4.14 PUBLIC SERVICES AND UTILITIES

This section evaluates the public services and utilities impacts of the proposed Plan. The information presented was compiled from multiple sources including the proposed Plan, the San Diego County General Plan EIR, and other sources identified throughout the section.

4.14.1 EXISTING CONDITIONS

4.14.1.1 PUBLIC SERVICES

Fire Protection

Fifteen cities in the San Diego region are each responsible for fire protection and prevention within their city limits through their own fire department. El Cajon, La Mesa, and Lemon Grove entered into a joint powers agreement (JPA) in 2010 to provide fire protection and emergency services to their jurisdictions. The management team that provides these services is called Heartland Fire and Rescue. The unincorporated County is provided fire and emergency services by 16 Fire Protection Districts (FPDs), seven County Service Areas (CSAs), and CAL FIRE. Generally, each agency is responsible for structural fire protection and wildland fire protection within their area of responsibility. However, mutual and automatic aid agreements enable non-lead fire agencies to respond to fire emergencies outside their district boundaries. Volunteer fire protection companies provide emergency services for seven areas in the unincorporated County where no fire protection agency is established (County of San Diego 2011a). Support for the volunteer fire protection agencies is given through the San Diego County Fire Authority (SDCFA).

Some fire protection agencies have entered into agreements in which joint powers agencies serve as a centralized management system to coordinate fire protection and dispatch services. The North County Dispatch (JPA and the Heartland Fire and Rescue are examples of coordinating agencies that assist local fire departments. The California Department of Forestry and Fire Protection (CAL FIRE) is the principle contractor for fire protection services in the County of San Diego. CAL FIRE is responsible for wildland fire protection of approximately 1.2 million acres of State Responsibility Area within the County (LAFCO 2005b). CAL FIRE is responsible for fire response services within over 50 percent of the unincorporated County's total land area. It operates 18 stations within the County, include one air attack base in Ramona. CAL FIRE also operates an emergency response air program with both aircraft and helicopters, as needed. 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 2012).

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 of the Port of San Diego are cross-trained as marine fire fighters. Automatic and mutual aid agreements exist between many of these agencies to provide necessary support for emergencies. Table 4.14-1 identifies agencies responsible for fire protection in the region's cities. Table 4.14-2 identifies agencies responsible for providing fire protection in the unincorporated areas of San Diego County. Roughly 12,336 acres, or about 0.5 percent, of the unincorporated County is not served by any FPD. These areas rely upon neighboring FPDs or CAL FIRE to respond to emergencies. The agency that responds to emergencies in unprotected areas is decided on a case-by-case basis (County of San Diego 2011a).

Table 4.14-1
Fire Service Providers in the 18 Cities 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	9	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	2	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	47	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 2011; City of Chula Vista 2010; City of Coronado 2011; City of Del Mar 2009; City of El Cajon Fire Department 2011; City of Encinitas 2011; City of Escondido Fire Department 2011; City of Imperial Beach 2011; City of La Mesa 2011; City of Lemon Grove 2011; City of National City 2008; City of Oceanside Fire Department 2011; City of Poway 2011; City of San Diego 2011; City of San Marcos 2011; City of Santee 2011; City of Solana Beach 2010; City of Vista Fire Department 2009; County of San Diego 2011a; Heartland Fire Rescue; North County Dispatch JPA 2012.

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 beings 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.

Table 4.14-2
Fire Service Providers in the Unincorporated and Federal Lands in San Diego Region

Agency	Governance[1]	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
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	5	Heartland JPA
Lower Sweetwater Fire Protection District	Independent	National City	2	Heartland JPA
North County Fire Protection District	Independent	District	6	North County JPA
Pine Valley Fire Protection District	Independent	District/CAL FIRE	1	CAL FIRE
Rancho Santa Fe Fire Protection District	Independent	District	4	North County JPA
San Diego Rural Fire Protection District	Independent	SDCFA	13	CAL FIRE
San Marcos Fire Protection District	Dependent	City of San Marcos	4	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	3	CAL FIRE
Rincon del Diablo MWD	Independent	City of Escondido	n/a	City of Escondido
Yuima MWD	Independent	CAL FIRE	n/a	CAL FIRE
CSA 107 – Elfin Forest	Dependent	District	1	North County JPA
CSA 109 – Mt. Laguna **	Dependent	SDCFA	1	CAL FIRE
CSA 110 – Palomar Mountain **	Dependent	SDCFA	1	CAL FIRE
CSA 111 – Boulevard**	Dependent	SDCFA	1	CAL FIRE
CSA 112 – Campo**	Dependent	SDCFA	1	CAL FIRE
CSA 113 – San Pasqual**	Dependent	SDCFA	1	CAL FIRE
CSA 115 – Pepper Drive	Dependent	City of Santee	n/a	Heartland JPA
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

Source(s): LAFCO 2005a, 2005b, 2007; CAL FIRE 2009; County of San Diego 2011a; San Miguel Fire District 2015
SDCFA = San Diego County Fire Authority
1. Fire protection agencies in the unincorporated County can be broadly classified as independent agencies or dependent agencies. Independent agencies have a directly elected Board of Directors. Dependent agencies rely on elected officials from other levels of local government.
* Does not include fire protection provided by the San Diego Harbor Police Department for the Port of San Diego or the Department of Defense for military facilities.
** San Diego County Board of Supervisors approved actions necessary to implement "Step II of the Hybrid Plan Proposal" on January 25, 2011. Pending LAFCO approval it would incorporate CSA No(s). 109, 110, 111, 112, and 113 into CSA No. 135.

The Insurance Service Office evaluates the fire protection services of a community and rates it on a scale from 1 to 10 based on the capabilities of the agency. These ratings are known as Public Protection Classifications (PPC™). A rating of one is the highest a fire department can receive; while a rating of 10 means that a community does not meet minimum criteria (LAFCO 2005b). Criteria for this rating system are consistent with the performance measurements discussed in the paragraph above.

Police Protection

The San Diego County Sheriff's Department (SDSD) is the primary law enforcement body in the San Diego region. SDSD provides 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.

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. SDSD operates several other law enforcement support facilities, including seven detention facilities. These provide the services necessary to support an inmate population and functions of court services for the entire San Diego region. SDSD 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 SDSD's crime laboratory for all the cities within San Diego County, except for the City of San Diego. Table 4.14-3 shows sworn police protection personnel by jurisdiction in the San Diego region.

Table 4.14-3
Sworn Police Protection Personnel by Jurisdiction in the San Diego Region, 2013

Police Protection Providers by Jurisdiction	Number of Sworn Personnel*
City of Carlsbad	114
City of Chula Vista	237
City of Coronado	44
City of El Cajon	120
City of Escondido	158
City of La Mesa	68
City of National City	86
City of Oceanside	202
City of San Diego	1970
San Diego County Sheriff's Department (total)	974
City of Del Mar	10
City of Encinitas	60
City of Imperial Beach	28
City of Lemon Grove	24
City of Poway	50
City of San Marcos	79
City of Santee	61
City of Solana Beach	17
City of Vista	92
Harbor Police	130

Source: SANDAG 2013
*Fiscal Year 2012-2013

SDSD operates several other law enforcement support facilities, including seven detention facilities. These provide the services necessary to support an inmate population and functions of court services for the entire San Diego region. SDSD 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 SDSD's crime laboratory for all the cities within San Diego County, except for the City of San Diego. Table 4.14-3 shows sworn police protection personnel by jurisdiction in the San Diego region.

Similarly to fire-protection services, police departments are evaluated on response times. Standards for 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 calls such as animal noise disturbance, where the highest priority calls include officer assistance. 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 about 503,096 students enrolled in kindergarten through 12th grade. There are roughly 44 school districts with about 742 schools throughout the region, staffed with over 23,281 teachers. In addition to the primary and secondary schools, there are eight community colleges, three public higher education institutions, and several private education schools at all education levels throughout the region (CDE 2013, 2014). Table 4.14-4 identifies the public school districts that provide education at the elementary, middle/intermediate, and high school levels, and their enrollment statistics.

Facility planning for public schools is generally based on generation rates. The generation rates are compared against 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. Generation rates vary by jurisdiction and type of development.

Table 4.14-4
2013-2014 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*	Student/ Teacher Ratio
Alpine Union Elementary	Elementary	1,392	4	703	2	0	0	2	2,095	84	24:9
Bonsall Union Elementary	Elementary	1,650	3	610	1	0	0	1	2,260	96	23:5
Borrego Springs Unified	Unified	219	1	141	1	161	2	2	521	36	14:5
Cajon Valley Union	Elementary	11,077	20	5,343	7	0	0	3	16,420	761	21:6
Cardiff Elementary	Elementary	637	2	110	0	0	0	0	747	42	17:8
Carlsbad Unified	Elementary	4,962	9	2,591	3	3,423	2	3	10,993	440	25:0
Chula Vista Elementary	Elementary	24,429	46	4,917	0	126	0	1	29,472	1,393	21:2
Coronado Unified	Unified	1,180	2	743	1	1,197	1	3	3,120	156	20:0
Dehesa Elementary	Elementary	994	2	430	0	1,076	0	3	2,500	99	25:3
Del Mar Union Elementary	Elementary	3,750	8	626	0	0	0	1	4,376	271	16:1
Encinitas Union Elementary	Elementary	4,668	9	768	0	0	0	1	5,436	256	21:2
Escondido Union	Elementary	13,135	19	6,311	5	0	0	2	19,446	995	19:5
Escondido Union High	High School	0	0	0	0	11,651	6	3	9,303	420	22:2
Fallbrook Union Elementary	Elementary	3,731	6	1,550	1	0	0	2	5,281	243	21:7
Fallbrook Union High	High School	0	0	0	0	2,589	2	2	2,634	123	21:4
Grossmont Union High	High School	0	0	0	0	22,542	13	6	22,555	910	24:8

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*	Student/ Teacher Ratio
Jamul-Dulzura Union Elementary	Elementary	563	1	317	2	109	0	1	989	54	18:3
Julian Union Elementary	Elementary	1,502	1	833	1	1,207	1	2	3,542	161	22:0
Julian Union High	High School	0	0	0	0	152	1	1	152	13	11:7
La Mesa-Spring Valley	Elementary	8,403	17	3,700	4	0	0	2	12,103	488	24:8
Lakeside Union Elementary	Elementary	3,693	7	1,590	2	0	0	4	5,766	270	21:4
Lemon Grove	Elementary	2,699	4	1,255	0	0	0	2	3,954	148	26:7
Mountain Empire Union	Unified	1,612	4	848	3	1,090	3	11	3,550	179	19:8
National Elementary	Elementary	5,023	11	924	0	0	0	1	5,947	286	20:8
Oceanside Unified	Unified	10,842	17	4,544	4	5,858	3	2	21,244	875	24:3
Poway Unified	Unified	16,429	25	8,005	6	10,982	6	1	35,498	1,321	26:9
Ramona City Unified	Unified	2,410	5	1,323	1	1,978	2	3	5,740	224	25:6
Rancho Santa Fe Elementary	Elementary	420	1	273	1	0	0	0	693	60	11:6
San Diego County Office of Education	County Office of Education (COE)	1,055	1	574	0	2,552	1	6	4,190	263	15:9
San Diego Unified	Unified	63,156	136	28,598	31	38,549	41	10	130,303	6,845	19:0
San Diego Union High	High School	0	0	4,019	4	8,440	4	3	12,497	396	31:6
San Marcos Unified	Unified	10,225	11	4,408	3	5,474	4	2	20,107	815	24:7
San Pasqual Union Elementary	Elementary	328	1	221	0	0	0	0	549	27	20:3
San Ysidro Elementary	Elementary	3,420	5	1,681	1	2	0	1	5,103	202	25:3
Santee Elementary	Elementary	4,339	9	2,055	0	0	0	3	6,394	300	21:3

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*	Student/ Teacher Ratio
SBC – High Tech High	Statewide Benefit Charter	500	2	660	2	1,170	2	0	2,330	110	21:2
Solana Beach Elementary	Elementary	2,586	6	445	0	0	0	0	3,031	176	17:2
South Bay Union Elementary	Elementary	6,334	11	1,368	0	0	0	1	7,702	425	18:1
Spencer Valley Elementary	Elementary	1,082	1	814	0	1,225	0	1	3,121	242	12:9
Sweetwater Union High	High School	414	0	11,540	10	28,947	12	10	40,901	1,727	23:7
Vallecitos Elementary	Elementary	208	1	104	0	82	0	2	394	22	17:9
Valley Center-Pauma Unified	Unified	1,983	4	892	1	1,287	2	2	4,162	187	22:3
Vista Unified	Unified	10,999	17	5,437	5	9,149	5	8	25,670	1,120	22:9
Warner Unified	Unified	137	2	64	0	104	2	1	305	20	15:3

Source: CDE 2013, 2014
*Data from 2012-2013

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 4.14-5 shows the city and county public library systems in the County. 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 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 4.14-5
Municipal and County Public Library Systems in the San Diego Region, 2012

Library	Total Outlets	Total Visits	Total Circulation	Total Transactions	Total Programs
Carlsbad City Library	3	858,422	1,354,453	299,464	1,809
Chula Vista Public Library	4	726,310	969,168	115,157	665
Coronado Public Library	1	368,226	352,261	47,771	631
Escondido Public Library	4	518,966	683,183	99,853	220
National City Public Library	1	307,554	252,356	85,453	4,246
Oceanside Public Library	4	472,617	501,410	39,228	876
San Diego County Library	35	5,920,891	11,988,559	551,304	22,807
San Diego Public Library	36	5,602,380	6,973,727	1,299,071	14,018

Source: CSL 2013

Recreational Facilities

San Diego County has hundreds of designated parks, with uses including camping parks, preserves, sports parks, community and teen centers, botanical gardens, historic sites, and day use parks. As of 2015, these parks and open spaces span over 1,000,000 acres throughout the San Diego region (SANDAG 2015). Trails and pathways allow for walking, hiking, biking and horseback riding throughout the region and connect scenic and recreational areas. These trails include the California Coast Trail, which is intended to be a contiguous public right-of-way from the northern to southern border of California to allow for coastal access.

Parkland and open space is owned by federal, state, and local government agencies, as well as by tribes, public utilities, private owners, and joint use agreements. Funding for parks comes from existing sources from their 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 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 centers, senior centers, 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.

4.14.1.2 WASTEWATER COLLECTION AND TREATMENT FACILITIES

The San Diego region is served by over 7,935 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 4.14-6 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. As a result of the treatment process, biosolids are produced and disposed of in landfills. Table 4.14-7 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 on-site wastewater treatment systems, such as septic tanks. Most commonly, these systems consist of a septic tank connected to a leach line.

Table 4.14-6
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 Ag. Ass. CS	0.7	1.6	0.4
AC/S Environmental Security, MCB Camp Pendleton	USMC Base, Camp Pendleton CS	32.0	104.0	80.0
Borrego Water District	Borrego Wd- Rams Hill CS	2.8	12.5	1.6
Buena Sanitation District	Buena CS	8.3	91.8	0.0
Carlsbad MWD	Carlsbad MWD CS	4.8	282.0	0.0
Chula Vista City	City of Chula Vista CS	2.6	501.0	0.0
Coronado City	City of Coronado CS	6.6	39.3	1.0
CSU San Diego	San Diego State University CS	0.0	5.0	4.0
Del Mar City	City of Del Mar CS	1.8	29.0	0.0
El Cajon City	City of El Cajon CS	0.0	192.0	0.0
Encinitas City	City of Encinitas CS	4.0	123.0	0.0
Escondido City	HARRF Disch to San Elijo Ocean Outfall CS	10.7	370.0	0.0
Fallbrook Public Utility District	Fallbrook Plant 1, Oceanside of CS	4.6	76.8	0.0
Imperial Beach City	City of Imperial Beach CS	6.0	39.5	0.3
La Mesa City	City of La Mesa CS	0.0	155.0	0.0
Lemon Grove City	City of Lemon Grove CS	0.1	62.4	0.0
Leucadia Wastewater District	Leucadia Wastewater District CS	16.67	200.0	0.0
Marine Corps Base, Camp Pendleton	USMC Base, Camp Pendleton CS	33.9	120.1	95.0
National City	City of National City CS	1.0	105.0	0.0
Oceanside PWD	La Salina WWTP, Oceanside Otfl CS	35.6	439.7	0.0
Olivenhain MWD	4-S Ranch CS	5.5	45.0	10.0
Otay MWD	Otay Water District CS	2.2	82.0	0.0
Padre Dam Municipal Water District	Padre Dam CS	4.6	161.0	0.0
Poway City	City of Poway CS	3.4	185	63.5
Rainbow MWD	Rainbow Municipal Water Dist CS	3.0	60.0	0.0
Ramona MWD	San Vicente Treatment Plant CS	1.0	40.0	28.0
Rancho Santa Fe CSD	Rancho Santa Fe San Dist Plant CS	6.0	60.0	0.0
Rancho Santa Fe CSD	Santa Fe Valley CS	2.0	15.2	0.0
San Diego City	San Diego City CS	145.0	3,002.0	2,000.0
San Diego County Department of Public Works	County of San Diego CS	10.0	407.0	64.0
San Diego County Department of Public Works	Julian Water Pollution Facil. CS	0.6	2.8	1.8
Solana Beach City	City of Solana Beach CS	2.0	49.0	0.0
UC San Diego	University of California, San Diego CS	.5	25.0	3.0
US Marine Corps Recruit Depot Vallecitos Water District	Marine Corps Recruit Depot CS	0.0	4.0	2.5
Vallecitos Water District	Meadowlark CS	7.6	247.0	0.0
Valley Center MWD	Lower Moosa Canyon Recl Facil CS	5.0	50.0	0.0
Valley Center MWD	Woods Valley CS	5.0	50.0	0.0
Vista City	City of Vista CS	0.3	211.7	0.0

Source: SWRCB 2015a

Table 4.14-7
Wastewater Treatment and Water Recycling Facilities in the San Diego Region

Responsible Agency	Facility Name	Planned Capacity (2015) million gallons per day			Planned Capacity (2040) million gallons per day			Effluent Quality for TDS (mg/L)	Disposal Method
		P	S	T	P	S	T		
Carlsbad MWD	Carlsbad WRF	-	-	4.0	-	-	11.0	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	-	5.5	5.5	-	850	Outfall
Oceanside, City of	San Luis Rey WRF	13.5	13.5	1.5	17.4	17.4	7.5	1,000	Reuse-Outfall
Olivenhain MWD	4S Ranch WWTP	2.0	2.0	2.0	2.0	2.0	2.0	897	Reuse-Outfall
Otay WD	Ralph W. Chapman WRF	1.3	1.3	1.3	1.3	1.3	1.3	874	Reuse-Outfall
Padre Dam MWD	Padre Dam WRF	4.0	4.0	4.0	4.0	4.0	4.0	1,000	Reuse-Outfall
Ramona MWD	Santa Maria WRP	-	1.1	0.4	-	1.5	1.5	850	Reuse-Stream
Ramona MWD	San Vicente WRP	0.8	0.8	0.8	0.8	0.8	0.8	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
San Diego, City of (MWWD)	North City WRP	30.0	30.0	24.0	40.0	40.0	30.0	1,000	Reuse-Outfall
San Diego, City of (MWWD)	Point Loma WWTP	240.0	-	-	240.0	-	-	1700-2000	Outfall
San Diego, City of (MWWD)	South Bay WRP	15.0	15.0	13.5	21.0	21.0	15.0	1,000	Reuse-Outfall
San Elijo JPA	San Elijo WRF	5.3	5.3	3.0	5.3	5.3	5.3	1,000	Reuse-Outfall
Camp Pendleton Marine Corps Base	Southern Region TTP	-	-	3.8	-	-	7.5	750	Irrigation/Outfall
Camp Pendleton Marine Corps Base	Northern Region TTP	-	-	-	-	-	3.8	750	Irrigation/Percolation
Camp Pendleton Marine Corps Base	Sewage Treatment Plant #09	-	-	0.4	-	-	0.7	890	GW-Injection
Camp Pendleton Marine Corps Base	Sewage Treatment Plant #11	-	1.4	-	-	-	-	755	Percolation
Camp Pendleton Marine Corps Base	Sewage Treatment Plant #12	-	0.4	-	-	-	-	600	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	0.625	0.625	0.625	1,000	Irrigation
Valley Center MWD	North Village WRF	0.075	0.075	0.075	0.225	0.225	0.225	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	-	-	-	0.088	0.088	0.088	1,000	Irrigation
Valley Center MWD	Woods Valley Ranch WRF	0.158	0.158	0.158	0.450	0.450	0.450	1,000	Irrigation (Golf Course)
Valley Center MWD	Skyline Ranch WRF	0.025	0.025	0.025	0.025	0.025	0.025	1,000	Irrigation (Golf Course)
Whispering Palms CSD	Whispering Palms WPCF	0.5	0.5		0.5	0.5	0.5	963	Pasture-Percolation
	Total Capacity	389.4	152.25	77.6	419.24	159.74	107.54		

Source: SDCWA 2010

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 Wastewater Department

The City of San Diego Metropolitan Wastewater Department (MWWD) 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 MWWD 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 2015). 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 2015). 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 2015). 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 2015).

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 SBIWTP is able to provide secondary treatment for 25 million gallons of sewage per day that is then discharged into the Pacific Ocean. The treatment plant is located in San Ysidro, about 2 miles west from the point of entry and directly north of Tijuana’s main wastewater pumping station.

4.14.1.3 STORM WATER DRAINAGE FACILITIES

Storm water runoff occurs when precipitation from rain and snowmelt events flows over land or impervious surfaces and does not infiltrate 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, storm water is able to flow into natural drainage sites, such as creeks, streams, or rivers.

In urban areas, storm water 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, man-made channels, or storm drains. Storm water systems such as these are designed to prevent flooding in urban areas, control erosion, and protect water quality. See Section 4.10 Hydrology and Water Quality for discussion and analysis of the hydrology and water quality impacts of storm water associated with the proposed Plan.

Each MS4 operator, identified in Table 4.14-8, is responsible for operation, maintenance, and management of its own system. MS4s are interconnected, and their operators and often share facilities, cooperatively manage systems, and coordinate pollution control efforts.

Table 4.14-8
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 Co, MS4	San Diego County Department of Environmental Health	San Diego
San Diego Intl 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 2015b

Each jurisdiction within the project area requires the implementation of storm water 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 the Regulatory Setting.

4.14.1.4 SOLID WASTE

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. The City of San Diego is the LEA for facilities within that city. The LEAs are certified by the 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 2014a).

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 4.14-9 shows the 2013 waste generation and 2006 diversion rates by jurisdiction.

Table 4.14-9
Total Waste Generation Rates and Annual Disposal Rates
by Jurisdiction in the San Diego Region

City	2012 Total Waste Generation (Tons)	2011 Annual Disposal Rate (PPD)
City of Carlsbad	112,678	5.7
City of Chula Vista	159,833	3.6
City of Coronado	38,921	11.0
City of Del Mar	8,681	12.2
City of El Cajon	88,407	5.0
City of Encinitas	61,707	6.1
City of Escondido	144,466	5.5
City of Imperial Beach	13,741	3.2
City of La Mesa	30,271	3.4
City of Lemon Grove	21,476	4.6
City of National City	51,251	4.8
City of Oceanside	113,271	4.0
City of Poway	45,178	5.7
City of San Diego	1,290,892	5.9
City of San Marcos	88,095	5.5
City of Santee	46,644	5.3
City of Solana Beach	13,093	4.5
City of Vista	85,086	5.8
County of San Diego	461,599	5.2
Total	**2,875,288**	**107**

Source: CalRecycle 2006, 2014b
PPD: pounds per resident per day

Landfills

There are four landfills in the San Diego region, three of which are privately operated and one that is operated by the City of San Diego. The landfills receive a total daily throughput of approximately 17,680 tons per day. Together, they have a total remaining capacity of 82,086,693 cubic yards, which is roughly 37 percent of their total capacity (CalRecycle 2014c). Table 4.14-10 shows the remaining capacity of landfills located in the San Diego region and their estimated closure date. MCB Camp Pendleton operates two additional landfills for its exclusive use.

Table 4.14-10
Landfills Located in the San Diego Region

Facility	Operator	SwisNo	Estimated Closure Date	Throughput (Tons/Day)	Total Capacity (Cu Yd)	Remaining Capacity (Cu Yd)	% Capacity Remaining
Borrego Landfill	Allied Waste Industries, Inc.	37-AA-0006	10/31/2030	50	844,000	478,836	56.70%
Otay Landfill	Allied Waste Industries, Inc.	37-AA-0010	2/28/2028	5,830	61,154,000	24,514,904	40.10%
West Miramar Landfill	City of San Diego	37-AA-0020	8/31/2022	8,000	87,760,000	14,846,602	16.90%
Sycamore Landfill	Allied Waste Industries, Inc.	37-AA-0023	10/10/2031	3,800	71,233,171	42,246,551	59.3%
Total				**17,680**	**220,991,171**	**82,086,693**	**37.10%**

Source: CalRecycle 2014c

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 16,002 tons. Table 4.14-11 provides a list of transfer facilities and MRFs for the region and their individual daily throughputs.

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 140 recycling centers in the San Diego region that collect recyclable materials (CalRecycle 2015). In addition, nine 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 (CalRecycle 2014c). Another five chipping and grinding facilities in the region are designed to reduce the size of compostable material (CalRecycle 2014c).

Table 4.14-11
Transfer/ Processing Facilities

Facility	Operator	SwisNo	Throughput (Tons/Day)
EDCO Recycling	EDCO Disposal, Inc.	37-AA-0964	516
SANCO Recycling	SANCO Services	37-AA-0965	375
Ramona MRF and Transfer Station	JEMCO Equipment Corporation	37-AA-0925	370
Universal Refuse Removal Recycling & TS	Universal Refuse Removal	37-AA-0929	1,000
Palomar Transfer Station, Inc.	Palomar Transfer Station, Inc.	37-AH-0001	800
EDCO Recovery and Transfer Station	EDCO Disposal Corporation	37-AA-0105	1,500
Escondido Resource Recovery	JEMCO Equipment Corporation	37-AA-0906	2,500
EDCO Station	EDCO Disposal Corporation	37-AA-0922	1,000
Fallbrook Recycling Facility	Fallbrook Refuse Service	37-AA-0923	500
Amswede Recycling	Amswede Inc.	37-AA-0952	99
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-87	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
Waste Management of North County	Waste Management of North County	37-AA-0928	4,500
Total			**16,002**

Source: CalRecycle 2014c
* Solid Waste Information System (SWIS) data was converted using standard conversion rate of 1.67 cubic yards

Construction and Demolition and Inert Debris Facilities

Construction and demolition (C&D) 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 area recycled the most, while lumber is most commonly sent to the landfill (CalRecycle 2014c). There are 19 C&D recyclers in San Diego, one processing facility, and four inert fill-disposal operations (CalRecycle 2014d).

4.14.2 REGULATORY SETTING

FEDERAL LAWS, REGULATIONS, PLANS, AND POLICIES

Clean Water Act

The 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 Sections 1251 et seq.). States are required to adopt water quality standards for all surface waters of the U.S., as detailed in Section 303. Every applicant for a federal permit or license for any activity that may result in a discharge to a water body must obtain a CWA Section 401 (33 USC Section 1341) Water Quality Certification for the proposed activity and must comply with state water quality standards prescribed in the certification. In California, these certifications are issued by the SWRCB under the auspices of nine Regional Water Quality Control Boards (RWQCBs). 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 storm water 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. CWA Section 404 (33 USC Section 1344) establishes a permit program, administered by USACE, regulating discharge of dredged or fill materials into waters of the U.S., including wetlands. For a detailed discussion of the CWA see Section 4.10.2. Storm water and wastewater infrastructure 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 Section 6901 et seq.) gives USEPA 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. USEPA also developed federal criteria for the proper design and operation of municipal solid waste landfills (MSWLFs) and other solid waste disposal facilities. USEPA approved the State of California's program, a joint effort of the CIWMB, 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 FHWA and other USDOT 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 Section 303).

STATE LAWS, REGULATIONS, PLANS, AND POLICIES

Police

California Mutual Aid Plan

The California 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.

Schools

Assembly Bill 16

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 (CDE) 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 CDE list of source schools may apply (Chapter 33, Statutes of 2002).

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

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).

California Building Standards Code (Title 24, CCR)

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 CRR). Cities and counties are required by state law to enforce Title 24; however, they can adopt more restrictive ordinances.

Recreational Facilities

Quimby Act and AB 1359

Cities and counties have been authorized since the passage of the 1975 Quimby Act (Government Code §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 pubic recreational opportunities.

Utilities

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. Storm water and wastewater infrastructure 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 storm water through authorization of USEPA. 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, storm water drainage facilities, and landfills, the SWRCB has issued the following orders:

- 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 4.10.2 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.

Assembly Bill 885 On-Site Wastewater Treatment Systems (OWTS)

AB 885 (Chapter 781, Statutes of 2000) requires that the SWRCB, along with other interested parties, adopt specified regulations or standards for the permitting and operation of prescribed on-site wastewater treatment systems. Each RWQCB would have to incorporate the new standards and regulations into their regional water quality control plans. Resolution R9-2015-0008, adopted in April 2015, incorporates the OWTS policy into the San Diego Water Quality Control Plan (SWRCB 2014). On-site 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.

Integrated Waste Management Act of 1989 (AB 939 or IWMA)

AB 939 (Chapter 1095, Statutes of 1989) requires each city and county in California develop Integrated Waste Management Plans (IWMP) to divert 25% of its waste stream by 1995, and 50% 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 2012). 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.

Title 14, CCR

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 IWMP; and solid waste cleanup program (14 CCR Division 7).

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 2014).

REGIONAL AND LOCAL LAWS, REGULATIONS, PLANS, AND POLICIES

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 storm water 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) (Municipal Permit) regulates the conditions under which storm water and non-storm water discharges into and from MS4s are prohibited or limited. 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 storm water and non-storm water into waters of the U.S. within the San Diego region. These entities are the San Diego County Copermittees (Copermittees) which, along with the Orange County Copermittees, are subject to the requirements of the permit. The Caltrans storm water 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 a model Standard Urban Stormwater Mitigation Plan (SUSMP) (County of San Diego 2012) and an SUSMP manual (County of San Diego 2011b) to identify mitigation strategies required to protect storm water quality for new development and significant redevelopment within the San Diego region. The County's model SUSMP establishes a series of source control, site design, and treatment control 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., co-permittees of the Municipal Permit) has adopted their own SUSMP. A PDP should refer to the SUSMP that has jurisdiction for the project for guidance on the mitigation of storm water pollutants. All future projects implementing the proposed Plan must adhere to these regulations.

Provision D.1.g of RWQCB Order R9-2007-0001 requires the Copermittees to implement a Hydromodification Management Plan (HMP) "to manage increases in runoff discharge rates and durations from all PDPs, where such increased rates and durations are likely to cause increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force." The HMP requires PDPs to implement hydrologic control measures so that post-project runoff flow rates and durations do not exceed pre-project flow rates and durations where they would result in an increased potential for erosion or significant impacts to beneficial uses or violate the channel standard. For a more detailed discussion of the San Diego Municipal Permit and HMP, as well as its application, see Section 4.10.2.

Caltrans NPDES Permit

Caltrans operates under its own MS4 Permit (Order No. 2012-0011-DWQ), separate from the Municipal MS4 Permit. Caltrans' discharges consist of storm water and non-storm water discharges from state-owned rights-of-way and facilities. The Caltrans MS4 Permit regulates storm water discharge from Caltrans properties, facilities, and activities. It also requires that Caltrans construction activities that disturb 5 or more acres comply with SWRCB requirements. The most recent permit was approved in 2012 and became effective on July 1, 2013. This permit includes considerations for areas of special biological significance, total maximum daily loads, green infrastructure, and program effectiveness assessments, among other categories. For more information on the Caltrans NPDES Permit, see Section 4.10.2.

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, as well as describes monitoring plans to assess its effectiveness (SDRWQCB 2011). 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.

Wastewater Agency Management Plans

Municipalities and water districts with the responsibility for wastewater/sewer services have a variety of management plans for these utilities. These documents range from wastewater and/or sewer master plans, water management plans, integrated water resources plans, and regional water facilities master plans, among others.

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. Under the law SANDAG is designated as the region's Integrated Waste Management Local Task Force responsible advising and assisting the cities and County with certain aspects of compliance with AB 939.

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, storm water and sewer infrastructure.. Table 4.14-12 shows the different public services and utilities topics addressed in local jurisdictions' General Plans.

Table 4.14-12
General Plans Addressing Public Services and Utilities

City	Fire Protection	Police Protection	Schools	Libraries	Wastewater	Storm Water	Solid Waste	Parks and Recreation	Facilities Financing
Carlsbad	✓	✓	✓	✓	✓	✓	✓	✓	✓
Chula Vista	✓	✓	✓	✓	✓	✓	✓	✓	✓
Coronado	✓	✓	✓	✓	✓	✓		✓	
Del Mar	✓	✓	✓	✓	✓	✓	✓		
El Cajon	✓	✓	✓	✓	✓	✓	✓	✓	✓
Encinitas	✓	✓	✓	✓	✓	✓	✓	✓	✓
Escondido	✓	✓	✓	✓	✓	✓	✓	✓	✓
Imperial Beach	✓	✓	✓	✓	✓	✓	✓	✓	✓
La Mesa	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lemon Grove	✓	✓	✓	✓	✓	✓	✓	✓	✓
National City	✓	✓	✓	✓	✓	✓	✓	✓	✓
Oceanside	✓	✓	✓	✓	✓	✓	✓	✓	✓
Poway	✓	✓	✓	✓	✓	✓	✓	✓	✓
City of San Diego	✓	✓	✓	✓	✓	✓	✓	✓	✓
San Marcos	✓	✓	✓	✓	✓	✓	✓	✓	✓
Santee	✓	✓	✓	✓	✓	✓	✓	✓	✓
Solana Beach	✓	✓	✓		✓	✓	✓	✓	✓
Vista	✓	✓	✓	✓	✓	✓	✓	✓	✓
County of San Diego	✓	✓	✓	✓	✓	✓	✓	✓	✓

Data compiled by AECOM in 2014

The coastal cities in the San Diego region have adopted Local Coastal Programs (LCPs) for all or parts of their jurisdictions. The following jurisdictions have adopted LCPs: Carlsbad, 1986 (with the exception of the Agua Hedionda Segment); Chula Vista, 1985; Coronado, 1984; Del Mar, 2001; Encinitas, 1995; Imperial Beach, 1984; National City, 1991; Oceanside, 1986; San Diego (with the exception of the Mission Bay Segment), 1988; and Solana Beach, 2013. Each LCP reflects the unique needs of the individual coastal areas, while remaining consistent with the goals and policies of the Coastal Act. All LCPs must allow for coastal access and recreational opportunities, as stated in the Coastal Act (California Coastal Commission 2012).

Construction and Demolition Ordinances

C&D Ordinances are designed to ensure that debris from construction and demolition projects gets recycled and does not end up in municipal landfills. This usually requires the preparation of a waste management plan showing how the project applicant will meet diversion goals. The cities of Chula Vista, Encinitas, Imperial Beach, La Mesa, Lemon Grove, San Diego, Santee, Solana Beach, and Vista and the County have adopted C&D Ordinances (CalRecycle 2011).

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.

County Code of San Diego Ordinance No. 10253

This ordinance amends Sections 68.502 through 68.571 of the County Code to reflect the change in state law regarding management of solid waste and diversion of recyclable material from disposal. This ordinance helps to regulate the collection, transportation, and disposal of solid waste and recyclable materials.

4.14.3 SIGNIFICANCE CRITERIA

Appendix G of the CEQA Guidelines ("Appendix G") 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, the unique nature of the proposed Plan's population and housing impacts, and the unique characteristics of the proposed Plan and EIR.

Checklist questions for public services and utilities are provided in several sections of Appendix G. For purposes of this EIR, the Appendix G questions have been combined and modified.

Specifically, Appendix G addresses criteria for Public Services (XIV), Utilities and Service Systems (XVII), and Recreation (XV), as three separate sections. For the purposes of this EIR, these three issue areas have been combined in this section (PS-1, U-1, U-2, and U-3). Additionally, the criteria (b) and (d) listed in Appendix G criteria under Utilities and Service Systems (XVII), which address water supply impacts and construction of new water supply and treatment facilities, are addressed in Section 4.16 Water Supply. Appendix G criteria (a) and (b) addressing impacts to recreational facilities have been combined with those addressing public services (PS-1). For purposes of this EIR, implementation of the proposed Plan would have significant public services and utilities impact if it would:

PS-1 Result in the substantial physical deterioration of public facilities or cause 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.

U-1 Result in the expansion or construction of wastewater collection and treatment facilities to adequately meet projected capacity needs, the construction of which could cause significant environmental impacts.

U-2 Require or result in the construction of new storm water drainage facilities or the expansion of existing facilities, the construction of which could cause significant environmental impacts.

U-3 Require or result in the construction of new solid waste disposal facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects.

4.14.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

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

ANALYSIS METHODOLOGY

The following analysis evaluates impacts to public facilities as a result of regional growth and land use change and the implementation of transportation network improvements and programs. Impacts to these facilities would include physical deterioration, or the need to construct new or expanded facilities in order to maintain service ratios or other performance standards. Impacts of construction activities for new or expanded facilities are analyzed as well.

During the timeframe of the proposed Plan, climate change effects likely to exacerbate the proposed Plan's public facilities impacts include, but are not limited to, more days of extreme high temperatures, longer and more humid heat waves, less frequent, more intense rainstorms, more frequent flood events, sea level rise, more frequent and severe coastal flooding, and more frequent and severe wildfires. For example, increased risk and intensity of wildfire and increased risk of flooding associated with sea level rise would increase demands for fire protection and emergency services. In wildfire hazard areas and areas vulnerable to sea level rise that also are forecasted for new growth, the climate change effects would compound the demands that new growth places on public services. In general, these climate change effects would increase between 2020 and 2050. Climate change effects are further detailed in Appendix F.

IMPACT ANALYSIS

2020

Regional Growth and Land Use Change

From 2012 to 2020, regional population is forecasted to increase by 292,284 people (9 percent), 83,866 housing units (7 percent), and 173,211 jobs (13 percent). The 2020 regional land use pattern is shown in Figure 2.0-11. Approximately 75 percent of the forecasted regional population increase by 2020 is in the City of San Diego (45 percent), County of San Diego (17 percent), and City of Chula Vista (13 percent). Similarly, these three jurisdictions accommodate approximately 77 percent of new housing units and 69 percent of new jobs, respectively, by 2020.

In the City of San Diego, the communities with the highest proportion of the forecasted population and housing unit increases include Mira Mesa, Otay Mesa, Downtown, Pacific Highlands Ranch, Black Mountain Ranch, University City, Navajo, and Mission Valley. The highest proportions of forecasted job increases are in the communities of Downtown, Kearny Mesa, Mira Mesa, Mission Valley, University City, and Otay Mesa.

In the unincorporated County, the communities with the highest proportion of the forecasted population and housing unit increases include Lakeside, Otay, North County Metro, Pendleton-De Luz, Fallbrook, Spring Valley, Ramona, and Valley Center. The highest proportions of forecasted job increases are in the communities of Lakeside, Spring Valley, North County Metro, Fallbrook, and Ramona. In these areas, higher levels of public services would be needed, and demand for public services would increase throughout the region in response to forecasted growth.

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 response times and service ratios needed 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 2020, 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 facilities or expansion of existing facilities would likely be needed to maintain existing (2012) service levels for fire protection, police protection, emergency services, schools, libraries, and recreational facilities in the year 2020. 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.

The provision of new facilities or expansion of existing governmental facilities would result in short-term construction-related impacts and long-term operational impacts, such as air quality, noise, traffic, and other resource areas. 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

In general, the construction and operation of transportation network improvements would require minor or no use of public services or facilities. Demand for public services and facilities is typically driven by new growth as described above. 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.

New transportation network improvements and programs would generally require little to no increase in police and fire protection and emergency services and would not cause deterioration of these facilities compared to existing (2012) conditions. 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 the annual rates of vehicle and bicycle/pedestrian injury/fatal collisions would not increase. Therefore, the need for public services and facilities would not increase because of planned transportation network improvements.

Transportation network improvements would not result in substantial physical deterioration of recreational facilities through direct land conversion or indirect impacts such as noise or increased surface runoff in 2020 due to design standards and the locations of existing recreational facilities and future transportation network improvement. Transportation network improvements would not lead to the increased use of recreational facilities, and therefore would not expedite their physical deterioration.

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.

2020 Conclusion

Implementation of regional growth and land use change, but not transportation network improvements, 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 2020 is significant.

2035

Regional Growth and Land Use Change

All jurisdictions within the San Diego region are projected to increase in population between 2012 and 2035. Approximately 78 percent of the forecasted regional population increase between 2021 and 2035 is in the City of San Diego (51 percent), County of San Diego (18 percent), and City of Chula Vista (9 percent). Similarly, these three jurisdictions accommodate approximately 81 percent of new housing units and 66 percent of new jobs, respectively, between 2021 and 2035.

In the City of San Diego, the communities with the highest proportion of the forecasted population and housing unit increases include Downtown, College Area, Mira Mesa, Otay Mesa, Mission Valley, Navajo, and Uptown. The highest proportions of forecasted job increases are in the communities of Downtown, Kearny Mesa, Mira Mesa, Mission Valley, University City, and Otay Mesa. In the unincorporated County, the communities with the highest proportion of the forecasted population and housing unit increases include Lakeside, North County Metro, Otay, Fallbrook, Spring Valley, San Dieguito, and Ramona. The highest proportions of forecasted job increases are in the communities of Lakeside, Spring Valley, North County Metro, Otay, and Fallbrook.

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, such as air quality, noise, traffic, and other resource areas. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessen 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

By 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 true in the 2020 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. Therefore, transportation network improvements and programs would have a less than significant impact.

2035 Conclusion

Implementation of regional growth and land use change, but not transportation network improvements, 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

Approximately 75 percent of the forecasted regional population increase between 2036 and 2050 is in the City of San Diego (52 percent), County of San Diego (14 percent), and City of Chula Vista (9 percent). Similarly, these three jurisdictions accommodate approximately 78 percent of new housing units and 77 percent of new jobs, respectively, between 2036 and 2050.

In the City of San Diego, the communities with the highest proportion of the forecasted population and housing unit increases include the City Heights and Eastern Area of Mid-City, Greater North Park, Uptown, Linda Vista, Clairemont Mesa, and Downtown. The highest proportions of forecasted job increases are in the communities of Downtown, Otay Mesa, and University City.

In the unincorporated County, the communities with the highest proportion of the forecasted population and housing unit increases include Lakeside, North County Metro, and Spring Valley. The highest proportions of forecasted job increases are in the communities of Otay, Lakeside, and North County Metro.

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, such as air quality, noise, traffic, and other resource areas. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessen 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

By 2050, the highway, transit, and active transportation (bicycle and pedestrian) improvements, would be in place and operational in accordance with the proposed Plan. However, as described in the 2020 analysis, transportation network improvements and programs 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.

2050 Conclusion

Implementation of regional growth and land use change, but not transportation network improvements, 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.

MITIGATION MEASURES

PS-1 Deterioration and Physical Impacts Related to Public Services and Facilities

2020, 2035, and 2050

PS-1A Implement Mitigation Measures for New/Expanded Public Service Facilities. During planning, design, and project-level CEQA review of development or public facilities projects, the County of San Diego, cities, and 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, air quality, noise, traffic, biological resources, cultural resources, GHG emissions, hydrology and water quality, and water supply.

SIGNIFICANCE AFTER MITIGATION

2020, 2035, and 2050

Implementation of the proposed Plan would result in significant impacts associated with the construction or expansion of public facilities in 2020, 2035, and 2050 in order to maintain necessary service ratios and performance standards. Mitigation Measure PS-1A 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.

U-1 RESULT IN THE EXPANSION OR CONSTRUCTION OF WASTEWATER COLLECTION AND TREATMENT FACILITIES TO ADEQUATELY MEET PROJECTED CAPACITY NEEDS, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS.

ANALYSIS METHODOLOGY

The following section analyzes the impacts of regional growth and land use change on the capacity of existing wastewater treatment facilities. Where the analysis shows that forecasted regional growth would result in new or expanded collection and treatment facilities, the environmental impacts of constructing such new or expanded collection and treatment facilities are described. Section 4.10 Hydrology and Water Quality is referenced here, in regard to waste discharge requirements. Transportation network improvements and programs would not generate substantial wastewater from their operational activities, including landscaping, and the construction of these projects would generate a minimal amount of wastewater for a short period of time. Due to the negligible demand for wastewater facilities from the construction and operation of transportation network improvements and programs, this analysis focuses on regional growth and land use change.

IMPACT ANALYSIS

2020

Regional Growth and Land Use Change

From 2012 to 2020, regional population is forecasted to increase by 292,284 people (9 percent), 83,866 housing units (7 percent), and 173,211 jobs (13 percent). The 2020 regional land use pattern is shown in Figure 2.0-11. Approximately 75 percent of the forecasted regional population increase by 2020 is in the City of San Diego (45 percent), County of San Diego (17 percent), and City of Chula Vista (13 percent). Similarly, these three jurisdictions accommodate approximately 77 percent of new housing units and 69 percent of new jobs, respectively, by 2020.

In the City of San Diego, the communities with the highest proportion of the forecasted population and housing unit increases include Mira Mesa, Otay Mesa, Downtown, Pacific Highlands Ranch, Black Mountain Ranch, University City, Navajo, and Mission Valley, which are all served by wastewater collection systems and treatment facilities. In the unincorporated areas of the County, the communities with the highest proportion of the forecasted population and housing unit increases include North County Metro, Fallbrook, Spring Valley, Ramona, and Valley Center, which are currently served by OWTS. While population growth would result in an increase in the amount of wastewater generated, especially in the cities of San Diego and Chula Vista, it is likely that the existing wastewater treatment plants have sufficient capacity to serve forecasted growth through 2020. However, smaller treatment plants listed throughout the region may reach capacity and need to be expanded. 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 on-site wastewater treatment facilities, such as septic tanks.

The provision of new or expanded wastewater treatment facilities and collection systems would result in short-term construction-related impacts and long-term operational impacts, such as air quality, noise, traffic, water quality, and other resource areas. WDRs and existing regulations, as further described in Section 4.10, would reduce water quality impacts of future wastewater treatment facility construction projects. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessen 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 facilities and collection 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.

2020 Conclusion

Implementation of regional growth and land use change, but not transportation network improvements, would result in substantial adverse physical impacts associated with the construction and operation of new or expanded wastewater facilities and collection systems. Therefore, this impact (U-1) in the year 2020 is significant.

2035

Regional Growth and Land Use Change

From 2021 to 2035, regional population is forecasted to increase by 417,985 people (12 percent), 145,099 housing units (12 percent), and 145,814 jobs (10 percent). The 2035 regional land use pattern is shown in Figure 2.0-12.

Approximately 78 percent of the forecasted regional population increase between 2021 and 2035 is in the City of San Diego (51 percent), County of San Diego (18 percent), and City of Chula Vista (9 percent). Similarly, these three jurisdictions accommodate approximately 81 percent of new housing units and 66 percent of new jobs, respectively, between 2021 and 2035. In the City of San Diego, the communities with the highest proportion of the forecasted population and housing unit increases include Downtown, College Area, Mira Mesa, Otay Mesa, Mission Valley, Navajo, and Uptown, which are all served by wastewater collection systems and treatment facilities. In the unincorporated County, the communities with the highest proportion of the forecasted population and housing unit increases that are served by OWTS include Lakeside, North County Metro, Fallbrook, Spring Valley, and Ramona. However, the smaller wastewater collection systems and treatment facilities throughout the region would need to be expanded to ensure adequate capacity to support regional growth forecasted to occur by 2035. 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 on-site wastewater treatment facilities.

The provision of new or expanded wastewater treatment facilities and collection systems would result in short-term construction-related impacts and long-term operational impacts, such as air quality, noise, traffic, water quality, and other resource areas. WDRs and existing regulations, as further described in Section 4.10, would reduce water quality impacts of future wastewater treatment facility construction projects. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessen 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 facilities and collection 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.

2035 Conclusion

Implementation of regional growth and land use change, but not transportation network improvements, would result in substantial adverse physical impacts associated with the construction and operation of new or expanded wastewater facilities and collection systems. Therefore, this impact (U-1) in the year 2035 is significant.

2050

Regional Growth and Land Use Change

From 2036 to 2050, regional population is forecasted to increase by 215,061 people (6 percent), 97,152 housing units (7 percent), and 141,467 jobs (8 percent). The 2050 regional land use pattern is shown on Figure 2.0-13.

Approximately 75 percent of the forecasted regional population increase between 2036 and 2050 is in the City of San Diego (52 percent), County of San Diego (14 percent), and City of Chula Vista (9 percent). Similarly, these three jurisdictions accommodate approximately 78 percent of new housing units and 77 percent of new jobs, respectively, between 2036 and 2050. In the City of San Diego, the communities with the highest proportion of the forecasted population and housing unit increases include the City Heights and Eastern Area of Mid-City, Greater North Park, Uptown, Linda Vista, Clairemont Mesa, and Downtown, which are all served by wastewater collection systems and treatment facilities. In the unincorporated County, the communities with the highest proportion of the forecasted population and housing unit increases include North County Metro, Ramona, North Mountain, Julian, Rainbow, Valley Center, Bonsall, and Fallbrook. These areas of growth are currently served by OWTS. However, small wastewater collection systems and treatment facilities in these areas of increased growth would need to be expanded to ensure adequate capacity to support regional growth forecasted to occur by 2050. 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 on-site wastewater treatment facilities.

The provision of new or expanded wastewater treatment facilities and collection systems would result in short-term construction-related impacts and long-term operational impacts, such as air quality, noise, traffic, water quality, and other resource areas. WDRs and existing regulations, as further described in Section 4.10, would reduce water quality impacts of future wastewater treatment facility construction projects. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessen 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 facilities and collection 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.

2050 Conclusion

Implementation of regional growth and land use change, but not transportation network improvements, would result in substantial adverse physical impacts associated with the construction and operation of new or expanded wastewater facilities and collection systems. Therefore, this impact (U-1) in the year 2035 is significant.

MITIGATION MEASURES

U-1A Implement Mitigation Measures for New/Expanded Wastewater Facilities. During planning, design, and project-level CEQA review of development projects, wastewater treatment facilities, and collection systems, the County of San Diego, cities, and wastewater management agencies can and should apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction or expansion of wastewater facilities and collection systems. Mitigation measures should be implemented by wastewater management agencies directly responsible for the approval and construction of new or expanded collection systems or treatment plants. Significant environmental impacts requiring mitigation may include but are not limited to air quality, noise, traffic, biological resources, cultural resources, energy, greenhouse gas emissions, hydrology and water quality, and water supply.

Mitigation Measure WS-1A would reduce water use for construction and operation of projects. These measures to reduce water use would reduce the amount of wastewater that ultimately requires treatment.

SIGNIFICANCE AFTER MITIGATION

2020, 2035, and 2050

Implementation of the proposed Plan would result in significant impacts associated with the construction or expansion of wastewater facilities and collection systems in 2020, 2035, and 2050. Mitigation Measures U-1A and WS-1A would reduce the impacts of project-specific construction or expansion through project-level planning, design, and CEQA mitigation measures, and through reducing the volume of wastewater requiring treatment and reducing impacts due to construction of new or expanded wastewater facilities and collection systems. However, it cannot be guaranteed that all future project-level impacts can be mitigated to a less than significant level. Therefore, this impact (U-1) would remain significant and unavoidable.

U-2 REQUIRE OR RESULT IN THE CONSTRUCTION OF NEW STORM WATER DRAINAGE FACILITIES OR THE EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL IMPACTS.

ANALYSIS METHODOLOGY

This section analyzes the impacts of regional growth and land use change and transportation network improvements and programs on the capacity of existing storm water drainage facilities. This analysis determines if the construction of new or expansion of facilities is necessary, and discusses the environmental impacts of construction and operational activities of the new or expanded facilities.

During the timeframe of the proposed Plan, climate change effects likely to exacerbate the proposed Plan's storm water drainage facilities impacts include, but are not limited to, less frequent, more intense rainstorms, more frequent flood events, sea level rise, and more frequent and severe coastal flooding. These effects would increase the proposed Plan's impacts on peak storm water flows. In general, these climate change effects would increase between 2020 and 2050. Climate change effects are further detailed in Appendix F.

IMPACT ANALYSIS

2020

Regional Growth and Land Use Change

Regional growth and land use change would be mostly located in urban areas that are already predominately impermeable surfaces; therefore, regional growth and land use change in urban areas would not significantly increase the amount of storm water runoff. However, development that increases impervious area, for example, in previously undeveloped areas near communities such as Lakeside, Otay, North County Metro, Pendleton-De Luz, Fallbrook, Spring Valley, Ramona, and Valley Center, would result in increased storm water flows in volume and/or velocity. Any increase in volume and/or velocity of storm water flow increases the potential for flooding, scouring, erosion, and other drainage pattern alterations.

Development associated with the proposed Plan would have to comply with all existing regulations pertaining to drainage patterns (i.e., the local SUSMP and HMP). These regulations include the requirement that post-project storm water 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 LID Handbook. 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 storm water 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 4.10.2.

In addition, regulations (Hydromodification under RWQCB Order R9-2007-0001) require that priority development projects maintain pre-project hydrology under post-construction operation. This means that additional runoff volumes and peak flow discharges from impervious areas must be attenuated to pre-project levels in order to maintain hydrological conditions and not exceed storm water conveyance capacities. One of the methods for achieving this is through the implementation of Low Impact Development (LID). 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.

The effectiveness of the regulations described above to reduce the impacts of development depends upon the implementation of the requirements. When projects are out of compliance with regulations and the BMPs are not properly implemented, impacts are likely to occur. By incorporating these design standards for the protection of public life and property into the proposed Plan projects, surface runoff patterns and flows would be adequately controlled and impacts to drainage patterns would be avoided.

Notwithstanding these regulations in place, regional growth and land use change that results from implementation of the proposed Plan in 2020 would require the construction of new or expansion of existing storm water drainage facilities to ensure adequate capacity for the conveyance of storm water. Additionally, changes to drainage patterns due to regional growth and land use change as further discussed under Impact HWQ-3 in Section 4.10 would necessitate the construction of storm water drainage facilities in new places.

The provision of new or expanded stormwater drainage facilities would result in short-term construction-related impacts and long-term operational impacts, such as biological resources, water quality, water supply, and other resource areas. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessen 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 stormwater drainage facilities and collection systems, it cannot be guaranteed that impacts from the construction and operation of such 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

While most of the transportation improvements (e.g., highway, arterial, transit, and active transportation) would occur in already urbanized areas, some improvements would convert vacant land to impervious surfaces, resulting in increased storm water 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, regulations (Hydromodification under RWQCB Order R9-2007-0001) require that priority development projects maintain pre-project hydrology under post-construction operation. This means that additional runoff volumes and peak flow discharges from impervious areas, such as from new managed lanes and general purpose lanes, must be attenuated to pre-project levels in order to maintain hydrological conditions and not exceed storm water conveyance capacities. One of the methods for achieving this is through the implementation of LID. 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.

However, new or expanded storm water drainage facilities would be required to support the transportation network improvements by the year 2020, and any increase in the volume of storm water generated would require storm water 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-3 in Section 4.10 would necessitate the construction of storm water drainage facilities in new places.

The provision of new or expanded stormwater drainage facilities would result in short-term construction-related impacts and long-term operational impacts, such as biological resources, water quality, water supply, and other resource areas. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessen 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 stormwater drainage facilities and collection 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 significant impact.

2020 Conclusion

Implementation of regional growth and land use change as well as transportation network improvements would result in substantial adverse physical impacts associated with the construction of new or expanded storm water facilities. Therefore, this impact (U-2) in the year 2020 is significant.

2035

Regional Growth and Land Use Change

By 2035, regional growth and land use change would result in the conversion of vacant land in the unincorporated County in the communities of Lakeside, North County Metro, Fallbrook, Spring Valley, San Dieguito, and Ramona to impervious surfaces. While incorporating all of the design standards and maintaining compliance with all applicable regulations, as described in Section 4.10, would help to reduce some impacts related to storm water drainage, regional growth and land use change that results from implementation of the proposed Plan in 2035 would require the construction of new or expansion of existing storm water drainage facilities to ensure adequate capacity for the conveyance of storm water. Changes to drainage patterns, as discussed under HWQ-3 in Section 4.10, would also necessitate the construction of new facilities. Regional growth and land use change would be mostly located in urban areas that are already predominately impermeable surfaces; therefore, regional growth and land use change in urban areas would not significantly increase the amount of storm water runoff.

The provision of new or expanded stormwater drainage facilities would result in short-term construction-related impacts and long-term operational impacts, such as biological resources, water quality, water supply, and other resource areas. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessen 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 stormwater drainage facilities and collection systems, it cannot be guaranteed that impacts from the construction and operation of such 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

As discussed in the 2020 analysis, incorporating all of the design standards and maintaining compliance with all applicable regulations, as described in Section 4.10, would adequately control storm water flows. However, storm water drainage facilities would still be required to support the transportation network improvements. Changes to drainage patterns, as discussed under HWQ-3 in Section 4.10, would also necessitate the construction of new facilities.

The provision of new or expanded stormwater drainage facilities would result in short-term construction-related impacts and long-term operational impacts, such as biological resources, water quality, water supply, and other resource areas. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessen 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 stormwater drainage facilities and collection 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 significant impact.

2035 Conclusion

Implementation of regional growth and land use change as well as transportation network improvements would result in substantial adverse physical impacts associated with the construction of new or expanded storm water facilities. Therefore, this impact (U-2) in the year 2035 is significant.

2050

Regional Growth and Land Use Change

By 2050, regional growth and land use change would result in the conversion of vacant land to impervious surfaces in the unincorporated County in the communities of Lakeside, North County Metro, and Spring Valley. While incorporating all of the design standards and maintaining compliance with all applicable regulations, as described in Section 4.10, would help to reduce some impacts related to storm water drainage, regional growth and land use change that results from implementation of the proposed Plan in 2050 would require the construction of new or expansion of existing storm water drainage facilities to ensure adequate capacity for the conveyance of storm water. Changes to drainage patterns due to land use changes described under HWQ-3 in Section 4.10 would also create the need to construct new storm water drainage facilities. Regional growth and land use change would be mostly located in urban areas that are already predominately impermeable surfaces; therefore, regional growth and land use change in urban areas would not significantly increase the amount of storm water runoff.

The provision of new or expanded stormwater drainage facilities would result in short-term construction-related impacts and long-term operational impacts, such as biological resources, water quality, water supply, and other resource areas. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessen 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 stormwater drainage facilities and collection systems, it cannot be guaranteed that impacts from the construction and operation of such 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

As discussed in the 2020 analysis, incorporating all of the design standards and maintaining compliance with all applicable regulations, as described in Section 4.10, would adequately control storm water flows. However, storm water drainage facilities would still be required to support the transportation network improvements and programs. Changes to drainage patterns due to transportation improvements described under HWQ-3 in Section 4.10 would also create the need to construct new storm water drainage facilities.

The provision of new or expanded stormwater drainage facilities would result in short-term construction-related impacts and long-term operational impacts, such as biological resources, water quality, water supply, and other resource areas. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessen 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 stormwater drainage facilities and collection 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 significant impact.

2050 Conclusion

Implementation of regional growth and land use change as well as transportation network improvements, would result in substantial adverse physical impacts associated with the construction of new or expanded storm water facilities. Therefore, this impact (U-2) in the year 2050 is significant.

MITIGATION MEASURES

U-2A Implement Mitigation Measures for New/Expanded Storm Water Drainage Facilities. During planning, design, and project-level CEQA review of development projects or storm water projects, the County of San Diego, cities, and storm water management agencies can and should apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction or expansion of storm water facilities. Mitigation measures should be implemented by storm water management agencies directly responsible for the construction of new or expanded storm water facilities. Significant environmental impacts requiring mitigation may include, but are not limited to, air quality, noise, traffic, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality, and water supply.

For transportation network improvements, SANDAG shall, and other transportation project sponsors can and should, be required to implement storm water BMPs during planning, design, project-level CEQA review, and project construction. Measures include, but are not limited to, capturing rainwater for on-site reuse, such as for landscape irrigation.

SIGNIFICANCE AFTER MITIGATION

2020, 2035, and 2050

Implementation of the proposed Plan would result in significant impacts related to the construction of new or expansion of existing storm water facilities in 2020, 2035, and 2050. Implementation of Mitigation Measures U-2A would reduce these impacts 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 (U-2) would remain significant and unavoidable.

U-3 REQUIRE OR RESULT IN THE CONSTRUCTION OF NEW SOLID WASTE DISPOSAL FACILITIES OR THE EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.

ANALYSIS METHODOLOGY

The following section analyzes the impacts of regional growth and land use change on the capacity of existing solid waste disposal facilities. Where the analysis shows that forecasted regional growth would result in new or expanded solid waste disposal facilities, the environmental impacts of constructing such new or expanded facilities are described.

Solid waste from construction of transportation network improvements can be processed separately from municipal solid waste in construction and demolition waste and inert debris facilities, and would not largely affect municipal solid waste disposal facilities (CalRecycle 2014d). Additionally, operational waste from transportation improvements and programs would be minimal, such as the waste collected from trash receptacles placed at new transit stations. Thus, operational impacts of transportation network improvements and program impacts are not discussed further in this section.

This section focuses on the environmental impacts of new or expanded landfills needed to serve future growth. However, it should be recognized that, to serve future growth, other types of new or expanded solid waste facilities with smaller footprints would also be needed, the construction of which could also cause environmental impacts. These include collection, transfer, and material recovery facilities; and recycling, composting, and chipping/grinding facilities.

IMPACT ANALYSIS

2020

Regional Growth and Land Use Change

Existing programs, policies, and practices 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. As explained in the existing conditions section, as of 2014 the West Miramar Sanitary Landfill has 16.9 percent capacity remaining and is estimated to close in 2022, which would significantly reduce the available capacity at landfills in the region. The Borrego Landfill, Otay Landfill, and Sycamore Landfill have a limited remaining capacity and are estimated to close by the years 2030, 2028, and 2031, respectively (CalRecycle 2014c). Therefore, there is sufficient landfill capacity in the region to accommodate forecasted regional growth at least through 2020. As a result, forecasted regional growth would not generate solid waste at a level that would require new or expanded solid waste disposal facilities. Regional growth and land use change would have a less than significant impact.

Transportation Network Improvements and Programs

Construction of transportation network improvements, such as managed lanes along I-5 and I-805 that would be implemented by the year 2020, would generate solid waste and debris. While some these materials would be processed separately, some waste from these construction projects would end up in municipal solid waste facilities. This would contribute to reduced capacity of landfills in the region. However, the majority of transportation improvements in 2020 would involve service improvements and not construction of facilities, so there would only be minimal contribution of waste to the landfills. 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 2020. Therefore, transportation network improvements would not generate solid waste at a level that would require new or expanded solid waste disposal facilities. Transportation network improvements would have a less than significant impact.

2020 Conclusion

Implementation of regional growth and land use change as well as transportation network improvements would not result in substantial adverse physical impacts associated with the construction of new or expanded solid waste facilities. Therefore, this impact (U-3) in the year 2020 is less than significant.

2035

Regional Growth and Land Use Change

Existing programs, policies, and practices 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. However, all the active landfills in the region, identified in Table 4.14-10, have a limited capacity and are estimated to be closed by 2031. In addition, growth and development forecasted to occur by 2035 would result in an increase in the total amount of solid waste generated. Therefore, the region's landfills would not have sufficient permitted capacity to accommodate the solid waste disposal needs of the region in the year 2035. The insufficient capacity of the current solid waste facilities would necessitate the construction of new solid waste facilities, or the expansion of existing facilities.

The provision of new or expanded solid waste disposal facilities would result in short-term construction-related impacts and long-term operational impacts, such as biological resources, water quality, water supply, and other resource areas. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessen 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 solid waste facilities, it cannot be guaranteed that impacts from the construction and operation of such 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

Construction of transportation network improvements, such as Trolley line extensions from UTC to Mira Mesa and Phase I of San Ysidro to Kearny Mesa, and Managed Lane construction along I-5 and 1-805, that would be implemented by the year 2035 would generate solid waste and debris. This waste would be generated from site preparation activities or from materials used in the construction. While some of these materials would be processed separately, some waste from these construction projects would end up in municipal solid waste facilities. Due to the large number and the extent of the 2035 transportation network improvements, it is likely that a large amount of solid waste would be generated by these projects. This would contribute to reduced capacity of landfills in the region. As discussed in the 2035 analysis for regional growth and land use change, the region's existing landfills would not have sufficient capacity to accommodate the region's demand for solid waste disposal by 2035, and new or expanded solid waste disposal facilities would be needed. Therefore, transportation network improvements would cause a significant impact.

2035 Conclusion

Implementation of regional growth and land use change as well as transportation network improvements would result in substantial adverse physical impacts associated with the construction of new or expanded solid waste facilities. Therefore, this impact (U-3) in the year 2035 is significant.

2050

Regional Growth and Land Use Change

Existing programs, policies, and practices 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. However, all the active landfills in the region, identified in Table 4.14-10, have a limited capacity and are estimated to be closed by 2031. Regional growth would increase the total amount of solid waste generated and additional landfill capacity would need to be provided in order to support the growing population. The increase in solid waste would create a need for the construction of new solid waste facilities or the expansion of existing facilities.

The provision of new or expanded solid waste disposal facilities would result in short-term construction-related impacts and long-term operational impacts, such as biological resources, water quality, water supply, and other resource areas. Construction-related and long-term operational impacts are typically controllable and avoided or substantially lessen 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 solid waste facilities, it cannot be guaranteed that impacts from the construction and operation of such 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

Construction of transportation network improvements, such as several Trolley line extensions and Managed Lane construction along I-5, SR 52, SR 54, I-15, and 1-805 that would be implemented by the year 2050, would generate solid waste and debris. This waste would be generated from site preparation activities or from materials used in the construction of the lanes. While some of these materials would be processed separately, some waste from these construction projects would end up in municipal solid waste facilities. Due to the large number and the extent of the 2050 transportation network improvements, it is likely that a large amount of solid waste would be generated by these projects. This would contribute to reduced capacity of landfills in the region. As discussed in the 2050 analysis for regional growth and land use change, the region's existing landfills would not have sufficient capacity to accommodate the region's demand for solid waste disposal by 2050, and new or expanded solid waste disposal facilities would be needed. Therefore, transportation network improvements would cause a significant impact.

2050 Conclusion

Implementation of regional growth and land use change as well as transportation network improvements would result in substantial adverse physical impacts associated with the construction of new or expanded solid waste facilities. Therefore, this impact (U-3) in the year 2050 is significant.

MITIGATION MEASURES

U-3A Implement Mitigation Measures for New/Expanded Solid Waste Facilities. During planning, design, and project-level CEQA review of solid waste facility projects, 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 landfills.

Mitigation measures should be implemented by solid waste management agencies directly responsible for the construction of new or expanded solid waste facilities. Significant environmental impacts requiring mitigation may include, but are not limited to, air quality, traffic, and water quality.

U-3B 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, including but not limited to the following:

- Ensure that source reduction techniques and recycling measures are incorporated into project construction/demolition; and
- 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-3C Implement Green Building Measures. During planning, design, 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:

- Reuse and minimize C&D debris and increase diversion of C&D waste from landfills to recycling facilities;
- Prepare and apply a waste management plan that promotes C&D 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; and
- Develop an indoor recycling program and space.

This mitigation measure 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-3A would reduce these impacts through project-level planning, design, and CEQA mitigation measures. Mitigation Measures U-3B and U-3C would further reduce this impact by extending the life of existing landfills and delaying the need to construct new or expanded landfills. However, it cannot be guaranteed that all future project-level impacts can be mitigated to a less than significant level. Therefore, this impact (U-3) would remain significant and unavoidable.