4.14 UTILITIES AND ENERGY

This section of the EIR presents an analysis of the potential impacts related to utilities and energy associated with development and implementation of the proposed Master Plan, including five near-term development components (Project). The analysis addresses water supply, distribution and treatment; wastewater treatment and disposal; solid waste disposal; and energy. This section presents the environmental setting, regulatory framework, impacts of the Project on the environment, and proposed measures to mitigate any significant or potentially significant impacts. Appendix D provides the energy calculations for the Project.

Public and agency comments related to utilities and energy were received during the public scoping period in response to the original Notice of Preparation (NOP) and address the use of sustainable water sources to serve additional growth (e.g., water conservation programs, graywater treatment/recycling, stormwater reuse, low-flow water fixtures, and developing a separate water works system) and seek identification of areas requiring extension of sanitary sewer trunk mains outside of areas currently served.

No additional public and agency comments related to utilities and energy were received during the public scoping period in response to the Revision to Previously Released NOP. For a complete list of public comments received during the public scoping periods refer to Appendix B.

4.14.1 Environmental Setting

4.14.1.1 Study Area

The study area for each utility is comprised of that utility's service area as described below.

4.14.1.2 Water Service

Water Supply Overview

Water service to CSUMB is currently provided by the Marina Coast Water District (MCWD). Established in 1960, MCWD provides water supply and wastewater collection services for residents in the City of Marina and to lands in the former Fort Ord Army base, each within its own service area, referred to by MCWD as the Central Marina and Ord Community service areas, respectively (Fort Ord's water and wastewater collection systems were transferred to the MCWD in 2001 via a Public Benefit Conveyance). Each service area is operated as a separate supply system, each with its own water supply sources and distribution systems. CSUMB is located in the Ord Community service area.

Both of MCWD's water supply systems rely on groundwater from the Salinas Valley Groundwater Basin. The Monterey County Water Resources Agency (MCWRA) is responsible

for the regulation of water withdrawals from the Salinas Valley Groundwater Basin, which constitutes all of MCWD's groundwater supplies and in turn supplies the majority of the water to the Ord Community service area. Per two agreements with the MCWRA, MCWD is limited to pumping a total of 3,020 acre-feet per year (AFY) for the Central Marina service area and 6,600 AFY for the Ord Community service area (MCWD 2021).

Regional Groundwater Overview

The Salinas Valley Groundwater Basin (Basin), which extends from the Monterey Bay inland, is the source of all potable water supply for the former Fort Ord, and for the CSUMB campus (see Section 4.8, Hydrology and Water Quality, Figure 4.8-2). Based on DWR Bulletin 118, the Basin consists of nine subbasins including the 180/400-Foot Aquifer Subbasin (3-004.01), East Side Aquifer Subbasin (3-004.02), Forebay Aquifer Subbasin (3-004.04), Upper Valley Aquifer Subbasin (3-004.05), Langley Area Subbasin (3-004.0), Monterey Subbasin (3-004.10), Seaside Subbasin (3-004.08), Paso Robles Subbasin (3-004.06), and the Atascadero Subbasin (3-004.11) (MCWD 2021; DWR 2016).

Marina and the former Fort Ord overlie three subbasins of the Salinas Valley Groundwater Basin: the 180/400 Foot Aquifer Subbasin, Monterey Subbasin, and Seaside Subbasin. Portions of MCWD's Ord Community service area extends into the Seaside Subbasin, which is an adjudicated aquifer,[1] but all of MCWD's current wells are located within the Monterey Subbasin (MCWD 2021). The Salinas Valley Groundwater Basin has been in an overdraft condition with seawater intruding at an estimated rate of 11,000 to 18,000 acre-feet per year (AFY) into the 180/400 Foot Aquifer Subbasin (MCWD 2021). The 180/400 Foot Aquifer Subbasin has been declared by the State to be a basin subject to "critical conditions of overdraft" (DWR 2016). Ongoing monitoring by Monterey County Water Resources Agency (MCWRA) indicates that the seawater intrusion continues to migrate inland, particularly in the 180-Foot Aquifer, but groundwater conditions appear to be improving in some areas south of the Salinas River (MCWD 2021).

MCWD's groundwater withdrawals from the Monterey Subbasin are about 3,300 AFY or less than 1.0 percent of total annual Basin withdrawals of about 475,300 AFY (MCWD 2021). Within the Monterey Subbasin, MCWD production wells tap the Deep Aquifer and the 400-Foot Aquifer, which are described in further detail in Section 4.8, Hydrology and Water Quality. Other than MCWD, only a small number of wells tap the Deep Aquifer, some of which also draw from the 400-Foot Aquifer. Inter-basin cross-boundary flows exist between the Monterey Subbasin and the 180/400 Foot Aquifer Subbasin and therefore conditions in the180/400 Foot Aquifer Subbasin affect conditions in the Monterey Subbasin (MCWD GSA 2021).

[1] Adjudication refers to an action filed in the superior or federal district court to determine the rights to extract groundwater from a basin or store water within a basin.

MCWD is taking actions to preserve and protect the groundwater aquifers from which MCWD draws potable water. In addition to planned water supplies described below, MCWD also recently identified a potential groundwater injection barrier project for mitigating seawater intrusion and protecting the groundwater aquifer. This project is currently in the conceptual phase and would potentially include the expansion of the existing Advanced Water Treatment Facility (AWTF) at the Monterey One Water (M1W)[2] regional wastewater treatment plant, a new AWTF booster pump station, pipelines from the transmission facilities to the injection site, and multiple monitoring wells (MCWD 2020a).

MCWRA has been and is currently working to eliminate basin overdraft and seawater intrusion. The current program builds upon actions taken in the 1940s when MCWRA's predecessor agency, the Monterey County Flood Control and Water Conservation District, initiated development of the Nacimiento and San Antonio dams and reservoirs to augment water resources within the County. In 1991 and 1992, MCWRA developed and approved the Monterey County Water Recycling Projects, a combination of the Salinas Valley Reclamation Plant (SVRP) and the Castroville Seawater Intrusion Project (CSIP). The SVRP produces about 14,000 AFY of tertiary-treated recycled water at the regional wastewater treatment plant operated by M1W. CSIP delivers recycled wastewater for agricultural irrigation use in the Castroville area to reduce groundwater pumping along the coast. The CSIP project has operated successfully since 1998, reducing groundwater pumping and the rate of seawater intrusion (MCWD 2021). As reported in the MCWD's Urban Water Management Plan (UWMP), 12,560 acre-feet of tertiary-treated water was delivered for crop irrigation in 2020 (MCWD 2021). The SVRP is capable of producing an average of 29.6 million gallons per day (MGD) of recycled water or about 33,000 AFY. However, as agricultural demands are seasonal, this capacity cannot be fully utilized year-round (MCWD 2021).

To further address basin overdraft and seawater intrusion, MCWRA's Salinas Valley Water Project (SVWP) was developed to provide for the long-term management and protection of groundwater resources in the Salinas Valley Groundwater Basin. The SVWP included modifying the spillway at Nacimiento Reservoir, adjusting the operations of Nacimiento and San Antonio reservoirs to increase releases into the Salinas River, and construction of the Salinas River Diversion Facility (SRDF). The SRDF consists of seasonal installation of a rubber dam on the Salinas River near Marina, which seasonally diverts stored water into the CSIP's pipelines for delivery as irrigation water (MCWD 2021). The SVWP and SRDF were completed in 2010 and deliver 1,500 to 5,000 AFY for CSIP, further reducing the volume of coastal groundwater pumped for agriculture (MCWD 2021).

[2] Formerly the Monterey Regional Water Pollution Control Agency (MRWPCA).

The Pure Water Monterey Project was recently constructed by the M1W and the Monterey Peninsula Water Management District (MPWMD). The project develops new sources of water supply and conveys them to the M1W regional wastewater treatment plant, where they are recycled as either advanced treated water for indirect potable reuse in the southern Seaside Groundwater Basin (see Chapter 4.8, Hydrology and Water Quality, Figure 4.8-3), or as additional tertiary treated water for CSIP. At full capacity, M1W is expected to generate up to 4,300 AFY of additional supply for CSIP (MCWD 2021).

In addition to the above efforts, the 180/400 Foot Aquifer Subbasin Groundwater Sustainability Plan (GSP) and the Monterey Subbasin GSP provide a range of projects and management actions to attain sustainability in these subbasins, some of which build upon the projects identified above (e.g., SRDF). The projects and management actions for the Monterey Subbasin GSP include: multi-subbasin projects that are generally identified in multiple Salinas Valley Subbasin GSPs and expand upon how the project would be applied in the Monterey Subbasin and Marina-Ord Area local projects and management actions led by MCWD (or Marina-Ord Area agencies) that will primarily benefit this area. This EIR focuses on the Monterey Subbasin GSP elements related to the Marina-Ord Area. These projects and actions include the following:

- **Multi-Subbasin Projects:**
    - Winter Releases from Reservoir to Maximize Diversions from SRDF. Winter release water will be diverted at the SRDF, treated at a new water treatment plant, and (1) injected through Aquifer Storage and Recovery (ASR) injection wells and/or (2) delivered directly to municipalities as supply augmentation. This project correlates to Priority Project #9 (SRDF Winter Flow Injection Project) from the 180/400-Foot Aquifer Subbasin GSP.
    - Regional Municipal Supply Project. This project would construct a regional desalination plant to treat the brackish water extracted from the proposed seawater intrusion barrier in the 180/400-Foot Aquifer Subbasin. This project correlates to Priority Project #6 (Seawater Intrusion Pumping Barrier) from the 180/400-Foot Aquifer GSP.
    - Multi-Benefit Stream Channel Improvements. Proposed stream channel improvements include: removing dense vegetation and reducing the height of sediment bars; removing invasive species *Arundo donax* (arundo) and *Tamarix sp.* (tamarisk) throughout the Salinas River watershed; and enhancing the recharge potential of floodplains along the Salians River. This project correlates to Priority Project #1 (Invasive Species Eradication) from the 180/400-Foot Aquifer GSP.

- **Marina-Ord Area Local Projects:**
    - Stormwater Recharge Management. As future development and redevelopment within the Marina-Ord Area occurs, additional stormwater from urbanized areas and construction sites will be captured and infiltrated, providing recharge to the groundwater basin, per the FORA Stormwater Master Plan, which has the long-term objective to percolate all storm water on the east side of Highway 1 as part of the redevelopment of the former Fort Ord.
    - MCWD Demand Management Measures. MCWD plans to continue to implement conservation efforts within its service area including implementation of design standards for new construction that exceed the State's plumbing code; implementation of 2020 UWMP demand management measures; and replacement of portions of the water distribution system that are over 50-years old to reduce system water losses.
    - Recycled Water Reuse through Landscape Irrigation and Indirect Potable Reuse. The project consists of recycled water reuse through landscape irrigation and/or indirect potable reuse (IPR) within MCWD's service area. The source water for these options is recycled water from the M1W regional wastewater treatment plant, which would undergo advanced treatment to meet criteria under Title 22 of the California Code Regulations (CCR) for subsurface applications of recycled water. Reuse of this water through IPR involves injection into a groundwater aquifer and recovery through an appropriately permitted Groundwater Replenishment Reuse Project (GRRP), which provides seasonal storage and generates potable water that can meet a larger portion of MCWD's water demand beyond irrigation and non-potable needs.
    - Drill and Construct Monitoring Wells. This project includes drilling and construction of monitoring wells screened in the 400-Foot Aquifer and the Deep Aquifers near the southwestern portion of the Subbasin to fulfill monitoring network data gaps.

Service Areas and Existing Demand

MCWD's Central Marina service area encompasses 3.2 square miles, and its sphere of influence[3] encompasses an additional 2.4 square miles. The Ord Community service area, located southeast of the City of Marina and MCWD's Central Marina service area, encompasses a 44 square mile area, of which about 20 square miles is designated for redevelopment, with the balance being

[3] A sphere of influence is the planning boundary outside of an agency's legal boundary that designates the agency's probable future boundary and service area as defined by state law and administered by the Monterey County Local Agency Formation Commission.

parks and open space (MCWD 2021). As indicated previously, CSUMB is located within the Ord Community service area. MCWD's service areas are shown on Figure 4.14-1.

In 2020, MCWD delivered 1,669.4 acre-feet of water to 5,439 customers in the Ord Community service area, which was an increase from 1,331.7 acre-feet in 2015, and groundwater production totaled 2,075 acre-feet in 2020 (MCWD 2021).

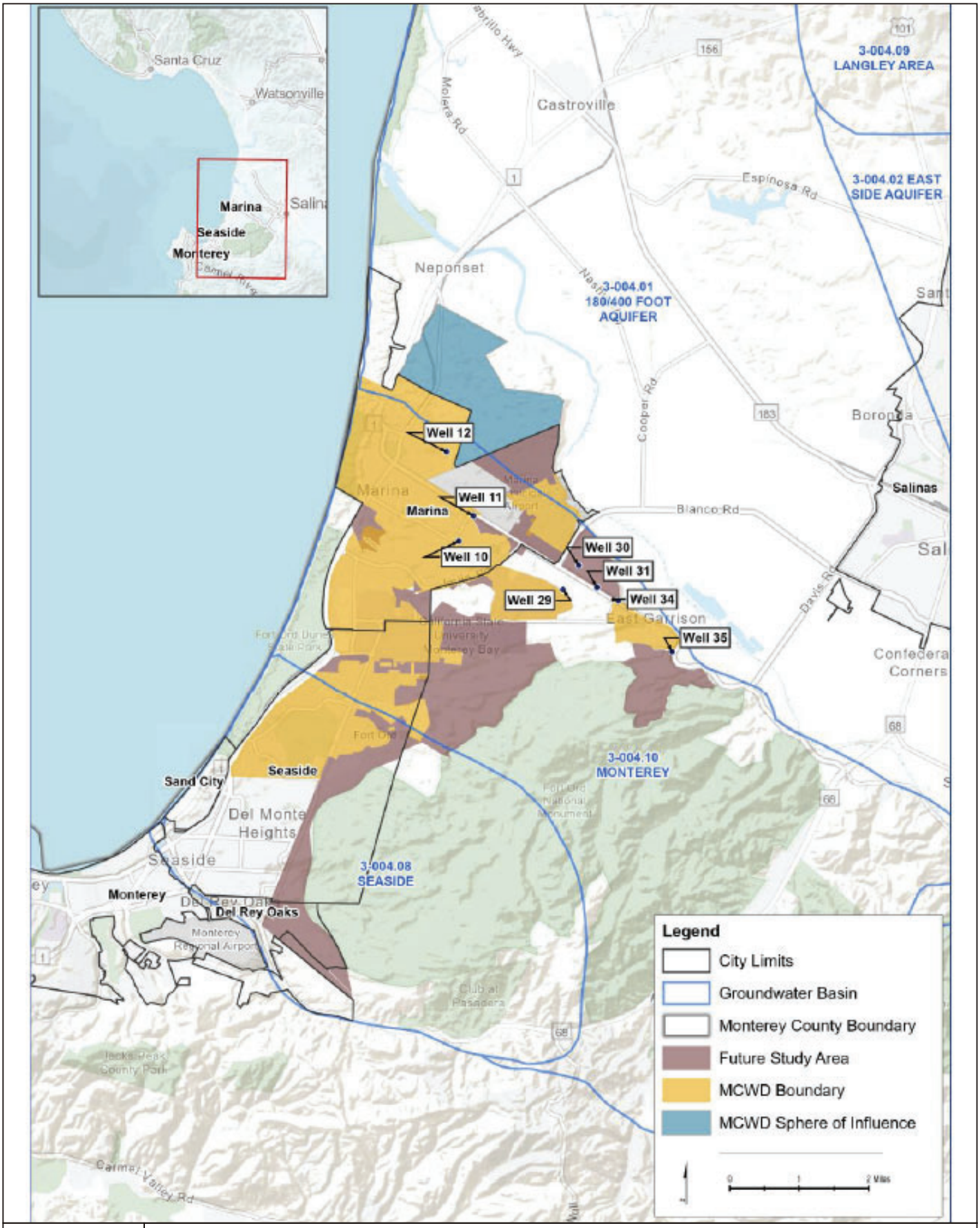
Planned Water Supplies

In addition to groundwater, MCWD's water supply plans include utilizing a combination of recycled water and desalination to meet the future demands of the Ord Community service area (MCWD 2021). MCWD has a seawater desalination plant located at its main office adjacent to Marina State Beach. This facility was constructed in 1996 as a pilot facility and is not currently in use but has a design capacity of 300 AFY (MCWD 2021).

MCWD identified desalination and recycled water as supplemental water sources in its Regional Urban Water Augmentation Program (RUWAP); project design and CEQA documents were completed in 2004, and later amended in October 2006, February 2007, and April 2016 (MCWD 2021). The recycled water component consists of a maximum of 1,727 AFY (1,427 for the Ord Community and 300 AFY for the Monterey Peninsula outside of MCWD's service area). While MCWD has senior rights to recycled water through its agreement with M1W, MCWD has not yet used recycled water within its two service areas (MCWD 2021). However, on April 8, 2016, MCWD and M1W entered into an agreement which would provide up to 1,427 AFY of advanced treated water for urban landscape irrigation, instead of the tertiary treated recycled water planned under the RUWAP. Approximately 600 AFY of advanced treated water is expected to be provided in Phase I with an additional 827 AFY allocated as part of Phase 2 (MCWD 2020a). MCWD will begin supplying advanced treated recycled water to customers in the next several years, via a wholesale purchase from M1W (MCWD 2021).

Fort Ord Water Allocation

A potable groundwater allocation of 6,600 AFY was established for Fort Ord (Ord Community service area) as part of the closure of the former Army base (MCWD 2021). This amount was based on the peak annual water use on Fort Ord during the period between 1980 and 1992, which was 6,600 acre-feet in 1984. MCWRA requires that MCWD pump not more than 5,200 AFY from the 180-Foot and 400-Foot aquifers, to reduce the risk of seawater intrusion (MCWD 2021). Under the 1993 Agreement between the United States of America and the MCWRA concerning annexation of Fort Ord into MCWRA's benefit assessment zones 2 and 2A for the Nacimiento and San Antonio Dams, MCWRA was allocated 6,600 AFY of potable groundwater for use on Fort Ord (MCWD 2021).



SOURCE: Shaaf & Wheeler 2021

FIGURE 4.14-1
MCWD Service Areas

DUDEK

CSU Monterey Bay Master Plan EIR

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The 6,600 AFY of existing groundwater pumping rights for the Ord Community service area have been allocated among the land use jurisdictions by the Fort Ord Reuse Authority (FORA);[4] allocations and water demand by jurisdiction are shown on Table 4.14-1. In addition, 300 AFY has been allocated to the Ord Community service area from the MCWD's existing pilot desalination plant (MCWD 2021), although the facility is not currently in use. The water demand information presented in Table 4.14-1 is described in the Water Demand and Supply Forecasts section below.

Table 4.14-1
MCWD Ord Community Service Area Water Demand by Jurisdiction (AFY)

Jurisdiction	Actual Water Demand	Projected Water Demand						Allocation
	2012[1]	2015[2]	2020	2025	2030	2035	2040	
U.S. Army	620	633	409	461	471	471	471	1,577
CSUMB	404	404	318	421	616	821	977	1,035[3]
Del Rey Oaks	0	0	0	31	224	238	238	243
City of Monterey	0	0	0	0	130	130	130	65
County of Monterey	8	52	227	436	436	522	522	720
UCMBEST	3	3	1	116	335	377	408	230
City of Seaside	657	657	339	839	1,032	1,435	1,698	1,012
State Parks and Rec	0	0	0	7	9	9	9	45
Marina Ord Community	264	285	446	1,125	1,638	1,757	1,809	1,325[4]
Assumed Line Loss	395	348	190	348	348	348	348	348
Total Ord Community	**2,351**	**2,382**	**1,929**	**3,784**	**5,239**	**6,108**	**6,610**	**6,600[4]**

Definition: AFY = acre-feet per year.
Source: Marina Coast Water District, Urban Water Management Plan, 2016 and 2021.
Notes:
1. Actual demands from calendar year 2012 used to represent a non-drought year.
2. Projected 2015 demands. Actual use was lower due to mandatory drought restrictions.
3. CSUMB allocation shown above does not include 33 AFY included with the CSU purchase of the Promontory from a developer in the City of Marina.
4. Allocation does not include 300 AFY existing pilot desalination plant.

[4] On June 30, 2020, FORA's legal mandate expired and the authority dissolved, under the Fort Ord Reuse Authority Act.

Water Demand and Supply Forecasts

Water demand and supply information is available in Fort Ord Base Reuse Plan EIR and the MCWD's 2020 UWMP, as described below.

Base Reuse Plan EIR

At the time of the closure of the Fort Ord military base, the EIR prepared for the Fort Ord Base Reuse Plan projected that future redevelopment and buildout would result in a water demand of 9,000 AFY, which would exceed available supplies of 6,600 AFY established in agreements with MCWRA, resulting in the need for 2,400 AFY of additional water (MCWD 2021). As a result, MCWD prepared the RUWAP, as described above, which proposes to provide a combination of recycled and desalinated water sources to provide water supply augments of 2,400 AFY for the Ord Community service area. In 2007, FORA allocated the RUWAP's recycled water component of 1,427 AFY among the land use jurisdictions in the Ord Community service area, resulting in 973 AFY of additional needed water supply. To address the remaining (potable) water augmentation under the Base Reuse Plan, MCWD, FORA, and MRWPCA entered a memorandum of understanding on May 13, 2016, to explore the most cost effective and technically efficient mix of advance treated water, conservation, desalination, groundwater recharge and recovery, and other water sources, options, and alternatives to provide the additional 973 AFY of the projected 2,400 AFY of supplemental water supply for the Ord Community service area. The recommended option under that study was Indirect Potable Reuse through the expansion of the M1W Advance Water Purification Plant and injection into the Deep or 400-foot aquifers (MCWD 2021).

Urban Water Management Plan

Pursuant to state law, MCWD has prepared and adopted a 2020 UWMP in 2021. The 2020 UWMP projects a water demand of 6,610 AFY in the Ord Community service area over the ensuing 20 years, to the year 2040, as summarized in Table 4.14-1, which is lower than the total buildout demand of 9,000 AFY estimated in the Fort Ord Base Reuse Plan EIR. The Ord Community service area is projected to slightly exceed its current Salinas Valley groundwater allocation by the year 2040, but would not exceed its allocation by 2035, the horizon year for the Project. By 2040, the total Ord Community allocated groundwater supply of 6,600 AFY is projected to fall short of the estimated demand of 6,610 AFY by 10 AFY. However, by 2035, the allocated supply would be sufficient to meet the estimated demand of 6,108 AFY. The MCWD does not allocate water supply to projects but advises customer land use jurisdictions as to current and historic water use within their boundaries and estimated remaining supply available for new developments. With these provisions, the established sub-allocations for the Ord Community service area cannot be exceeded by the various jurisdictions until supplemental water supplies are made available.

The Urban Water Management Planning Act requires a description of a water provider's supply reliability and vulnerability to shortage for an average water year, a single dry year or multiple-dry years. Such an analysis is most clearly relevant to water systems that are supplied by surface water. Since the bulk of MCWD's supply is groundwater, short- and medium-term hydrologic events over a period of less than five years usually have little bearing on water availability (MCWD 2021). MCWD's current UWMP also concludes that the available water supply is considered reliable in average, dry and multiple-dry years because demand is projected to decline under a multiple-year drought and the available groundwater storage exceeds even a five-year demand (MCWD 2021).

MCWD Water System Facilities

The MCWD's municipal water system consists of seven active groundwater wells, seven ground level storage tanks totaling 9.2 million gallons in storage, distribution mains, and fire hydrants. The MCWD's topography generally slopes towards the coastline from east to west; based on this topography, the water distribution system is comprised of five pressure zones. MCWD is divided into five pressure zones (A-E); four of these pressure zones are served by ground level storage tanks while the highest zone, zone E, is served by a pressure tank (MCWD 2020c). MCWD is currently constructing a recycled water distribution system and will begin delivering advanced treated recycled water in the near future (MCWD 2021).

MCWD owns and operates its production wells and does not currently purchase wholesale water supply, but will soon from M1W, as described previously (MCWD 2021). Historically, MCWD supplied its Central Marina service area with water from 11 wells screened in the 180-Foot and 400-Foot aquifers. Between 1960 and 1992, some of those wells indicated varying degrees of seawater intrusion and were replaced. MCWD currently has three wells in the Central Marina service area, all of which are in the Deep Aquifer. The U.S. Army's original wells serving the Ord Community service area were located in the Main Garrison area near Marina. When wells indicated varying degrees of seawater intrusion, the Army installed four wells further inland in 1985. MCWD currently has five wells in the Ord Community service area; four are in the 400-Foot Aquifer and one is in the Deep Aquifer (MCWD 2021).

MCWD's recently completed Water Master Plan included development and utilization of a hydraulic model to evaluate the adequacy of the existing water system capacity (transmission mains, storage reservoirs, and booster stations) and to plan its expansion to service anticipated future growth through 2035 (MCWD 2020c). The Water Master Plan includes recommended improvements and a Capital Improvement Program. Infrastructure improvements are recommended to mitigate existing system deficiencies and serve development over the next 15 years. Improvements in the pressure zones the serve the campus (pressure zones B, C and D) include new and replacement tanks, pump

stations, pipelines and valves (MCWD 2020c). These improvements are further specified and described in Section 4.14.3, Impacts and Mitigation Measures.

The Water Master Plan considers two alternatives related to water supply to serve the buildout. One alternative is development of an Eastern Well Field due to ongoing concerns about the intrusion of seawater and the potential for eventual intrusion into the deep aquifer that could render the MCWD's existing wells inoperable due to total dissolved solids and salinity issues. MCWD has historically planned to mitigate this issue by abandoning the existing wells and constructing a new well field east of the existing service area. This Eastern Well Field would convey water to a future reservoir at the existing East Garrison development before being pumped to the MCWD's pressure zones A and B by new pump station facilities. This alternative would require substantial transmission main improvements along Inter-Garrison Road, new pumping facilities located within the East Garrison community, construction of new wells, and the abandonment of existing well facilities. As an alternative to the Eastern Well Field, and assuming seawater intrusion does not adversely impact the existing water supply wells, the second alternative consists of utilizing the existing wells and rehabilitating them as necessary to service future growth (MCWD 2020c).

MCWD's recycled water facilities under the RUWAP are described above (see Planned Water Supplies). MCWD's existing recycled water system consists of inactive areas of distribution pipeline that were constructed in anticipation of the delivery of recycled water, a 2.0 MG storage reservoir, and a recently constructed transmission pipeline between the AWTF at M1W and the storage tank (MCWD 2020a). MCWD will begin supplying advanced treated recycled water to customers in the next several years, via a wholesale purchase from M1W (MCWD 2021).

CSUMB Water System and Water Use

Water Use and Allocation

CSUMB is allocated 1,035 AFY of potable groundwater and 87 AFY of recycled water (MCWD 2021). Total potable water use at CSUMB in 2018 was approximately 318 AFY, for all uses, including residential uses in the East Campus and irrigation on both the Main and East Campuses (see Table 4.14-2) (MCWD 2021). Based on campus data, total potable water use at CSUMB in Fiscal Year 2018-2019 was approximately 316 AFY, of which 219 AFY was related to building use and 97 AFY was related to irrigation. Campus water use has declined over the years as a result of installation of water meters and implementation of water conservation measures (Lerch, personal communication, 2019), as demonstrated by Table 4.14-2, which shows water consumption on the campus declining substantially and steadily over the past 10 years. In an effort to reduce water usage, the campus has metered all East Campus Housing units and new buildings, installed artificial turf, used evapotranspiration metering to reduce landscape water usage, and

replaced existing urinals with waterless urinals and existing toilets with dual-flush toilets. Installation of artificial turf and metering at East Campus Housing is consistent with requirements set forth in Mitigation Measures 7.1-1 and 7.1-3 in CSUMB's 2007 Master Plan EIR.

Table 4.14-2
10 Years of Annual CSUMB Water Consumption (Acre-Feet/Year)

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
434.68	405.50	425.43	344.95	293.08	283.06	314.36	317.98	277.48	242.37

Source: MCWD 2021.

Water System Infrastructure

The MCWD currently serves the Ord Community including CSUMB through a system of four interconnected pressure zones designated zones A-D based on the elevation range served. The areas of the CSUMB campus served by these zones are summarized as follows:

- Zone A does not serve the CSUMB campus.
- Zone B provides service to the north and west areas of the Main Campus. It also serves East Campus Housing.
- Zone C provides service to the central area of the Main campus and the majority of the East Campus Open Space.
- Zone D provides service to a small area of the Main campus south of Butler Street and East of 6th Avenue.

MCWD's Water Master Plan proposes to increase the number of pressure zones from 4 to 7 and forecasted growth in each (MCWD 2020c). However, it is anticipated that CSUMB will continue to be served by zones B through D, as under existing conditions.

All three zones serving the campus are connected to several trunk mains, which connect in turn to adjacent cities as part of MCWD's overall system. These include 12-, 14-, 16-, and 24-inch trunk lines connected to the City of Marina to the north, an 18-inch trunk line connected to the City of Salinas to the east, and 8- and 12-inch lines connected to the City of Seaside to the south. The main trunk line is the 24-inch line running along Sixth Street. Numerous pipelines, pump stations, valves, and storage reservoirs are identified in MCWD's Water Master Plan to serve existing deficiencies and planned growth in the pressure zones that serve the campus and other development (MCWD 2020c). See Section 4.14.3, Impacts and Mitigation Measures (Impact UTL-1) for information about MCWD improvements related to the Project.

In anticipation of receiving 87 AFY of regionally generated advanced treated recycled water, over the past ten years the campus has installed recycled water irrigation piping for all newly created landscapes. The Pure Water Monterey advanced treated recycled water pipeline is currently complete through the CSUMB campus with points of connections installed in proximity to CSUMB irrigation locations.

CSUMB Fees and Contributions

In October 2006, CSU and MCWD entered into an agreement setting forth the terms and conditions reached between CSU and MCWD pursuant to California Government Code § 54999.3 regarding "capacity charges" for new or expanded uses, and standard rates for water and wastewater services. In the agreement, CSU also agreed to provide easements to MCWD for three sites on its CSUMB campus totaling 3.5 acres, for MCWD's use for water storage and other infrastructure facilities. To date, these easements have been provided to MCWD, with the last easement currently being revised, finalized, and executed. In October 2019, CSU terminated the October 2006 agreement in accordance with the terms of the agreement. The parties are currently engaged in negotiations to enter into a new agreement for capacity charges pursuant to California Government Code § 54999.3.

4.14.1.3 Wastewater Collection and Treatment

The sanitary sewer system serving the CSUMB Campus is owned, operated, and maintained by MCWD. MCWD collects wastewater in two wastewater collection systems serving the Central Marina and the Ord Community service areas and conveys each to an interceptor pipeline operated by M1W west of highway 1. M1W pumps the sewage through the interceptor pipeline to the regional wastewater treatment plant two miles north of Marina, which is also operated by M1W.

MCWD Collection

MCWD's wastewater collection system consists of approximately 150 miles of up to 72-inch gravity sewer pipes that convey flows to the M1W interceptor pipeline, which in turn conveys the wastewater to the M1W regional wastewater treatment plant, located north of the City of Marina (MCWD 2020b). Based on the varying topography and numerous lift stations, the sewer system is divided into multiple collection basins that serve to collect flows from smaller developments and route that flow to larger sewer trunk lines. MCWD has two points of connection to the regional wastewater collection system. Central Marina connects via a dedicated pump station. The Ord Community connects via a gravity pipeline with a metering flume. The total flow at the flume was just under 900 AFY in 2015 and approximately 970 AFY in 2020. Municipal wastewater flows to the regional wastewater treatment plant were 19,700 AFY in 2015 and 19,000 AFY in 2020, with MCWD contributing about 11 percent in both years (MCWD 2021). In all, MCWD collects and transmits approximately 2.0 MGD of wastewater to the regional

wastewater treatment plant of which approximately 1.0 MGD are from the Ord Community service area (MCWD 2020b).

MCWD recently completed a Sewer Master Plan that included development and utilization of a hydraulic model to evaluate adequacy of sewer infrastructure for existing and future development (MCWD 2020b). The existing wet weather flow analysis indicated that the existing sewer system exhibited acceptable performance to service existing and future customers during peak wet weather flows, with some exceptions, including some localized areas at CSUMB (MCWD 2020b). Recommendations for replacement of existing sewer lines and lift station improvements are identified in the CSUMB area to serve growth unrelated to CSUMB (MCWD 2020b) (see CSUMB Sanitary Sewer System below for additional information).

In 1991, MCWD constructed a pilot recycled water system, providing tertiary treated wastewater for irrigation of public streetscapes and parks near the wastewater plant; MCWD operated this facility from 1994 to 1997. In 1997 MCWD discontinued production at its water reclamation facility and directed the raw wastewater flow to the M1W regional wastewater treatment plant. The Marina wastewater treatment plant was retired, and MCWD now provides wastewater collection services only, with treatment performed at the M1W regional wastewater treatment plant.

Monterey One Water (M1W) - Wastewater Treatment

M1W serves a population of approximately 250,000. It operates a regional wastewater system that consists of treatment, disposal, and reclamation facilities. The system provides centralized wastewater treatment for cities and communities of northern Monterey County through a network of wastewater pump stations and pressure pipelines that convey wastewater to the regional wastewater treatment plant. M1W provides wastewater treatment services to: the cities of Monterey, Pacific Grove, Del Rey Oaks, Sand City, Marina, and Salinas; the Seaside Sanitation District; the Castroville, Moss Landing and Boronda Community Service Districts; and former Fort Ord lands, including the CSUMB campus. Residential, commercial, and industrial wastewater is conveyed to the plant, which is located north of the City of Marina. The regional wastewater treatment plant primarily treats municipal wastewater, but when needed to meet water recycling demands the plant also treats industrial processing water, crop irrigation drainage water, and urban stormwater runoff (M1W 2021).

Wastewater at the regional wastewater treatment plant is treated to two different standards: 1) primary and secondary treatment for discharge through the MRWPCA ocean outfall or use as influent for the tertiary treatment system; and 2) Title 22 California Code of Regulations standards (tertiary filtration and disinfection) for unrestricted crop irrigation use. Recycled water is produced at the SVRP, located at the regional wastewater treatment plant as described in

Section 4.14.1.2, which produces tertiary-treated water for irrigation of farmland in the northern Salinas Valley. The recycled water is delivered to the CSIP, also described above, irrigating farmland in the greater Castroville area, reducing demands on Salinas Valley Groundwater Basin and retarding seawater intrusion in that area.

The plant has an average dry weather design capacity of 29.6 MGD and a peak wet weather design capacity of 75.6 MGD. It currently receives and treats on average approximately 18.5 MGD of wastewater (MCWD 2020b), and therefore, has capacity to treat approximately 11 MGD of additional flows. The volume of treated wastewater effluent at the plant varies throughout the year, with the highest flows occurring during the non-irrigation season (November through March). The lowest flows occur during the irrigation season (April through October) when a large portion of the secondary effluent from the plant is diverted to the SVRP for additional tertiary treatment and subsequent use for crop irrigation of approximately 12,000 acres within the CSIP area (MRWPCA 2016).

In most winter months, secondary treated wastewater from the regional wastewater treatment plant is discharged to the Monterey Bay through the ocean outfall, which includes a diffuser that extends 11,260 feet offshore at a depth of approximately 100 feet. The diffuser on the ocean outfall is designed to convey wet weather flows of up to 81.2 MGD. However, the current permitted capacity of the outfall of 75.6 MGD is less than its 81.2 MGD capacity. As indicated above, some of the current secondary-treated effluent (17-19 MGD) is discharged though the ocean outfall during winter months, while most is diverted to the SVRP to produce recycled water for the CSIP. The interceptor pipeline system also has currently unused or excess conveyance capacity (MRWPCA 2016).

CSUMB Sanitary Sewer System

As previously stated, the sanitary sewer system that serves CSUMB is owned, operated, and maintained by the MCWD. The existing MCWD owned wastewater facilities within the Main Campus are comprised of two distinct systems made up of various pipe collectors and one lift station. These two sewer systems collect wastewater from CSUMB main campus buildings as well as from off-site non-CSUMB owned buildings that pass flow through the campus. System 1 is the group of Collector H, Collector 6th Avenue Branch, Collector U, Collector North Main Quad, and Promontory Force Main; System 2 is comprised of Collector N (Whitson Engineers 2019 and 2020). Wastewater is conveyed by this system to the M1W pump station west of highway 1 where it is in turn pumped to the regional wastewater treatment plant 2 miles north of Marina (MCWD 2020b).

Existing 2018-2019 wastewater flows from CSUMB are approximately 195,500 gallons per day (GPD) or 0.2 MGD. In a recent Sanitary Sewer Capacity Analysis conducted for the CSUMB Main

Campus it was determined that adequate existing capacity exists in the sanitary sewer pipe collectors on the Main Campus (Whitson Engineers 2019). Additionally, it was also determined that the MCWD system within the campus is anticipated to be adequately sized to accommodate future campus growth under the proposed Master Plan (Whitson Engineers 2020), as further discussed in Section 4.14.3, Impacts and Mitigation Measures).

Two areas of the CSUMB East Campus are served by 3 different lift stations: Schoonover Park Lift Station, Hodges Lift Station and Imjin Road Lift Station. These stations discharge to an Ord Community collector outside of CSUMB, which also serves Abrams Park, Preston Park, and the Airport Area. Of the three lift stations in the CSUMB East Campus, the MCWD Sewer Master Plan recommends replacement of the Imjin Road Lift Station to serve growth unrelated to CSUMB.

4.14.1.4 Solid Waste

CSUMB is within the service area of the Monterey Regional Waste Management District (MRWMD). The MRWMD's service area encompasses a population of approximately 170,000 over 853 square miles, including the cities of Carmel-by-the-Sea, Del Rey Oaks, Marina, Monterey, Pacific Grove, Sand City, Seaside, and the unincorporated areas of Big Sur, Carmel Highlands, Carmel Valley, Castroville, Corral De Tierra, Laguna Seca, Moss Landing, Pebble Beach, San Benancio, and Toro Park (MRWMD 2016).

GreenWaste Recovery provides solid waste, recycling, and organics (both food and yard waste) collection services to the Project area. Waste from the CSUMB campus and the Monterey Peninsula is taken to the 315-acre Monterey Peninsula Landfill approximately 2 miles north of the City of Marina. The landfill has a maximum permitted throughput of 3,500 tons of waste per day (CalRecycle 2019a) and receives approximately 1,300 tons of waste per day, or 490,000 tons per year (MRWMD 2016). The landfill's maximum permitted capacity is 49.7 million cubic yards of waste. As of 2004 (the most recent data available), the landfill had a remaining capacity of over 48.5 million cubic yards of waste (CalRecycle 2019a). The landfill is expected to have capacity for approximately 90 to 100 more years (CalRecycle 2019a). Developments in recycling and diversion in the coming years are anticipated to add additional life expectancy to the Monterey Peninsula Landfill disposal site (MRWMD 2016).

The MRWMD's facilities also include 20 acres for resource recovery facilities. The MRWMD's first Materials Recovery Facility (MRF) opened in April 1996 in response to Assembly Bill (AB) 939 (see Section 4.14.2, Regulatory Framework) and diverted more than 1.6 million tons of recyclable and reusable materials from landfill disposal over a period of 20 years (MRWMD 2016). In response to California's increased diversion goal pursuant to AB 341 (see Section 4.14.2), a new, expanded MRF opened in February 2018, dramatically expanding the MRWMD's capacity to divert materials from disposal. The new MRF is capable of recovering up to 75 percent or more

of the mixed waste stream from both commercial and multi-family sources, single-stream recyclables, as well as construction and demolition and self-haul loads. The MRF processes recyclables collected from the residential and commercial sectors of the Monterey Peninsula region, construction and demolition debris, and commercial mixed waste. The MRF also receives clean loads of source-separated green and wood waste, mattresses, tires, and appliances (MRWMD 2018).

In 2017, approximately 2,123 tons of waste were generated at the CSUMB campus (CSUMB 2019). That same year, the campus had a waste diversion rate of approximately 35 percent, not including building demolition. The campus waste diversion rate fluctuates annually; from 2013 to 2017, it ranged from approximately 31 percent to 38 percent, with a 5-year average of 35 percent. When building demolition is accounted for (i.e., due to the demolition of former unusable military buildings), the campus's overall waste diversion rates ranged from approximately 53 percent to 97 percent from 2013 to 2017. Through recycling and reuse of construction/demolition materials, the campus has been able to divert the vast majority of its construction/demolition waste from the landfill (averaging 98 percent diversion from 2013 to 2017 for specific projects).

4.14.1.5 Energy

The environmental setting for the Project related to electricity, natural gas, and petroleum, including associated service providers, supply sources, and estimated consumption, is discussed in detail as follows. In summary, California's estimated annual energy use in 2018 (the most recent year for which data is available for all three energy sources) included the following:

- Approximately 257,268 gigawatt hours of electricity (EIA 2019a)
- Approximately 2,110,829 million cubic feet of natural gas (MMcf) (EIA 2019b)
- Approximately 16 billion gallons of gasoline (CEC 2019)

Electricity

Electricity usage in California varies substantially based on the types of operational uses in a building, the types of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building. In 2018, California's total energy consumption was second-highest among the states, but its per capita energy consumption was the fourth-lowest due in part to its mild climate and its energy efficiency programs (EIA 2021).

Residents within Monterey County, including the CSUMB campus, receive electricity from the Pacific Gas and Electric Company (PG&E). PG&E provides electric services to 5.4 million customers via 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of

interconnected transmission lines over a 70,000-square-mile service area that includes Northern California and Central California (PG&E 2016). According to PG&E, its customers consumed 78,519 million kilowatt-hours (kWh) of electricity in 2020 (see Table 4.14-3) (CEC 2021a).

Table 4.14-3
Pacific Gas & Electric Company 2020 Electricity Consumption

Sector	Total Electricity (in millions of kWh)
Agricultural and Water Pump	6,637.59
Commercial Buildings	26,246.78
Commercial Other	3,948.56
Industry	9,814.34
Mining and Construction	1,747.64
Residential	29,833.54
Streetlight	290.38
Total Consumption	**78,518.84**

Source: CEC 2021a.
Notes: kWh = kilowatt-hour.

PG&E receives electric power from a variety of sources. According to the California Public Utilities Commission's (CPUC's) *2021 California Renewables Portfolio Standard Annual Report*, 35 percent of PG&E's power came from eligible renewable energy sources in 2019, including biomass/waste, geothermal, small hydroelectric, solar, and wind sources (CPUC 2021a). Therefore, PG&E exceeded the state's Renewables Portfolio Standards (RPS) target of 33 percent renewable energy delivered by 2020.

Based on recent energy supply and demand projections in California, statewide annual peak electricity demand is projected to grow an average of 1,087 megawatts per year for the next decade, or 1.5 percent annually, and consumption per capita is expected to remain relatively constant at 7.6 to 8.0 MWh per person (CEC 2018).

In Monterey County, PG&E reported an annual electrical consumption of approximately 2,586 million kWh in 2020, with 1,705 million kWh for non-residential uses and 728 million kWh for residential uses, which includes electricity delivered to CSUMB (CEC 2021b).

Natural Gas

The CPUC regulates natural gas utility service for approximately 10.8 million customers who receive natural gas from PG&E, Southern California Gas, San Diego Gas and Electric, Southwest Gas, and several smaller natural gas utilities. PG&E provides natural gas service to most of Northern California, including Monterey County and the CSUMB campus. As provided in Table 4.14-4, PG&E customers consumed approximately 4,509 million therms of natural gas in 2020 (CEC 2021c).

Table 4.14-4
Pacific Gas and Electric Company 2020 Natural Gas Consumption

Sector	Total Natural Gas (in millions of therms)
Agricultural and Water Pump	44.03
Commercial Buildings	796.94
Commercial Other	50.97
Industry	1,585.35
Mining and Construction	139.96
Residential	1,891.28
Total Consumption	**4,508.54**

Source: CEC 2021c.

Natural gas is used for cooking, space heating, generating electricity, and as an alternative transportation fuel. The majority of California's natural gas customers are residential and small commercial customers (core customers). These customers accounted for approximately 30 percent of the natural gas delivered by California utilities in 2017. Large consumers, such as electric generators and industrial customers (noncore customers), accounted for approximately 70 percent of the natural gas delivered by California utilities in 2017 (EIA 2019b).

The CPUC regulates California natural gas rates and natural gas services, including in-state transportation over transmission and distribution pipeline systems, storage, procurement, metering, and billing. Most of the natural gas used in California comes from out-of-state natural gas basins. California gas utilities may soon also begin receiving biogas into their pipeline systems (CPUC 2021b).

In 2012, California customers received 35 percent of their natural gas supply from basins located in the Southwest, 16 percent from Canada, 40 percent from the Rocky Mountains, and 9 percent from basins located within California (CPUC 2017). Natural gas from out-of-state production basins is delivered into California through the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California are the Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Southern Trails Pipeline, and Mojave Pipeline. The North Baja–Baja Norte Pipeline takes gas off the El Paso Pipeline

at the California/Arizona border and delivers it through California into Mexico. The Federal Energy Regulatory Commission regulates the transportation of natural gas on interstate pipelines, and the CPUC often participates in Federal Energy Regulatory Commission proceedings to represent the interests of California natural gas consumers (CPUC 2017).

Most of the natural gas transported through interstate pipelines, as well as some California-produced natural gas, is delivered through the PG&E and Southern California Gas intrastate natural gas transmission pipeline systems (commonly referred to as California's "backbone" natural gas pipeline system). Natural gas on the backbone pipeline system is then delivered into local transmission and distribution pipeline systems or to natural gas storage fields. Some large noncore customers take natural gas directly off the high-pressure backbone pipeline system, and some core customers and other noncore customers take natural gas off the utilities' distribution pipeline systems. The CPUC has regulatory jurisdiction over 150,000 miles of utility-owned natural gas pipelines, which transported 82 percent of the natural gas delivered to California's gas consumers in 2012 (CPUC 2017).

PG&E and Southern California Gas own and operate several natural gas storage fields located in Northern and Southern California. These storage fields and four independently owned storage utilities—Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage—help meet peak-season natural gas demands and allow California natural gas customers to secure natural gas supplies more efficiently (CPUC 2017).

California's regulated utilities do not own any natural gas production facilities. All-natural gas sold by these utilities to core customers must be purchased from suppliers and/or marketers. The price of natural gas sold by suppliers and marketers was deregulated by the Federal Energy Regulatory Commission in the mid-1980s and is determined by market forces. However, the CPUC decides whether California's utilities have taken reasonable steps to minimize the cost of natural gas purchased on behalf of its core customers (CPUC 2017).

In 2020, PG&E delivered 10 million therms of natural gas to Monterey County (including CSUMB), with the majority going to non-residential uses (60 million therms) (CEC 2021d).

Demand for natural gas can vary depending on factors such as weather, price of electricity, the health of the economy, environmental regulations, energy efficiency programs, and the availability of alternative renewable energy sources. As previously indicated, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available through existing delivery systems, thereby increasing the availability and reliability of resources.

Petroleum

There are more than 36 million registered vehicles in California, and those vehicles consume an estimated 16.8 billion gallons of fuel each year (CEC 2019; DMV 2020). Petroleum currently accounts for approximately 92 percent of California's transportation energy consumption (CEC 2019). However, technological advances, market trends, consumer behavior, and government policies could result in significant changes in fuel consumption by type and in total. At the federal and state levels, various policies, rules, and regulations have been enacted to improve vehicle fuel efficiency, promote the development and use of alternative fuels, reduce transportation-source air pollutants and greenhouse gas (GHG) emissions, and reduce vehicle miles traveled (VMT). Section 4.6, Greenhouse Gas Emissions, discusses in more detail both federal and state regulations that would help increase the fuel efficiency of motor vehicles and reduce GHG emissions (see 4.6.2, Regulatory Framework). Market forces have driven the price of petroleum products steadily upward over time, and technological advances have made use of other energy resources or alternative transportation modes increasingly feasible.

Largely as a result of and in response to these multiple factors, gasoline consumption within the state has declined in recent years, and availability of other alternative fuels/energy sources has increased. The quantity, availability, and reliability of transportation energy resources have increased in recent years, and this trend will likely continue and accelerate (CEC 2019). Increasingly available and diversified transportation energy resources act to promote continuing reliable and affordable means to support vehicular transportation within the state.

CSUMB Electrical, Natural Gas, Telecommunication Infrastructure

The CSUMB Master Plan Guidelines provide information about the existing electrical, natural gas, and telecommunications infrastructure on campus (Page 2020). PG&E delivers electricity and natural gas to East Campus Housing area and residences are individually metered. The campus owns a medium-voltage electricity distribution system that extends to every building on the Main Campus. Main Campus electricity is procured both from a 1.0 MW solar tracking PV generation facility owned by SunEdison under a twenty-year contract, and from PG&E metered to campus at a single location. The campus also owns a natural gas distribution system that extends to many buildings on the Main Campus. The natural gas is transported to campus via a PG&E pipeline, metered to campus at a single location. A gas-fired central plant on the Main Campus supplies hot water for heating to the campus core through underground piping. Approximately two-thirds of Main Campus thermal demand is satisfied from this system; the balance is supplied by standalone gas-fired boilers and furnaces. The campus core is also served by a central chilled water plant located at the library. Underground chilled water pipes are installed in the campus core. The campus also has a fiber optic telecommunications system.

4.14.1.6 Site Conditions for Near-Term Development Components

The existing utilities and energy setting for the near-term development component sites is generally described above. Additional information is provided below related to specific conditions on each site, including existing development conditions. Chapter 3, Project Description provides additional information about the location and characteristics of each development component site.

Student Housing Phase III

The approximately 6.4-acre Student Housing Phase III site is mostly paved with an existing surface parking lot and an unused paved area. The existing surface parking lot is actively used by the campus. The unused paved area, which is the potential staging area, dates back to the former Fort Ord. Vegetation and paved pathways border the component site on the west and south. There are no utilities that currently serve the site.

Academic IV

The approximately 4.0-acre Academic IV site is mostly paved or developed. Existing Building 13 (Science Research Lab Annex) and parking lot areas 13 and 19 are located on the site. Vegetation and paved pathways border the component site on all sides. The potential staging area on the west is a paved parking lot, and the staging area on the east is mostly unpaved and previously contained one of the Hammerheads residential area buildings that was demolished. Existing utilities presently serve Building 13.

Student Recreation Center Phases I and II

The approximately 8.5-acre Student Recreation Center site is partially paved or developed. Existing Building 21 (Beach Hall) and Building 23 (Tide Hall), and portions of parking lots 23 and 508 are located on the site. These buildings are used for various campus administration uses. Vegetation and paved pathways border the component site on the north and west sides of the site. The potential staging area to the south is mostly unpaved and vegetated. Existing utilities presently serve Buildings 21 and 23.

Student Housing Phase IIB

The approximately 7.2-acre Student Housing Phase III site and potential staging area are mostly paved. This unused paved area dates back to the former Fort Ord. Vegetation borders a portion of the entire site on the north, west, and south. There are no utilities that currently serve the site.

Academic V

The approximately 2.7-acre Academic V site is partially paved or developed. Existing Buildings 1, 2, and 3 (Administration, Playa, and Del Mar buildings) and parking lot 18 are located on this site. These buildings are used for administration and academic uses. Vegetation and paved pathways border the component site on all sides. Construction staging for this development would potentially use the same staging area as that identified for the Student Recreation Center. Existing utilities presently serve Buildings 1, 2, and 3.

4.14.2 Regulatory Framework

4.14.2.1 Federal

Clean Water Act

The Clean Water Act (33 USC § 1251 *et seq.*) provides mechanisms to reduce direct pollutant discharges into waterways and manage polluted runoff. Primary drinking water standards are established in Section 304 of the CWA. States are required to ensure that the public's potable water meets these standards.

Section 303 of the Clean Water Act requires states to identify surface waters that have been impaired. Under Section 303(d), states, territories, and authorized tribes are required to develop a list of water quality segments that do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. Section 402 of the Clean Water Act established the National Pollutant Discharge Elimination System (NPDES) to regulate the discharge of pollutants from point sources.

Safe Drinking Water Act

The Environmental Protection Agency (EPA) regulates contaminants of concern to domestic water supply, as required by the Safe Drinking Water Act (Public Law 93-523). Contaminants are regulated by EPA through the establishment of primary and secondary maximum contaminant levels (MCLs). EPA has delegated responsibility for California's drinking water program to the State Water Resources Control Board (SWRCB) Division of Drinking Water. SWRCB Division of Drinking Water is responsible for program implementation and for adoption of standards and regulations that are at least as stringent as those developed by EPA.

Infrastructure Investment and Jobs Act

The Infrastructure Investment and Jobs Act (Infrastructure Deal) was signed into law in November 2021. The legislation includes $39 billion of new investment to modernize transit, in addition to continuing the existing transit programs for five years as part of surface transportation

reauthorization. The Infrastructure Deal also invests $7.5 billion to build out a national network of electric vehicle (EV) chargers. The Infrastructure Deal provides funding for deployment of EV chargers along highway corridors to facilitate long-distance travel and within communities to provide convenient charging where people live, work, and shop to support a goal of building a nationwide network of 500,000 EV chargers. This investment is intended to accelerate the adoption of EVs, which would help reduce emissions and improve air quality. In addition, the Infrastructure Deal includes more than $65 billion of investments in clean energy transmission, including upgrading existing power infrastructure through expanding transmission lines to facilitate the expansion of renewables and clean energy.

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and Conservation Act (Public Law 94-163), which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the Act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. In 2012, new fuel economy standards for passenger cars and light trucks were approved for model years 2017 through 2021 (77 Fed. Reg. 62624–63200). Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States.

Intermodal Surface Transportation Efficiency Act

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 (Public Law 102-240) promoted the development of intermodal transportation systems to maximize mobility and address national and local interests in air quality and energy. ISTEA contained factors for metropolitan planning organizations to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, metropolitan planning organizations adopted policies defining the social, economic, energy, and environmental values guiding transportation decisions.

Transportation Equity Act for the 21st Century

The Transportation Equity Act for the 21st Century (Public Law 105-178) was signed into law in 1998 and builds on the initiatives established in the ISTEA legislation (previously discussed). The Act authorizes highway, highway safety, transit, and other efficient surface transportation programs. The Act continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of transportation decisions. The act also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of intelligent transportation systems to help improve operations and management of transportation systems and vehicle safety.

Energy Independence and Security Act

On December 19, 2007, the Energy Independence and Security Act (EISA) of 2007 (Public Law 110-140) was signed into law. In addition to setting more stringent Corporate Average Fuel Economy standards for motor vehicles, the EISA includes the following other provisions related to energy efficiency:

- Renewable Fuel Standard (RFS)
- Appliance and Lighting Efficiency Standards
- Building Energy Efficiency

This federal legislation (the RFS) requires ever-increasing levels of renewable fuels to replace petroleum (EPA 2013, 2015). The EPA is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

The RFS program was created under the Energy Policy Act of 2005 (42 USC §13201 *et seq.*) and established the first renewable fuel volume mandate in the United States. As required under the Act, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the EISA, the RFS program was expanded in several key ways that lay the foundation for achieving significant reductions in GHG emissions from the use of renewable fuels, reducing imported petroleum, and encouraging the development and expansion of the renewable fuels sector in the United States. The updated program is referred to as "RFS2" and includes the following:

- Expands the RFS program to include diesel, in addition to gasoline
- Increases the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022
- Establishes new categories of renewable fuel, and sets separate volume requirements for each one
- Requires the EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces

Additional provisions of the EISA address energy savings in government and public institutions, research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green" jobs.

4.14.2.2 State

Sustainable Groundwater Management Act

In 2014, California enacted the Sustainable Groundwater Management Act (SGMA) (Cal. Water Code § 10720-10737.8 *et seq*.) to bring the state's groundwater basins into a more sustainable regime of pumping and recharge. The legislation provides for the sustainable management of groundwater through the formation of local groundwater sustainability agencies (GSAs) and the development and implementation of GSPs and requires GSAs and GSPs for all groundwater basins identified by the DWR as high or medium priority. Additionally, the legislation establishes criteria for the sustainable management of groundwater and authorizes DWR to establish best management practices for groundwater (DWR 2016).

Under SGMA, several GSAs have been formed in the region. The Salinas Valley Basin GSA (SVBGSA)[5] covers all of the SVGB within Monterey County, except the adjudicated Seaside Basin and the lands within MCWDs GSA. The MCWD GSA covers the portion of the Monterey and 180/400 Foot Aquifer Subbasins within their service area.

Under a 2018 agreement between the MCWD GSA and the SVBGSA, the GSP for the 180/400-Foot Aquifer Subbasin and a portion of the Monterey Subbasin outside of the MCWD service area has been or will be prepared by the SVBGSA and the GSP for the Monterey Subbasin in the Marina and Ord Management Areas is being prepared by the MCWD GSA (MCWD 2021). The MCWD GSA Monterey Subbasin GSP is required to be prepared and submitted to DWR by January 31, 2022. The Monterey Subbasin GSP was released in draft form in September 2021 (MCWD GSA 2021). The 180/400-Foot Aquifer Subbasin GSP was prepared by SVBGSA in coordination with the MCWD GSA and was submitted to DWR in January of 2020. Both of these subbasin GSPs describe current groundwater conditions, develop a hydrogeologic conceptual model, establish a water budget, outline local sustainable management criteria, and provide projects and programs for reaching sustainability in the Subbasins by 2040 (SVBGSA 2020; MCWD GSA 2021). See Section 4.8, Hydrology and Water Quality for details about the projects and actions for reaching sustainability identified in the 180/400 Foot Aquifer Subbasin GSP and in the Monterey Subbasin GSP.

The SVBGSA is developing five other subbasin plans, including for a portion of the Monterey Subbasin not within the jurisdiction of the MCWD GSA, which have to be prepared and submitted to DWR by January 31, 2022. The five other subbasins are not in critical overdraft conditions. Together, the six Subbasin plans under the SVBGSA will be integrated into the Salinas Valley Integrated Groundwater Sustainability Plan (SVBGSA 2020).

[5] The SVBGSA is a Joint Powers Authority (JPA). The JPA membership is composed of the MCWRA, City of Salinas, City of Soledad, City of Gonzales, City of King (King City), the Castroville Community Services District (CSD), and M1W (SVBGSA 2020).

California Recycled Water Policy

On February 3, 2009, the SWRCB adopted a statewide recycled water policy, with the ultimate goal to increase the use of recycled water from municipal wastewater sources. Included in the statewide policy is the mandate to increase the use of recycled water in California by 200,000 AFY by 2020, and an additional 300,000 AFY by 2030 (SWRCB 2013). The plan also states that the SWRCB expects to develop other policies to encourage stormwater, surface, and groundwater use to promote water conservation. The SWRCB adopted an amendment to the Recycled Water Policy on January 22, 2013, which establishes monitoring requirements for constituents of emerging concern in recycled municipal wastewater.

Water Supply Assessments

In 2001, Senate Bill (SB) 610 amended California law regarding review of water availability for large projects (Cal. Water Code §10910 *et seq*.; Cal. Pub. Resources Code § 21151.9). Pursuant to SB 610, preparation of a "water supply assessment" (WSA) is required for projects subject to CEQA that meet specified criteria regarding project size: projects of 500 or more residential units, 500,000 square feet or more of retail commercial space, 250,000 square feet or more of office commercial space, 500 or more hotel rooms, specified industrial uses, or a project that would result in a water demand equal to or greater than the amount needed to serve a 500-unit residential project. These assessments, prepared by "public water systems" responsible for service, address whether there are adequate existing or projected water supplies available to serve proposed projects over a 20-year period, in addition to existing demand and other anticipated development in the service area.

The CSU determined that a WSA was not required for the Project because the CSU, as a state entity, is not required by law to prepare WSAs for projects undergoing CEQA review. Water Code Section 10910 and the referenced CEQA provisions require only a "city or county," acting as a local lead agency under CEQA, to request a WSA and include it in a project EIR.

California Integrated Waste Management Act and Related Regulations

AB 939 established the California Integrated Waste Management Act of 1989 (Pub. Resources Code § 40050 *et seq*.), which requires all California cities and counties to reduce the volume of solid waste deposited in landfills by 50 percent by 2000, and to continue to remain at 50 percent or more diversion for each subsequent year. The Act requires each California city and county to prepare, adopt, and submit to CalRecycle a Source Reduction and Recycling Element (SRRE) that demonstrates how the jurisdiction will meet the Act's mandated diversion rate. AB 939 also established the goal for all California counties to provide at least 15 years of on-going landfill capacity, as well as the authority and responsibilities of the California

Integrated Waste Management Board (CIWMB), which administers the Act. In January 2010, CalRecycle replaced the CIWMB.

In 1999, AB 75 required each state agency and large state facility to develop and adopt Integrated Waste Management Plans, implement programs to reduce waste disposal, and have their waste diversion performance annually reviewed by CalRecycle (Pub. Resources Code §§ 40148, 40196.3, 41821.2, and 42920 *et seq.*]). AB 75 also requires all state agencies and large state facilities to divert at least 25 percent of their solid waste from landfills by January 1, 2002, and at least 50 percent on and after January 1, 2004. The CSU is defined as a "state agency" in Pub. Resources Code § 40196.3, and the campuses of the CSU are defined as "large state facilities" in Pub. Resources Code § 40148.

In 2007, Senate Bill (SB) 1016 amended the California Integrated Waste Management Act to establish a per capita disposal measurement system. The per capita disposal measurement system is based on a jurisdiction's reported total disposal of solid waste divided by a jurisdiction's population. CalRecycle sets a target per capita disposal rate for each jurisdiction based on the 50-percent diversion mandate. Each jurisdiction must submit an annual report to CalRecycle with an update of its progress in implementing diversion programs and its current per capita disposal rate.

AB 341, adopted in October 2011, also amended the California Integrated Waste Management Act and established a statewide policy goal to divert 75 percent of solid waste from landfills by 2020. AB 341 focused on mandatory commercial recycling and requires California commercial enterprises and public entities that generate 4 or more cubic yards per week of waste, as well as multi-family housing complexes with 5 or more units, to arrange for recycling services.

Mandatory commercial recycling was one of the measures adopted in the AB 32 Scoping Plan by the California Air Resources Board (CARB), pursuant to the California Global Warming Solutions Act of 2006 (Cal. Health & Safety Code § 38500 *et seq.*). (AB 32 is further described below.) The mandatory commercial recycling measure is focused on increasing waste diversion from commercial uses to reduce GHG emissions (GHGs resulting from decomposition of organic waste in landfills has been identified as a significant source of emissions contributing to global climate change). This regulation reflects the statutory provisions of AB 341 and provides additional procedural clarifications.

Mandatory Commercial Organics Recycling

Since April 1, 2016, AB 1826, the Mandatory Commercial Organics Recycling Act (Pub. Resources Code § 42649.8), adopted in 2014, has been requiring businesses[6] to recycle their

[6] Under this Act, "business" means a commercial or public entity, including, but not limited to, a firm, partnership, proprietorship, joint stock company, corporation, or association that is organized as a for-profit or nonprofit entity, or a multifamily residential dwelling.

organic waste, depending on the amount of waste they generate on a weekly basis. Additionally, AB 1826 requires that, after January 1, 2016, all local jurisdictions implement an organic waste recycling program to divert organic waste generated by businesses, including multi-family residential dwellings with five or more units. Organic waste includes food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. This law phases in the mandatory recycling of commercial organics over time. Given that CSU is not a local jurisdiction or a business, the Mandatory Commercial Organics Recycling Act does not apply to activities at CSUMB; however, CSUMB does report on organics recycling in its annual report to CalRecycle.

Assembly Bill 2812

As of January 1, 2017, pursuant to AB 2812 (Pub. Resources Code §§ 42924.5 and 42926), each state agency is required to provide adequate receptacles, signage, education, and staffing, and arrange for recycling services consistent with existing recycling requirements for each office building of the state agency or large state facility. The bill also requires state agencies, at least annually, to review the adequacy and condition of the receptacles for recyclable material and associated signage, education, and staffing.

Warren–Alquist Act

The California Legislature passed the Warren–Alquist Act in 1974. The Warren–Alquist Act (Pub. Resources Code § 25000 *et seq*.) created the California Energy Commission (CEC) in response to the energy crisis of the early 1970s and the state's growing demand for energy resources. The legislation also incorporated the following three key provisions designed to address the demand side of the energy equation:

- It directed the CEC to formulate and adopt the nation's first energy conservation standards for buildings constructed and appliances sold in California.
- The Act removed the responsibility of electricity demand forecasting from the utilities, which had a financial interest in high demand projections, and transferred it to a more impartial CEC.
- The CEC was directed to embark on an ambitious research and development program, with a particular focus on fostering what were characterized as non-conventional energy sources.

Assembly Bill 3232

Enacted in 2018, AB 3232 required the CEC, by January 1, 2021, to assess the potential for the state to reduce the emissions of greenhouse gases from the state's residential and commercial building stock by at least 40 percent below 1990 levels by January 1, 2030. The bill also requires

the CEC to include, in the 2021 edition of the integrated energy policy report and all subsequent integrated energy policy reports, a report on the emissions of greenhouse gases associated with the supply of energy to residential and commercial buildings.

Senate Bill 100

Senate Bill (SB) 100 (2018) accelerated the rigor of the Renewables Portfolio Standard (RPS) by establishing that 44 percent of the total electricity sold to retail customers in California per year by December 31, 2024; 52 percent by December 31, 2027; and 60 percent by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 further states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100 percent of the retail sales of electricity to California by 2045. This bill requires that the achievement of 100 percent zero-carbon electricity resources does not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Consequently, utility energy generation from non-renewable resources is expected to be reduced based on implementation of the RPS requirements described above. The Project's reliance on non-renewable energy sources would be reduced accordingly.

Assembly Bill 32 and Senate Bill 32

In 2006, the Legislature enacted AB 32, the California Global Warming Solutions Act of 2006 (Cal. Health and Safety Code §§ 38500-38599 *et seq*.). AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020. In 2016, the Legislature enacted SB 32, which extended the horizon year of the state's codified GHG reduction planning targets from 2020 to 2030, requiring California to reduce its GHG emissions to 40 percent below 1990 levels by 2030. In accordance with AB 32 and SB 32, CARB prepares scoping plans to guide the development of statewide policies and regulations for the reduction of GHG emissions. Many of the policy and regulatory concepts identified in the scoping plans focus on increasing energy efficiencies and the use of renewable resources and reducing the consumption of petroleum-based fuels (e.g., gasoline and diesel). As such, the state's GHG emissions reduction planning framework creates co-benefits for energy-related resources. Additional information on AB 32 and SB 32 is provided in Section 4.6, Greenhouse Gas Emissions, of this EIR.

California Building Standards

The California Building Standards Code was established in 1978 and serves to enhance and regulate California's building standards (Cal. Code Regs, tit. 24). Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to

reduce energy demand and consumption. Part 6 is updated periodically (every 3 years) to incorporate and consider new energy efficiency technologies and methodologies.

The 2019 Title 24 standards were approved and adopted by the California Building Standards Commission (CBSC) in December 2018. The 2019 standards became effective January 1, 2020 and are the currently applicable building standards. The standards require that all low-rise residential buildings have a photovoltaic system meeting the minimum qualification requirements such that annual electrical output equal to or greater than the dwelling's annual electrical usage. Notably, net energy metering rules limit residential rooftop solar generation to produce no more electricity than the home is expected to consume on an annual basis. Single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards, while new non-residential buildings will use about 30 percent less energy.

Looking beyond the 2019 standards, the most important energy characteristic for a building will be that it produces and consumes energy at times that are appropriate and responds to the needs of the grid, which reduces the building's emissions. In furtherance of that characteristic, the 2019 standards require that new single-family homes include solar photovoltaic to meet the home's expected annual electric needs and also encourage demand responsive technologies, including battery storage, heat pump water heaters, and improving the building's thermal envelope through high performance attics, walls, and windows. These smarter homes perform better and affect the grid less, which reduces the building's GHG emissions.

The 2022 standards, which are under development, will improve upon the 2019 standards for new construction of, and additions and alterations to, residential and nonresidential buildings. In August 2021, the CEC adopted the 2022 Title 24 Energy Code. If also approved by the CBSC, the 2022 Energy Code will go into effect on January 1, 2023.

Title 24 also includes Part 11, the California Green Building Standards Code (CALGreen). CALGreen instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings, as well as schools and hospitals. The 2019 CALGreen standards became effective on January 1, 2020. The mandatory standards require the following:

- In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for low-emitting, fuel-efficient and carpool/van pool vehicles.
- Construction shall facilitate future installation of electric vehicle supply equipment.
- Shade trees shall be planted to comply with specifications for surface parking areas, landscape areas, and hardscape areas.

- Water conserving plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with efficiency standards.
- Outdoor potable water use in landscaped areas shall comply with a local water efficient landscape ordinance or the current DWRs' Model Water Efficient Landscape Ordinance, whichever is more stringent.
- Outdoor recycled water supply systems shall be installed in accordance with applicable state codes.
- Installations of heating, ventilation, and air conditioning (HVAC), refrigeration, and fire suppression equipment shall comply with specified standards.

The CALGreen standards also include voluntary efficiency measures that are implemented at the discretion of agencies and applicants.

State Vehicle Standards

In a response to the transportation sector accounting for more than half of California's carbon dioxide (CO_2) emissions, AB 1493 was enacted in 2002 (Cal. Health and Safety Code § 43018.5 and § 42823 amendments). AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the state board to be vehicles whose primary use is noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. The 2009–2012 standards resulted in a reduction of approximately 22 percent of GHG emissions compared to emissions from the 2002 fleet, and the 2013–2016 standards resulted in a reduction of approximately 30 percent.

In 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards called Advanced Clean Cars. By 2025, when the rules would be fully implemented, new automobiles would emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions (CARB 2011).

Although the focus of the state's vehicle standards is on the reduction of air pollutants and GHG emissions, one co-benefit of implementation of these standards is a reduced demand for petroleum-based fuels.

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or SB 375 (Cal. Gov. Code § 65080), coordinates land use planning, regional transportation plans, and funding priorities to help California meet its GHG emissions reduction mandates. SB 375 requires metropolitan planning

organizations to include a sustainable communities strategy (SCS) in its regional transportation plan. The main focus of the SCS is to plan for growth in a fashion that will ultimately reduce GHG emissions, but the strategy is also a part of a bigger effort to address other development issues within the general vicinity, including transit and VMT, which influence the consumption of petroleum-based fuels. See Section 4.6, Greenhouse Gas Emissions, for information about the relevant SCS for the Monterey Bay region.

CSUMB Implementation of CalRecycle Requirements

Based on the regulations presented above, CSUMB is required to: (1) develop and adopt an Integrated Waste Management Plan and submit an annual report; (2) recycle and achieve at least 50 percent diversion rate on and after 2004 as applicable for state agencies; and (3) provide adequate receptacles, signage, education, and staffing. The California Integrated Waste Management Act statewide policy goal to divert 75 percent of solid waste from landfills by 2020 applies only to cities and counties and therefore does not apply to CSUMB. However, as shown in Table 4.14-5 below, under the CSU Sustainability Policy, CSU campuses shall seek to reduce the solid waste disposal rate by 50 percent by 2016, by 80 percent by 2020, and move to zero waste. The Campus Sustainability Plan calls for diverting 75 percent diversion of non-demolition and construction waste by 2025. (Note that a "Core Goal" of the Campus Sustainability Plan, which has a 2030 planning period, is to divert 90 percent of waste from the landfill.) The CSUMB *Materials Management and Conservation Plan* was prepared in May 2018 to address CalRecycle mandates and CSU goals related to solid waste.

California State University

CSU Sustainability Policy

CSU has identified sustainability as a system-wide priority, as detailed in the CSU Sustainability Policy, which was adopted in 2014 and is currently in the process of being updated. The CSU Sustainability Policy focuses mainly on energy and GHG emissions, and largely aligns with the State of California's energy and GHG emissions reduction goals (CSU 2014). The policy aims to reduce the environmental impact of construction and operation of buildings and to integrate sustainability across the curriculum. Table 4.14-5 includes a summary of the CSU Sustainability Policy and associated goals.

Table 4.14-5
CSU Sustainability Policy

University Sustainability
1. The CSU will develop employee and student workforce skills in the green jobs industry, promote the development of sustainable products and services, and foster economic development.
2. The CSU will seek to further integrate sustainability into the academic curriculum.
3. The CSU will pursue sustainable practices in all areas of the university.
4. Each CSU is encouraged to designate a sustainability officer responsible for campus sustainability programs.
Climate Action Plan
1. The CSU will strive to reduce systemwide facility greenhouse gas (GHG) emissions to 1990 levels, or below, by 2020 consistent with AB 32, California's Global Warming Solutions Act of 2006.
2. The CSU will strive to reduce facility GHG emissions to 80 percent below 1990 levels by 2040.
3. The CSU will encourage and promote the use of alternative transportation and/or alternative fuels.
Energy Independence and Procurement
1. The CSU shall pursue energy procurement and production. The CSU shall endeavor to increase its self-generated energy capacity from 44 to 80 megawatts (MW) by 2020.
2. The CSU will endeavor to exceed the State of California and CPUC RPS sooner than the established goal of procuring 33 percent of its electricity needs from renewable sources by 2020.
Energy Conservation and Utility Management
1. All CSU buildings and facilities will be operated in the most energy efficient manner.
2. All CSU campuses will continue to identify energy efficiency improvement measures to the greatest extent possible.
3. The CSU will cooperate with federal, state, and local governments and other appropriate organizations in accomplishing energy conservation and utilities management objectives throughout the state.
4. Each CSU campus will designate an energy/utilities manager with the responsibility and the authority for carrying out energy conservation and utilities management programs.
5. The CSU will monitor monthly energy and utility usage on all campuses and will prepare a systemwide annual report on energy utilization and greenhouse gas emissions.
6. Each CSU campus is encouraged to develop and maintain an integrated strategic energy resource plan.
Water Conservation
1. All CSU campuses will pursue water resource conservation to reduce water consumption by 10 percent by 2016, and 20 percent by 2020 including such steps to develop sustainable landscaping, install controls to optimize irrigation water use, reduce water usage in restrooms and showers, and promote the use of reclaimed/recycled water.
Waste Management
1. Campuses shall seek to reduce the solid waste disposal rate by 50 percent by 2016, by 80 percent by 2020, and move to zero waste.
2. The CSU will encourage the reduction of hazardous waste while supporting the academic program.
Sustainable Procurement
1. Campuses will promote use of suppliers and/or vendors who reduce waste and re-purpose recycled material.
2. Campus practices should encourage use of products that minimize waste sent to landfills or incinerators and participation in the CalRecycle Buy-Recycled program or equivalent.
3. Campuses shall continue to report on and track all recycled content product categories.
Sustainable Food Service
1. Campuses shall strive to increase their sustainable food purchases to 20 percent of total food budget by 2020.
2. Campuses shall collaborate to provide information and/or training on sustainable food service operations.

Table 4.14-5
CSU Sustainability Policy

Sustainable Building Practices	
1.	All future CSU new construction, remodeling, renovation, and repair projects will be designed with consideration of optimum energy utilization, low life cycle operating costs, and compliance with all applicable energy regulations.
2.	Capital Planning, Design and Construction in the Chancellor's Office shall monitor building sustainability/energy performance, based on Leadership in Energy and Environmental Design (LEED) principles.
3.	The CSU shall design and build all new buildings and major renovations to meet or exceed the minimum requirements equivalent to LEED "Silver."
Physical Plant Management	
1.	Each campus shall operate and maintain a comprehensive energy management system.
2.	To the extent possible, programs will be consolidated to achieve the highest building utilization.
3.	All CSU campuses will implement a utilities chargeback system to recover direct and indirect costs of utilities.

Under the CSU Sustainability Policy, campuses are responsible for quantifying and reducing their Scope 1 and 2 emissions to reach the 2020 and 2040 goals. Scope 1 emissions are direct emissions (e.g., combustion of fossil fuels, fleet vehicles, agriculture operations, use of refrigerants). Scope 2 emissions are emissions from purchased utilities (e.g., electricity, water).

Executive Order 987

CSU Executive Order 987 provides a policy statement on energy conservation, sustainable building practices, and physical plant management for the CSU. CSUMB operates under this executive order, which sets minimum efficiency standards for new construction and renovations, and establishes operating practices intended to ensure CSU buildings are used in the most energy efficient and sustainable manner possible while still meeting the programmatic needs of the University.

Integrated California University Administrative Manual (Section IX)

The Integrated California State University Administrative Manual (ICSUAM; Section IX) provides that all CSU buildings and facilities will be operated in the most energy efficient manner without endangering public health and safety. The policy also indicates that all future CSU new construction, remodeling, renovation and repair projects will be designed for optimum energy utilization, lowest life-cycle operating costs, and in compliance with all applicable energy codes (Enhanced Title 24 Energy Codes) and regulations. Incorporation of energy efficient design features in the project plans and specifications will receive a high priority.

CSUMB Campus Sustainability Plan

The CSUMB Campus Sustainability Plan builds upon and replaces the 2013 CSUMB Climate Action Plan (CSUMB 2020). The Sustainability Tracking Assessment and Rating System Report provides data

collection and consistent review of metrics that support efforts in every topic area identified. Key goals of the plan that are relevant to the analysis in this section include the following:

- Reduce GHG emissions and achieve carbon neutrality[7] by 2030 by making progress on the Carbon Neutrality Roadmap.
- Divert 75 percent diversion of non-demolition and construction waste by 2025. (Note that a "Core Goal" of the plan, which has a 2030 planning period, is to divert 90 percent of waste from the landfill.)
- Reduce waste associated with move out by 25 percent.
- Plan for future projects to integrate Living Building Challenge certification options, in support of campus-scale efforts to meet Living Community Challenge goals.
- Support mode shift from Single Occupancy Vehicles; double percent of bicycle, walking, carpool and bus/shuttle commute trips each by 2030.

The Carbon Neutrality Roadmap (Roadmap) is a technical appendix to the CSUMB Campus Sustainability Plan in support of achieving carbon neutrality by 2030. The Roadmap provides a detailed review of pathways that CSUMB can follow and describes existing and recommended carbon reduction measures that, if implemented, will enable CSUMB to achieve its carbon neutrality goal.

4.14.3 Impacts and Mitigation Measures

This section presents the evaluation of potential environmental impacts associated with the Project related to utilities and energy. The section identifies the thresholds of significance used in evaluating the impacts, the methods used in conducting the analysis, and the evaluation of Project impacts, and the Project's contribution to cumulative impacts. In the event significant impacts within the meaning of CEQA are identified, appropriate mitigation measures, where feasible, are identified.

4.14.3.1 Thresholds of Significance

The significance thresholds used to evaluate the impacts of the Project related to utilities and energy are based on Appendix G of the CEQA Guidelines. Based on Appendix G, a significant impact related to utilities and energy would occur if the Project would:

A. Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant

[7] Carbon neutrality means achieving a state in which the net amount of carbon dioxide or other carbon compounds emitted into the atmosphere is reduced to zero because it is balanced by actions to reduce or offset these emissions (CSUMB 2020).

environmental effects. (See Section 4.8, Hydrology and Water Quality for the impact evaluation related to stormwater drainage).

B. Not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple-dry years.

C. Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve to the project's projected demand in addition to the provider's existing commitments.

D. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

E. Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

F. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

G. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.14.3.2 Analytical Method

Program- and Project-Level Review

The utilities and energy impact analysis in this section includes a program-level analysis under CEQA of the proposed Master Plan and project design features (PDFs), as described in Chapter 3, Project Description. The analysis also includes a project-level analysis under CEQA of the 5 near-term development components that would be implemented under the proposed Master Plan. Both construction and operation of the Project are considered in the impact analysis, where relevant.

Campus development under the proposed Master Plan and associated population growth would result in increased demand for utilities and energy. The analysis of impacts to utilities and energy is based on a comparison of existing and projected supply and capacity demands for services and the resulting need, if any, for new, expanded, or modified facilities to provide for the increased demand. Under CEQA, impacts are typically considered to be significant if there would be inadequate supplies or capacity to meet the project's demands, or a project would require new or expanded utility or service facilities, the construction of which would result in significant environmental impacts. In the event that significant adverse environmental impacts would occur even with incorporation of applicable regulations and proposed PDFs, mitigation measures would be identified to reduce impacts to less than significant, where feasible.

Project Design Features

There are a number of PDFs that are incorporated quantitatively into the trip generation rates contained in the Transportation Analysis (Appendix H), and therefore are quantitatively incorporated into the energy analysis, including the following:

- *PDF-MO-1 and PDF-MO-2* provide that CSUMB will accommodate at least 60 percent of enrolled students and 65 percent of faculty and staff in on-campus housing. CSUMB will implement these PDFs to ensure that these campus housing goals are met, which will minimize vehicle commute travel to and from the campus. Appendix C, Student Housing and Parking Management Guidelines, and the CSUMB Housing Guidelines (CSUMB 2022) provide additional information about meeting the identified housing goals.
- *PDF-MO-6(c)* provides that CSUMB will implement strategies and measures to reduce parking demand, including that parking will be consolidated and relocated to select areas on the periphery of the campus core. While this PDF includes other measures (e.g., maintaining existing parking supply, prohibiting residential Freshmen and Sophomores from purchasing a parking permit, a "park once" policy, electric vehicle charging stations), such measures are not assumed in the quantitative analysis.
- *PDF-MO-8* establishes restrictions to general vehicle travel through the campus core and locates vehicle circulation and parking on the campus periphery (see Chapter 3, Project Description, Figure 3-9). Specifically, vehicle access will be limited to CSUMB students, faculty, and staff vehicles on General Jim Moore Boulevard between Eighth Street and Fifth Street. Vehicle travel through the campus core will be restricted to shuttles, transit vehicles, service vehicles, and emergency vehicles at: Inter-Garrison Road between General Jim Moore Boulevard and Sixth Avenue, Divarty Street between General Jim Moore Boulevard and Seventh Avenue, Fourth Avenue between Divarty Street and Inter-Garrison Road, Fifth Avenue between Divarty Street and Inter-Garrison, A Street between Divarty Street and Seventh Avenue, Sixth Avenue between B Street and north of Divarty Street, and Butler Street between Sixth Avenue and Seventh Avenue. Additionally, Seventh Avenue between Colonel Durham Street and Butler Street will be converted to one-way for vehicles traveling north from Colonel Durham Street to Inter-Garrison Road.

As indicated in Section 4.13, Transportation, to provide for a conservative analysis, other mobility PDFs are considered qualitatively, including PDF-MO-3 through PDF-MO-7, and PDF-MO-9 through PDF-MO-18. While these PDFs would serve to reduce vehicle travel and promote transit, bicycle and pedestrian mobility, their ability to reduce vehicle travel is not quantified in the Transportation Analysis (Appendix H) and therefore the energy analysis conservatively does not include these PDFs in the operational estimates identified below. These PDFs are described in detail in Chapter 3, Project Description.

Additionally, there are a number of other PDFs that are considered in the technical analysis as part of the Project but not factored into the quantitative estimates of water, wastewater and energy, including the following water, energy and transportation PDFs (see Chapter 3, Project Description for the specific text of each applicable PDF):

- *PDF-W-1* indicates that development will be pursued within the campus's water allocation by: establishing water use thresholds below CalGreen Building Code standards; establishing water modeling for each capital project during the feasibility phase; establishing potable water conservation projects; retrofitting high-use campus fixtures; pursuing a heat recovery chilling system to reduce water needs; and studying expansion of non-potable water use including the establishment of an on-site water recycling facility.
- *PDF-E-1* calls for achieving carbon neutrality for scope 1&2 emissions, per the Carbon Neutrality Roadmap.
- *PDF-E-2* calls for the design and retrofit of infrastructure and buildings to minimize energy use by: establishing district-scale on-site energy production and distribution strategies; studying expansion of district-scale electrical, chilled and hot water distribution; achieving a minimum 15 percent energy performance improvement target goal over current Title 24 code in new construction; achieving a minimum 5 percent energy performance improvement target goal over existing usage in existing facilities; establishing passive heating and cooling and thermal-mass building designs; establishing standards for campus-scale energy conversion systems; and meeting minimum requirements equivalent to LEED "Silver," while aiming for the highest green building energy standards possible (i.e., LEED Platinum or equivalent).
- *PDF-E-3* provides for meeting future demand for energy in a safe, reliable, and cost-effective manner by: performing regular energy efficiency upgrades to reduce energy use; recommissioning major buildings every five years, as funding is available; establishing energy system efficiency retrofit projects; and establishing funding mechanisms and thresholds for existing energy systems as they near the end of their usable life.

Water Use and Sewer Generation Rates

To formulate accurate water and sewer usage estimation factors for use in the analysis presented here, CSUMB analyzed twelve years of monthly water usage data from MCWD invoices. Water use accounts were categorized into use types as follows: Office/Class, Residence Hall, Dining, Irrigation and Office/Class with Irrigation. An appropriate basis was selected for each use type. Then for each use type a statistical analysis was performed to determine average water use within a reasonable degree of certainty. Specifically, one standard deviation was added to the average water use per unit (i.e., per gross square footage [GSF] or per bed) to calculate a conservative water use rate or factor. The resulting rates/factors that were used in the analysis are shown in Table 4.14-6.

CSUMB estimated wastewater generation at buildout of the proposed Master Plan is based on the assumption that wastewater generated would equal 100 percent of building water use.

Table 4.14-6
Water Use Rates Used to Estimate Water Demand Associated with Project

Use Type	Average Water Use		Standard Deviation[1]	Rate/Factor Used in Water Use Forecast
	Average Volume	Unit		
Office and Class Space (Non-Housing Uses)	0.000015	AFY/GSF	0.000006	0.000021[2]
Residence Halls[3]	0.028	AFY/Bed	0.003	0.031[2]
Dining - 2[4] Meals/Day	0.00011	AFY/GSF	0.00001	0.00012[2]
Dining - 3[4] Meals/Day	0.00031	AFY/GSF	0.00008	0.00039[2]
Irrigation Associated with Buildings	NA	AFY/GSF	NA	0.000053[5]
Irrigation Associated with Play Fields	NA	AFY/Acre	NA	2.3[6]

Notes: AFY=acre feet per year; GSF=gross square feet

1. Standard deviation is a measure of how spread out the numbers are in a data set.
2. The rate/factor used in the water use forecast is based on the average rate + 1 standard deviation to develop a conservative basis for estimating water demand.
3. Applies only to new construction.
4. CSUMB has limited dinning space leading to a limited data set for assessing water use from dining halls. For validation purposes these factors were compared to data provided by the "University Residential & Dinning Utilities Benchmarking Report" Stanford University Residential & Dining Enterprise August 2018 and found to be representative or conservative.
5. Irrigation associated with buildings factor estimated as total irrigation used on campus divided by total campus GSF in 2017.
6. Data indicated that the MCWD factors of Landscape non-turf 2.1 AFY/Acre and turf 2.5 AFY/Acre, in the 2020 UWMP (Table 4.4), yield accurate estimations of future usage. Therefore, an average of these two factors was used to estimate future usage.

4.14.3.3 Project Impacts and Mitigation Measures

This section provides a detailed evaluation of impacts on utilities and energy associated with the Project. See Section 4.8, Hydrology and Water Quality for the impact evaluation related to stormwater drainage and groundwater.

Impact UTL-1: **Construction of New or Expanded Utilities (Threshold A).** The Project would not require or result in the relocation or construction of new or replacement water, wastewater treatment, electric power, natural gas, or telecommunications facilities, the construction of which would result in significant effects. *(Less than Significant)*

Master Plan

Potable Water

As indicated in Section 4.14.1, Existing Setting, MCWD provides potable water supplies to CSUMB. The existing potable water distribution infrastructure is adequate to service proposed Master Plan development and associated population growth and can accommodate the

modifications necessary to facilitate development of the Project. All new buildings would require new water delivery pipelines to be constructed from existing mains or from the existing service loops within the development areas. Specific improvements associated with development would be implemented in accordance with MCWD design standards and capacity requirements. Many existing pipelines and smaller loops run through proposed development areas, which may require demolition or reconfiguration to meet the final development pattern. Whether relocation of these lines is necessary would be addressed during detailed site design of individual projects, however the Deed granting the water system to MCWD under Public Benefit Conveyance from the Army allows the current owner of the land to relocate MCWD's infrastructure provided a mutually agreeable location can be found. The construction impacts associated with new potable water service connections or relocation of existing pipelines are evaluated throughout Chapter 4, Environmental Setting, Impacts, and Mitigation Measures of this Draft EIR as a component of development under the proposed Master Plan.

As indicated in Section 4.14-2, Environmental Setting, MCWD's recently completed Water Master Plan evaluates the adequacy of the existing potable water system capacity and provides plans for its expansion to service anticipated future growth through 2035. The Water Master Plan includes recommended improvements and a Capital Improvement Program. Infrastructure improvements are recommended to mitigate existing system deficiencies and serve development over the next 15 years.

MCWD's Water Master Plan proposes to increase the number of pressure zones from 4 to 7 and forecasted growth in each zone (MCWD 2020c). However, it is anticipated that CSUMB will continue to be served by zones B through D, as under existing conditions. MCWD's Water Master Plan identified a range of water supply infrastructure improvements needed to serve existing and/or future development in the pressure zones that serve the campus and other development (MCWD 2020c). CSUMB estimates that the proposed Project would have limited contribution to total growth in demand in the pressure zones that serve the campus. Specifically, CSUMB estimates that the proposed Master Plan would contribute approximately 7 percent to the total growth identified in the MCWD Master Plan in pressure zone B, approximately 16 percent in pressure zone C, and less than 1 percent in pressure zone D, as shown in Table 4.14-7.

Table 4.14-7
CSUMB Master Plan Water Demand as Percent of MCWD Water Master Plan Demand[1]

Pressure Zones	MCWD Demand (AFY) [2]			CSUMB Potable Water Demand (AFY)			CSUMB Growth in Water Demand as % of MCWD Master Plan Growth in Water Demand
	Existing Conditions	MCWD Water Master Plan Buildout	Net Increase	Existing Conditions	CSUMB Master Plan Buildout	Net Increase	
Zone A	1,748	2,464	717	0	0	0	0.0%
Zone B	1,109	2,577	1,467	61	168	107	7.3%
Zone BPEG	112	224	112	0	0	0	0.0%
Zone C	336	1,568	1,232	254	454	200	16.2%
Zone D	336	2,016	1,680	0.06	7	7	0.4%
Zone E	112	336	224	0	0	0	0.0%
Zone EG-HYD	0	112	112	0	0	0	0.0%
Total	**3,753**	**9,298**	**5,545**	**315**	**629**	**314**	**5.7%**

Source: MCWD 2020c (Tables 5.1 and 5.2).
Notes: AFY = acre feet per year.
1. This table uses 2017 as the basis for existing conditions for comparison as the base year used in the MCWD Water Master Plan (MCWD 2020c), which was 2017. Impact UTL-2 and Table 4.14-8 are based on a 2018-2019 water demand for CSUMB. It should be noted that the difference between CSUMB 2017 and 2018-2019 water demand was minor at 315.06 AFY (2017) verses 315.94 AFY (2018-2019).
2. MCWD demand is based on Water Master Plan Tables 5.1 and 5.2, which are presented in million gallons per day (mgd). Conversion of mgd to AFY was performed for this table (1 mgd = 1,120 AFY).

Therefore, implementation of the proposed Master Plan, in and of itself, would not require or result in the need for construction of potable water infrastructure improvements identified by MCWD and the impact would be *less than significant*.

Recycled Water

As indicated in Section 4.14.1, Environmental Setting, CSUMB was allocated 87 AFY of recycled water (MCWD 2021). In anticipation of receiving 87 AFY of regionally generated advanced treated recycled water, the campus has installed recycled water irrigation piping for all newly created landscapes over the past ten years. The Pure Water Monterey advanced treated recycled water pipeline is currently complete through the CSUMB campus with points of connections installed in proximity to CSUMB irrigation locations. CSUMB is in the process of designing the pipeline lateral connections to the existing advanced treated recycled water pipeline through the campus. These laterals may be installed by CSUMB or by MCWD under a separate project. Advanced treated recycled water may be available to CSUMB from MCWD in the near future.

While MCWD is planning for other recycled water improvements under the RUWAP, that would expand their capacity to deliver recycled water to customers, as described in the Recycled Water Master Plan (MCWD 2020a), CSUMB does not need additional recycled water to serve proposed Master Plan growth and development. Therefore, the Project would not require or result in the need for construction of new recycled water facilities and the impact would be *less than significant*.

Wastewater

All new buildings implemented under the proposed Master Plan would require new connections to existing wastewater pipelines on campus. Specific improvements associated with development would be implemented in accordance with MCWD design standards. Existing pipelines and smaller laterals that run through proposed development areas may require demolition or relocation to meet the final development pattern. Whether relocation of these lines is necessary would be addressed during detailed site design of individual projects. The construction impacts associated with new or replacement wastewater service connections or relocation of existing pipelines are evaluated throughout Chapter 4, Environmental Setting, Impacts, and Mitigation Measures of this Draft EIR as a component of development under the proposed Master Plan.

As indicated in Section 4.14-2, Environmental Setting, MCWD's recently completed Sewer Master Plan evaluates the adequacy of the existing sewer system capacity and provides plans for its expansion to service anticipated future growth through 2035 in its service area. The Sewer Master Plan includes recommended improvements and a Capital Improvement Program. Infrastructure improvements are recommended to upsize and mitigate existing system deficiencies such that the system would be adequate to serve existing and new regional development over the next 15 years.

No relocation or construction of new or expanded wastewater treatment facilities are necessary to serve the Project as discussed in Impact UTL-3. Additionally, according to a Sewer Capacity Study conducted for the CSUMB Main Campus, the existing MCWD's wastewater collection infrastructure is adequately sized to support the proposed Master Plan development and the MCWD sewer system is not anticipated to be undersized (Whitson Engineers 2019 and 2020). Therefore, sewer system improvements are not needed to serve proposed Master Plan development on the Main Campus. While there are other improvements identified in MCWD's Sewer Master Plan in areas that serve the campus, those improvements are in areas that serve East Campus Housing and/or the Promontory, which are not the subject of proposed new Master Plan building development. As indicated previously, while the proposed Master Plan calls for conversion of existing student housing at East Campus Housing to faculty and staff housing, such conversion would not result in a substantial increase in wastewater generation. Therefore, the Project would not require or result in the need for construction of new wastewater facilities and the impact would be *less than significant*.

Other Utilities

As indicated in Section 4.14-1, Environmental Setting, PG&E provides electricity and natural gas to East Campus Housing and the campus owns the electricity and natural gas distribution systems that extends to buildings on the Main Campus. The campus core is also served by a central hot water plant at the central plant and a central chilled water plant located at the library. Underground hot and chilled water pipes are installed in the campus core. The campus also has a fiber optic telecommunications system that extends to every building.

Buildout under the proposed Master Plan would also require new electric power, natural gas, heating hot water and chilled water and telecommunications (telephone and cable lines) connections to serve new buildings on campus, as needed by each building type. The construction impacts associated with these new connections are evaluated throughout Chapter 4, Environmental Setting, Impacts, and Mitigation Measures of this Draft EIR as a component of development under the proposed Master Plan. The proposed Master Plan would have *no impacts* associated with the construction of new electric power, natural gas, heating hot water and chilled water and telecommunications connections beyond what is identified throughout this Draft EIR.

Near-Term Development Components

The near-term development components would result in the addition of new residential, academic, and recreation buildings that would require new or replacement water, wastewater, electrical, natural gas and telecommunications connections to serve the new buildings. The construction impacts associated with new or replacement service connections are evaluated throughout Chapter 4, Environmental Setting, Impacts, and Mitigation Measures of this Draft EIR as a component of development under the proposed Master Plan. The proposed Master Plan would have *no impacts* associated with the construction of new or replacement water, wastewater, electrical, natural gas, heating hot water and chilled water, and telecommunications connections beyond what is identified throughout this Draft EIR.

Mitigation Measures

Mitigation measures are not required because significant impacts related to the construction of new or replacement water, wastewater treatment, electric power, natural gas, or telecommunications facilities have not been identified.

Impact UTL-2: **Adequacy of Water Supplies (Threshold B).** Sufficient water supplies are available to serve the Project and reasonably foreseeable future development in the service area during normal, dry, and multiple-dry years. *(Less than Significant)*

Master Plan

This impact analysis assesses whether there are sufficient water supplies to serve the Project and other reasonably foreseeable future development in the same service area. Section 4.8, Hydrology and Water Quality discusses impacts to groundwater as a result of MCWD's continued provision of potable water supplies.

Campus growth accommodated by the proposed Master Plan would result in an increase of approximately 6,066 full-time-equivalent students (FTES) and 752 FTE faculty/staff over existing levels. The Project also would result in a net increase of approximately 2.6 million gross square feet (GSF) of new academic and support facilities, including housing, administration, student life, recreational, and institutional partnership buildings. On-campus housing is projected to increase by 3,820 student beds with conversion of 757 existing east campus residential units from student to faculty and staff occupancy. The Project also would accommodate redevelopment and growth in outdoor athletics and recreation facilities to serve campus needs, with space set aside for additional athletic fields, tennis courts, and pools, as well as for the eventual replacement of the existing stadium, field house, and pool house.

Water demand estimates with new development under the proposed Master Plan were developed by CSUMB (see Table 4.14-8). The estimates account for new student beds, academic space, dining halls, and outdoor uses, including irrigation. Water use rates for types of buildings (academic, dining hall, residential) were developed based on review of existing water use at existing facilities (see Section 4.14.3.2, Analytical Methods). The demand rates are similar to and in some cases slightly lower than demand rates used for CSUMB in MCWD's 2020 UWMP. However, CSUMB used rates that reflect actual campus water use and accounts for incorporation of water-conserving features in new buildings. The campus water model also considers CalGreen standards. The campus water use rates were reviewed with MCWD during the preparation and public review of MCWD's 2020 UWMP. Regardless, CSUMB and MCWD have similar demand projections for the proposed Master Plan, as described below.

Water demand associated with the Project is summarized in Table 4.14-8. With development under the proposed Master Plan, the Project would result in an increased demand of approximately 314 AFY of potable water and 87 AFY of non-potable irrigation water. Of the 314 AFY of potable, 106 are for irrigation. Total campus water demand with existing, approved and proposed Master Plan buildout is estimated at 629 AFY potable and recycled 87 AFY for a total

projected demand of 716 AFY for CSUMB by 2035. This is slightly less than MCWD's 2020 UWMP forecast water demand of 721 AFY for CSUMB under the proposed Master Plan by the year 2040. MCWD's water demand projection for CSUMB under the proposed Master Plan in 2040 is included in this EIR given that MCWD projected some of the CSUMB proposed Master Plan development as occurring between 2035 and 2040, even though the anticipated horizon year for the proposed Master Plan is 2035.

The total CSUMB water demand following proposed Master Plan buildout would be well below the University's potable groundwater allocation of 1,035 AFY. Campus growth would result in an irrigation non-potable water demand of 87 AFY, which is the current limit of its non-potable recycled water allocation. Therefore, Project demand would not exceed existing CSUMB allocated water supplies through 2035.

Table 4.14-8
Estimated CSUMB Proposed Master Plan Water Demand in 2035

Use	New Master Plan Development	Net New Demand	
		CSUMB Rate[1]	Demand (AFY)[2]
Potable Water			
Non-Residential Building (Academic, Administration, Student Life, Indoor Recreation, Outdoor Recreation Support, Facilities, Panetta Institute)	1,192,839 GSF	0.000021 AFY/GSF	26
Student Housing[3]	5,200 beds	0.031 AFY/bed	161
Convert East Campus Student Housing to Year-Round Faculty and Staff Housing	-1,380 beds / +757 units	NA	7
Dining Hall[4]	Venue serving 2 meals per day Venue serving 3 meals per day	0.00012 AFY/GSF 0.00039 AFY/GSF	14
Potable Irrigation for New Non-Housing Building	Landscaping	0.000053 AFY/GSF	4
Potable Irrigation for New Student Housing	Landscaping	0.000053 AFY/GSF	92
Potable Irrigation for Athletic Fields and Outdoor Facilities	Landscaping	2.3 AFY/Acre	10
		Net New Potable Water Subtotal	*314*
Non-Potable Irrigation			
Conversion of Exiting Potable Water Irrigation to Non-Potable Irrigation	Landscaping	0.000053 AFY/GSF	63
Athletic Fields and Outdoor Facilities	Landscaping	2.3 AFY/Acre	24
		Net New Non-Potable Water Subtotal	*87*
		TOTAL NET NEW DEMAND IN 2035 (POTABLE AND NON-POTABLE)	***400***
		Total Existing Demand 2018-2019 Usage (Potable)	*316*
		Net New Potable Water (Potable)	*314*
		TOTAL FUTURE DEMAND IN 2035 (POTABLE)	***629***

Table 4.14-8
Estimated CSUMB Proposed Master Plan Water Demand in 2035

Use	New Master Plan Development	Net New Demand	
		CSUMB Rate[1]	Demand (AFY)[2]
	Total Future 2035 Demand (Potable)		*629*
	Total Future 2035 Demand (Non-Potable)		*87*
	TOTAL DEMAND IN 2035 (POTABLE AND NON-POTABLE)		***716***
	MCWD WATER DEMAND PROJECTION FOR CSUMB IN 2040[5]		***721***
	CSUMB Allocation		**1,035 - Potable Water 87 - Recycled Water**
	Does Project Exceed Allocation?		**No**

Sources: Table 4.14-6 and MCWD 2021 (Table C1).
Notes: AFY=acre feet per year; GSF=gross square feet
1. See Table 4.14-6 for CSUMB water use rates used in this table.
2. Numbers are rounded to the nearest whole number.
3. Includes a total of 5,200 student beds. The conversion and loss of 1,380 student beds at East Campus Housing is provided for in the next row, and results in net increase in 3,820 student beds. See Table 3-5, Chapter 3, Project Description.
4. Determined by type of food service and whether venue serves snacks and lunch, equivalent to two meals per day (e.g., Starbucks) or three meals a day (e.g., dining commons).
5. The MCWD water demand projection for CSUMB under the proposed Master Plan in 2040 is based on the 2020 UWMP Table C1 projection for 2040 (977 AFY) minus the projection for new CSU Corporation housing on 2nd Avenue in 2040 (256.25 AFY), which is not part of the proposed Master Plan (977 AFY – 256.25 AFY = 720.75). MCWD's water demand projection for CSUMB in 2040 is included in this EIR given that MCWD projected some of the CSUMB proposed Master Plan development as occurring between 2035 and 2040, even though the anticipated horizon year for the proposed Master Plan is 2035.

The Project includes a proposed PDF to conserve water, PDF-W-1, which indicates that the campus would remain within the campus's water allocation by implementing a range of conservation measures for each new project. The Project would result in increased demand for water supply over existing conditions, but Project water demand would be well below CSUMB's established groundwater supply allocation and would be further reduced with implementation of PDF-W-1 that calls for implementation of a range of water conservation measures. In addition to this PDF, new development would be required to install water conserving fixtures as required by California Code of Regulations, Title 24. The Project's forecasted water demand calculations presented in Table 4.14-8 do not take into account the reduced water demand that would result from implementation of PDF-W-1 and new Title 24 regulations and, therefore, overstate forecast demand. It is also noted that CSUMB's existing water use is less than reported in 2008, and projected water demand is less than was projected in the CSUMB 2007 Master Plan EIR.

MCWD estimates that by 2040 projected demand in the Ord Community service area will slightly exceed by 10 AFY the total groundwater supply allocation for the area of 6,600 AFY due to non-CSUMB related growth, although total demand would not exceed the supply allocation by 2035, the horizon year for the Project (MCWD 2021), as shown in Table 4.14-1. That is, by Project buildout year 2035, the total allocated supply of 6,600 AFY for the Ord Community service area would be sufficient to meet the estimated demand of 6,108 AFY. Therefore, there would be

adequate water supplies to serve the Project as well as other reasonably foreseeable development in the next 15 years to the year 2035. See also Section 4.8, Hydrology and Water Quality, for an analysis of the Project's impacts related to groundwater supply, groundwater recharge, and sustainable groundwater management.

Regardless of the slight forecasted demand exceedance shown in 2040 related to non-CSUMB growth, pursuant to terms of agreements between MCWD and MCWRA, MCWD is limited to pumping that does not exceed 6,600 AFY, as indicated in Section 4.14.1, Environmental Setting. MCWD does not allocate water supply to projects but advises customer land use jurisdictions as to current and historic water use within their boundaries and estimated remaining supply available for new developments. With these provisions, the established sub-allocations for the Ord Community service area cannot be exceeded by the various jurisdictions until supplemental water supplies are made available, as a result of implementation of MCWD's RUWAP or from other sources. (As indicated in Section 4.14.1, Existing Conditions, the RUWAP would provide a combination of recycled and desalinated water sources to provide water supply augments of 2,400 AFY for the Ord Community service area.) MCWD's current 2020 UWMP also concludes that the available water supply is considered reliable in average, dry and multiple-dry years because demand is projected to decline under a multiple-year drought due in part to conservation measures, and the available groundwater storage greatly exceeds demand even during a fifth consecutive drought year (MCWD 2021). The available water supply is considered reliable in all years (MCWD 2021).[8]

Given the preceding information, water supplies through 2035 are adequate to serve the Project and reasonably foreseeable development under average, dry and multiple-dry years, resulting in an impact that is *less than significant*.

Near-Term Development Components

The near-term development components would result in the addition of 1,000 student beds, 171,704 GSF of academic space in Academic IV and V, and 70,000 GSF of recreational facility space in Recreation Center Phases I and II within the first 10 years of proposed Master Plan building (by approximately 2030). Some of these near-term development components would be located on sites with existing buildings that would be demolished to accommodate the new projects (Buildings 1, 2, 3, 13, 21, and 23). As shown in Table 4.14-9, the net increase in water demand attributable to the near-term development components, accounting for demolition of

[8] The Salinas Valley Groundwater Basin has an estimated 19.8 million acre-feet of storage capacity, and groundwater levels have not declined significantly during drought cycles, so pumping within the agreed-upon limits (e.g., 6,600 afy within the Ord Community) is considered reliable (MCWD 2021).

existing buildings and based on the campus water use rates shown in Table 4.14-6 above, would total approximately 75 AFY (60 AFY potable and 15 AFY non-potable irrigation) in year 2030.

Table 4.14-9
Estimated CSUMB Water Demand from Near-Term Development Components

Near-Term Development Components/Use	New Master Plan Development	Net New Demand (Near-Term Development Components)	
		CSUMB Rate[1]	Demand (AFY)[2]
Potable Water			
Academic IV	95,000 GSF	0.000021 AFY/GSF	2
Academic V	76,704 GSF	0.000021 AFY/GSF	2
Recreation Center Phases I and II	70,000 GSF	0.000021 AFY/GSF	1
Student Housing Phases IIB and III[2]	1,000 beds	0.031 AFY/bed	31
Dining Hall[3]	Venue serving 2 meals per day Venue serving 3 meals per day	0.00012 AFY/GSF 0.00039 AFY/GSF	5
Building Demolitions Associated with Near-Term Development Components	(41,457 GSF)	Based on actual metered use	(<1)
Potable Irrigation for New Student Housing	Landscaping	0.000053 AFY/GSF	20
		Net New Potable Water Subtotal	*60*
Non-Potable Irrigation			
Non-Potable Irrigation for New Non-Housing Building	Landscaping	0.000053 AFY/GSF	15
		Net New Non-Potable Water Subtotal	*15*
		TOTAL NET NEW DEMAND IN 2030 (POTABLE AND NON-POTABLE)	***75***
		Total Existing Demand 2018-2019 Usage (Potable)	*316*
		Net New Potable Water (Potable)	*60*
		TOTAL FUTURE DEMAND IN 2030 (POTABLE)	***376***
		Total Future 2030 Demand (Potable)	*376*
		Total Future 2030 Demand (Non-Potable)	*15*
		TOTAL DEMAND IN 2030 (POTABLE AND NON-POTABLE)	***391***
		MCWD WATER DEMAND PROJECTION FOR CSUMB IN 2030[4]	***529***
		CSUMB Allocation	**1,035 - Potable Water 87 - Recycled Water**
		Do Near-Term Development Components Exceed Allocation?	**No**

Sources: Table 4.14-6 and MCWD 2021 (Table C1).
Notes: AFY=acre feet per year; GSF=gross square feet

1. See Table 4.14-6 for CSUMB water use rates used in this table.
2. Numbers are rounded to the nearest whole number.
3. Determined by type of food service and whether venue serves snacks and lunch, equivalent to two meals per day (e.g., Starbuck) or three meals a day (e.g., dining commons).
4. The MCWD water demand projection for CSUMB under the proposed Master Plan in 2030 is based on the 2020 UWMP Table C1 projection for 2030 (616 AFY) minus the projection for new CSU Corporation housing on 2nd Avenue (87.5 AFY) in 2030, which is not part of the proposed Master Plan (616 AFY – 87.5 AFY = 528.5).

This water demand attributable to the near-term development components represents a portion of and is accounted for in the total proposed Master Plan water demand identified in Table 4.14-8. These near-term developments would also be subject to proposed PDF-W-1 as related to site-specific project designs and considerations. In addition to this PDF, the near-term development components would be required to install water conserving fixtures as required by California Code of Regulations, Title 24. Further, the water demand associated with the near-term development components is well within the CSUMB allocation identified previously.

Additionally, MCWD estimates that projected demand in the Ord Community service area would not exceed the total groundwater supply allocation for the area of 6,600 AFY by 2030 (MCWD 2021), as shown in Table 4.14-1, which is the estimated time frame in which the near-term development components would be implemented. By 2030, the total estimated demand for the Ord Community is projected to be 5,239 AFY, as shown in Table 4.14-1, which is within the total groundwater supply allocation for the area of 6,600 AFY. Therefore, there would be adequate water supplies to serve other reasonably foreseeable development in the next 10 years to the year 2030. MCWD's current 2020 UWMP also concludes that the available water supply is considered reliable in average, dry and multiple-dry years because demand is projected to decline under a multiple-year drought and the available groundwater storage exceeds demand even during a fifth consecutive drought year (MCWD 2021).

Given the preceding information, water supplies are adequate to serve the near-term development components and reasonably foreseeable development under average, dry and multiple-dry years, resulting in an impact that is *less than significant*.

Mitigation Measures

Mitigation measures are not required because a significant impact related to water supplies has not been identified.

Impact UTL-3: Wastewater Treatment Capacity (Threshold C). The Project would not exceed wastewater treatment capacity. *(Less than Significant)*

Master Plan

As indicated in Impact UTL-2, campus growth accommodated by the proposed Master Plan would result in a net increase of approximately 6,066 FTE students and 752 FTE faculty/staff and approximately 2.6 million GSF of new buildings over existing levels. CSUMB estimates wastewater generation at buildout of the proposed Master Plan as approximately 0.38 MGD, based on an assumption that 100 percent of building water use would result in wastewater, as indicated in Section 4.14.3.2, Analytical Method. Table 4.14-10 indicates that the net increase in potable building water use would be 208 AFY in 2035 with the proposed project, which equals a net

increase of 0.19 MGD of wastewater. Combined with existing wastewater generation from the campus, the estimated total campus wastewater flows would be 0.38 MGD, which is well within remaining treatment capacity at the regional wastewater treatment plant, which is estimated at approximately 11 MGD. Therefore, as the wastewater generated by the Project would not exceed the capacity of the wastewater treatment plant, the impact would be *less than significant.*

Table 4.14-10
CSUMB Proposed Master Plan Wastewater Generation in 2035

Water Use/Wastewater Generation	Existing Conditions[1] (2018-2019)	Net New Demand[2] (2035)	Total Future Demand (2035)
Building Water Use (AFY)	219	208	427
Wastewater Generation[3] (MGD)	0.20	0.19	**0.38**

Notes: AFY=acre feet per year; GSF=gross square feet

1. Based on campus data, total potable water use at CSUMB in Fiscal Year 2018-2019 was approximately 316 AFY. Of that amount, 219 AFY was related to building use.
2. From Table 4.14-8.
3. To obtain wastewater generation from building water use the following conversion factor was used: 1 AFY = 892.75 GPD.

Near-Term Development Components

The near-term development components would result in the addition of 1,000 student beds, 171,704 square feet of academic space in Academic IV and V, and 70,000 GSF of recreational facility space in Recreation Center Phases I and II within the first 10 years of proposed Master Plan building (by approximately 2030). Some of these near-term development components would be located on sites with existing buildings that would be demolished to accommodate the new projects (Buildings 1, 2, 3, 13, 21, and 23). Wastewater generation for the near-term development components, accounting for demolition of existing buildings, represents a portion of and is accounted for in the total Master Plan wastewater generation estimate identified for the proposed Master Plan above in Table 4.14-10. Specifically, based on Table 4.14-9, the net increase in building water use for the near-term developments would be approximately 40 AFY, which equals approximately 0.04 MGD, based on the same conversion factor used in Table 4.14-10. This wastewater volume is also well within remaining treatment capacity at the regional wastewater treatment plant, estimated at approximately 11 MGD. Therefore, as the wastewater generated by the near-term development components would not exceed the capacity of the wastewater treatment plant, the impact would be *less than significant.*

Mitigation Measures

Mitigation measures are not required because a significant impact related to exceedance of the wastewater treatment plant capacity has not been identified.

Impact UTL-4: **Solid Waste (Thresholds D and E).** The Project would not generate solid waste in excess of state standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; and the Project would comply with federal and state management and reduction statutes and regulations related to solid waste. *(Less than Significant)*

Master Plan

As indicated in Impact UTL-2, campus growth accommodated by the proposed Master Plan would result in a net increase of 6,066 full-time-equivalent students (FTES) 752 FTE faculty/staff, and approximately 2.6 million GSF of new buildings and related infrastructure connections. The increase in population and physical development on campus would increase the generation of nonhazardous solid waste. Solid waste generated under the proposed Master Plan would be directed to the Monterey Peninsula Landfill, which has remaining capacity beyond the Master Plan horizon year of 2035. Specifically, the landfill is expected to have capacity for approximately 90 to 100 more years (CalRecycle 2019a).

As described above in Section 4.14.1.4, approximately 2,123 tons of waste was generated at the CSUMB campus in 2017 (CSUMB 2019). Based on the CSUMB population of 7,658 FTE for the 2016/2017 academic year, approximately 0.28 tons per FTE person were generated that year. Data from the campus indicate an average per-capita waste generation rate of approximately 0.24 tons per person per year from 2013-2017. To provide a more conservative estimate of solid waste generation with the proposed Master Plan, the calculated waste generation rate for 2016/2017 is used in this analysis. Using the generation rate of 0.28 tons per FTE person per year, a net increase of approximately 1,909 tons per year of solid waste would be generated during Project operation with the proposed net increase of 6,818 FTE students, faculty, and staff. This represents a conservative estimate as the per-capita generation rate would most likely decline over time in accordance with the campus's increasing solid waste diversion goals.

Project construction would generate significantly higher amounts of waste than Project operation due to demolition of buildings and associated construction activities. The exact amount of solid waste that would be generated from construction/demolition activities is not known. However, as described in Section 4.14.1.4, when building demolition is accounted for (i.e., due to the demolition of former unusable military buildings), the campus's overall waste diversion rates ranged from approximately 53 percent to 97 percent from 2013 to 2017. Through recycling and reuse of construction/demolition materials, the campus has been able to divert the vast majority of its construction/demolition waste from the landfill (averaging 98 percent diversion from 2013 to 2017 for specific projects). Therefore, Project construction would not generate solid waste in excess of existing remaining landfill capacity, which is estimated at over 48.5 million cubic yards with an estimated closure date in 2107.

The net increase in solid waste generation expected with Project operation (1,909 tons per year) would comprise less than 1 percent of the annual 490,000 tons received at the landfill. In addition, the campus would continue to comply with applicable CalRecycle requirements, including reporting annually, recycling, attaining at least a 50 percent diversion rate for state agencies, and providing adequate receptacles, signage, education, and staffing. As per the CSU Sustainability Policy (see Table 4.14-5), CSUMB shall also seek to reduce solid waste diversion by 80 percent by 2020 and then continue toward zero waste by 2040. The Campus Sustainability Plan provides an interim objective of diverting 90 percent of waste from the landfill by 2030. Compliance with the CSU Sustainability Policy and the Campus Sustainability Plan overtime will increase CSUMB's diversion rate over existing conditions. Additionally, as of February 2018, MRWMD's MRF began recovering up to 75 percent or more of recycled materials from commercial and residential trash, thus reducing the solid waste tons sent to the landfill. As such, the Project would not generate solid waste in excess of the capacity of local infrastructure, otherwise impair the attainment of solid waste reduction goals, or conflict with regulations related to solid waste, and the impact would be *less than significant*.

Near-Term Development Components

The growth contemplated in the proposed Master Plan, including near-term development components, would result in an increase in solid waste generation that would comprise a limited portion of existing capacity at the Monterey Peninsula Landfill, would not otherwise impair the attainment of solid waste reduction goals, or conflict with regulations related to solid waste and the impact of the near-term development components would also be *less than significant*.

Mitigation Measures

Mitigation measures are not required because a significant impact related to solid waste has not been identified.

Impact UTL-5: **Wasteful Energy Consumption (Threshold F).** The Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. *(Less than Significant)*

Master Plan

The Project includes the development of the CSUMB campus to support planned on-campus student enrollment, faculty, and staff growth. In conjunction with these efforts, the Project – in part – includes the demolition of up to 24 existing buildings, and the replacement of those building with new construction. As discussed previously, the Project would include PDF-E-2, which calls for the design and retrofit of infrastructure and buildings to minimize energy use by: establishing

district-scale on-site energy production and distribution strategies; studying expansion of district-scale electrical, chilled and hot water distribution; achieving a minimum 15 percent energy performance improvement target goal over current Title 24 code in new construction; achieving a minimum 5 percent energy performance improvement target goal over existing usage in existing facilities; establishing passive heating and cooling and thermal-mass building designs; establishing standards for campus-scale energy conversion systems; and meeting minimum requirements equivalent to LEED "Silver," while aiming for the highest green building energy standards possible (i.e., LEED Platinum or equivalent). Moreover, PDF-E-3 would allow for the recommissioning of major buildings every five years, as funding is available and would also establish energy system efficiency retrofit projects. From an energy perspective, the redevelopment of the existing campus in this respect will serve to increase and improve the efficiency of campus operations as new buildings will comply with more rigorous and effective regulatory standards.

Electricity

Construction Use. Temporary electric power for as-necessary lighting and electronic equipment such as computers may be needed inside temporary construction trailers. However, the electricity used for such activities would be temporary and would be substantially less than that required for Project operation and would have a negligible contribution to the Project's overall energy consumption. Therefore, the electricity consumption of the Project during construction would not be considered inefficient or wasteful, and impacts would be *less than significant*.

Operational Use. The operational phase of the Project would require electricity for multiple purposes including, but not limited to, building heating and cooling, lighting, appliances, and electronics.

Energy consumption data provided by CSUMB, was utilized for both existing conditions and Project buildout (see Appendix D for calculations). In 2016-2017, the CSUMB Main Campus facilities consumed approximately 11,468,472 kWh. At buildout, the Project's electricity consumption would be approximately 27,006,093 kWh of electricity. The Project's electricity consumption at buildout was estimated by utilizing a rate of 6.4 KWh/GSF/year, which is based on the existing buildings' electricity consumption. Overall, new buildings' electricity consumption associated with the Project would be approximately 17,587,977 kWh per year. Notably, the Project's forecasted electricity consumption calculations are overestimated as they do not account for the reduced electricity demand that would be achieved through required compliance with all current applicable energy codes (Title 24 Energy Codes) and regulations and implementation of the PDFs identified in Section 4.14.3.2, Analytical Method, as further discussed below.

Although overall electricity consumption would increase due to the implementation of the Project, new buildings, HVAC, lighting, and other systems, such as electric motor equipment, would be designed to maximize energy performance pursuant to applicable regulations. The

ICSUAM (Section IX) provides that all future CSU new construction, remodeling, renovation and repair projects will be designed for optimum energy utilization, lowest life-cycle operating costs, in compliance with all applicable energy codes (Title 24 Energy Codes) and regulations, including the statewide mandatory energy requirements (Cal. Code Regs. tit 24, part 6), which improve the energy efficiency of non-residential and residential buildings, and minimum mandatory energy measures under CALGreen (Cal. Code Regs. tit 24, part 11). In addition to these energy saving requirements, the Project would implement PDF-E-2, which would require energy efficiency and new buildings be developed to exceed current Title 24 standards by a minimum of 15 percent while existing facilities would strive to reduce energy consumption by 5 percent. The Project would also implement PDF-E-3 to manage energy supplies to reduce overall energy use. Furthermore, as part of PDF-E-2, the Project would establish district-scale on-site energy production and distribution strategies and would implement standards for campus-scale energy conversion systems to help the campus meet carbon neutrality for scope 1 and 2 emissions identified in PDF-E-1. Additionally, newly developed buildings would be designed to meet LEED Silver or equivalent standards at a minimum and the campus would aim to meet the highest green building energy standards possible (i.e., LEED Platinum or equivalent), under PDF-E-2.

Overall, CSUMB would ensure that the Project would meet Title 24 requirements applicable at the time of construction of specific components, as required by state regulations and as provided in PDF-E-2, and evaluate participation in CALGreen voluntary measures on a project-by-project basis. PDF-E-1 and PDF-E-3, described above, would also be implemented. For these reasons, the electricity consumption of the Project during operations would not be considered inefficient or wasteful, and impacts would be *less than significant*.

Natural Gas

Construction Use. Natural gas is not anticipated to be required during construction of the Project. Fuels used for construction would primarily consist of diesel and gasoline, which are discussed below under the "petroleum" subsection. Any minor amounts of natural gas that may be consumed as a result of Project construction would be substantially less than that required for Project operation and would have a negligible contribution to the Project's overall energy consumption. Therefore, natural gas use during construction would not be wasteful or inefficient and impacts would be *less than significant*.

Operational Use. Natural gas consumption during operation would be required for various purposes, including, but not limited to, building heating and food preparation. Default natural gas generation rates in CalEEMod for the Project were adjusted based on existing and forecasted usage provided by CSUMB. Based on these estimates, in 2016-2017, CSUMB Main Campus facilities consumed approximately 555,708 therms. The Project's natural gas consumption at buildout was estimated by utilizing a rate of 0.18 therms/GSF/year, which is based on the existing

buildings' natural gas consumption. At buildout, it is estimated the Project would consume approximately 1,106,827 therms of natural gas per year. New development under the Project would account for approximately 648,746 therms per year. Notably, the Project's forecasted natural gas consumption calculations are overestimated as they do not account for the reduced natural gas demand that would be associated with compliance with all current applicable energy codes (Title 24 Energy Codes) and regulations and implementation of the PDFs identified in Section 4.14.3.2, Analytical Method, as further discussed below.

Although natural gas consumption would increase due to the implementation of the Project, proposed new buildings and related HVAC and other systems would be designed to maximize energy performance in accordance with applicable regulations. The ICSUAM (Section IX) requires that all future CSU new construction, remodeling, renovation and repair projects be designed for optimum energy utilization, lowest life-cycle operating costs, and in compliance with all applicable energy codes (Enhanced Title 24 Energy Codes) and regulations, including the statewide mandatory energy requirements (Cal. Code Regs. tit 24, part 6), which improve the energy efficiency of non-residential and residential buildings, and minimum mandatory energy measures under CALGreen (Cal. Code Regs. tit 24, part 11). In addition to these energy saving requirements, the Project would also implement PDF-E-1, which would limit future natural gas use. As with electricity demand, natural gas demand for the Project would comply with and would exceed current Title 24 standards by a minimum of 15 percent at the time of development, which is a target goal of PDF-E-2. The Project would also implement PDF-E-3 to manage energy supplies to reduce overall energy use. Furthermore, as part of PDF-E-2, the Project would establish district-scale on-site energy production and distribution strategies and would implement standards for campus-scale energy conversion systems to help the campus meet carbon neutrality for scope 1 and 2 emissions identified in PDF-E-1. Additionally, newly developed buildings would be designed to meet LEED Silver or equivalent standards at a minimum and the campus would aim to meet the highest green building energy standards possible (i.e., LEED Platinum or equivalent), under PDF-E-2.

Overall, CSUMB would ensure that the Project would meet Title 24 requirements applicable at the time of construction of specific components, as required by state regulations and as provided in PDF-E-2, and evaluate participation in CALGreen voluntary measures on a project-by-project basis. PDF-E-1 and PDF-E-3, described above, would also be implemented. For these reasons, the natural gas consumption of the Project would not be considered inefficient or wasteful, and impacts would be *less than significant*.

Petroleum

Construction Use. Petroleum would be consumed throughout construction of the Project. Fuel consumed by construction equipment would be the primary energy resource expended over the

course of construction, and on-road vehicles associated with the transportation of construction materials and construction worker commutes would also result in petroleum consumption. Heavy-duty construction equipment associated with construction activities and haul trucks involved in transport of demolished material would rely on diesel fuel. Construction workers would travel to and from the Project site throughout the duration of construction. It is assumed that construction workers would travel to and from the Project site in gasoline-powered vehicles. For purposes of estimating project emissions, construction was based on the assumption that no more than approximately 300,000 gross square feet (GSF) of development projects under the proposed Master Plan would occur concurrently. This analysis is based on the construction scenario described in Section 4.2, Air Quality (see Section 4.2.3.2, Analytical Method, Construction Emissions). While construction specifics for buildout of the Project are not currently available, the petroleum estimated from the construction scenario were assumed to represent a worst-case for the phased development over 15 years (2035). In order to estimate Project construction petroleum consumption, the petroleum consumption over the worst-case construction scenario were multiplied over the 15-year buildout duration. CalEEMod was used to estimate construction equipment usage; results are included in Appendix D of this EIR.

As shown in Appendix D, construction activities are estimated to consume approximately 327,738 gallons of petroleum over the buildout of the Project. For comparison, California daily petroleum consumption is estimated at approximately 78.6 million gallons per day (EIA 2019c). Therefore, over the 15-year buildout of the Project, the total amount of petroleum used in connection with construction activities would be equivalent to less than 4 percent of the amount of petroleum consumed in the state in a single day. Additionally, all projects would be required to comply with regulatory measures such as CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes, minimizing fuel consumption. Furthermore, because California's construction equipment is regulated, Project construction petroleum use is reasonably expected to continue to decline, as Tier 4 construction equipment, which is more fuel efficient, becomes more widely available. Therefore, because petroleum use during construction would be temporary, relatively limited, and would continue to decline with the use of more efficient equipment, it would not be wasteful or inefficient and impacts would be *less than significant*.

Operational Use. The majority of fuel consumption resulting from the Project's operational phase would be attributable to students and faculty/staff employees traveling to and from the Project site, and worker vehicles traveling around the Project site.

Petroleum fuel consumption associated with motor vehicles and delivery trucks traveling to and from the Project site during operation is a function of VMT. As provided in the Transportation Analysis (Appendix H), the annual VMT attributable to buildout of the Project is expected to be 295,440 VMT per year. (This annual VMT estimate quantitively accounts for the implementation

of PDF-MO-1 and PDF-MO-2 providing for housing of at least 60 percent of enrolled students and 65 percent of faculty and staff in on-campus housing, as well as PDF-MO-6(c) and PDF-MO-8 that will consolidate and relocate parking to the periphery of the campus core and establish restrictions to general vehicle travel through the campus core. These PDFs would result in reductions in VMT to and from campus and, consequently, reduced fuel usage.) By comparison, the existing campuses' VMT is approximately 178,460 VMT per year. In addition, as presented in Table 4.13-8 of Section 4.13, Transportation, the Project's VMT per service population would be less than significant, as the total VMT per service population associated with the Project would be 20.24, which is less than the applicable significance threshold of 23.91. Similar to construction worker and vendor trips, fuel consumption for operation was estimated by converting the total CO_2 emissions to gallons using the conversion factors for CO_2 to gallons of gasoline or diesel. The worker vehicles were assumed to be gasoline powered, and the delivery trucks were assumed to be diesel.

Calculations for annual mobile-source fuel consumption are provided in Table 4.14-11Table 4.14-. At Project buildout year 2035, mobile sources from the Project would result in the consumption of approximately 280,207 gallons of gasoline per year and 29,904 gallons of diesel per year, for a total of 310,110 gallons of petroleum consumed. The total existing mobile source consumption in 2018 was approximately 187,850 gallons of gasoline and 20,047 gallons of diesel, for a total of 207,897 gallons of petroleum consumed. Therefore, the Project would result in an increase in consumption of approximately 102,212 gallons of petroleum per year. By comparison, California as a whole consumes approximately 16.8 billion gallons of petroleum per year (CEC 2019). Thus, the Project would result in an increase in petroleum consumption equivalent to 0.00006 percent of the state's total consumption (102,212/16.8 billion).

Table 4.14-11
Petroleum Consumption – Operation

Fuel	Vehicle MT CO_2	kg CO_2/Gallon	Gallons
Project Buildout			
Gasoline	2,460.21	8.78	280,206.72
Diesel	305.32	10.21	29,903.53
		Total	**310,110.25**
Existing Conditions			
Gasoline	1,649.33	8.78	187,850.45
Diesel	204.68	10.21	20,047.31
		Total	**207,897.76**
		Net Total Petroleum Consumption	**102,212.48**

Sources: a. Appendix D; b. The Climate Registry 2021.
Notes: CO_2 = carbon dioxide; kg = kilogram; MT = metric ton.

Over the lifetime of the Project, the fuel efficiency of the vehicles being used by students, faculty/staff employees, and delivery trucks is expected to increase. As such, the amount of petroleum consumed as a result of vehicular trips to and from the Project site during operation would decrease over time. There are numerous regulations in place that require and encourage increased fuel efficiency. For example, CARB has adopted an approach to passenger vehicles by combining the control of smog-causing pollutants and GHG emissions into a single, coordinated package of standards. Technologies to achieve the GHG emission standards include engine and emission control advancements, wider application of advanced hybrid technology and greater use of stronger and lighter materials, which would help reduce fuel consumption. The program would also include efforts to support and accelerate the number of plug-in hybrids and zero-emissions vehicles in California (CARB 2013). Additionally, in response to SB 375, CARB adopted the goal of reducing per-capita GHG emissions by 4 percent and nearly 7 percent from passenger vehicles by 2020 and 2035, respectively (AMBAG 2018). As such, operation of the Project is expected to use decreasing amounts of petroleum over time due to advances in fuel economy and improvements in public transit and transportation options.

Further, although not quantified herein, PDF-MO-3 through PDF-MO-7, and PDF-MO-9 through PDF-MO-18 would help reduce petroleum use during operation as these measures would require implementation of a TDM plan and other measures to reduce single-occupant vehicle trips and associated petroleum use. In particular, PDF-MO-6 and related PDFs provide for the implementation, enhancement, and expansion of TDM strategies to reduce single-occupant vehicle trips as part of a formal TDM Plan, which will address parking management (e.g., maintaining existing parking supply, prohibiting residential Freshmen and Sophomores from purchasing a parking permit, providing for a "park once" policy, expanding electric vehicle charging stations), transit mobility, bicycle and pedestrian mobility, and program monitoring and administration. Lastly, the CSU Sustainability Policy calls for the use of alternative transportation and/or alternative fuels.

In summary, although the Project would increase petroleum use during operation as a result of students and faculty/staff employees commuting to the site, as well as delivery trucks, the use would be a small fraction of the statewide use and, due to efficiency increases and implementation of relevant PDFs and the CSU Sustainability Policy, would diminish over time. Given these considerations, petroleum consumption associated with the Project would not be considered inefficient or wasteful and the impact would be *less than significant*.

Near-Term Development Components

As demonstrated above, the proposed Master Plan, which includes the near-term development components, would result in an increase in electricity, natural gas, and petroleum consumption that would be relatively minimal when compared with the State's usage and, due to efficiency increases and implementation of relevant PDFs and the CSU Sustainability Policy, such

consumption would diminish and become more efficient over time. Therefore, the near-term development components would not be wasteful or inefficient use of energy resources and impacts would be *less than significant*.

Mitigation Measures

Mitigation measures are not required because a significant impact related to energy consumption has not been identified.

While not required to reduce a significant energy-related impact, MM-GHG-1 (see Section 4.6, Greenhouse Gas Emissions) would reduce the Project's GHG emissions related to energy consumption via building decarbonization efforts that increase electricity consumption to offset reductions in natural gas consumption, as the latter is more GHG intensive. The decarbonization of buildings would allow CSUMB to use clean electricity instead of natural gas, as PG&E meets the state's RPS targets, and would also allow for a portion of the campus's electricity consumption offset through expansion of solar PV infrastructure. Implementation of MM-GHG-1 would not result in a significant energy-related impact, even though it would increase the Project's electricity consumption (see Section 4.6, Greenhouse Gas Emissions, Table 4.6-7), because Project-related buildings would continue to meet and exceed regulatory standards designed to ensure efficient energy consumption, as described above. See Section 4.6, Greenhouse Gas Emissions for additional information.

Impact UTL-6: **Conflicts with Energy Plans (Threshold G).** The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. *(Less than Significant)*

Master Plan

The ICSUAM (Section IX) requires that all CSU buildings and facilities be operated in the most energy efficient manner without endangering public health and safety. The policy also provides that all future CSU new construction, remodeling, renovation and repair projects be designed for optimum energy utilization, lowest life-cycle operating costs, and in compliance with all applicable energy codes (Title 24 Energy Codes) and regulations.

Title 24 of the California Code of Regulations contains energy efficiency standards for residential and non-residential buildings based on a state mandate to reduce California's energy demand. Specifically, Title 24 provides a number of energy efficiency measures that impact energy used for lighting, water heating, heating, and air conditioning, including the energy impact of buildings associated with windows, doors, skylights, wall/floor/ceiling assemblies, attics, and roofs. Part 6 of Title 24 specifically establishes energy efficiency standards for residential and non-residential buildings constructed in the State of California in order to reduce energy demand and

consumption. Title 24, Part 11, contains mandatory energy measures that are applicable to the Project under CALGreen.

As discussed in Impact UTL-5, the Project would result in an increased demand for electricity, natural gas, and petroleum. In accordance with Title 24 Part 11 mandatory compliance, the Project would have: (a) 50 percent of its construction and demolition waste diverted from landfills; (b) mandatory inspections of energy systems to ensure optimal working efficiency; (c) low-pollutant-emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards; and (d) a 20 -percent reduction in indoor water use.

In addition, the Project would implement PDF-E-1 through PDF-E-3, which include various energy conservation measures such as setting a minimum of exceeding the current Title 24 regulations by 15 percent for all new development and a 5 percent reduction in energy consumption for existing buildings. Furthermore, the Project would look to implement energy conservation systems that move the campus towards achieving carbon neutrality.

As discussed in Section 4.14.2, Regulatory Framework, there are several CSU and CSUMB plans that would be applicable to the Project. The CSU Sustainability Policy focuses mainly on energy and GHG emissions, and largely aligns with the State of California energy and GHG emissions reduction goals. The policy aims to reduce the environmental impact of construction and operation of buildings and to integrate sustainability across the curriculum. The Project would comply with the CSU Sustainability Policy through meeting the State building code requirements, including use of energy-efficient HVAC systems, installing LED lighting, retrofitting campus water fixtures to low-flow plumbing equipment, and compliance with waste recycling requirements.

Furthermore, CSUMB adopted the Campus Sustainability Plan, which replaced the prior 2013 CSUMB Climate Action Plan. The Campus Sustainability Plan includes a Carbon Neutrality Roadmap in support of achieving carbon neutrality by 2030. The Carbon Neutrality Roadmap includes 12 topic areas and associated goals in a variety of sectors including: water, energy, food, waste, procurement, build environment, transportation, habitat, resiliency, academic and curricular, student affairs and co-curricular, and community and engagement. The Project would support progress towards meeting the carbon neutrality goal through implementing PDF-W-1, PDF-E-1 through PDF-E-3, and PDF-MO-1 through PDF-MO-18, which would minimize the increase in consumption of electricity, natural gas, and petroleum and provide for compliance with energy standards and regulations. The Project would also be required to replace existing lighting with energy efficient lighting, such as LED lights. LED lights use up to 90 percent less energy and last up to 25 times longer than incandescent bulbs. Finally, to support mode shift from single occupancy vehicles and encourage alternative transportation methods, the Project would develop a TDM Plan, per PDF-MO-6. The TDM Plan would include a variety of trip reduction strategies such as expanding upon existing alternative transportation programs; establishing an

incentives-based commuter program to encourage students, faculty and staff commuters to carpool and take alternative modes of travel to campus; increase bicycle facilities; and prioritize carpool parking, etc.

Based on the considerations above, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and the impact would be *less than significant*.

Near-Term Development Components

Because the proposed Master Plan, which includes the near-term development components, would comply with Title 24 regulations as required by the ICSUAM, and would implement PDF-W-1, PDF-E-1 through PDF-E-3, and PDF-MO-1 through PDF-MO-18, these components also would minimize the increase in consumption of electricity, natural gas, and petroleum and provide for compliance with energy standards and regulations. Therefore, the near-term development components would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency and the impact would be *less than significant*.

Mitigation Measures

Mitigation measures are not required because a significant impact related to conflicts with a state or local plan for renewable energy or energy efficiency has not been identified.

While not required to reduce a significant energy-related impact, the implementation of MM-GHG-1 would decarbonize existing buildings and/or new buildings to reduce the Project's natural gas consumption (see Section 4.6, Greenhouse Gas Emissions, Table 4.6-7 and Table 4.6-8).

4.14.3.4 Cumulative Impacts

This section provides an evaluation of utilities and energy impacts associated with the Project, including near-term development components, when considered together with other reasonably foreseeable cumulative development, as identified in Table 4.0-1 in Section 4.0, Introduction to Analysis, as well as growth under current local agency general plans, or as projected by service purveyors in their service areas (e.g., MCWD). The geographic area considered in the cumulative analysis for this topic is described in the impact analysis below.

Impact UTL-7: Cumulative Utilities and Energy Impacts (Thresholds A through G). The Project would not result in a cumulatively considerable contribution to significant cumulative impacts related to utilities and energy. (*Less than Significant*)

Utility Relocation or Construction

Potable Water

The geographic area considered in the cumulative impact analysis related to relocation or construction of new potable water facilities is the Ord Community service area of the MCWD. Cumulative growth would result in the need for new water delivery connections to adequately serve future growth in MCWD's Ord Community service area. As indicated in Impact UTL-1, all new Project buildings would require new water delivery and wastewater pipeline connections to existing MCWD infrastructure; and relocation of some lines could be necessary. The construction impacts associated with new water service connections or relocation of existing pipelines are evaluated throughout Chapter 4, Environmental Setting, Impacts, and Mitigation Measures of this Draft EIR as a component of development under the proposed Master Plan.

As indicated in Impact UTL-1, MCWD's recently completed Water Master Plan evaluates the adequacy of the existing potable water system capacity and provides plans for its expansion to service anticipated future growth through 2035. The Water Master Plan includes recommended improvements and a Capital Improvement Program. Infrastructure improvements are recommended to mitigate existing system deficiencies and serve development over the next 15 years. CSUMB estimates that the proposed Project would have limited contribution to total growth in demand in the pressure zones that serve the campus (see Table 4.14-7). Other cumulative development in the Ord service area would contribute to infrastructure improvements identified in Water Master Plan, including additional pipelines, valves, pump stations, and storage tanks. When identified MCWD improvements are implemented, such improvements would require CEQA compliance and compliance with applicable regulatory requirements and permits, as applicable. To the extent that such improvements result in potentially significant impacts, such impacts would be reduced through the implementation of mitigation measures required through the CEQA process for these projects.

Implementation of the proposed Master Plan, in and of itself, would not require construction of potable water infrastructure improvements identified by MCWD. Moreover, the Project's percentage of the total growth identified in the MCWD Master Plan would be relatively limited and would not be cumulatively considerable, and therefore cumulative impacts would be *less than significant.*

Recycled Water

The geographic area considered in the cumulative impact analysis related to relocation or construction of new recycled water facilities is the Ord Community service area of the MCWD. As indicated in Impact UTL-1, the Pure Water Monterey advanced treated recycled water pipeline is currently complete through the CSUMB campus with points of connections installed in proximity to CSUMB irrigation locations. CSUMB is in the process of designing the pipeline lateral connections to the existing advanced treated recycled water pipeline through the campus. Advanced treated recycled water may be available to CSUMB from MCWD in the near future.

While MCWD is planning for other recycled water improvements under the RUWAP, that would expand their capacity to deliver recycled water to customers, CSUMB does not need additional recycled water to serve proposed Master Plan growth and development, nor would the Project contribute to the need to construct additional recycled water infrastructure projects. Given that the implementation of the proposed Master Plan, in and of itself, would not require construction of these recycled water infrastructure improvements, nor would the Project contribute to any such need, the contribution of the Project to cumulative impacts related to recycled water improvements would not be cumulatively considerable, and cumulative impacts would be *less than significant*.

Wastewater

The geographic area considered in the cumulative impact analysis related to relocation or construction of new wastewater facilities is the Ord Community service area of the MCWD. Cumulative growth would result in the need for new wastewater connections to adequately serve future growth in MCWD's Ord Community service area. As indicated in Impact UTL-1, all new Project buildings would require new water delivery and wastewater pipeline connections to existing MCWD infrastructure; and relocation of some lines could be necessary. The construction impacts associated with new wastewater service connections to new buildings or relocation of existing pipelines are evaluated throughout Chapter 4, Environmental Setting, Impacts, and Mitigation Measures of this Draft EIR as a component of development under the proposed Master Plan.

As indicated in Impact UTL-1, MCWD's recently completed Sewer Master Plan evaluates the adequacy of the existing sewer system capacity and provides plans for its expansion to service anticipated future growth through 2035 in its service area. The Sewer Master Plan includes recommended improvements and a Capital Improvement Program. Infrastructure improvements are recommended to upsize and mitigate existing system deficiencies such that the system would be adequate to serve existing and new regional development over the next 15 years. No relocation or construction of new or expanded wastewater treatment facilities are necessary to serve the Project as discussed in Impact UTL-3 or to serve cumulative growth (see Wastewater

Treatment Capacity below). Additionally, according to a Sewer Capacity Study conducted for the CSUMB Main Campus, the existing MCWD's wastewater collection infrastructure is adequately sized to support the Project development and the MCWD sewer system is not anticipated to be undersized (Whitson Engineers 2019 and 2020). Therefore, MCWD sewer system improvements are not needed to serve Project development on the Main Campus.

While MCWD is planning for wastewater system improvements to serve cumulative growth, these improvements are not required to serve Project growth and development. Given that the implementation of the proposed Master Plan, in and of itself, would not require construction of wastewater infrastructure improvements, nor would the Project contribute to the need to construct such improvements, the contribution of the Project to cumulative impacts related to wastewater improvements would not be cumulatively considerable, and cumulative impacts would be *less than significant*.

Other Utilities

The geographic area considered in the cumulative impact analysis related to relocation or construction of new electric power, natural gas, and telecommunications is the cumulative project sites in the former Fort Ord and beyond, as described in Section 4.0, Introduction to Analysis. As indicated in Section 4.14-1, Environmental Setting, PG&E provides electricity and natural gas to East Campus Housing and the campus owns the electricity and natural gas distribution systems that extends to buildings on the Main Campus. The campus also has a fiber optic telecommunications system, which serves only the campus, so this system is not the focus of this cumulative impact analysis.

As indicated in Impact UTL-1, all new Project buildings would require new electric power and natural gas. The construction impacts associated with these new connections are evaluated throughout Chapter 4, Environmental Setting, Impacts, and Mitigation Measures of this Draft EIR as a component of development under the proposed Master Plan. Development under the proposed Master Plan, in combination with cumulative projects listed in Table 4.0-1, would result in an increase in electrical and natural gas demands. As development of the projects listed in Table 4.0-1 proceeds, PG&E would typically incorporate anticipated development into their assessment of their associated infrastructure and periodically consider the need to purchase more resources and upgrade/expand infrastructure. There are currently no known off-campus electric power or natural gas improvements that are known to be required to serve the Project and other cumulative development, beyond improvements and connections that may be required on individual project sites.

Moreover, to the extent new cumulative project development is constructed in the future, that development would undergo its own environmental review under CEQA, which would be

conducted by other jurisdictions. As part of the review, the need for new or expanded electricity and natural gas facilities would be assessed and would be required to comply with applicable regulatory requirements and permits at the time that such facilities are proposed. To the extent that cumulative development results in potentially significant impacts related to construction of improvements or connections related to electric power and natural gas, such impacts would be reduced through the implementation of mitigation measures required through the CEQA process for these projects. Further, as required by law, all utility connections would be constructed in accordance with all applicable building codes and applicable standards to ensure an adequately sized and properly constructed transmission and conveyance system.

As there are currently no known off-campus electric power or natural gas improvements that are known to be required to serve the Project and other cumulative development, the contribution of the Project to cumulative impacts related to construction of such electric power and natural gas improvements would not be cumulatively considerable, and cumulative impacts would be *less than significant*.

Water Supply Availability

The geographic area considered in the cumulative impacts for water supply is the Ord Community service area of the MCWD. Impact UTL-2 provides an analysis of the Project and reasonably foreseeable future development related to the sufficiency of water supplies. This impact analysis concludes that Project demand would not exceed, and is well under, the existing CSUMB allocated water supplies through 2035 (see Table 4.14-8), even without accounting for the reduced water demand that would result from implementation of PDF-W-1 and new Title 24 regulations. It further concludes that while the MCWD estimates that projected demand in the Ord Community service area from non-CSUMB growth will slightly exceed (by 10 AFY) the total groundwater supply allocation for the service area of 6,600 AFY by 2040, projected demand would not exceed the total groundwater supply allocation by 2035, the horizon year for the Project (MCWD 2021), as shown in Table 4.14-1. That is, by Project buildout year 2035, the total allocated supply of 6,600 AFY for the Ord Community service area would be sufficient to meet the estimated demand of 6,108 AFY. Therefore, there would be adequate water supplies to serve the Project as well as other reasonably foreseeable development in the next 15 years to the year 2035.

Regardless of the slight forecasted demand exceedance shown in 2040 related to non-CSUMB growth, pursuant to terms of agreements between MCWD and MCWRA, MCWD is limited to pumping that does not exceed 6,600 AFY, as indicated in Section 4.14.1, Environmental Setting. MCWD does not allocate water supply to projects but advises customer land use jurisdictions as to current and historic water use within their boundaries and estimated remaining supply available for new developments. With these provisions, the established sub-allocations for the Ord Community service area cannot be exceeded by the various jurisdictions until supplemental

water supplies are made available, as a result of implementation of MCWD's RUWAP or from other sources. MCWD's current 2020 UWMP also concludes that the available water supply is considered reliable in average, dry and multiple-dry years because demand is projected to decline under a multiple-year drought and the available groundwater storage greatly exceeds demand even during a fifth consecutive drought year (MCWD 2021).

Given the preceding information, water supplies through 2035 are adequate to serve the Project and reasonably foreseeable development under average, dry and multiple-dry years, and as such Project impacts relative to water supply would not be cumulatively considerable, thereby resulting in a cumulative impact that is *less than significant*, as concluded in Impact UTL-2.

Cumulative impacts related to continued groundwater pumping are addressed in Section 4.8, Hydrology and Water Quality.

Wastewater Treatment Capacity

The geographic area considered in the cumulative impacts for wastewater treatment include areas served by the M1W regional wastewater treatment plant. A 40-year wastewater flow projection analysis was conducted as part of the planning for the Pure Water Monterey Project, which found that wastewater flows to the regional wastewater treatment plant will continue to decrease until approximately the year 2030. After 2030, based on the "high" and "low" projections of regional population growth and assuming a minimum of 59.0 gallons per capita per day, flows are projected to increase and may range between 22.7 and 24.3 MGD by the year 2055, i.e., 77 to 82 percent of regional wastewater treatment plant design capacity (MRWPCA 2016). These projected increases in wastewater flows are dependent upon implementation of regional growth plans reflected in city and county general plans. If wastewater flows do increase in the future, M1W could curtail diversions of other sources and use excess flows at the regional wastewater treatment plant. Therefore, even if future increases in municipal wastewater flows occur, the regional wastewater treatment plant capacity would not require expansion due to the Project and other cumulative development. Thus, the existing regional wastewater treatment plant has capacity to treat additional projected future flows from cumulative development within its service area, and no significant cumulative impacts related to wastewater treatment plant capacity have been identified. Therefore, Project impacts would not be cumulatively considerable and cumulative impact related to wastewater treatment capacity would be *less than significant*.

Solid Waste

The geographic area considered for cumulative impacts related to solid waste is Monterey County. Two agencies oversee solid waste disposal in Monterey County: the MRWMD, as described above, which serves the western coastal areas of the County, including the Project site, and the Salinas Valley Solid Waste Authority (SVSWA), which serves the eastern inland portions

of the County. Two active landfills are currently operating in Monterey County: the MRWMD's Monterey Peninsula Landfill and the SVSWA's Johnson Canyon Sanitary Landfill. As described in Section 4.14.1.4 above, the Project area is served by the Monterey Peninsula Landfill, which has a remaining capacity of over 48.5 million cubic yards and an estimated closure date in 2107 (CalRecycle 2019a). The Johnson Canyon Sanitary Landfill has a remaining capacity of approximately 6.9 million cubic yards and an estimated closure date in 2055 (CalRecycle 2019b). Thus, the combined remaining capacity of the existing active Monterey County landfills is approximately 55.4 million cubic yards. Additionally, as of February 2018, MRWMD's MRF began recovering up to 75 percent or more of recycled materials from commercial and residential trash, thus reducing the solid waste tons sent to the Monterey Peninsula Landfill.

Cumulative development, in addition to the Project, would generate solid waste during construction and operation that would be disposed of at landfills in the County. Cumulative projects would be required to adhere to applicable solid waste regulations, including the California Integrated Waste Management Act and related regulations, which would serve to continue to require reduction, recycling, and reuse to reduce the amount of solid waste sent to landfills. As described in Impact UTL-4 above, the Project would generate 1 percent of the annual 490,000 tons received at the Monterey Peninsula Landfill. In addition, the campus would continue to comply with applicable CalRecycle requirements. As per the CSU Sustainability Policy (see Table 4.14-5), CSUMB shall also seek to reduce solid waste diversion by 80 percent by 2020 and then continue toward zero waste by 2040. The Campus Sustainability Plan provides an interim objective of diverting 90 percent of waste from the landfill by 2030. Compliance with the CSU Sustainability Policy and the Campus Sustainability Plan overtime will increase CSUMB's diversion rate over existing conditions. Given the ample remaining landfill capacity in Monterey County, implementation of applicable solid waste regulations and policies, and the relatively limited amount of solid waste that would be generated by the Project, the contribution of the Project to cumulative impacts related to landfill capacity would not be cumulatively considerable, and cumulative impacts would be *less than significant*.

Energy

Potential cumulative impacts on energy would result if the Project, in combination with past, present, and future projects, would result in the wasteful or inefficient use of energy. This could result from development that would not incorporate sufficient building energy efficiency features, would not achieve building energy efficiency standards, or would result in the unnecessary use of energy during construction and/or operation.

All cumulative projects would be required to comply with regulatory measures such as CARB's Airborne Toxics Control Measure, which restricts heavy-duty diesel vehicle idling time to 5 minutes, minimizing construction fuel consumption. Additionally, petroleum use by cumulative

projects relative to construction activities is reasonably expected to continue to decline, as Tier 4 construction equipment, which is more fuel efficient, becomes more widely available. While construction activities related to the Project would consume petroleum-based fuels, consumption of such resources would be temporary and would cease upon the completion of construction. Regarding operations, the cumulative projects within the areas serviced by PG&E would be applicable to this analysis. Projects that include development of large buildings or other structures that would have the potential to consume energy in an inefficient manner would have the potential to contribute to a cumulative impact. However, as discussed in Impacts UTL-5 and UTL-6-, comprehensive state regulations are designed and would be implemented to increase and ensure energy efficiency.

As described in Impact UTL-5, the Project would not result in wasteful, inefficient, or unnecessary use of energy due to the implementation of water, energy and mobility PDFs and compliance with and exceedance of Title 24 building standards. For the same reason, the Project would not conflict with relevant energy-related plans, as discussed in the analysis for Impact UTL-6. Cumulative projects that include long-term energy demand, such as residential and/or non-residential developments, would be subject to CALGreen, which provides energy efficiency standards for commercial and residential buildings. CALGreen is used to implement increasingly stringent energy efficiency standards that would require the Project and the cumulative projects to minimize the wasteful and inefficient use of energy. In addition, cumulative projects would be required to meet or exceed the Title 24 building standards, further reducing the inefficient use of energy. Furthermore, various federal and state regulations, including the Low Carbon Fuel Standard, Pavley Clean Car Standards, and Low Emission Vehicle Program, would serve to reduce the transportation fuel demand of cumulative projects.

In consideration of cumulative energy use, the Project would not contribute to a wasteful or inefficient demand on energy resources or services, and would not conflict with energy-related plans. Therefore, the Project's contribution would not be cumulatively considerable and cumulative impacts related to the use of energy would be *less than significant.*

4.14.4 References

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