3.18 Utilities and Service Systems

3.18.1 Introduction

This section describes the regulatory and environmental setting for utilities and service systems in the vicinity of the of the Proposed Project and Atwater Station Alternative. It also describes the impacts on utilities and service systems that would result from implementation of the Proposed Project and Atwater Station Alternative.

Additional considerations of utilities and service systems are presented in Section 3.6, *Energy*, which discusses natural gas infrastructure and impacts related to energy demand, and Section 3.10, *Hydrology and Water Quality*, which describes potential stormwater drainage system impacts. Cumulative impacts on utilities and service systems, in combination with planned, approved, and reasonably foreseeable projects, are discussed in Chapter 4, *Other CEQA-Required Analysis*.

3.18.2 Regulatory Setting

This section summarizes federal, state, regional, and local regulations related to utilities and service systems and applicable to the Proposed Project and the Atwater Station Alternative.

3.18.2.1 Federal

There are no federal regulations related to utilities and service systems relevant to the Proposed Project and Atwater Station Alternative**.**

3.18.2.2 State

Section 3.10, *Hydrology and Water Quality*, presents the California regulations related to stormwater pollution prevention.

California Government Code Section 4216

California Government Code Section 4216 et seq. requires that persons planning to conduct any excavation first contact the regional notification center. Section 4216 includes several related requirements, including requirements for excavations near "high priority utilities,"[1] which include high-pressure natural gas pipelines and other pipelines that are potentially hazardous to workers or the public if damaged or ruptured. Underground Service Alert North (USA North) is the regional notification center for the areas where the Proposed Project and the Atwater Station Alternative would be located. USA North receives planned excavation reports and transmits the information to all participating members that may have underground facilities at the location of excavation. The USA North members then mark or stake their facility, provide information about the location, or advise the excavator of clearance.

[1] Consistent with California Government Code Section 4216(e), high priority utilities include natural gas pipelines carrying petroleum with normal operating pressures greater than 415kPA (60 pounds per square inch gauge); petroleum pipelines; pressurized sewage pipelines; high voltage electric supply lines, conductors, or cables that have a potential to ground of greater than 60 kilovolt; and hazardous materials pipelines that are potentially hazardous to workers or the public if damaged.

Integrated Waste Management Act

The Integrated Waste Management Act (Assembly Bill 939) mandates a reduction of waste and establishes a framework to implement source reduction, recycling, and composting. The California Department of Resources Recycling and Recovery (CalRecycle) is responsible for implementation of the Integrated Waste Management Act.

California Green Building Standards

The California Code of Regulations (Cal. Code Regs.), Title 24, Part 11, California Green Building Standards (or CALGreen), sets standards for sustainable building design for residential and nonresidential buildings in California. The code sets forth sustainable construction practices applicable to planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. Effective January 1, 2014, 2013 CALGreen mandates permitted new residential and nonresidential building construction, demolition and certain additions and alteration projects to recycle and/or salvage for reuse a minimum 50 percent of the nonhazardous construction and demolition (C&D) debris generated during a project (CALGreen 4.408, 5.408, 301.1.1, and 301.3). Effective January 1, 2017, 2016 CALGreen will increase the recycle and/or salvage mandate to 65 percent for new residential and non-residential building construction, demolition, and certain additions and alteration projects (2016 CALGreen 4.408 and 5.408). These measures remain in place under the 2019 CALGreen, effective January 1, 2020 (2019 CALGreen 4.408 and 5.408).

Water Efficient Landscape Ordinance

Pursuant to the Water Conservation in Landscaping Act of 2006 (California Government Code 65591 et seq.), cities and counties in California are required to adopt a water efficient landscape ordinance. Local ordinances are intended to reduce water use for landscaping and irrigation purposes and encourage the use of recycled and reclaimed water for these purposes. The California Department of Water Resources maintains a model water efficient landscape ordinance (MWELO) (23 Cal. Code Regs. 490 et seq.) after which local jurisdictions can model their ordinances.

3.18.2.3 Regional and Local

The San Joaquin Regional Rail Commission (SJRRC), a state joint powers agency, proposes facilities inside and outside of the Union Pacific Railroad (UPRR) right-of-way (ROW). The Interstate Commerce Commission Termination Act (ICCTA) affords railroads engaged in interstate commerce considerable flexibility in making necessary improvements and modifications to rail infrastructure,[2] subject to the requirements of the Surface Transportation Board (STB). ICCTA broadly preempts state and local regulation of railroads and this preemption extends to the construction and operation of rail lines. As such, activities within the UPRR ROW are clearly exempt from local building and zoning codes and other land use ordinances. However, facilities located outside of the UPRR ROW, including proposed stations, the proposed Merced Layover & Maintenance Facility, and the Atwater Station Alternative would be subject to regional and local plans and regulations. Though ICCTA does broadly preempt state and local regulation of railroads, SJRRC intends to obtain local agency permits for construction of facilities that fall outside of the UPRR ROW even though SJRRC has not determined that such permits are legally necessary may not be required.

[2] Altamont Corridor Express (ACE) operates within a ROW and on tracks owned by UPRR, which operates interstate freight rail service in the same ROW and on the same tracks.

Appendix G of this environmental impact report (EIR), *Regional Plans and Local General Plans* provides a list of applicable goals, policies, and objectives from regional and local plans of the jurisdictions in which the Proposed Project and the Atwater Station Alternative would be located. Section 15125(d) of the California Environmental Quality Act (CEQA) Guidelines requires an EIR to discuss "any inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans." These plans were considered during the preparation of this analysis and were reviewed to assess whether the Proposed Project and Atwater Station Alternative would be consistent with the plans of relevant jurisdictions.[3] The Proposed Project and Atwater Station Alternative would be generally consistent with the applicable goals, policies, and objectives related to utilities and service systems identified in Appendix G.

3.18.3 Environmental Setting

This section describes the environmental setting related to utilities and service for the Proposed Project and Atwater Station Alternative. For the purposes of this analysis, the study area for utilities and service systems is defined as follows.

- *Direct Impacts.* Utilities and service systems within the environmental footprint of the Proposed Project and the Atwater Station Alternative that could be directly affected by physical changes from structural development and/or infrastructure installation represents the direct impact study area.
- *Indirect Impacts*. The service area of identified utilities and service systems that currently provide service to ACE or would provide service to the Proposed Project and Atwater Station Alternative represents the indirect impact study area.

Information presented in this section regarding existing utilities and service systems was obtained from the following sources.

- Utility providers in the Proposed Project and the Atwater Station Alternative service area.
- Operating permits for utilities in the Proposed Project and the Atwater Station Alternative service area.

This section begins with an overview of utilities and service system providers in the study area, followed by a detailed description of existing water, wastewater, stormwater, and telecommunications utilities in the study area. Descriptions of solid waste facilities are presented for the entire study area because they are large operations that typically serve multiple municipalities.

3.18.3.1 Overview of Utilities and Service System Providers

Utilities and service systems in the study area addressed in this analysis include water supply, wastewater, stormwater, telecommunications, and solid waste. Utility providers that would be directly affected by the Proposed Project and the Atwater Station Alternative are providers that maintain utilities infrastructure, including water lines, irrigation canals, water supply canals, wastewater lines, storm drains, and telecommunications lines, within the environmental footprints of the Proposed Project and the Atwater Station Alternative. Solid waste facilities, including landfills and recycling centers, are large operations that would not be displaced or otherwise directly

[3] An inconsistency with regional or local plans is not necessarily considered a significant impact under CEQA, unless it is related to a physical impact on the environment that is significant in its own right.

affected by the Proposed Project and the Atwater Station Alternative. Utility providers that would provide utility service to the Proposed Project and the Atwater Station Alternative include water, wastewater, stormwater, and solid waste service providers, some of which currently serve the area of the Proposed Project and the Atwater Station Alternative.

Table 3.18-1 identifies the existing utilities that are located within the environmental footprint for the Proposed Project and the Atwater Station Alternative and the agencies that own and operate them. Agencies that have not yet provided information on utilities within the study area are identified in the preliminary utility plans for the Proposed Project and the Atwater Station Alternative.

Table 3.18-1. Utilities within the Environmental Footprints for the Proposed Project and the Atwater Station Alternative

Owner (Operator)	Utility Type
AT&T	Telecom lines (underground)
Central Valley Independent Network	Telecom lines (underground)
City of Atwater	Water lines Sewer lines Storm drains
City of Ceres	Sewer lines
City of Modesto	Water lines Sewer lines
City of Merced	Water lines Sewer lines Storm drains
City of Turlock	Water lines Sewer lines Storm drain
Comcast	Telecom lines (underground and overhead)
Frontier Communications	Telecom lines (underground and overhead)
Level 3	Telecom lines (overhead)
Sprint	Telecom lines (underground)
Turlock Irrigation District	Water lines (active and abandoned) Sewer lines
Unknown	Telecom lines (overhead)

Note:
Potential utilities identified within the environmental footprint are preliminary. Agencies that have not yet provided information on utilities within the study area are identified in the 15% preliminary engineering utility plans (Appendix C).

Table 3.18-2 lists the service providers that maintain water, wastewater, stormwater, and solid waste utilities and associated easements within the study area. Telecommunications providers are non-governmental agencies that provide service at the regional level. Telecommunications providers that maintain utilities infrastructure within the study area include AT&T Network, Central Valley Independent Network, Comcast, Frontier Communications, Level 3 Communications, and Sprint.

Table 3.18-2. Utility Service Providers in the Study Area

Municipality	Utility Type	Provider
City of Ceres	Water Supply	City of Modesto Utilities Department
		City of Ceres Public Works Department
	Wastewater	City of Ceres Public Works Department
	Stormwater	City of Modesto Utilities Department City of Turlock Municipal Services Department [a]
	Solid Waste	Bertolotti Disposal
City of Turlock	Water Supply	City of Turlock Municipal Services Department
	Wastewater	
	Stormwater	
	Solid Waste	Turlock Scavenger
City of Livingston	Water Supply	City of Livingston Public Works Department
	Wastewater	
	Stormwater	
	Solid Waste	Gilton Solid Waste Management
City of Atwater	Water Supply	City of Atwater Public Works Department
	Wastewater	
	Stormwater	Merced Storm Water Group
	Solid Waste	City of Atwater Public Works Department
City of Merced	Water Supply	City of Merced Public Works Department
	Wastewater	
	Stormwater	Merced Storm Water Group
	Solid Waste	City of Merced Public Works Department

Sources: City of Ceres 2018; City of Turlock 2020a; City of Livingston 2020a; City of Atwater 2020; City of Merced 2020a.

[a] Due to limited capacity at the Ceres Wastewater Treatment Plant, flows in the North Ceres Sewer Service Area are directed to the City of Modesto Treatment Plant. In addition, the City of Ceres is under contract for 2.0 million gallons per day for the City of Turlock's wastewater treatment plant (City of Ceres 2018).

Solid waste facilities typically serve a region, rather than a single municipality. Table 3.18-3 presents the solid waste facilities that serve the study area, including landfills, recycling facilities, composting facilities, and transfer stations.

Table 3.18-3. Solid Waste Facilities in the Study Area

Facility Name	Facility Location	Permitted Capacity (cubic yards)	Remaining Capacity (cubic yards)	Remaining Capacity Date	Estimated Closure Date	Types of Waste Accepted
Bertolotti Transfer and Recycling Center	Modesto	1,300 tons/day	N/A	N/A	N/A	Mixed municipal, industrial, tires, agricultural, wood, construction, and demolition
Turlock Transfer	Turlock	1,872 tons/day	N/A	N/A	N/A	Mixed municipal, industrial, tires, green materials, wood, animal carcass, construction, and demolition
Fink Road Landfill	Crows Landing	14,640,000	8,240,435	2012	2023	Municipal, compost, industrial, hazardous materials, construction, and demolition
Gilton Resource Recovery and Transfer Facility	Modesto	1,200 tons/day	N/A	N/A	N/A	Mixed municipal, industrial, tires, agricultural, wood, construction, and demolition
Highway 59 Disposal Site	Merced	30,012,352	28,025,334	2005	2030	Mixed municipal, green materials, wood, tires, and hazardous materials

Sources: California Department of Resources Recycling and Recovery (CalRecycle) 2020a, 2020b, 2020c, 2020d, and 2020e.
N/A = information not available.

3.18.3.2 Study Area Water, Wastewater and Stormwater

The study area includes the service areas of utility providers that serve the cities of Ceres, Turlock, Livingston, Atwater, and Merced.

Water

Within the cities of Ceres, Turlock, Livingston, Atwater, and Merced, potable water supply is derived primarily from groundwater sources. Each city owns and operates its own municipal wells and a distribution system that transports potable water to end users. The Turlock Irrigation District is currently developing a water treatment plant and distribution system that would provide surface water from the Don Pedro Reservoir to Turlock, Modesto, and Ceres. (Turlock Irrigation District 2018; City of Turlock. 2016). Additionally, the Stanislaus Regional Water Authority is in the process of implementing its Regional Surface Water Supply Project, which includes a new treatment plant that will deliver water from the Tuolumne River to the cities of Ceres and Turlock. The first phase of construction of this project began in 2018 and the final phase of construction is anticipated to be completed in 2023 (Stanislaus Regional Water Authority 2020).

Cities may anticipate differences in water supply and demand between normal, single dry, and multiple dry years. Each of the cities, where the Project would be located, include water shortage contingency planning as a part of their Urban Water Management Plans (City of Ceres 2016, City of Turlock 2016, City of Livingston 2016, City of Atwater 2019, City of Merced 2017, City of Stockton 2016). The Cities of Ceres and Turlock identify that water supplies and demands during single dry and multiple dry years would be equivalent to those during normal years, and if necessary, the Cities of Ceres and Turlock plans to meet any additional demand through increased groundwater pumping and water conservation, ensuring that the City will maintain 100 percent supply reliability (City of Ceres 2016 and City of Turlock 2016). The City of Livingston identifies that water demand during dry years will decrease by 10 percent due to mandatory water use restrictions and by 25 percent during multiple dry years (City of Livingston 2016). As such, the City of Livingston identifies that water demands during single and multiple dry years would be met due to mandatory water use restrictions, increased groundwater production (City of Livingston 2016). Nonetheless, the City continues its efforts towards water conservation, groundwater recharge, and groundwater management (City of Livingston 2016). The City of Atwater identifies that water demands would be met during single and multiple dry years (City of Atwater 2019). The City of Merced identifies that water demands during single dry and multiple dry years would be met through increased groundwater pumping (City of Ceres Merced 2017). The City of Stockton anticipates that the available supply of water from the Stockton East Water District and Woodbridge Irrigation District will decrease in single dry years, requiring lower overall water demand compared to normal years. In years one and two of multiple dry years, the City of Stockton anticipates supply and demand to remain the same as in normal years. In year three of multiple dry years, the City of Stockton anticipates that the available supply of water from Stockton East Water District and Woodbridge Irrigation District will decrease, requiring lower water demand than in normal years (City of Stockton 2016).

Table 3.18-4 summarizes water demand for the cities of Ceres, Turlock, Livingston, Atwater, Merced, and Stockton during normal years.

Table 3.18-4. Study Area—Water Supply and Demand by Jurisdiction

Jurisdiction	2020		2025		2030		2035	
	Supply	Demand	Supply	Demand	Supply	Demand	Supply	Demand
City of Ceres[a]	10,756	10,756	13,015	13,015	15,262	15,262	18,432	18,432
City of Turlock[a]	27,470	27,470	30,729	30,729	34,310	34,310	37,852	37,852
City of Livingston[a]	6,926	6,926	7,150	7,150	7,405	7,405	7,681	7,681
City of Atwater	8,213	8,213	8,525	8,525	8,849	8,849	9,185	9,185
City of Merced	31,260	31,260	33,287	33,287	35,875	35,875	37,829	37,829
City of Stockton[b]	69,200	34,654	75,700	36,856	75,700	39,217	92,100	41,749

Sources: City of Ceres 2016; City of Turlock 2016; City of Livingston 2016; City of Atwater 2019; City of Merced 2017; City of Stockton 2016.

[a] Water supply and demand values were provided in millions of gallons by the respective urban water management plan, the values were converted to acre-feet/year based on the following multiplier: 3.0688832459704 acre-feet.

[b] The City of Stockton's water supply and demand is included because there may be additional water use at the ACE Rail Maintenance Facility in Stockton with the Proposed Project.

Wastewater

Table 3.18-5 summarizes local wastewater treatment facilities for the cities of Ceres, Turlock, Livingston, Atwater, and Merced. Each city operated wastewater infrastructure typically consists of pipelines, lift stations, and pump stations that convey municipal wastewater to the treatment facilities.

Table 3.18-5. Study Area—Wastewater Treatment Facilities by Jurisdiction

Facility	Owner (Operating Agency[a])	Jurisdictions in the study area Served	Existing Flows (MGD)	Permitted Capacity (MGD)[b]
City of Ceres Wastewater Treatment Plant	City of Ceres	City of Ceres	3.7	4.5
Turlock Regional Water Quality Control Facility	City of Turlock	City of Turlock City of Ceres	8.5	20.0[c]
City of Livingston Domestic Wastewater Treatment Plant	City of Livingston	City of Livingston	1.06	2.0
Atwater Regional Wastewater Treatment Facility	City of Atwater (Veolia North America)	City of Atwater	N/A	6.0
City of Merced Wastewater Treatment Plant	City of Merced	City of Merced	N/A	12.0[d]

Sources: City of Ceres 2018; City of Turlock 2020b; City of Livingston 2020b; Central Valley Regional Water Quality Control Board 2011; City of Merced 2020b.

MGD = million gallons per day.

N/A = not available.

[a] Operating agency is listed in parentheses, if different from the facility owner.

[b] The permitted capacity of the facility is based on the average dry weather flow.

[c] The City of Ceres is under contract for 2.0 MGD of the facility's capacity (City of Ceres 2018).

[d] The City of Merced is currently undertaking an expansion of the facility to 16 MGD (and then up to 20.0 MGD in a subsequent phase); flows up to these limits are permitted pursuant to further civil and environmental review (Central Valley Regional Water Quality Control Board 2020a).

All the facilities listed in Table 3.18-5 operate in conformance with the National Pollutant Discharge Elimination System (NPDES) and Waste Discharge Requirements of the Central Valley Water Board (1993, 2014, 2015, 2018, 2019, 2020).

Stormwater

Stormwater facilities must be sufficient to convey runoff in a safe, cost-effective manner and prevent flooding on adjacent properties. The cities of Turlock, Livingston, Atwater, and Merced are permittees under the NPDES Phase II (MS4 permit). Regulation of water quality through the NPDES program is discussed in more detail in Section 3.10, *Hydrology and Water Quality*.

Turlock and Livingston operate their own municipal storm drain system. The cities of Atwater and Merced, along with Merced County, make up the Merced Storm Water Group storm sewer system. Facilities typically consist of storm drain inlets and catchment facilities in developed areas, which drain to pipeline systems, pump stations, and detention basins. Stormwater that is not stored in detention basins can be treated at the local wastewater treatment facility or discharged into a local waterbody.

The City of Turlock discharges stormwater to the San Joaquin River (City of Turlock 2020c). The City of Livingston discharges stormwater into Merced Irrigation District canals, which drain to Bear Creek and the Merced River (City of Livingston 2007). The cities of Atwater and Merced drain to a number of creeks throughout Merced, which eventually drain to the San Joaquin River (City of Merced 2002).

3.18.4 Impact Analysis

3.18.4.1 Methods for Analysis

Direct impacts on utilities and service systems would occur if the Proposed Project or the Atwater Station Alternative disrupted or damaged existing utilities infrastructure. To determine the potential for direct impacts on utilities and service systems to occur, the environmental footprint of the Proposed Project or the Atwater Station Alternative is compared to the locations of utilities infrastructure. For this analysis, utilities that would be potentially affected during construction and require protection in place or to be relocated are identified.

Indirect impacts on utilities and service systems would occur if the Proposed Project or the Atwater Station Alternative would result in demand for utilities that exceed the planned supply of the appropriate service provider, thereby resulting in the need for new entitlements or the construction of new utilities infrastructure. The demand for water, wastewater, stormwater, and solid waste resulting from the Proposed Project and the Atwater Station Alternative is determined for both construction and operation. Construction demand is assumed to conform to industry standards. Operational demand is dependent upon per-passenger demands and regulatory requirements related to utilities provision for landscaping and maintenance. Operational waste demand is based on existing waste generation rates at existing ACE stations. This demand is then compared to the planned supply (capacity) of the utility providers that serve the geographic area in which construction or operation would occur.

3.18.4.2 Thresholds of Significance

The CEQA Guidelines Appendix G (14 Cal. Code Regs. 15000, et seq.) has identified significance criteria to be considered for determining whether a project could have significant impacts on utilities and service systems.

An impact would be considered significant if construction or operation of the project would have any of the following consequences.

- 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.
- Would not have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.
- 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.
- 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.
- Violate federal, state, and local management and reduction statutes and regulations related to solid waste.

3.18.4.3 Impacts and Mitigation Measures

Impact USS-1	Construction of the Proposed Project could 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.
Level of Impact	**Potentially significant impact**
Mitigation Measures	USS-1: Implement utility relocation and disruption plans
Level of Impact after Mitigation	**Less than significant impact**

Impact Characterization and Significance Conclusion

Proposed Project

Construction

Relocation of Existing Utilities

Table 3.18-1 provides a list of utilities infrastructure present within the environmental footprint of the Proposed Project. In addition, there are several utilities that would be within the direct study area that have not been identified by service providers. Agencies that have not yet provided information on utilities within the study area are identified in Appendix C, *ACE Ceres-Merced Extension 15% Preliminary Engineering Plans*. Table 3.18-6 indicates which known utilities would be affected by the construction of the Proposed Project.

As demonstrated in Table 3.18-6, construction of the Proposed Project would conflict with existing utilities infrastructure, requiring the relocation of some existing utilities. It is possible that relocation or accidental disruption during construction could disrupt utility service or damage utilities, resulting in a potentially significant impact on utilities infrastructure.

Storm Water Drainage

As discussed in Section 3.10, *Hydrology and Water Quality*, construction would entail grading, trenching, and other ground disturbance activities that could temporarily change drainage patterns in the vicinity of the environmental footprints for the Proposed Project. Construction staging areas could temporarily increase impervious surface area within the environmental footprints for the Proposed Project, resulting in increased stormwater runoff. However, as described in Section 3.10, SJRRC would implement a stormwater pollution prevention plan (SWPPP) as required by the NPDES program administered by the Regional Water Quality Control Board. The SWPPP would prevent ponding and ensure that stormwater runoff during construction would be controlled and would not require the relocation or construction of new storm water facilities.

Operations

Water and Wastewater Treatment

As described in Impact USS-2, local water providers and wastewater treatment plants have available capacity to serve the temporary, incremental demands associated with operation of the Proposed Project. Therefore, operation of the Proposed Project would not result in relocation or construction of new or expanded water or wastewater treatment facilities.

Storm Water Drainage

Track improvements associated with the Ceres to Merced Extension Alignment would not require storm water facilities. Typically, railroad track permits water to percolate through to the ground. As such, the addition of new track and track improvements associated with the Ceres to Merced Extension Alignment would not result in the creation of substantial new areas of impervious surface, and increases in stormwater runoff would be minimal. Installation of stormwater drainage or retention infrastructure would not be required along the track (there would be no impact).

The Turlock, Livingston, and Merced Stations would establish new paved platforms and parking areas, and the proposed Merced Layover & Maintenance Facility would result in paved maintenance facilities and a parking area. These improvements would potentially change drainage patterns and result in increased stormwater runoff due to the addition of impervious areas and require installation of stormwater conveyance infrastructure. Stormwater infrastructure would be installed or reconfigured as necessary to serve these new paved areas at existing stations. New facilities would require installation of stormwater conveyance infrastructure. The new storm drains would connect to the local storm drain system. The stormwater facilities design would be required to comply with state and local requirements for storm drain design, including integration of post-construction stormwater controls into site design, as described in Section 3.10, *Hydrology and Water Quality*. Design of storm drains would be consistent with municipal requirements. The implementation of these storm water facilities would help avoid any water quality impacts, and the environmental effects from installing these facilities would be less than significant.

Electric Power

Electric power for the proposed stations and the Merced Layover & Maintenance Facility is assumed to be provided by PG&E as these facilities are within PG&E's electric service area. It is assumed that PG&E's existing electric power facilities would be able to accommodate the slight increase in electricity demand from the new stations and the Merced Layover & Maintenance Facility, as PG&E generates power from various sources and provides connections to the larger power grid. Though local connections to electric transmission facilities may be necessary, the amount of electricity needed for the Proposed Project, is not anticipated to result in the need for new or expanded electric power facilities. Thus, impacts from operation of the Proposed Project would be less than significant.

Natural Gas

The Proposed Project area is within PG&E's natural gas service area. Natural gas would only be required at the Merced Layover & Maintenance Facility. The amount of natural gas needed is anticipated to be minor and it is assumed that the small amount of natural gas needed for these buildings would be within the capacity of the existing PG&E natural gas system. Though local connections to natural gas facilities would be needed, new or expanded natural gas facilities would not be required, and thus impacts from operation of the Proposed Project would be less than significant.

Telecommunications Facilities

The proposed stations and the Merced Layover & Maintenance Facility would require connections to telecommunication utilities. The stations and the Merced Layover & Maintenance Facility are located in urbanized areas where telecommunication facilities already exist and away from known sensitive areas. As such, these connections are not expected to cause significant environmental effects and these connections are not expected to require the construction or expansion of these facilities. Therefore, impacts from operation of the Proposed Project would be less than significant.

Atwater Station Alternative

Table 3.18-6 indicates which known utilities would be affected by the construction of the Atwater Station Alternative. While it is not anticipated that the Atwater Station Alternative would interfere with utilities provision during construction, it is possible that relocation or accidental disruption during construction could disrupt utility service or damage utilities, resulting in a potentially significant impact on utilities infrastructure. As demonstrated in Table 3.18-6, the Atwater Station Alternative is expected to affect more utilities than the proposed Livingston Station. Nonetheless, both would result in the same impact (less than significant after mitigation).

Operation of the Atwater Station Alternative would have a similar water demand and would generate a similar amount of wastewater as the proposed Livingston Station. As such, for the same reasons as the Proposed Project the Atwater Station Alternative would have the same less than significant impacts on water and wastewater treatments facilities. In addition, the Atwater Station Alternative would result in a similar change to drainage patterns and stormwater runoff as the proposed Livingston Station, and would be required to adhere to the same regulations as the Proposed Project. As such, for the same reasons as the Proposed Project the Atwater Station Alternative would have the same less than significant impacts on storm water facilities. Like the proposed Livingston Station, the Atwater Station Alternative would not require the use of natural gas and would therefore have no impact on natural gas facilities. Finally, the Atwater Station

Alternative would require connections to electrical and telecommunication utilities and for the same reasons as the Proposed Project, the Atwater Station Alternative would result in a less than significant impact on electric power facilities and telecommunication facilities.

Table 3.18-6. Utilities Potentially Affected

Facilities	To be Protected in Place						To be Relocated					
	Irrigation Canals	Gas and Electric Lines	Water Lines	Sewer Lines	Storm Drains	Telecom Lines	Irrigation Canals	Gas and Electric Lines	Water Lines	Sewer Lines	Storm Drains	Telecom Lines
Proposed Project												
Ceres to Merced Extension Alignment	1	85	16	23	6	51	3	6	0	0	0	7
Turlock Station	0	2	1	3	2	0	0	0	0	0	0	0
Livingston Station	0	0	0	0	0	0	0	0	0	0	0	1
Merced Station	0	0	0	0	0	0	0	0	0	0	0	0
Merced Layover & Maintenance Facility	0	0	0	0	0	0	0	0	0	0	0	0
Alternative Analyzed at an Equal Level of Detail												
Atwater Station Alternative	0	1	1	1	0	1	0	0	0	0	0	0

Notes: Agencies that have not yet provided information on utilities within the study area are identified in the 15% preliminary engineering utility plans (Appendix C).

Mitigation Measures

Mitigation Measure USS-1 would apply to the construction of the Proposed Project. In addition, Mitigation Measure USS-1 would apply to the construction of the Atwater Station Alternative**.**

Mitigation Measure USS-1: Implement construction road traffic control plan

San Joaquin Regional Rail Commission (SJRRC) or its contractor will coordinate with all utility providers during final design and construction stages to identify utilities potentially impacted by the project, including existing and planned utilities. A utility relocation plan will be developed and implemented to minimize service interruption and safely relocate, repair, or replace affected utilities. SJRRC or its contractor will assist utility owners in developing a communications plan to inform end users of potential planned service interruptions.

Significance with Application of Mitigation

Construction of the Proposed Project could result in significant impacts on utility infrastructure if construction activities resulted in the interruption of service or damage to the infrastructure. Mitigation Measure USS-1 will require the SJRCC to coordinate with utilities providers to address the potential for utility disruption and to minimize service interruptions. SJRRC will work with utility owners during final engineering design and construction of the Proposed Project to relocate utilities or protect them in place. SJRRC will assist utility owners in preparing communications materials to inform end users of planned service interruptions. With implementation of Mitigation Measure USS-1, impacts would be reduced to a less-than-significant level.

For the same reasons listed above, with implementation of Mitigation Measure USS-1.1 impacts on utilities infrastructure due to the construction of the Atwater Station Alternative would be reduced to a less-than-significant level.

Impact USS-2	There would be sufficient water supplies available to serve the Proposed Project (due to construction operations) and reasonably foreseeable future development during normal, dry, and multiple dry years; and construction and operations of the Proposed Project would not result in a determination by the wastewater treatment provider that serves or may serve the Proposed Project that it does not have adequate capacity to serve the Proposed Project's projected demand in addition to the providers existing commitments.
Level of Impact	**Less than significant impact**

Impact Characterization and Significance Conclusion

Proposed Project

Construction

Construction of the Proposed Project, including the new stations, new tracks, and track upgrades, would require water use for concrete work, earthwork compaction, dust control, and irrigation for reseeded areas. The construction contractor would truck in water to the construction site. In urban areas, contractors could fill their water trucks from local hydrants. The exact source of the water used during construction at different locations is unknown at this phase in the design. Water use during construction would be temporary and would not place a long-term demand on local service

providers. As shown in Tables 3.18-4, local water providers would have available capacity to serve the temporary, incremental demands associated with construction of Proposed Project. It is expected that local water providers would have sufficient water supplies available to serve construction in normal, dry, and multiple dry years. During water shortages, including droughts, local water providers would meet shortfalls through implementation of water shortage contingency plans that are part of their respective urban water management plans. Thus, impacts from construction of the Proposed Project would be less than significant.

Construction contractors of the Proposed Project would provide portable toilets at construction sites. The wastewater would be hauled offsite and dumped at a wastewater treatment facility. This source of wastewater would be temporary during construction. The small amount of wastewater created during construction (from portable restroom facilities) could be accommodated by wastewater treatment facilities within the Proposed Project area. As shown in Table 3.18-5, local wastewater treatment plants would have available and adequate capacity to serve the temporary, incremental demands associated with construction of Proposed Project. The Proposed Project would be expected to result in a determination by the wastewater treatment providers within the Proposed Project area that they have adequate capacity. Therefore, impacts from construction of the Proposed Project would be less than significant.

Operations

With operation of the Proposed Project, new Altamont Corridor Express (ACE) service would be introduced from Ceres to Merced, with new stations, resulting in an associated increase in use of water and generation of wastewater. There are, however, no new restrooms proposed at the Turlock, Livingston, or Merced Stations.

At the new stations, primary water demand would be for landscape irrigation and maintenance. The Cities of Turlock, Livingston, and Merced do not plan to utilize recycled water for landscaping within their current water planning forecasts (City of Turlock 2016; City of Livingston 2016;; City of Merced 2017). The Turlock, Livingston, and Merced Stations would be required to comply with each respective municipalities' water efficient landscaping and irrigation ordinances (Turlock Municipal Code Chapter 9-2, Section 109; Livingston Municipal Code Title 9, Chapter 11; and Merced Municipal Code Chapter 17.60) pursuant to statewide Green Building Standards. It is anticipated that landscaping and maintenance would not substantially increase water demand at new stations. As shown in Tables 3.18-4 and 3.18-5, local water providers and wastewater treatment plants would have available capacity to serve the incremental demands associated with landscape irrigation at new stations.

Proposed Project operations would consist of new passenger rail service between Ceres and Merced. It is anticipated that two additional train sets would service the new passenger rail service between Ceres and Merced. Water is used and wastewater is generated during train washing, engine maintenance, and other maintenance activities at the ACE Rail Maintenance Facility in Stockton. The two additional trains would result in an increased demand of 80,000 gallons of water per month (3 acre-feet/year) at either the ACE Rail Maintenance Facility in Stockton or at the Merced Layover & Maintenance Facility for train cleaning and maintenance. This water demand is less than 0.01 percent of Stockton's anticipated supply and less than 0.01 percent of Merced's anticipated supply at the time of buildout of the Project (see Table 3.18-4). As addressed in the 2018 ACE Extension Lathrop to Ceres/Merced EIR, the ACE Maintenance Facility discharges to the City of Stockton's Regional Wastewater Control Facility, which complies with the wastewater treatment requirements

of the Central Valley Water Board (San Joaquin Regional Rail Commission 2018) The Merced Layover & Maintenance Facility would be required to comply with the Industrial General Permit, which requires the use of best management practices, best available technology economically achievable, and best conventional pollutant control technology to reduce and prevent discharges of pollutants to meet applicable water quality standards. Any increases in wastewater generation at new stations—as well as the increased wastewater generation at the ACE Maintenance Facility or the Merced Layover & Maintenance Facility—would not be of a magnitude to require the expansion of existing or construction of new wastewater treatment infrastructure or result in violations of wastewater treatment requirements.

The wastewater and water providers within the Proposed Project area that may serve the Proposed Project stations currently have capacity for existing and future demand. Therefore, water and wastewater generation from operation of the Proposed Project is expected to result in a determination by the wastewater treatment provider that serves the Proposed Project that it has adequate capacity to serve the Proposed Project's projected demand in addition to the providers existing commitments. As stated above, local water providers would have sufficient water supplies available to serve the Proposed Project and reasonably foreseeable future development during normal, dry, and multiple dry years. During water shortages, including droughts, local water providers would meet shortfalls through implementation of water shortage contingency plans. Therefore, impacts from operation of the Proposed Project would be less than significant.

Atwater Station Alternative

Construction and operation of the Atwater Station Alternative is expected to result in the same water demand and wastewater treatment demand as construction of the Livingston Station. Thus, for the same reasons listed above, construction and operation of the Atwater Station Alternative is expected to result in a determination by the wastewater treatment provider that serves the Atwater Station Alternative that it has adequate capacity to serve the projected demand of the Atwater Station Alternative in addition to the providers existing commitments. In addition, local water providers would have sufficient water supplies available to serve the Atwater Station Alternative and reasonably foreseeable future development during normal, dry, and multiple dry years. Impacts from construction and operation of the Atwater Station Alternative would be less than significant. There would be no difference in impact between the Atwater Station Alternative and the proposed Livingston Station.

Impact USS-3	Construction and operations of the Proposed Project 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; and/or violate federal, state, and local management and reduction statutes and regulations related to solid waste.
Level of Impact	**Less than significant impact**

Impact Characterization and Significance Conclusion

Proposed Project

Construction

Typical C&D waste would be generated during ground clearing, ROW work, and station construction associated with the Proposed Project. State and local regulations, including CALGreen, require that

contractors divert C&D waste from landfills by reusing or recycling C&D materials. Those materials that cannot be reused onsite would be conveyed to a solid waste facility that is permitted to accept C&D waste. As shown on Table 3.18-3, all the regional solid waste facilities accept C&D material, and the landfill facilities in the vicinity of the Proposed Project have sufficient remaining capacity (or a throughput) that would accommodate the temporary demand for waste disposal generated by construction of the Proposed Project. Additionally, as required by CALGreen, 65 percent of the C&D waste generated during construction would need to be recycled or diverted from the waste stream (2019 CALGreen 4.408 and 5.408).

Therefore, solid waste generated by construction of the Proposed Project would not be in excess of state or local standards, or the capacity of local infrastructure, and would not violate statutes and regulations related to solid waste. Thus, construction of the Proposed Project would have a less-than-significant impact related to solid waste.

Operations

Under the Proposed Project, new passenger rail service would be introduced from Ceres to Merced, with new stations between Ceres and Merced, resulting in an associated marginal increase in solid waste disposal at stations. In addition, the new Merced Layover & Maintenance Facility would generate solid waste associated with train maintenance activities.

In 2015, ACE generated approximately 3.5 tons per month at seven existing ACE stations, including the Fremont, Pleasanton, Livermore, Vasco Road, Tracy, Existing Lathrop/Manteca, and Stockton Stations (San Joaquin Regional Rail Commission 2018). Utilizing the acreages associated with each of the existing stations and the tons of solid waste generated in a month, a solid waste generation factor of 0.14 tons per acre per month is derived for ACE stations. With the Proposed Project, three new stations (Turlock Station, Livingston, and Merced Station) would become operational. Increased maintenance activities at the existing ACE Rail Maintenance Facility in Stockton and at the proposed Merced Layover & Maintenance Facility would also result in increases in solid waste generation. Table 3.18-6 provides the anticipated solid waste generation from the Proposed Project, utilizing the derived solid waste generation factor.

Table 3.18-7. Proposed Project Stations—Solid Waste Generation

Station/Facilities	Acreage	Anticipated Solid Waste Generation (tons monthly)
Turlock Station	3.6	0.49
Livingston Station	3.7	0.50
Merced Station	4.3	0.58
Merced Layover & Maintenance Facility	53.8	7.28
Total (monthly)	--	8.85
Total (annually)	--	106.2

Source: San Joaquin Regional Rail Commission 2018.

It is anticipated that operation of the Proposed Project would generate an additional 106.2 tons of waste annually, which is approximately an additional 212,400 pounds of solid waste annually. As shown in Table 3.18-3, the solid waste facilities that serve the Proposed Project have capacity to accommodate projected increases in solid waste disposal. Therefore, additional solid waste

generated by Proposed Project would be within the capacity of local landfills. In addition, waste diversion measures for new stations would be implemented in accordance with local regulations. Apart from solid waste generated at new stations and at the Merced Layover & Maintenance Facility, the Ceres to Merced Extension Alignment would not result in ongoing solid waste generation. Solid waste could occasionally be generated as part of routine track maintenance and would be diverted as required by the appropriate federal, state, and local regulatory guidance.

Thus, solid waste generated by operation of the Proposed Project would not be in excess of state or local standards or the capacity of local infrastructure and would not violate statutes and regulations related to solid waste. Thus, operation of the Proposed Project would have a less-than-significant impact related to solid waste.

Atwater Station Alternative

Construction

Similar to the Proposed Project, all C&D waste generated under the Atwater Station Alternative would be subject to the same regulatory requirements to reduce the waste stream. Therefore, solid waste generated by construction of the Atwater Station Alternative would not be in excess of state or local standards, or the capacity of local infrastructure, and would not violate statutes and regulations related to solid waste. Thus, construction of the Atwater Station Alternative would have a less-than-significant impact related to solid waste.

There would be no difference in the impact conclusions between the proposed Livingston Station and the Atwater Station Alternatives (both would result in a less-than-significant impact). However, it is expected that the Atwater Station Alternatives would generate more C&D waste than the proposed Livingston Station because the Atwater Station Alternatives would require the demolition of more buildings than the proposed Livingston Station.

Operations

It is anticipated that the amount of solid waste generated from operation of the Atwater Station Alternative would be similar to the solid waste generated by the proposed Livingston Station. Thus, for the same reasons listed above for the Proposed Project, solid waste generated by operation of the Atwater Station Alternative would not be in excess of state or local standards or the capacity of local infrastructure and would not violate statutes and regulations related to solid waste. Thus, operation of the Atwater Station Alternative would have a less-than-significant impact related to solid waste. There would not be a substantial difference in the operational impacts between the proposed Livingston Station and the Atwater Station Alternative.

3.18.4.4 Overall Comparison of the Proposed Livingston Station and Atwater Station Alternative

The Atwater Station Alternative and the proposed Livingston Station would have similar impacts on utilities and service systems. Operations of the Atwater Station Alternative and the proposed Livingston Station are expected to result in the same demand on utilities; therefore, there would be no difference in impact related to the demand of utilities. The only meaningful difference between the Atwater Station Alternative and the proposed Livingston Station is the number of utilities that would be affected during construction and the amount of C&D waste that would be generated during construction. The Atwater Station Alternative is expected to affect more utilities than the proposed

Livingston Station. It is expected that the Atwater Station Alternatives would generate more C&D waste than the proposed Livingston Station because the Atwater Station Alternatives would require the demolition of more buildings than the proposed Livingston Station.

Overall, the Atwater Station Alternative would have a slightly greater impact on utilities and service systems than the proposed Livingston Station.