

4.9 Traffic and Transportation

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This section analyzes the potential impacts on traffic, transportation, and circulation that could result from implementation of the Monterey Peninsula Water Supply Project (MPWSP or proposed project). The analysis is based on estimates of construction workers and vehicles associated with construction of the various components of the proposed project; California Department of Transportation (Caltrans) data on state highway traffic volumes; Transportation Agency for Monterey County (TAMC) data on local roadway traffic volumes; a field reconnaissance by a professional traffic engineer; and review of available maps of transit routes, bike routes, and recreational paths. The analysis focuses primarily on construction-related impacts because most impacts on traffic and transportation would occur during project construction. However, impacts related to long-term project operations and maintenance activities are also discussed.

4.9.1 Setting

The project area includes the cities of Marina, Sand City, Seaside, Monterey, and Pacific Grove, and unincorporated areas of Monterey County. Construction workers and construction vehicles would use regional highways and local roadways to transport materials and equipment and excavated spoils and fill material to and from the construction work areas. In addition, construction workers would install approximately 30 miles of pipeline within or adjacent to roadways and recreational trails.

4.9.1.1 Regional Roadways

Regional transportation within Monterey County, and within the project area, is supported by a system of highways, including U.S. Highway 101 (Highway 101) and several state routes (Highways 1, 68, 156, 183, and 218). These roadways provide regional access to the project area, the rest of Monterey County, and beyond.

Highway 101 is multi-lane freeway that connects to San Jose and points north and San Luis Obispo and points south. Regional traffic on Highway 101 connects to the project area via interchanges at Highway 156 in Prunedale and Highway 68 in Salinas. The most recent data published by Caltrans indicates the average daily traffic volume on Highway 101 ranges from about 84,000 vehicles north of the Highway 156 interchange; from 59,000 to 74,000 vehicles between Highway 156 and Highway 68; and about 58,000 vehicles south of Highway 68 (Caltrans, 2013).

Highway 1 varies from a two-lane surface state highway (with at-grade intersections) to a multi-lane freeway (with ramp interchanges). Highway 1 runs north-south directly through the project area, providing direct access to construction work areas in Marina and Seaside, and connecting with regional highways such as Highway 156 in Castroville, Highway 218 in Seaside and Del Rey Oaks, and Highway 68 in Monterey. The most recent data published by Caltrans indicate the average daily traffic volume on Highway 1 ranges from 41,000 to 45,000 vehicles between Highway 156 and Marina; and from 54,000 to 82,000 vehicles between Marina and the Monterey southern city limits (Caltrans, 2013).

Highway 68, also known as the Monterey-Salinas Highway, is a surface highway connecting Monterey with Salinas.¹ It is primarily a two-lane road, but there are four-lane segments as well as segments with a center two-way left-turn median. The intersections on Highway 68 at Highway 218–Monterra Road, Ragsdale Drive, and York Road are signalized with separate turn lanes. The most recent data published by Caltrans indicates the average daily traffic volume on Highway 68 ranges from 21,800 to 29,000 vehicles between the interchanges with Highway 1 in Monterey and with Reservation Road in Spreckels (Caltrans, 2013).

Highway 156 is a predominantly two-lane highway connecting Highway 101 with Highway 1 near Castroville. At Castroville Road it widens to four lanes and becomes a freeway, with interchanges at Highway 183 (Merritt Street) and Highway 1. The most recent data published by Caltrans indicates the average daily traffic volume on Highway 156 ranges from 28,000 to 31,000 vehicles between Highway 1 and Highway 101 (Caltrans, 2013).

Highway 183, also referred to as Merritt Street in the town of Castroville and Market Street in the city of Salinas, is a predominantly two-lane surface highway connecting Castroville (Highway 1) with Salinas (Highway 101); there are segments with four lanes or a center two-way left-turn median in Castroville. The most recent data published by Caltrans indicates the average daily traffic volume on Highway 183 ranges from 12,000 to 38,000 vehicles between Highway 1 and Highway 101 (Caltrans, 2013).

Highway 218, also known as Canyon Del Rey Boulevard, is a surface highway connecting Highway 1 (at a freeway interchange) with Highway 68. It has four lanes (plus turn lanes) through Seaside, narrowing to two lanes east of Fremont Street. The most recent data published by Caltrans indicates the average daily traffic volume on Highway 218 ranges from 19,000 to 24,000 vehicles between Highway 1 and Del Rey Oaks, and from 12,800 to 14,400 vehicles between Del Rey Oaks and Highway 68 (Caltrans, 2013).

4.9.1.2 Local Roadways

The project area has a network of roads that serve various purposes. *Arterial streets* are designed to carry the traffic of local and collector streets to and from freeways and other major streets, generally providing direct access to nonresidential properties. *Collector streets* are designed to move traffic between arterials to local roadways. *Local roads* generally provide direct access to

¹ Highway 68 (Holman Highway) also connects Carmel with Pacific Grove, and overlaps with Highway 1 between Carmel and Monterey.

residential land uses. The roadways that would be most affected by project construction activities (and, to a lesser extent, project operations) are primarily two-lane roads, although some potentially affected roadways have four travel lanes (two in each direction).

Table 4.9-1 presents roadway characteristics (e.g., number of travel lanes, bike lanes, parking availability, public transit service, etc.) for the local roadways that would be directly affected by project construction activities (i.e., installation of pipelines within road rights-of-way).

**TABLE 4.9-1
CHARACTERISTICS OF ROADS THAT COULD BE DIRECTLY AFFECTED
BY PROJECT CONSTRUCTION ACTIVITIES^a**

Roadway / Segment	No. of Travel Lanes	Average Daily Traffic Volumes ^b	Bike Route?	On-Street Parking?	Public Transit Lines ^c	Figure Reference
Seawater Intake System and MPWSP Desalination Plant						
Lapis Road: ▪ Del Monte Boulevard to CEMEX access road	2 lanes	–	No	No	N/A	Figure 3-3
Del Monte Boulevard: ▪ Highway 1 to Charles Benson Road	2 lanes	–	No	No	Monterey-Salinas Transit (MST) 27	Figure 3-4
Charles Benson Road: ▪ Del Monte Boulevard to MPWSP Desalination Plant	2 lanes	–	No	No	N/A	Figure 3-4
Desalinated Water Pipeline						
Charles Benson Road: ▪ Del Monte Boulevard to MPWSP Desalination Plant	2 lanes	–	No	No	N/A	Figure 3-4
Del Monte Boulevard: ▪ Charles Benson Road to Lapis Road	2 lanes	–	No	No	MST 27	Figure 3-4 Figure 3-6
▪ Lapis Road to north of Marina Greens Drive	2 lanes	2,990 to 3,375	No	No	MST 27	
▪ North of Marina Greens Drive to Beach Road	2 to 4 lanes	2,990 to 3,375	No	Yes	MST 27	
▪ Beach Road to Reservation Road	4 lanes (median)	–	No	No	N/A	
Transmission Main						
Del Monte Boulevard: ▪ Reservation Road to Highway 1 interchange	4 lanes (median)	24,850 to 26,700	No	No	N/A	Figure 3-6 Figure 3-8
Monterey Road: ▪ Fremont Boulevard to California Avenue	5 lanes	–	No	No	N/A	
Playa Avenue: ▪ Del Monte Boulevard to California Avenue	4 lanes	11,060 to 12,650	No	No	Jazz A, B, & C	Figure 3-8
Del Monte Boulevard: ▪ Playa Avenue to Tioga Avenue	4 lanes	–	No	Yes (southbound)	MST 8, 19, & 20	
Auto Center Parkway (La Salle Avenue): ▪ Del Monte Boulevard to Fremont Boulevard	4 lanes	–	No	Yes	MST 8 & Jazz A	

TABLE 4.9-1 (Continued)
CHARACTERISTICS OF ROADS THAT COULD BE DIRECTLY AFFECTED
BY PROJECT CONSTRUCTION ACTIVITIES

Roadway / Segment	No. of Travel Lanes	Average Daily Traffic Volumes ^b	Bike Route?	On-Street Parking?	Public Transit Lines ^c	Figure Reference
Transfer Pipeline						
Auto Center Parkway (La Salle Avenue): ▪ Del Monte Boulevard to Fremont Boulevard	4 lanes	–	No	No	N/A	Figure 3-8
La Salle Avenue ▪ Fremont Boulevard to Flores Avenue	2 lanes	–	No	Yes	MST Jazz A	Figure 3-7
▪ Flores Avenue to Yosemite Street	2 lanes	–	No	Yes	N/A	
Yosemite Street: ▪ La Salle Avenue to Hilby Avenue	2 lanes	–	No	Yes	MST 8 & 11; Jazz B	
Hilby Avenue: ▪ Yosemite Street to Mescal Street	2 lanes	–	No	Yes	N/A	Figure 3-7
General Jim Moore Boulevard: ▪ North and south of Hilby Avenue	4 lanes (median)	5,900 to 6,955	No	No	N/A	
Terminal Reservoir and Aquifer Storage and Recovery (ASR) Pump Station						
General Jim Moore Boulevard: ▪ North and south of Hilby Avenue	2 lanes	5,900 to 6,955	Yes	No	MST 12	Figure 3-7
ASR Pipelines, ASR Injection/Extraction Wells, and Terminal Reservoir						
General Jim Moore Boulevard: ▪ Hilby Avenue to Eucalyptus Road	2 lanes	6,270 to 6,790	No	No	MST 12	Figure 3-7
▪ Eucalyptus Road to Arloncourt Road	4 lanes (median)	6,180 to 6,710	No	No	MST 12	
Monterey Pipeline						
Del Monte Avenue: ▪ La Salle Avenue to Camino El Estero	4 lanes	37,785 to 39,150	No	No	MST (multiple routes) ^d	Figure 3-8
▪ Camino El Estero to Washington Street	6 lanes	–	No	No	MST 19 & 20	
Figuroa Street: ▪ Del Monte Avenue to Franklin Street	2 lanes	–	Yes	Yes	N/A	
Franklin Street: ▪ Figuroa Street to Pacific Street	2 lanes (one-way)	9,880 to 10,850	No	Yes	MST (multiple routes) ^e	
▪ Pacific Street to High Street	2 lanes	8,085 to 8,640	No	Yes	MST (multiple routes) ^e	
High Street: ▪ Franklin Street to the Presidio of Monterey	2 lanes	–	No	Yes	N/A	
<i>NOTE: The Monterey Pipeline segment that traverses the Presidio of Monterey would be constructed on federal property within an existing CalAm easement where public access (vehicle, bicycle, pedestrian, etc.) is restricted. Therefore, roadway characteristics along this segment are not provided.</i>						
Spencer Street: ▪ Presidio of Monterey to Eardley Avenue	2 lanes	–	No	Yes	N/A	Figure 3-9

**TABLE 4.9-1 (Continued)
CHARACTERISTICS OF ROADS THAT COULD BE DIRECTLY AFFECTED
BY PROJECT CONSTRUCTION ACTIVITIES**

Roadway / Segment	No. of Travel Lanes	Average Daily Traffic Volumes ^b	Bike Route?	On-Street Parking?	Public Transit Lines ^c	Figure Reference
Eardley Avenue: ▪ Spencer Street to 9th Street (Eardley Pump Station)	2 lanes	–	No	Yes	N/A	
Valley Greens Pump Station (both site options)						
Carmel Valley Road: ▪ Valley Greens Road to Williams Ranch Road	2 lanes	–	No	Yes	MST 24	Figure 3-2
Ryan Ranch–Bishop Interconnection Improvements						
Highway 68 (Monterey-Salinas Highway): ▪ Ragsdale Drive to Citation Court	2 lanes	17,540 to 23,345	No	No	MST 8, 13, 15, & 56	Figure 3-10
Ragsdale Drive: ▪ Highway 68 to Upper-Lower Ragsdale Drive	4 lanes	–	No	No	MST 8, 13, 15, & 56	
Lower Ragsdale Drive: ▪ Ragsdale Drive to Wilson Road	2 lanes	–	Yes	No	N/A	
Wilson Road: ▪ Lower Ragsdale Drive to Citation Court	2 lanes	–	Yes	No	MST 8, 13, 15, & 56	
Main System–Hidden Hills Interconnection Improvements						
Terra Grande Drive: ▪ Telerana Way to northern terminus	2 lanes	–	No	No	N/A	Figure 3-10
Upper Tierra Grande Booster Station Access Road: ▪ Terra Grande Drive to northern terminus	2 lanes	–	No	No	N/A	

^a The exact locations of the proposed pipelines relative to the roadways listed in this table (i.e., within the travel lanes, within the right-of-way but not within the travel lanes, or outside the right-of-way) are not known at this time. To inform the reader of potential impacts (as described under Impact 4.9-2), the information in the table is based on the conservative assumption that roadway travel lanes would be affected.

^b Average daily traffic volumes provided by the Transportation Agency for Monterey County (TAMC, 2010).
– = no data available

^c Public transit information provided by Monterey-Salinas Transit (MST, 2013).
N/A = not applicable

^d MST routes along this segment of Del Monte Avenue include Routes 2X, 12, 19, 20, 55, 71, 72, 74, 75, 76, and 77.

^e MST routes along this segment of Franklin Street include Routes 3, 19, 20, 55, 70, 71, 72, 74, 75, 76, and 77.

SOURCE: ESA, 2014.

4.9.1.3 Traffic Operating Conditions on Roadways

The operating conditions of a roadway, as measured by the level of traffic congestion experienced by motorists, are described as the level of service (LOS). There are six service levels ranging from LOS A as the best operating condition (free-flow conditions with limited travel delays) to LOS F as the worst-case condition (congested or overloaded roadways with extremely long delays). LOS A through D generally represent traffic volumes that are less than roadway capacity, while LOS E represents at-capacity conditions. The six service levels cover the entire range of

roadway operating conditions that might occur. The LOS of a particular roadway segment is based on several factors, including traffic volumes, number of lanes, type of intersection control, speed and travel time, traffic interruptions, and driving comfort and convenience. It is important to note that LOS standards are intended to regulate long-term traffic increases resulting from the operation of new development and do not apply to construction projects whose temporary traffic-volume increases end when construction activities end.

The Circulation Element of the *2010 Monterey County General Plan* establishes a traffic level-of-service standard of LOS D for county roads and intersections (Policy C-1.1). Monterey County plans to achieve the LOS D standard on county roads and intersections by 2027, with some exceptions (Monterey County, 2010).

Cities in the affected area (e.g., Monterey and Marina) have a similar LOS D standard for roads and intersections within their jurisdictions; the City of Seaside has an LOS C standard. Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D.

4.9.1.4 Railroads

Amtrak provides passenger rail service in Monterey County. The Coast Starlight, which has daily northbound and southbound departures (with Seattle and Los Angeles as the final destinations), serves Salinas. The Union Pacific Railroad (UPRR) provides freight service in Monterey County.

The TAMC owns a 13-mile segment of railroad right-of-way between Castroville (where it connects with the UPRR) and Monterey (where it terminates at Cannery Row). Known as the Monterey Branch Line, the right-of-way passes through the cities of Marina and Seaside as well as the former Fort Ord military base. In Seaside and Monterey, several portions of the TAMC right-of-way have been paved over to accommodate recreational trails.

4.9.1.5 Public Transit

The Monterey-Salinas Transit (MST) line provides bus service within northern Monterey County and southern Santa Cruz County. In Monterey County, bus service is provided between the cities of Monterey and Salinas, Marina and Watsonville, Salinas and Watsonville, and south from Salinas to Gonzales. In addition, the MST also provides bus service within the cities of Gonzales, Marina, Monterey, Pacific Grove, Salinas, and Seaside. Bus routes within and around the project area include Routes 3, 8, 11, 12, 19, 20, 27, 71, 72, 73, 74, 75, 76, 77, 79, 91, Jazz A, Jazz B, and Jazz C (MST, 2013). **Table 4.9-1**, above, indicates the project area roadways that are shared with public transit routes.

4.9.1.6 Bicycle Routes and Pedestrian Paths

Within Monterey County, bicycle travel for both commuting and recreational purposes is common. A network of bicycle facilities, including Class I (bicycle paths), Class II (bicycle lanes, striped in roads), and Class III (bicycle routes without striping), extend throughout the county (as well as the project area) and are frequently located along the right-of-way of roadways or railroads. For example, the 18-mile-long Class I Monterey Peninsula Recreational Trail (also known as the

Monterey Bay Coastal Bike Path) originates at Merritt Street in Castroville and heads south along Del Monte Boulevard to Canyon Del Rey Boulevard in Seaside. From there the trail follows the TAMC right-of-way and terminates in Pacific Grove near Forest Avenue (MTY County.com, 2013). As part of the proposed project, approximately 26 miles of underground pipeline would be installed within or adjacent to the Monterey Peninsula Recreational Trail and TAMC right-of-way. There are numerous other designated bike routes, some with designated bike lanes, in and around the project area. **Table 4.9-1** indicates the project area roadways that have bikeways.

The level of pedestrian facilities (e.g., sidewalks versus edge-of-road paths) and volumes of pedestrians vary depending on location. However, automobiles are the predominant travel mode in the project area.

4.9.2 Regulatory Framework

4.9.2.1 Federal and State

Caltrans is responsible for planning, designing, constructing, operating, and maintaining all state-owned roadways in Monterey County. In California, Caltrans implements federal interstate highway standards. Caltrans requires that project proponents seeking to conduct construction activities within a state-owned right-of-way obtain a Caltrans encroachment permit.

4.9.2.2 Applicable State, Regional, and Local Land Use Plans and Policies Relevant to Traffic and Transportation

Table 4.9-2 describes the traffic and transportation related regional and local land use plans, policies, and regulations relevant to the MPWSP and that were adopted for the purpose of avoiding or mitigating an environmental effect. Also included in **Table 4.9-2** is an analysis of project consistency with such plans, policies, and regulations. Where the analysis concludes the proposed project would not conflict with the applicable plan, policy, or regulation, the finding is noted and no further discussion is provided. Where the analysis concludes the proposed project may conflict with the applicable plan, policy, or regulation, the reader is referred to Section 4.9.3, Impacts and Mitigation Measures, for additional discussion.

Transportation Agency for Monterey County

The TAMC is an independent association of local officials that oversees planning and funding of regional transportation improvements throughout Monterey County. The agency prepares the Regional Transportation Plan and oversees the implementation of its recommended improvements.

Association of Monterey Bay Area Governments

The Association of Monterey Bay Area Governments (AMBAG) is the federally designated Metropolitan Planning Organization (MPO) for the tri-county Monterey Bay region. It is the lead agency responsible for developing and administering the transportation plans and programs that receive federal funds in Monterey, San Benito, and Santa Cruz Counties. As the MPO, AMBAG acts as a forum for cooperative decision-making in the development of transportation plans,

programs, and recommendations. AMBAG also develops and maintains a regional travel-demand forecasting model used to plan regional transportation facilities and assess development proposals.

Local Agencies

The incorporated cities of Monterey, Marina, Sand City, and Seaside have adopted General Plans, policies, and capital improvement programs that regulate development and transportation improvements within their jurisdictions. The cities administer encroachment permits for work performed within the rights-of-way of their respective roadways.

Monterey County Public Works Department

The Monterey County Public Works Department is responsible for maintaining roads, bridges, and related facilities within the unincorporated area of the county. The Public Works Department works with the Monterey County Planning Department to review land development applications for compliance with local and state regulations (i.e., private roads, driveways, and county-maintained roads). The Public Works Department administers encroachment permits for work performed within county rights-of-way (such as underground utility work, and driveways and road approaches); permits street closures; and issues transportation permits for county roads.

**TABLE 4.9-2
APPLICABLE STATE, REGIONAL AND LOCAL LAND USE PLANS AND POLICIES RELEVANT TO TRAFFIC AND TRANSPORTATION**

Project Planning Region	Applicable Plan	Plan Element/Section	Project Component(s)	Specific Plan, Policy, or Ordinance	Relationship to Avoiding or Mitigating a Significant Environmental Impact	Project Consistency with Plan, Policy, or Ordinance
City of Marina (coastal zone and inland areas)	City of Marina General Plan	Community Infrastructure	Subsurface Slant Wells, Source Water Pipeline, Desalinated Water Pipeline, Transmission Main	Policy 3.3: The intent of the General Plan Transportation and Infrastructure Element is to ensure that the requirements for transportation, water supply, wastewater collection and treatment, storm water drainage, and solid-waste disposal generated by existing and future development are adequately provided for. It is also the intent of this section to ensure, to the maximum extent possible, that the provision of such services does not have a deleterious effect on either natural resources or the quality of life of residents of Marina or other potentially affected areas. The major concerns of this section are outlined below: 6. Protect existing and future residential areas from through-traffic that creates safety, noise, and pollution problem.	This policy is intended to protect residential areas from traffic-induced safety hazards, disruptive noise levels, and air pollutants.	<u>Consistent:</u> The subsurface slant wells would not be staffed. Routine and periodic site visits from CalAm personnel would be minimal (no more than 4 roundtrips or 8 one-way trips per day) and would not generate traffic in residential areas. Pipelines would be periodically inspected and repaired, as needed, but would not generate a substantial number of new vehicle trips.
City of Marina (coastal zone)	The City of Marina Local Coastal Land Use Plan	Policies	Subsurface Slant Wells, Source Water Pipeline, Desalinated Water Pipeline, Transmission Main	Policy 1: Insure access to and along the beach, consistent with the recreational needs and environmental sensitivity of Marina Coastal area.	This policy is intended to maintain public access to and along the shoreline.	<u>Consistent:</u> Project construction may have short-term indirect effects on shoreline access (i.e., increased traffic) during the construction period. Most project components proposed within the coastal zone would ultimately be buried underground and would not preclude public access to or along the coast. With coastal erosion, there is potential for portions of the subsurface slant wells to become exposed, which could affect access along the shoreline. This issue is addressed in Section 4.2, Geology, Soils, and Seismicity. Specifically, please refer to Table 4.2-6 for additional discussion of the project's conformity with applicable Marina Local Coastal Land Use Plan policies related to beach erosion.
City of Monterey (coastal zone)	California Coastal Act	Development	Monterey Pipeline	Section 30253: Minimization of adverse impacts. New development shall do all of the following: d. Minimize energy consumption and vehicle miles traveled.	This policy is intended to protect air quality and conserve energy.	<u>Consistent:</u> Any increase in the number of vehicle trips associated with the subsurface slant wells would be negligible. Pipelines would be periodically inspected and repaired, as needed, but would not generate a substantial number of new vehicle trips.
City of Monterey (coastal zone)	California Coastal Act	Public Access	Monterey Pipeline	Section 30210: Access; recreational opportunities; posting. In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.	This policy is intended to maintain public access to recreational areas and resources.	<u>Consistent:</u> Project construction may have short-term indirect effects on shoreline access (i.e., increased traffic) during the construction period. However, the Monterey Pipeline would be buried underground and would not substantially affect long-term public access to or along the coast.
City of Monterey (coastal zone)	California Coastal Act	Public Access	Monterey Pipeline	Section 30211: Development not to interfere with access. Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.	This policy is intended to maintain public access to and along the shoreline.	<u>Consistent:</u> Project construction may have short-term indirect effects on shoreline access (i.e., increased traffic) during the construction period. Most project components proposed within the coastal zone would ultimately be buried underground and would not preclude public access to or along the coast.
City of Monterey (coastal zone)	Del Monte Beach Land Use Plan	Public Works	Monterey Pipeline	Policy 13: New development shall not preclude or interfere with planned public transportation improvements or facilities, e.g. restored rail service and associated shuttle service.	This policy is intended to protect public transportation facilities and operations within the coastal zone.	<u>Potentially Inconsistent:</u> Construction of the Monterey Pipeline may temporarily disrupt or could conflict with the schedule of planned improvements to public transportation service along Del Monte Avenue. This issue is addressed further in Impact 4.9-5, which identifies mitigation measures whose implementation would minimize or avoid this potential inconsistency.
City of Monterey (coastal zone)	Harbor Land Use Plan	Public Works, Parking, and Circulation	Monterey Pipeline	Policy 3.K: New development shall not preclude or interfere with planned public transportation improvements or facilities, e.g. restored rail service and associated shuttle service.	This policy is intended to protect public transportation facilities and operations within the coastal zone.	<u>Potentially Inconsistent:</u> Construction of the Monterey Pipeline may temporarily disrupt or could conflict with the schedule of planned improvements to public transportation service along Del Monte Avenue. This issue is addressed further in Impact 4.9-5, which identifies a mitigation measure whose implementation would minimize or avoid this potential inconsistency.

TABLE 4.9-2 (Continued)
APPLICABLE STATE, REGIONAL AND LOCAL LAND USE PLANS AND POLICIES RELEVANT TO TRAFFIC AND TRANSPORTATION

Project Planning Region	Applicable Plan	Plan Element/ Section	Project Component(s)	Specific Plan, Policy, or Ordinance	Relationship to Avoiding or Mitigating a Significant Environmental Impact	Project Consistency with Plan, Policy, or Ordinance
City of Seaside (coastal zone and inland areas)	City of Seaside General Plan	Circulation	Transmission Main, Transfer Pipeline, Monterey Pipeline, ASR Conveyance Pipelines, ASR Pump-to-Waste Pipeline, ASR Settling Basin, ASR Pump Station, Terminal Reservoir	Policy C-1.7: Reduce impacts on residential neighborhoods from truck traffic and related noise.	This policy is intended to protect residential areas from traffic congestion and disruptive noise levels.	<u>Potentially Inconsistent:</u> Construction-related traffic increases could result in substantial adverse effects on traffic conditions along neighborhood (residential) streets in the Seaside. This issue is addressed further in Impact 4.9-1, which identifies a mitigation measure whose implementation would minimize or avoid this potential inconsistency. Traffic-related noise is addressed in EIR Section 4.12, Noise and Vibration. (Refer to Table 4.12-3 for additional discussion of the project's conformity with applicable Seaside General Plan policies related to noise and vibration.)
County of Monterey (coastal zone and inland areas)	Monterey County General Plan	Circulation	MPWSP Desalination Plant, Source Water Pipeline, Brine Discharge Pipeline, Desalinated Water Pipeline, Salinas Valley Return Pipeline, Valley Greens Pump Station, Main System-Hidden Hills Interconnection Improvements, Ryan Ranch-Bishop Interconnection Improvements	Policy C-3.4: Strategies to encourage travel in non-peak hours shall be supported.	This policy is intended to avoid traffic congestion.	<u>Potentially Inconsistent:</u> Project construction would temporarily increase traffic and congestion during peak hours. This issue is addressed in Impact 4.9-1, which identifies a mitigation measure whose implementation would minimize or avoid this potential inconsistency.
County of Monterey (coastal zone and inland areas)	Monterey County General Plan	Circulation	MPWSP Desalination Plant, Source Water Pipeline, Brine Discharge Pipeline, Desalinated Water Pipeline, Salinas Valley Return Pipeline, Valley Greens Pump Station, Main System-Hidden Hills Interconnection Improvements, Ryan Ranch-Bishop Interconnection Improvements	Policy C-4.3: The needs of bicyclists and pedestrians, as well as provisions for utilities and drainage, shall be considered and, where appropriate, provided in all public rights-of-way in a manner that minimizes impacts to adjacent land uses.	This policy is intended to protect bicycle and pedestrian modes of transportation.	<u>Consistent:</u> Project construction may have short-term indirect effects on pedestrian and bicycle use within public rights-of-way (i.e., increased traffic and land closures) during the construction period. However, all project components proposed within public rights-of-way would ultimately be buried underground and would not substantially impede use of these rights-of-way for long-term pedestrian and bicycle use.
Fort Ord Reuse Authority (Seaside and Monterey County)	Base Reuse Plan	Circulation	ASR Pipelines, ASR Settling Basin, ASR Pump Station, Terminal Reservoir, Transfer Pipeline, Ryan Ranch-Bishop Interconnection Improvements	Pedestrian and Bicycles Policy B-1: Each jurisdiction shall provide and maintain an attractive, safe and comprehensive bicycle system. Program B-1.2: Each jurisdiction shall review new development to provide bicycle system facilities consistent with the Reuse Plan and the Bicycle System Plan concurrently with development approval.	This policy is intended to maintain a safe bicycle system.	<u>Consistent:</u> Project construction may have short-term indirect effects on the existing bicycle network within the former Fort Ord area (i.e., increased traffic and land closures) during the construction period. However, all project components potentially affecting the bicycle network would ultimately be buried underground and would not substantially impede long-term use of the bicycle network.
Fort Ord Reuse Authority (Seaside and Monterey County)	Base Reuse Plan	Circulation	ASR Pipelines, ASR Settling Basin, ASR Pump Station, Terminal Reservoir, Transfer Pipeline, Ryan Ranch-Bishop Interconnection Improvements	Transportation Demand Management Policy A-1: Transportation demand management (TDM) programs shall be encouraged. Program A-1.3: Require new development to incorporate design features that will strengthen TDM programs.	This policy is intended to provide adequate service levels for the local transportation system.	<u>Consistent:</u> Implementation of the proposed project would result in a negligible long-term increase in traffic volumes.
Fort Ord Reuse Authority (Seaside and Monterey County)	Base Reuse Plan	Circulation	ASR Pipelines, ASR Settling Basin, ASR Pump Station, Terminal Reservoir, Transfer Pipeline, Ryan Ranch-Bishop Interconnection Improvements	Land Use and Transportation Objective A: A transportation system that supports the planned land use development patterns. Program A-1.2: Each jurisdiction with lands at former Fort Ord shall require new developments to conduct a traffic analysis to determine impacts on traffic conditions, require measures such as TDM programs and traffic impact fees to mitigate these impacts.	This policy is intended to provide adequate service levels for the local transportation system.	<u>Consistent:</u> Implementation of the proposed project would result in a negligible long-term increase in traffic volumes.

SOURCE: City of Marina, 1982; City of Marina, 2000; City of Monterey, 2003a; City of Monterey, 2003b; City of Seaside, 2004; City of Seaside, 2012; Monterey County, 2010.

4.9.3 Impacts and Mitigation Measures

4.9.3.1 Significance Criteria

Appendix G of the CEQA Guidelines recommends the following significance criteria for the evaluation of traffic and transportation. Implementation of the proposed project would result in a significant impact related to traffic and transportation if it would:

- Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel as well as relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program, including but not limited to LOS standards, travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that would cause substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; or

Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. In addition to the above-listed CEQA significance criteria, the following criteria, derived from common engineering practices, are also used to evaluate potential project impacts:

- Substantially increase traffic safety hazards;
- Cause substantial damage or wear of public roadways by increased movement of heavy vehicles; or
- Parking interference during construction.

Based on the nature of the proposed project, no impacts related to the following significance criteria would result for the reasons described below:

Conflict with the applicable congestion management program, including LOS standards. LOS standards established by jurisdictions/agencies are intended to regulate long-term (permanent) traffic increases associated with new development and do not apply to short-term (temporary) traffic increases that occur during construction. As discussed under Impact 4.9-8, long-term operations of the MPWSP Desalination Plant would generate approximately 33 round-trips (66 one-way trips) per day (60 commute trips and 6 for deliveries). The greatest long-term increase in vehicle trips from MPWSP Desalination Plant operations would occur on Charles Benson Road. Based on existing traffic conditions and the industrial nature of the surrounding land uses on Charles Benson

Road, the projected increase is well within the roadway carrying capacity of this two-lane road and would not affect traffic conditions. None of the other proposed facilities (subsurface slant wells, ASR-5 and ASR-6 Wells, Terminal Reservoir, ASR Pump Station, and Valley Greens Pump Station) would be routinely staffed. However, routine and periodic site visits by CalAm staff to monitor operations and conduct maintenance would be required. The long-term operations and maintenance requirements for these proposed project facilities would be similar to those required for existing CalAm operations in the Monterey District service area. They would be incorporated into existing routine site visits and activities and would not generate a significant number of new vehicle trips. Any additional increase in the number of vehicle trips associated with these facilities would be negligible. Pipelines would be periodically inspected and repaired, as necessary, but otherwise would not generate vehicle traffic. Because implementation of the proposed project would not result in substantial long-term, ongoing effects related to traffic and congestion, typical LOS calculations were not performed for this traffic analysis, and county LOS standards were not used to evaluate potential project impacts. No impact related to conflicts with the applicable congestion management program or LOS standards would occur, and this significance criterion is not discussed further.

Changes in air traffic patterns. Construction and operation of the proposed project facilities would not affect air traffic patterns. Neither the construction equipment proposed for use during project construction nor the proposed facilities, once completed, would exceed the height restrictions established by nearby airports (Monterey Peninsula Airport and Marina Municipal Airport). Therefore, this significance criterion is not applicable and is not discussed further.

Permanent increases in traffic safety hazards due to a design feature or incompatible uses. The proposed project would not introduce new design features (e.g., new facilities or obstructions within public roadways) or alter existing features (e.g., road realignment). In addition, traffic generated during operation of the proposed project would be compatible with the mix of vehicle types (autos and trucks) currently using regional and local roadways. Therefore, this significance criterion is not applicable and is not discussed further. Temporary increases in traffic safety hazards during project construction are addressed under Impact 4.9-3, below.

Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. In general, adopted policies, plans, and programs pertaining to public transit, bicycle, and pedestrian travel are intended to be used for long-term planning purposes and do not apply to construction activities. Implementation of the proposed project would not permanently change the existing or planned transportation network in the affected jurisdictions of Monterey County, nor would the proposed project directly or indirectly eliminate alternative modes of transportation, transportation corridors, or facilities (e.g., bicycle paths, lanes, or routes; bus turnouts or bus routing; walkways, sidewalks, or crosswalks, etc.). Further, the proposed project would not prevent the use of any roads on which public transit routes operate, nor would it generate increased traffic volumes on roads used as public transit routes to a degree that would cause lengthy delays for transit riders or eliminate and/or reduce access to such transit facilities. Therefore, the proposed project would not conflict with policies, plans, or programs related to transit, bicycle, or pedestrian travel. Temporary impacts related to alternative modes of transportation during project construction are addressed in Impact 4.9-3 (increased traffic safety hazards) and Impact 4.9-5 (temporary disruptions to public transit during construction).

4.9.3.2 Approach to Analysis

Construction of the project components would create temporary effects on segments of the roadway network in the project area by increasing traffic volumes on roads that provide access to the construction work areas. There is also a potential for project construction to result in temporary lane closures and detours, particularly along pipeline segments that require construction within vehicle travel lanes or road shoulders. Construction-related traffic and changes in traffic circulation patterns could have an impact on traffic flow and traffic safety conditions on area roads. Construction characteristics, including crew sizes, techniques, materials and equipment, and the rate of construction, were used to estimate the number of vehicles that would be required for construction of the individual facilities.

Most impacts on traffic and transportation would occur during project construction. As a result, the following analysis is focused primarily on construction-related effects, although impacts related to long-term project operations and maintenance activities are addressed under Impact 4.9-8. As discussed above in Section 4.9.3.1, Significance Criteria, project operations and maintenance activities would generate a very small increase in traffic, thus eliminating the need to perform LOS calculations.

This analysis relies on published information regarding roadway characteristics and existing traffic volumes; preliminary construction information provided by the project applicant; and estimates of daily vehicle trips for construction activities and for long-term maintenance and operations, augmented by the professional traffic analyst's knowledge of the project area. Existing traffic volumes on project area roadways were gathered from the Caltrans website (for state highways) and the TAMC website (for local roads). Estimates of project-related traffic increases were added to existing traffic volumes, and a qualified expert in traffic analysis evaluated the effect of that percent increase on traffic flow, based upon professional experience and knowledge of the relevant roadways. The following factors were considered in the evaluation of construction-related traffic impacts on area roadways: (1) workers would commute to and from the construction work areas earlier and/or later than project-related construction truck trips (i.e., those trips would not happen at the same time); (2) daily traffic volumes on public roads typically vary from day-to-day (by about 10 percent, ± 5 percent), and any increased traffic within the typical daily fluctuation would not be perceptible to the average motorist; and (3) although construction-related vehicle trips would increase traffic volumes on local, two-lane roadways in the project area, the increase would not substantially affect traffic flow if the traffic volumes remained within the carrying capacity of the roads (roughly 10,000 to 15,000 vehicles per day for two-lane roads, depending on design features).

Construction activities associated with the subsurface slant wells and MPWSP Desalination Plant would occur 24 hours a day, 7 days a week. Twenty-four-hour construction activities are also required during development and completion of the proposed ASR-5 and ASR-6 Wells. To the extent feasible, pipeline installation and construction of all other proposed facilities would be conducted during daytime hours. However, some construction might be performed at night to expedite construction and meet the project schedule. The following describes typical construction methods to be used for proposed project components:

- Construction of non-linear facilities (e.g., the MPWSP Desalination Plant, pump stations, Terminal Reservoir, the proposed ASR injection/extraction wells) would typically involve site preparation, grading and excavation, equipment and materials deliveries, concrete formwork, building construction, installation of support equipment, installation of security fencing, and revegetation. Earthmoving activities would be performed using heavy construction equipment such as bulldozers, backhoes, cranes, and graders. Construction workers would pour concrete footings for tanks, lay pipelines, and make pipeline connections. Most pipelines would be installed using conventional open-trench construction techniques. However, trenchless technologies would be used where open-cut trenching is not feasible or desirable (e.g., state highway crossings, stream and drainage crossings, and areas with high utility congestion).
- Upon the completion of construction activities, roadways disturbed during pipeline installation would be restored to their preconstruction condition.

Construction activities would generate daily vehicle trips by construction work crews commuting to and from work each day; trucks hauling equipment and materials to the construction work areas; and trucks hauling excavated spoils and construction debris offsite for disposal. The number of construction-related trips would vary during the 2.5 years of project construction depending on the construction phase, the facilities being constructed, and the nature of the construction activities taking place. The impact analysis presented below is based on the estimated maximum number of daily and hourly vehicle trips that would be generated during periods of peak construction activity, based on a worst-case scenario that assumes all project components would be constructed simultaneously. Due to the construction durations associated with individual project components, the duration of overlap between components would be limited, and the actual traffic volumes generated during project construction are likely to be lower than described below.

The average pace of work for pipeline installation would be 150 to 250 feet per day. It is estimated that project construction activities would generate roughly 35,225 cubic yards of excess spoils and construction debris requiring offsite disposal. The average capacity for haul trucks would be 10 cubic yards per truck. Vehicle trips associated with spoils hauling and placement would occur throughout the 30-month construction duration. However, as noted below, not all of the proposed facilities are anticipated to generate excess spoils and construction debris that would be hauled offsite.

Construction equipment and materials associated with the subsurface slant wells, MPWSP Desalination Plant, and ASR injection/extraction wells would be stored within the respective construction work areas or at designated staging areas. Construction equipment and materials associated with pipeline installation would be stored along the pipeline easements and at nearby designated staging areas. To the extent feasible, parking for construction and worker vehicles would be accommodated within the construction work areas and on adjacent roadways.

Construction-related traffic occurring on access roadways in the “peak” direction on weekdays from 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. would coincide with peak-period commuter traffic and therefore would have the greatest potential to impede traffic flow. Traffic volume increases caused by project construction would be most noticeable on local, two-lane

roads (and, conversely, would be less noticeable on regional, multi-lane roads like Highway 1 and major arterials like Del Monte Boulevard). Project-generated truck trips would be dispersed throughout the day, thus lessening the effect on peak-hour traffic. Drivers could experience delays if they were traveling behind a construction truck. This analysis conservatively assumes that construction workers would commute to and from the worksites during the morning and afternoon peak traffic hours.

The discussion of construction-related impacts relies on the following: estimates of construction worker vehicle trips and construction truck trips associated with each project component, and assumptions related to potential overlap of individual facility construction. As described in Chapter 3, Project Description, Section 3.5.10, all project components would be constructed over the 2.5-year project construction period, with multiple facilities being constructed concurrently. The final construction schedule and phasing could vary from that presented in this assessment. However, the construction scenarios described in this section (estimated vehicle trips for the construction of each project component and the combined impacts associated with concurrent construction of multiple components) are conservative and have been developed to allow for a reasonable assessment of the nature and magnitude of potential construction impacts.

4.9.3.3 Summary of Impacts

Table 4.9-3 summarizes the proposed project’s impacts and significance determinations related to traffic and transportation.

**TABLE 4.9-3
 SUMMARY OF IMPACTS – TRAFFIC AND TRANSPORTATION**

Impacts	Significance Determinations
Impact 4.9-1: Temporary traffic increases on regional and local roadways due to construction-related vehicle trips.	LSM
Impact 4.9-2: Temporary reduction in roadway capacities and increased traffic delays during construction.	LSM
Impact 4.9-3: Increased traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways during construction.	LSM
Impact 4.9-4: Impaired emergency access during construction.	LSM
Impact 4.9-5: Temporary disruptions to public transportation, bicycle, and pedestrian facilities during construction.	LSM
Impact 4.9-6: Increased wear-and-tear on the designated haul routes used by construction vehicles.	LSM
Impact 4.9-7: Parking interference during construction.	LSM
Impact 4.9-8: Long-term traffic increases on regional and local roadways during project operations and maintenance.	LS

LS = Less than Significant impact, no mitigation required
 LSM = Less than Significant impact with Mitigation

4.9.3.4 Construction Impacts and Mitigation Measures

Impact 4.9-1: Temporary traffic increases on regional and local roadways due to construction-related vehicle trips. (*Less than Significant with Mitigation*)

Construction-related vehicle traffic could result in increased congestion and delays for vehicles. Because multiple project components would be constructed simultaneously, and the construction traffic for many of the components would use the same roads, the total number of construction-related vehicle trips along common construction access routes could be higher than the maximum number of daily vehicle trips associated with a single project component. Thus, the analysis below considers the estimated maximum number of daily construction-related vehicle trips and the construction access routes for each project component, the potential for the timing of construction of the various project components to overlap, and the total combined number of additional vehicle trips along the common access routes resulting from all concurrent construction activities. Project components that would increase traffic along common roads or road segments are grouped by area, and the effects of the combined construction-related traffic increases are compared to existing traffic volumes and road carrying capacities. Note that because total trips would be dispersed over various roads and road segments (based on the origins and/or destinations of those trips), the total trips generated by project components in a given area do not necessarily represent the total increase in vehicle trips on any single common road or road segment.

Table 4.9-4 presents the estimated number of daily construction worker trips and truck trips generated by construction activities for each project component. The total trips for each area reflect the maximum increase in traffic during periods of peak construction activities; peak construction periods are limited to the maximum duration of overlap among project components.

Project Components in North Marina Area

Subsurface Slant Wells. Construction access for the subsurface slant wells in the coastal area of northern Marina would use Highway 1, Del Monte Boulevard, Lapis Road, Reservation Road, and the existing CEMEX access road located off of Highway 1. It is assumed that construction activities for the subsurface slant wells would occur 24 hours a day, 7 days a week, and could occur anytime during the calendar year, for a total of 18 months of slant well construction. As shown in **Table 4.9-4**, up to 30 workers would be needed to construct the intake facilities located in the coastal area. Construction worker trips are not expected to exceed 33 round-trips (66 one-way trips) per day (60 commute trips and six midday trips). Materials and equipment deliveries would generate an estimated 20 truck round-trips (40 one-way trips) per day. There would be no truck trips related to the offsite disposal of excess spoils because excavated sand would be spread onsite.

MPWSP Desalination Plant. Construction vehicles would most likely use Highway 1, Del Monte Boulevard, Reservation Road, and Charles Benson Road to access the MPWSP Desalination Plant site. It is assumed that construction activities at the MPWSP Desalination Plant site would occur 24 hours a day, 7 days a week for approximately 25 months. As shown in **Table 4.9-4**, up to 88 workers would be needed to construct the MPWSP Desalination Plant. Construction workers

**TABLE 4.9-4
ESTIMATED MAXIMUM DAILY VEHICLE TRIPS DURING PROJECT CONSTRUCTION**

Project Facility	Duration (months)	Maximum Daily Totals		Daily Vehicle Trips			
		Workers	Trucks	Workers ^a		Trucks	
				Round-trip	One-Way	Round-trip	One-Way
North Marina Area (maximum duration of peak construction activities = 3 months)							
Subsurface Slant Wells ^b	18	30	20	33	66	20	40
MPWSP Desalination Plant	25	88	55	97	194	55	110
Source Water Pipeline	6	25	12	28	56	12	24
Brine Discharge Pipeline	3	12	6	14	28	6	12
Salinas Valley Return Pipeline	3	12	6	14	28	6	12
Desalinated Water Pipeline	6	25	12	28	56	12	24
TOTAL TRIPS ^c =		192	111	214	428	111	222
Seaside Area (maximum duration of peak construction activities = 3 months)							
Transmission Main	6	25	12	28	56	12	24
Transfer Pipeline	6	25	12	28	56	12	24
Terminal Reservoir / ASR Pump Station	18	40	25	44	88	25	50
ASR Conveyance Pipelines and ASR Pump-to-Waste Pipeline	3	25	12	28	56	12	24
ASR Injection/Extraction Wells	12	25	12	28	56	12	24
TOTAL TRIPS ^c =		140	73	156	312	73	146
Monterey/Pacific Grove Area (maximum duration of peak construction activities = 1 month)							
Monterey Pipeline	12	25	12	28	56	12	24
Ryan Ranch–Bishop Interconnection Improvements	1	12	6	14	28	6	12
Main System–Hidden Hills Interconnection Improvements	1	12	6	14	28	6	12
TOTAL TRIPS ^c =		49	24	56	112	24	48
Carmel Valley Area							
Valley Greens Pump Station	2	12	6	14	28	6	12

NOTES:

- ^a Worker round-trips are increased by 10 percent to account for miscellaneous midday trips by some of the workers.
- ^b Accounts for the nine permanent subsurface slant wells that would be constructed *after* construction of the test slant well and completion of the pilot program.
- ^c Because total trips would be dispersed over various roads and road segments (based on the origins and/or destinations of those trips), the total trips generated by project components in a given area do not necessarily represent the total increase in vehicle trips on a single common road or road segment.

SOURCE: ESA, 2014.

would generate up to 97 round-trips (194 one-way trips) per day (176 commute trips and 18 midday trips). Materials and equipment deliveries would generate an estimated 55 truck round-trips (110 one-way trips) per day. There would be no truck trips related to the offsite disposal of excess spoils because excavated soils not used for backfill would be spread or reused onsite.

Source Water Pipeline. Construction-related traffic would access the work areas for the Source Water Pipeline using Highway 1, Del Monte Boulevard, Reservation Road, and Charles Benson Road. As shown in **Table 4.9-4**, construction of the Source Water Pipeline would require up to 25 workers. Construction workers would generate up to 28 round-trips (56 one-way trips) per day (50 commute trips and six midday trips). This project component would generate an estimated 12 truck round-trips (24 one-way trips) per day for materials and equipment deliveries and hauling of excess spoils and construction debris offsite.

Brine Discharge Pipeline. Construction traffic for the Brine Discharge Pipeline would access the pipeline alignment using Highway 1, Del Monte Boulevard, Reservation Road, and Charles Benson Road. As shown in **Table 4.9-4**, construction of this pipeline would require up to 12 workers. Construction workers would generate up to 14 round-trips (28 one-way trips) per day (24 commute trips and four midday trips). This project component would generate an estimated six truck round-trips (12 one-way trips) per day for materials and equipment deliveries and hauling of excess spoils and construction debris offsite.

Salinas Valley Return Pipeline. Construction traffic for the 1.2-mile-long Salinas Valley Return Pipeline would access the pipeline alignment using Highway 1, Del Monte Boulevard, Reservation Road, and Charles Benson Road. As shown in **Table 4.9-4**, construction of this project component would require up to 12 workers. Construction workers would generate up to 14 round-trips (28 one-way trips) per day (24 commute trips and four midday trips). This project component would generate an estimated six truck round-trips (12 one-way trips) per day for materials and equipment deliveries and hauling of excess spoils and construction debris offsite.

Desalinated Water Pipeline. Construction traffic for the 3.3-mile Desalinated Water Pipeline would access the pipeline alignment using Highway 1, Reservation Road, Del Monte Boulevard, Reservation Road, and Charles Benson Road. As shown in **Table 4.9-4**, construction of this project component would require up to 25 workers. Construction workers would generate up to 28 round-trips (56 one-way trips) per day (50 commute trips and six midday trips). This project component would generate an estimated 12 truck round-trips (24 one-way trips) per day for materials and equipment deliveries and hauling of excess spoils and construction debris offsite.

Combined Construction-Related Traffic Increases in North Marina Area

Based on assumptions developed by a professional traffic engineer regarding the origins and destinations of trips by construction workers and haul trucks, and the dispersal of construction traffic on area roadways, the estimated maximum increase in vehicle trips during peak construction periods on common regional roads and road segments are as follows:

- **Highway 1 (north of Reservation Road):** Traffic generated by concurrent construction of project components with trip origins and destinations in the Highway 1 and Highway 101 corridors north of Reservation Road would use this road. The total combined vehicle trips associated with the project components in this area (i.e., about 214 one-way worker vehicle trips per day, and about 112 one-way truck trips per day) represent an increase of about 0.8 percent above the current daily traffic volume on this road.

- **Highway 1 (south of Reservation Road):** Traffic generated by concurrent construction of project components with trip origins and destinations in the Highway 1 corridor south of Reservation Road would use this road. The total combined vehicle trips associated with the project components in this area (i.e., about 108 one-way worker vehicle trips per day, and 56 one-way truck trips per day) represent an increase of up to about 0.3 percent above the current daily traffic volume on this road.
- **Reservation Road:** Traffic generated by concurrent construction of project components with trip origins and destinations in the Highway 101 corridor southeast of the project area would use this road. The total combined vehicle trips associated with the project components in this area (i.e., about 108 one-way worker vehicle trips per day, and 56 one-way truck trips per day) represent a 0.5 to 3 percent increase above the current daily traffic volume on this road, which ranges from about 5,300 to 29,000 vehicles per day (TAMC, 2010).

Truck trips generated by concurrent construction activities would be dispersed throughout the day and over the area road network. The maximum increases in traffic resulting from concurrent construction of project components during peak periods of construction would fall within the daily fluctuations of traffic volumes and would not be noticeable to the average motorist on Highway 1 or on the higher-volume segments of Reservation Road. While the increased traffic would be noticeable by drivers on the lower-volume segments of Reservation Road, the traffic volumes would continue to be within the carrying capacity of this two-lane road (i.e., about 10,000 to 15,000 vehicles per day). Therefore, the impact would be less than significant for the subsurface slant wells, MPWSP Desalination Plant, Source Water Pipeline, Desalinated Water Pipeline, Salinas Valley Return Pipeline, and Brine Discharge Pipeline.

Project Components in Seaside Area

Transmission Main. Depending on the location of each day's worksite, construction traffic for the 6-mile-long Transmission Main would access the pipeline alignment using different roads (e.g., Highway 1, Del Monte Boulevard, Reservation Road, Lightfighter Drive, 2nd Avenue, 1st Street, Divarty Street, and 8th Street). As shown in **Table 4.9-4**, construction of this project component would require up to 25 workers. Construction workers would generate up to 28 round-trips (56 one-way trips) per day (50 commute trips and six midday trips). It is estimated that about 12 truck round-trips (24 one-way trips) per day (spread over the 9-hour workday) would be generated by materials and equipment deliveries and hauling of excess spoils and construction debris offsite.

Transfer Pipeline. Depending on the location of each day's worksite, construction traffic would access the pipeline alignment using different roads (e.g., Highway 1, Monterey Road, Fremont Boulevard, Del Monte Boulevard, La Salle Avenue, Yosemite Street, Hilby Avenue, Highway 68, Highway 218, and General Jim Moore Boulevard). As shown in **Table 4.9-4**, construction of this project component would require up to 25 workers. Construction workers would generate up to 28 round-trips (56 one-way trips) per day (50 commute trips and six midday trips). This project component would generate an estimated 12 truck round-trips (24 one-way trips) per day for materials and equipment deliveries and hauling of excess spoils and construction debris offsite.

Terminal Reservoir and ASR Pump Station. Construction traffic for the Terminal Reservoir and ASR Pump Station would most likely use Highway 1, Fremont Boulevard, Broadway, Highway 68, Highway 218, and General Jim Moore Boulevard. As shown in **Table 4.9-4**, construction of these project components would require up to 40 workers. Construction workers would generate up to 44 round-trips (88 one-way trips) per day (80 commute trips and eight midday trips). Materials and equipment deliveries would generate an estimated 25 truck round-trips (50 one-way trips) per day. There would be no truck trips related to the offsite disposal of excess spoils because excavated soils not used for backfill would be spread or reused onsite.

ASR Conveyance Pipelines and ASR Pump-to-Waste Pipeline. Depending on the location of each day's construction work area, construction traffic for the two parallel 0.9-mile-long ASR Conveyance Pipelines and ASR Pump-to-Waste Pipeline would access the work areas using different roads (e.g., Highway 1, Fremont Boulevard, Broadway, Highway 68, Highway 218, and General Jim Moore Boulevard). As shown in **Table 4.9-4**, construction of the ASR Conveyance Pipelines and ASR Pump-to-Waste Pipeline would require up to 25 workers. Construction workers would generate up to 28 round-trips (56 one-way trips) per day (50 commute trips and six midday trips). Materials and equipment deliveries would generate an estimated 12 truck round-trips (24 one-way trips) per day. There would be no truck trips related to the offsite disposal of excess spoils because excavated soils not used for backfill would be spread or reused onsite.

ASR Injection/Extraction Wells (ASR-5 and ASR-6 Wells) and ASR Settling Basin. Construction traffic for the proposed ASR injection/extraction wells and ASR Settling Basin would use Highway 1, Lightfighter Drive, Fremont Boulevard, Broadway, Highway 68, Highway 218, and General Jim Moore Boulevard. As shown in **Table 4.9-4**, construction of the ASR injection/extraction wells would require up to 25 workers. Construction workers would generate up to 28 round-trips (56 one-way trips) per day (50 commute trips and six midday trips). Materials and equipment deliveries would generate an estimated 12 truck round-trips (24 one-way trips) per day. There would be no truck trips related to the offsite disposal of excess spoils because excavated soils not used for backfill would be spread or reused onsite.

Combined Construction-Related Traffic Increases in Seaside Area

Based on assumptions developed by a professional traffic engineer regarding the origins and destinations of trips by construction workers and haul trucks, and the dispersal of construction traffic on area roadways, the estimated maximum increase in vehicle trips during peak construction periods on common regional roads and road segments are as follows:

- **Highway 1 (north of Fremont Boulevard / Del Monte Boulevard):** Traffic generated by concurrent construction of project components in the Seaside area with trip origins and destinations in the Highway 1 and Highway 101 corridors north of Fremont Boulevard / Del Monte Boulevard would use this road segment. The vehicle trips associated with the project components in this area (i.e., about 154 one-way worker vehicle trips per day, and 74 one-way truck trips per day) represent an increase of about 0.4 percent above the current daily traffic volume on this road segment.

- **Highway 1 (south of Fremont Boulevard / Del Monte Boulevard):** Traffic generated by concurrent construction of project components in the Seaside area with trip origins and destinations in the Highway 1 corridor south of Fremont Boulevard / Del Monte Boulevard would use this road segment. The vehicle trips associated with the project components in this area (i.e., about 78 one-way worker vehicle trips per day, and 36 one-way truck trips per day) represent an increase of up to about 0.2 percent above the current daily traffic volume on this road segment.
- **Other Common Roadways, including Highways 68 and 218:** The combined vehicle trips on other common roadways associated with the project components in the Seaside area (i.e., up to about 78 one-way worker vehicle trips per day, and 36 one-way truck trips per day) represent an increase of up to about 0.4 percent above the current daily traffic volumes on Highway 68 and Highway 218, and from 0.6 to 2 percent above the current daily volumes on non-state roadways, which range from about 4,200 to 15,000 vehicles per day (TAMC, 2010).

Truck trips generated by concurrent construction activities would be dispersed throughout the day and over the area road network. Although the combined traffic increases resulting from concurrent construction activities would fall within the daily fluctuations of traffic volumes for the highway and arterial roadways in the area and would not be noticeable to the average motorist, these traffic increases could result in substantial adverse effects on traffic conditions along local and neighborhood (residential) streets in the Seaside area. The effect of construction-related traffic on traffic congestion is considered a potentially significant impact for the Transmission Main, Transfer Pipeline, Terminal Reservoir, ASR Pump Station, ASR Conveyance Pipelines, ASR Pump-to-Waste Pipeline, ASR Settling Basin, and ASR-5 and ASR-6 Wells. However, with implementation of **Mitigation Measure 4.9-1 (Traffic Control and Safety Assurance Plan)**, the impact would be reduced to a less-than-significant level. The mitigation measure includes provisions for reducing construction-related traffic and traffic congestion impacts on local streets.

Project Components in Monterey/Pacific Grove Area

Monterey Pipeline. Depending on the location of each day's worksite, construction traffic for the Monterey Pipeline would access the pipeline alignment using Highway 1, Del Monte Boulevard, Highway 218, Del Monte Avenue, Figueroa Street, Franklin Street, High Street, Spencer Street, and Eardley Street. As shown in **Table 4.9-4**, construction of this project component would require up to 25 workers. Construction workers would generate up to 28 round-trips (56 one-way trips) per day (50 commute trips and six midday trips). This project component would generate an estimated 12 truck round-trips (24 one-way trips) per day for materials and equipment deliveries and hauling of excess spoils and construction debris offsite.

Ryan Ranch–Bishop Interconnection Improvements. Construction traffic for the Ryan Ranch–Bishop Interconnection Improvements would most likely use Highway 68, Ragsdale Drive, Lower Ragsdale Drive, and York Road to access the construction work area. As shown in **Table 4.9-4**, construction of this project component would require up to 12 workers. Construction workers would generate up to 14 round-trips (28 one-way trips) per day (24 commute trips and four midday trips). This project component would generate an estimated six truck round-trips

(12 one-way trips) per day for materials and equipment deliveries and hauling of excess spoils and construction debris offsite.

Main System–Hidden Hills Interconnection Improvements. Construction traffic for the Main System–Hidden Hills Interconnection Improvements would use Highway 68, Laureles Grade, Carmel Valley Road, and Terra Grande Drive to access the construction work areas. As shown in **Table 4.9-4**, construction of this project component would require up to 12 workers. Construction workers would generate up to 14 round-trips (28 one-way trips) per day (24 commute trips and four midday trips). This project component would generate an estimated six truck round-trips (12 one-way trips) per day for materials and equipment deliveries and hauling of excess spoils and construction debris offsite.

Combined Construction-Related Traffic Increases in Monterey/Pacific Grove Area

Based on assumptions developed by a professional traffic engineer regarding the origins and destinations of trips by construction workers and haul trucks, and the dispersal of construction traffic on area roadways, the estimated maximum increase in vehicle trips during peak construction periods on common regional roads and road segments are as follows:

- **Highway 1 (north of Highway 68):** Traffic generated by concurrent construction of project components with trip origins and destinations north of the project area would use this road. The vehicle trips associated with the project components in this area (i.e., about 56 one-way worker vehicle trips and 24 one-way truck trips per day) represent an increase of up to about 0.1 percent above the current daily traffic volume along this segment of Highway 1.
- **Highway 1 (south of Highway 68):** Traffic generated by concurrent construction of project components with trip origins and destinations south of the project area would use this road. The vehicle trips associated with the project components in this area (i.e., about 28 one-way worker vehicle trips per day, and 12 one-way truck trips per day) represent less than a 0.1 to 0.5 percent increase above the current daily traffic volume on this road.
- **Highways 68 and 218:** Traffic generated by concurrent construction of project components with trip origins and destinations east of the project area would use these roads. The vehicle trips associated with the project components in this area (i.e., up to about 28 one-way worker vehicle trips per day, and 12 one-way truck trips per day) represent an increase of up to about 0.3 percent above the current daily traffic volumes on these roads.

As described above, truck trips generated by concurrent construction would be dispersed throughout the day and over the area road network. The combined traffic increases resulting from concurrent construction activities would fall within the daily fluctuations of traffic volumes for the regional highways and arterial roadways in the area and would continue to be within the carrying capacities of the two-lane roads (i.e., about 10,000 to 15,000 vehicles per day). However, these traffic increases could result in substantial adverse effects on traffic conditions along lower-volume local streets in downtown Monterey and Pacific Grove (e.g., Figueroa Street, Franklin Street, High Street, Spencer Street, Eardley Street, Ragsdale Drive, Laureles Grade, and Terra Grande Drive). The effect of construction-related traffic on traffic congestion would be a potentially significant impact for the Monterey Pipeline, Ryan Ranch-Bishop Interconnection Improvements, and Main System-Hidden Hills Interconnection Improvements. However, with implementation of **Mitigation**

Measure 4.9-1 (Traffic Control and Safety Assurance Plan), the impact would be reduced to a less-than-significant level.

Traffic Increases in Carmel Valley Area

Valley Greens Pump Station. Construction traffic for the Valley Greens Pump Station would use Highway 1 and Carmel Valley Road to access the construction work area. There are no other facilities proposed in the Carmel Valley area that could contribute additional vehicle trips during project construction. As shown in **Table 4.9-4**, construction of this project component would require up to 12 workers. Construction workers would generate up to 14 round-trips (28 one-way trips) per day (24 commute trips and four midday trips). This project component would generate an estimated six truck round-trips (12 one-way trips) per day for materials and equipment deliveries and hauling of excess spoils and construction debris offsite. The increases in traffic resulting from construction of the Valley Greens Pump Station would fall within the daily fluctuations of traffic volumes for Carmel Valley Road and this segment of Highway 1, and would not be noticeable to the average motorist. Therefore, this impact would be less than significant for the Valley Greens Pump Station.

Impact Conclusion

Project-related construction activities would result in a temporary increase in traffic from construction workers and trucks traveling to and from the construction work areas. Although the estimated maximum increase in traffic along regional roadways would remain within the carrying capacities of the regional roadways and would not substantially affect traffic flow, construction-related traffic increases along local and neighborhood (residential) streets could result in adverse traffic conditions. This impact would be less than significant for all project components located north of Reservation Road and the Valley Greens Pump Station. This impact would be potentially significant for the Transmission Main, Transfer Pipeline, Terminal Reservoir, ASR Pump Station, ASR Conveyance Pipelines, ASR Pump-to-Waste Pipeline, ASR-5 and ASR-6 Wells, ASR Settling Basin, Monterey Pipeline, Ryan Ranch-Bishop Interconnection Improvements, and Main System-Hidden Hills Interconnection Improvements. However, implementation of **Mitigation Measure 4.9-1 (Traffic Control and Safety Assurance Plan)** would reduce this potentially significant impact related to increased traffic to a less-than-significant level.

Land Use Plans & Policies Consistency

In addition to the impact described above, as noted in **Table 4.9-2**, project construction could conflict with applicable land use policies and ordinances related to increased traffic congestion that were adopted for the purpose of avoiding or mitigating an environmental effect. These policies and ordinances include Seaside General Plan Policy C-1.7 and Monterey County General Plan Policy C-3.4. Implementation of **Measure 4.9-1 (Traffic Control and Safety Assurance Plan)** would require that CalAm or its contractors develop project-specific circulation and detour plans to reduce traffic congestion to the extent feasible. Therefore, with this measure implemented, the MPWSP would be brought into conformance with the above-noted policies and ordinances.

Mitigation Measures

Mitigation Measure 4.9-1 has been developed for the project as a whole and applies to all project components and associated construction activities; however, with respect to construction-related increases in traffic and traffic congestion impacts, only the following project components would require implementation of this measure to reduce impacts to a less-than-significant level: the Transmission Main, Transfer Pipeline, ASR Conveyance Pipelines, ASR Pump-to-Waste Pipeline Terminal Reservoir, ASR Pump Station, ASR-5 and ASR-6 Wells, ASR Settling Basin, Monterey Pipeline, Ryan Ranch–Bishop Interconnection Improvements, and Main System–Hidden Hills Interconnection Improvements.

Mitigation Measure 4.9-1: Traffic Control and Safety Assurance Plan.

The construction contractor(s) shall obtain any necessary road encroachment permits prior to constructing each project component and shall comply with the conditions of approval attached to project implementation. As part of the road encroachment permit process, a qualified traffic engineer shall prepare a traffic control and safety assurance plan in accordance with professional engineering standards and submit the plan to the agencies with jurisdiction over the affected roads and recreational trails, as well as to the California Public Utilities Commission, for review and approval. For all project construction activities that could affect the public right-of-way (e.g., roadways, sidewalks, and walkways), the plan shall include measures that would provide for continuity of vehicular, pedestrian, and bicyclist traffic; reduce the potential for traffic accidents; and ensure worker safety in construction zones. Where project construction activities could disrupt mobility and access for bicyclists and pedestrians, the plan shall include measures to ensure safe and convenient access would be maintained.

The traffic control and safety assurance plan shall be developed on the basis of detailed design plans for the approved project. The plan shall include, but not necessarily be limited to, the elements listed below:

- Develop circulation and detour plans to minimize impacts on local streets. Haul routes that minimize truck traffic on local roadways and residential streets shall be used. As necessary, signage and/or flaggers shall be used to guide vehicles through the construction work areas.
- Control and monitor construction vehicle movements by enforcing standard construction specifications through periodic onsite inspections.
- Install traffic control devices where traffic conditions warrant, as specified in the applicable jurisdiction's standards (e.g., the *California Manual of Uniform Traffic Controls for Construction and Maintenance Work Zones*).
- Schedule truck trips outside of peak morning and evening commute hours to minimize adverse impacts on traffic flow (i.e., if agencies with jurisdiction over the affected roads identify highly congested roadway segments during their review of the encroachment permit applications).
- Post detour signs along affected roadways to notify motorists of alternative routes.

- Perform construction that crosses on-street and off-street bikeways, sidewalks, and other walkways in a manner that allows for safe access for bicyclists and pedestrians. Alternatively, provide safe detours to reroute affected bicycle/pedestrian traffic.
- At least two weeks prior to construction, post signage along all potentially affected recreational trails; Class I, II, and III bicycle routes; and pedestrian pathways, including the Monterey Peninsula Recreational Trail, to warn bicyclists and pedestrians of construction activities. The signs shall include information regarding the nature of construction activities, duration, and detour routes. Signage shall be composed of or encased in weatherproof material and posted in conspicuous locations, including on park message boards, and existing wayfinding signage and kiosks, for the duration of the closure period. At the end of the closure period, CalAm or its contractors shall retrieve all notice materials.
- CalAm and its contractors shall schedule construction activities to minimize impacts during heavy recreational use periods (e.g., weekends and holidays).
- Implement a public information program to notify motorists, bicyclists, nearby residents, and adjacent businesses of the impending construction activities (e.g., media coverage, email notices, websites, etc.). Notices of the location(s) and timing of road closures shall be published in local newspapers and on available websites to allow motorists to select alternative routes. This provision shall be implemented in conjunction with **Mitigation Measure 4.12-1d (Neighborhood Notice)**.
- Store all equipment and materials in designated contractor staging areas.
- Maintain alternate one-way traffic flow past the construction zone where possible.
- Install detour signs to direct traffic to alternative routes around the closed road segment if alternate one-way traffic flow cannot be maintained past the construction zone.
- Limit lane closures during peak hours.
- Restore roads and streets to normal operation by covering trenches with steel plates outside of normal work hours or when work is not in progress.
- Comply with roadside safety protocols to reduce the risk of accidents. Provide “Road Work Ahead” warning signs and speed control (including signs informing drivers of state-legislated double fines for speed infractions in a construction zone) to achieve required speed reductions for safe traffic flow through the work zone. Train construction personnel to apply appropriate safety measures as described in the traffic control and safety assurance plan.
- Maintain access for emergency vehicles at all times. Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, transit stations, hospitals, and schools. Provide advance notification to local police, fire, and emergency service providers of the timing, location, and duration of construction activities that could affect the movement of emergency vehicles on area roadways.
- Avoid truck trips through designated school zones during the school drop-off and pickup hours to the extent feasible.

- Provide flaggers in school areas at street crossings to manage traffic flow and maintain traffic safety during the school drop-off and pickup hours on days when pipeline installation would occur in designated school zones.
- Coordinate with Monterey-Salinas Transit so the transit provider can temporarily relocate bus routes or bus stops in work zones as deemed necessary.

Impact 4.9-2: Temporary reduction in roadway capacities and increased traffic delays during construction. (*Less than Significant with Mitigation*)

Construction activities occurring within vehicle travel lanes and road shoulders could require temporary lane closures and/or detours. These lane closures and detours would temporarily reduce roadway capacities and result in increased traffic delays during project construction.

All Proposed Pipelines

The proposed project would include installation of approximately 30 miles of new pipelines. **Table 4.9-1**, above, presents the roads that would be directly affected by project construction activities (i.e., construction would occur within or adjacent to the road rights-of-way).

Pipeline installation would generally be accomplished using conventional open-trench methods; however, where it is not feasible to perform open-cut trenching—such as state highway crossings, stream and drainage crossings, and areas of high utility congestion—trenchless technologies (e.g., boring and jacking, or horizontal directional drilling) would be used. Trenchless technologies would not reduce the number or available width of travel lanes (pits used for bore-and-jack and directional drilling are assumed to be located out of public roadways). For example, jack-and-bore methods would be used to install pipelines beneath all major intersections, thus avoiding traffic flow disruptions and hazardous conditions for pedestrians or bicyclists. Each roadway crossing presents unique conditions, and construction methods would vary depending on such factors as the available construction area, possible utility interference, and the contractor's preferred method of construction.

The average trench width and depth for pipeline installation would be 6 feet by 8 feet. Pipeline installation would progress at a rate of approximately 150 to 250 feet per day. The active work area along open trenches would be wider than the trenches themselves to accommodate access by trucks and loaders. Staging areas would be sited at strategic locations along the pipeline alignments.

Depending on the final pipeline alignments and the width of roads where construction would occur in vehicle travel lanes or the adjacent road shoulder, temporary lane closures and/or detours could be needed to accommodate the construction zone. Some roadway segments would have sufficient pavement width outside of the construction zone to accommodate two-way traffic flow, but other roadways would not, and alternate one-way traffic flow would be maintained on pavement as narrow as 10 feet.

Where feasible and appropriate, construction contractors would install pipelines so as to avoid construction within vehicle travel lanes and to minimize impacts on roadway capacity and function. Detailed information regarding the final pipeline alignments (i.e., whether the pipelines would require construction in road rights-of-way) and associated construction activities would be developed during final project design. This analysis conservatively assumes that all pipelines could require construction within or adjacent to vehicle travel lanes and could require temporary lane closures and/or detours. Impacts on roadway capacities and traffic flow related to pipeline installation are considered to be potentially significant for all proposed pipelines. However, with implementation of **Mitigation Measure 4.9-1 (Traffic Control and Safety Assurance Plan)**, which includes measures to minimize the adverse effects of roadway construction and detours, these impacts would be reduced to a less-than-significant level.

All Other Proposed Facilities

Installation of non-linear facilities (e.g., subsurface slant wells, MPWSP Desalination Plant, ASR injection/extraction wells, Terminal Reservoir, ASR Pump Station, ASR settling basin, and Valley Greens Pump Station) would not involve construction within road rights-of-way and would not result in temporary lane closures or detours. Therefore, the impact would be less than significant.

Impact Conclusion

Traffic delays resulting from temporary lane closures and detours would be a potentially significant impact for all of the proposed pipelines, but implementation of **Mitigation Measure 4.9-1 (Traffic Control and Safety Assurance Plan)** would reduce the impact to a less-than-significant level. For all other proposed facilities, the impact would be less than significant because none of the non-linear facilities are expected to require temporary lane closures or detours.

Mitigation Measures

Mitigation Measure 4.9-1 has been developed for the project as a whole and applies to all project components and associated construction activities; however, with respect to reduced road capacity resulting from temporary lane closures and detours during project construction, only construction of the proposed pipelines would require implementation of this measure to reduce impacts to a less-than-significant level.

Mitigation Measure 4.9-1: Traffic Control and Safety Assurance Plan.

(See Impact 4.9-1, above, for description.)

Impact 4.9-3: Increased traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways during construction. (*Less than Significant with Mitigation*)

All Proposed Project Facilities

Construction vehicles traveling to and from the project area, including trucks delivering equipment and supplies to the construction work areas and trucks hauling excavated materials offsite for

disposal, would share the area roadways with other vehicles. The greatest number of daily construction-related truck trips would occur along Highway 1 and Del Monte Boulevard. Approximately 30 miles of pipelines would be installed during the 2.5 years of project construction, including 26 miles along Del Monte Boulevard, the Monterey Peninsula Recreational Trail, and the TAMC right-of-way, which are generally parallel. During project construction, bicyclists and pedestrians could be required to enter the adjacent road shoulder or use other temporary detours to circumvent construction work areas.

Project construction activities could increase traffic safety hazards in the project area due to:

- Conflicts between haul trucks and other large construction vehicles (with slower speeds and wider turning radii than automobiles) and automobiles, bicyclists, and pedestrians using the roadways
- Conflicts related to the movement of traffic on travel lanes adjacent to construction work areas, particularly at entry and egress points where construction-related vehicles would access public roadways
- Confusion on the part of bicyclists and pedestrians due to temporary changes in bicycle and pedestrian circulation along the Monterey Peninsula Recreational Trail, designated bicycle routes, and other sidewalks and public pathways

Potential increases in traffic safety hazards during project construction would be a potentially significant impact. However, implementation of **Mitigation Measure 4.9-1 (Traffic Control and Safety Assurance Plan)** would reduce this potential impact to a less-than-significant level.

Mitigation Measures

Mitigation Measure 4.9-1 applies to all proposed project facilities and associated construction activities.

Mitigation Measure 4.9-1: Traffic Control and Safety Assurance Plan.

(See Impact 4.9-1, above, for description.)

Impact 4.9-4: Impaired emergency access during construction. (*Less than Significant with Mitigation*)

All Proposed Pipelines

As discussed above for Impact 4.9-2, pipeline installation activities could require construction within vehicle travel lanes and road shoulders. Temporary reductions in travel lanes and roadway capacity to accommodate the construction work areas could result in delays for emergency vehicles. Trenching and paving along roadways during pipeline installation could also disrupt emergency vehicle access to adjacent land uses. This impact is potentially significant. However, implementation of **Mitigation Measure 4.9-1 (Traffic Control and Safety Assurance Plan)**, which contains provisions to maintain access during construction, would reduce the impact to a less-than-significant level.

All Other Proposed Facilities

Construction activities and staging areas for the subsurface slant wells, MPWSP Desalination Plant, ASR injection/extraction wells, Terminal Reservoir, ASR Settling Basin, ASR Pump Station, and Valley Greens Pump Station are not expected to require construction in roadways or road shoulders. As such, construction of these facilities would not obstruct access for emergency vehicles in the vicinity of the construction work areas. Therefore, impacts related to disrupted access to adjacent land uses for emergency vehicles would be less than significant.

Mitigation Measures

Mitigation Measure 4.9-1 applies to all proposed project facilities and associated construction activities; however, with respect to disruptions to emergency access, only construction of the proposed pipelines would require implementation of this measure to reduce impacts to a less-than-significant level.

Mitigation Measure 4.9-1: Traffic Control and Safety Assurance Plan.

(See Impact 4.9-1, above, for description.)

Impact 4.9-5: Temporary disruptions to public transportation, bicycle, and pedestrian facilities during construction. (*Less than Significant with Mitigation*)

All Proposed Pipelines

Pipeline installation activities could temporarily affect public transportation, bicycle travel, and pedestrian travel along affected roadways and recreational trails in the project area. Approximately 30 miles of pipelines would be installed within or adjacent to roadways and recreational trails, including 26 miles along Del Monte Boulevard, the Monterey Peninsula Recreational Trail, and the TAMC right-of-way, which generally run parallel.

Construction activities, including vehicle ingress and egress, equipment and materials staging, trenching, and stockpiling, could disrupt established bicycle and pedestrian facilities located along the pipeline alignments. The proposed Source Water Pipeline alignment crosses the Monterey Peninsula Recreational Trail at the intersection of Del Monte Boulevard and Charles Benson Road. The Desalinated Water Pipeline would be installed on the west side of Del Monte Boulevard, along the Monterey Peninsula Recreational Trail and the TAMC right-of-way between Charles Benson Road and Reservation Road. The Transmission Main and the Monterey Pipeline would generally be constructed within or adjacent to the TAMC right-of-way or the Monterey Peninsula Recreational Trail. Along the proposed Transmission Main alignment to the north, the Monterey Peninsula Recreational Trail runs north-south adjacent to Fort Ord Dunes State Park, and serves as a primary bicycle and pedestrian access route into the park from Marina, Sand City, and Seaside. In Sand City, a portion of California Avenue along the proposed Transmission Main alignment, north of La Playa Avenue, contains a designated Class II bikeway. Installation of the Transfer Pipeline could also adversely affect the Class III bikeway on Hilby Avenue and the Class II bikeway along General Jim Moore Boulevard in the vicinity of Hilby

Avenue. The Ryan Ranch-Bishop Interconnection Improvements would be installed along Ragsdale Drive, Lower Ragsdale Drive, and Wilson Road, all of which have designated Class II bikeways.

Construction activities within or adjacent to vehicle travel lanes could disrupt access to bus stops operated by MST, require that bus stops be temporarily relocated, and/or conflict with bicycle traffic along roads with designated bike lanes. Pipeline installation activities along the Monterey Peninsula Recreational Trail and TAMC right-of-way could conflict with bicycle and pedestrian traffic. Construction-related impacts on alternative transportation modes and facilities during pipeline installation activities would be potentially significant. However, implementation of **Mitigation Measure 4.9-1 (Traffic Control and Safety Assurance Plan)**, which includes measures that would minimize impacts on public transportation and provide for continuity of pedestrian and bicyclist traffic during construction, would reduce the impact to a less-than-significant level.

All Other Proposed Facilities

Construction activities for the subsurface slant wells, MPWSP Desalination Plant, ASR injection/extraction wells, Terminal Reservoir, ASR settling basin, ASR Pump Station, and Valley Greens Pump Station would occur in off-road areas and would not impede vehicular, bicycle, or pedestrian traffic flow or disrupt public transportation. As such, impacts on public transportation and bicycle and pedestrian facilities from construction of these facilities would be less than significant.

Land Use Plans & Policies Consistency

In addition to the impact described above, as noted in **Table 4.9-2**, project construction could conflict with applicable land use plans, policies, and/or ordinances related to alternative modes of transportation (e.g., public transit, bicycle, pedestrian) that were adopted for the purpose of avoiding or mitigating an environmental effect. These include City of Monterey Del Monte Beach Land Use Plan Policy 13 and Monterey Harbor Land Use Plan Policy 3.K. Implementation of **Mitigation Measure 4.9-1 (Traffic Control and Safety Assurance Plan)** includes several provisions for addressing the potential adverse effects to these resources and facilities during project construction. With this measure implemented, the MPWSP would be brought into conformance with the above-noted policy and ordinances.

Mitigation Measures

Mitigation Measure 4.9-1 applies to all proposed project facilities and associated construction activities; however, with respect to disruptions to public transportation and bicycle/pedestrian facilities, only construction of the proposed pipelines would require implementation of this measure to reduce impacts to a less-than-significant level.

Mitigation Measure 4.9-1: Traffic Control and Safety Assurance Plan.

(See Impact 4.9-1, above, for description.)

Impact 4.9-6: Increased wear-and-tear on the designated haul routes used by construction vehicles. (*Less than Significant with Mitigation*)

All Project Components

The use of trucks to transport equipment and material to and from the construction work areas could affect road conditions on the designated haul routes by increasing the rate of road wear. The degree to which this impact would occur depends on the roadway design (pavement type and thickness) and the existing condition of the road. Freeways and major arterials (e.g., Highways 1, 68, 101, 156, 183, and 218, and Del Monte Boulevard) are designed to handle a mix of vehicle types, including heavy trucks; therefore, the impacts of project-related construction traffic are expected to be negligible on those roads. However, some of the smaller roadways and residential streets may not have been constructed to support use by heavy construction trucks and vehicles, and project-related increases in construction truck trips could cause excessive wear-and-tear on these roadways, a potentially significant impact. However, implementation of **Mitigation Measure 4.9-6 (Roadway Rehabilitation Program)**, which requires rehabilitation of any roadways damaged following construction, would reduce this impact to a less-than-significant level.

Mitigation Measures

Mitigation Measure 4.9-6 applies to all proposed project facilities and associated construction activities.

Mitigation Measure 4.9-6: Roadway Rehabilitation Program.

Prior to commencing project construction, CalAm and the affected jurisdiction(s) shall enter into an agreement detailing the preconstruction condition of all major construction access and haul routes proposed for use by project-related construction vehicles, in addition to any appropriate post-construction roadway rehabilitation requirements. Temporary detour routes may also be included, if appropriate. The construction routes identified in the rehabilitation program must be consistent with those identified in the construction traffic control and safety assurance plan developed under Mitigation Measure 4.9-1. Roads damaged by project-related construction vehicles shall be repaired to a structural condition equal to that which existed prior to construction activities.

Impact 4.9-7: Parking interference during construction. (*Less than Significant with Mitigation*)

Assuming construction workers would drive to construction work areas alone in their own vehicles (i.e., they would not carpool), project-related construction activities would increase parking demand at certain locations in the project area. Worker parking demand would vary among the individual project components and would also depend on the construction phase and the nature of construction activities taking place. In addition, depending on the final pipeline alignments and the width of the vehicle travel lanes or adjacent road shoulders where construction would occur, construction activities could displace parking spots and adversely affect parking conditions. **Table 4.9-1** shows roadways that could be directly affected by project construction

activities and indicates whether these roads have on-street parking spaces. Where feasible and appropriate, construction contractors would install pipelines so as to avoid construction within vehicle travel lanes and minimize parking displacement. Detailed information regarding pipeline alignments (i.e., whether the pipelines would require construction in road rights-of-way) and associated construction activities would be developed during project design. This analysis assumes that pipeline installation activities could require construction within or adjacent to vehicle travel lanes and could require temporary displacement of parking spaces.

Monterey Pipeline

Installation of the proposed Monterey Pipeline through mixed-use commercial areas and residential neighborhoods in downtown Monterey would displace parking spaces along the affected roadways that have on-street parking, and could adversely affect parking conditions. In addition, construction worker parking demand associated with these construction activities could further limit parking in the downtown area. Parking interference impacts during installation of the Monterey Pipeline within road rights-of-way in downtown Monterey (i.e., within the city of Monterey) would be potentially significant. However, implementation of **Mitigation Measure 4.9-7 (Construction Worker Parking Requirements)** would reduce this impact to a less-than-significant level. **Mitigation Measure 4.9-7** requires that the construction contractor coordinate with the city of Monterey to identify suitable parking areas for construction workers to avoid or minimize parking impacts in downtown Monterey.

All Other Proposed Pipelines

Installation of the other proposed pipelines in unincorporated Monterey County and in the cities of Marina, Seaside, Sand City, and Pacific Grove could temporarily displace parking spaces along the affected roadways that have on-street parking. However, in general, the roadways along these other pipeline alignments have less-than-substantial demand for the available on-street parking spaces, and/or alternative parking spaces are present nearby. Therefore, impacts associated with temporary displacement of on-street parking during installation of these other pipelines would be less than significant, and no mitigation is necessary.

Subsurface Slant Wells

Construction of subsurface slant wells and support facilities would occur entirely within the CEMEX sand mining facility and would have no effect on parking availability in public areas. Further, construction worker parking demand for the subsurface slant wells could be accommodated within the construction work areas and in other previously disturbed areas of the CEMEX sand mining facility. Thus, no impact would result.

MPWSP Desalination Plant

Construction worker parking demand for the MPWSP Desalination Plant could easily be accommodated within the 46-acre parcel, which is currently vacant. Construction activities at the MPWSP Desalination Plant site would have no effect on parking availability in public areas. Thus, no impact would result.

Terminal Reservoir, ASR Pump Station, ASR-5 and ASR-6 Wells, ASR Conveyance Pipelines, ASR settling basin, and ASR Pump-to-Waste Pipeline

Construction of the ASR-5 and ASR-6 Wells, ASR Conveyance Pipelines, ASR Pump-to-Waste Pipeline, ASR Pump Station, ASR settling basin, and Terminal Reservoir could increase parking demand in the vicinity of General Jim Moore Boulevard in the former Fort Ord area. However, there is ample on-street parking available in the former Fort Ord area to accommodate this increase. Thus, this impact would be less than significant.

Valley Greens Pump Station, Main System-Hidden Hills Interconnection Improvements, and Ryan Ranch-Bishop Interconnection Improvements

The Valley Greens Pump Station (both site options), Ryan Ranch-Bishop Interconnection Improvements, and Main System-Hidden Hills Interconnection Improvements are located in low-density areas with ample parking available to accommodate construction worker vehicles. Any on-street parking displaced during installation of proposed improvements in roadways could also be accommodated on adjacent roadways. This impact would be less than significant.

Impact Conclusion

Installation of the Monterey Pipeline in downtown Monterey would result in significant parking impacts due to temporary increases in parking demand associated with construction worker vehicles and temporary displacement of on-street parking along the active construction corridor. However, implementation of **Mitigation Measure 4.9-7 (Construction Worker Parking Requirements)** would reduce this impact to a less-than-significant level. Construction activities for the subsurface slant wells and MPWSP Desalination Plant would have no effect on parking. Parking displacement impacts resulting from construction of the proposed ASR-5 and ASR-6 Wells, ASR Pump Station, Terminal Reservoir, ASR settling basin, Valley Greens Pump Station, Ryan Ranch-Bishop Interconnection Improvements, Main System-Hidden Hills Interconnection Improvements, and all other proposed pipelines would be less than significant.

Mitigation Measures

Mitigation Measure 4.9-7 applies only to installation of the Monterey Pipeline in downtown Monterey (i.e., within the city of Monterey).

Mitigation Measure 4.9-7: Construction Worker Parking Requirements.

Prior to commencing project construction, the construction contractor(s) shall coordinate with the City of Monterey to identify designated worker parking areas that would avoid or minimize parking displacement in the congested downtown area. If necessary, the construction contractor shall provide transport for construction workers between a designated parking location and the construction work areas. The construction contractor shall also provide incentives for workers that carpool or take public transportation to the construction work areas.

4.9.3.5 Operational Impacts and Mitigation Measures

Impact 4.9-8: Long-term traffic increases on regional and local roadways during project operations and maintenance. (*Less than Significant*)

MPWSP Desalination Plant

The MPWSP Desalination Plant would be operated 24 hours per day, 365 days per year. The MPWSP Desalination Plant is estimated to require approximately 25 to 30 full-time workers (facility operators and support personnel) to operate, monitor, and maintain the desalination facilities. There would be up to 10 workers for each of the following three shifts: 9:00 a.m. to 5:00 p.m., 4:00 p.m. to 1:00 a.m., and 12:00 a.m. to 9:00 a.m.; based on this assumption, approximately 66 one-way trips (33 round trips) would occur throughout each day (30 commute trips and 3 deliveries) during long-term operations and maintenance of the MPWSP Desalination Plant.

Given the minimal number of daily vehicle trips associated with worker commutes and deliveries, long-term operations and maintenance of the MPWSP Desalination Plant would not adversely affect traffic conditions on the existing circulation system over the long term. Therefore, the impact would be less than significant.

All Other Proposed Facilities

All other proposed facilities (i.e., the subsurface slant wells, ASR-5 and ASR-6 Wells, ASR Pump Station, Terminal Reservoir, Valley Greens Pump Station, and all pipelines) would be operated remotely using Supervisory Control and Data Acquisition systems, with periodic visits by CalAm personnel for operations review and maintenance. Maintenance activities include such tasks as landscape maintenance, visual inspections of facilities, performance monitoring, servicing of pumps, testing and servicing of valves, backflushing the ASR-5 and ASR-6 Wells, and minor pipeline repairs. The vehicle trips generated by these routine and periodic site visits would be similar in number to those required for existing CalAm operations in the Monterey District service area and would not constitute a significant increase in new vehicle trips on area roadways. Overall, any increases in traffic generated by facility operations and maintenance would be negligible compared to existing conditions and would not result in a noticeable increase in traffic on adjacent streets. Therefore, the long-term traffic impact for all other proposed facilities would also be less than significant.

Impact Conclusion

Long-term increases in vehicle trips during project operations and maintenance would result in a less than significant traffic impact for all project facilities.

Mitigation Measures

None required.

References – Traffic and Transportation

- California Department of Transportation (Caltrans), 2013. *2012 Traffic Volumes on California State Highways*, 2013. Available online at: www.dot.ca.gov/hq/traffops/saferestr/trafdata/index.htm. Accessed December 31, 2013.
- City of Marina, 1982. *The City of Marina Local Coastal Land Use Plan*. Prepared by Ironside and Associates. Certified by California Coastal Commission on April 30, 1982.
- City of Marina, 2000. *City of Marina General Plan*, amended December 31, 2006.
- City of Monterey, 2003a. *City of Monterey Del Monte Beach Local Coastal Program Land Use Plan*. Adopted by City of Monterey June 2003. Certified by California Coastal Commission October 2003.
- City of Monterey, 2003b. *City of Monterey Harbor Local Coastal Program Land Use Plan*. Adopted by City of Monterey June 2003. Certified by California Coastal Commission October 2003.
- City of Seaside, 2004. *Seaside General Plan*. Adopted August 5, 2004.
- City of Seaside, 2012. *City of Seaside Local Coastal Program, Land Use Plan*. November 2012.
- MTY County.com, 2013. Monterey County Bike Routes and Paths [Maps]. Available online at: <http://www.mtycounty.com/pgs-parks/bike-path.html>. Accessed September 9, 2013.
- Monterey County, 2010. *2010 Monterey County General Plan*. Adopted October 26, 2010.
- Monterey-Salinas Transit (MST), 2013. System Maps and Bus Timetables. Effective September 1, 2012. Available online at: <http://www.mst.org/maps-schedules/route-list/>.
- Transportation Agency of Monterey County (TAMC), Regional Traffic Counts Program, Average Daily Traffic Volumes, 2010.

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