4.16 UTILITIES AND SERVICE SYSTEMS

This section describes existing conditions related to utilities and service systems, identifies associated regulatory requirements, evaluates potential project and cumulative impacts, and identifies mitigation measures for any significant or potentially significant impacts related to implementation of the Sustainability Policy and Regulatory Update of the County of Santa Cruz (County) General Plan and Local Coastal Program (LCP) and County Code (Sustainability Update or project). The analysis is based on review of utility service plans and other relevant documents, and discussions with public utility providers. See also Section 4.10, Hydrology and Water Quality, for discussions regarding surface and groundwater resources.

4.16.1 Environmental Setting

4.16.1.1 Public Potable Water Service Providers

Nearly all of Santa Cruz County's water supply is derived from local surface water (streams and reservoirs - 20% of supply) and groundwater (80% of supply), which are fed entirely by precipitation and do not receive any imported water. A small amount of recycled water is produced for irrigation (4%) (County of Santa Cruz Environmental Health 2020). In 2020, total water use in Santa Cruz County was estimated at approximately 51,590 acre-feet[1]/year (AFY) with non-agricultural water use accounting for approximately 51% of the total as summarized in Table 4.16-1 (County of Santa Cruz 2020).

Domestic supply within the region is provided by five large public agencies, four medium water systems, 115 small water systems, and some 8,000 individual wells (County of Santa Cruz 2020). Potable water supplies within the County's Urban Services Line (USL) and rural services line (RSL) are provided by six agencies as summarized in Table 4.16-2. An overview of each agency is provided below.

Unincorporated areas of the county not serviced by the larger water purveyors rely on private wells and stream diversions for their water supply. The County established the Drinking Water Program in Environmental Health to ensure that small water systems deliver a reliable and adequate supply of groundwater or surface water to their customers. As such, the County acts as the Local Primacy Agency for the California Water Resources Control Board Division of Drinking Water and oversees small public water systems.

In addition to groundwater wells, a small number of residences, agricultural parcels, and other development within the unincorporated regions of the county rely on beneficial water supplies through permitted surface water (stream, spring, or pond) diversions and potentially unpermitted or illegal stream diversions. It is unknown how much surface water diversions within the county account for private water supply each year. Of the 17 watersheds in county, most surface water supplies for municipal or beneficial use are diverted from the San Lorenzo River Watershed, North Coast streams (i.e., Waddell Creek, Scott Creek, San Vincent Creek, and Laguna Creek), and Corralitos Creek. Of the surface water supply streams in the county, only

[1] One acre-foot equals 325,851 gallons.

Soquel Creek has been adjudicated (County of Santa Cruz 2017). See Section 4.10, Hydrology and Water Quality, for further discussion of surface water and groundwater resources.

Table 4.16-1. Water Use in Santa Cruz County, 2020

Water Supplier	Connections	Population Served	Total Water Use (In AFY)	Water Source			Imported from Outside County
				Ground-water	Surface Water	Recycled Water	
City of Santa Cruz	24,561	97,417	8,375	5%	95%		
City of Watsonville[1]	14,855	65,966	7,201	100%			
Soquel Creek Water District	14,479	40,632	3,312	96.7%	3.3%		
San Lorenzo Valley Water District	7,900	23,700	1,953	53%	47%		
Scotts Valley Water District	3,807	10,709	1,339	87%		13%	
Central Water District	823	2,706	411	100%			
Big Basin Water Company	605	1,694	205	37%	63%		
Mount Hermon Association	494	2,850	155	100%			
Forest Lakes Mutual Water Company	326	1,076	40	100%			
Smaller Water Systems (5-199 connections)	2,616	7,691	1,552	91%	6%		3%
Individual Users*	8,000	21,000	2,400	95%	5%		
Pajaro Agriculture (SC County only)**			22,500	92%	1%	7%	
Mid- & North-County Agriculture*			2,400	90%	10%		
TOTALS	**78,466**	**275,441**	**51,593**	**78%**	**19%**	**3%**	**0.1%**
Summary by Water Source (AFY)				40,027	9,788	1,776	47
Summary of Non-Agricultural Use (AFY)			26,943	17,397	9,326	174	47

Notes: Data for smaller systems is from 2019
*Values are estimates |**Includes a small number of water systems; recycled water source is the City of Watsonville
Source: County of Santa Cruz 2020

Table 4.16-2. Water Agencies Serving Unincorporated Santa Cruz County

Agency	County Planning Areas Served
City of Santa Cruz	Live Oak, San Lorenzo Valley (along Graham Hill Road), Bonny Doon
City of Watsonville	Pajaro Valley, Salsipuedes, San Andreas
Central Water District	Aptos
San Lorenzo Valley Water District (SLVWD)	San Lorenzo Valley
Scotts Valley Water District (SVWD)	Carbonera
Soquel Creek Water District (SqCWD)	Soquel, La Selva Beach

City of Santa Cruz

The City of Santa Cruz provides drinking water to an area approximately 20 square miles in size, including the entire City of Santa Cruz, adjoining unincorporated areas of Santa Cruz County, a small part of the City of Capitola, and coastal agricultural lands north of the city and the University of California at Santa Cruz campus. The unincorporated areas served by the City of Santa Cruz include Live Oak, the area along Graham Hill Road that extends north of the city, and limited service along the coast north of the city, primarily along State Highway 1. The City's service on the coast north of the city consists of limited numbers

of connections that primarily derive from the City's agreements with landowners along its water pipelines. The City also provides approximately 12 million gallons per year of raw water for agricultural irrigation along the coast north of the City (City of Santa Cruz Water Department 2021b).

The City serves approximately 25,000 connections in an approximate 20-square mile area. The current population residing in the City's water service area is estimated as 96,186 people. Approximately two thirds of the total population, almost 64,000, live inside the city limits. It is estimated that almost 32,000 people, or about one third of the service area population, live outside the city limits. Within the city, about 9,100 people including students, faculty, staff, and their families reside on the University of California Santa Cruz campus. (City of Santa Cruz Water Department 2021a).

Water Supplies

The City's water system relies predominantly on local surface water supplies, which include the North Coast sources (Liddell Spring and Laguna, Majors, and Reggiardo Creeks), the San Lorenzo River (Felton Diversion, Tait Diversion, and Tait Wells), and Loch Lomond Reservoir. Together, these surface water sources represent approximately 95% of the City's total annual water production. The balance of the City's supply comes from groundwater, all of which is extracted from the Beltz Well system the Santa Cruz Mid-County Groundwater Basin (City of Santa Cruz 2021a). During the past decade, the North Coast sources represented 23% of the total water supply, the San Lorenzo River represented 56%, Loch Lomond Reservoir (Newell Creek) represented 15%, and the Beltz Well system contributed the remaining 5% (City of Santa Cruz Water Department 2021a).

The North Coast water sources consist of surface diversions from three coastal creeks and a natural spring located approximately 6 to 8 miles northwest of downtown Santa Cruz. The San Lorenzo River sources include the Tait Diversion adjacent to the Coast Pump Station on State Highway 9 near the city limits and the Felton Diversion, which is an inflatable dam and intake structure built in 1974, located about six miles upstream from the Tait Diversion. When the Felton Diversion is being operated, water is pumped through the Felton Booster Station to Loch Lomond Reservoir.

Loch Lomond Reservoir is located near the town of Ben Lomond in the Santa Cruz Mountains. The reservoir was constructed in 1960 and has a maximum capacity of 2,810 million gallons. In addition to providing surface water storage, the reservoir and surrounding watershed are used for public recreation purposes, including fishing, boating, hiking, and picnicking (swimming and wading are prohibited). In addition to the City, the San Lorenzo Valley Water District is entitled by contract to receive a portion of the water stored in Loch Lomond (City of Santa Cruz 2021a).

The water stored in Loch Lomond Reservoir to help meet dry-season water demand and provide back-up supply during winter storms when river diversions can be problematic due to turbidity issues. The City follows a variety of policies, procedures and legal restrictions in operating its water supply system, and the amount of water produced from each of the City surface water sources is controlled by different water rights and operational agreements. In general, the water supply system is managed to use available flowing sources to meet daily demands as much as possible. Groundwater and stored water from Loch Lomond

Reservoir are used primarily in the summer and fall months when flows in the coast and river sources decline (City of Santa Cruz 2021b).

Even though groundwater constitutes only up to about 5% of the City water supply on an annual basis, it is a crucial component of the water system for meeting peak season demands, maintaining pressure in the eastern portion of the distribution system, and for weathering periods of drought. The Beltz Well system consists of four production wells and two water treatment plants located in the eastern portion of the City water service area (City of Santa Cruz 2021a). The wells are in the Mid-County groundwater basin, and the City is a member agency of the Santa Cruz Mid-County Groundwater Agency (MGA); see Section 4.10, Hydrology and Water Quality, for discussion of this basin.

The City does not currently operate a recycled water system in its service area; however, the Pasatiempo Golf Course, located within the City's service area, now receives disinfected secondary effluent from the City of Scotts Valley that it treats to tertiary standards at the Pasatiempo Golf Course Tertiary Plant for use as recycled water golf course irrigation. This reduces the demand for potable water from the Santa Cruz water system that would otherwise be used for irrigation (City of Santa Cruz 2021a).

Water Demand and Future Supplies

The City of Santa Cruz recently updated its Urban Water Management Plan (UWMP) and reports that until the early 2000s, the general trend in the City of Santa Cruz water system use was one in which water use rose roughly in parallel with account and population growth over time, except during two major drought periods in the late 1970s and the early 1990s. Around 2000, this pattern changed and system demand began a long period of decline, accelerated by pricing changes, drought, economic downturn, and other factors. In 2015, after two years of water rationing, annual water use fell to a level of about 2.5 billion gallons, similar to the level experienced during the 1970s drought. In 2020, demand was still at a similar level as 2015, about 2.6 billion gallons, despite several years above long-term average rainfall from 2016 and 2020. While demand did rebound following droughts in the 1970s and 1980s, demand has not rebounded to pre-drought conditions following 2014, contrary to previous projections (City of Santa Cruz 2021a).

Current projections forecast that water use over the next 25 years, including projected population growth, will increase at a very slow rate to reach approximately 2.8 billion gallons per year by 2045 (City of Santa Cruz 2021a). With implementation of the City's water rights modifications and water supply augmentation strategies as summarized below, the City projects having sufficient water available in normal years and single dry years to serve anticipated demand throughout the 2020-2045 UWMP planning period (City of Santa Cruz 2021a).

However, the City's 2020 UWMP predicts that under multi-year drought conditions in the near term (2025) with proposed water rights modifications but before implementation of the planned aquifer storage and recovery (ASR) facilities and planned infrastructure projects, available supplies would meet projected demand in years one through four of the multi-year drought scenario, but would fall short of demand by 27% in year five, although such a shortage could occur sooner and persist longer through a multiple dry year period. Under multi-year drought conditions after 2030, with implementation of the ASR and planned

infrastructure projects, available supplies would meet projected demand in years one through four of the mutli-year drought scenario, and the year-five shortage is anticipated to be substantially reduced with projected shortages no larger than a negligible two percent or five percent with consideration of climate change parameters in dry years (City of Santa Cruz 2021a).

The City of Santa Cruz is vulnerable to water shortages during multiple dry year periods primarily due to the limitation in when and how much water is available to meet system demand, exacerbated by a lack of storage within the system. To address these limitations, the City is actively planning and implementing a number of projects and major investments in the water system designed to secure future water supply reliability. Since 2015, the City of Santa Cruz has been pursuing a Water Supply Augmentation Strategy (WSAS) developed by the Water Supply Advisory Committee, a citizen committee, which was formed in 2014 by Santa Cruz City Council with the charge to analyze potential solutions to deliver a safe, adequate, reliable, affordable and environmentally sustainable water supply for the City of Santa Cruz. The WSAS portfolio elements, which are being pursued on a concurrent timeline, and current progress are summarized below (City of Santa Cruz 2021a).

- **Element 0: Demand Management.** Demand Management, or conservation, is not considered a water supply for the purposes of the UWMP, but is addressed in the UWMP 2020.
- **Element 1: Transfers and Exchanges.** The City has been piloting water transfers to the Soquel Creek Water District since 2018, as water supplies are available, under a cooperative piloting agreement that extends through 2025. Potential water transfers and exchanges with local water districts in addition to the Soquel Creek Water District, include Central Water District, Scotts Valley Water District, and San Lorenzo Valley Water District, which would be facilitated by the City's proposed water rights modifications to place of use as briefly summarized below.
- **Element 2: Aquifer Storage and Recovery (ASR).** The City has been evaluating the feasibility of ASR in both the Santa Cruz Mid-County and in the Santa Margarita Groundwater Basins, with current work primarily focused on the portion of Santa Cruz Mid-County Basin within the City of Santa Cruz service area. Pilot testing has been conducted at the existing Beltz 8 and Beltz 12 well facilities to better understand potential water quality and operational constraints. Implementation of ASR also may occur in the future in the Santa Margarita Groundwater Basin.
- **Element 3: Recycled Water or Desalination.** Following completion of the 2017 Desalination Feasibility Update Review Report, further study of recycled water has been prioritized over study of seawater desalination. The City is continuing to examine the use of recycled water through commissioned engineering studies. The 2018 Recycled Water Facilities Planning Study recommendation includes two projects that would provide non-potable reuse in the city. The City is also committed to exploring other reuse opportunities, including: coordination with Soquel Creek Water District's Pure Water Soquel project, exploring groundwater replenishment and reuse at Beltz Well system, and exploring groundwater replenishment and reuse in Santa Margarita Groundwater Basin (City of Santa Cruz 2021a).

The Santa Cruz Water Rights Project supports the implementation of the WSAS and involves the modification of the City's existing water rights to increase the flexibility of the water system by improving

the City's ability to utilize surface water within existing allocations. This project also incorporates into the City's water rights bypass flow requirements for all of the City's surface water sources which are protective of local anadromous fisheries (Agreed Flows). The primary components of the Santa Cruz Water Rights Project include:

- Water rights modifications related to place of use, method of diversion, points of diversion and re-diversion, underground storage and purpose of use, extension of time, and stream bypass requirements for fish habitats;
- Water supply augmentation components, including new aquifer storage and recovery (ASR) facilities at unidentified locations, ASR facilities at the existing Beltz Well facilities, water transfers and exchanges and intertie improvements; and
- Surface water diversion improvements, including the Felton Diversion fish passage improvements and the Tait Diversion and Coast Pump Station improvements (City of Santa Cruz 2021a).

The City expects that the proposed water rights modifications will be implemented by 2025, including implementation of the Agreed Flows, which are protective of local anadromous fisheries. The City also anticipates completion of the following components of the WSAS and planned infrastructure projects by 2030:

- ASR in the Santa Cruz Mid-County Groundwater Basin and/or the Santa Margarita Groundwater Basin, sized for up to 4.5 million gallons per day (mgd) injection and 8.0 mgd extraction,
- Improvements to the Tait Diversion,
- Facility improvements at Graham Hill Water Treatment Plant (GHWTP), and
- Replacement of major transmission pipelines on the North Coast and the Newell Creek Pipeline (City of Santa Cruz 2021a).

As described above, the City of Santa Cruz water system reliability is vulnerable to multiple consecutive dry years in the near term due to the high reliance on surface water sources and limited storage within the system. To address these reliability challenges, the City is pursuing the WSAS summarized above. In addition, as required by California Water Code and to manage risks due to water supply shortages that can be expected in the future, the 2020 UWMP includes a Water Shortage Contingency Plan that addresses how the City's water system would be managed during a water shortage emergency that arises as a result of drought, which could result in required customer water use reductions (City of Santa Cruz 2021a).

Planned Infrastructure Improvements

The City's major water infrastructure facilities include three water treatment plants, including the Graham Hill Water Treatment Plants and two groundwater treatment plants related to the Beltz well system; 4 raw water pump stations, 10 distribution tanks with a total maximum capacity of 21.2 million gallons of treated water storage; 7 surface water diversions; 7 groundwater production wells; and approximately 300 miles of treated and raw water pipelines interconnecting the City's system. Key components of the City water system, including the North Coast system, the Newell Creek Dam inlet/outlet pipe, and water treatment

facilities, have reached the end of their useful life and are overdue for renewal and replacement. The City's Capital Improvement Program (CIP) for water infrastructure includes plans and funding for numerous capital improvements projects, including rehabilitation or replacement projects, upgrades and improvement projects, water supply augmentation components, and water main replacements (City of Santa Cruz 2021b).

Major planned improvement projects that will help support implementation of the WSAS and support water supply reliability. The City's CIP includes upgrades to the City's Graham Hill Water Treatment Plant are critical to the implementation of the WSAS to allow treatment of higher turbidity source water that otherwise would need to be bypassed during high flow periods such as during and after storm events. Recent and ongoing projects include major maintenance repair project. The City also is developing the Facilities Improvement Project, which is a comprehensive evaluation of the facility that identifies the most cost-effective improvements to meet water treatment objectives and improve the overall reliability and resiliency of the plant. The City also is planning improvements to raw water conveyance by upgrades to both the Newell Creek Pipeline and segments of the North Coast system. These projects will improve reliability and reduce hydraulic constraints to improve delivery of raw water to the Graham Hill Water Treatment Plant (City of Santa Cruz 2021a).

City of Watsonville

The City of Watsonville provides potable water service to residential, commercial, industrial, and institutional customers in the city of Watsonville and parts of unincorporated areas of Santa Cruz County. The unincorporated areas served by the City include portions of the Pajaro Valley, Salsipuedes, and San Andreas planning (Pajaro Dunes) areas from Corralitos on the north to Pajaro Dunes on the south. This City's water system serves a population of 65,231 customers within nine hydraulic pressure zones. The City's regional water system consists of 14 wells, eight reservoirs and water storage facilities, the Corralitos Filtration Plant (CFP water treatment plant, and 190 miles of pipelines (City of Watsonville 2021). Approximately 13,000 of the customers served by Watsonville reside of the Watsonville (Local Agency Formation Commission of Santa Cruz County [LAFCO] 2018).

Water Supplies

The City's water supplies include groundwater and surface water sources. Depending on the year, 90–100% of water supplied by the City is from groundwater sources, while surface water accounts for the remainder. The City pumps groundwater from the Pajaro Valley Groundwater Subbasin (Subbasin); City use accounts for about 14% of the total annual pumping from the Subbasin (City of Watsonville 2021). Fourteen groundwater wells provided the City with a range of 6,316 to 7,102 AFY of water over the last 5 years (City of Watsonville 2021). All City water is treated at each well site and meets or exceeds state and federal drinking water standards.

The Subbasin is designated as "critically overdrafted"; groundwater overdraft occurs when groundwater use exceeds the amount of recharge into an aquifer, which leads to a decline in groundwater levels. This, in turn, has allowed seawater intrusion. Seawater intrusion into the groundwater increases the salinity of the groundwater. Groundwater resources in the Subbasin have been managed by the Pajaro Valley Water

Management Agency (PV Water) since the agency's formation in 1984. PV Water has completed multiple water supply projects to help reduce overdraft, lessen seawater intrusion, and improve and protect water quality within the entire basin. As indicated below, the City works collaboratively with PV Water on a number of projects, including the Watsonville Area Recycled Water Treatment Facility (RWF) (City of Watsonville 2021). See Section 4.10, Hydrology and Water Quality, for discussion of this groundwater basin.

The City's wastewater treatment facility provides recycled water for agricultural irrigation. The City and PV Water jointly developed the Watsonville Area RWF. The City operates the RWF, and PV Water distributes the recycled water for agricultural uses (City of Watsonville 2021). The has a design capacity of up to 4,000 AFY. This recycled water is intended for agricultural purposes only. This facility is not connected to the City's distribution system; instead, PV Water manages the distribution of recycled water to agricultural users in the Pajaro Valley. The RWF provides recycled water for crop irrigation throughout the coastal areas of the South Santa Cruz and North Monterey counties. By treating wastewater and making it available to the local agricultural industry, the RWF protects groundwater by providing an alternative to well extraction, supports the local agricultural industry, and reduces wastewater discharges into the Monterey Bay National Marine Sanctuary (City of Watsonville 2021).

During years of average or above average rainfall, the City utilizes a combination of surface water and groundwater supply sources. The surface water sources are Corralitos and Browns Creeks, although the City is not always able to withdraw water from the creeks. The City has pre-1914 water rights on these two creeks, which are located north of the City limits. The surface water diversions flow to the CFP and are treated via slow sand filtration and disinfection. When operational, the CFP treats up to 900 AFY, although it has a maximum design capacity of 2 mgd. Its operation is limited by the amount of surface water available in the Corralitos and Browns creeks (City of Watsonville 2021).

Water Demand and Future Supplies

Existing water demand in the City's service area is 7,102 AFY. The City's 2020 residential water use averaged 87 gallons per capita per day (gpcd), which is less than the City's targeted regional 117 gpcd. Water demand in the City's service area is projected to increase to 8,255 AFY in the year 2040 and to 8,384 AFY in the year 2045 (City of Watsonville 2021). The City's 2020 UWMP reports that residents have been effective in reducing residential water use. In developing future projections, the City's 2020 UWMP assumed that there may be only minor additional decreases in indoor water usage per household; however, the effects of climate change (e.g., drought occurrences and temperature changes) would increase outdoor water usage over time, resulting in an assumed net-zero change for residential water use projections (City of Watsonville 2021).

As indicated above, the City's wells provided the city with a range of 6,316 to 7,102 AFY of water over the last five years. The City's wells are capable of providing 21,000 AFY of water (City of Watsonville 2021) The City intends to continue pumping groundwater from its existing well sources. It is likely that additional sources will be explored for future use to replace aging wells and to provide sufficient redundancy. However, at this time, the City's wells are capable of providing for both current and projected water demands through the planning period of 2045 (City of Watsonville 2021). City wells are not currently run at full capacity and can supply additional water when needed. The City is able to supply its customers with adequate water

through several years of drought. However, during drought conditions, the City also implements stricter water conservation measures (City of Watsonville 2021). The City's 2020 UWMP indicates that, new wells can be placed within the Pajaro Valley and would be located hydraulically upstream of the seawater intrusion areas in order to reduce impacts on the groundwater basin. The City is currently drilling a new well and intends to continue to drill wells over time, but only to maintain and replace aging wells, not to increase water supply (City of Watsonville 2021).

Climate change is projected to increase the severity and frequency of drought events, and surface water sources are more vulnerable to drought events. According to the City's 2020 UWMP, because the City can fully rely on groundwater, it is somewhat less susceptible to drought impacts. However, the City remains vulnerable to a particularly severe and prolonged drought, as surface waters recharge aquifers. Drought events may also result in groundwater overdraft, which exacerbates saltwater intrusion. While seawater intrusion is not currently an issue for the City, it continues to affect others in the Pajaro Valley, and could become a concern for the City's future groundwater supply (City of Watsonville 2021).

Groundwater resources in the Subbasin have been managed by PV Water, which is a state-chartered water management district formed to manage existing and supplemental water supplies in order to prevent further increase in, and to accomplish continuing reduction of, long-term overdraft in the Subbasin. PV Water also works to provide and ensure sufficient water supplies for present and future anticipated needs within its boundaries, generally the greater coastal Pajaro Valley. The 2014 Basin Management Plan Update (2014 BMP) screened 44 programs and projects of which seven were selected for inclusion in a BMP portfolio that would eliminate overdraft and reduce the rate of seawater intrusion by 90% (City of Watsonville 2021). In December 2016, PV Water submitted the 2014 BMP as an Alternative to a Groundwater Sustainability Plan to comply with California's Sustainable Groundwater Management Act. PV Water is currently implementing the projects and programs outlined in the 2014 BMP and is also performing the first five-year update of the Alternative to a Groundwater Sustainability Plan (GSP) as required under SGMA (City of Watsonville 2021).

The State of California has set a Maximum Contaminant Level (MCL) for total chromium of 50 parts per billion (ppb). The City meets this MCL. In 2014, the State proposed a reduced level of 10 ppb for hexavalent chromium, also known as chromium-6. Six of the City's wells have chromium-6 levels slightly above 10 ppb with an average of 8.5 ppb among all wells. The City engaged with consultants and engineers to identify the most appropriate treatment technology for the chromium-6 impacted wells. In 2017, the Superior Court of Sacramento County issued a judgment invalidating the State's chromium-6 MCL for drinking water, ruling that the State failed to comply with the Safe Drinking Water Act's requirement to consider economic feasibility. The State is in the process of developing a new MCL. The City is prepared to ensure that each of its impacted sources meets the required treatment levels within the compliance period (City of Watsonville 2021).

Central Water District

CWD covers a service area of approximately five square miles east of the unincorporated area of Aptos, between the SqCWD and City of Watsonville. With an estimated population of 2,700 to 3000, CWD

produced 126.7 million gallons of water and customers consumed 123.3 million gallons in fiscal year 2017/2018. Total production and associated groundwater pumping have declined since 2008 (CWD 2021).

The CWD distribution system consists of approximately 23.2 miles of 2- to 10-inch-diameter pipe. The distribution system is separated into five pressure zones, each supplied by pressure-reducing valves or by a combination of booster pumps and storage tanks. There are three wells that provide CWD's water supply and an additional three wells that are currently inactive (CWD 2021).

CWD's water supply source is also drawn exclusively from the same two groundwater aquifers in the overdrafted Santa Cruz Mid-County Groundwater Basin, the Purisima and the Aromas. CWD shares these two aquifers with other groundwater users and is a member of the Santa Cruz Mid-County Groundwater Sustainability Agency. The CWD has monitored groundwater resources and is currently designated to manage the groundwater resources within its boundaries. There are three wells that provide CWD's water supply and an additional three wells that are currently inactive (CWD 2020). The District has an adequate water supply and is addressing infrastructure repairs and upgrades through its CIP (LAFCO 2017).

San Lorenzo Valley Water District

The SLVWD was established in 1941 and served approximately 23,000 people in its service area in 2020 through 7,908 metered connections. SLVWD serves a combined area of approximately 98 square miles (62,749 acres). SLVWD service area boundaries include the unincorporated communities of Boulder Creek, Brookdale, Ben Lomond, Lompico, Manana Woods subdivision, the town of Felton and southwest portions of the City of Scotts Valley and adjacent unincorporated areas (WSC and Montgomery and Associates 2021).

The SLVWD maintains approximately 190 miles of pipeline and pump stations, storage tanks and water treatment facilities. SLVWD has identified and prioritized its infrastructure needs in its CIP; the principal needs are well replacements, storage tanks, distribution system upgrades, and interties (LAFCO 2020).

Water Supplies

SLVWD owns, operates, and maintains two separately managed water systems, which are the North/South System (or San Lorenzo Valley System) and the Felton System. The North/South service area includes the unincorporated communities of Boulder Creek, Brookdale, Ben Lomond, Mañana Woods, Lompico and portions of the City of Scotts Valley and adjacent unincorporated neighborhoods. The Felton Service Area was acquired by SLVWD from California American Water (CAW or Cal-Am) in September 2008 and includes the town of Felton and adjacent unincorporated areas (WSC and Montgomery & Associates 2021) .

SLVWD relies on surface water and groundwater supplies from the Santa Margarita Groundwater Basin. SLVWD does not supply recycled water. SLVWD practices conjunctive use to provide a reliable water supply to their customers. Conjunctive use refers to the optimized, sustainable use of multiple sources of water throughout repeated climatic cycles. SLVWD relies on groundwater and surface water diversions to meet all customer needs. Production from stream diversions occurs whenever possible which allows groundwater

to remain stored for use during dry periods. Recycled water distributed by SVWD to one multi-residential customer in SLVWD's service area helps offset potable water demands; however, recycled water does not provide a substantial water supply for SLVWD (WCS and Montgomery & Associates 2021).

The SLVWD's currently active water supplies consist of nine active stream diversions, seven active groundwater wells, and one active spring.[2] Groundwater from the Santa Margarita Groundwater Basin (SMGB) provides approximately half of the potable water for SLVWD customers.

In 2020, SLVWD lost a majority of its northern intake and raw waterline infrastructure to the CZU Complex Fire. Reconstruction of the approximately 7 miles of raw water line and four diversion intake structures are planned for reconstruction within the next 2-3 years. In the meantime, SLVWD is managing its remaining surface water diversions and groundwater well sites conjunctively. This involves moving water from SLVWD online systems to the damaged offline parts of the northern system. During the period of construction, SLVWD believes it will use 48% groundwater well supply compared to its annual average of 46% groundwater and 54% surface water supply (WCS and Montgomery & Associates 2021).

In addition to the City of Santa Cruz, SLVWD is entitled by contract to receive a 313 AFY of raw water stored in Loch Lomond Reservoir. Water supplies could include a potential water supply from the City in lieu of direct diversion from Loch Lomond Reservoir. An intertie connecting SLVWD's service area with SVWD's service area was completed in 2016. It was permitted as an emergency intertie and is not used for regular water transfers between the Districts (WCS and Montgomery & Associates 2021). An emergency intertie connecting SLVWD's Felton system to the North/South system was also completed in 2016. Although only permitted for emergency use at this time, it is anticipated that the interties will eventually be used to expand capabilities for conjunctive use.

Water Demand and Future Supplies

SLVWD's water demand in 2020 was approximately 2,049 AFY and projected demand in 2045 is estimated at approximately 2,277 AFY (WSC and Montgomery & Associates 2021). The SLVWD's UWMP indicates that SLVWD's water supply is adequate to meet both current and projected water demands during average, single-dry-year, and five-year-consecutive-dry-year conditions, and SLVWD expects to continue to evaluate options to diversify supply and promote continued water conservation to ensure reliability for the SMGB and stream diversions (WSC and Montgomery & Associates 2021). It is anticipated that groundwater will be used in dry years in coordination with provisions of the pending Santa Margarita Groundwater Sustainability Plan and SLVWD's Water Supply Contingency Plan. The combined effects of drought, increased demand, modified water rights, and/or climate change could necessitate increased levels of conservation and/or further infrastructure improvements. In addition, according to the 2020 UWMP, the long-term resiliency and reliability of the supply may be bolstered by expanding conjunctive use opportunities and the introduction of supplemental supply, including potential projects listed in the Santa Margarita Groundwater Agency (SMGWA) public review draft GSP, which are intended to strengthen local

[2] SLVWD's diversions under its water-right Permit No. 20123 are contingent on the existence of certain minimum streamflows existing below the City's Felton Diversion through the September-May period (City of Santa Cruz 2021b).

groundwater supplies and help achieve groundwater sustainability (WSC and Montgomery & Associates 2021).

SLVWD is collaborating with the County of Santa Cruz Water Resources Division to develop a San Lorenzo Watershed Conjunctive Use and Baseflow Enhancement Plan (Plan) to improve water resource efficiency. The Plan will provide guidance for diverting excess winter surface flow in the San Lorenzo River Watershed to meet water supply needs, resting groundwater wells, and providing active, passive, and/or in-lieu groundwater recharge. During the dry season, the augmented groundwater will be used to meet demands and reduce stream diversions. SLVWD anticipates that conjunctive use of surface and groundwater will lead to increased stream baseflow during summer and other critical times benefitting fisheries, and will also contribute to increased storage, recovery, and sustainable management of the SMGB (WSC and Montgomery & Associates 2021). SLVWD released a Draft Initial Study/Mitigated Negative Declaration (IS/MND) and Notice of Intent to Adopt the MND for this project in July 2021 (SLVWD 2021). The IS/MND indicates that the plan includes four conjunctive use scenarios that would allow more flexibility to divert surface flows during the winter and spring (peak flow season) and/or provide in-lieu groundwater recharge to improve surface flows during the summer (low flow season); three of the four scenarios are evaluated in the IS/MND (SLVWD 2021).

As a result of the CZU Lighting Complex Fire in August 2020, SLVWD facilities sustained significant facility and operational capacity losses. According to a preliminary damage assessment prepared for SLVWD, more than 50% of the structures assessed were destroyed or majorly damaged, while other facilities have heat damage, smoke, or possible contamination (SLVWD 2020). The water system's primary damage includes intakes and raw water pipelines (Peavine, Foreman, Clear Creek 1-3, Sweetwater); the Bennett Spring Overflow, tanks, piping and controls; and water storage (Lyon and Little Lyon tanks are contaminated with soot and other fire byproducts). The Big Steel Water Tanks and the Water Treatment Plant were spared from significant damage but will require some minor repair before resuming full operation. SLVWD is currently working on emergency repairs to bring the water system back to functioning condition. At the time of the assessment in September 2020, service had been restored to all customers, although 419 customers were still affected by a Do Not Drink/Do Not Boil order (SLVWD 2020).

The San Lorenzo River watershed also sustained extensive damage during the fire, including destruction of trees and vegetation with indirect damage due to contamination of surface waters by ash and debris, increased erosion potential due to destruction of vegetation on slopes, and potential future damage caused by toppling of damaged trees. Surface waters within the fire zone have been contaminated directly by ash and debris (SLVWD 2020).

Scotts Valley Water District

The SVWD was established in 1961 and served approximately 10,600 people in its service area in 2020. SVWD service area boundaries include most of the City of Scotts Valley as well as some unincorporated areas north of the City. It is approximately five miles from north to south and one mile east to west with an approximate area of 4.8 square miles (WSC and Montgomery & Associates 2021).

Water Supplies

Groundwater from the Santa Margarita Groundwater Basin is the source of potable water supply for SVWD. SVWD overlies a large portion of the Santa Margarita Groundwater Basin; see Section 4.10, Hydrology and Water Quality, for further discussion of this basin. SVWD shares the basin with neighboring SLVWD, the Mount Hermon Association, 11 small water systems and approximately 800 private well users (WSC and Montgomery & Associates 2021). Recycled water, supplied to SVWD by the City of Scotts Valley Water Reclamation Facility, is used primarily for landscape irrigation (WSC and Montgomery & Associates 2021).

The SMGB principal aquifers Include Santa Margarita Sandstone, Monterey Formation, Lompico Sandstone, and Butano Formation aquifers. The Santa Margarita and Lompico aquifers have long been recognized as principal water supply aquifers. The Lompico aquifer is currently the principal groundwater producing unit in the Scotts Valley area. SVWD produces groundwater from five active wells. SVWD wells primarily extract groundwater from the Lompico aquifer with well #3B and Orchard well also extracting water from the Butano aquifer (WSC and Montgomery & Associates 2021).

SVWD operates wells that vary in depth from 450 feet to 1,750 feet. Pumped water is filtered through a pressurized system of sand, gravel, and anthracite to remove iron, manganese, and hydrogen sulfide from the water. Chemicals are introduced before and after filtration to oxidize the iron and disinfect the water. This treatment enables SVWD to meet Federal and State drinking water standards. There are three treatment plants that SVWD uses to produce potable water for customers: Orchard Run Water Treatment Plant treats water from Orchard well and well 3B that has a capacity of 1,100 gallons per minute (gpm); El Pueblo Water Treatment Plant treats water from wells 11A and 11B and has a capacity of 1,000 gpm; and Well 10 Treatment Plant treats water from well 10A and has a capacity of 800 gpm (WSC and Montgomery & Associates 2021).

As indicated above, an intertie connecting SLVWD's service area with SVWD's service area was completed in 2016. It was permitted as an emergency intertie and is not used for regular water transfers between the Districts (WSC and Montgomery & Associates 2021).

Water Demand and Future Supplies

SVWD's water demand is projected to increase from approximately 1,135 AFY in 2020 to 1,144 SFY in 2045 (WSC and Montgomery & Associates 2021). Groundwater production had declined from 2002 through 2015 due to drought conditions, use of recycled water, and implementation of conservation programs and system demand has remained relatively stable since that time. Since 2004 SVWD has actively worked on reducing the system demand through introduction of a recycled water supply, implementation of water use efficiency programs, and minimizing water waste. use efficiency (WSC and Montgomery & Associates 2021).

SVWD has adequate supplies available to meet projected demands under normal, single-dry-year, and five-year-consecutive-dry-year conditions, and continues to implement water use efficiency measures, recycled water use, and actively explores opportunities for regional projects and collaborative activities to increase supply resiliency (WSC and Montgomery & Associates 2021). SVWD anticipates meeting demands under

all water year scenarios, continues to evaluate options to diversify supply, encourages use of recycled water, and promotes water use efficiency measures. Average year supply is assumed to equal baseline pumping developed under the GSP groundwater model simulated conditions. Pumping groundwater in excess of recharge in a single year or multiple years may not show up immediately as a decline in groundwater level but has detrimental impacts over the long-term. Therefore, it is assumed that pumping to meet demand will vary annually; however, the groundwater supply will balance out over the long-term (WSC and Montgomery & Associates 2021).

The decline of groundwater levels in many parts of the Santa Margarita Groundwater Basin occurred during 1985-2004 representing a loss in groundwater storage in the basin by an estimated 28,000 acre-feet. SVWD began actively managing groundwater in the area in the early 1980s, developed the Water Resources Management Plan in 1983 to monitor and manage water resources, and adopted a Groundwater Management Plan in 1994. Along with SLVWD and other agencies, SVWD also participated in the Santa Margarita Groundwater Basin Advisory Committee that was actively involved in the cooperative groundwater management of the basin until its dissolution and substitution with SMGWA in 2017. With conservation and other management efforts by local water agencies, the total pumping from the basin has decreased by 45% since 1997 (SVWD 2021).

Soquel Creek Water District

The SqCWD provides potable water service and groundwater resource management within its service area and serves a population of approximately 40,000 (ESA 2018). The SqCWD's service area includes portions of the City of Capitola and unincorporated Santa Cruz County, including the communities of Aptos, La Selva Beach, Opal Cliffs, Rio Del Mar, Seascape, Seacliff Beach, and Soquel. In 2020, 82% of the total water deliveries were to residential customers (62% to single-family accounts and 20% to multi-family accounts). SqCWD also serves non-residential uses, including commercial, irrigation, government, fire protection, and SqCWD accounts. SqCWD promotes conservation year-round, regardless of any drought curtailments (WSC 2021).

Water Supplies

SqCWD produces its supply from the Santa Cruz Mid-County Groundwater Basin (Mid-County Basin). The Mid-County Basin is in a state of critical overdraft with seawater intrusion occurring in coastal monitoring wells. Seawater intrusion occurs when seawater moves into freshwater aquifers due to a drop in hydraulic pressure. Hydraulic pressure drops are caused by lowering groundwater elevations caused by over-pumping (WSC 2021). The SqCWD water supply system consists of 18 production wells (15 of which are currently active), approximately 166 miles of pipeline, and 18 water storage tanks (ESA 2018).

SqCWD pumps groundwater from aquifers located within two geologic formations that underlie the SqCWD service area. In 2020, the Purisima Formation provided about 62% of total production and the Aromas Red Sands aquifer provided the remaining 38%. In 2016 through 2020, SqCWD pumped an average of 3,300 AFY from these sources. While SqCWD is currently 100% reliant on its groundwater supply, its distribution system includes interties with Central Water District (CWD), the City of Santa Cruz Water Department, Pure Source Water Inc. (Pure Source), Trout Gulch Mutual Water Company (Trout Gulch), and Cabrillo College.

There are three interties with SqCWD including one bi-directional intertie at SqCWD's O'Neill Ranch Well that allows for limited water exchanges, and two uni-directional (to SqCWD) interties that provide SqCWD with greater reliability in the event of an emergency. There are two uni-directional (to SqCWD) interties with CWD that also provide SqCWD with greater reliability during an emergency. The remaining two interties with Pure Source and Trout Gulch are uni-directional (to Pure Source and Trout Gulch) and are generally only used by these suppliers when they have a system emergency (WSC 2021).

Water Demand and Future Supplies

Total SqCWD water demand in 2020 was approximately 3,347 AFY and is projected to be approximately 3,655 AFY in 2045 (WSC 2021). Projected demands are expected to decrease from a maximum of 3,866 AFY in 2025 to a low of 3,655 AFY in 2040 (WSC 2021). SqCWD expects to meet demands under all water year scenarios (normal, single dry, and five-year consecutive droughts), implement Pure Water Soquel, which is described below, pursue further evaluation of supplemental supply options to diversify supply, and promote continued water conservation, to ensure reliability for the Mid-County Basin throughout the future (WSC 2021). Average normal year supply is 3,800 AFY based on 1,500 AFY of recharge from Pure Water Soquel and 2,300 AFY of net average pumping, which was based on assumed demand hydraulically modeled for the GSP. Demands during drought are expected to change in single dry and multiple dry years at the same percent of average supply identified for each year type (WSC 2021).

In 2018, SqCWD approved Pure Water Soquel, which is a groundwater replenishment and seawater intrusion prevention project that uses advanced water purification to purify recycled water for replenishing the groundwater basin. Pure Water Soquel is included in the GSP and is necessary for the basin to reach sustainability. The project is designed to produce 1.3 mgd or approximately 1,500 AFY of purified water, which is the estimated volume required to offset the portion of the Basin's groundwater overdraft attributable to SqCWD groundwater pumping (ESA 2018). In addition, the conveyance infrastructure for Pure Water Soquel has been designed to accommodate up to 3,000 AFY and may therefore be expanded to increase groundwater recharge (WSC 2021). The facility is also being designed to enable future expansion if needed. The project is under construction and is expected to be operational in 2023. The Pure Water Soquel with the goal of coming online in late 2022/2023, which would provide up to approximately 1,500 AFY. SqCWD could pump an annual average of 3,800 AFY to fully restore the Mid-County Basin (WSC 2021). Additionally, SqCWD is currently improving its existing groundwater well infrastructure and redistributing pumping inland through implementation of the Well Master Plan (WSC 2021).

In terms of surface water transfers, as previously described, the City of Santa Cruz and SqCWD have been investigating the feasibility of transferring excess City surface water to SqCWD for the purpose of passively recharging the groundwater basin. Pursuant to a 2016 agreement that was extended in February and March 2021, a pilot program was established to sell excess winter water supply from the City's GHWTP to the SqCWD, and pilot transfers were provided to a limited portion of the SqCWD service area during the 2018/2019 and 2019/2020 winter and spring wet season; the extension of the agreement allows for another five-year term through water year 2026 (May 1, 2026) (City of Santa Cruz 2021b).

According to the District's 2020 UWMP, SqCWD actively manages water resources using a combination of management tools that were first established in the 1996 Soquel-Aptos Area Groundwater Management

Plan. The Community Water Plan (CWP), first prepared in 2015 with community input is the District's roadmap for meeting the goal of a sustainable groundwater basin by 2040 (WSC 2021). Components of the CWP include implementation of water conservation program, a water management program, including SqCWD-only management efforts such as the Well Master Plan to regional efforts including a monitoring well network program, groundwater modeling, seawater intrusion studies, and partnerships with other users of the basin, and completing the Pure Water Soquel Project for a supplemental water source (WSC 2021).

As indicated above, the City of Santa Cruz, SqCWD, and Central Water District are member agencies of the MGA, which is responsible for implementing the mandates set forth in the 2014 Sustainable Groundwater Management Act in the Santa Cruz Mid-County Basin (Basin). The MGA adopted a GSP that was approved by the California Department of Water Resources (DWR) in June 2021. The GSP includes projects and management actions that are being implemented to restore protective water levels and prevent further seawater intrusion from moving further inland and contaminating the groundwater basin.

As the Santa Cruz Mid-County Groundwater Basin is in a state of critical overdraft, SqCWD has been actively pursuing supplemental supply options that would allow for reductions in groundwater pumping to facilitate basin recovery (WSC 2021). (See Section 4.10, Hydrology and Water Quality, for additional information on the Santa Cruz Mid-County Groundwater Basin.) Based on current hydrologic evaluations and desire to achieve and maintain groundwater sustainability, SqCWD plans to limit its net average groundwater pumping to 2,300 AFY to contribute to basin recovery based on the proportion of its basin consumptive use. To meet the targeted pumping, SqCWD has identified that approximately 1,500 AFY of supplemental water source(s) would be required and the 2020 UWMP indicates that additional supplemental supplies will be used as appropriate, but Pure Water Soquel will reduce overdraft conditions and will protect against and aid in preventing further seawater intrusion of the basin (WSC 2021).

4.16.1.2 Wastewater

The collection, conveyance, and treatment of wastewater within the unincorporated areas of the county are managed by a number of agencies. Wastewater services within Santa Cruz County are provided by three cities, four special districts, and six County Service Areas (CSAs). Facilities range from individual or small community onsite wastewater treatment systems (OWTS, also known as septic systems) to local wastewater collection systems and regional treatment plants. Wastewater infrastructure includes septic systems, collection and sewer main lines, lift stations, treatment plants and recycled water treatment systems. Wastewater systems are closely regulated both for health and environmental concerns. The Regional Water Quality Control Board (RWQCB) regulates operations and discharges from sewage systems, while the County regulates individual and small OWTS with flows up to 10,000 gallons per day (LAFCO 2019).

Sanitary sewer service and wastewater treatment providers that serve unincorporated county areas are summarized in Table 4.16-3. An overview of each agency is provided below. It is noted that sewer service in the Scotts Valley area is provided by the City, and the City produces recycled water for SVWD to be distributed primarily for irrigation use and generally within city boundaries.

Table 4.16-3. Sanitary Sewer and Wastewater Treatment Providers Serving Unincorporated Santa Cruz County

Agency	Service Provided	County Planning Areas Served
City of Santa Cruz	Wastewater Treatment Facility	Aptos, Live Oak, Soquel, San Lorenzo Valley (along Graham Hill Road)
City of Watsonville	Wastewater Treatment Facility	Pajaro Valley, Salsipuedes, San Andreas
City of Scotts Valley	Water Reclamation Facility	Carbonera
Davenport County Sanitation District	Collection, Treatment, and Recycled Water	North Coast
Freedom County Sanitation District	Collection	Pajaro Valley
Santa Cruz County Sanitation District	Collection	Aptos, Live Oak, Soquel
Salsipuedes Sanitary District	Collection	Pajaro Valley
County Community Service Areas ▪ CSA 2-Place de Mer ▪ CSA 5-Sand Dollar Beach and Canon del Sol ▪ CSA 7-Boulder Creek ▪ CSA 10-Rolling Woods ▪ CSA 20-Trestle Beach	 Septic Package Treatment Collection and Treatment Collection Collection and Treatment	 La Selva San Andreas San Lorenzo Valley San Lorenzo Valley La Selva
SLVWD: Bear Creek Estates	Septic and Collection System	San Lorenzo Valley

Source: LAFCO 2019.

County of Santa Cruz

The Sanitation Division of the County Community Development & Infrastructure Department staffs three County sanitation districts, which include the Davenport County Sanitation District, the Santa Cruz County Sanitation District (SCCSD), and the Freedom County Sanitation District, as well as five County Service Areas (CSAs): 2 (Place de Mer), 5 (Sand Dollar), 7 (Boulder Creek), 10 (Rolling Woods), and 20 (Trestle Beach). These agencies provide sanitary sewer collection services. Collected wastewater is treated at the City of Santa Cruz wastewater treatment facility (WWTF) for the Santa Cruz County Sanitation District and CSA 10, and at the City of Watsonville wastewater treatment facility for the Freedom County Sanitation District. The three districts provide a total of 252.3 miles of gravity sewer lines, 16.5 miles of force mains, and 46 pump stations (County of Santa Cruz 2017).

Where County sanitation districts are unable to provide sanitary waste services to unincorporated communities, CSAs have been formed by residents to pay assessments for sanitary waste management services in addition to other services such as road maintenance, street lighting maintenance, and fire protection. In total, five CSAs provide municipal wastewater services for their communities. CSAs 2, 5, 7, and 20 dispose of treated waste through independent wastewater treatment systems maintained and operated by the County, which do not discharge to any of the three County sanitation district facilities (County of Santa Cruz 2017). As indicated above, wastewater treatment for CSA 10 is provided by the City of Santa Cruz.

Communities located within the rural areas of the county, primarily in the San Lorenzo Valley, which contains the highest density of septic systems of any comparable area in the state, are not connected to municipal wastewater infrastructure and instead dispose and treat sanitary waste through individual private septic systems, also known as OWTS. Countywide septic system services (permitting, inspections, education, water quality monitoring, reporting, and fee collection) are provided by the County through the Septic System Maintenance and Management CSA No. 12. This CSA provides service to over 27,700 septic systems, 15,200 of which are located within the San Lorenzo River Watershed (County of Santa Cruz Health Services Agency 2021). Septage that is routinely pumped from septic tanks is transported by private pumpers for disposal at the Santa Cruz and Watsonville wastewater treatment plants. See Section 4.10, Hydrology and Water Quality, for further discussion of OWTS in the county.

Santa Cruz County Sanitation District

The SCCSD, formed in 1973, provides wastewater collection service for the city of Capitola and the unincorporated communities of Aptos, Soquel and Live Oak. The District also serves Harbor High School, a satellite medical center and the Port District which are within the City of Santa Cruz and outside the District's boundary. The District receives periodic inquiries regarding sewer service in the La Selva Beach area due to septic problems in that area, but that area lies outside its current sphere of influence. During the 1970s the District participated in regional sewer studies and ultimately acted to abandon its treatment plants and outfall, build a transmission line into the city of Santa Cruz, and contract with the City of Santa Cruz to treat and dispose of the district's sewage. The city built a new outfall in 1989 and added secondary treatment in 1998 (LAFCO 2019).

The SCCSD's collection system is pumped to the City of Santa Cruz WWTF for treatment. The SCCSD collects approximately 3.6 mgd of wastewater, and up to 5.5 mgd or more during wet periods, at their main pump station, the D.A Porath Sanitation Facility (WSC 2021). The District is required to comply with the requirements of the City of Santa Cruz National Pollutant Discharge Elimination System (NPDES) permit NO. CA0048194. The D. A. Porath Sanitation Facility is located at 2750 Lode Street off 26th Avenue in Live Oak. That facility pretreats sewage from the entire District before it is pumped to the City of Santa Cruz for treatment. Santa Cruz County Sanitation District operates a collection system and serves about 72,000 residents. It currently has 36,000 connections and approximately 220 miles of sewer line (LAFCO 2019) or 234 miles including force mains.

The County adopts a CIP that identifies and prioritizes needs and project costs for planned improvements to the District's infrastructure over a 5-year period. The 2020-20 CIP identifies projects located in various areas of the District. As part of the County Sanitation's Sewer Lateral Program, the County reviewed over 600 sewer lateral videos and required repairs on over 350 laterals. Repairs fix defects that could lead to sewer exfiltration or cause sanitary sewer overflows (County of Santa Cruz 2021b).

The SCCSD currently has a moratorium on new connections for an area in the Soquel planning area near Upper Rodeo Gulch due to constrained sewer line capacity in which development is limited. The District is currently working on plans to upgrade the affected sewer line to provide required capacity. Other areas may require upgraded sewer lines in the future.

Davenport County Sanitation District

The Davenport County Sanitation District owns and operates a wastewater treatment facility serving the community of Davenport, which includes a domestic wastewater collection system, influent headworks, aerated lagoon, sand filter, and a chlorine contact tank. The District currently has 108 connections and serves over 200 residents. Redevelopment of the CEMEX cement plant that closed in 2008, could require expansion of the existing treatment plant and recycled water plant to meet the new demands. There would also be a need for new transmission lines and possibly pump stations to serve the new development (LAFCO 2019).

Freedom County Sanitation District

The Freedom County Sanitation District provides wastewater collection service for the Buena Vista/Calabasas area of Freedom and the Green Valley Road corridor outside Watsonville's city limits. The District also serves three connections outside its boundaries, including the Pinto Lake County Park ranger's residence. The District currently has over 1,800 connections and serves approximately 4,000 residents. Collected wastewater is transported to the City of Watsonville treatment plant (LAFCO 2019).

County Service Areas

CSA 2 has been collecting and disposing wastewater from the oceanfront residential development in La Selva Beach, known as Place de Mer, since the construction of the septic system back in 1972. The current two-pump station community septic tank system has 97 connections and serves about 168 residents (LAFCO 2019).

The County currently has a countywide CIP and a specific CIP for the SCCSD, The County has adopted a Sewer System Management Plan (SSMP). The existing community septic tank system for CSA 2 is undersized and requires new larger tanks and new leach pits. CSA 2 plans a major upgrade and in May 2021, the homeowners of Community Service Area (CSA) 2- Place De Mer approved the formation of an assessment district in the amount of $2.8 million to fund sanitary sewer improvements to replace a failing community septic system and gravity sewer mains. The project includes an advanced wastewater treatment system that will treat the CSA's wastewater to a higher than secondary treatment, reduce nitrogen, and remove the existing precast concrete tanks that have failed. The replacement of gravity sewer mains will reduce the possibility of infiltration and exfiltration (Santa Cruz County Environmental Health 2021). The LAFCO service review recommends that the County consider developing a specific capital improvement plan and/or long-term maintenance plan that covers the sanitation districts managed and operated by the Public Works Department (Davenport, Freedom, and Santa Cruz County Sanitation Districts and CSAs 2, 5, 7, 10, and 20) (LAFCO 2019).

CSA 5 operates two separate treatment plants and serves over 200 residents. The Sand Dollar treatment plant was constructed in 1967 and the Canon del Sol treatment plant was constructed in 1982. CSA 5 currently has 184 connections and approximately 1.2 miles of sewer line (LAFCO 2019). Minor upgrades to aeration tanks have been identified (LAFCO 2019).

CSA 7 has a wastewater collection and treatment plant that treats the domestic wastewater from the Boulder Creek Country Club and surrounding houses. The all-in-one wastewater treatment plant consists of an equalization tank, aeration tank, and a clarifier to remove solids, and the treated effluent is discharged to leach fields. CSA 7 has 263 connections and serves over 600 residents (LAFCO 2019). CSA 7 does not have any current or proposed sewer-related capital improvement projects scheduled at this time, although the County has indicated that the wastewater treatment plant is deteriorating and in need of repair (LAFCO 2019). Since the LAFCO 2019 review, significant replacement and repairs to the treatment plant were completed after the CZU Lightning Fires destroyed much of the plant, however the equalization tank still needs to be replaced. Replacement and rehabilitation are also needed at some of the CSA's sewer pump stations and sewer mains, which will require additional funding (LAFCO 2019). Efforts are currently underway to evaluate the feasibility of expanding CSA 7 to provide sewage collection and treatment for downtown Boulder Creek and the small communities along the Highway 236 corridor.

CSA 10 operates a sanitary sewer collection system and serves the residential areas of Rolling Woods and Woods Cove, as well as the Pasatiempo Golf Club. The County currently has a contractual agreement with the City of Santa Cruz to transfer collected wastewater to the City of Santa Cruz's treatment system. The City treats the sewage at its WWTF and disposes the treated wastewater into the Pacific Ocean off West Cliff Drive. CSA 10 has 104 connections and has almost 900 residents within its service area (LAFCO 2019). The County has not identified any infrastructure needs at this time, although future repairs may be needed (LAFCO 2019).

CSA 20 operates a collection and treatment plant located in the Trestle Beach subdivision near La Selva Beach. The wastewater system provides on-site treatment to a secondary level and serves a small community of around 40 residents. The Public Works Department has indicated that the current infrastructure is aging, deteriorating, and in need of repair (LAFCO 2019). CSA 20 does not have any current or proposed sewer-related capital improvement projects scheduled at this time, and is not part of the County's SSMP, but the County has indicated that the existing treatment plant requires some repairs (LAFCO 2019).

Salsipuedes Sanitary District

Salsipuedes Sanitary District has provided wastewater collection services to the unincorporated area northeast of Watsonville since 1965. Treatment of collected wastewater is provided by the Watsonville Wastewater Treatment Plant as part of a 1985 contractual agreement. The District currently has over 500 connections and serves about 2,100 residents. The 2015 Service Review for the Salsipuedes Sanitary District identified a potential to reorganize the Salsipuedes Sanitary District either by contracting for collection system maintenance from the City, or by annexing to the Santa Cruz County Sanitation District or a new regional sanitation district (LAFCO 2019).

San Lorenzo Valley Water District

SLVWD provides sewer service to the Bear Creek Estates area within the District. which serves 56 homes. The system collects and treats domestic wastewater which is discharged to a subsurface 2.3 acre leach field (WSC and Montgomery & Associates 2021).

City of Santa Cruz

The City WWTF serves the cities of Santa Cruz and Capitola and parts of unincorporated Santa Cruz County. In addition to the City of Santa Cruz, the WWTF serves the Santa Cruz County Sanitation District (SCCSD) and CSA 10 The City also provides septage disposal for CSA 12 and provides capacity for the City of Scotts Valley to discharge its treated wastewater into the Pacific Ocean via the City's discharge.

Treatment Plant Overview

The City owns and operates the WWTF, located on California Street adjacent to Neary Lagoon that provides secondary level of treatment. The City treats sewage from domestic and industrial sources and discharges the treated effluent into the Pacific Ocean under the provisions of a waste discharge permit (NPDES No. CA0048194) issued by the California RWQCB, Central Coast Region (Order No. R3-2005-0003). Monterey Bay, into which the region's treated wastewater is disposed, was designated in 1992 as a National Marine Sanctuary. Wastewater influent and effluent characteristics are carefully monitored for compliance with state water quality requirements. The City also participates in a regional receiving water monitoring program with other dischargers in the Monterey Bay area (City of Santa Cruz 2012).

The City's WWTF was upgraded in 1998 to provide secondary treatment in order to meet state and federal waste discharge requirements, and currently produces wastewater of a quality that would be classified as Disinfected Secondary-23. The treatment process consists of a series of steps, including screening, aerated grit removal, primary sedimentation, trickling filter treatment, solids contact, secondary clarification, and ultraviolet disinfection (City of Santa Cruz 2012).

The WWTF is not currently permitted for and does not now produce recycled water for offsite reuse. The current level of treatment is not sufficient for general irrigation without additional treatment and facility upgrades. In addition to the treatment upgrades, a distribution system, including pumps, meters, storage facilities, and separate piping would be required to convey the recycled water to customers (City of Santa Cruz 2012). The City is actively investigating the feasibility of development and use of recycled water, as discussed in Section 4.3.1.2, Water Supply.

In 2019, the City approved an agreement with SqCWD to allow SqCWD to utilize a portion of the treated effluent produced by the City's WWTF for groundwater replenishment as part of Pure Water Soquel approved by the SqCWD. Pure Water Soquel will treat a portion of secondary effluent water from the City's WWTF with a new tertiary treatment facility, located at the City's WWTF. That tertiary-treated water will then be pumped to a new Advanced Water Purification Facility located in Live Oak for further purification using advanced water purification methods for injection into the ground to replenish the groundwater basin. The agreement also included additional benefits of providing a facility to produce Title 22 recycled water for the

City's use at the WWTF. In the future, a portion of that water could be used for a recycled water and irrigation water for La Barranca Park, which runs along Bay Street near the WWTF. Pure Water Soquel will also reduce the City's discharge of treated secondary wastewater to the Monterey Bay National Marine Sanctuary (City of Santa Cruz 2020).

Treatment Plant Capacity

The WWTF has a permitted wastewater treatment capacity of 17.0 million gallons per day (mgd). In 2019, the WWTF treated 3.3 billion gallons of wastewater effluent at an average daily rate of 9.04 mgd. The SCCSD has treatment capacity rights of 8 mgd at the City's WWTF. As previously indicated, the SCCSD contributes approximately 3.6 to 5.5 mgd with a remaining capacity of 2.5 mgd. The total remaining treatment plant capacity, therefore, is 6.5 mgd. The City contributes approximately 5.0 mgd and has a remaining capacity of 4.0 mgd.

Treated Effluent Disposal

The treated effluent is disposed into the Monterey Bay via a deep ocean outfall constructed in 1987. The outfall extends 12,250 feet on the ocean bottom and terminates one mile offshore at a depth of approximately 110 feet below sea level. A 1,200-foot diffuser at the end of the pipe provides an initial dilution of greater than 139 parts seawater to 1 part wastewater (City of Santa Cruz 2012). The City of Scotts Valley discharges its treated effluent via the City's ocean outfall. The Scotts Valley Wastewater Treatment Plant has a permitted capacity of 1.5 million gpd and treats water to secondary and tertiary levels. Secondarily treated effluent that is not used for recycled water is transmitted via a main to Santa Cruz and discharged to the ocean through the outfall shared with the City.

City of Watsonville

The City of Watsonville's Wastewater Treatment Facility collects and treats all of the wastewater (excluding stormwater run-off) from a 21-square-mile service area comprising users within the City, Freedom County Sanitary District, Pajaro/Sunny Mesa Community Services District (in Monterey County), and Salsipuedes Sanitary District. The treatment facility is located on the Pajaro River, southwest of the City between Highway 1 and the Monterey Bay.

More than 170 miles of pipeline are used to transport wastewater to the facility for treatment. The treatment plant treats about 5 mgd of wastewater in dry weather. It is permitted to treat up to 12 mgd. In 2020, it treated a total of 1,795 million gallons, or 5,510 AFY (City of Watsonville 2021). Existing average daily flows are 5.2 mgd (LAFCO 2018).

The wastewater treatment process includes primary sedimentation, biological filtration, aeration, and secondary clarification. In 2009, the City completed its upgrade of the treatment plant to include tertiary treatment, providing recycled water to the PV Water for agricultural irrigation through its coastal distribution system. During the irrigation season, virtually all of the City of Watsonville wastewater is recycled for irrigation, providing a critical component in the efforts to reduce groundwater overdraft and seawater intrusion. . All secondary treated water undergoes extensive monitoring and testing to ensure compliance

with all state and federal pollution prevention laws prior to being discharged to the Monterey Bay over a mile offshore. (City of Watsonville 2021).

4.16.1.3 Solid Waste

Solid waste generally refers to garbage, refuse, sludge, and other discarded solid materials that come from residential, industrial, and commercial activities. Construction, demolition, and inert wastes are also classified as solid waste. Agricultural waste can be generated by agricultural areas, but typically is disposed on site (composted, mulched, chipped, or burned) rather than entering the municipal solid waste stream. The general waste classifications used for California waste management units, facilities, and disposal sites are Nonhazardous Solid Waste, Special Waste, Designated Waste, Hazardous Waste, and Industrial Waste.

Santa Cruz County Recycling and Solid Waste Services (Recycling & Trash) is responsible for the operation and administration of solid waste diversion and disposal in the unincorporated areas of the County. Recycling & Trash operates the County's two solid waste facilities, the Buena Vista Landfill located west of the City of Watsonville at 1231 Buena Vista Drive and the Ben Lomond Transfer Station located east of Ben Lomond in the San Lorenzo Valley at 9835 Newell Creek Road. The remaining solid waste disposal capacity of the existing and planned solid waste facilities serving Santa Cruz County is summarized in Table 4.16-4.

Table 4.16-4. County of Santa Cruz Existing and Planned Solid Waste Facility Capacity

Solid Waste Facility	Total Capacity			Daily Capacity		
	Total Permitted Capacity (cubic yards)	*Remaining Capacity (cubic yards)*	*Percent Remaining*	*Permitted Daily Capacity (tons)*	*Average Daily Disposal (tons)*	*Percent Remaining*
Buena Vista Landfill	7,537,700	1,947,631	26%	1,150	297	74%
Ben Lomond Transfer Station	—	—	—	300	118	61%
Monterey Peninsula Landfill	49,700,000	48,560,000	98%	3,500	1,753	50%

Sources: CalRecycle 2020, 2022a, 2022b; County of Santa Cruz 2022; K. Kolassa, personal communication, February 3, 2022.

The Buena Vista Landfill is a 126-acre solid waste landfill facility with permitted green waste processing operation with 61 acres available for disposal use. The Buena Vista Landfill is permitted to receive a total of 7,537,700 cubic yards of solid waste, including agricultural, construction/demolition, contaminated soil, dead animals, green materials, industrial, inert, metals, mixed municipal, sludge (biosolids), tires, and wood waste. The facility has a maximum permitted daily solid waste throughput capacity of 1,150 tons (K. Kolassa, personal communication, February 3, 2022), and a maximum permitted green waste throughput capacity of 12,500 cubic yards. In 2021, 92,133 tons of solid waste were disposed of at the

Buena Vista Drive Sanitary Landfill, which is an average of approximately 297 tons per day (K. Kolassa, personal communication, February 3, 2022). Based on the most recent facility capacity evaluation in 2021, the Buena Vista Landfill has a remaining capacity of 1,947,631 cubic yards (County of Santa Cruz 2022) and is expected to reach capacity by 2030 (County of Santa Cruz 2020). After the landfill's closure, refuse from the unincorporated County will be transferred to the Monterey Regional Waste Management District (MRWMD) 315-acre Monterey Peninsula Landfill approximately 2 miles north of the City of Marina in Monterey County, and the County is currently in the process of studying a transfer station to be located at the current Buena Vista Landfill site. The Monterey Peninsula Landfill has a maximum permitted throughput of 3,500 tons of waste per day (CalRecycle 2022b). In 2020, the Monterey Peninsula Landfill received 639,799 tons of solid waste, which is an average of approximately 1,753 tons per day (CalRecycle 2020). 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 2022b). The landfill is expected to have capacity for approximately 90 more years (CalRecycle 2022b). 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 Ben Lomond Transfer Station is a 3.5-acre large-volume solid waste transfer/processing facility located east of Ben Lomond in the San Lorenzo Valley at 9835 Newell Creek Road. The Ben Lomond Transfer Facility is permitted to receive and process a total of 300 tons per day of mixed municipal, green materials, tires, construction/demolition, and industrial waste. Processed waste from this facility is either diverted for reuse, recycling, or composting off site and refuse is transferred to the Monterey Peninsula Landfill or Buena Vista Landfill. The Ben Lomond Transfer Station accepts an average of 118 tons of refuse and recyclable material daily.

Residential and commercial waste collection services are provided to the unincorporated areas of the county by GreenWaste Recovery. Garbage and yard trimmings (green waste) collected in the northern part of the county, primarily in the Mountain Region, is delivered to the Ben Lomond Transfer station. Refuse is transferred into larger trucks and taken to Monterey Peninsula Landfill or Buena Vista Landfill. Green waste is processed (chipped and screened) and taken off-site for composting or directly to market as wood chips, mulch or solid amendment product. Food waste is delivered to the Monterey Regional Waste Management District in the City of Marina (GreenWaste 2021). Recyclable materials are collected and taken to the 9-acre GreenWaste Recovery Facility located in the City of San Jose, which is permitted to receive and process a total of 3,500 tons per day (CalRecycle 2021b; GreenWaste 2021).

The County Department of Public Works sponsors a wide range of recycling and waste reduction programs that have resulted in significant diversion of waste from landfill disposal. In addition, the County owns and operates solid waste facilities and conducts recycling, reuse, and waste diversion operations at those facilities. The combination of various programs and facility operations has resulted in the County (unincorporated area) achieving approximately 58% waste diversion.

4.16.2 Regulatory Framework

4.16.2.1 Federal Regulations

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) regulates public water systems that supply drinking water (42 U.S.C. Section 300(f) et seq.; 40 Code of Federal Regulations [CFR] Section 141 et seq.). The principal objective of the federal SDWA is to ensure that water from the tap is potable, meaning safe and satisfactory for drinking, cooking, and hygiene. The main components of the SDWA are to:

- Ensure that water from the tap is potable.
- Prevent contamination of groundwater aquifers that are the main source of drinking water for a community.
- Regulate the discharge of wastes into underground injection wells pursuant to the Underground Injection Control program (see 40 CFR Section 144).
- Regulate distribution systems.

Clean Water Act

The Clean Water Act (CWA) is the primary federal law that protects our nation's waters, including lakes, rivers, aquifers, and coastal areas. As defined by the U.S. Environmental Protection Agency (EPA), the CWA is the primary law regulating pollution of the nation's waterways and is intended to govern the restoration and maintenance of the chemical, physical, and biological integrity of the nation's water.

Section 402 of the CWA implements the National Pollution Discharge Elimination System (NPDES), which is regulated by the EPA. The permitting program prohibits the unauthorized discharge of pollutants from a point source (e.g., pipe, ditch, well) to United States waters. The permitting program addresses municipal, commercial, and industrial wastewater discharges and discharges from large animal feeding operations. Under Section 402 of the CWA, permittees must verify compliance with permit requirements by monitoring their effluent, maintaining records, and filing periodic reports. The program is administered at the local level by the Regional Water Quality Control Boards (RWQCBs). Under the NPDES program, the RWQCBs implements Waste Discharge Requirements for some discharges in addition to those subject to NPDES permits. Permits contain specific requirements that limit the pollutants in discharges. They also require dischargers to monitor their wastewater to ensure that it meets all requirements. Wastewater dischargers must maintain their treatment facilities, and treatment plant operators must be certified. The RWQCB routinely inspects treatment facilities and strictly enforce permit requirements.

4.16.2.2 State Regulations

California Safe Drinking Water Act

The California Safe Drinking Water Act (SDWA) (Health & Safety Code Section 116270 et seq.; 22 Cal. Code Regs. Section 64400 et seq.) regulates drinking water more rigorously than federal law. Like the federal Safe Drinking Water Act, California requires that primary and secondary maximum contaminant levels be established for pollutants in drinking water; however, some California maximum contaminant levels are more protective of health. The California SDWA also requires the SWRCB to issue domestic water supply permits to public water systems. The SWRCB enforces the federal and state SDWAs and regulates more than 7,500 public water systems across the state. Implementation of the federal SDWA is delegated to the State of California. The SWRCB's Division of Drinking Water oversees the state's comprehensive Drinking Water Program. The Drinking Water Program is the agency authorized to issue public water system permits.

Model Water Efficient Landscape Ordinance

The Water Conservation in Landscaping Act, enacted in 2006, required DWR to update the Model Water Efficient Landscape Ordinance. The updated Model Water Efficient Landscape Ordinance requires cities and counties to adopt landscape water conservation ordinances. The County of Santa Cruz adopted 2015 State Model Water Efficient Landscape Ordinance in Section 13.13.010 of the Santa Cruz County Code (SCCC).

The Water Conservation Act of 2009

SB 7 (SB X7-7), the Water Conservation Act of 2009, was enacted in November 2009 and requires all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita urban water use by 20% by December 31, 2020 (California Water Code Section 10608.20). In order to reach this goal, SB X7-7 requires each urban retail water supplier to report progress in meeting water use targets (California Water Code Section 10608.40). The law also requires wholesale water suppliers to support their retail member agencies' efforts to comply with SB X7-7 through a combination of regionally and locally administered active and passive water conservation measures, programs, and policies, as well as the use of recycled water.

Green Building Standards Code

In January 2010, the California Building Standards Commission adopted the statewide mandatory Green Building Standards Code (hereafter the "CALGreen Code") that requires the installation of water-efficient indoor infrastructure for all new projects beginning after January 1, 2011. The CALGreen Code was incorporated as Part 11 into Title 24 of the California Code of Regulations. The CALGreen Code was revised in 2013 with the revisions taking effect on January 1, 2014; however, these revisions do not have substantial implications to the water use already contemplated by the 2010 CALGreen Code. The CALGreen Code applies to the planning, design, operation, construction, use and occupancy of every newly constructed building or structure. All new development must satisfy the indoor water use infrastructure

standards necessary to meet the CALGreen Code. The CALGreen Code requires residential and nonresidential water efficiency and conservation measures for new buildings and structures that will reduce the overall potable water use inside the building by 20%. The 20% water savings can be achieved in one of the following ways: 1) installation of plumbing fixtures and fittings that meet the 20% reduced flow rate specified in the CALGreen Code, or 2) by demonstrating a 20% reduction in water use from the building "water use baseline".

Urban Water Management Planning Act

In 1983, the California State Legislature (Legislature) enacted the Urban Water Management Planning Act (California Water Code, sections 10610–10656), which requires specified urban water suppliers within the state to prepare a UWMP and update it every 5 years. State and local agencies and the public frequently use UWMPs to determine if water supply planning has been efficiently implemented. As such, UWMPs serve as an important element in documenting water supply availability and reliability for purposes of compliance with Senate Bill (SB) 610 and SB 221, which link water supply sufficiency to large land use development project approvals. Urban water suppliers also must prepare UWMPs, pursuant to the Urban Water Management Planning Act, in order to be eligible for state funding and drought assistance.

A UWMP provides information on water usage, water supply sources, and water reliability planning within a specified water agency service area. It also may provide implementation schedules to meet projected demands over the planning horizon a description of opportunities for new development of desalinated water, groundwater information (where groundwater is identified as an existing or planned water source), a description of water quality over the planning horizon, and identification of water management tools that maximize local resources and minimize imported water supplies. Additionally, a UWMP evaluates the reliability of water supplies within the specified service area. This includes a water supply reliability assessment, water shortage contingency plan, and development of a plan in case of an interruption of water supplies.

Water Supply Assessments

In 2001, Senate Bill (SB) 610 amended California law regarding review of water availability for large projects (section 10910 et seq. of the Water Code; section 21151.9 of the Public Resources Code [CEQA]; see also section 15155 of the CEQA Guidelines). Pursuant to SB 610, preparation of a water supply assessment 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 proposed project does not propose new residential, commercial, hotel or other development, and therefore, it does not meet the requirements that would trigger the preparation of a water supply assessment.

Sustainable Groundwater Management Act

In 2014, California enacted the "Sustainable Groundwater Management Act" (California Water Code sections 10720-10737.8 et seq.) to bring the state's groundwater basins into a more sustainable regime of pumping and recharge. It requires development and implementation of plans to reduce groundwater pumping and/or implement projects to eliminate any adverse impacts on groundwater beneficial uses by 2040. The legislation provides for the sustainable management of groundwater through the formation of local groundwater sustainability agencies and the development and implementation of GSPs. The GSPs are required to set objectives and implement projects and programs to achieve sustainability within 20 years of plan implementation, report data to DWR, mitigate overdraft, and address groundwater dependent ecosystems. The approved and pending GSPs for the watersheds in the county are described in Section 4.10.1.3, Groundwater Resources. SGMA also requires consideration of the interaction between General Plan updates and groundwater sustainability plans, with the intent that they be consistent with each other.

California Integrated Waste Management Act

AB 939, known as the California Integrated Waste Management Act of 1989, required all California cities and counties to divert 50% of the waste generated within their boundaries by the year 2000. 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 California Integrated Waste Management Act's mandated diversion goals. Each jurisdiction's SRRE must include specific components, as defined in California Public Resources Code sections 41003 and 41303. In addition, the SRRE must include a program for the management of solid waste generated in the jurisdiction consistent with the following hierarchy: (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation, and (4) land disposal.

Assembly Bill 341

AB 341, adopted in October 2011, amended the California Integrated Waste Management Act and established a statewide policy goal to divert 75% 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 to arrange for recycling services. As noted above in Section 4.16.1.3, Solid Waste, the County's diversion rate is approximately 58%. The State of California also did not meet the meet the 75% recycling goal by 2020 as set out in AB 341 (the state's 2019 recycling rate was 37%), CalRecycle remains committed to achieving this goal (CalRecycle 2021a).

Assembly Bill 1826

AB 1826 (2014) requires businesses to recycle their organic waste on and after April 1, 2016, 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 multifamily 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.

Senate Bill 1383

SB 1383 was enacted in 2016 to reduce the environmental impacts caused by the release of methane emissions from organic materials decomposing in landfills, as well as to increase statewide edible food recovery efforts beginning January 1, 2022. SB 1383 expands upon the goals of AB 341 and AB 1826 and directs actions to achieve statewide organic waste disposal reduction and edible food recovery targets. As required by SB 1383, CalRecycle, in consultation with the California Air Resources Board (CARB), is charged with developing regulations to reduce disposal of organic waste by 50% of 2014 levels by 2020 and 75% by 2025. In addition, at least 20% of the edible food in the organic waste stream must be recovered to feed people by 2025. Materials that cannot be effectively recovered for human consumption would be directed to organic waste recovery facilities to make useful products, including compost, fertilizer, fuel, or energy. These facilities may be developed at existing landfills, other waste management sites, or at new stand-alone sites.

4.16.2.3 Local Regulations

County of Santa Cruz General Plan/LCP

The County of Santa Cruz General Plan/LCP is a comprehensive, long-term planning document for the unincorporated areas of the county and includes the County's LCP, which was certified by the California Coastal Commission in 1994. The County General Plan/LCP provides policies and programs to establish guidelines for future growth and all types of physical developments. The existing Parks, Recreation and Public Facilities Element includes objectives and policies that address utilities and service systems, including water supply, wastewater, and solid waste. The proposed project includes revisions to some of the existing goals, policies, and implementation strategies related to utilities and service systems, sewer, water, stormwater, solid waste, electricity, and telecommunications, as described in Chapter 3 of this Environmental Impact Report (EIR) and further reviewed in Section 4.16.3.3 below.

Santa Cruz County Zero Waste Plan

In 2015, the County of Santa Cruz Department of Public Works published the Zero Waste Plan. The Plan is intended to guide County officials in the planning and decision-making process to achieve zero waste goals. The Plan outlines several strategies and initiatives aimed at moving the County towards a zero-waste future. These include:

- Supporting legislation and adopting policies that require minimized environmental impacts and reduce the waste stream;
- Ensuring that facilities and infrastructure are in place to properly manage all recovered materials;
- Continuing to implement activities and programs that support the County's Zero Waste Policy;

- Fostering sustainable green practices and business;
- Educating and engaging businesses, organizations, public agencies, and residents to encourage zero-waste behavior change (SCCDPW 2015).

This plan incorporates the reductions required by AB 939, 341, and 1826. This plan aims to maintain 75% diversion, provides policies and practices that would increase diversion rates, and identifies challenges specific to the County.

Santa Cruz County Code

Chapter 7.20, Solid Waste - Santa Cruz County Landfill Ban

On June 21, 2005, the Santa Cruz County Board of Supervisors voted to ban the disposal of recyclable materials in the Buena Vista Landfill and created new requirements for County residents and businesses to recycle. The ban prohibits placement of recyclable materials in refuse containers in the unincorporated County area. The landfill ban and list of recyclable materials prohibited are provided in the SCCC, Title 7, Health and Safety, Chapter 7.20, Solid Waste. The list covers a variety of household and commercial wastes, ranging from yard waste and newspapers, to concrete and electronic waste, among many others. The ban further provides that if the director of Santa Cruz County Department of Public Works determines that a particular recyclable material cannot be recycled for a specific time period, then the director may permit the disposal of said recyclable material at any county disposal facility for that time period.

Chapter 7.69, Water Conservation

The purpose of this chapter is to prevent waste of water and to reduce long-term demand for water supply within Santa Cruz County. Water conservation will also decrease energy use and production of greenhouse gases. The provisions of this chapter apply to all use of water in unincorporated areas of Santa Cruz County. Water conservation measures in addition to or more stringent than those contained in this chapter may be required by other chapters of this code, or otherwise required by a supplier of water as a condition of water service. The regulations identify prohibited water uses, and also require regulations for retrofitting plumbing fixtures at time of sale of all existing residential, commercial, and industrial buildings. Pre-existing toilets that use not more than one and six-tenths of a gallon per flush shall be considered to meet the requirements of this chapter.

Chapter 13.13, Water Conservation - Water Efficient Landscaping

Chapter 13.13 addresses water-efficient landscaping and indicates that water conservation reduces demand on groundwater and surface water supplies, saves energy, inhibits salt-water intrusion and conserves aquatic resources. Sustainable landscapes benefit ecosystems, enhance soil and scenic resources, minimize energy use and reduce greenhouse gas emissions. The purposes of this chapter are to: conserve water by setting a maximum applied water allowance as an upper limit for water use and reducing water use to the lowest practical amount; promote sustainability and mitigate climate change in new landscaping projects by installing native plants and habitat enhancements, avoiding invasive plants,

improving soils, minimizing stormwater runoff and providing shade; improve the efficiency of existing landscaping; promote rainwater capture and graywater use; and implement the 2015 California Model Water Efficient Landscape Ordinance. This chapter applies to landscape areas of new, expanded or rehabilitated landscapes in commercial, industrial, public, residential and agricultural service establishment projects that require a building, grading or discretionary permit.

4.16.3 Impacts and Mitigation Measures

4.16.3.1 Thresholds of Significance

The thresholds of significance used to evaluate the impacts of the proposed project related to utilities and service systems are based on Appendix G of the CEQA Guidelines and, if applicable, other agency standards, as listed below. A significant impact would occur if the project would:

UTL-1 Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

UTL-2 Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

UTL-3 Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

UTL-4 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.

UTL-5 Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

4.16.3.2 Analytical Methods

This analysis describes how the proposed Sustainability Update could result in increased demand on public utility systems in the county. This analysis focuses services provided in unincorporated areas of the county and the adequacy and capacity of these services, relative to additional demand that may result from the proposed project. Public utilities analyzed in this section include water utilities, wastewater collection and treatment, and solid waste disposal. Where potentially significant impacts on services are identified, mitigation measures are recommended.

Potential Growth Assumptions

Adoption and implementation of the proposed Sustainability Update would not directly result in impacts related to population and housing. However, the proposed General Plan/LCP amendments includes could lead to future development, indirectly resulting in potential impacts related to public utilities. The proposed project includes the following components that could lead to population growth and development of new

housing units and potential service demands; the proposed Countywide Design Guidelines component of the proposed project does not include guidelines related to housing growth or utilities:

- Amendments to the General Plan/LCP include policies that support new development, mixed-use development, and potential intensified redevelopment, primarily within the Urban Services Line (USL).
- Amendments to the SCCC that include changes to permitted/allowed uses in some zone districts, including encouraging opportunities for residential development and allowing new agricultural tourism, education, and homestay uses in agricultural zones.
- Amendments to General Plan/LCP land use and/or zone district maps for 23 specified parcels.

As described in Section 4.0, Introduction to Analyses, this EIR estimates that the proposed project has the potential to accommodate approximately 4,500 housing units throughout the county over existing conditions as shown in Table 4.0-2, with approximately 75% projected to occur within urban areas. This EIR also estimates that the proposed project has the potential to accommodate approximately 6,210,000 square feet of non-residential uses as shown in Table 4.0-3, with approximately 60% expected to occur within urban areas. These are forecasts provide an estimate of potential growth that could occur as a result of adoption and implementation of the proposed Sustainability Update for the purpose of evaluation in this EIR. This estimate of growth may or may not occur, and this estimate does not establish a limit to development. Annual limits for residential units are set annually by the County pursuant to Measure J and SCCC provisions as explained in Section 4.13 of this EIR, Population and Housing. Additionally, some of this projected development and growth would occur under the existing General Plan/LCP without the proposed project.

EIR Notice of Preparation Comments

Public and agency comments were received during the public scoping period in response to the Notice of Preparation (NOP), which is included in Appendix A. A summary of the comments received during the scoping period for this EIR, as well as written comments received, are included in Appendix B. Comments related to utilities included the following:

- The EIR should analyze the impacts of water use and encourage use of recycled water in parks, athletic fields, medians, and greenway buffers.

4.16.3.3 Project Impact Analysis

Impact UTL-1: New or Expanded Facilities (Significance Threshold UTL-1). Adoption and implementation of the proposed Sustainability Update could lead to development that could result in future increased utility service demands, but would not result in relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. (***Less than Significant)***

The proposed project would not directly result in new development, but could indirectly lead to future development and redevelopment throughout the county, primarily within urban areas within the County's USL. Implementation of the proposed Sustainability Update could lead to development of additional housing units and non-residential development with a population increase of approximately 11,385 new residents as explained in Section 4.13, Population and Housing. However, potential future development and growth resulting from the proposed project is not substantially higher than forecast growth in the year 2040 without the proposed project as summarized in Section 4.0.2.2 and is within historical growth rates. Therefore, the proposed project would not induce substantial unplanned population growth in the unincorporated area of Santa Cruz County.

While most agencies have CIPs to plan for improvements to repair, upgrade, and/or replace utility infrastructure, there are no known facilities that would be required as a result of future development accommodated by the Sustainability Update based on discussions with service providers. Existing sewer line capacity issues in the Soquel area are being addressed with planned improvements by the SCCSD. The SCCSD would continue to monitor sewer pipelines and review projects as they are proposed to ensure that adequate capacity exists.

While some repairs and upgrades also have been identified in several County-operated CSAs for wastewater facilities to address existing deficiencies, there are no known facilities that would be required as a result of the proposed project. Furthermore, additional residential development in the CSAs is estimated to be minor or the same as what could occur under the County's existing General Plan/LCP with only minor expansion of non-residential uses. Additionally, as previously mentioned, redevelopment of the CEMEX cement plant in Davenport could require expansion of the existing treatment plant and recycled water plant to meet the new demands.

Compliance with County General Plan/LCP policies would ensure development projects can be adequately served by water and sewer infrastructure as part of the approval process (Built Environment [BE]-2.1.8, Parks, Recreation + Public Facilities [PPF]-4.2.1); see Tables 4-16-5 and 4-16-6 below. Therefore, the project would not result in the need for relocated or new public utility facilities related to water or wastewater treatment facilities. No new or expanded storm drainage or energy utility systems have been identified; see Sections 4.10 and 4.6, respectively. Therefore, the proposed project would result in a *less-than-significant impact*.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Impact UTL-2: Water Supplies (Significance Threshold UTL-2). Adoption and implementation of the proposed Sustainability Update could lead to development that could result in future increased demand for domestic water supplies, but two existing providers (City of Santa Cruz and Soquel Creek Water District) may not have sufficient water supplies available to serve the development indirectly resulting from implementation of the Sustainability Update and reasonably foreseeable future development during normal, dry, and multiple years. (***Potentially Significant and Unavoidable)***

The proposed project would not directly result in new development, but could indirectly lead to future development and redevelopment throughout the county, primarily within the County's USL. The proposed project would result in additional demand for domestic potable water. Each of the six major public water service utilities have concluded that supplies are available to serve projected demand through the year 2040 for normal, dry, and multiple dry years based on recent updates to each agency's state-mandated UWMP. However, the City of Santa Cruz forecasted a slight shortfall after the fourth year of a multi-year drought, as discussed in Section 4.16.1.2 and further explained below.

Potential future growth and development accommodated by the proposed Sustainability Update could result in some increase in development over what could occur in the year 2040 under the existing General Plan/LCP without the project. Potential growth in the unincorporated areas within the service areas of the City of Watsonville, San Lorenzo Valley Water District, and Scotts Valley Water District is expected as minor increases in non-residential developments, but residential development is not estimated over what could occur under the existing General Plan/LCP and growth projections and would be minor. Therefore, it appears that any future growth indirectly resulting from the project would be accommodated in the growth projections of these agencies.

Potential growth in the City of Santa Cruz service area would primarily result from redevelopment and intensification in the Live Oak planning area. Housing unit forecasts included in the City's 2020 UWMP estimate 14,140 occupied and 15,947 total dwelling units in areas outside of the City, but within the City's service area (City of Santa Cruz 2021a). Areas outside the city limits would be primarily within the unincorporated county, although the City's service area also includes the western edge of the City of Capitola. Growth projections developed for this EIR and summarized in Section 4.0.2.2, estimate 13,538 occupied dwelling units in the Live Oak area in 2040 as a result the proposed project. This is within the City's projection for occupied units. However, the City's estimate would also include the western portion of the City of Capitola, where future redevelopment of Capitola Mall may occur, and the unincorporated area along Graham Hill that is in the City's service, but where no new development is projected.

Although, the amount and timing of future development is not known, future potential development resulting from the proposed project and potential future development in Capitola may approach or exceed housing unit estimates used to forecast water demand in the City's 2020 UWMP. The UWMP and discussions with the Santa Cruz Water Department indicate that water demand has decreased and is

projected to increase at a very slow rate in the future. The City also forecasts adequate supplies to meet demand during normal and single-year dry years and forecasts a negligible two to five percent shortfall in the future during year five of a multiple-dry year period. Under multi-year drought situations, imposition of the City's Water Contingency Plan and required customer curtailment would be required. It appears that water demand generated from potential future development in the Live Oak area could be accommodated by the City as overall demand has remained flat despite development within the City's service area, However, due to uncertainties of when development would occur, as well as potential development in the City of Capitola, it is conservatively concluded that City water supplies may not be adequate during drought periods to serve development that may occur in the Live Oak planning area as an indirect result of the proposed project, which would be a *significant impact*.

Potential growth in the SqCWD service area would primarily result from redevelopment and intensification in the Soquel and Aptos planning areas with some minor development in the La Selva Beach area. Housing unit forecasts included in the SqCWD's 2020 UWMP are based on AMBAG growth forecasts adopted in 2018, which predict 17,498 dwelling units in SqCWD's service area (WSC 2021). Most of the City of Capitola is included in this area in addition to unincorporated county areas. Growth projections developed for this EIR and summarized in Section 4.0.2.2, estimate 14,168 occupied dwelling units in the Aptos, La Selva, and Soquel planning areas in 2040 with the proposed project. This potential growth is within the SqCWD's 2020 UWMP growth projections, but may approach or exceed the UWMP estimates with consideration of existing and potential development in the City of Capitola. As with the City of Santa Cruz, due to uncertainties of when development would occur, as well as potential development in the City of Capitola, it is conservatively concluded that SqCWD water supplies may not be adequate to serve development that may occur in the Aptos, Soquel, and La Selva Beach planning area as an indirect result of the proposed project, which would be a *significant impact*.

The proposed Sustainability Update includes policies that serve to avoid or minimize impacts related to provision of adequate water supplies as summarized in Table 4.16-5. These policies support use of water conservation fixtures, measures, and landscaping in new development and support water facility improvements. In addition, the policies require that new development or intensification of land use only be allowed where public service levels are adequate to serve a project, including water supply (PPF-3.1.1 and PPF-4.1). Implementation of these policies also would be required for developments served by small mutual water companies or water systems. Requirements for water conserving-fixtures and water-efficient landscaping are also included in the SCCC and building codes and would be required for new development.

Adoption and implementation of the proposed Sustainability Update would not directly result in new development, but new development accommodated by the proposed project would result in demand for domestic water supplies. Future potential development and growth appears to be within growth projections developed for each of the six major public water districts serving the unincorporated county area, although potential development may approach or exceed estimates in the City of Santa Cruz and SqCWD 2020 UWMPs. Implementation of the proposed Sustainability Update policies summarized in Table 4.16-5 and compliance with SCCC water conservation requirements would serve to reduce water demand. Furthermore, policies require that development be allowed only where adequate water supplies are available, and all public water purveyors would have to approve new connections as part of future

development project reviews. Implementation of County policies and compliance with water conservation regulations and requirements of the water purveyors would serve to reduce demand and ensure availability of adequate water supplies prior to approval of future developments, and it is concluded that the proposed Sustainability Update's potential indirect impact on water supplies would be considered *less than significant*, except it is conservatively concluded that the impact could be *potentially significant* for the Santa Cruz Water Department and SqCWD.

Table 4.16-5. Proposed and Retained General Plan/LCP Policies that Avoid/Minimize Impacts Related to Water Supply

Potential Impact	Policies
Sufficient Water Supply Availability	• Allow expansion of the USL only when sewer, water supply and road capacity is available. (BE-1.1.1) • Consider adequacy of water service in determining the number of units to be permitted for projects within each residential density range. (BE-2.1.8) • Establish standards for landscaping associated with new construction and major renovation projects with consideration for water conservation. (BE-4.1.5) • Encourage building designs to conserve water. (Objective BE-4.2) • Encourage development projects to conserve water with efficient fixtures indoors and sustainable site elements outdoors, such as drought-tolerant plants, rainwater catchment systems, graywater irrigation systems. (BE-4.2.6) • Encourage water districts, resource management agencies, and agricultural users to implement water conservation measures, especially in areas subject to overdraft; support water conservation assistance to growers. (ARC-1.5.3) • Allow new development or intensification of land use only where public service levels are adequate, including water supply, sewage treatment, road capacity. (PPF-3.1.1) • Coordinate with water agencies to ensure that land use and growth are linked directly to availability of water supplies. (PPF-4.1.1) • Require commitment letter from a water agency that verifies the capability of the system to serve proposed development. (PPF-4.1.2) • Review all development proposals to assess whether adequate service is available. (PPF-4.1.3) • Support water system improvements for storage, treatment, and distribution. (PPF-4.1.4) • Support groundwater sustainably to maintain water quality and stream baseflows. (PPF-4.1.5) • Use the best methods for water conservation in new developments. (PPF-4.1.6) • Encourage water reuse and recycling. (PPF-4.1.7)

Mitigation Measures

The proposed project and existing regulations would require incorporation of water-conserving fixtures, measures, and landscaping as part of new development in the county, which would serve to minimize water demands. No other mitigation measures have been identified that would reduce potential impacts on water supply of the City of Santa Cruz and SqCWD to a less-than-significant level. Therefore, the impact for these two water suppliers would remain *potentially significant and unavoidable*.

Impact UTL-3: Wastewater Treatment Capacity (Significance Threshold UTL-3). Adoption and implementation of the proposed Sustainability Update could lead to development that could result in increased wastewater flows and required treatment, but would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments. ***(Less than Significant)***

The proposed project would not directly result in new development, but could indirectly lead to future development and redevelopment throughout the county, primarily within urban areas within the county's USL. Implementation of the proposed project could indirectly result in new development and associated generation of wastewater. Both regional wastewater treatment facilities have adequate remaining capacity to serve potential growth resulting from the proposed project. Wastewater generation can be generally estimated based on water demand. Based on water demand rates identified in the City of Santa Cruz General Plan 2030 EIR (City of Santa Cruz 2012), it is estimated that future development within SCCSD's service area in which wastewater is collected and conveyed to the City of Santa Cruz WWTF for treatment would generate an increase of approximately 0.86 million mgd of wastewater by the year 2040. This amount is well within the remaining treatment plant capacity allocation to SCCSD remaining portion (2.5 mgd). Similarly, the City of Watsonville's wastewater treatment plant has an estimated remaining capacity of approximately 7 mgd per day that would be more than adequate to serve the limited potential increased development in the county areas served by the treatment plant.

Therefore, future increased wastewater generation resulting from implementation of the proposed Sustainability Update would not exceed existing treatment plant capacities. Furthermore, the proposed Sustainability Update includes policies that serve to avoid or minimize impacts related wastewater treatment as summarized in Table 4.16-6. These policies would ensure that new development or intensification of land use only be allowed where public service levels are adequate to serve a project, including sewer service and wastewater treatment (PPF-3.1.1 and PPF-4.1.1).

Table 4.16-6. Proposed and Retained General Plan/LCP Policies that Avoid/Minimize Impacts Related to Wastewater Treatment

Potential Impact	Policies
Wastewater Treatment Capacity	• Allow expansion of the USL only when sewer, water supply and road capacity is available. (BE-1.1.1) • Consider adequacy of sewer service in determining the number of units to be permitted for projects within each residential density range. (BE-2.1.8) • Require written commitment from sewer service that it can support a new development. (PPF-4.2.1) • Allow new development at designated urban densities that can be served by community sewage disposal systems. (PPF-4.2.2) • Site sewer facilities to best serve all areas anticipated to require sewer service. (PPF-4.2.6)

Therefore, adoption and implementation of the proposed Sustainability Update would not directly result in new development and resulting wastewater flows can be accommodated within the remaining capacity of the existing regional wastewater treatment providers. Furthermore, with implementation of the proposed Sustainability Update policies and implementation strategies summarized in Table 4.16-6 that endure adequate sewer services are available as part of future development project reviews, the proposed Sustainability Update's potential indirect impact on wastewater treatment capacity would be considered *less than significant*.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Impact UTL-4: Solid Waste (Significance Threshold UTL-4 and UTL-5). Adoption and implementation of the proposed Sustainability Update could lead to development would not 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. ***(Less than Significant)***

The proposed project would not directly result in new development, but could indirectly lead to future development and redevelopment throughout the county, primarily within urban areas within the county's USL. Implementation of the proposed project could indirectly result in new development and an associated increase in the generation of solid waste from construction and operation of these new uses. It is expected that construction waste would generally be recycled and reused to the maximum extent possible, due to the cost of disposing of such materials, in accordance with applicable regulations. As described above, off-site disposal of solid waste from future development would be at the Buena Vista Landfill until its closure date, after which solid waste would be transferred to the Monterey Peninsula Landfill thereafter, which has an expected closure date of February 2107 (CalRecycle 2022b). Thus, adequate landfill capacity is available during the timeframe of the proposed project and beyond to serve development accommodated by the project.

The proposed Sustainability Update includes policies to that serve to avoid or minimize impacts related to solid waste as summarized in Table 4.16-7. Furthermore, the County is working to implement its Zero Waste Plan, which would ultimately result in no net increase in solid waste generation. Additionally, future development accommodated by the project would be required to comply with all applicable federal, state, and local regulations related to solid waste. As previously noted, solid waste generated during construction and operation of development accommodated by the project would be expected to be recycled to the maximum extent possible, and unsalvageable materials generated from development accommodated by the project would be disposed of at authorized sites in accordance with all applicable federal, state, and local statutes and regulations. Thus, the project's impact related to compliance with applicable solid waste regulations would be *less than significant*.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Table 4.16-7. Proposed and Retained General Plan/LCP Policies that Avoid/Minimize Impacts Related to Solid Waste

Potential Impact	Policies
Solid Waste Generation and Disposal	• Establish materials recovery through recycling, reuse and composting, as the primary and fundamental strategy of solid waste management, with landfill disposal as a secondary and essential component. (PPF-4.5.1) • Take into account the whole materials management system to achieve a zero waste goal by focusing on reducing and eliminating materials from entering into the waste stream ' reuse as a secondary strategy; and recycling as a tertiary strategy. (PPF-4.5.2) • Require all County departments to develop materials acquisition and handling practices, which reduce the amount of waste generated in daily operations. (PPF-4.5.2) • Recognize and support businesses, which manufacture using recovered materials or deal in reusable discards as important to the local economy and to County landfill diversion goals through the Green Business Program and other mechanisms. (PPF-4.5.3) • Continue to use education programs, and mandatory phase-outs or bans to eliminate products with non-recyclable, non-biodegradable or excessive packaging. (PPF-4.5.4) • Maintain the economic viability of the integrated waste management system through user-based and benefit-related funding. (PPF-4.5.5) • Provide the opportunity for recycling to all residents and businesses in a convenient manner to maximize participation, including recycling collection services, curbside drop off, buyback and source-separated collection through publicly provided service. (PPF-4.5.6) • Consider mandatory recycling or material-specific landfill disposal prohibitions if state and local landfill diversion goals are not met through the use of voluntary programs. (PPF-4.5.7)

Table 4.16-7. Proposed and Retained General Plan/LCP Policies that Avoid/Minimize Impacts Related to Solid Waste

Potential Impact	Policies
	• Require all development projects, except single-family dwellings, to provide sufficient and accessible space for the storage and collection of recyclable materials separate from (PPF-4.5.8) • Recognize small-scale recycling collection facilities as a compatible accessory use in all land use designations, subject to appropriate zoning standards. (PPF-4.5.9) • Allow properly managed on-site yard waste composting for materials generated on-site in all land use designations. (PPF-4.5.10) • Provide separate collection of yard waste, for off-site composting, from residential and non-residential generators and continue to phase in collection of food waste and other compostable material. (PPF-4.5.11) • Provide publicly-owned facilities of sufficient size, location and design to meet the processing requirements for all County-sponsored recycling and composting programs and for local city-sponsored programs choosing to participate. Ensure sufficient capacity and make said facilities available to process materials from local non-profit and private recycling and composting businesses. (PPF-4.5.13) • Adopt strategies and continue to conduct planning efforts to remove all organic wastes from the waste stream. (PPF-4.5.14) • Establish multi-jurisdictional and public-private cooperation as a primary principle in planning and operating recycling and composting processing facilities. (PPF-4.5.15) • Work with state and regional permitting agencies, including RWQCB, the Monterey Bay Air Resources District, California Fish and Wildlife, Coastal Commission, and CalRecycle, to approve a composting facility or provide an alternative means for the processing of organic waste. (PPF-4.5.16) • Include a public education and information component of materials recovery and processing programs to ensure public awareness and understanding of program participation requirements, program objectives and accomplishments and program costs and benefits. (PPF-4.5.16) • Ensure that solid waste collection contracts maintain a distinction between recyclable materials and refuse. (PPF-4.5.17) • Establish a solid waste collection rate structure, which provides economic incentives for recycling more and disposing less. (PPF-4.5.18) • Consider adoption of landfill disposal bans for specific recyclable or compostable materials where necessary to achieve County materials recovery and landfill diversion goals. (PPF-4.5.22)

4.16.3.4 Cumulative Impact Analysis

The geographic area considered for the public water supplies for the analysis of cumulative impacts include the service areas covered by the water districts. The state-required UWMPs considered cumulative growth for 20-year periods. As discussed in Section 4.16.1.1, there is adequate capacity to serve planned growth to the year 2040, and potential growth indirectly resulting from the proposed project would be within the projections included in the UWMPs and service review by LAFCO of the Central Water District, except for the City of Santa Cruz and SqCWD. Therefore, cumulative development and growth would not result in a new significant cumulative impact related to public water utilities except for these two agencies, which could result in a potentially significant cumulative impact related to water supply.

As discussed for Impact UTL-2, potential development accommodated by the proposed project could approach or exceed growth estimates in the City's UWMP, although demand associated with unincorporated county growth would only represent approximately 5% of the total demand within the City's service area. This would be a concern only during multiple-year droughts in which all customers would be subject to water restrictions imposed by the City. New development in the county would be subject to County approvals, including approval only when adequate water supplies are available, and with incorporation of water conservation features in project designs. New water connections also would require approval from the City. Because of the limited water demand from the county in relation to total demand in the City's service area, and with compliance with local policies and regulations regarding water conservation requirements, the proposed project's contribution to a potential significant cumulative impact would not be cumulatively considerable. The same would be true with the SqCWD, except that the county's demand represents the majority of the demand within SqCWD's service area. While, future development also would be subject to approvals by the County and compliance with local policies and regulations, including requirements established by SqCWD for new water connections, it is conservatively concluded that the project's contribution would be cumulatively considerable, resulting in a significant cumulative impact.

See Section 4.10.3 regarding impacts to groundwater sources due to development, including use of individual wells.

The geographic area considered for the for wastewater treatment of existing plants for the analysis of cumulative impacts include the service areas covered by the cities of Santa Cruz and Watsonville for their respective treatment plants. Both agencies have adequate capacities to support growth and development within their service areas, and therefore, no significant impact to wastewater treatment facility capacities would occur. The SCCSD has indicated that there could be sewer lines within inadequate capacity near the Capitola Mall that may need upgrading with future redevelopment of the Mall.

The geographic area considered for the analysis of cumulative impacts related to solid waste generation and landfill capacity is Santa Cruz County and the area of Monterey County served by the Monterey Peninsula Landfill. As discussed above, the Buena Vista Landfill has a remaining capacity of 1,947,631 cubic yards (County of Santa Cruz 2022) and an estimated closure date in 2030 (County of Santa Cruz 2020) and the Monterey Peninsula Landfill has a remaining capacity of over 48.5 million cubic yards and an estimated closure date in 2107 (CalRecycle 2022b). Construction and operation of past,

present, and reasonably foreseeable future projects in the region would generate solid waste that would require disposal in area landfills. 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. Therefore, given regulatory requirements related to reuse and recycling, as well as remaining landfill capacities, area landfills would be expected to have adequate capacity to serve cumulative development, and cumulative impacts on landfill capacity would be *less than significant*.

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