	City of San Marcos	3	North County JPA
San Miguel Consolidated Fire Protection District	Independent	District	8	Heartland JPA
Valley Center Fire Protection District	Independent	District/CAL FIRE	2	CAL FIRE
Vista Fire Protection District	Independent	City of Vista	n/a	North County JPA
Mootami MWD	Independent	CAL FIRE	n/a	CAL FIRE
Pauma MWD	Independent	CAL FIRE	n/a	CAL FIRE
Ramona MWD	Independent	CAL FIRE	n/a	CAL FIRE
Rincon del Diablo MWD	Independent	City of Escondido	n/a	City of Escondido
Yuima MWD	Independent	CAL FIRE	n/a	CAL FIRE
<u>Boulevard</u>	<u>Volunteer</u>	<u>SDCFA</u>	<u>1</u>	<u>CAL FIRE</u>
Sunshine Summit	Volunteer	SDCFA	1	CAL FIRE
Ranchita	Volunteer	SDCFA	1	CAL FIRE
Ocotillo Wells	Volunteer	SDCFA	1	CAL FIRE
Intermountain	Volunteer	SDCFA	1	CAL FIRE
De Luz	Volunteer	SDCFA	1	CAL FIRE
Shelter Valley	Volunteer	SDCFA	1	CAL FIRE
Others				
CAL FIRE	State	CAL FIRE	18	CAL FIRE
USFS	Federal	USFS	12	USFS

Sources: San Diego Local Agency Formation Commission (LAFCO) 2005a, 2005b, 2007; County of San Diego 2011; San Miguel Fire District 2021.

SDCFA = San Diego County Fire Authority

Performance of fire protection and emergency services is generally measured with travel or response time standards and service ratios. Travel or response time standards measure the estimated time it will take for responding agency personnel to reach a certain point in their service area from the time of initial call or the

time an emergency vehicle begins moving to the emergency location. These standards differ among agencies. Service ratios are also used to measure the adequacy of service. Service ratio standards typically ensure there are a minimum number of personnel and pieces of equipment to serve a certain population. Water supply and pressure must also be considered when evaluating fire protection services.

Police Protection

The San Diego County Sheriff's Department (SDCSD) is the primary law enforcement body in the San Diego region. SDCSD provides police protection services for the unincorporated areas of the County and the following nine cities: Vista, San Marcos, Santee, Lemon Grove, Imperial Beach, Poway, Encinitas, Del Mar, and Solana Beach. These cities generally provide their own traffic enforcement, while the unincorporated County relies on the California Highway Patrol and SDCSD.

Traffic enforcement, police patrol, and investigative services are provided in the cities of Carlsbad, Chula Vista, Coronado, El Cajon, Escondido, La Mesa, National City, Oceanside, and San Diego by their own city police departments. SDCSD operates several other law enforcement support facilities, including seven detention facilities. These detention facilities provide the services necessary to support a daily average population of more than 5,000 inmates (SDCSD 2018). SDCSD also provides specialized services, such as aerial support, a bomb and arson unit, and a special enforcement detail responsible for highly specialized tactical operations. Forensic services are provided to law enforcement and criminal justice agencies through SDCSD's crime laboratory for all the cities within San Diego County, except for the City of San Diego. Table 4.15-3 shows sworn police protection personnel by jurisdiction in the San Diego region.

**Table 4.15-3
Sworn Police Protection Personnel by Jurisdiction in the San Diego Region**

Police Protection Providers by Jurisdiction	Number of Sworn Personnel
City of Carlsbad	129
City of Chula Vista	261
City of Coronado	46
City of El Cajon	126
City of Escondido	159
City of La Mesa	69
City of National City	90
City of Oceanside	218
City of San Diego	2,043
San Diego County Sheriff's Department (total)	1,029
City of Del Mar	10
City of Encinitas	61
City of Imperial Beach	28
City of Lemon Grove	24
City of Poway	49
City of San Marcos	81
City of Santee	60
City of Solana Beach	17

Police Protection Providers by Jurisdiction	Number of Sworn Personnel
City of Vista	94
Harbor Police	140

Source: SANDAG 2021.

Local police department staffing goals are set based on different metrics depending on the jurisdiction. For example, some, similar to fire-protection services, evaluate police services based on response times (City of San Diego 2008). Others follow established staffing guidelines set by organizations like the International Association of Chiefs of Police (City of Poway 1991), or base staffing on a ratio of police officers to citizens. Response times can vary among service providers and between urban and rural areas. Urbanized areas generally see a much faster response time than rural areas. Response times are also measured against the type of emergency. Calls are generally ranked into different priority levels, where the higher priority call receives a faster response time goal. The lowest priority calls are generally for issues such as animal noise disturbance, while the highest priority calls include officer assistance and generally involve more serious crimes. Unlike fire protection emergency responses that are dispatched from a central location, police units respond while on patrol.

Schools

The public school system in the San Diego region has approximately 506,260 students enrolled in kindergarten through 12th (K-12) grade. There are roughly 44 public school districts with about 742 schools throughout the region, staffed with over 25,783 teachers. In addition to public primary and secondary schools, there is an ever-growing number of charter schools at all grade levels in the San Diego region. Higher education is represented by eight community colleges, three public higher education institutions, and several private education schools throughout the region (California Department of Education 2019a, 2019b). Table 4.14-4 identifies K-12 public school districts that provide education at the elementary, middle/intermediate, and high school levels, and their enrollment statistics.

**Table 4.15-4
2018-2019 Student Enrollment and Staffing by District in the San Diego Region**

District	District Type	Elementary School Students	Elementary Schools	Middle/Intermediate School Students	Middle/Intermediate Schools	High School Students	High Schools	Other School Types	Total Students	Number of Teachers*	Number of Students per Teacher
Alpine Union Elementary	Elementary	1,113	4	347	1	N/A	N/A	1	1,764	69	24.3
Bonsall Union Elementary	Elementary	1,826	3	459	1	371	1	N/A	2,656	119	21.2
Borrego Springs Unified	Unified	221	1	69	1	4,000	2	N/A	4,290	131	21.8
Cajon Valley Union	Elementary	14,542	20	4,177	7	N/A	N/A	2	18,720	873	20.9
Cardiff Elementary	Elementary	722	2	N/A	N/A	N/A	N/A	N/A	722	46	16.7
Carlsbad Unified	Elementary	5,956	9	1,879	3	3,891	2	2	11,726	521	23.2
Chula Vista Elementary	Elementary	31,989	46	N/A	N/A	N/A	N/A	3	31,989	1,561	19.2
Coronado Unified	Unified	1,520	2	510	1	1,203	1	N/A	3,233	157	20.7
Dehesa Elementary	Elementary	8543-1420	2	1,420		2,545		8	11,088	876	24.2
Del Mar Union Elementary	Elementary	4,456	8	N/A	N/A	N/A	N/A	N/A	4,456	246	18.9
Encinitas Union Elementary	Elementary	5,443	9	N/A	N/A	N/A	N/A	N/A	5,443	256	21.2
Escondido Union	Elementary	7,123	21	4,436	5	N/A	N/A	N/A	19,322	1,059	18.0
Escondido Union High	High School	N/A	N/A	N/A	N/A	9,947	7	1	9,977	472	20.8
Fallbrook Union Elementary	Elementary	4,449	6	1,058	1	N/A	N/A	3	5,507	249	20.8
Fallbrook Union High	High School	N/A	N/A	N/A	N/A	2,298	1	2	2,299	102	21.2

District	District Type	Elementary School Students	Elementary Schools	Middle/Intermediate School Students	Middle/Intermediate Schools	High School Students	High Schools	Other School Types	Total Students	Number of Teachers*	Number of Students per Teacher
Grossmont Union High	High School	N/A	N/A	N/A	N/A	22,205	11	7	22,215	1,040	21.4
Jamul-Dulzura Union Elementary	Elementary	592	1	204	1	50	N/A	1	846	35	22.1
Julian Union High	High School	N/A	N/A	N/A	N/A	111	1	N/A	111	10	11.5
La Mesa-Spring Valley	Elementary	10,415	22	2,964	1	N/A	N/A	1	13,379	501	25.5
Lakeside Union Elementary	Unified	4,545	8	1,252	2	280	1	1	6,077	263	21.6
Lemon Grove	Elementary	3,015	6	860	N/A	N/A	N/A	N/A	3,875	174	20.9
Mountain Empire Union	Unified	2,716	4	830	2	2,040	1	9	5,586	249	13.7
National Elementary	Elementary	5941	11	N/A	N/A	N/A	N/A	N/A	5,941	288	19.6
Oceanside Unified	Unified	11,489	16	3,225	4	6,517	2	3	21,231	934	21.8
Poway Unified	Unified	19,676	26	5,909	6	11,705	5	1	37,290	1,570	24.4
Romana City Unified	Unified	2961	5	937	1	1,849	1	4	5,747	243	23.3
Rancho Santa Fe Elementary	Elementary	462	1	147	1	N/A	N/A	N/A	609	66	10.0
San Diego County Office of Education	County Office of Education (COE)	3,694	4	1,174	N/A	3,050	1	10	7,918	439	14.1
San Diego Unified	Unified	72,535	138	19,797	32	39,372	29	23	131,706	6,435	20.0
San Diego Union High	High School	N/A	N/A	4,301	5	9,114	4	1	13,415	563	25.1
San Marcos Unified	Unified	11,620	12	3,530	3	6,690	2	3	21,840	46	487.8
San Pasqual Union Elementary	Elementary	603	1	N/A	N/A	N/A	N/A	N/A	603	34	18.2

District	District Type	Elementary School Students	Elementary Schools	Middle/Intermediate School Students	Middle/Intermediate Schools	High School Students	High Schools	Other School Types	Total Students	Number of Teachers*	Number of Students per Teacher
Santee Elementary	Elementary	4,732	9	N/A	N/A	N/A	N/A	2	7,227	311	22.2
SBC – High Tech High	Statewide Benefit Charter	1,033	2	443	2	1,088	3	N/A	2,564	133	19.0
Solana Beach Elementary	Elementary	3,111	7	N/A	N/A	N/A	N/A	N/A	3,111	185	16.4
South Bay Union Elementary	Elementary	7,715	11	N/A	N/A	N/A	N/A	N/A	7,715	334	21.9
Spencer Valley Elementary	Elementary	1,243	1	N/A	N/A	N/A	N/A	2	3,307	275	28.4
Sweetwater Union High	High School	N/A	N/A	11,915	11	29,836	13	6	42,730	1,893	22.0
Vallecitos Elementary	Elementary	224	1	N/A	N/A	N/A	N/A	N/A	224	12	17.0
Valley Center-Pauma Unified	Unified	2,173	4	713	1	1,314	1	2	4,200	185	22.8
Vista Unified	Unified	12,941	16	3,543	5	10,250	4	8	26,734	1,191	20.7
Warner Unified	Unified	1,234	2	N/A	N/A	513	1	2	1,747	108	14.4

Source: CDE 2019a

Facility planning for public schools is generally based on student generation rates, which vary by jurisdiction and development type. The generation rates are compared against the current capacity of individual school facilities that would be affected by the growth. Historical data and future plans for an area are used to project the number of students that will eventually be a part of the community.

Libraries

The San Diego County Library operates branches in the cities of Del Mar, El Cajon, Encinitas, Imperial Beach, La Mesa, Lemon Grove, Poway, San Marcos, Santee, Solana Beach, and Vista, as well as in the unincorporated areas of the County and two bookmobiles. The cities of Carlsbad, Chula Vista, Coronado, Escondido, National City, Oceanside, and San Diego maintain and operate their own library systems. Table 4.15-5 shows the city and county public library systems in the San Diego region. The libraries of California State University, San Marcos; San Diego State University; and the University of California, San Diego are also open to the public, but community members must pay an annual fee in order to check out library resources. The San Diego County Public Law Library (Law Library) is open to the general public, as well as California legal professionals, and provides them with legal materials and information. The Law Library is funded through the County of San Diego general fund, in addition to a portion of collected court fees. Some libraries have adopted master plans for their system facilities to assess their needs, while others developed service standards, such as square footage of the facility per resident in a defined service area.

**Table 4.15-5
Municipal and County Public Library Systems in the San Diego Region**

Library	Total Outlets	Total Visits	Total Circulation	Total Collection Use	Total Programs
Carlsbad City Library	3	126,000	936,797	1,030,255	1,719
Chula Vista Public Library	3	961,848	500,195	509,994	1,506
Coronado Public Library	1	244,436	251,978	414,688	575
Escondido Public Library	3	234,750	371,765	390,468	493
National City Public Library	1	107,228	73,853	86,702	1,280
Oceanside Public Library	5	321,109	284,041	289,328	1,253
San Diego County Library	35	3,294,000	8,631,175	8,921,429	17,916
San Diego Public Library	36	5,377,801	6,196,778	26,186,544	13,615

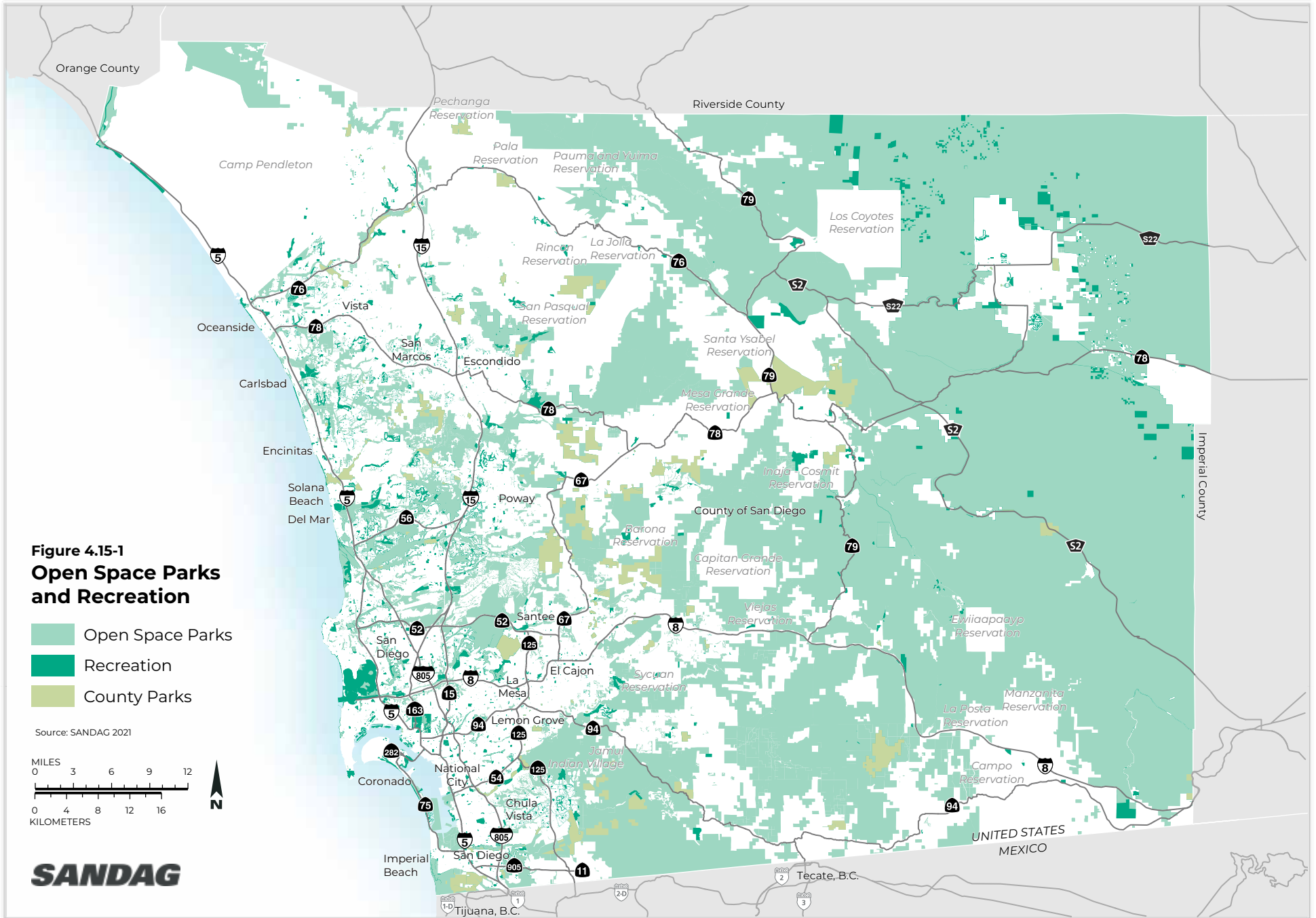
Source: California State Library 2021

Recreational Facilities

San Diego County has hundreds of designated parks, with uses including camping parks, preserves, sports parks, beaches, community and teen centers, golf courses/clubhouses, convention centers, marinas, casinos, botanical gardens, landscaped open space, undeveloped natural areas, historic sites, day use parks, racetracks, tourist attractions, and other recreational uses (Figure 4.15-1). As of 2016, these parks and open spaces span over 1,300,000 acres throughout the San Diego region. Trails and pathways allow for walking, hiking, biking, and horseback riding throughout the region and connect scenic and recreational areas. Trails include the California Coast Trail, which, once completed, will be a 1,200-mile contiguous public right-of-way from the northern to southern border of California to allow for coastal access (California Coastal Conservancy 2019).

Parkland and open space in the San Diego region are owned by federal, State, and local government agencies, as well as tribes, public utilities, private owners, and joint use agreements. Funding for parks comes from existing sources from their respective owners, as well as tax increment financing, bonds, donations, JPAs, and others. It is also a common practice to charge development fees for new development projects to be used to develop parks within that community.

Public park and recreational facilities can be provided by school districts, community service districts, park and recreation districts, and nonprofit agencies. These facilities include community, senior, and youth centers, sports fields, stadiums, public and private golf courses, visitors centers, amusement parks, fairgrounds, equestrian centers, facilities used for water-oriented recreational purposes, ranches, and private/commercial recreation facilities. Funding for these sites is generally provided by the local jurisdiction.



UTILITIES

Wastewater Collection and Treatment Facilities

The San Diego region is served by over 7,903 miles of pressure and gravity sewer lines, as well as pipes, sewer laterals, and pump stations to move wastewater from its source to a wastewater treatment plant. The wastewater is generated by a variety of residential, commercial, and industrial actions throughout the region. Table 4.15-6 identifies existing wastewater collection systems in the San Diego region.

Wastewater treatment facilities remove solids and contaminants by a variety of methods. The treated wastewater is then released through ocean outfalls, percolation beds, or groundwater recharge. Water reclamation facilities are also used throughout the region and can further treat the water so that it may be used again for agriculture, construction, or other commercial and industrial processes (see Section 4.18). Depending on the process used to treat the biosolids produced during water treatment, the products can be disposed of in designated landfills or municipal solid waste landfills, or used to fertilize crops. Table 4.15-7 identifies the capacity of permitted wastewater treatment facilities in the San Diego region.

Most rural areas in San Diego County do not have a sanitary sewer system and must use onsite wastewater treatment systems, such as septic tanks. Most commonly, these systems consist of a septic tank connected to a leach line. Septic tanks are discussed further in Section 4.9, *Hazards and Hazardous Materials*.

Table 4.15-6
Wastewater Collection Systems in the San Diego Region by Responsible Agency

Responsible Agency	Collection System (CS)	Pressure Sewer (miles)	Gravity Sewer (miles)	Lateral Sewer (miles)
22nd District Agricultural Association	22nd District Agricultural Association CS	0.7	1.6	1.5
Borrego Water District	Borrego Wd-Rams Hill CS	2.8	12.5	1.6
Buena Sanitation District	Buena CS	3	93.3	0
CSU San Diego	San Diego State University CS	0	6	4
Ca Dept of Parks & Rec Winterhaven	San Mateo Campground/San Onofre CS	1.2	0.6	0.1
Carlsbad MWD	Carlsbad MWD CS	3.9	282	0
Chula Vista City	City of Chula Vista CS	3.4	511	10
Coronado City	City of Coronado CS	6.6	39.3	0
Del Mar City	City Of Del Mar CS	3.8	29	0
El Cajon City	City of El Cajon CS	0	195	0
Encinitas City	City of Encinitas CS	4.5	124	0
Escondido City	HARRF Discharge To San Elijo OO CS	8.5	345	0
Fallbrook Public Utility District	Fallbrook PUD CS	4.6	78.6	0
Imperial Beach City	City of Imperial Beach CS	6	39.5	0
La Mesa City	City of La Mesa CS	0	155	0
Lemon Grove City	City of Lemon Grove CS	0.1	62.4	0

Responsible Agency	Collection System (CS)	Pressure Sewer (miles)	Gravity Sewer (miles)	Lateral Sewer (miles)
Leucadia Wastewater District	Leucadia Wastewater District CS	16.67	205	0
National City	City of National City CS	1	105	0
Oceanside City	City of Oceanside Collection System, La Salina WWTP	37.7	445.6	0
Olivenhain Municipal Water District	4-S Ranch CS	20	65	0
Otay MWD	Otay Water District CS	2.2	82	0
Padre Dam Municipal Water District	Padre Dam CS	4.6	164.5	0
Poway City	City of Poway CS	3.5	185	75
Rainbow Municipal Water District	Rainbow Municipal Water Dist CS	3	87	0
Ramona MWD	San Vicente Treatment Plant CS	1	40	28
Ramona MWD	Santa Maria CS	4	45	31
Rancho Santa Fe Community Services District	Rancho Santa Fe San Dist Plant CS	6	65	0
Rancho Santa Fe Community Services District	Santa Fe Valley CS	2	19.7	0
San Diego City (City Attorney's Office at Civic Center Plaza)	San Diego City CS (Wastewater Collection System)	112.51	2,931.40	0
San Diego County Dept of Public Works	County of San Diego CS	5.3	422	0
San Diego County Dept of Public Works	Julian Water Pollution Facil. CS	0.6	3	0
Solana Beach City	City Of Solana Beach CS	2	49	0
UC San Diego	University Of California, San Diego CS	0.5	26.5	3
US Marine Corps Base Camp Pendleton	USMC Base, Camp Pendleton CS	39.2	125	79.5
US Marine Corps Recruit Depot	MCRD CS	0	4	2.5
Vallecitos Water District	Meadowlark CS	7.63	259.27	0
Valley Center MWD	Lower Moosa Canyon Recl Facil CS	5	50	0
Valley Center MWD	Woods Valley CS	5	6	0
Vista City	City of Vista CS	0.3	214.5	0

Source: SWRCB 2021.

**Table 4.15-7
Wastewater Treatment and Water Recycling Facilities in the San Diego Region**

Responsible Agency	Facility Name	Planned Capacity (2020) million gallons per day			Planned Capacity (2045) million gallons per day			Effluent Quality for TDS (mg/L)	Disposal Method
		P	S	T	P	S	T		
Carlsbad MWD	Carlsbad WRF	-	-	7.4	-	-	12.0	1,000	Irrigation
Encina Wastewater Authority	Encina WPCF	43.3	43.3	-	43.3	43.3		1,031	Outfall-Reuse
Escondido, City of	Hale Avenue RRF/WRF	18.0	18.0	9.0	27.0	27.0	20.0	1,000	Reuse-Outfall-Stream
Fairbanks Ranch CSD	Fairbanks Ranch WPCF	0.3	0.3	-	0.3	0.3	0.3	1,100	Percolation
Fallbrook PUD	Fallbrook Plant #1 WRF	2.7	2.7	2.7	2.7	2.7	2.7	850	Reuse-Outfall
Leucadia Wastewater District	Forest R. Gafner WRP	1.0	1.0	1.0	1.0	1.0	1.0	1,000	Reuse-Outfall
Oceanside, City of	La Salina WWTP	5.5	5.5	-	-	-	-	897	Outfall
Oceanside, City of	San Luis Rey WRF	13.5	13.5	1.5	17.4	17.4	7.5	874	Reuse-Outfall
Olivenhain MWD	4S Ranch WWTP	2.0	2.0	2.0	2.0	2.0	2.0	1,000	Reuse
Otay WD	Ralph W. Chapman WRF	1.3	1.3	1.3	1.3	1.3	1.3	850	Reuse-Outfall
Padre Dam MWD	Padre Dam WRF	6.0	6.0	5.7	6.0	6.0	5.7	800	Reuse-Outfall
Ramona WMD	Santa Maria WRP	-	1.0	0.4	-	1.0	0.4	850	Reuse-Stream
Ramona MWD	San Vicente WRP	-	-	0.5	-	-	0.6	550	Reuse-Stream
Rancho Santa Fe CSD	Santa Fe Valley WRF	-	-	0.5	-	-	0.5	1,000	Irrigation
Rancho Santa Fe CSD	Rancho Santa Fe WRF	0.5	0.5	-	0.6	0.6	0.6	1,100	Percolation

Responsible Agency	Facility Name	Planned Capacity (2020) million gallons per day			Planned Capacity (2045) million gallons per day			Effluent Quality for TDS (mg/L)	Disposal Method
		P	S	T	P	S	T		
San Diego, City of (MWWD)	North City WRP	30.0	30.0	24.0	52.0	52.0	52.0	1,000	Reuse-Outfall
San Diego, City of (MWWD)	Point Loma WWTP	240.0	-	-	240.0	-	-	1,700-3,000	Outfall
San Diego, City of (MWWD)	South Bay WRP	15.0	15.0	15.0	36.0	36.0	36.0	1,000	Reuse-Outfall
San Elijo JPA	San Elijo WRF	5.3	5.3	3.0	5.3	5.3	5.3	950	Reuse-Outfall
Camp Pendleton Marine Corps Base	Southern Region TTP	-	-	7.5	-	-	7.5	750	Irrigation/Outfall
Camp Pendleton Marine Corps Base	Northern Region TTP	-	-	4.0	-	-	4.0	750	Irrigation/Percolation
Vallecitos WD	Meadowlark WRF	5.0	5.0	5.0	5.0	5.0	5.0	1,000	Reuse
Valley Center MWD	Lower Moosa Canyon WRF	0.4	0.4	0.4	0.875	0.875	0.875	1,000	Irrigation
Valley Center MWD	North Village WRF	-	-	-	0.125	0.125	0.125	1,000	Irrigation
Valley Center MWD	Welk WRF	-	-	-	0.125	0.125	0.125	1,000	Irrigation (Golf Course)
Valley Center MWD	Lilac Ranch WRF	-	-	-	0.125	0.125	0.125	1,000	Irrigation
Valley Center MWD	Woods Valley Ranch WRF	0.275	0.275	0.275	0.475	0.475	0.475	1,000	Irrigation (Golf Course)
Valley Center MWD	Meadowood WRF	0.170	0.170	0.170	0.170	0.170	0.170	1,000	Irrigation
Whispering Palms CSD	Whispering Palms WPCF	0.5	0.5	-	0.5	0.5	0.5	963	Pasture-Percolation
Total Capacity		105.73	106.73	67.66	266.50	267.50	230.78		

Source: SDCWA 2015.

P: Primary Treatment; S: Secondary Treatment; T: Tertiary Treatment; CSD: Community Services District; mg/L: milligrams per liter; MWD: Municipal Water District; RRF: Resource Recovery Facility; TDS: Total Dissolved Solids; TTP: Tertiary Treatment Plant; WPCF: Water Pollution Control Facility; WRF: Water Reclamation/ Recycling Facility; WRP: Water Reclamation Plant; WWTP: Wastewater Treatment Plant

City of San Diego Metropolitan Sewerage System

The Metropolitan Sewerage System, which is owned and operated by the City of San Diego Public Utilities Department's Wastewater Branch, provides regional wastewater treatment services for the City of San Diego and 15 other cities and sanitation districts: Chula Vista, Coronado, Del Mar, El Cajon, Imperial Beach, La Mesa, National City, and Poway; the Lemon Grove Sanitation District; the Padre Dam Municipal and Otay water districts; and the County of San Diego (on behalf of the Winter Gardens Sewer Maintenance District, and the Alpine, Lakeside, and Spring Valley sanitation districts).

The Metropolitan Sewerage System comprises the Point Loma Wastewater Treatment Plant and Ocean Outfall, the North City Water Reclamation Plant and South Bay Water Reclamation Plant, the Metro Biosolids Center, the Environmental Monitoring and Technical Services Laboratory, nine major pump stations, and 75 smaller pump stations (City of San Diego 2018). The pump stations move wastewater through sewers to the various treatment plants.

The Point Loma Wastewater Treatment Plant treats roughly 175 million gallons of wastewater per day (although it has a maximum capacity of 240 million gallons per day) and discharges it through the Point Loma Ocean Outfall into the Pacific Ocean (City of San Diego 2018). Any sludge or biosolids accumulated from the processing of the wastewater at this plant is sent to the Metro Biosolids Center for further processing. Up to 30 million gallons of wastewater can be treated per day at the North City Water Reclamation Plant (City of San Diego 2018). Wastewater from northern San Diego is processed and purified, and then redistributed through a reclaimed water pipeline for irrigating, landscaping, and industrial uses. Water processed through the South Bay Water Reclamation Plant can either be discharged into the ocean through the South Bay Ocean Outfall or sent on to Tertiary Treatment to be used for reclaimed water purposes. The South Bay Water Reclamation Plant has the capacity to process 15 million gallons per day (City of San Diego 2018).

South Bay International Wastewater Treatment Plant

The International Boundary and Water Commission (IBWC) Minute No. 283 of July 8, 1990, was approved by both the United States and Mexico, which allowed for the establishment of the "Clean Water Partnership" binational interagency and authorized the construction of the South Bay International Wastewater Treatment Plant (SBIWTP). The SBIWTP was constructed as a response to untreated wastewater flowing north from Tijuana and polluting the Tijuana River in the United States. The plant provides secondary treatment for 25 million gallons of sewage per day that is then discharged into the Pacific Ocean (IBWC 2018). The treatment plant is located in San Ysidro, about 2 miles west of the point of entry and directly north of Tijuana's main wastewater pumping station.

Stormwater Drainage Facilities

Stormwater runoff occurs when precipitation from rain and snowmelt events flows over land or impervious surfaces and does not infiltrate into the ground. This effect is increased by the amount of impervious surfaces (paved streets, parking lots, and building rooftops). In more rural, less developed areas, such as in the unincorporated County, stormwater is able to flow into natural drainage sites, such as creeks, streams, or rivers. In urban areas, stormwater runoff is collected in a Municipal Separate Storm Sewer System (MS4), through a system of conveyances consisting of roads with drainage systems, streets, catch basins, curbs, gutters, ditches, artificial channels, or storm drains. Stormwater systems such as these are designed to prevent flooding in urban areas, control erosion, and protect water quality. Section 4.10, *Hydrology and Water Quality*,

provides a discussion and analysis of the hydrology and water quality impacts of stormwater associated with the implementation of the proposed Plan.

Each MS4 operator, identified in Table 4.15-8, is responsible for operation, maintenance, and management of its own system. MS4s are interconnected, and their operators often share facilities, cooperatively manage systems, and coordinate pollution control efforts.

**Table 4.15-8
Operators of Municipal Separate Storm Sewer Systems in the San Diego Region**

Facility Name	Agency/Discharger	City
Carlsbad MS4	Carlsbad City	Carlsbad
Chula Vista MS4	Chula Vista City	Chula Vista
Coronado MS4	Coronado City	Coronado
Del Mar MS4	Del Mar City	Del Mar
El Cajon MS4	El Cajon City	El Cajon
Encinitas MS4	Encinitas City	Encinitas
Escondido MS4	Escondido City	Escondido
Imperial Beach MS4	Imperial Beach City	Imperial Beach
La Mesa MS4	La Mesa City	La Mesa
Lemon Grove MS4	Lemon Grove City	Lemon Grove
National City MS4	National City	National City
Oceanside MS4	Oceanside City	Oceanside
Poway MS4	Poway City	Poway
San Diego City, MS4	San Diego City Storm Water	San Diego
San Diego County, MS4	San Diego County Department of Environmental Health	San Diego
San Diego International Airport MS4	San Diego County Regional Airport Authority	San Diego
San Diego Port District MS4	San Diego Unified Port District	San Diego
San Marcos MS4	San Marcos City	San Marcos
Santee MS4	Santee City	Santee
Solana Beach MS4	Solana Beach City	Solana Beach
Vista MS4	Vista City	Vista
Caltrans MS4	Caltrans	Statewide
Phase II Small MS4	Del Mar Fairgrounds	Del Mar
Phase II Small MS4	UCSD	San Diego

Source: SWRCB 2015.

Each jurisdiction within the Plan Area requires the implementation of stormwater pollution prevention techniques, so that conveyance systems are designed to protect surface and ground water quality, as mandated by State and federal regulations. These regulations require a multifaceted approach that involves infrastructure improvements and maintenance; water quality monitoring; source identification of pollutants; land use planning policies and regulations; and pollution prevention activities such as education, code enforcement, outreach, public advocacy, and training, and are explained in more detail in Section 4.15.2, *Regulatory Setting*.

Electricity and Natural Gas Services

San Diego County is served by San Diego Gas and Electric (SDG&E), which provides electricity and natural gas to over 3.6 million customers (i.e., 1.4 million accounts) in the county and portions of southern Orange County. The utility has a diverse power production portfolio, composed of a variety of renewable and non-renewable sources. Energy production typically varies by season and by year. Regional electricity loads also tend to be higher in the summer because the higher summer temperatures drive increased demand for air-conditioning. In contrast, natural gas loads are higher in the winter because the colder temperatures drive increased demand for natural gas heating. See Table 4.15-9 for a summary of electricity and natural gas use within SDG&E service area.

**Table 4.15-9
Electricity and Natural Gas Consumption in the SDG&E Service Area in 2019**

Sector	Electricity (GWh)	Natural Gas (million therms)
Agriculture and Water Pump	355	5
Commercial	10,865	200
Industry	1,342	21
Mining and Construction	395	4
Residential	7,435	304
Streetlight	90	--
Total	20,481	534

Source: CEC 2019b.

Telecommunications Services

Telecommunications services, including telephone and cellular phone services, cable television, and internet and broadband services in the San Diego region, are provided by a number of privately owned companies.

Telephone and Cellular Phone

Local phone service in the San Diego region is provided primarily by AT&T, which offers traditional landline (copper wire) service as well as digital telephone service. Digital telephone service is offered by a number of other providers including Cox, Time Warner, Vonage, and a variety of smaller companies.

AT&T, Sprint Nextel Corporation, T-Mobile, Verizon Wireless, and Spectrum are some of the cellular telephone providers offering service in the San Diego region. Providers use a combination of underground lines and above ground cellular towers to provide telephone service to the Plan Area. Cellular towers are distributed throughout the San Diego region to provide coverage.

Cable Television and Internet

Cable television and internet services are offered by many of the same companies that provide cellular phone service in the area and can be delivered via a number of different technologies, including mobile (cellular), wireless, wireless local area network, and broadband. Fiber optic cables and copper wires are generally co-located with other utility infrastructure, which is usually installed underground within new development in order to reduce visual and safety hazards. With the recent advent of streaming services, only broadband internet infrastructure is needed to access television service.

Broadband refers to a high-speed internet connection that can transport multiple signals and traffic types. According to the Federal Communications Commission (FCC) (2017), 100 percent of residents in the San Diego region currently have access to broadband via at least one provider.

**Table 4.15-10
Fixed Broadband Providers in the San Diego Region**

Provider	Technology
A+ Wireless	Cable
Accel Wireless	Terrestrial Fixed Wireless
Allstream	Optical Carrier/Fiber, Other Copper Wireline
AT&T	DSL, Optical Carrier/Fiber, Fixed Wireless
Birch Communications	DSL, Other Copper Wireline
Block Line Systems	Optical Carrier/Fiber
California Internet	Terrestrial Fixed Wireless
Call One	Optical Carrier/Fiber, Other Copper Wireline
CBTS Technology Solutions	Other Copper Wireline
Cellco	Terrestrial Fixed Wireless
Charter Communications, Inc.	Cable, Optical Carrier/Fiber
Cogent Communications	Optical Carrier/Fiber, Other Copper Wireline
Comcast	Cable
Compudyne	Optical Carrier/Fiber, Terrestrial Fixed Wireless
Consolidated Communications	Optical Carrier/Fiber
Consolidated Smart Systems	Cable
Cox Communications, Inc.	Cable, Optical Carrier/Fiber
Earthlink	DSL, Optical Carrier/Fiber, Other Copper Wireline
Frontier Communications	DSL
GCI Communication	Satellite
Google Fiber	Optical Carrier/Fiber
HUGHES	Satellite
Level 3 Communications	Optical Carrier/Fiber, Other Copper Wireline
Logix Communications	Optical Carrier/Fiber
MCI Communications	Optical Carrier/Fiber, Other Copper Wireline
Mediacom	Cable
Netfortris	Optical Carrier/Fiber, Other Copper Wireline
Network Billing Systems	Optical Carrier/Fiber, Other Copper Wireline
One Ring Networks	Other Copper Wireline, Terrestrial Fixed Wireless
PAETEC Communications	DSL, Optical Carrier/Fiber
Sail Internet	Terrestrial Fixed Wireless
San Diego Broadband	Terrestrial Fixed Wireless
SDWISP	Terrestrial Fixed Wireless
Sky Valley Network	Terrestrial Fixed Wireless
Southern California Telephone Company	Terrestrial Fixed Wireless

Provider	Technology
Tailwind Voice & Data	DSL, Cable Modem, Optical Carrier/Fiber, Other Copper wireline
Tierzero	Optical Carrier/Fiber, Other Copper Wireline, Terrestrial Fixed Wireless
U.S. Telepacific	Optical Carrier/Fiber, Other Copper Wireline, Terrestrial Fixed Wireless, DSL
Utility Telecom	Optical Carrier/Fiber, Other Copper Wireline
ViaSat	Satellite
VSAT Systems	Satellite
Wave Broadband	Cable, Optical Carrier/Fiber
Webpass	Optical Carrier/Fiber, Terrestrial Fixed Wireless
XO Communication Services	Optical Carrier/Fiber, Other Copper Wireline
Zayo	Optical Carrier/Fiber
Zito Media	Cable

Source: FCC 2020.

Solid Waste Disposal and Recycling Facilities

The County of San Diego is the designated local enforcement agency (LEA) for all solid waste facilities in the region except for facilities within the City of San Diego, which is its own LEA. The LEAs are certified by the California Department of Resources Recycling and Recovery (CalRecycle) and have the responsibility of ensuring that solid waste facilities are operated and closed correctly and that solid waste is stored and transported properly. LEAs can issue operating permits to facilities, including landfills, transfer stations, material recovery, and composting facilities.

Solid Waste Generation

Solid waste refers to garbage, refuse, and other discarded solid materials that are generated by residential, commercial, and industrial activities. Solid waste is measured in volume and weight, and is classified into one of eight categories: paper, plastics, glass, metals, yard waste, other organics, other wastes, and special wastes. CalRecycle provides specific definitions of these classifications on their website (CalRecycle 2018a).

Solid waste generation is measured by disposal and diversion. Disposal is defined in PRC Section 40192 as “the final deposition of solid wastes onto land, into the atmosphere, or into the waters of the state.” Diversion includes programs and practices such as waste prevention and source reduction, recycling, reuse, and composting that reduce the total amount of waste that requires disposal. Table 4.15-11 shows the 2016 waste generation and disposal rates by jurisdiction.

**Table 4.15-11
Total Waste Generation Rates and Annual Disposal Rates by Jurisdiction in the San Diego Region**

City	2016 Total Waste Generation (tons)	2016 Annual Disposal Rate (PPD)
City of Carlsbad	158,252	7.3
City of Chula Vista	182,251	3.7
City of Coronado	41,826	11.5

City	2016 Total Waste Generation (tons)	2016 Annual Disposal Rate (PPD)
City of Del Mar	12,911	14.5
City of El Cajon	99,769	4.9
City of Encinitas	66,579	5.8
City of Escondido	162,547	5.6
City of Imperial Beach	16,724	3.4
City of La Mesa	51,551	4.7
City of Lemon Grove	21,187	4.0
City of National City	60,198	4.9
City of Oceanside	133,395	4.1
City of Poway	50,895	5.5
City of San Diego	1,521,363	6.3
City of San Marcos	86,589	4.9
City of Santee	49,708	4.6
City of Solana Beach	14,311	5.9
City of Vista	97,376	5.3
Unincorporated San Diego	492,691	5.2
Total	3,320,123	108.8

Source: CalRecycle 2021d.

PPD = pounds per day.

Landfills

There are four landfills in the San Diego region, three of which are privately operated and one of which is operated by the City of San Diego. The landfills receive a total daily throughput of approximately 19,750 tons per day. Together, they have a total remaining capacity of 146,359,020 cubic yards, which is roughly 48 percent of their total permitted capacity (CalRecycle 2021). Table 4.15-12 shows the remaining capacity of landfills located in the San Diego region and their estimated closure dates. Marine Corps Base Camp Pendleton operates two additional landfills for its exclusive use that are not included in the table.

Table 4.15-12
Landfills Located in the San Diego Region and Estimated Capacity

Facility	Operator	Solid Waste Information System No.	Throughput (tons/day)	Maximum Permitted Capacity (cubic yards)	Remaining Capacity (cubic yards)	Percent Capacity Remaining	Estimated Closure Date
Borrego Landfill	Borrego Landfill, Inc.	37-AA-0006	50	476,098	111,504	23	2046
Otay Landfill	Otay Landfill, Inc.	37-AA-0010	6,700	61,154,000	21,194,008	35	2030

Facility	Operator	Solid Waste Information System No.	Throughput (tons/day)	Maximum Permitted Capacity (cubic yards)	Remaining Capacity (cubic yards)	Percent Capacity Remaining	Estimated Closure Date
Miramar Landfill	City of San Diego	37-AA-0020	8,000	97,354,735	11,080,871	11	2030
Sycamore Landfill	Sycamore Landfill, Inc.	37-AA-0023	5,000	147,908,000	113,972,637	77	2042
Total			19,750	306,892,833	146,359,020	48	

Source: CalRecycle 2021a.

Collection, Transfer, and Material Recovery Facilities

Solid waste generated from residences and businesses in the San Diego region is collected by private operators, under contract with each of the cities and the County, and permitted by the State. The City of San Diego is an exception in the region and operates its own solid waste management system, including solid waste collection.

Twenty transfer stations in the region receive solid waste and transfer it into vehicles or containers to be moved to a landfill or transformation facility. There are fourteen additional transfer stations that are combined with material recovery facilities (MRFs) that remove recyclables and other valuable materials from the solid waste as it is being processed. A final transfer station also chips and grinds wood waste. MRFs process unseparated trash or separated trash with commingled recyclables. The total daily throughput capacity for the region of these facilities is 19,750 tons. Table 4.15-13 provides a list of transfer facilities and MRFs for the region and their individual daily throughputs.

**Table 4.15-13
Transfer/Processing Facilities in the San Diego Region**

Facility	Operator	Solid Waste Information System (SWIS) Number	Maximum Permitted Throughput (Tons/Day)
EDCO Recycling	EDCO Disposal, Inc.	37-AA-0964	516
SANCO Recycling	SANCO Services	37-AA-0956	1,000
Ramona MRF and Transfer Station	JEMCO Equipment Corporation	37-AA-0925	700
Universal Refuse Removal Recycling & TS	Universal Refuse Removal	37-AA-0929	1,000
Palomar Transfer Station, Inc.	Palomar Transfer Station, Inc	37-AH-0001	2,250
EDCO Recovery and Transfer Station	EDCO Disposal Corporation	37-AA-0105	1,500
Escondido Resource Recovery	JEMCO Equipment Corporation	37-AA-0906	3,223
EDCO Station	EDCO Disposal Corporation	37-AA-0922	1,000
Fallbrook Recycling Facility	Fallbrook Refuse Service	37-AA-0923	500

Facility	Operator	Solid Waste Information System (SWIS) Number	Maximum Permitted Throughput (Tons/Day)
Amswede Recycling	Amswede Inc.	37-AA-0952	175
EDCO CDI Recycling	EDCO Waste and Recycling Services	37-AA-0953	175
SANCO Resource Recovery	SANCO Services	37-AA-0956	1,000
EDCO Waste and Recycling – LVT Op.	EDCO Waste and Recycling	37-AA-0969	15
Coast Waste Management, Inc. LVTS	Coast Waste Management, Inc.	37-AA-0966	15
Waste Management of San Diego – LVTO	Universal Refuse Removal Recycling & TS	37-AA-0967	15
Escondido Disposal, Inc.	Escondido Disposal, Inc.	37-AA-0970	15
EDCO Bin Yard	EDCO Bin Yard	37-AA-0972	15
Otay CDI MVPF	Otay Landfill Inc.	37-AA-0973	174
Escondido LVTO	Caltrans Region 2	37-AA-0976	15
Descanso LVTO	Caltrans Region 1	37-AA-0977	15
Boulevard LVTO	Caltrans Region 1	37-AA-0978	15
Carlsbad LVTO	Caltrans Region 2	37-AA-0979	15
Chula Vista LVTO	Caltrans Region 2	37-AA-0980	15
Santee LVTO	Caltrans Region 1	37-AA-0981	15
Caltrans Henshaw LVTO	Caltrans Region 1	37-AA-0983	15
Benchmark Landscape – Poway Branch	Benchmark Landscape – Poway Branch	37-AA-0985	2
Benchmark Landscape – San Marcos	Benchmark Landscape – San Marcos Branch	37-AA-0986	1
Benchmark Landscape – Spring Valley	Benchmark Landscape – Spring Valley	37-AA-0987	1
City of San Diego Env. Ser. Dept. LVTO	City of San Diego (Refuse Collection)	37-AB-0010	80
Waste Management North Co. Limited Col. Trans Op.	Waste Management Inc. North County	37-AA-0958	15
Allan Company MRF & T/S	Cedarwood-Young Company, dba Allan Co.	37-AB-0016	1,000
Coronado Bridge Paint LVTO	California Department of Transportation	37-AB-0018	15
Kearny Mesa LVTO	California Department of Transportation	37-AB-0023	15
Terra Bella Nursery, Inc.	Terra Bella Nursery, Inc.	37-AB-0024	199
Miramar Greenery	City of San Diego	37-AB-0003	690
West Miramar Sanitary Landfill	City of San Diego	37-AA-0020	8,000
Total			23,411

Source: CalRecycle 2021a.

Recycling, Composting, Chipping, and Grinding

The implementation of recycling, composting, chipping, and grinding practices reduces the amount of material that must be sent to the landfill. There are over 80 recycling centers in the San Diego region that collect recyclable materials (CalRecycle 2021c). In addition, three composting facilities in the region collect, grind, mix, pile, and add moisture and air to organic materials to speed natural decay and produce a soil amendment, and another four chipping and grinding facilities in the region are designed to reduce the size of compostable material (CalRecycle 2021d). One organics processing facility is also permitted in the County (CalRecycle 2021d).

Construction and Demolition and Inert Debris Facilities

Construction and demolition (C&D) material and inert debris are solid waste that pose a potential threat to public health and safety and the environment, and must be handled differently from municipal solid waste. C&D materials include lumber, drywall, glass, metal, roofing material, tile, carpeting and floor coverings, piping, concrete, cardboard and other packaging materials, dirt, and rock. Of these materials, metals are recycled the most, while lumber is most commonly sent to the landfill. According to the *2014 Disposal Facility-Based Characterization of Solid Waste in California*, C&D materials are estimated to account for between 21.7 to 25.5 percent of the disposed waste stream in the state (CalRecycle 2021e). There are 19 C&D recyclers in San Diego, 1 large processing facility, 3 medium processing facilities, and 4 inert fill-disposal operations (CalRecycle 2021c). According to CalRecycle, the San Diego region diverted 65,546 tons of C&D debris in 2018 from local landfills (CalRecycle 2021d).

ANTICIPATED EFFECTS FROM CLIMATE CHANGE

Climate change could affect public services and utilities in a variety of ways, mainly due to damage to infrastructure or changes to operations. The San Diego region is likely to experience sea-level rise of up to 1.2 feet by 2050 and up to 4.6 feet by 2100, wetter winters and more intense precipitation that can lead to increased flooding, more intense heat waves and annual average temperatures increases of up to 4.8°F by 2050, and a longer and less predictable fire season (CEP and SDF 2015, Kalansky et al. 2018, OPC 2018). More details on future climate projections are available in Appendix F.

Public Services

Climate change, particularly extreme events, could increase the demand on some public services, although the extent of this impact has not been quantified. For example, there could be more demand on public services to combat the increased severity and frequency of wildfires, extreme heat events, flooding, or landslides; this increased demand could conceivably require expanded or additional public service facilities. Moreover, the existing facilities themselves may experience impacts. Climate change could affect public services in the following ways:

- As temperatures warm and landscapes experience longer dry seasons, wildfire risks are likely to increase. More frequent or severe wildfires may strain existing fire-fighting capacity, requiring the expansion of fire stations or the addition of new facilities and operations.
- During extreme heat events, which are expected to become more severe, additional cooling centers may be required to prevent heat-related illnesses or fatalities. In 2017, a heat wave in the San Diego region closed 85 schools to protect children from the extreme heat (Kalansky et al. 2018). This type of event could

become more common, particularly threatening disadvantaged communities and vulnerable populations, including children, elderly, and homeless populations.

- Emergency response to severe events may require greater emergency management capacity from the region (Kalansky et al. 2018). Also, there may be a greater need for monitoring and assessments to provide hazard warning and preparation (Kalansky et al. 2018).
- Additionally, climate change conditions, such as sea-level rise and flooding, could contribute to deterioration or damage of existing public facilities. Across the state, damages due to inundation from 50 centimeters of sea-level rise could reach \$18 billion dollars, some of which could include damages to public facilities, although the potential financial impact on public facilities has not been separately quantified (Kalansky et al. 2018).
- Climate change impacts may also damage recreational facilities and parks through destructive hazards such as wildfire, flooding, and landslides. Coastal parks and facilities, such as the Waterfront Park in the City of San Diego, may be particularly vulnerable to inundation from sea-level rise and coastal flooding (County of San Diego Parks and Recreation 2019).

More details on the effects of climate hazards on public services are provided in Appendix F.

Utilities

Utilities in the San Diego region, including wastewater collection and treatment, stormwater drainage, solid waste management systems, electric power, natural gas, and telecommunications facilities, may face risks and challenges from climate change. These impacts are described in the subsections below, with more detail in Appendix F.

Wastewater Collection and Treatment

Although no research was found on the impacts of climate change on wastewater treatment within the San Diego region, it is possible that higher temperatures would increase treatment costs or require changes in operations. The costs could increase because higher air and water temperatures reduce water quality and quantity by changing water chemistry, promoting bacterial growth, and increasing evapotranspiration (Duran-Encalada et al. 2017).

Both extreme precipitation and drought can cause challenges for wastewater treatment facilities. Extreme precipitation may cause more intense or frequent floods, which may overwhelm the current wastewater intake systems (Major et al. 2011). Drought conditions could reduce the inflow of water, which increases the concentration of pollutants, including salinity, in the wastewater treatment stream (Tran et al. 2017). Sea-level rise can also cause several problems for wastewater treatment, including overwhelming capacity and making treatment more difficult. As with extreme precipitation, sea-level rise could increase the risk of flooding or of overloading the treatment system.

Water quality in the watershed may be reduced after more frequent or intense wildfires due to erosion and sedimentation (EPA 2015). Although the impacts in the San Diego region were not specifically addressed in the literature, it is possible that degraded water quality from saltwater intrusion, greater contamination from pollutants, and sedimentation from wildfires may require more extensive water treatment processes to reach the required quality for discharge. Flooding and erosion exacerbated by climate change may present other physical risks to facilities and equipment of the utility. Erosion could wash away soils that support or cover infrastructure (ICLEI 2012), although this risk has not been quantified in the San Diego region.

Stormwater Drainage Facilities

Changes in the timing and intensity of precipitation, as well as sea-level rise, could affect stormwater management in the San Diego region (County of San Diego 2018c). While total annual precipitation may not change in the San Diego region, the pattern of precipitation may. More intense precipitation events could occur, and the San Diego region's current stormwater system may not be equipped to handle the quantity of runoff from a particular event (County of San Diego 2018c, Ascent Environmental Inc. 2017, Tuler 2016). When not sufficiently managed, stormwater can flood and erode roadways, and transport debris and sand can block drainage systems/culverts. If the stormwater system is overwhelmed, this could increase the likelihood or severity of flooding (Tuler 2016, Major et al. 2011).

According to ICLEI (2012), storm sewers around the San Diego Bay are highly vulnerable to flooding and inundation due to sea-level rise. Sea-level rise could exacerbate the flooding impacts of extreme precipitation. As sea levels rise, storm drain outfalls are inundated and unable to handle precipitation events (Tuler 2016). Due to impeded drainage, higher sea levels may exacerbate riverine flooding as well (Ascent Environmental Inc. 2017).

Solid Waste Management

Higher temperatures could have impacts on waste collection, processing, and disposal. Decomposition rates, odor, and pest activity may increase under higher temperatures, which could necessitate more frequent waste collection (USAID 2012). Also, higher temperatures could overheat collection vehicles or processing equipment (USAID 2012).

Extreme precipitation events could cause flooding along collection routes, access roads, and facilities (USAID 2012). Sea-level rise may narrow collection routes, damage low-lying processing facilities, and lead to material damage of coastal solid waste management facilities (USAID 2012). Flooding and erosion exacerbated by climate change may present other physical risks to facilities and equipment of the utility. Erosion could wash away soils that support or cover infrastructure (ICLEI 2012), although this risk has not been quantified in the San Diego region.

Energy Facilities

Climate change could contribute to the need for new or expanded energy facilities, although there is insufficient research to draw definitive conclusions about the extent to which climate change would do so. Climate change could contribute to this impact via the following ways:

- The projected increase in demand due to climate change (discussed above) could necessitate the building or expansion of additional generation facilities.
- Additional transmission capacity might be needed, not only due to additional load needing to be transmitted, but also because higher temperatures reduce the carrying capacity of the transmission lines—which in turn may lead to greater generation needs. According to Bartos et al. (2016), by mid-century (2040–2060) in the United States, increases in air temperature may reduce transmission capacity in the summer by 1.9–5.8 percent relative to the 1990–2010 base period. Simultaneously, peak summer loads may rise by 4.2–15.0 percent on average due to higher temperatures (Bartos et al. 2016).
- Higher temperatures can decrease generation capacity of natural gas-fired power plants, while increasing energy demand. Under a high emission scenario, generation capacity may decrease by 3–6 percent in

California and reduce transformer and substation capability by 2–4 percent (Sathaye et al. 2012). A decrease in generation capacity may necessitate the expansion/building of additional facilities.

- According to the County of San Diego’s Climate Action Plan (2018), wildfire can damage electrical infrastructure, including severing transmission lines when fire comes in direct contact with the lines and affecting transmission capacity due to heat and smoke. Key transmission corridors are vulnerable to more frequent wildfires.
- Sea-level rise and increased storm frequency and/or intensity could affect coastal power plants, leading to flooding of some facilities. Additionally, offshore water intake pipes may be damaged by storm surge and debris (Perez 2009).

4.15.2 REGULATORY SETTING

FEDERAL LAWS, REGULATIONS, PLANS, AND POLICIES

Clean Water Act

The Clean Water Act (CWA) as it is known today was established in 1972 and is the basis for regulation of the discharge of pollution into the waters of the U.S. and regulation of surface water quality standards (33 USC 1251 et seq.). States are required to adopt water quality standards for all surface waters of the U.S., as detailed in Section 303. Section 402 of the CWA establishes the National Pollutant Discharge Elimination System (NPDES), which regulates the discharge of pollutants from point sources. Municipal point sources consist primarily of domestic treated sewage and processed water, including municipal sewage treatment plant outfalls and stormwater conveyance system outfalls. These outfalls contain pollutants that are emitted directly into waters of the U.S. Without a permit, the discharge of pollutants from point sources into navigable waters of the U.S. is prohibited. NPDES permits require regular water quality monitoring. For a detailed discussion of the CWA see Section 4.10.2. Stormwater and wastewater discharges must meet water quality standards that are established pursuant to the CWA.

Resource Conservation and Recovery Act of 1976

Subtitle C of the Resource Conservation and Recovery Act (RCRA) (42 USC 6901 et seq.) gives the U.S. Environmental Protection Agency (EPA) the authority to control hazardous waste from the "cradle-to-grave," and was designed to protect human health and the environment, reduce/eliminate the generation of hazardous waste, and conserve energy and natural resources; to reduce the amount of waste generated; and to ensure that wastes are managed in an environmentally sound manner. RCRA regulates the management of solid waste (e.g., garbage), hazardous waste, and underground storage tanks holding petroleum products or certain chemicals. Solid waste, as defined by RCRA, includes both hazardous and nonhazardous materials. RCRA establishes a framework for the management of nonhazardous waste in Subtitle D. Nonhazardous solid waste includes household garbage, sludge from waste treatment plants, construction debris, and various types of nonhazardous industrial waste. Subtitle D states the requirements for solid waste planning and encourages recycling and recovery programs that most directly affect state and regional solid waste management authorities. EPA also developed federal criteria for the proper design and operation of municipal solid waste landfills and other solid waste disposal facilities. EPA approved the State of California’s program, a joint effort of the California Integrated Waste Management Board, SWRCB, RWQCBs, and LEAs, on October 7, 1993.

Department of Transportation Act Section 4f

Passed in 1966, the Department of Transportation Act includes Section 4(f), which states that the Federal Highway Administration and other Department of Transportation agencies cannot approve the use of land from public state parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless certain conditions apply. These exceptions are as follows: if there is no feasible and prudent avoidance alternative to the use of land, and if the action includes all possible planning to minimize harm to the property resulting from such use; or if the Administration determines that the use of the property will have a de minimis impact (49 USC 303).

National Energy Act of 1978

The National Energy Act of 1978 included the Public Utility Regulatory Policies Act (Public Law 95-617), Energy Tax Act (Public Law 95-318), National Energy Conservation Policy Act (Public Law 95-619), Power Plant and Industrial Fuel Use Act (Public Law 95-620), and the Natural Gas Policy Act (Public Law 95-621).

The intent of the National Energy Act was to promote greater use of renewable energy, provide residential consumers with energy conservation audits to encourage slower growth of electricity demand, and promote fuel efficiency. The Public Utility Regulatory Policies Act created a market for nonutility electric power producers to permit independent power producers to connect to their lines and to pay for the electricity that was delivered.

The Energy Tax Act promoted fuel efficiency and renewable energy through taxes and tax credits. The National Energy Conservation Policy Act required utilities to provide residential consumers with energy conservation audits and other services to encourage slower growth of electricity demand.

Energy Policy Act of 2005

This comprehensive energy legislation, signed in August 2005, contains several electricity-related provisions that aim to, among other things, to help ensure that consumers receive electricity over dependable, modern infrastructure, removes outdated obstacles to investment in electricity transmission lines, makes electricity reliability standards mandatory instead of optional, and gives federal officials the authority to site new power lines in DOE-designated national corridors in certain limited circumstances.

Telecommunications Act of 1996

The Telecommunications Act (47 USC Chapter 5) was the first major overhaul of telecommunications law in almost 62 years. The Act deregulates local phone service and allows long-distance carriers and cable television companies to provide local phone service and local telephone companies to provide long distance service. Section 706 of the Act requires that the FCC determine annually whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion, and assesses the impact of the FCC's policies on broadband deployment.

STATE LAWS, REGULATIONS, PLANS, AND POLICIES

California Mutual Aid Plan

The California Governor's Office of Emergency Services' (CAL OES) Mutual Aid Plan establishes policies, procedures, and responsibilities for requesting and providing inter- and intra-agency assistance in

emergencies. The plan directs local agencies to develop automatic or mutual aid agreements, or to enter into agreements for assistance by hire (e.g., Schedule A contracts) where local needs are not met by the framework established by the Mutual Aid Plan (Cal OES 2019).

Assembly Bill 16

Assembly Bill (AB) 16 was passed in 2002 and created the Critically Overcrowded School Facilities program to supplement the construction provisions within the School Facilities Program (SFP). The SFP provides State funding assistance for new construction and modernization of facilities. The Critically Overcrowded School Facilities program allows school districts that have been determined by the California Department of Education to have critically overcrowded facilities to apply for new construction projects without meeting all SFP program requirements. Districts with SFP new construction eligibility and school sites included on a California Department of Education list of source schools may apply (Chapter 33, Statutes of 2002).

Senate Bill 50 – Leroy F Greene Schools Facilities Act of 1998

Senate Bill (SB) 50, or the Leroy F. Greene School Facilities Act of 1998, restricts the ability of local agencies to deny project approvals on the basis that public school facilities (classrooms, auditoriums, etc.) are inadequate. School impact fees are collected at the time when building permits are issued. Payment of school fees are also collected at the time when building permits are issued. Payment of school fees is required by SB 50 for all new residential development projects and is considered “full and complete mitigation” of any school impacts. School impact fees are payments to offset capital cost impacts associated with new developments, which result primarily from costs of additional facilities, related furnishings and equipment, and projected capital maintenance requirements. As such, agencies cannot require additional mitigation for any school impacts (Chapter 407, Statutes of 1998).

Senate Bill 1389, Chapter 568, Statutes of 2002

The CEC is responsible for, among other things, forecasting future energy needs for the state and developing renewable energy resources and alternative renewable energy technologies for buildings, industry, and transportation. Senate Bill (SB) 1389 (Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report assessing major energy trends and issues facing the state’s electricity, natural gas, and transportation fuel sectors. The report also provides policy recommendations to conserve resources, protect the environment, and ensure reliable, secure, and diverse energy supplies. The 2019 Integrated Energy Policy Report was adopted in February 2020. Energy topics covered in the report include decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast (CEC 2020). The 2020 draft Integrated Energy Policy Report Update was released in January 2021.

California Building Standards Code (Title 24, CCR)

Building Standards Code Title 24 applies to all buildings throughout the State of California and includes requirements for structural, mechanical, electrical, and plumbing systems, and requires measures for energy conservation, green design, construction and maintenance, and fire and life safety and accessibility (24 CCR). Cities and counties are required by State law to enforce Title 24; however, they can adopt more restrictive ordinances.

California Rules for Overhead Electrical Line Construction

These rules prescribed by the Public Utilities Commission of the State of California under General Order No. 95 sets requirements for overhead line design, construction, and maintenance. Rules were last updated in January 2015.

California Government Code 4216 through 4216.9, Protection of Underground Infrastructure

California Government Code 4216 through 4216.9 requires an excavator to notify appropriate known operators of subsurface installations within the delineated boundaries of a proposed area of excavation, as provided.

Quimby Act and AB 1359

Cities and counties have been authorized since the passage of the 1975 Quimby Act (Government Code Section 66477) to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities. The dedicated land or fees may only be used for the development or rehabilitation of neighborhood or community parks or recreational facilities in the subdivision they were provided for, according to AB 1359 (Chapter 412, Statutes of 2013), unless certain requirements are met and an exception is made. The goal of the Quimby Act is to require developers to help mitigate the impacts of property improvements. The act gives authority for passage of land dedication ordinances only to cities and counties. Special districts must work with cities and/or counties to receive parkland dedication and/or in-lieu fees. The fees must be paid and land conveyed directly to the local public agencies that provide park and recreation services communitywide.

California Coastal Act, Coastal Recreation Policies

California Coastal Act policies related to coastal recreation include Public Resources Code Section 30210, which requires that maximum access and recreational opportunities shall be provided for all people, and Section 30213, which protects lower cost visitor and recreational facilities, and encourages the provision of public recreational opportunities.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Water Code, Division 7) was instated to regulate activities and factors that may affect the quality of the waters of the State of California, to protect the health, safety, and welfare of the people. It charges the State with the act of protecting the waters from degradation and established nine RWQCBs throughout the state. The Act declares that the SWRCB and each RWQCB will have the primary responsibility for water quality control. Each RWQCB is in charge of updating their water quality control plans, known as Basin Plans. They also regulate pollutant or nuisance discharges that may affect surface or groundwater. Stormwater and wastewater discharges must meet water quality standards that are established in Basin Plans.

State Water Resources Control Board

The SWRCB issues individual and general NPDES permits for wastewater and stormwater through authorization of the EPA. Discharges that may impact surface or groundwater, and which are not regulated by an NPDES permit, are issued a waste discharge requirement (WDR) that serves as a permit under the authority

of the California Water Code. The RWQCBs issue Land Disposal WDRs that permit certain solid and liquid waste discharges to land to ensure that wastes do not reach surface water or groundwater. Land Disposal WDRs contain requirements for liners, covers, monitoring, cleanup, and closure. The RWQCBs also permit certain point source discharges of waste to land that have the potential to affect surface or groundwater quality. This category of discharges, known as “Non-15” WDR, is the most diverse and includes sewage sludge and biosolids, industrial wastewater from power plants, wastes from water supply treatment plants, treated wastewater for aquifer storage and recovery, treated groundwater from cleanup sites, and many others.

Related to wastewater collection and treatment facilities, stormwater drainage facilities, and landfills, the SWRCB has issued the following orders:

- California Department of Transportation (Caltrans) NPDES Permit (Order 99-06-DWQ): Requires Caltrans to regulate nonpoint source discharge from its properties, facilities, and activities. Among other requirements, Caltrans must annually update an enforceable Stormwater Management Plan (SWMP). See Section 4.10, for more detail.
- Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Order No. 2006-0003-DWQ): Requires all federal and State agencies, municipalities, counties, districts, and other public entities that own, operate, or are otherwise responsible for sanitary sewer systems greater than 1 mile in length that collect and/or convey untreated wastewater to a publicly owned treatment facility in California to prepare sewer system management plans and report all sanitary sewer overflows (SSOs) to the SWRCB. Order No. WQ 2008-0002-EXEC, amended the statewide Monitoring and Reporting Program for SSOs that reach surface waters or storm drains. The RWQCB issued Order No. R9-2007-0005 to reaffirm the prohibition of SSOs upstream of a wastewater treatment facility.

Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems (OWTS) (Title 23, CCR)

AB 885 (Chapter 781, Statutes of 2000) required that the SWRCB, along with other interested parties, adopt specified regulations or standards for the permitting and operation of prescribed onsite wastewater treatment systems (OWTS). Each RWQCB must incorporate the new standards and regulations into their regional water quality control plans. Resolution R9-2015-0008, adopted in April 2015, incorporated the OWTS policy into the San Diego Water Quality Control Plan, and Resolution No. 2018-0019 amended the Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems (the “OWTS Policy”) in CCR Title 23 (SWRCB 2018). Onsite wastewater treatment systems allow habitation in locations that are far from central wastewater treatment plants, such as areas of the unincorporated County. OWTS can help to reduce the strain on municipal wastewater facilities and reduce the need for construction of new facilities in these remote areas. The OWTS policy helps to reduce an OWTS’ impact on the environment where they are used.

San Diego Regional Municipal Storm Water Permit

An MS4 is defined as a conveyance or system of conveyances (e.g., municipal streets, catch basins, gutters, storm drains, etc.) used for collecting or conveying stormwater that is not a combined sewer or connected to a publicly owned treatment network. The San Diego Municipal Storm Water Permit (Order R9-2013-0001) (as amended by Order No. R9-2015-0001 and R9-2015-0100) (Municipal Permit) regulates the conditions under which stormwater and non-stormwater discharges into and from MS4s are prohibited or limited (RWQCB 2018). The 18 cities, County government, San Diego County Regional Airport Authority, San Diego Unified Port District, Del Mar Fairgrounds, and the University of California, San Diego each owns or operates an MS4, through which it

discharges stormwater and non-stormwater into waters of the U.S. within the San Diego region. These entities are the San Diego County Copermittees (Copermittees) who, along with the Orange County Copermittees, are subject to the requirements of the permit. The Caltrans stormwater system is regulated separately under the Caltrans NPDES permit, as described below.

This permit requires each of the Copermittees to prepare a Jurisdictional Urban Runoff Management Program (JURMP) to control the contribution of pollutants to and the discharges from the MS4. Each of these JURMPs includes a component addressing construction activities, development planning, and existing development. In accordance with the provisions of the Municipal Permit, the County of San Diego developed the County of San Diego BMP Design Manual (County of San Diego 2018b). The County's BMP Design Manual establishes a series of source control, site design, and treatment control best management practices (BMPs) that are to be implemented by all Priority Development Projects (PDPs). PDPs include new development; redevelopment projects that create, add, or replace 5,000 square feet; and pollutant generating projects. Each jurisdiction within San Diego County (i.e., the Copermittees of the Municipal Permit) has adopted their own stormwater standards.

San Diego Regional Water Quality Control Board Basin Plan

The Water Quality Control Plan for the San Diego Basin, also known as the Basin Plan, establishes water quality objectives and implementation strategies to protect the beneficial uses of water bodies in the San Diego region, and describes monitoring plans to assess its effectiveness (RWQCB 2016). Beneficial uses are defined as “the uses of water necessary for the survival and well-being of man, plants, and wildlife,” and promote the economic, social, and environmental goals of mankind. Policies in the Basin Plan define treatment levels of water that must be met by regional wastewater facilities.

Integrated Waste Management Act of 1989 (AB 939)

AB 939 (Chapter 1095, Statutes of 1989) requires each city and county in California to develop Integrated Waste Management Plans (IWMPs) to divert 25 percent of its waste stream by 1995, and 50 percent by 2000, with the base year set as 1990. The passage of SB 1016 changed the way that waste disposal is measured. As of 2007, the diversion requirement is only measured in pounds per person per day (CalRecycle 2018d). The goal of AB 939 is to reduce dependence on landfills for waste disposal. The Act established a hierarchy of priority for waste management: (1) source reduction (waste prevention), to reduce the amount of waste generated at its source; (2) recycling (or reuse) and composting; (3) transformation; and (4) disposal by landfilling. See below for a discussion of the IWMP for the San Diego Region.

AB 341

Legislation enacted in 2011 (AB 341, Chesbro, Chapter 476, Public Resources Code Section 42926(a)) changed the due date of the State agency waste management annual report to May 1 beginning in 2012. The bill makes a legislative declaration that it is the policy goal of the State of California that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020. AB 341 also requires the provision of recycling service to commercial facilities that generate 4 cubic yards or more of solid waste per week, and to multifamily facilities with five or more units.

AB 1826

AB 1826 Chesbro (Chapter 727, Statutes of 2014), requires businesses, including State agencies, to recycle their organic waste on and after April 1, 2016, depending on the amount of organic waste they generate per week.

Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. For businesses that generate 8 or more cubic yards of organic waste per week, this requirement began on April 1, 2016, while those that generate 4 cubic yards of organic waste per week must have had an organic waste recycling program in place beginning January 1, 2017. The requirement becomes more stringent in following years. Multifamily properties are regulated, but are only required to divert green waste and non-hazardous wood waste. This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including certain multifamily residential dwellings, as described above, starting on January 1, 2016. In September 2020, CalRecycle extended the organic waste recycling requirements to businesses that generate 2 cubic yards or more of commercial solid waste (total trash, recyclables, and organics) per week.

AB 2396

As of January 1, 2017, pursuant to AB 2396 (McCarty, Chapter 466, Statutes of 2016), each State agency is required to include in its existing annual report to CalRecycle specified information on the State agency's compliance with mandatory commercial recycling requirements, pursuant to AB 341, and mandatory commercial organics recycling requirements, pursuant to AB 1826.

AB 2812

Effective July 1, 2018, State agencies must provide adequate recycling and organics recycling containers to collect waste generated. Containers should be placed adjacent to trash containers and be visible, easily accessible, and clearly marked.

CalRecycle Regulations

CalRecycle regulations pertaining to nonhazardous waste management in California include minimum standards for solid waste handling and disposal; regulatory requirements for composting operations; standards for handling and disposal of asbestos-containing waste; resource conservation programs; enforcement of solid waste standards and administration of solid waste facility permits; permitting of waste tire facilities and waste tire hauler registration; special waste standards; used oil recycling program; electronic waste recovery and recycling; planning guidelines and procedures for preparing, revising, and amending countywide IWMPs; and solid waste cleanup program (14 CCR Division 7).

CALGreen Construction Waste Diversion

The California Green Building Standards Code (CALGreen) mandates locally permitted new residential and non-residential building construction, demolition and certain additions and alteration projects to recycle and/or salvage for reuse a minimum 65 percent of the nonhazardous construction and demolition waste or meet a local C&D waste management ordinance, whichever is more stringent.

Caltrans Highway Design Manual

The Caltrans Highway Design Manual was developed to be a set of policies and procedures to carry out the highway design functions of Caltrans. While this manual does not instate a legal standard, it does provide guidance and uniform standards related to design and construction of Caltrans facilities. These standards include consideration of runoff and controlling it through hydraulic design of drainage features (Caltrans 2018).

REGIONAL AND LOCAL LAWS, REGULATIONS, PLANS, AND POLICIES

County of San Diego Fire Protection Ordinance No. 10172

This ordinance ratified the 2011 Consolidated Fire Code for the 16 FPDs in the unincorporated County. Each FPD can modify the code based on specific needs for their jurisdiction. The County Fire Code applies to both ministerial and discretionary projects and both new and repair projects. The County Fire Code is amended every 3 years in conjunction with the revised California Building Standards Code.

Wastewater Agency Management Plans

The municipalities and water districts with the responsibility for wastewater/sewer services have a variety of management plans for these utilities.

The County of San Diego developed a Sewer System Management Plan (SSMP) to document management of their wastewater collection system (County of San Diego 2015). The SSMP provides a summary of the action plan implemented to comply with the sanitary sewer system requirements imposed by the WDRs and other governing agencies. It includes a description of the activities and procedures that personnel follow to implement the various programs encompassed in the overall efforts to efficiently manage, operate, and maintain the sanitary sewer system and facilitate the reduction and potential elimination of SSOs. The goals of the SSMP include the following:

- Minimizing the frequency and impact of SSOs.
- Effectively and efficiently mitigating the impacts of SSOs should they occur.
- Providing adequate sewer capacity to convey peak flows.
- Maintaining and improving the condition of the collection system infrastructure to provide continual reliable service.
- Engaging and educating the public regarding programs and issues related to the wastewater collection system.

San Diego Integrated Waste Management Plan

The County of San Diego prepares the IWMP for the San Diego region. The IWMP includes the following elements: Source Reduction and Recycling, Household Hazardous Waste, Non-Disposal Facility, and Countywide Siting. The Countywide Siting Element must demonstrate at least 15 years of remaining disposal capacity. It includes various strategies to demonstrate the remaining capacity, such as existing, proposed, and tentative landfills or landfill expansions; increased diversion efforts; and the export of solid waste disposal. In the San Diego region, the Countywide Siting Element must be updated every 5 years, and must be adopted by the County Board of Supervisors and a majority of the cities within San Diego County. A 5-year review of the Countywide IWMP was completed in 2018, which determined that updates to the Countywide Summary Plan or the Countywide Siting Element planning documents were not warranted (County of San Diego 2018a). Under the law SANDAG is designated as the region's Integrated Waste Management Local Task Force responsible for advising and assisting the cities and County with certain aspects of compliance with AB 939.

Solid Waste Reduction Plans

A number of jurisdictions within the San Diego region have developed solid waste reduction plans that designate waste reduction targets. For example, the City of San Diego Environmental Services Department has developed a zero waste plan for the City of San Diego that is designed to divert waste from landfill disposal. The plan calls for 75 percent diversion by 2020 and 90 percent diversion by 2035, and for zero waste to be disposed of in landfills by 2040 (City of San Diego 2015b). One of the goals of the plan is to promote local policies and ordinances as well as legislation at the State level that encourages manufacturers, consumers, and waste producers to be responsible for waste. The County of San Diego developed a Strategic Plan to Reduce Waste (County of San Diego 2017), that calls for 75 percent diversion by 2020. The County is in the process of updating its Solid Waste Ordinance in response to the State's updated waste diversion goals, such as the AB 1826 regulations. Other jurisdictions, such as the City of Encinitas, have incorporated goals to develop waste reduction strategies into climate action plans (City of Encinitas 2020). In response to CALGreen C&D Diversion mandates, local jurisdictions have also adopted C&D ordinances.

County and City General Plans

The County and cities' General Plans establish policies for a number of topics relevant to public services and utilities, including fire prevention, law enforcement, schools, libraries, parks and recreational facilities, solid waste, stormwater and sewer infrastructure. General Plan policies related to public services and utilities include implementation of funding and management strategies for public infrastructure projects, and planning policies to identify demand for new facilities and their design and construction. Policies related to police and fire-rescue can include identification of response times or other staffing goals, and characterization of standards for facilities and equipment. Beyond its General Plan, the County has developed a Parks Master Plan and Community Trails Master Plan and implements its Parkland Dedication Ordinance to plan for and fund park and recreation expansions in conjunction with population growth. Other jurisdictions in the County have also conducted master planning to identify future park and recreation needs and expansion opportunities. In 2017, the California Governor's Office of Planning and Research completed the first comprehensive update to the General Plan Guidelines since 2003. One of the major changes includes an expanded section addressing the need for additional recycling, anaerobic digestion, composting, and remanufacturing facilities in the land use element of general plans.

4.15.3 SIGNIFICANCE CRITERIA

Appendix G of the CEQA Guidelines provides criteria for determining the significance of a project's environmental impacts in the form of Initial Study checklist questions. Unless otherwise noted, the significance criteria specifically developed for this EIR are based on the checklist questions that address the criteria in Appendix G. In some cases, SANDAG has combined checklist questions, edited their wording, or changed their location in the document in an effort to develop significance criteria that reflect the programmatic level of analysis in this EIR and the unique characteristics of the proposed Plan.

Checklist questions for public services and utilities are included in three sections of the CEQA Guidelines Appendix G checklist: Public Services (XIV), Recreation (VXI), and Utilities and Service Systems (XIX). For purposes of this EIR, the Appendix G questions have been combined and modified. Specifically, Appendix G Section XIV, Public Services, question (a), and Section XVI, Recreation, question (b) have been combined into PS-1. Section XVI, Recreation, question (a) is included as REC-1. Section XIX, Utilities and Service Systems, questions (a) and (c) are combined in U-1. Section XIX, Utilities and Service Systems, questions (d) and (e) are combined in U-2. Section XIX, Utilities and Service Systems, question (b) is included in Section 4.18.

Implementation of the proposed Plan would have a significant public services and utilities impact if it would:

- PS-1** Result in substantial adverse physical impacts associated with the provision of or need for new or physically altered (i.e., expanded) public facilities, in order to maintain adequate fire and police protection, emergency services, schools, libraries, and recreation facilities.
- REC-1** Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
- U-1** Result in the expansion, relocation, or construction of wastewater collection and treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities to adequately meet projected capacity needs, the construction of which could cause significant environmental impacts.
- U-2** Generate solid waste in excess of state or local standards or in excess of the capacity of local infrastructure; negatively impact the provision of solid waste services or impair the attainment of solid waste reduction goals; or fail to comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

4.15.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

- PS-1** **RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF OR NEED FOR NEW OR PHYSICALLY ALTERED (I.E., EXPANDED) PUBLIC FACILITIES, IN ORDER TO MAINTAIN ADEQUATE FIRE AND POLICE PROTECTION, EMERGENCY SERVICES, SCHOOLS, LIBRARIES, AND RECREATION FACILITIES**

ANALYSIS METHODOLOGY

This section analyzes impacts associated with the provision of or need for new or physically altered public facilities in order to maintain adequate public services under the proposed Plan. A significant impact would occur if forecasted regional growth and land use change or planned transportation network improvements required construction or expansion of facilities to maintain adequate levels of service for fire and police protection, emergency services, schools, libraries, and recreation facilities, that would result in adverse physical impacts. Impacts of construction activities for new or expanded facilities are analyzed as well. Additional information about impacts on fire protection related to wildfire is included in Section 4.19, *Wildfire*.

IMPACT ANALYSIS

2025

Regional Growth and Land Use Change

From 2016 to 2025, regional growth is forecasted to result in an increase of 161,338 people (5 percent), 97,661 housing units (8 percent), and 115,328 jobs (7 percent). The 2025 regional land use pattern is shown in Figure 2-17. Approximately 78.8 percent of the 2025 population growth would occur within the City of San Diego (57.9 percent), City of Chula Vista (12 percent), and City of Escondido (8.8 percent). Collectively, these three jurisdictions would accommodate approximately 78 percent of new housing units and 63 percent of new jobs, respectively, by 2025. In these cities, higher levels of public services would be needed, while demand for public services would increase throughout the region in response to forecasted growth and increased risk from wildfires, as discussed in Section 4.19. As discussed in Chapter 2, *Project Description*, the SCS land use pattern concentrates development into either Mobility Hub or Smart Growth Opportunity Areas.

To meet increased demand for public services due to forecasted regional growth, additional fire and police personnel, equipment, and facilities would likely be needed to maintain adequate response times and service ratios to protect the health and safety of people and to protect property in areas of new growth and increased density. In areas of new growth, new facilities such as police and fire stations would be needed to protect the new infrastructure and population, while the increased population in developed areas would require both new facilities and physical expansion of existing facilities. Where growth occurs outside of existing service areas, response times to those areas would be longer and would be out of compliance with service standards unless new or expanded facilities are constructed.

Based on forecasted population and housing unit growth by 2025, schools, libraries, and recreational facilities would also experience facility deficiencies and would require new or expanded facilities to maintain current levels of service as population increases. As the population grows, use of these facilities would increase. Schools and libraries would become overcrowded, and recreation areas would become overused and degraded if no new or expanded facilities are constructed. The need for these facilities would be concentrated in residential areas, because demand for these public services is driven by population growth, while demand for fire and police protection facilities and emergency services is created by both residential and non-residential land use types.

Throughout the San Diego region, the construction of new public facilities or expansion of existing public facilities would likely be needed to maintain existing (2016) service levels for fire protection, police protection, emergency services, schools, libraries, and recreational facilities in the year 2025. Individual service providers are responsible for identifying service deficiencies based upon their adopted performance measures or services standards for determining the adequacy of existing public services, and deciding when and where to expand existing facilities or provide new facilities. Payment of school fees, as required by SB 50, for all new residential projects would fully mitigate school impacts for a portion of the population and housing growth projected in 2025. Other public facilities or expansions are funded through Facilities Benefit Assessment fees, Development Impact Fees, Mello Roos fees and other public funding mechanisms assessed at the time development projects are approved.

The provision of new facilities or expansion of existing governmental facilities would result in short-term construction-related impacts and long-term operational impacts, for such resource areas as air quality, noise, and traffic, among others. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessened by mitigation measures adopted by the implementing agency, including adherence to existing regulations and BMPs. Because details are not known about timing, location, and other project-specific information for new or expanded facilities, it cannot be guaranteed that impacts from the construction and operation of new or physically altered governmental facilities would be less than significant for all projects. Therefore, regional growth and land use change would cause a significant impact.

Transportation Network Improvements and Programs

New transportation network improvements and programs, such as additions to existing highways, rail corridors, or local roads located in established communities, would generally require little to no increase in police and fire protection and emergency services, and would not cause deterioration of the facilities that provide police, fire, and emergency services compared to existing (2016) conditions. Construction of network improvements would maintain emergency access to construction work sites, and nearby businesses, schools, hospitals, and medical facilities near construction site. All construction activities, including roadway closures, would be coordinated with police and fire protection, and emergency services to prevent service delays or disruptions. The operation of the transportation network improvements and programs would not increase use

of fire, emergency, and police services due to increased accidents, injuries, and collisions, because improvements would be required to conform to the design standards of the public agency responsible for implementation in order to minimize hazardous conflicts and conditions that could contribute to collisions and other safety hazards, as discussed in additional detail in Section 4.16, *Transportation*. Transit service expansions would introduce new facilities, such as stations and park and ride facilities, which would require police, fire, and emergency service protection; however, the proposed Plan would not significantly affect response times or exceed the capacity of the local service providers. Therefore, the need for fire, emergency, and police services and facilities would not substantially increase as a result of planned transportation network improvements and programs.

As a result, the construction and operation of transportation network improvements would require minor or no use of public services or facilities, except for transportation network improvements at Mobility Hubs where stations would be constructed and linked with active transportation improvements and a concentration of flexible transportation services due to incentivized transportation infrastructure. Demand for public services and facilities is typically driven by new population, housing, and job growth as described above, and not by transportation network improvements or programs. Therefore, the construction and operation of transportation improvements and programs would not increase demand for schools, libraries, and recreational facilities such that new or physically altered facilities would be required in order to maintain adequate facilities or levels of service.

Based upon the current level and pattern of fire, emergency, and police protection within the region transportation network improvements and programs identified in the proposed Plan would not create demand for additional increases of police and fire protection and emergency services beyond the demand for such services created by regional growth, and would not create the need for new or expanded school, library, or recreational facilities. Therefore, transportation network improvements and programs would have a less-than-significant impact.

2025 Conclusion

Implementation of regional growth and land use changes, but not transportation network improvements and programs, would result in substantial adverse physical impacts associated with the substantial physical deterioration of existing facilities and the construction of new or expanded public facilities. Therefore, this impact (PS-1) in the year 2025 is significant.

2035

Regional Growth and Land Use Change

From 2026 to 2035, regional growth is forecasted to result in an increase of 149,500 people (4.3 percent), 121,650 housing units (9.4 percent), and 159,728 jobs (9 percent). The 2035 regional land use pattern is shown in Figure 2-18. Approximately 78 percent of the 2035 population growth would occur in the City of San Diego (70.9 percent) and City of National City (7.3 percent). These two jurisdictions would account for approximately 73 percent of new housing units and 60 percent of new jobs, respectively, by 2035. In these cities, higher levels of public services would be needed, while demand for public services would increase throughout the region in response to forecasted growth and increased risk from wildfires, as discussed in Section 4.19.

While some areas would experience a higher percent increase than others, there would be additional demand for public services throughout the region. In areas of new growth, new facilities such as police and fire stations

would be needed to protect the new infrastructure and population, while the increased population in developed areas would require both new facilities and physical expansion of existing facilities. Where growth occurs outside of existing service areas, response times to those areas would be longer and would be out of compliance with service standards unless new or expanded facilities are constructed.

The provision of new facilities or expansion of existing governmental facilities would result in short-term construction-related impacts and long-term operational impacts, for such resource areas as air quality, noise, and traffic, among others. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessened by mitigation measures adopted by the implementing agency, including adherence to existing regulations and BMPs. Because details are not known about timing, location, and other project-specific information for new or expanded facilities, it cannot be guaranteed that impacts from the construction and operation of new or physically altered governmental facilities would be less than significant for all projects. Therefore, regional growth and land use change would cause a significant impact.

Transportation Network Improvements and Programs

Between 2026 and 2035, additional transportation network improvements and programs are proposed in areas throughout the region that are currently served by different public service providers. However, as described in the 2025 analysis, none of the proposed transportation network improvements and programs would create new demand for public services beyond the level of demand created by new regional growth that would result in substantial physical deterioration of existing facilities or require new or physically altered governmental facilities. Mobility Hubs improvements, particularly at the Central Mobility Hub and San Ysidro Mobility Hub, are not anticipated to create new demand for public services and facilities because that demand is typically driven by new population, housing, and job growth as described above, and not by transportation network improvements or programs. Therefore, transportation network improvements and programs would have a less-than-significant impact.

2035 Conclusion

Implementation of regional growth and land use changes, but not transportation network improvements and programs, would result in substantial adverse physical impacts associated with the substantial physical deterioration of existing facilities and the construction of new or expanded public facilities. Therefore, this impact (PS-1) in the year 2035 is significant.

2050

Regional Growth and Land Use Change

From 2036 to 2050, regional growth is forecasted to result in an increase of 125,725 people (3.4 percent), 61,433 housing units (4.3 percent), and 164,843 jobs (8.5 percent). The 2035 regional land use pattern is shown in Figure 2-19. Approximately 78 percent of the 2035 population would occur in the City of San Diego (37 percent), City of Chula Vista (28 percent), and City of San Marcos (13 percent). Collectively, these three jurisdictions would accommodate approximately 89 percent of new housing units and 72 percent of new jobs, respectively, by 2050. In these cities, higher levels of public services would be needed, while demand for public services would increase throughout the region in response to forecasted growth and increased risk from wildfires, as discussed in Section 4.19.

While some areas would experience a higher percent increase than others, there would be additional demand for public services throughout the region. In areas of new growth, new facilities such as police and fire stations

would be needed to protect the new infrastructure and population, while the increased population in developed areas would require both new facilities and physical expansion of existing facilities. Where growth occurs outside of existing service areas, response times to those areas would be longer and would be out of compliance with service standards unless new or expanded facilities are constructed.

The provision of new facilities or expansion of existing governmental facilities would result in short-term construction-related impacts and long-term operational impacts on such resource areas as air quality, noise, and traffic, among others. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessened by mitigation measures adopted by the implementing agency, including adherence to existing regulations and BMPs. Because details are not known about timing, location, and other project-specific information for new or expanded facilities, it cannot be guaranteed that impacts from the construction and operation of new or physically altered governmental facilities would be less than significant for all projects. Therefore, regional growth and land use change would cause a significant impact.

Transportation Network Improvements and Programs

Between 2036 and 2050, additional transportation network improvements and programs are proposed in areas throughout the region that are currently served by different public service providers. However, as is true in the 2025 and 2035 analyses, none of the proposed transportation network improvements and programs would create new demand for public services beyond the level of demand created by new regional growth that would result in substantial physical deterioration of existing facilities or require new or physically altered governmental facilities. Mobility Hubs improvements are not anticipated to create new demand for public services and facilities since that demand is typically driven by new population, housing, and job growth as described above, and not by transportation network improvements or programs. Therefore, transportation network improvements and programs would have a less-than-significant impact.

2050 Conclusion

Implementation of regional growth and land use change, but not transportation network improvements and programs, would result in substantial adverse physical impacts associated with the substantial physical deterioration of existing facilities and the construction of new or expanded public facilities. Therefore, this impact (PS-1) in the year 2050 is significant.

Exacerbation of Climate Change Effects

The proposed Plan could potentially exacerbate climate change effects on the need for new or physically altered public facilities. Climate change is expected to increase the risk of several hazards, such as extreme heat, wildfire, and flooding, all of which pose a threat to human health and safety or to structures. Increased incidence of these risks due to climate change may strain current capacity of fire and police protection, emergency services, and recreation facilities (such as cooling centers) and thus eventually spur development of new facilities to meet demand for public services (Kalansky et al. 2018). The proposed Plan is also expected to result in substantial adverse physical impacts to existing facilities that may necessitate construction of new or expanded facilities; this could contribute to impacts on existing facilities the region is already expected to see under climate change. However, it is uncertain to what degree climate change could spur development of new facilities, because it depends on decision-making surrounding implementation of climate adaptation measures; public services providers may not decide to construct additional public service facilities in reaction to increased climate change hazards.

MITIGATION MEASURES

PS-1 RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF OR NEED FOR NEW OR PHYSICALLY ALTERED (I.E., EXPANDED) PUBLIC FACILITIES, IN ORDER TO MAINTAIN ADEQUATE FIRE AND POLICE PROTECTION, EMERGENCY SERVICES, SCHOOLS, LIBRARIES, AND RECREATION FACILITIES

2025, 2035, and 2050

PS-1 Implement Mitigation Measures for New/Expanded Public Service Facilities. During planning, design, and project-level CEQA review of development of public facilities projects, the County of San Diego, cities, and other public service providers can and should implement mitigation measures to avoid or reduce significant environmental impacts associated with the construction of new or expanded public facilities. Mitigation measures should be implemented by public service providers directly responsible for the construction or expansion activities. Significant environmental impacts requiring mitigation may include, but are not limited to, agricultural resources, air quality, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality, noise, paleontological resources, transportation, tribal cultural resources, and water supply. Mitigation measures may be similar to those described in this EIR for construction of development projects and transportation network improvements.

SIGNIFICANCE AFTER MITIGATION

2025, 2035, and 2050

Implementation of the proposed Plan would result in significant impacts associated with the construction or expansion of public facilities by 2025, 2035, and 2050 in order to maintain necessary service ratios and performance standards. Mitigation measure PS-1 would reduce the impacts of project-specific construction or expansion through project-level planning, design, and CEQA mitigation measures. However, it cannot be guaranteed that all future project-level impacts can be mitigated to a less-than-significant level. Therefore, this impact (PS-1) would remain significant and unavoidable.

REC-1 INCREASE THE USE OF EXISTING NEIGHBORHOOD AND REGIONAL PARKS OR OTHER RECREATIONAL FACILITIES SUCH THAT SUBSTANTIAL PHYSICAL DETERIORATION OF THE FACILITY WOULD OCCUR OR BE ACCELERATED

ANALYSIS METHODOLOGY

This section analyzes impacts associated with an increase in the use of parks and recreational facilities that would cause accelerated substantial deterioration under the proposed Plan. A significant impact would occur if forecasted regional growth and land use change or planned transportation network improvements and programs resulted in increased use of parks or other recreational facilities, in a manner that would result in or accelerate substantial physical deterioration of those facilities. To evaluate potential impacts, areas where regional growth and land use change are expected to occur and locations of planned transportation projects are compared to the existing open space park lands (i.e., conserved lands) and recreational lands (i.e., parks) identified in Section 4.15.1, *Existing Conditions*, to determine if implementation of the proposed Plan would accelerate or result in substantial physical deterioration of parks or other facilities.

Physical deterioration is likely to occur when parks and recreation facilities are overused. Overuse would likely result when a greater number of people are using the same amount of parks and recreational facilities leading

to the accelerated deterioration of existing facilities. Physical deterioration would also occur without the acquisition of new parks and recreational facilities or increased maintenance of existing parks and facilities or a decrease in land dedicated to open space or parkland use. However, local jurisdictions have the means to acquire, develop, and maintain parkland and recreation facilities in the future through the funding mechanisms described in Section 4.15.2, and through the laws, regulations, and local plans described in this section. Local jurisdictions have authority to acquire land or collect in-lieu fees to avoid a reduction in park acreage per capita.

IMPACT ANALYSIS

2025

Regional Growth and Land Use Change

From 2016 to 2025, regional growth is forecasted to result in an increase of 161,338 people (4.8 percent), 97,661 housing units (8 percent), and 115,328 jobs (7 percent). As noted under Threshold PS-1, approximately 78.8 percent of the 2025 population growth would occur within the City of San Diego, City of Chula Vista, and City of Escondido. In each of the communities where growth would occur, park and recreation facilities would experience an increase in their use, which would accelerate the deterioration of the existing facilities. In addition, approximately 663 acres of open space parks and 251 acres of recreation lands across various locations throughout the region would be removed by development as a result of regional growth and land use change between 2016 and 2025. Figure 4.15-2 illustrates where these conversions would occur. Specifically, the majority of the open space conversions would occur as a result of growth and land use change in eastern Otay Mesa near the International Border, as shown in Figure 4.15-2, which would convert 521 acres of open space parks to non-open space uses by 2025. Park and recreational facility expansions would offset these impacts; however, communities throughout the region may not be able to keep up with the demand for park and recreational facilities proportionate to the projected increase in population demand. Compliance with the Quimby Act would require developers set aside land, donate conservation easements, or pay fees for park improvements, which would partially offset the projected impacts. However, there is no assurance that future park and recreation facilities would be capable of adequately serving forecasted populations, and a physical deterioration of park and recreation facilities may occur or be accelerated by 2025. Therefore, this is a significant impact.

Transportation Network Improvements and Programs

Most network improvements from 2016 to 2025 are additions to existing highways, rail corridors, or local roads located in established communities, such as the addition of managed lanes along I-5 through the coastal cities of Encinitas, Carlsbad, and Oceanside; and the addition of new toll lanes on SR 11 to the Otay Mesa East Port of Entry (POE). The proposed Plan also includes the construction of new facilities by 2025, such as the final segment of SR 11, the future toll road, and the SR 125/SR 11/SR 905 southbound connector ramps as part of the SR 11/Otay Mesa East POE. Other planned network improvements include active transportation projects and improvements to regional arterials, which occur along or within existing transportation alignments. Major improvements also include double-tracking at certain locations on the LOSSAN Rail Corridor and station addition in the Gaslamp Quarter in downtown San Diego. The proposed Plan also includes new infrastructure as part of the Mobility Hubs consisting of parking, electric vehicle charging stations, travel kiosks, passenger loading zones, parcel delivery lockers and carshare parking.

Transportation network improvements would not result in substantial physical deterioration of recreational facilities (i.e., parkland, open space, and recreation uses) through indirect impacts such as noise or increased

surface runoff in 2025 due to compliance with design standards. However, the future transportation network improvements, including new and facility widenings, would directly displace 54-59 acres of open space parks and 20-21 acres of recreation lands (Figure 4.15-2). In addition, the future transportation network improvements could have impacts on the following County parks and recreation facilities through the year 2050: Eastview County Park and Sweetwater Regional Park (i.e., SR 125 Complete Corridor improvements from SR 905 to SR 54), Lakeside Sports Park (San Diego River Trail from Mast Park to Lakeside baseball park), Los Peñasquitos Canyon Preserve (Commuter Rail), Otay Valley Regional Park (Heritage Road Bridge), San Elijo Lagoon and Ecological Reserve (North Coast Bike Trail), San Luis Rey River Park (San Luis Rey River Trail), and Waterfront Park (Commuter Rail). None of the County trails would be impacted by transportation network improvements. Furthermore, the transportation network improvements and programs, in particular rail improvements and active transportation facilities, could redistribute a portion of existing travel and attract transit users to recreation facilities in the vicinity of transit stops and stations leading to minor increases in usage. Construction of the transportation network improvements, such as facility widenings, may also require the temporary closure or re-routing of bicycle facilities. All bike lane or path closures would be properly noticed and safely detoured. In addition, active transportation improvements would expand recreation opportunities, such as bicycle facilities, in the region resulting in adverse physical impacts. Therefore, transportation network improvements would not lead to a substantial increase in the use of existing recreational facilities but would expand active transportation facilities and remove land designated for park and recreation uses and increase park and recreational usage near expanded transit. The proposed Plan would put more pressure on existing facilities and contributing to their physical deterioration given there would be no assurance that future park and recreation facilities would expand to offset the acreage removals. Therefore, this is a significant impact.

2025 Conclusion

Implementation of regional growth and land use changes would result in increased demand for recreation facilities leading to accelerated deterioration while regional growth and transportation network improvements combined would contribute to the expansion of active recreation facilities and the physical removal of 988-994 acres of open space park and recreation lands by the year 2025. Collectively, these impacts would result in the substantial physical deterioration of existing park and recreation facilities and adverse physical impacts related to future facility expansions. Therefore, this impact (REC-1) in the year 2025 is significant.

**Figure 4.15-2
Impacts to
Recreational
Facilities**

- Open Space Parks
- Recreation
- County Parks

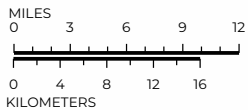
**Transportation Impacts to
Open Space Parks &
Recreation**

- 2025
- 2035
- 2050

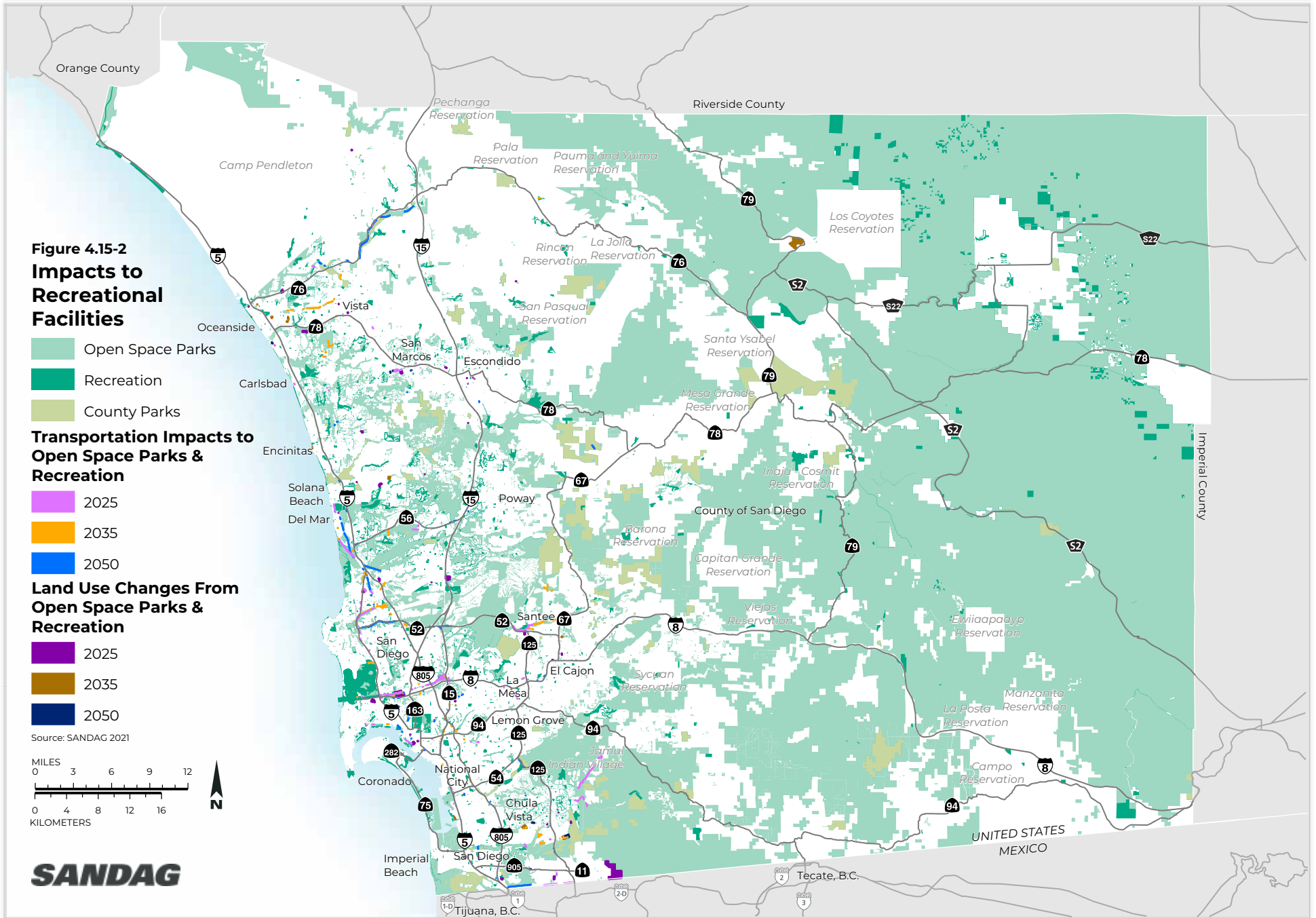
**Land Use Changes From
Open Space Parks &
Recreation**

- 2025
- 2035
- 2050

Source: SANDAG 2021



SANDAG



2035***Regional Growth and Land Use Change***

From 2026 to 2035, regional growth is forecasted to result in an increase of 149,500 people (4.3 percent), 121,650 housing units (9.4 percent), and 159,728 jobs (9 percent). As noted under PS-1, approximately 78 percent of the 2035 population growth would occur in the City of San Diego and City of National City. In each of the communities where growth would occur, park and recreation facilities would experience an increase in their use, which would accelerate the deterioration of the existing facilities. In addition, approximately 45 additional acres of open space parks and 324 additional acres of recreation lands would be displaced by development in various locations throughout the region as a result of 2035 regional growth and land use change (Figure 4.15-2). Between 2026 and 2035, the majority of the open space conversions would be occur as a result of growth and land use change in the Warner Springs area shown in Figure 4.15-2, which would convert 275 acres of open space parks to spaced rural residential use. When combined with the conversion of 663 acres of open space parks and 251 acres of recreation lands by 2025, a total removal of ~~678-708~~ acres of open space parks and 575 acres of recreation lands would be expected by 2035 under the proposed Plan. Similar to 2025, park and recreation facility expansions would offset these impacts; however, communities throughout the region may not be able to keep up with the demand for park and recreational facilities proportionate to the projected increase in population demand. Compliance with the Quimby Act would require developers set aside land, donate conservation easements, or pay fees for park improvements, which would partially offset the projected impacts. However, there is no assurance that future park and recreation facilities would be capable of adequately serving forecasted populations, and a physical deterioration of park and recreation facilities may occur or be accelerated by 2035. Therefore, this is a significant impact.

Transportation Network Improvements and Programs

By 2035, additional transportation network improvements and programs are proposed in areas throughout the region. Most transportation improvements would affect existing transportation facilities, such as SPRINTER rail corridor double-tracking; Blue, Orange, and Green Trolley line double/third tracking; rail grade separations; additional managed lanes and general purpose lanes along existing freeways and highways; improvements to regional arterials; and active transportation projects. Other planned transportation network improvements, including the Commuter Rails 398 and 582 extensions, would require acquisition of new rights-of-way in highly developed established communities.

As is true in the 2025 analysis, none of the proposed 2035 transportation network improvements and programs would create new demand for park and recreation facilities beyond the level of demand created by new regional growth, except where expanded transit would result in a minor redistribution of trips and increases in recreational usage near transit stations or stops. Similar to 2025 improvements, construction of the 2035 transportation network improvements, such as facility widenings, may also require the temporary closure or re-routing of bicycle facilities. All bike lane or path closures would be properly noticed and safely detoured. Ultimately, active transportation improvements implemented by 2035 would expand recreation opportunities, such as bicycle facilities, in the region resulting in adverse physical impacts. The future transportation network improvements implemented between 2026 and 2035 would directly remove ~~46-53~~ acres of open space parks and ~~9-16~~ acres of recreation lands (Figure 4.15-2) and, when added to the removal impacts occurring by 2025, would result in a total displacement of ~~100-112~~ acres of open space parks and ~~29-37~~ acres of recreation lands by 2035 under the proposed Plan. Therefore, transportation network improvements would not lead to a substantial increased demand on existing recreational facilities but would expand active transportation facilities and remove an additional ~~55-69~~ acres of land designated for such uses, putting more pressure on

existing facilities and contributing to their physical deterioration given there would be no assurance that future park and recreation facilities would expand to offset the acreage removals. Therefore, this is a significant impact.

2035 Conclusion

Implementation of regional growth and land use changes by 2035, would result in increased demand for recreation facilities leading to accelerated deterioration, while regional growth and transportation network improvements combined would contribute to the expansion of active recreation facilities and the physical removal of an additional ~~424-438~~ acres of open space park and recreation lands leading to a total removal of ~~1,512-1,412~~ acres by 2035. Collectively, these impacts would result in the substantial physical deterioration of existing park and recreation facilities and adverse physical impacts related to future facility expansions. Therefore, this impact (REC-1) in the year 2035 is significant.

2050

Regional Growth and Land Use Change

From 2036 to 2050, regional growth is forecasted to result in an increase of 125,725 people (3.4 percent), 61,433 housing units (4.3 percent), and 164,843 jobs (8.5 percent). As noted under Threshold PS-1, approximately 78 percent of the 2050 population growth would occur in the City of San Diego, City of Chula Vista, and City of San Marcos. In each of the communities where growth would occur, park and recreation facilities would experience an increase in their use, which would accelerate the deterioration of the existing facilities. In addition, approximately 77 additional acres of open space parks and 6 additional acres of recreation lands would be directly removed by development in various locations throughout the region as a result of regional growth and land use change between 2036 and 2050 (Figure 4.15-2). When combined with the conversion of open space parks and recreation lands by 2035, a total removal of ~~755-785~~ acres of open space parks and 581 acres of recreation lands would be expected by 2035 under the proposed Plan. Recreation facility expansions would offset these impacts; however, communities throughout the region may not be able to keep up with the demand for park and recreational facilities proportionate to the projected increase in population demand. Compliance with the Quimby Act would require developers set aside land, donate conservation easements, or pay fees for park improvements, which would partially offset the projected impacts. However, there is no assurance that future park and recreation facilities would be capable of adequately serving forecasted populations, and a physical deterioration of park and recreation facilities may occur or be accelerated by 2050. Therefore, this is a significant impact.

Transportation Network Improvements and Programs

Between 2036 and 2050, additional transportation network improvements and programs are proposed in areas throughout the region. Most of the transportation network improvements would affect existing transportation facilities, such as Blue, Orange, and Green Trolley line double/third tracking; rail grade separations; additional managed lanes and general purpose lanes along existing freeways and highways; improvements to regional arterials; and active transportation projects. Other planned transportation network improvements including Commuter Rail 581, 582, 583, and 398 extensions and the SPRINTER extension would require acquisition of new rights-of-way.

However, as is true in the 2025 and 2035 analyses, none of the proposed 2050 transportation network improvements and programs would create new demand for park and recreation facilities beyond the level of

demand created by new regional growth, with the exception of the minor redistribution of trips that may lead to increased usage of recreation facilities near transit stations and stops. Construction of the transportation network improvements, such as facility widenings, may also require the temporary closure or re-routing of bicycle facilities. All bike lane or path closures would be properly noticed and safely detoured. In addition, active transportation improvements would expand recreation opportunities, such as bicycle facilities, in the region resulting in adverse physical impacts. However, the future transportation network improvements would displace ~~64-89~~ additional acres of open space parks and ~~9-13~~ additional acres of recreation lands, which when added to the removal impacts occurring by 2035 result in a total removal of ~~164-201~~ acres of open space parks and ~~38-50~~ acres of recreation lands by 2050 (Figure 4.15-2). Therefore, transportation network improvements would not lead to the increased use of recreational facilities but would result in the construction of new active transportation facilities and would remove ~~73-76~~ additional acres of land designated for such uses, putting more pressure on existing facilities and contributing to their physical deterioration given there would be no assurance that future park and recreation facilities would expand to offset the acreage removals. Therefore, this is a significant impact by 2050.

2050 Conclusion

Implementation of regional growth and land use changes by 2050 would result in increased demand for recreation facilities leading to accelerated deterioration, while regional growth and transportation network improvements combined would contribute to the expansion of active recreation facilities and the physical removal of an additional ~~424-186~~ acres of open space park and recreation lands leading to a total removal of ~~1,585-1,598~~ acres by 2050 under the proposed Plan. Collectively, these impacts would result in the substantial physical deterioration of existing park and recreation facilities and adverse physical impacts related to future facility expansions. Therefore, this impact (REC-1) in the year 2050 would be significant.

Exacerbation of Climate Change Effects

It is uncertain whether the proposed Plan may exacerbate climate change effects on increased use and deterioration of recreation facilities. Increased risk of some hazards, such as extreme heat, may cause more people to visit recreation centers as cooling centers to use swimming pools, or parks to escape the heat (Kalansky et al. 2018). On the other hand, increased risk of other hazards, such as wildfires and flooding, may decrease attendance at recreation centers as going outdoors becomes more dangerous. Thus, it is difficult to draw a conclusion on the proposed Plan's potential exacerbation of climate change effects on increased use of recreation facilities. However, climate change risks from extreme heat, wildfire, extreme precipitation and flooding, and sea-level rise and storm surge could cause physical deterioration of any exposed recreation facilities.

MITIGATION MEASURES

REC-1 INCREASE THE USE OF EXISTING NEIGHBORHOOD AND REGIONAL PARKS OR OTHER RECREATIONAL FACILITIES SUCH THAT SUBSTANTIAL PHYSICAL DETERIORATION OF THE FACILITY WOULD OCCUR OR BE ACCELERATED

2025, 2035, and 2050

REC-1 Implement Mitigation Measures for Parks and other Recreational Facilities. During planning, design, and project-level CEQA review of development projects and transportation network improvements and programs, the County of San Diego, cities, and other public service providers can and should, SANDAG shall,

and other transportation project sponsors can and should implement mitigation measures to avoid or reduce substantial physical deterioration of parks or other recreational facilities. Mitigation measures could include expanding or improving existing recreation facilities to accommodate additional use, or building new recreation facilities.

SIGNIFICANCE AFTER MITIGATION

2025, 2035, and 2050

Implementation of mitigation measure REC-1 would reduce impacts related to the adverse physical impacts of facility expansions and deterioration of existing parkland and recreational facilities in 2025, 2035, and 2050, but not to a less-than-significant level. Local jurisdictions with inadequate parkland per capita would use State regulations and local plans and ordinances to acquire land and funding for the provision of new parkland as population growth occurs. However, it cannot be assured that adequate financial resources would be available to acquire the amount of parkland needed to meet forecasted population growth and offset losses that would occur a result of transportation improvements. Therefore, this impact (REC-1) would remain significant and unavoidable.

U-1 RESULT IN THE EXPANSION, RELOCATION, OR CONSTRUCTION OF WASTEWATER COLLECTION AND TREATMENT, STORMWATER DRAINAGE, ELECTRIC POWER, NATURAL GAS, OR TELECOMMUNICATIONS FACILITIES TO ADEQUATELY MEET PROJECTED CAPACITY NEEDS, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS

ANALYSIS METHODOLOGY

This section analyzes impacts associated with the provision of or need for new or physically altered utilities facilities in order to maintain adequate services under the proposed Plan (aside from water supply facilities, which are evaluated separately in Section 4.18). A significant impact would occur if forecasted regional growth and land use change or planned transportation network improvements and programs required construction, expansion, or relocation of utilities facilities that would result in adverse physical impacts.

IMPACT ANALYSIS

2025

Regional Growth and Land Use Change

From 2016 to 2025, regional growth is forecasted to result in an increase of 161,338 people (4.8 percent), 97,661 housing units (8 percent), and 115,328 jobs (7 percent). The 2025 regional land use pattern is shown in Figure 2-17 Approximately 78.8 percent of the 2025 population growth would occur within the City of San Diego (57.9 percent), City of Chula Vista (12.1 percent), and City of Escondido (8.8 percent). Collectively, these three jurisdictions would accommodate approximately 78 percent of new housing units and 63 percent of new jobs, respectively, by 2025. In these cities, higher demand for new utility infrastructure, upgraded systems, and/or expansions would occur, while demand for utilities would also increase throughout the region in response to forecasted growth. In general, however, regional growth and land use change in urban areas would have less demands on utilities than in more rural areas that are not currently served by utility infrastructure.

While population growth would result in an increase in the amount of wastewater generated, especially in the cities of San Diego, Chula Vista, and Escondido, the service providers responsible for operating the existing wastewater treatment plants outlined in Table 4.15-7 would have to maintain sufficient conveyance and treatment capacity to serve forecasted growth through 2025 in accordance with approved Wastewater Discharge Requirements filed with the SWRCB and local health ordinances. Development in existing communities would require expansion or upsizing of existing collection and treatment systems, while development in new areas would require installation of new collection and treatment systems. Development in rural residential areas would also require onsite wastewater treatment facilities, such as septic tanks.

Similarly, stormwater drainage improvements would need to be constructed to serve new development and redeveloped areas to accommodate forecasted growth through 2025. Increases in impervious surfaces would increase stormwater runoff, which would increase the volume and/or velocity of stormwater flows leading to flooding, scouring, erosion, and other drainage pattern alterations. Therefore, regional growth and land use change that results from implementation of the proposed Plan in 2025 would require the construction of new or expanded stormwater drainage facilities to ensure adequate capacity for the conveyance of stormwater. Development associated with the proposed Plan would have to comply with all existing regulations pertaining to drainage patterns (i.e., the local Standard Urban Stormwater Mitigation Plan [SUSMP] and Hydromodification Management Plan [HMP]). The stormwater regulations include the requirement that post-project stormwater flows match the pre-project flows for PDPs. When there is an increase in impervious area, this requirement would generally be achieved through the implementation of the appropriate BMPs described in the local SUSMP and HMP, and the County Low Impact Development (LID) Handbook. LID is an integrated site design methodology that uses small-scale detention and retention to minimize pollutants conveyed by runoff and to mimic pre-project site hydrological conditions. Furthermore, drainage systems would be upgraded and increased in size in areas determined by each MS4 operator to have inadequate conveyance capacity relative to new impervious surface to reduce impacts related to stormwater runoff through their SUSMP and/or JURMP. Hydrologic impacts resulting from construction would be primarily addressed through compliance with the Construction General Permit as discussed in Section 4.10.

Regional growth and land use change would increase demand for energy resources and require electricity and/or natural gas infrastructure relocations and/or improvements to serve development through 2025. As described in Section 4.6, *Energy*, projected growth would trigger the need for new or expanded energy facilities, including power plants, distributed generation, electrical transmission and distribution infrastructure, and natural gas facilities (e.g., storage, pipelines). Construction and operation of the facilities would have a range of impacts depending on the facility type, size, and location. Forecasted regional growth and land use change would primarily occur in or adjacent to areas that are already developed and that have electricity and natural gas infrastructure in place. Although this would reduce the need for construction of new facilities in other areas, the increases in demand for electricity and natural gas would result in upgrades of transmission lines, substations, and distribution and related facilities that already serve these areas to ensure that energy infrastructure adequately meets future needs. Telecommunications systems would also need to be constructed to serve new development and redeveloped areas associated with forecasted population growth and land use change through 2025. Demand for telecommunication infrastructure would require the construction of broadband cable lines, telephone lines, cellular towers, and other transmission devices. Similar to other utility infrastructure, development in existing communities would require expansion or upsizing of existing systems, while development in new areas would require installation of new systems.

The provision of new or expanded wastewater treatment facilities and collection systems, stormwater conveyance and treatment BMPs, new or expanded energy facilities, and telecommunications infrastructure would result in short-term construction-related impacts and long-term operational impacts on such resources

as air quality, noise, traffic, and water quality, among others. WDRs and existing regulations, as further described in Section 4.10, would reduce water quality impacts of future utility construction projects. Construction-related and long-term operational impacts are typically controllable and avoided or substantially reduced by mitigation measures adopted by the implementing agency, including adherence to existing regulations and BMPs, such as those issued and enforced through the SWRCB and RWQCB. Because details are not known about timing, location, and other project-specific information for provision of new or expanded utility systems, it cannot be guaranteed that impacts from the construction and operation of new or expanded facilities and collection systems would be less than significant for all projects. Therefore, regional growth and land use change would cause a significant impact.

Transportation Network Improvements and Programs

While most of the transportation improvements (e.g., highway, arterial, transit, and active transportation) would occur in already urbanized areas, some improvements would require new connections and expansions of utility infrastructure and convert vacant land to impervious surfaces, resulting in increased stormwater flow volume and/or velocity. As described in Section 4.10.2, engineering standards, including the Caltrans Highway Design Manual and County requirements, exist for properly controlling and conveying surface runoff and surface waters when drainage modifications are necessary for project implementation. In addition, requirements in the Municipal Stormwater Permit (Order R9-2013-0001) require that PDPs maintain pre-project hydrology under post-construction operation. This means that additional runoff volumes and peak flow discharges from new impervious areas must be attenuated to pre-project levels in order to maintain hydrological conditions and not exceed stormwater conveyance capacities. One of the methods for achieving this is through the implementation of LID.

However, new or expanded stormwater drainage facilities would be required to support the transportation network improvements by the year 2025, and any increase in the volume of stormwater generated would require stormwater drainage facilities with sufficient capacity downstream in channels and other drainage outlets. Additionally, changes to drainage patterns due to transportation improvements, as further discussed under Impact HWQ-2 in Section 4.10, would necessitate the construction of stormwater drainage facilities in new places.

A number of the transportation network improvements would require relocated or new electrical or natural gas infrastructure, such as the supporting infrastructure to the mobility hubs (i.e., traction power substations to provide power to the automated people movers), fleet electrification plans (i.e., Neighborhood Electric Vehicles), and various transit station improvements, such as communications equipment, signaling systems and security lighting. The proposed Plan would also increase the number of electric vehicles and charging stations throughout the region and within mobility hubs. Construction impacts associated with the installation of electricity and natural gas connections or the relocation of existing lines are expected to be confined to trenching within rights-of-way in order to place the lines below surface. Electrical and natural gas facilities required for the planned transportation network improvements would be constructed as part of the various network improvements. Because the demand for electrical energy and natural gas associated with the transportation network improvements in the proposed Plan would be a small fraction of the regional use new energy facilities would not be necessary beyond the infrastructure needs associated with regional growth and land use change.

Similar to regional growth and land use change, the provision of new or expanded utility infrastructure in conjunction with the transportation network improvements in the proposed Plan in 2025 would result in short-term construction-related impacts and long-term operational impacts on such resource areas as

biological resources and water quality. These impacts would be anticipated as a result of stormwater and drainage infrastructure and energy infrastructure upgrades and relocations associated with transportation network improvements changes. It is not anticipated that wastewater conveyance and treatment or telecommunication systems would need to be installed or expanded to serve the 2025 transportation network. Construction-related and long-term operational impacts are typically controllable and avoided or substantially reduced by mitigation measures adopted by the implementing agency, including adherence to existing regulations and BMPs. Because details are not known about timing, location, and other project-specific information for provision of new or expanded utility systems, it cannot be guaranteed that impacts from the construction and operation of such facilities would be less than significant for all projects. Therefore, transportation network improvements would cause a less-than-significant impact on wastewater, electrical, natural gas, and telecommunications infrastructure and a significant impact related to stormwater drainage facilities.

2025 Conclusion

Implementation of regional growth and land use change, as well as transportation network improvements and programs, would result in substantial adverse physical impacts associated with the construction and operation of new or expanded utility infrastructure for wastewater, storm drain, electrical, natural gas and telecommunications systems. Therefore, the impact (U-1) in the year 2025 would be significant.

2035

Regional Growth and Land Use Change

From 2026 to 2035, regional growth is forecasted to result in an increase of 149,500 people (4.3 percent), 121,650 housing units (9.4 percent), and 159,728 jobs (9 percent). Approximately 78 percent of the 2035 population growth would occur in the City of San Diego (70.9 percent) and City of National City (7.3 percent). These two jurisdictions would account for approximately 73 percent of new housing units and 60 percent of new jobs, respectively, by 2035. In these cities, higher demand for new utility infrastructure, upgraded systems and/or expansions would occur, while demand for utilities would also increase throughout the region in response to forecasted growth. In general, however, regional growth and land use change in urban areas would have less demand on utilities than in more rural areas that are not currently served by utility infrastructure.

Similar to 2025, 2035 forecasted growth in accordance with the proposed Plan would trigger the need for the provision of new or expanded wastewater treatment facilities and collection systems, stormwater conveyance and treatment BMPs, electrical and natural gas facilities, and telecommunications infrastructure, which would result in short-term construction-related impacts and long-term operational impacts on such resources as air quality, noise, traffic, and water quality, among others. WDRs and existing regulations, as further described in Section 4.10, would reduce water quality impacts of future utility construction projects. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessened by mitigation measures adopted by the implementing agency, including adherence to existing regulations and BMPs, such as those issued and enforced through the SWRCB and RWQCB. Because details are not known about timing, location, and other project-specific information for provision of new, relocated, or expanded utility systems, it cannot be guaranteed that impacts from the construction and operation of new or expanded facilities and collection systems would be less than significant for all projects. Therefore, regional growth and land use change would cause a significant impact.

Transportation Network Improvements and Programs

Similar to 2025, the provision of new, relocated or expanded utility infrastructure in conjunction with the transportation network improvements in the proposed Plan in 2035 would result in short-term construction-related impacts and long-term operational impacts on such resource areas as biological resources, cultural resources, and water quality, among others. These impacts would be anticipated as a result of stormwater and drainage infrastructure put in place as part of the transportation network improvements. It is not anticipated that wastewater conveyance and treatment or telecommunication systems would need to be installed or expanded to serve the 2035 transportation network. A number of the transportation network improvements would require relocated or new electrical or natural gas infrastructure, particularly at mobility hubs such as the Central Mobility Hub and San Ysidro Mobility Hub, as discussed in more detail above under 2025. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessened by mitigation measures adopted by the implementing agency, including adherence to existing regulations and installation of BMPs. Because details are not known about timing, location, and other project-specific information for provision of new, relocated or expanded utility systems, it cannot be guaranteed that impacts from the construction and operation of such facilities would be less than significant for all projects. Therefore, transportation network improvements and programs would cause a less-than-significant impact on the demand for wastewater, electrical, natural gas, and telecommunications infrastructure and a significant impact related to stormwater drainage facilities.

2035 Conclusion

Implementation of regional growth and land use change would result in substantial adverse physical impacts associated with the construction and operation of new, relocated or expanded utility infrastructure for wastewater, storm drain, electrical, natural gas and telecommunications systems. Transportation network improvements and programs would cause a less-than-significant impact on wastewater, electrical, natural gas, and telecommunications infrastructure and a significant impact related to stormwater drainage facilities. Therefore, the impact (U-1) by the year 2035 would be significant.

2050

Regional Growth and Land Use Change

From 2036 to 2050, regional growth is forecasted to result in an increase of 125,725 people (3.4 percent), 61,433 housing units (4.3 percent), and 164,843 jobs (8.5 percent). Approximately 78 percent of the 2050 population growth would occur in the City of San Diego, City of Chula Vista, and City of San Marcos. In these cities, higher demand for new utility infrastructure, upgraded systems, and/or expansions would occur, while demand for utilities would also increase throughout the region in response to forecasted growth. In general, however, regional growth and land use change in urban areas would have less demand on utilities than in more rural areas that are not currently served by utility infrastructure.

Similar to 2025 and 2035, 2050 forecasted growth in accordance with the proposed Plan would trigger the need for the provision of new or expanded wastewater treatment facilities and collection systems, stormwater conveyance and treatment BMPs, energy (i.e., electrical and natural gas) facilities, and telecommunications infrastructure, which would result in short-term construction-related impacts and long-term operational impacts on such resource areas as air quality, noise, traffic, and water quality, among others. WDRs and existing regulations, as further described in Section 4.10, would reduce water quality impacts of future utility construction projects. Construction-related and long-term operational impacts are typically controllable and

avoided or substantially reduced by mitigation measures adopted by the implementing agency, including adherence to existing regulations and BMPs, such as those issued and enforced through the SWRCB and RWQCB. Because details are not known about timing, location, and other project-specific information for provision of new or expanded utility systems, it cannot be guaranteed that impacts from the construction and operation of new or expanded facilities and collection systems would be less than significant for all projects. Therefore, regional growth and land use change would cause a significant impact.

Transportation Network Improvements and Programs

The provision of new or expanded utility infrastructure, in particular stormwater drainage associated with the transportation network improvements in the proposed Plan in 2050 would result in short-term construction-related impacts and long-term operational impacts on such resource areas as biological resources, cultural resources, and water quality, among others. These impacts would be anticipated as a result of stormwater and drainage infrastructure put in place as part of the transportation network improvements. It is not anticipated that wastewater conveyance and treatment or telecommunication systems would need to be installed or expanded to serve the 2050 transportation network. As with 2025 and 2035, construction-related and long-term operational impacts are typically controllable and avoided or substantially reduced by mitigation measures adopted by the implementing agency, including adherence to existing regulations and installation of BMPs. Because details are not known about timing, location, and other project-specific information for provision of new or expanded utility systems, it cannot be guaranteed that impacts from the construction and operation of such facilities would be less than significant for all projects. Therefore, transportation network improvements and programs would cause a less-than-significant impact on wastewater, electricity, natural gas, and telecommunications infrastructure and a significant impact related to stormwater drainage facilities.

2050 Conclusion

Implementation of regional growth and land use change by 2050, would result in substantial adverse physical impacts associated with the construction and operation of new or expanded utility infrastructure for wastewater, storm drain, and telecommunications systems. Transportation network improvements and programs would cause a less-than-significant impact on wastewater, electricity, natural gas, and telecommunications infrastructure and a significant impact related to stormwater drainage facilities. Therefore, the impact (U-1) by the year 2050 would be significant.

Exacerbation of Climate Change Effects

The proposed Plan could potentially exacerbate climate change effects on the need for new or expanded utility infrastructure, particularly storm drain infrastructure. Climate change is expected to increase the risk of flooding due to more frequent and intense extreme precipitation events, which may strain current capacity of stormwater infrastructure and thus eventually spur growth for new infrastructure to capture excess stormwater (County of San Diego 2018c, Ascent Environmental Inc. 2017, Tuler 2016). The proposed Plan is also expected to result in substantial adverse physical impacts to existing utility infrastructure that may necessitate construction of new or expanded infrastructure; this could contribute to impacts on existing infrastructure the region is already expected to see under climate change. However, it is uncertain to what degree climate change could spur growth for new stormwater infrastructure, because it depends on decision-making surrounding implementation of climate adaptation measures; lead agencies may not decide to construct additional stormwater infrastructure in reaction to increased flooding risks.

MITIGATION MEASURES

- U-1 RESULT IN THE EXPANSION, RELOCATION, OR CONSTRUCTION OF WASTEWATER COLLECTION AND TREATMENT, STORMWATER DRAINAGE, ELECTRIC POWER, NATURAL GAS, OR TELECOMMUNICATIONS FACILITIES TO ADEQUATELY MEET PROJECTED CAPACITY NEEDS, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS**

2025, 2035, and 2050

U-1a Implement Mitigation Measures for New/Expanded Wastewater, Stormwater, Electrical, Natural Gas, and Telecommunications Facilities Associated with Development Projects. During planning, design, and project-level CEQA review of development projects, the County of San Diego, cities, and other wastewater, stormwater, and telecommunications management agencies can and should apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction or expansion of new or expanded facilities. Mitigation measures should be implemented by utilities management agencies directly responsible for the approval and construction of new or expanded facilities. Significant environmental impacts requiring mitigation may include, but are not limited to, air quality, biological resources, cultural resources, energy, greenhouse gas emissions, hydrology and water quality, noise, paleontological resources, traffic, tribal cultural resources, and water supply. Mitigation measures may be similar to those described in this EIR for construction of development projects.

U-1b Implement Mitigation Measures for New/Expanded Stormwater Facilities Associated with Transportation Network Improvements. During planning, design, and project-level CEQA review of transportation network improvements, SANDAG shall, and other transportation project sponsors can and should, be required to implement stormwater BMPs during planning, design, project-level CEQA review, and project construction. Measures include, but are not limited to, implementation and construction of sand filters, bio strips, bioswales, detention basins, storage vaults, and infiltration basins, which would reduce pollutant runoff into the storm drain system.

SIGNIFICANCE AFTER MITIGATION

2025, 2035, and 2050

Implementation of the proposed Plan would result in significant impacts associated with the construction or expansion of utility systems and facilities in 2020, 2035, and 2050 in order to serve areas undergoing population growth and transportation network improvements. Mitigation measures U-1a and U-1b would reduce the impacts of project-specific construction or expansion through project-level planning, design, and CEQA mitigation measures. However, it cannot be guaranteed that all future project-level impacts can be mitigated to a less-than-significant level. Therefore, the impact (U-1) would remain significant and unavoidable.

- U-2 GENERATE SOLID WASTE IN EXCESS OF STATE OR LOCAL STANDARDS OR IN EXCESS OF THE CAPACITY OF LOCAL INFRASTRUCTURE; NEGATIVELY IMPACT THE PROVISION OF SOLID WASTE SERVICES; IMPAIR THE ATTAINMENT OF SOLID WASTE REDUCTION GOALS; OR FAIL TO COMPLY WITH FEDERAL, STATE, AND LOCAL MANAGEMENT AND REDUCTION STATUTES AND REGULATIONS RELATED TO SOLID WASTE**

ANALYSIS METHODOLOGY

This section analyzes impacts from the generation of solid waste associated with implementation of the proposed Plan that would exceed the capacity of local infrastructure and services or fail to comply with statutes and regulations related to solid waste. A significant impact would occur if forecasted regional growth and land use change or planned transportation network improvements and programs either result in generation of solid waste that exceeded the capacity of landfills or caused a failure to comply with federal, State, or local goals or standards, which include demonstrating at least 15 years of remaining disposal capacity in landfills and diverting an increasing percentage of waste streams over time. To evaluate potential impacts, expected increases in solid waste generation are compared to available permitted landfill capacity and applicable standards, waste reduction goals, and management statutes.

IMPACT ANALYSIS

2025

Regional Growth and Land Use Change

Regional growth forecasted to occur between 2016 and 2025 would produce both C&D debris and municipal solid waste during operations. It is anticipated that the majority of construction-phase C&D debris would likely be diverted, while lower diversion rates are expected during operation of new developments. Existing programs, policies, and practices in place throughout the region would continue to reduce the rate of solid waste generation (amount per person or per employee) and divert a percentage of solid waste from landfills to recycling facilities. As explained in Section 4.15.1, as of 2016 the Miramar Landfill has 11 percent capacity remaining and is estimated to close in 2030, which would significantly reduce the available capacity at landfills in the region. The Borrego Landfill, Otay Landfill, and Sycamore Landfill have remaining capacity and are estimated to close by the years 2046, 2030, and 2042, respectively (CalRecycle 2021c). As noted in Table 4.15-11, the County and City can demonstrate they have more than 15 years of permitted landfill capacity at these facilities as required by the State's Integrated Waste Management Act. Therefore, there would be sufficient landfill capacity in the region to accommodate forecasted regional growth through 2025. As a result, given waste management programs and reduction measures in place throughout the region focused on diverting an increasing percentage of waste from landfills, forecasted regional growth would not generate solid waste at a level that would exceed the capacity of permitted solid waste disposal facilities in the region. Regional growth and land use change would have a less-than-significant impact.

Transportation Network Improvements and Programs

Construction of transportation network improvements that would be implemented by the year 2025 would generate solid waste and C&D debris. While some of these materials would be processed separately, some waste from these construction projects would end up in municipal solid waste facilities. The need to dispose of solid waste as part of the transportation network improvements would contribute to reduced capacity of landfills in the region. As discussed in the regional growth and land use change analysis, there is sufficient landfill capacity to accommodate forecasted growth in the region at least through 2025, and there are programs in place to increase the amount of waste diversion. Therefore, transportation network improvements would not generate solid waste at a level that would require new or expanded solid waste disposal facilities given waste management programs and reduction measures in place within the region. Transportation network improvements and programs would have a less-than-significant impact.

2025 Conclusion

Implementation of regional growth and land use change, as well as transportation network improvements and programs, would not result in substantial adverse physical impacts associated with the construction of new or expanded solid waste facilities. Therefore, this impact in the year 2025 would be less-than-significant.

2035

Regional Growth and Land Use Change

Regional growth forecasted to occur between 2026 and 2035 would produce both C&D debris and municipal solid waste during operations. It is anticipated that the majority of construction-phase C&D debris would likely be diverted, while lower diversion rates are expected during operation of new developments. Existing programs, policies, and practices in place throughout the region would continue to reduce the rate of solid waste generation (amount per person or per employee) and divert a percentage of solid waste from landfills to recycling facilities. By 2035, Borrego Landfill and Sycamore Landfill would be the only permitted landfills with remaining disposal capacity as they are estimated to close by the years 2046 and 2042, respectively (CalRecycle 2021c). With the projected closure of the Miramar Landfill and Otay Landfill before 2035, the County and City could still demonstrate it has more than 15 years of permitted landfill capacity at the other facilities as required by the State's Integrated Waste Management Act. However, there may not be sufficient landfill capacity in the region to accommodate forecasted regional growth through 2035. As a result, given waste management programs and reduction measures in place throughout the region focused on diverting an increasing percentage of waste from landfills, forecasted regional growth would generate solid waste at a level that would exceed the capacity of permitted solid waste disposal facilities in the region even with waste reduction measures in place. Regional growth and land use change would have a significant impact.

Transportation Network Improvements and Programs

Construction of transportation network improvements that would be implemented by the year 2035 would primarily generate C&D debris and a minimal amount of municipal solid waste (i.e., associated with construction workforce and Mobility Hub and transit station operations) While much of the C&D debris materials would be processed and diverted from landfills in accordance with recycling programs and policies, small quantities of municipal solid waste produced from these construction projects would end up in landfills. The need to dispose of waste as part of the transportation network improvements would contribute to reduced capacity of landfills in the region, which may not be sufficient to accommodate the regions waste disposal needs by 2035. Therefore, transportation network improvements would generate solid waste at a level that would exceed the capacity of permitted solid waste disposal facilities in the region and would require new or expanded solid waste disposal facilities. Transportation network improvements and programs would have a significant impact.

2035 Conclusion

Implementation of regional growth and land use change and transportation network improvements and programs in the proposed Plan by 2035 would generate solid waste and C&D debris that may not be accommodated by the regional landfills. Although, the forecasted growth and network improvements would comply with programs, policies, and practices to reduce the rate of solid waste generation, this impact (U-2) in the year 2035 would be significant.

2050***Regional Growth and Land Use Change***

Regional growth forecasted to occur between 2036 and 2050 would produce both C&D debris and municipal solid waste during operations. It is anticipated that the majority of construction-phase C&D debris would likely be diverted, while lower diversion rates are expected during operation of new developments. Existing programs, policies, and practices in place throughout the region would continue to reduce the rate of solid waste generation (amount per person or per employee) and divert a percentage of solid waste from landfills to recycling facilities. However, all of the currently permitted landfills would be closed before 2050, and the County and City would have to expand the permitted capacity within their jurisdictions to demonstrate they have more than 15 years of permitted landfill capacity as required by the State's Integrated Waste Management Act. Because there may not be sufficient landfill capacity in the region to accommodate forecasted regional growth through 2050, forecasted regional growth would generate solid waste at a level that would exceed the capacity of permitted solid waste disposal facilities in the region even with waste reduction measures in place. Regional growth and land use change would have a significant impact.

Transportation Network Improvements and Programs

Construction of transportation network improvements that would be implemented by the year 2050 would primarily generate C&D debris and a minimal amount of municipal solid waste (i.e., associated with construction workforce and mobility hub and transit station operations) While much of the C&D debris materials would be processed and diverted from landfills in accordance with recycling programs and policies, small quantities of municipal solid waste that would be produced from these construction projects would end up in landfills. The need to dispose of waste as part of the transportation network improvements would contribute to reduced capacity of landfills in the region, which may be insufficient to accommodate the region's waste disposal needs by 2050. Therefore, transportation network improvements would generate solid waste at a level that would exceed the capacity of permitted solid waste disposal facilities in the region and would require new or expanded solid waste disposal facilities. Transportation network improvements and programs would have a significant impact on the solid waste disposal system in 2050.

2050 Conclusion

Implementation of regional growth and land use change and transportation network improvements and programs in the proposed Plan by 2050 would generate solid waste and C&D debris that may not be accommodated by the regional landfills. Although, the forecasted growth and network improvements would comply with programs, policies, and practices to reduce the rate of solid waste generation, this impact (U-2) in the year 2050 would be significant.

Exacerbation of Climate Change Effects

The proposed Plan is not expected to exacerbate climate change effects related to excess generation of solid waste.

MITIGATION MEASURES

2035 and 2050

U-2a Implement Mitigation Measures for New/Expanded Solid Waste Facilities. During planning, design, and project-level CEQA review of solid waste facility projects, the County of San Diego, cities, and other solid waste management agencies can and should apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction or expansion of new or expanded solid waste facilities. Significant environmental impacts requiring mitigation may include, but are not limited to, air quality, biological resources, cultural resources, energy, greenhouse gas emissions, hydrology and water quality, noise, paleontological resources, traffic, tribal cultural resources, and water supply. Mitigation measures may be similar to those described in this EIR for construction of development projects.

U-2b Reduce Construction Waste. During planning, design, and project-level CEQA review, and prior to the construction or demolition of transportation network improvement projects and development projects, SANDAG shall, and other transportation project sponsors, the County of San Diego, cities, and other local jurisdictions can and should, implement measures to reduce construction waste to comply with waste reduction goals identified by the state and local agencies, including but not limited to the following:

- Ensure that source reduction techniques and recycling measures are incorporated into project construction/demolition.
- Reuse and/or recycle construction and demolition waste.

This mitigation measure would extend the life of existing landfills and delay the need to construct new or expanded landfills.

U-2c Reduce Operational Waste. During planning, design, project-level CEQA review, and construction of development projects, the County of San Diego, cities, and other local jurisdictions can and should integrate green building waste management measures such as those identified in the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED), Energy Star Homes, Green Point Rated Homes, and the California Green Builder Program. These measures include, but are not limited to, the following:

- Prepare and apply a waste management plan that promotes solid waste diversion.
- Implement source reduction through (1) using materials that are more durable and easier to repair and maintain, (2) designing to generate less scrap material through dimensional planning, (3) increasing recycled content, (4) using reclaimed materials, and (5) using structural materials in a dual role as finish material (e.g., stained concrete flooring, unfinished ceilings, etc.).
- Reuse existing structures and shells in renovation projects.
- Design for flexibility through the use of moveable walls, raised floors, modular furniture, moveable task lighting, and other reusable building components.
- Develop an indoor recycling program and space.

These mitigation measures would extend the life of existing landfills and delay the need to construct new or expanded landfills.

SIGNIFICANCE AFTER MITIGATION**2035 and 2050**

Implementation of the proposed Plan would result in significant impacts related to the construction of new or expanded solid waste facilities in 2035 and 2050. Implementation of mitigation measure U-2a would reduce these impacts through project-level planning, design, and CEQA mitigation measures. Mitigation measures U-2b and U-2c would further reduce this impact by extending the life of existing landfills and delaying the need to construct new or expanded landfills or landfill capacity. However, it cannot be guaranteed that all future project-level impacts can be mitigated to a less-than-significant level. Therefore, this impact (U-2) would remain significant and unavoidable.

