

4. Environmental Setting

The purpose of this section is to provide a “description of the physical environmental conditions in the vicinity of the proposed Project, as they exist at the time the Notice of Preparation (NOP) is published, from both a local and a regional perspective” pursuant to CEQA Guidelines Section 15125(a). In addition to the summary below, detailed environmental setting descriptions are provided in each subsection of Chapter 5 of this Draft Supplemental EIR.

4.1 PROJECT LOCATION

The 41.13-gross-acre Project site is located within the southern portion of the City of Santa Ana (Figure 3-1, Regional Location) at 3600, 3606, 3732, 3701, 3719, 3810, 3814, 3820, and 3900 South Bristol Street and includes the following nine parcels: (Assessor Parcel Numbers [APNs]) 412-131-12, 412-131-13, 412-131-14, 412-131-16, 412-131-17, 412-131-22, 412-131-24, 412-131-25, and 412-131-26. The site is generally bordered by MacArthur Boulevard, Bristol Street, Sunflower Avenue, and South Plaza Drive. Regional access to the Project site is generally provided via Interstate 405 (I-405) at the Bristol Street exit and from State Route 55 (SR-55) from the MacArthur Boulevard exit. The regional location of the Project site is shown in Figure 3-1 in Chapter 3.0, Project Description. Access to the Project site is provided by MacArthur Boulevard, Bristol Street, Sunflower Avenue, South Plaza Drive, and Callen’s Common. Sunflower Avenue has a jurisdictional boundary near the centerline with the City of Santa Ana on the north and the City of Costa Mesa on the south. The local vicinity is shown in Figure 3-2 in Chapter 3.0, Project Description.

4.2 PROJECT SITE DESCRIPTION

The Project site is relatively flat and located approximately 33 to 34 feet above mean sea level (amsl). The 41.13-acre site is developed with 465,063 square feet (SF) of predominately retail and restaurant uses, with some medical office, financial, and fitness uses. The site includes 3 multi-story buildings and 13 one-story buildings occupied with single and multiple tenants that include the following:

- **3900 South Bristol Street:** A single story commercial building constructed in 1972 with six commercial tenants.
- **3610 South Bristol Street:** A single story commercial building constructed in 1972 with two roll up truck bays.
- **3701 South Plaza Drive:** A single story commercial building constructed in 1974 and currently serves as a gym for LA Fitness company.
- **3620 South Bristol Street:** A three-story medical and dentist office constructed in 1973.
- **3600 South Bristol Street:** A 19,910 square foot two-story bank/office building constructed in 1972.
- **3608 South Bristol Street:** A single story restaurant space constructed in 1972.
- **3730 South Bristol Street:** A single story commercial building constructed in 1972 and currently occupied by Bank of America.
- **3638 South Bristol Street:** A single story commercial building constructed in 2003 and currently occupied by Sleep Number.
- **3710 South Bristol Street:** A single story commercial building constructed in 2001 and currently occupied by Jack in the Box.

- **1500 West MacArthur Boulevard:** A single story restaurant space constructed in 1984.
- **3814-16 South Bristol Street:** A two story commercial building constructed in 1979 and currently occupied by Plato’s Closet, Aloha Hawaiian BBQ, barbershop, and a hair salon.
- **3810 South Bristol Street:** A single story commercial building constructed in 2004 and currently occupied by McDonald’s.
- **3820 South Bristol Street:** A single story commercial building constructed in 1978 and currently occupied by Robbins Brothers.
- **3930 South Bristol Street:** A 30,129 square foot retail/office building with a 3,330 SF mezzanine and 6 loading docks that was developed in 1985.

The Project site contains limited ornamental landscaping and parking is provided in surface parking areas located near each of the buildings throughout the site. An aerial photograph of the Project site is shown as Figure 3-3 in Chapter 3.0, *Project Description*.

The Project site is located within the City of Santa Ana General Plan Update (GPU) South Bristol Street Focus Area and has a land use designation of District Center-High (DC-5), as shown as Figure 3-4 in Chapter 3.0, *Project Description*. The existing zoning designations for the Project site are General Commercial (C-2) north of Callen’s Common, and Commercial Residential (CR) and General Commercial (C-2) south of Callen’s Common, as shown as Figure 3-5 in Chapter 3.0, *Project Description*.

4.3 SURROUNDING LAND USES AND DEVELOPMENT

The Project site is located within an urbanized area and is surrounded by roadways followed by commercial and residential development. The surrounding land uses are described in Table 4-1.

Table 4-1: Surrounding Existing Land Use and Zoning Designations

	Existing Land Use	General Plan Designation	Zoning Designation
North	MacArthur Boulevard followed by commercial retail uses and multi-family residential uses.	District Center (DC), General Commercial (GC), Medium Density Residential (MR-15)	General Commercial (C-2), Planned Shopping Center (C-4), Two-Family Residence (R2)
West	South Plaza Drive followed by multi-family residential uses north of Callen’s Common and commercial retail uses south of Callen’s Common.	Medium Density Residential (MR-15) north of Callen’s Common and District Center (DC) south of Callen’s Common	Suburban Apartment (R4) north of Callen’s Common and Special Development 48 (SD48) south of Callen’s Common
South	Sunflower Avenue followed by South Coast Plaza in the City of Costa Mesa.	City of Costa Mesa, Regional Commercial	City of Costa Mesa, Planned Development Commercial (PDC)
East	Bristol Street followed by commercial retail and multi-family residential.	District Center (DC) followed by Low Density Residential (LR-7)	Commercial Residential (CR), General Commercial (C-2), Single-Family Residence (R1), and Suburban Apartment (R4)

4.4 AIR QUALITY

Climate and Meteorology

The City of Santa Ana is located within the South Coast Air Basin (Basin), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The Basin is a 6,600-square-mile coastal plain bounded by the Pacific Ocean to the southwest and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, and all of Orange County.

The ambient concentrations of air pollutants are determined by the amount of emissions released by sources and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the volume of emissions released by existing air pollutant sources.

Criteria Air Pollutants

The California Air Resources Board (CARB) and the U.S. Environmental Protection Agency (USEPA) currently focus on the following air pollutants as indicators of ambient air quality: ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable particulate matter with an aerodynamic diameter of 10 micrometers or less (PM₁₀), fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less (PM_{2.5}), and lead. These pollutants are referred to as "criteria air pollutants" because they are the most prevalent air pollutants known to be injurious to human health. Extensive health-effects criteria documents regarding the effects of these pollutants on human health and welfare have been prepared over the years.¹ Standards have been established for each criteria pollutant to meet specific public health and welfare criteria set forth in the Federal Clean Air Act (CAA). California has generally adopted more stringent ambient air quality standards for the criteria air pollutants (California Ambient Air Quality Standards [CAAQS] or state standards) and has adopted air quality standards for some pollutants for which there is no corresponding national standard (National Ambient Air Quality Standards [NAAQS]), such as sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

Existing Air Quality Conditions

The SCAQMD maintains monitoring stations within its boundaries that monitor air quality and compliance with associated ambient standards. The Project site is located within the monitoring boundary of the Anaheim-Pampas Lane monitoring station (SRA 17), which is 9.7 miles north of the Project site. The most recent 3 years of data is shown on Table 5.1-2 within Section 5.1, *Air Quality*, and identifies the number of days ambient air quality standards were exceeded in the area. Table 5.1-2 details that the federal PM₁₀ standard had no exceedances. The state PM₁₀ standard was exceeded 4 times in 2019, 5 times in 2020, and 1 time in 2021. The PM_{2.5} federal standard had 4 exceedances in 2019, 12 exceedances in 2020, and 10 exceedances in 2021. The 1-hour ozone state standard was exceeded 1 time in 2019, 6 times in 2020, and 0 times in 2021. The 8-hour ozone federal standard was 1 time in 2019, 15 times in 2020, and 0 times in 2021. In addition, the CO, SO₂, and NO₂ standards were not exceeded in this area during the 3-year period.

¹ Additional sources of information on the health effects of criteria pollutants can be found at CARB and USEPA's websites at <http://www.arb.ca.gov/research/health/health.htm> and <http://www.epa.gov/air/airpollutants.html>, respectively.

The Basin is currently designated as a nonattainment area for O₃, PM₁₀, and PM_{2.5} CAAQS, as well as the 8-hour O₃ and PM_{2.5} NAAQS. The Basin is designated as attainment or unclassified for the remaining CAAQS and NAAQS.

Current Emissions from Existing Onsite Uses. The Project site is currently developed with 16 commercial buildings that total approximately 465,063 SF. The estimated operation-source emissions from the existing commercial uses on the Project site are provided in Table 5.1-4 in Section 5.1, *Air Quality*.

Sensitive Land Uses

Existing offsite sensitive air quality receptors in the vicinity of the Project site consists of residences. The closest offsite residences are located 130 feet (40 meters) to the west of the site, as listed in Table 4-2.

Table 4-2: Closest Sensitive Receptors to the Project Site

Receptor Description	Distance and Direction from the Project Site
Multi-family Residences	130 feet to the west
Multi-family Residences	292 feet to the northwest
Multi-family Residences	460 feet to the east
Bomo Koral Park	1,580 feet to the east

Sources: Air Quality Assessment, Appendix B and Acoustical Assessment, Appendix N

4.5 CULTURAL RESOURCES

Historic

The Historic Resource Assessment that was prepared for the proposed Project (Appendix D) describes that the site is currently developed with 16 buildings that are surrounded by surface parking areas and ornamental landscaping. The existing onsite buildings were constructed between 1972 and 2004. Buildings A, B, C, D, E, F, and G were constructed more than 45 years ago but have been substantially altered since their original construction, and thus are not historic resources. The Historic Resource Assessment details that the Project site is not adjacent to any historic structures. Areas surrounding the site consist of modern multi-family residences and commercial buildings, including South Coast Plaza to the south.

Archaeologic

The chronology of coastal Southern California, which is inclusive of the Project area, is typically divided into three general time periods: the Early Holocene (11,000 to 8,000 Before Present [B.P.]), the Middle Holocene (8,000 to 4,000 B.P.), and the Late Holocene (4,000 B.P. to A.D. 1769). Orange County contains prehistoric sites dating from 9,000 to 10,000 years ago that show signs of human presence. Sites from 6,000 to 1,000 BC (Milling Stone period) are common in the coastal region of Southern California and at many inland locations.

A review of geologic mapping as detailed in the Archaeological Resources Assessment (Appendix E) indicates that the Project area is underlain by young Quaternary deposits, dating from the Late Holocene to the Late Pleistocene (Qya). The Late Holocene is contemporaneous with the duration of known human occupation of the area. Also, the records search conducted for the proposed Project identified one previously recorded prehistoric archaeological resource and three previously recorded historic-period archaeological isolates within 0.5-mile of the Project site. The Archaeological Resources Assessment Report (Appendix E) determined that due to the Holocene age of onsite soils, the presence of known archaeological and historical resources

within 0.5-mile from the Project site, and the former presence of agricultural-related structures onsite, the Project area is sensitive for prehistoric and historic-period archaeological deposits.

4.6 ENERGY

Electricity

The Southern California Edison Company (SCE) is the electrical purveyor in the City of Santa Ana. SCE provides electricity service to more than 14 million people in a 50,000 square-mile area of central, coastal and Southern California. As described by the Edison International 2022 Annual Report, the SCE electrical grid modernization effort supports implementation of California requirements to achieve carbon neutrality by 2045. In 2022 approximately 48 percent of power that SCE delivered to customers came from carbon-free resources (SCE 2022).

The GPU FEIR describes that in 2020 the total estimated electricity demand in Santa Ana, based on data provided by SCE, is estimated at 1,570,457,233 kilowatt hours (kWh) per year. The Project site is currently served by the electricity distribution system that exists along the roadways adjacent to the site.

Natural Gas

The Southern California Gas Company (SoCalGas) is the natural gas purveyor in the City of Santa Ana and is the principal distributor of natural gas in Southern California. SoCalGas estimates that gas demand will decline at an annual rate of 1.5 percent from 2022 to 2035 due to modest economic growth, mandated energy efficiency standards and programs, renewable electricity goals, and fuel substitution (CGEU 2022). SoCalGas designs its facilities and supplies to provide continuous service during extreme peak demands and has identified the ability to meet peak demands through 2035 (CGEU 2022).

The GPU FEIR describes that in 2020 the total estimated natural gas demand in Santa Ana, based on data provided by SoCalGas, was estimated to be 48.9 million therms per year. The Project site is currently served by the natural gas distribution system that exists within the roadways that are adjacent to the Project site.

4.7 GEOLOGY AND SOILS

Regional Setting

The Project region is located within the Los Angeles Basin which is part of the Peninsular Range Geomorphic Province of California. The Peninsular Ranges are characterized by a series of northwest trending mountain ranges separated by valleys. Range geology consists of granitic rock intruding the older metamorphic rocks. Valley geology is characterized by shallow to deep alluvial basins consisting of gravel, sand, silt, and clay. (Appendix G).

The Project region is located at the southern margin of the Los Angeles Basin, which ends abruptly with the Newport-Inglewood uplift. The uplift is characterized by coastal mesas of late Miocene to early Pleistocene marine sediments and late Pleistocene marine terrace deposits.

Faults and Ground Shaking

As described by the GPU FEIR, the City is located within the Peninsular Ranges Geomorphic Province that is traversed by a group of subparallel and fault zones trending roughly northwest. Major active fault systems—San Andreas, San Jacinto, Whittier-Elsinore, and Newport-Inglewood fault zones—form a regional tectonic framework consisting primarily of right-lateral, strike-slip movement. Santa Ana is situated between two major active fault zones—the Whittier-Elsinore Fault Zone to the northeast and the Newport-Inglewood Fault

to the southwest. Other potentially active faults near Santa Ana include the Elysian Park blind thrust; Chino-Central Avenue, San Joaquin Hills blind thrust, and San Jose, Cucamonga, Sierra Madre, and Palos Verdes faults. The GPU FEIR describes that Newport-Inglewood Fault is the dominant active fault that could significantly impact the City.

The Project site is not located within an Alquist-Priolo Fault Zone and no active faults are known to cross the site. The closest known active faults are associated with the San Joaquin Hills Fault, located approximately 1.3 miles northeast of the site and the Newport-Inglewood Fault Zone, approximately 4.1 miles southwest of the site (Appendix G).

Onsite Soils

Based on geologic maps, the Project site is situated on Holocene alluvial soils. The near surface soils are characterized by young axial channel deposits. The Geotechnical Report (Appendix G) describes that the site is generally comprised of three distinct soil zones to the maximum depth explored to 115 feet below ground surface (bgs) that include:

- Soil Zone 1 – From a depth of 0 to 30 feet, which consists predominantly of medium stiff to stiff lean clay and fat clay with medium high plasticity;
- Soil Zone 2 – From a depth of 30 to 80 feet, which consists of a mixed soil condition with interbedded silty sand, poorly-graded sands and lean clays;
- Soil Zone 3 – From a depth of 80 to 100 feet, which consists of very dense poorly graded sands.

Groundwater

The Geotechnical Report (Appendix G) describes that historic highest groundwater at the site has been mapped at a depth of about 5 feet bgs, and that groundwater during the geotechnical site investigation was encountered at a depth of between 12 feet and 16 feet bgs. However, that groundwater levels measured during the geotechnical investigation is a “snapshot” of the groundwater level and does not account for potential fluctuations in groundwater level due to seasonal and tidal variations.

Liquefaction and Settlement

As shown in GPU FEIR Figure 5.6-2, *Liquefaction Zones*, a majority of the City is mapped by the California Geological Survey as being potentially susceptible to liquefaction. The Geotechnical Report identifies that the Project site has a low liquefaction potential due to the underlying soil composition. Onsite soils include clayey soils to a depth of approximately 30 feet below the existing ground surface. Underlying soils are mixed soil with interbedded dense to very dense silty sand, poorly-graded sands, and lean clays. Due to the density of cohesive nature of the soils in the upper 50 feet, liquefaction potential is considered low even though the depth of groundwater is in the range of 12 to 16 feet bgs with a historic high of 5 feet bgs (Appendix G).

The GPU FEIR describes that potential hazard posed by seismic settlement and/or collapse in the City is considered moderate based on the compressibility of the underlying alluvial soils and the presence of shallow groundwater. Strong ground shaking can cause settlement of alluvial soils and artificial fills if they are not adequately compacted. Based on the onsite soils and groundwater conditions, the Geotechnical Report determined that static and seismic settlement is a potential concern of the Project site. The seismic settlement potential is estimated to be at least 2 inches (Appendix G).

Subsidence

The GPU FEIR describes that there is no pattern of lowering of the ground surface in Santa Ana and the risk of subsidence due to overdraft is generally low, with areas along the margins of the Santa Ana River and Santiago Creek most susceptible. Additionally, as described in the GPU Seismic Safety Element, the potential for area and focal ground subsidence due to earthquakes is relatively low in Santa Ana. The Project site is not located within or near a potential subsidence area, as shown in Exhibit 4, *Potential Subsidence Areas*, in the GPU Seismic Safety Element.

Landslides

The Geotechnical Report describes that the existing elevation of the Project site is a generally flat area that does not include any substantial slopes and is not located adjacent to any hillsides or slopes that could be susceptible to landslides. The site is not located within a mapped area considered potentially susceptible to seismically induced slope instability (Appendix G). In addition, the Project site is not adjacent to any hills or slopes that could be subject to a landslide.

Expansive Soils

The Project is in a semiarid region with marked seasonal changes in precipitation; most rain falls in winter, and there is a long dry season in summer and autumn. Therefore, the City's climate is such that a relatively high incidence of soil expansion is expected where soils contain the requisite clay minerals.

The GPU FEIR describes that due to the presence of alluvial materials in the City, there is some potential for expansive soils throughout Santa Ana and that expansive soils testing prior to grading is required as part of a soil engineering report, per the California Building Code (CBC) and the City of Santa Ana development and permitting requirements.

Expansion index testing was conducted on soil samples collected from the Project site, which determined that moderately to highly expansive soils are present onsite (Appendix G).

Paleontological Resources

The Natural History Museum of Los Angeles County database search completed for the proposed Project identified records of six recorded fossil localities in the general Project vicinity; however, none of these were documented in the Project site. The localities in the vicinity are associated with units mapped as uplifted older (Pleistocene) marine terraces (Qop).

The Project site is underlain by Holocene-aged axial channel deposits (Qya) dating from the Holocene to perhaps the Late Pleistocene. These soils are assigned a low paleontological resource sensitivity due to their relatively recent age. The Geotechnical Report details that only alluvium was encountered to a depth of 70 feet. However, a sedimentological shift was noted between 27 to 32 feet bgs. It is not known if the sedimentological shift indicates a presence of fossil-bearing older alluvium. Based on these findings, the Paleontological Resources Assessment determined that there is a low potential for paleontological resources near the ground surface, and that potential increases with depth.

4.8 GREENHOUSE GAS

Existing California GHG Conditions

California has significantly slowed the rate of growth of GHG emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls; but is still a substantial contributor to the U.S. emissions inventory total. CARB compiles GHG inventories for the State. Based upon the 2022 GHG

inventory data (i.e., the latest year for which data are available) for the 2000-2020 GHG emissions period, California emitted an average 369.2 million metric tons of CO₂e (MMTCO₂e) per year.

Existing City of Santa Ana GHG Conditions

The GPU FEIR describes that operation of existing land uses within the City and the related vehicle trips generate GHG emissions from tail pipe emissions, emissions from natural gas used for energy, heating, and cooking; electricity usage; area sources such as landscaping equipment and consumer cleaning products; water demand; waste generation; and solid waste generation. The GPU FEIR identified that the City generates approximately 2,212,612 MTCO₂e/year, which results in 4.8 MTCO₂e/year per service population (SP). Of this, 66 percent is generated by transportation sources (vehicle emissions).

Existing Project Site Conditions

The Project site is developed with 16 commercial buildings that generate GHG emissions from natural gas used for heating and hot water, electricity usage, related vehicle trips, use of landscaping equipment, use of consumer cleaning products, water demand, wastewater generation, and solid waste generation. The estimated GHG emissions from the existing development within each Phase area of the Project site are summarized in Table 5.5-2 in Section 5.5, *Greenhouse Gas Emissions*.

4.9 HAZARDS AND HAZARDOUS MATERIALS

The Project site was historically used for agriculture until the existing commercial buildings on the site were developed beginning in the early 1970s, and is currently developed with 16 commercial structures that are used for restaurants, a supermarket, banks, a dry-cleaning facility, medical and dental offices, and a variety of other retail establishments that use and store a limited volume of hazardous materials. The Phase I Environmental Site Assessment (Appendix J) identified three Recognized Environmental Conditions (RECs) that include a dry-cleaning facility, a potential existing Underground Storage Tank (UST), and removal of contaminated soil in 1984 that is suspected to be associated with the removal of previous USTs (previous USTs were removed in 1984 but did not document contaminated soil). In addition, the Project site was known to previously include a gas station.

The Phase II Environmental Site Assessments (Appendix K1 and K2) conducted onsite soil, soil gas, and groundwater testing throughout the site, including next to the dry-cleaning location. The testing identified that onsite soil samples in portions of the Project site exceed residential screening levels and in some cases commercial screening levels for total petroleum hydrocarbons- diesel range (TPH-d), TPH-motor oil range (TPH-mo), and select semi-volatile organic compounds (SVOCs) that are consistent with asphaltic material, and are likely attributable to the asphalt parking lots on the site, and soil that exhibited concentrations above residential screening levels and below commercial screening levels could be reused as backfill material for non-residential and non-sensitive-use areas.

Soil gas samples exceeded conservative residential screening levels for benzene and tetrachloroethene (PCE), but do not exceed the screening levels considering an attenuation factor (AF) of 0.001 that California Department of Toxic Substance control (DTSC) has applied for new residential construction. In addition, groundwater testing identified Methyl tert-butyl ether (MTBE) that exceeded the corresponding Maximum Contaminant Level (MCL) in one sample located at the northeast corner of the Project site at approximately 23.2 feet bgs, which is likely attributable to an offsite and upgradient LUST cleanup site, located northeast of the Project site. Also, a groundwater sample from the southern central portion of the Project site identified a TPH-d concentration, likely attributable to an offsite and upgradient source that exceeds the corresponding RSLs for “tap water” (drinking water). Additional information regarding groundwater quality is provided in Section 5.7, *Hydrology and Water Quality*.

Asbestos and Lead

The buildings within the Project site were constructed between 1972 and 2004; of which nine were constructed in the 1970s when asbestos and lead containing materials were commonly used; three structures on the Project site (3600, 3820, and 3900 South Bristol Street) have previously disposed of small quantities of asbestos containing materials (ACMs). Therefore, it is anticipated that some of the existing buildings on the Project site contain ACMs and lead-based paint and other lead containing materials.

John Wayne Airport

John Wayne Airport (SNA) is located approximately 1.4 miles southeast of the Project site, which is to the west of the primary aircraft approach corridor. The Project site is not located within SNA's Airport Safety Zone (shown on Figure 5.6-1 of Section 5.6, *Hazards and Hazardous Materials*). In addition, the Project site is located outside of both the airport's planned and actual (2019) 60 CNEL contours (Figures 5.6-2 and 5.6-3).

The Project site is located within the Airport Environs Land Use Plan (AELUP) Notification area, which requires notification of the Airport Land Use Commission (ALUC) for development projects and the FAR Part 77 Notification Imaginary Surface area (shown on Figure 5.6-4) that requires notification to FAA for any project that would be more than 206 feet in height above ground level or within the imaginary surface of a 100:1 slope extending outward for 20,000 feet from the nearest runway.

4.10 HYDROLOGY AND WATER QUALITY

Watershed

The Project site is in the Santa Ana River Watershed and the Newport Bay sub-watershed. The Santa Ana Watershed is subdivided into several smaller watersheds, and the Project site is in the Newport Bay Watershed. The Newport Bay Watershed spans 152 square miles from the foothills of the Santa Ana Mountains in the north to the Pacific Ocean in the south and from the Cities of Santa Ana and Costa Mesa on the west to the City of Lake Forest on the east. The Project site drains to the Santa Ana – Gardens - Delhi Channel and then to the Newport Back Bay.

Watershed Impairments: Section 303(d) of the Federal Clean Water Act (CWA) requires states to identify water bodies that are "impaired," or those that do not meet water quality standards and are not supporting their beneficial uses. Total Maximum Daily Loads (TMDLs) are then designed to serve as pollution control plans for these specific pollutants.

The Santa Ana – Gardens - Delhi Channel and the Newport Back Bay are included on the Section 303(d) List of Water Quality Impairments for: chlordane, DDT, nutrients, PCBs, sedimentation, malathion, toxicity, copper, indicator bacteria (WQMP Appendix M).

Groundwater Basin

The Project site overlies the Orange County Groundwater Basin that underlies an area of approximately 350 square miles, bordered by the Coyote and Chino Hills to the north, the Santa Ana Mountains to the northeast, the Pacific Ocean to the southwest, and terminates at the Orange County line to the northwest, where the aquifer system continues to the Central Basin in Los Angeles County (2020 Santa Ana Urban Water Management Plan [UWMP 2020]). The OC Basin is recharged primarily by four sources; local rainfall, storm and base flows from the Santa Ana River, purchased MWD imported water; and highly treated recycled wastewater. Basin recharge occurs largely in four recharge basins that are in or adjacent to the City of Anaheim. The Orange County Water District (OCWD) manages the Orange County Basin

through a Basin Production Percentage (BPP) that is determined each water year based on groundwater conditions, availability of imported water supplies, water year precipitation, Santa Ana River runoff, and basin management objectives.

Groundwater from the Orange County Basin provides approximately 76 percent of the City's water supply (2019-2020). The remaining supply comes from the Metropolitan Water District (23 percent) and recycled water (1 percent). As described by the UWMP, the water production capability of the basin has increased as a result of operation of the Groundwater Replenishment System in Fountain Valley, which turns wastewater into potable drinking water that is used for basin replenishment.

Groundwater Conditions

Per the Preliminary Geotechnical Investigation Report (Appendix G), the historic highest groundwater at the site has been mapped at a depth of about 5 feet bgs. Groundwater in August 2022 was encountered between a depth of 12 feet and 16 feet bgs.

The Phase II Environmental Site Assessments conducted groundwater testing, which identified MTBE that exceeded the corresponding residential MCL in one sample located at the northeast corner of the Project site at approximately 23.2 feet bgs, which is likely attributable to an offsite and upgradient LUST cleanup site, located northeast of the Project site. In addition, a groundwater sample from the southern central portion of the Project site identified a TPH-d concentration from an offsite source that exceeds the corresponding RSLs for "tap water" (drinking water).

Storm Drainage Facilities

The Project site is currently 90 percent impervious and 10 percent pervious (WQMP Appendix M). The existing topography of the Project site is relatively flat, with storm water draining via surface flow to existing gutters and onsite area drain systems. Drainage from the Project site currently flows to storm drains in South Plaza Drive, Sunflower Avenue, Bristol Street, and MacArthur Boulevard; and then to the Orange County Flood Control District Santa Ana – Gardens - Delhi Channel that drains to Newport Bay and the Pacific Ocean. The City of Santa Ana has determined that the existing storm drain in Sunflower Avenue and South Plaza Drive are hydraulically deficient. The City's 2018 Storm Drain Master Plan recommends upgrades to the storm drain infrastructure in these roadways.

Soil Infiltration

Onsite soils infiltration testing was performed during preparation of the Preliminary Geotechnical Investigation Report (Appendix G), which determined that the upper 25 to 30 feet of soils consist predominantly of medium to stiff lean clay and fat clay and based on percolation tests results are not suitable for infiltration. The testing identified infiltration rates of <0.10 inches per hour which is a low infiltration rate and considered infeasible to support drainage on the Project site.

Flood Zone, Tsunami, Seiche

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) for the Project area (06059C0279J) shows that the Project site is located within "Zone X," which is an area of minimal flood hazard potential outside of the 0.2 percent annual chance flood.

A tsunami is a series of ocean waves caused by a sudden displacement of the ocean floor, most often due to earthquakes. The Project site is over 5.9 miles from the Pacific Ocean, and outside of the Tsunami Hazard Zone identified by the California Department of Conservation (DOC 2023).

A seiche is a surface wave created when a body of water is shaken, usually by earthquake activity. Seiches are of concern relative to water storage facilities because inundation from a seiche can occur if the wave overflows a containment wall, such as the wall of a reservoir, water storage tank, dam, or other artificial body of water. There are no water bodies in the vicinity of the Project site, and no existing risks related to seiche flood hazards exist on or near the site.

4.11 LAND USE AND PLANNING

The Project site is developed with a shopping center that includes 16 commercial buildings (totaling 465,063 SF) with parking areas, vehicle circulation drives, and ornamental landscaping. The northern half of the site is developed with approximately 45 percent site coverage, and tenants include a grocery, gym, bank, and a variety of retail, service retail/commercial, medical, restaurant, and fast-food uses. The southern half of the site is developed with approximately 55 percent site coverage with a tenant mix of retail, service retail/commercial, restaurant, and fast-food uses. Existing major tenants on the southern half of the center include TJ Maxx, Ross Dress for Less, Cost Plus World Market, and Red Robin restaurant.

Existing General Plan Land Use and Zoning Designations

The Project site has a General Plan Land Use designation of District Center-High (DC-5) within the South Bristol Street Focus Area and is currently zoned General Commercial (C-2) and Commercial Residential (CR). The District Center-High land use designation applies to transit-oriented and high-density urban villages consisting of visually striking and dynamic buildings and spaces with a wide range and mix of residential, live-work, commercial, hotel, and employment-generating uses, or where such development is being encouraged. The development intensity standard applicable to this land use designation is a maximum floor area ratio (FAR) of 5.0 and 125 dwelling units per acre (du/ac). The District Center-High areas are intended to capitalize on the success of the South Coast Metro area and introduce mixed-use urban villages and encourage experiential commercial uses that are more walkable, bike friendly, and transit oriented.

Existing Transit-Oriented-Development (TOD) Setting

The proposed Project is located within a Transit Priority Area (TPA) as identified in the City of Santa Ana Traffic Impact Study Guidelines (September 2019) and is within the both the 2012 and 2045 High-Quality Transit Areas (HQTAs) as defined by SCAG. Furthermore, the General Plan's Mobility Element (April 2022) indicates key multimodal aspects and opportunities in the vicinity of the Project site, including public transit, bikeways, and pedestrian zones.

Surrounding Land Uses

The proposed Specific Plan area is located within an urban area that is fully developed. The Specific Plan area is located immediately north of major regional activity hubs including South Coast Plaza, Segerstrom Center for the Arts, and a mix of commercial and residential uses in the Cities of Costa Mesa and Santa Ana. The land uses immediately adjacent to the Specific Plan area include the following:

- North:** MacArthur Boulevard (a 6-lane major arterial) borders the site to the north, followed by commercial and multi-family residential uses. Areas across MacArthur Boulevard from the site are within the City of Santa Ana.
- East:** South Bristol Street (a 6-lane major arterial) borders the site on the east. Land uses east of Bristol Street include retail commercial uses and multi-family residential uses within the City of Santa Ana.

South: Sunflower Avenue (a 6-lane major arterial) borders the site to the south. Commercial uses are located south of Sunflower Avenue within the City of Costa Mesa.

West: South Plaza Drive (a 4-lane local roadway) borders the site to the west. Multi-family residential uses and South Coast Village are located west of South Plaza Drive.

4.12 NOISE

Existing Noise Levels

To assess the existing noise level environment, short-term noise measurements were taken at 6 locations and 24-hour noise level measurements were taken at 4 locations, which are shown in Figure 5.9-1 in Section 5.9, *Noise*. A description of these locations and the existing noise levels are provided in Table 5.9-4 in Section 5.9, *Noise*. Additionally, the average daily noise levels along roadway segments proximate to the Project site are included in Table 5.9-5 in Section 5.9, *Noise*. As shown, the existing traffic-generated noise levels on Project-vicinity roadways currently ranges from 53.9 dBA CNEL to 69.5 dBA CNEL 100 feet from the centerline.

Sensitive Receptors

Noise sensitive receptors are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include: residences, schools, hospitals, and recreation areas. Existing offsite sensitive noise receptors where someone can remain for 24-hours in the vicinity of the Project site consists of residences. The closest offsite residences are located 130 feet (40 meters) to the west of the site as listed in Table 4-2.

John Wayne Airport

As described previously, John Wayne Airport is located approximately 1.4 miles southeast of the Project site, which is to the west of the primary aircraft approach corridor. The Project site is located outside of both the airport's planned and actual (2019) 60 CNEL contours (Section 5.6, *Hazards and Hazardous Materials*, Figures 5.6-2 and 5.6-3). In addition, the General Aviation Noise Ordinance restricts airport operations between 11:00 p.m. and 7:00 a.m., to limit the hours of noise generated by the airport.

4.13 POPULATION AND HOUSING

Population

The California Department of Finance (DOF) estimates that the City of Santa Ana 2022 population was 308,459 persons, representing 9.75 percent of Orange County's total population. The Center for Demographic Research estimates that the City's population will increase to 360,077 in 2045, which is a 16.7 percent increase. In comparison, the County of Orange is projected to have an 11.8 percent increase in population between 2022 and 2045.

Housing

The California Department of Finance (DOF) estimates that the City of Santa Ana contained 81,082 housing units in 2022. Of the housing units within the City of Santa Ana 44.2 percent are detached single family housing units and 34.2 percent are multi-family units within buildings containing more than five units. In addition, the California DOF details that the in 2022 City had an average household size of 3.89 persons per household. In comparison, the County had an average household size of 2.87 persons per household.

The GPU FEIR assumes a 2.41 persons per household for multi-family residential uses to determine potential growth associated with implementation of the GPU.

The Census Factfinder 2021 information for the City identifies that 45.7 percent of the residences within the City are owner occupied units and 54.3 percent are renter-occupied units and the California DOF that the City of Santa Ana had a vacancy rate of 3.5 percent in 2022.

Employment

The City of Santa Ana is estimated to contain 159,980 employment opportunities as of 2019. The SCAG regional growth projections anticipate the number of jobs in the City of Santa Ana to increase by 7.8 percent to 172,400 jobs in the year 2045.

The SCAG 2019 Local Profile for Santa Ana identifies that only 20.8 percent of Santa Ana residents work and live in the City, while 79.2 percent commute to other places. Of the commuters residing in Santa Ana, the largest percentage commute to the City of Irvine (12.2 percent), Anaheim (6.8 percent), Orange (5.5 percent), and Costa Mesa (5.3 percent).

Jobs – Housing Ratio

The City's GPU FEIR identifies that a healthy jobs-housing balance is one new home built for every 1.5 jobs created. A job-housing imbalance can indicate high vehicle miles traveled, and potential air quality and traffic problems associated with commuting. The City of Santa Ana is currently jobs rich with approximately 78,792 housing units and 158,980 jobs in 2019, which results in 2.0 jobs per housing unit.

4.14 PUBLIC SERVICES

Fire

Fire protection and emergency medical services in the City of Santa Ana are provided by the OCFA through a contract for services. The OCFA provides fire suppression, emergency medical, rescue, fire prevention, hazardous materials coordination, and wildland management services. OCFA serves 23 cities in Orange County and all unincorporated areas. Within the City of Santa Ana, OCFA provides services from 10 city-owned fire stations.

There are six city-owned fire stations located within approximately 4 miles of the Project site. Station 76, which is located 0.5 mile from the Project site, is the first responding station and Station 77, which is 2.2 miles from the site is the second responding station to the Project site. Both Stations 76 and 77 have Advance Life Support capabilities. In addition, at least two members of each station's daily staff are paramedics. The location, equipment, and staffing of the Santa Ana fire stations within approximately 4 miles of the Project site are provided in Table 5.11-1 in Section 5.11, *Public Services*.

To manage fire services throughout the City an OCFA division chief serves as the City's local fire chief, and three battalion chiefs (one for each of the three 24-hour-shift schedules) provide daily management of station personnel and activities. Also, an administrative captain, administrative assistant, nurse educator, and a fire community relations and education specialist (bilingual) are assigned to serve the City of Santa Ana.

As provided by the OCFA 2022 Statistical Annual Report, there were 40,224 calls for service from the 10 fire stations in the City in 2022. Of the calls for service, 56.8 percent (22,835) were for emergency medical calls, 1.8 percent (734) were for fire incidents, and 17.5 percent (7,035) were for other incidents, which includes: cancelled service calls, ruptures, hazardous conditions, false alarms, and miscellaneous calls.

The OCFA 2022 standard for response is 8:30 minutes at the 90th percentile. In 2022 the 90th percentile response time for Station 76 was 8:11 minutes and 8:53 minutes for Station 77.

Law Enforcement

The Santa Ana Police Department provides police services throughout the City. The Police Department headquarters is located west of City Hall (60 Civic Center Plaza), which is approximately 4.1 miles north of the Project site. The Police Department also has the following additional policing facilities (as shown on Figure 5.11-1, *Existing Police Facilities*):

- Westend Substation located at 3750 West McFadden Avenue, which is 4.4 miles from the Project site;
- Southeast Substation located at 1780 East McFadden Avenue, which is 4.8 miles from the Project site; and
- Santa Ana Police Athletic and Activity League Community Center located at 2627 West McFadden Avenue, which is 3.6 miles northwest of the Project site.

The Police Department is divided into four policing districts, as listed below. The Project site is located within the Southcoast division:

- Westend District, serving all areas north of First Street and west of Flower Street
- Southcoast District, serving all areas south of First Street and west of Flower Street
- Northeast District, serving all areas north of First Street and east of Flower Street
- Southeast District, serving all areas south of First Street and east of Flower Street

In 2022, the Santa Ana Police Department had 302 officers, which included 168 members in the Field Operations Bureau and 134 patrol officers (SAPD 2023).

In 2022, officers responded to 126,973 calls for service and initiated 51,739 community engagement contacts and enforcement actions, which totaled 178,712 policing activities. In 2022, the average emergency response time was 5:22 minutes.

School Services

The Project site is located within the Santa Ana Unified School District (SAUSD) boundary, which serves a 24 square mile area and has a total of 57 schools, including: 26 elementary schools, 2 K-6 schools, 4 K-8 schools, 8 intermediate schools, 7 high schools, 4 educational options secondary schools, 1 dependent charter, 1 child development center, 3 early childhood education programs, and 1 K-6 deaf and hard of hearing regional program (SAUSD 2022).

According to the California Department of Education, SAUSD had an enrollment of 44,102 students in the 2021/2022 school year (CDE 2023). The Project site is in the attendance areas of Jefferson Elementary School (1522 West Adams Street), which is approximately 1.4 miles from the Project site; McFadden Institute of Technology (2701 South Raitt Street), which is approximately 1.5 miles from the Project site; and Segerstrom High School (2301 West MacArthur Boulevard), which is approximately 1.0 mile from the Project site (SAUSD 2022). Table 5.11-3 in Section 5.11, *Public Services*, shows the total capacity, the 2021-2022 school year enrollments, and the existing remaining capacity for between 368 and 911 additional students.

Library Services

The City of Santa Ana is served by two libraries: the Main Library (26 Civic Center Plaza) which is 4.3 miles north of the Project site, and Newhope Library Learning Center (122 North Newhope Street) which is 5.5 miles northwest of the Project site.

The Main Library is 39,790 SF and has amenities such as computer labs with internet access, a learning center, and the Santa Ana History Room. The History Room collects, preserves, and makes available materials of enduring historical value relating to the development of the City of Santa Ana and Orange County. The City of Santa Ana is planning the restoration and modernization of the existing Main Library.

The Newhope Library Learning Center is 10,600 SF and includes computer labs with internet access, a learning center, and a TeenSpace. TeenSpace is a mentoring program aimed at keeping underserved Santa Ana youth off the streets, in school, and focused on college and career plans.

4.15 PARKS AND RECREATION

The City of Santa Ana Parks Master Plan describes that the City has approximately 370.8 acres of developed park and recreational space that ranges in size from 0.1-acre to 65.3 acres within 44 parks; and that the City has plans to construct two additional parks. As discussed in Section 5.11, *Population and Housing*, the City had a population of 308,459 in 2022. Therefore, the City has approximately 1.2 acres of public park and/or recreational space per every 1,000 residents.

There are no existing parks within the South Bristol Street Focus Area and the southwestern portion of the Project site is located within a park-deficient area as identified in the GPU FEIR. However, City currently has six existing parks that provide 69.48 acres of parkland within two miles of the Project site, as listed in Table 5.12-1 in Section 5.12, *Parks and Recreation*.

4.16 TRANSPORTATION

Existing Trips

The Project site is currently developed with 16 commercial buildings that total approximately 465,063 SF. As shown on Table 5.13-3 in Section 5.13, *Transportation*, the existing onsite uses result in approximately 15,490 daily trips.

Existing Roadways

The public roadway network serving the Project site includes Bristol Street, South Plaza Drive, Bear Street, MacArthur Boulevard, and Sunflower Avenue, which are described below.

- **Bristol Street** is a six-lane divided roadway with sidewalks on both sides that is designated as a major arterial in the GPU and borders the Project site to the east. Bristol Street is oriented in the north-south direction and has a posted speed limit of 40 miles per hour (mph). On-street parking is not permitted on either side of this roadway in the vicinity of the Project site.
- **Bear Street** is a four-lane divided roadway north of MacArthur Boulevard, five-lane divided roadway between MacArthur Boulevard and Sunflower Avenue, a six-lane divided roadway south of Sunflower Avenue and is oriented in the north-south direction. The roadway is designated as a secondary arterial in the GPU and the posted speed limit on Bear Street is 40 mph. On-street parking is not permitted along this roadway in the vicinity of the Project site.
- **Callen's Common** is an onsite private roadway that is oriented east to west and bisects the Project site. The roadway has four lanes with a partially raised median.
- **MacArthur Boulevard** is a six-lane divided roadway designated as a major arterial in the General Plan and borders the Project site to the north. The roadway is aligned in an east-west direction, has sidewalks on both sides of the street, a Class II bike lane on the westbound side of the roadway, and has a posted speed limit of 40 mph. On-street parking is not permitted along this roadway in the vicinity of the Project site.
- **South Plaza Drive** is a four-lane divided roadway with sidewalks on both sides that borders the Project site to the west and is oriented in the north-south direction. The posted speed limit on South Plaza Drive is 25 mph. On-street parking is not permitted along this roadway in the vicinity of the Project site.

- **Sunflower Avenue** borders the Project site to the south, is designated as a major arterial in the General Plan and is an east-west oriented six-lane divided roadway east of Bear Street, and four-lane divided roadway west of Bear Street, with sidewalks on the westbound side. The posted speed limit on Sunflower Avenue is 40 mph. On-street parking is not permitted on either side of this roadway in the vicinity of the Project site. Sunflower Avenue divides the City of Santa Ana from the City of Costa Mesa to the south.

Existing Site Access

Vehicular access to the Project site is currently provided via unsignalized driveways along MacArthur Boulevard, Bristol Street, Sunflower Avenue, South Plaza Drive, and Callen's Common. Signalized access is provided on Bristol Street at Callen's Common.

Existing Transit Service

The Project site is located within a Transit Priority Area (TPA) and the Southern California Association of Governments (SCAG) identifies that the Project site is located within a High Quality Transit Area. Public transit bus service for the City is provided by the Orange County Transportation Authority (OCTA). Six OCTA bus routes operate within the vicinity of the Project site and travel along MacArthur Boulevard, Bristol Street, Sunflower Avenue, South Plaza Drive, and Bear Street. Also, the site is located within a high-quality transit corridor, as the fixed route bus routes provide service intervals of no longer than 15 minutes during peak commute hours, which includes the following:

- **OCTA Route 55:** The major routes of travel include MacArthur Boulevard and Bristol Street. Bus stops are provided on Bristol Street, northbound and southbound, south of the intersection with MacArthur Boulevard, adjacent to the Project site. Route 55 operates on approximately 30-minute headways on weekdays and weekends. Route 55 connects to the Newport Transportation Center.
- **OCTA Route 57:** The major route of travel includes Bristol Street. Bus stops are provided on Bristol Street, northbound and southbound, south of the intersection with MacArthur Boulevard, adjacent to the Project site. Route 57 operates on approximately 15-minute headways on weekdays and weekends. Route 57 connects to the Newport Transportation Center.
- **OCTA Route 76:** The major route of travel includes MacArthur Boulevard. Bus stops are provided on MacArthur Boulevard, eastbound and westbound, west of the intersection with Bristol Street and adjacent to the Project site. Route 76 operates on approximately 60-minute headways on weekdays and does not operate on weekends. Route 76 connects to John Wayne Airport.
- **OCTA Route 86:** The major routes of travel include Bristol Street and Sunflower Avenue. Bus stops are provided on Bristol Street, northbound and southbound, north of the intersection with Sunflower Avenue, adjacent to the Project site. Route 86 operates on approximately 60-minute headways on weekdays and does not operate on weekends. Route 86 connects to the Irvine Train Station.
- **OCTA Route 150:** The major route of travel includes Sunflower Avenue. Bus stops are provided on Sunflower Avenue, eastbound and westbound, east, and west of the intersection with South Plaza Drive, adjacent to the Project site. Route 150 operates on approximately 40-minute headways on weekdays and does not operate on weekends.
- **OCTA Route 553:** The major route of travel includes Sunflower Avenue, South Plaza Drive, and MacArthur Boulevard. Bus stops are provided on Sunflower Avenue, westbound, west of the intersection with Bristol Street, adjacent to the Project site. Route 553 operates on approximately 20-minute headways on weekdays and does not operate on weekends. Route 553 connects to the Anaheim Regional Transportation Intermodal Center.

In addition, the Southern California Regional Rail Authority also provides commuter/passenger rail service to, from and through Santa Ana. The Metrolink Orange County Line and the Inland Empire-Orange County

commuter lines travel through Santa Ana, with stops at the Santa Ana Regional Transportation Center that is 6 miles north of the Project site, the Anaheim Regional Transportation Intermodal Center that is 7.2 miles north of the Project site, and the Irvine Train Station that is 9.5 miles southeast of the Project site. Amtrak's Pacific Surfliner also provides passenger rail service through Santa Ana, connecting travelers to neighboring communities throughout Los Angeles and San Diego counties. As described previously, OCTA Bus Route 553 connects to the Anaheim Regional Transportation Intermodal Center and OCTA Bus Route 86 connects to the Irvine Train Station.

Existing Bicycle and Pedestrian Facilities

In the Project area, MacArthur Boulevard has a Class II bike lane on the westbound side and Bristol Street has Class II bike lanes on the northbound and southbound sides. Sidewalks currently exist on both sides of MacArthur Boulevard, South Plaza Drive, and Bristol Street and on the westbound side of Sunflower Avenue.

Existing VMT

The City identifies vehicle miles traveled (VMT) based on total VMT per service population for the entire County. Service population consists of the total employees and population that generate the VMT. The GPU FEIR details that the VMT per service population for the City in the year 2020 was 22.5, which is less than the County VMT per service population of 25.9.

4.17 TRIBAL CULTURAL RESOURCES

Native American Tribes

According to available ethnographic maps, ethnographic data, and Native American input, the City of Santa Ana lies within an area on the border of the traditional lands of the Gabrieleño and the Juaneño/Acjachemen.

Tribal Cultural Resources

A records search of the California Historical Resources Information System found four archaeological resources that were previously recorded within 0.5 mile of the Project site. Of these resources, one is a prehistoric site and three are historic-period archaeological isolates. The prehistoric site is associated with a prehistoric shell scatter, discovered in 1999, which is located 0.5-mile southeast of the Project site. According to the Archaeological Resource Assessment prepared for the Project, the site is sensitive for prehistoric archaeological resources. However, previous agricultural activities and current development within the site have reduced sensitivity for intact subsurface archaeological deposits at depths less than 18 inches bgs.

Sacred Lands File Search

The City requested a Sacred Lands File (SLF) Search from the NAHC on January 17, 2023, and received the results on February 2, 2023. The SLF returned negative results, indicating that no known tribal resources are located in the Project site.

4.18 UTILITIES AND SERVICE SYSTEMS

Water

The City's water supply is a combination of imported water from the Metropolitan Water District of Southern California (MWD), groundwater from the Orange County Groundwater Basin (OC Basin), and recycled water. Groundwater production accounts for 70 to 77 percent of the water supply and MWD imported water accounts for 23 to 30 percent, while recycled water accounts for less than 1 percent.

The Project site is currently developed with 16 commercial buildings that total 465,063 SF and include restaurants, a supermarket, banks, a dry cleaner, medical office, financial, and fitness uses and onsite landscaping. The existing water demand for the Project site is approximately 26,691 GPD.

The 2020 UWMP anticipates that the City's water supply will increase from 36,998 acre-feet (AF) in 2020 to 40,036 AF in 2040 (increase of 3,038 AFY). This increase includes the buildout of the South Bristol Street Focus Area. During the preparation of the GPU, the 2020 UWMP was not available at that time and the 2015 UWMP identified sufficient demand and supply to accommodate the GPU Focus Areas including the South Bristol Street Focus Area. The 2015 UWMP projected anticipated that 70 percent of supply would be groundwater from the OC Basin and 29 percent from imported/purchased sources. The 2015 UWMP detailed that the available supply would meet the projected demand in single dry years and multiple dry years through 2040.

The 2020 UWMP also describes that water demands per capita have been decreasing in recent years due to new state and local regulations related to water conservation. The 2020 UWMP demonstrated that the City used 66 gallons per capita per day (GPCD) in 2020, which is below the City's target of 116 GPCD for 2020. Additionally, as shown in Table 5.15-4, the 2020 MWD UWMP indicates that MWD has supply capabilities that would be sufficient to meet demands from 2025 to 2045 under the normal, single dry-year, and multiple dry years. Thus, the City would continue to be able to utilize imported water supply as needed.

Water Infrastructure

The City maintains 444 miles of transmission and distribution mains, 9 reservoirs with a storage capacity of 49.3 million gallons, 7 pumping stations, 20 wells, and 7 import water connections. The Project site is currently served by the City and is connected to the existing water infrastructure. MacArthur Boulevard contains a domestic 14-inch water line and a 14-inch Orange County Water District (OCWD) reclaimed water line. South Plaza Drive, Bristol Street, and Sunflower Avenue each have a 12-inch domestic water line that conveys water supplies to the Project site and adjacent areas.

Wastewater

In 2020, the City of Santa Ana generated approximately 21,768 acre-feet of wastewater (2020 UWMP). The City of Santa Ana operates and maintains the local sewer system consisting of approximately 390 miles of pipeline, 7,360 manholes, and 2 lift stations that connect to the Orange County Sanitation District's (OCSD) trunk system to convey wastewater to OCSD Treatment Plant 1. Wastewater from the Project site currently discharges into a private sewer line that drains to the west toward an existing City of Santa Ana 8-inch sewer line. The City's sewer line continues west to Sunflower Avenue and then into the 78-inch OCSD trunk sewer in Sunflower Avenue at Bear Street.

The GPU FEIR determined that the existing wastewater flows for the Bristol Street Focus Area are 565,500 gpd with an average flow of 0.0534 cubic feet per second (cfs) and a peak flow of 0.160 cfs. The Sewer Study (Appendix Q) prepared for the proposed Project monitored existing flows in South Plaza Drive, Sunflower Avenue, and the private 8-inch sewer main southwest of the site. It was determined that the OCSD South Plaza Drive sewer line has a capacity of 1.99 cfs, the OCSD Sunflower Avenue sewer line has a capacity of 96.80 cfs, and the City 8-inch sewer at the southerly site boundary has a capacity of 0.366 cfs (Appendix Q).

Wastewater from the Project site is treated at OCSD's Treatment Plant No. 1 in Fountain Valley. The treatment plant has a secondary treatment capacity of 182 million gallons per day (mgd). Average wastewater flows through Plant No. 1 are about 120 to 130 mgd; and therefore, the Plan has an additional capacity of approximately 52 mgd (GPU FEIR).

Storm Drainage Facilities

The Project site is within the Newport Bay Watershed. The proposed Project site is tributary to the Orange County Flood Control District (OCFCD) Santa Ana Gardens Channel, Facility No. F02, which is tributary to the OCFCD Santa Ana-Delhi Channel, Facility No. F01, Upper Newport Bay, and ultimately the Pacific Ocean. The Santa Ana Gardens Channel is a concrete lined channel from upstream at 1st Street to McFadden Avenue. Downstream of Alton Avenue, the channel is a reinforced rectangular concrete section, with a culvert at MacArthur Boulevard and Bristol Street. The Santa Ana Gardens Channel confluences with the Santa Ana-Delhi Channel at Sunflower Avenue, east of Bristol Street, and continues flowing southerly toward Upper Newport Bay. The Project site is currently 90 percent impervious and 10 percent pervious (Appendix M). The existing topography of the Project site is relatively flat and generally slopes to the west. The City's existing 54-inch storm drain transitions to an existing 60-inch storm drain in Sunflower Avenue at Bristol Street. Existing backbone storm drain lines are present in MacArthur Boulevard, Plaza Drive, along with Sunflower Avenue. A catch basin/lateral system exists in Bristol Street, to the east of the Project site. Drainage from the Project site currently flows to storm drains in South Plaza Drive, Sunflower Avenue, Bristol Street, and MacArthur Boulevard; and then to the Santa Ana Gardens Channel, Santa Ana-Delhi Channel, Newport Bay, and the Pacific Ocean. As mentioned previously, the existing storm drain facilities in Sunflower Avenue and Plaza Drive are hydraulically deficient, and upgrades are recommended by the City in its 2018 Storm Drain Master Plan.

Solid Waste

In 2019, a majority (80 percent) of the solid waste from the City of Santa Ana, which was disposed of in landfills, went to the Frank Bowerman Sanitary Landfill (CalRecycle 2023). The Frank R. Bowerman Sanitary Landfill received the largest amount of waste in 2019 which was 227,124 tons. The Olinda Alpha Sanitary Landfill received 31,849 tons. The total solid waste disposed from the City was 284,561 tons. The Frank Bowerman Sanitary Landfill is permitted to accept 11,500 tons per day of solid waste and is permitted to operate through 2053. In March 2023, the maximum tonnage received was 8,909.41 tons. Thus, the facility had additional capacity of 2,666.27 tons per day (CalRecycle 2023).

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