

4.7 Hazards and Hazardous Materials

Sections	Figures	Tables
4.7.1 Setting / Affected Environment	4.7-1 Environmental Cases Near Project Components – Northern Portion	4.7-1 Environmental Cases Identified Within 0.25 Mile of the Project Area
4.7.2 Regulatory Framework	4.7-2 Environmental Cases Near Project Components – Southern Portion	4.7-2 Schools in the Vicinity of Project Components
4.7.3 Evaluation Criteria		4.7-3 Applicable Regional and Local Plans and Polices Relevant to Hazards and Hazardous Materials
4.7.4 Approach to Analysis		4.7-4 Summary of Impacts - Hazards and Hazardous Materials Impacts
4.7.5 Direct and Indirect Effects of the Proposed Project		4.7-5 MPWSP Desalination Plant (9.6 mgd) - Water Treatment Chemicals
4.7.6 Cumulative Effects of the Proposed Project		

This section evaluates the potential for construction and operation of the Monterey Peninsula Water Supply Project (MPWSP or proposed project) to result in adverse impacts associated with hazards or hazardous materials, including releases of hazardous materials through routine use or accidents, being located near schools, airports, or within a high fire hazard area, or impairing emergency routes. The analysis is based on review of available hazards and hazardous materials websites, reports, and maps of the project area and vicinity, including reports and information posted on websites by the State Water Resources Control Board and the Department of Toxic Substances Control, and project-specific investigations conducted for various project components.

Comments received on the 2015 Draft EIR requested information on a hazardous materials site located along 1st Avenue in the City of Marina, noted the mis-location of one hazardous materials site on a figure and requested locating nearby schools on a map; the Fort Ord - University Villages site has been included and discussed in Section 4.7.1.1, the list and locations of hazardous materials sites has been updated and Figures 4.7-1 and 4.7-2 have been revised. Commenters requested a discussion on the possibility of frac-out during drilling, spill prevention measures, and a soil sampling and analyses for hazardous materials; these are now addressed in Impact 4.7-1 and Impact 4.7.2. Commenters requested the specific locations where trenchless drilling would be used for pipeline installation, and this is now discussed in Section 3.3.5.2.

4.7.1 Setting/Affected Environment

The study area for evaluation of hazards and hazardous materials impacts includes the project components and the vicinity adjacent to the components. In addition, the vicinity up to 0.25 mile from project components is considered relative to schools and up to 2 miles relative to airports. There is no known soil or groundwater contamination or wildfire hazard within MBNMS, nor any existing hazardous material usage within MBNMS that could be affected by the proposed project. Therefore, MBNMS resources are not described in the environmental setting/affected environment.

4.7.1.1 Soil and Groundwater Conditions

This section assesses the potential for hazardous materials to be present in soil and groundwater in the project area as a result of past and present land uses, and documented releases of hazardous materials in the project vicinity. This discussion is based on review of regulatory agency databases and hazardous materials investigation reports available on regulatory agencies' websites, information available on the Fort Ord Reuse Authority (FORA) website, available environmental assessments prepared for the Transportation Agency for Monterey County (TAMC) corridor and the 46-acre MPWSP Desalination Plant site, and site reconnaissance.

Past and Present Land Uses in the Project Vicinity

Various past and current land uses associated with the use, generation, or disposal of hazardous materials exist in the project vicinity: the Monterey Regional Waste Management District (MRWMD) landfill, the Monterey Regional Water Pollution Control Agency (MRWPCA) Regional Wastewater Treatment Plant, the former Fort Ord military base, commercial buildings, gasoline stations, railroad tracks, agricultural fields, residences, and recreational and open spaces. In some cases, these land uses have contributed to subsurface contamination that could be exposed during project construction and result in adverse environmental and health effects.

There is a potential for the following land uses in the project vicinity to have caused soil and/or groundwater contamination in the project area:

- ***Commercial/Industrial Uses.*** Commercial and industrial land uses include former and current gasoline service stations, dry cleaners, and other facilities that typically involve the use and storage of fuel, lubricants and oil, solvents, and other hazardous materials. Facilities with known releases of hazardous materials that have affected soil or groundwater are discussed below under the heading, Regulatory Agency Database Searches.
- ***Agricultural Uses.*** Portions of the proposed Source Water Pipeline, new Desalinated Water Pipeline, Castroville Pipeline, and Brine Discharge Pipeline are located within agricultural areas, and the proposed MPWSP Desalination Plant site is adjacent to agricultural fields. Historical agricultural land uses may leave behind residual levels of pesticides and herbicides in soils. In addition, farm equipment typically uses petroleum products and cleaning solvents (for equipment maintenance), which, in some cases, may have been released during use or storage. According to the Phase I Environmental Assessment for the 46-acre MPWSP Desalination Plant parcel,¹ the site was formerly owned by the Dole Food Company; however, the site appears to have historically been utilized as vacant land and no evidence of hazardous substances or petroleum products were noted (RBF Consulting, 2012).
- ***Railroad Operations.*** A preliminary environmental assessment of the Transportation Agency of Monterey County (TAMC) railroad corridor identified environmental concerns regarding the railroad alignment that would also overlap or be near portions of the proposed Castroville Pipeline, Source Water Pipeline, new Desalinated Water Pipeline, and the new Transmission Main Pipeline alignments (Kleinfelder, 2010). Soil along the railroad

¹ As described in Section 3.2.2 of Chapter 3, Description of the Proposed Project, the MPWSP Desalination Plant would be constructed on the upper terrace (approximately 25 acres) of the 46-acre parcel.

alignment may have been affected by fuel, oil, lubricants, and metals (e.g., cadmium, chromium, copper, nickel, and lead) leaking from railroad engines and cars over time. The railroad ties are typically wood that has been treated with creosote and less commonly copper, chrome, arsenic, and/or pentachlorophenol. Vegetation control is typically conducted using rail-mounted equipment that sprays herbicides along rail alignments.

- **Sand Mining.** The proposed Seawater Intake System and a portion of the Source Water Pipeline would be located within the CEMEX sand mining facility. Mining operations typically require the use of fuels and lubricants for equipment. The CEMEX facility was not listed as having a permitted UST or recorded releases in the regulatory agency database search discussed below under the heading, Regulatory Agency Database Searches.
- **Former Fort Ord Military Base.** Fort Ord was listed on the National Priorities List in 1990. Contaminated areas include munitions response sites; the Fritzsche Airfield Fire Drill Pit (Operable Unit [OU] 1); the Fort Ord landfill (OU2); firing ranges; hazardous waste storage areas; and unregulated disposal areas. Both soil and groundwater were impacted by contaminants in these areas, which have been investigated separately. The proposed Terminal Reservoir, ASR-5 and ASR-6 Wells, ASR Pipelines, and portions of the new Transmission Main would be within the Fort Ord Seaside Munitions Response site (LFR et al, 2011), which has potential unexploded ordnance hazards.² The former Fort Ord military base site is discussed in more detail below.

Regulatory Database Searches of Hazardous Materials Sites

Regulatory agency databases of hazardous materials sites that are compiled pursuant to Government Code Section 65962.5 were reviewed to identify documented releases of hazardous materials in soil and groundwater³ within 0.25 mile (1,320 feet) of the project components, including the California State Water Resources Control Board (SWRCB) GeoTracker database and the California Department of Toxic Substances Control (DTSC) EnviroStor database. The relevant individual site documents are cited below. A 0.25-mile search radius from the project area was utilized to encompass the potential for migration of shallow groundwater contaminant plumes from typical leaking underground storage tank cases to adversely affect groundwater in the project area. Open environmental cases and their distance from project components are summarized in **Table 4.7-1** and shown on **Figures 4.7-1** and **4.7-2**. Leaking underground storage tank (LUST) sites that have been closed by the regulatory agency are not discussed because site closure indicates that the regulatory agency considers these sites to pose a low threat to human health and groundwater quality. The Fort Ord OU1 site was recently closed but is shown on Figure 4.7-1 for informational purposes. Some other closed sites located close to project components are also listed because they were closed some years ago and the older closure standards may result in residual contamination above current standards.

² *Unexploded ordnance* refers to explosive weapons (bombs, bullets, shells, grenades, land mines, etc.) that did not explode when they were employed and still pose a risk of detonation, potentially many decades after they were used or discarded.

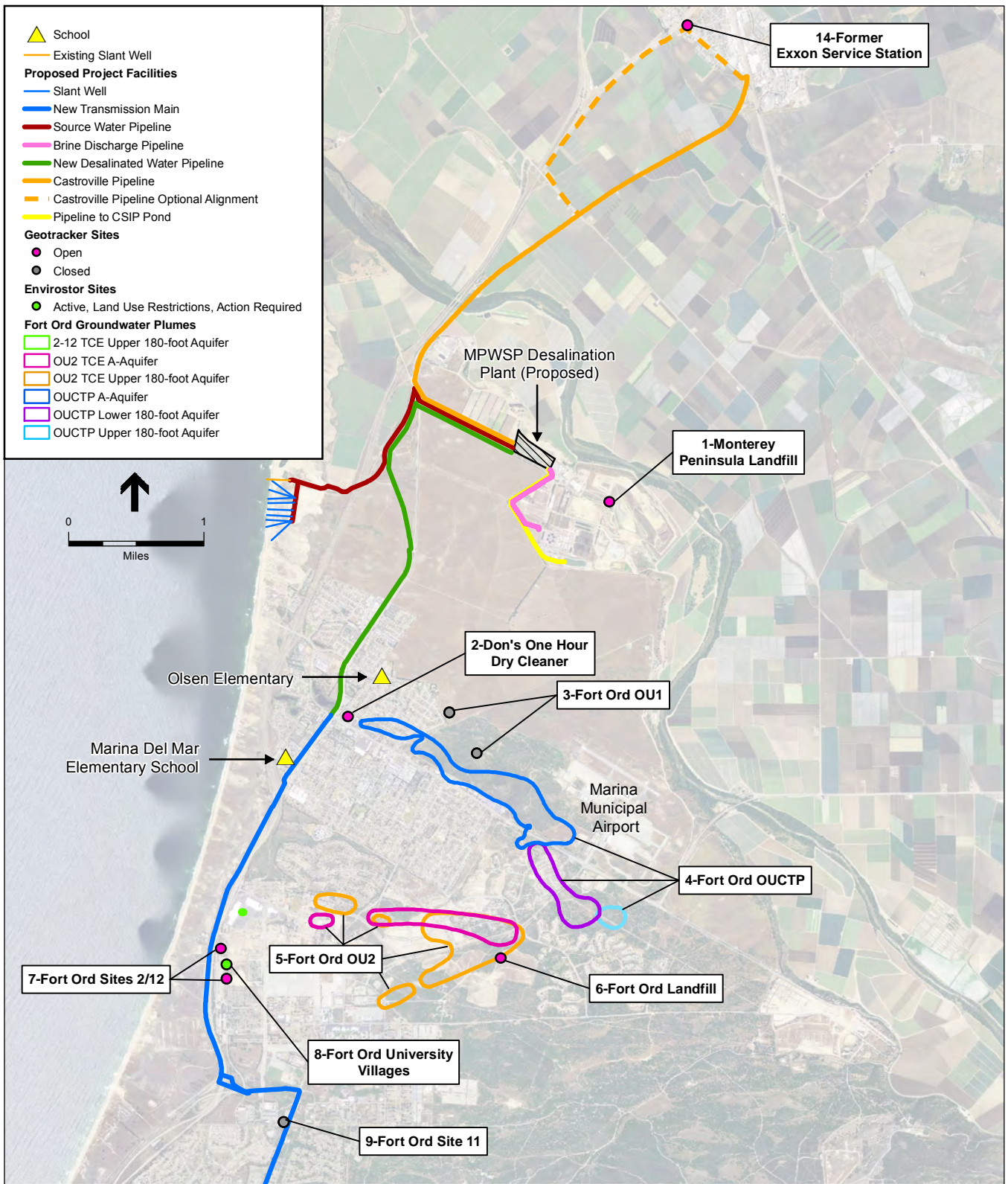
³ Unless listed in association with a documented release, it is assumed that facilities permitted to use, store, generate, or dispose of hazardous materials handle such materials in accordance with applicable laws and would not affect soil or groundwater in the project area.

**TABLE 4.7-1
 ENVIRONMENTAL CASES IDENTIFIED WITHIN 0.25 MILE OF THE PROJECT AREA**

Map ID	Site Name/Address	Approximate Distance and Direction from Project Area	Status and Comments
1	Monterey Peninsula Class III Landfill	0.5 mile east of pipeline to CSIP Pond & Brine Discharge Pipeline	Active – No environmental issues outside of landfill; does not underlie project components
2	Don's One Hour Dry Cleaners	530 feet east of new Desalinated Water Pipeline & new Transmission Main Pipeline	Active – Groundwater remediation in progress; does not underlie project components
3	Fort Ord OU1	0.9 mile east of new Desalinated Water Pipeline	Closed – Groundwater cleanup completed
4	Fort Ord OUCTP	1,100 feet east of new Desalinated Water Pipeline	Active – Groundwater remediation in progress; does not underlie project components
5	Fort Ord OU2	0.6 mile east of new Transmission Main Pipeline	Active – Groundwater remediation in progress; does not underlie project components
6	Fort Ord Sanitary Landfill	Two miles east of new Transmission Main Pipeline	Active – Groundwater remediation in progress; does not underlie project components
7	U.S. Army Fort Ord Sites 2 and 12	425 feet east of new Transmission Main Pipeline	Active – Groundwater remediation in progress; does not underlie project components
8	U.S. Army Fort Ord University Villages	800 feet east of new Transmission Main Pipeline	Active – Areas adjacent to Highway 1 have been remediated; does not underlie project components
9	Fort Ord Site 11	At staging area at northwest corner of General Jim Moore Blvd. & Gigling Road	Closed – Removed USTs and cleanup completed
10	Fort Ord Site 39 – Inland Ranges	0.5 mile east of ASR facilities and Terminal Reservoir	Closed – Cleanup complete along General Jim Moore Boulevard
11	Fort Ord Military Base Seaside Munitions Response Area	Within project area (Terminal Reservoir, ASR-5/ASR-6 wastewater infiltration area, southern part of new Transmission Main)	Closed – Cleanup complete along General Jim Moore Boulevard
12	Fort Ord Del Rey Oaks	4,200 feet southeast of Terminal Reservoir	Closed in project area; still open inland – Cleanup complete along General Jim Moore Boulevard
13	Fort Ord York School Agreement	1,200 feet northeast of Ryan Ranch-Bishop Interconnection Improvements	Closed – Cleanup complete
14	Former Exxon Service Station	Adjacent to Castroville Pipeline Optional Alignment on northeast side of Merritt Street (Highway 183)	Active – Soil and groundwater remediation in progress

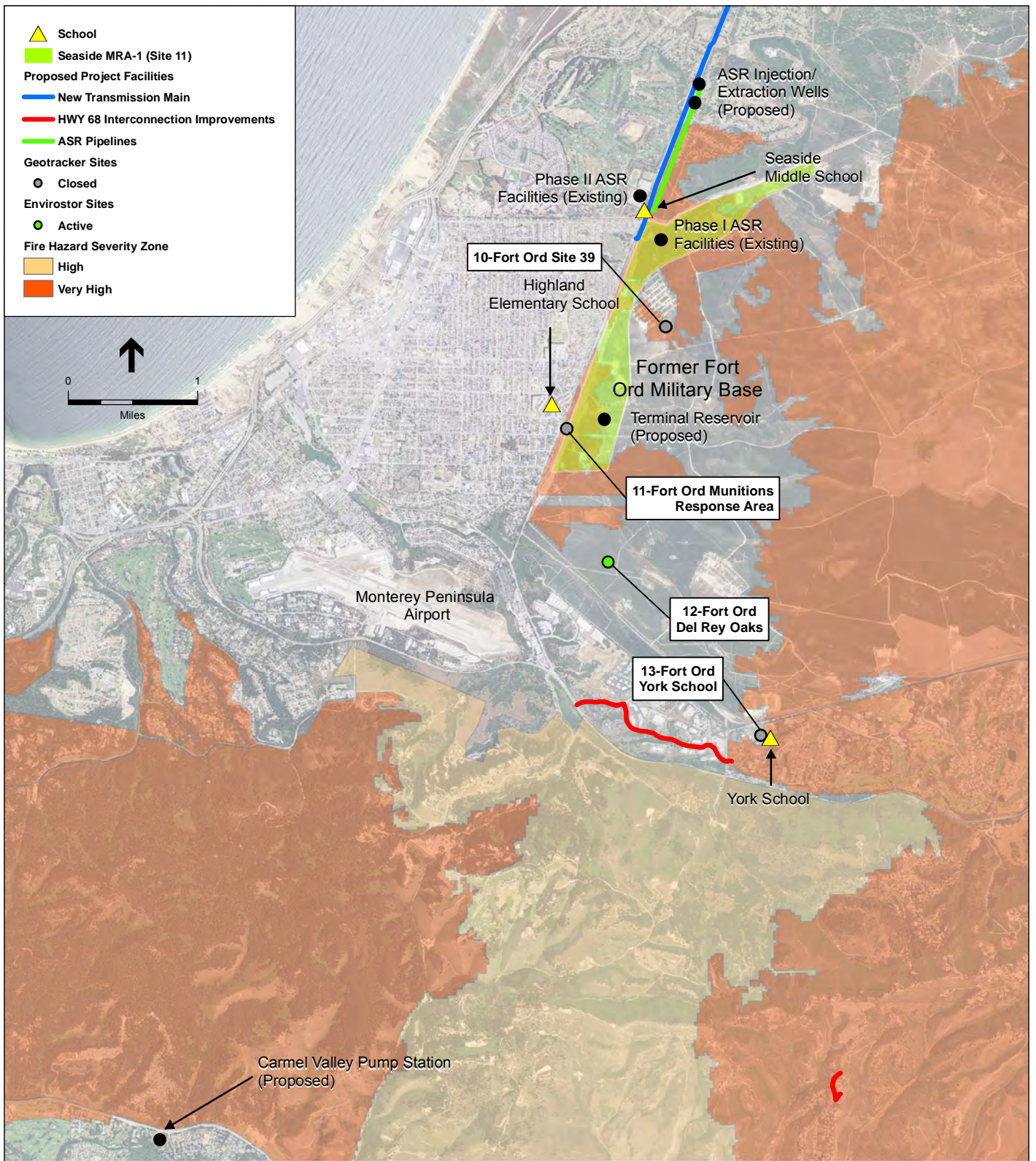
NOTE: Map ID numbers keyed to Figures 4.7-1 and 4.7-2.

SOURCES: Ahtna, 2016a, 2016b, 2016c; FORA, 2015; FORA, 2016a, 2016b; FOSET, 2007; LFR et al, 2008, 2011; Regenesis, 2016; RMC Geoscience, 2016; RRM, 2016; RWQCB, 2016; U.S. Army, 1997, 2012; USEPA, 2016; West, 2007



SOURCE: ESRI, 2007; RMC Geoscience, 2016; RWQCB, 2016; Regenesys, 2016; Ahtna, 2016a, 2016b, 2016c; West, 2007; FORA, 2016b

205335.01 Monterey Peninsula Water Supply Project
Figure 4.7-1
 Environmental Cases Near
 Project Components - Northern Portion



SOURCE: CAL FIRE, 2007; CAL FIRE 2008; DTSC, 2016; ESRI, 2013; USEPA, 2016; FORA, 2015; U.S. Army, 1997; Arcadis, 2016; Leidos, 2016

205335.01 Monterey Peninsula Water Supply Project

Figure 4.7-2

Environmental Cases Near Project Components - Southern Portion

Sites associated with past hazardous materials use and environmental cases identified during the regulatory agency database review that are considered to have a high potential to impact soil and/or groundwater in the project area based on remedial investigation findings, proximity to individual project component sites, and/or groundwater gradient (i.e., the site is upgradient from the project area with respect to the direction of groundwater flow) are discussed below with Map ID numbers keyed to Table 4.7-1, and Figures 4.7-1 and 4.7-2.

Monterey Peninsula Class III Landfill

Non-hazardous waste has been deposited since 1966 in both unlined and lined areas of the Monterey Peninsula Class III Landfill (**Map ID 1**) (RMC Geoscience, 2016). On-going monitoring includes groundwater, surface water, leachate, and landfill gas. Groundwater flow in the -2-Foot Aquifer is generally from the Salinas River toward the landfill (southwesterly), although flow direction reversals have occurred. The flow direction in the perched 35-Foot Aquifer generally flows to the northeast and produces a series of intermittent springs and seeps along the bluff face along the northeast side of the landfill. This water is managed using a series of subdrains and surface drains that discharge or drain to a storm water percolation pond. Trace detections of volatile organic compounds (VOCs) are occasionally detected in groundwater within the interior of the landfill but not at the perimeter detection monitoring wells.

Former Don's One Hour Dry Cleaners

Don's One Hour Dry Cleaners is a former dry cleaning operation that is undergoing remediation for dry cleaning solvents released to groundwater beneath the site (**Map ID 2**) (Regenesys, 2016). Groundwater was treated with a proprietary compound injected into groundwater to remediate perchloroethene (aka tetrachloroethene; PCE) and its degradation daughter products (trichloroethene, 1,2-dichloroethene, vinyl chloride). Injections of proprietary compounds to treat dry cleaning solvents is a common method accepted by regulatory agencies. Post-treatment monitoring indicates that only vinyl chloride is still present at a low concentration in one onsite well. Regenesys has proposed to conduct a follow-up injection to complete the site remediation.

Fort Ord Military Base Seaside Munitions Response Area Including Site 39 Inland Ranges and Former Fort Ord York School

From 1917 until its deactivation in 1994, the Fort Ord military base served as a training and staging facility for United States Army (U.S. Army) infantry troops. Industrial chemicals, and munitions and explosives of concern (MECs) have been detected in soil and groundwater at numerous locations across the former base. In 1990, the United States Environmental Protection Agency (USEPA) placed the military base on the National Priorities List, indicating that the Superfund cleanup process would be applied to the site. This action was taken primarily due to the presence of unexploded ordnance (UXO) on the surface and subsurface of the property (USEPA, 2016).

Investigations regarding the locations of MEC were initiated by the U.S. Army in 1993. These investigations resulted in the delineation of Munitions Response Areas (MRAs) that include approximately 12,000 acres of the former Fort Ord military base (U.S. Army, 2012). Smaller units, known as Munitions Response Sites (MRS), are defined within the MRA. Cleanup at the

former Fort Ord military base is the responsibility of the U.S. Army, which is conducting ordnance cleanup for 8,000 acres. The U.S. Army has also entered into an Environmental Services Cooperative Agreement (ESCA) with the Fort Ord Reuse Authority (FORA) for MEC remediation and transfer of the remaining 3,340 acres (USEPA, 2016; FORA, 2015). These 3,340 acres, referred to as the Seaside MRA, will be available for redevelopment under a redevelopment plan adopted by FORA once remediation is complete. The Terminal Reservoir, and its inlet and outlet pipelines are proposed within the Seaside MRA (**Map ID 11** on **Figure 4.7-2**), specifically within the Munitions Response Site 1 (MRS-15 SEA 01), which is adjacent to and extends east of General Jim Moore Boulevard. The southernmost end of the new Transmission Main at Eucalyptus Boulevard and the Terminal Reservoir is within MRS-15 SEA 03; most of the alignments, the proposed ASR Pipelines, and the ASR-5 and ASR-6 Wells are not within delineated MRSs. The Inland Ranges (Site 39; **Map ID 10**) and the Del Rey Oaks site (**Map ID 12**) are located further inland and further away from all project components.

Beginning in 1997, the U.S. Army performed sampling and removal investigations on the four Seaside MRSs (MRS-15 SEA 01 through 04). During these investigations, 4,900 MEC items, 50,000 pounds of munitions debris, and 115,000 pounds of Army cultural debris were identified and removed from the MRSs (FORA, 2015). As of 2015, the MEC remediation field activities have been completed and the regulatory agencies have agreed that remediation is complete. Phase II investigations in the Seaside MRA took place initially for the roadway alignment and utility corridor along General Jim Moore Boulevard (LFR et al, 2008) and then subsequently for the areas outside the roadway alignment and utility corridor (LFR et al, 2011). Together, these actions resulted in removal of detected MEC to a depth of 4 feet, except in a few areas where anomalies were left in place because they were likely the result of existing infrastructure (e.g., transmission towers, culverts, fence posts, monitoring wells), and completed the Phase II removal action for the Seaside MRA (LFR et al, 2011). Specifically, MEC was removed from three locations to a depth of 4 feet within the areas of the proposed Terminal Reservoir.

The Findings of Suitability for Early Transfer (FOSET) agreement (FOSET, 2007) was established to restrict the use of the Seaside MRS parcels for any purposes other than investigation and remediation of MEC and installation of utilities (including water supply infrastructure) until site remediation activities were deemed complete by the responsible agencies. FORA will retain ownership of the Seaside MRS parcels until remediation is complete and the parcels are transferred to the City of Seaside. As of 2016, the remediation has been deemed complete and the parcels are ready for transfer. Documentation of the remediation activities and transfer of the property is anticipated to be complete by 2019 (FORA, 2016a). Until then, all ground-disturbing activity in this area requires a Right of Entry agreement with FORA and compliance with the Ordnance Remediation District Regulations of the City of Seaside.

The former Fort Ord York School also is within an inland range area that was investigated for the presence of MECs (U.S. Army, 1997). The Wilson Road portion of the Ryan Ranch Bishop Interconnection Improvements extends into this former range area (**Map ID 13**). Investigations of this local area did not identify any MECs and the property was cleared for transfer to the County of Monterey.

Former Fort Ord Groundwater Contamination Sites

In addition to hazards related to UXO and military munitions, groundwater in the aquifers located beneath the former Fort Ord military base is contaminated with volatile organic compounds (VOCs), mostly trichloroethene (TCE) and carbon tetrachloride (CT). Investigation and remediation of these contaminant plumes have been organized into operable units (OUs), as discussed below. These plumes have undergone investigation, source removal, and remedial action, including continued operation of groundwater treatment systems. The groundwater contamination plumes currently above action levels, and undergoing investigation and remediation are shown on **Figure 4.7-1**. The status of each plume is summarized below.

- **Fort Ord OU1 (Fritzsche Army Airfield Fire Drill Area; Onsite and Offsite Plumes) (Map ID 3):** The Fire Drill Area was established in 1962 as a training area for the Fort Ord Fire Department. This area consisted of an unlined burn pit, a drum loading area, a storage tank, and underground piping that connected the storage tank to a discharge nozzle. During training exercises, fuel was pumped into the burn pit, ignited, and then extinguished. Training activities ceased in 1985. These training activities are believed to have resulted in the release of contaminants to soil and groundwater. This site previously had VOCs in groundwater consisting mostly of TCE, perfluorooctanoic acid, and perfluorooctane sulfonate (RWQCB, 2016). The site has been remediated and chemical concentrations are below action levels. The site is awaiting documentation of formal closure.
- **Fort Ord OUCTP (Map ID 4):** The status of the OUCTP plume is documented in the *Fourth Quarter 2014 through Third Quarter 2015 Groundwater Monitoring Report* (Ahtna, 2016a). Carbon tetrachloride was apparently disposed of at a location near what is now Lexington Court (within the former Fort Ord) possibly sometime in the 1950s as part of various training and maintenance activities where carbon tetrachloride and other solvents were used. Carbon tetrachloride and other VOCs to a lesser extent entered the underlying A-Aquifer and migrated north along the western edge of a groundwater divide, then west-northwest parallel to Reservation Road. The A-Aquifer is being treated using enhanced in situ bioremediation, followed by monitored natural attenuation. This method involves enhancing naturally-occurring microbes to metabolize (break down) the contaminants to non-toxic compounds and does not require the extraction of groundwater.

The carbon tetrachloride plume migrated downward into the Upper 180-Foot Aquifer through two known vertical conduits in the Fort Ord-Salinas Valley Aquitard (FO-SVA), creating two distinct parallel plumes. These vertical conduits (monitoring wells installed with inadequate sanitary seals) were decommissioned in 1999 and 2005. The two parallel plumes commingled and continued to migrate southeastward toward a natural vertical conduit (a discontinuity in the Intermediate 180-Foot Aquitard) south of monitoring well MW-OU2-64-180. Since the decommissioning of the two monitoring wells, carbon tetrachloride concentrations in the southern Upper 180-Foot Aquifer plume have attenuated, and only the northern plume remains. The Upper 180-Foot Aquifer groundwater remedy has been in operation since September 2011 and includes one groundwater extraction well (EW-OU2-09-180) connected to the OU2 groundwater treatment system (GWTS) where extracted groundwater is treated with granular activated carbon (GAC).

Carbon tetrachloride migrated further downward into the Lower 180-Foot Aquifer likely through the same vertical conduit through which it entered the Upper 180-Foot Aquifer, and also through the natural hole in the 180-Foot Aquitard, creating two distinct plumes: one north and one south of Reservation Road. VOC concentrations associated with OUCTP in the Lower 180-Foot Aquifer south of Reservation Road are commingled with VOC

concentrations associated with the OU2 plume. Monitored natural attenuation was implemented as the groundwater remedy for the Lower 180-Foot Aquifer in March 2011. Additionally, there is a contingency plan for treatment of groundwater (via granular activated carbon or air stripping) extracted from the Lower 180-Foot Aquifer by potable water supply wells at the well-head if chemicals associated with OU2 are detected in these wells.

- **Fort Ord OU2 and Former Sanitary Landfill (Map IDs 5 and 6):** The status of the OU2 plume is documented in the *Fourth Quarter 2014 through Third Quarter 2015 Groundwater Monitoring and Treatment System Report* (Ahtna, 2016b). The former Fort Ord Landfills were active from 1955 to 1987 and were used for residential and on-base waste disposal typical of municipal landfills during that time. Waste was placed in parallel trenches 10 to 30 feet deep and then covered over with the native dune sand excavated during trenching operations. Detailed disposal records are not available; however, information gathered during field activities and from other sources indicates that household and on-base commercial refuse, dried sewage sludge, construction debris, and small amounts of chemical waste (such as paint, oil, pesticides, electrical equipment, ink, and epoxy adhesive) were placed in the Fort Ord Landfills. These activities led to release of contaminants to the underlying unconfined A-Aquifer. The OU2 plume, primarily consisting of TCE, migrated west to the edge of the FO-SVA where it migrated downward into the Upper 180-Foot Aquifer, then east, and then down into the Lower 180-Foot Aquifer through a natural discontinuity in the intermediate 180-Foot Aquitard. Low concentrations of chemicals associated with OU2 plume co-mingle in the Lower 180-Foot Aquifer with the OU2 plume, discussed above. The groundwater treatment system consists of a groundwater pump and treatment system with twenty-five extraction wells, two injection wells and two infiltration galleries. Groundwater is treated using granular activated carbon and reinjected or recharged back into the aquifer.
- **Fort Ord Sites 2/12 (Map ID 7):** The status of the Fort Ord Sites 2/12 plume is documented in *Sites 2 and 12 Fourth Quarter 2014 through Third Quarter 2015 Groundwater Monitoring and Soil Gas Monitoring and Treatment System Report* (Ahtna, 2016c). The groundwater aquifer of interest within Sites 2/12 is the unconfined Upper 180-Foot Aquifer. Depth to groundwater in the Upper 180-Foot Aquifer is between 45 and 260 feet below ground surface (bgs). Groundwater in the Upper 180-Foot Aquifer generally flows southwest. The original source of the chemical plume is assumed to be historical use and improper disposal of solvents in the Site 12 area. The Upper 180-Foot Aquifer chemical plume appears to have originated within Site 12 and was subsequently transported over 3,000 feet to the southwest by groundwater flow, passing beneath Highway 1 and into the Site 2 area. The Sites 2/12 groundwater plume is characterized by the presence of eight VOCs in groundwater at concentrations above their respective action levels: chloroform, 1,2-dichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, total 1,3-dichloropropene, PCE, TCE, and vinyl chloride. TCE and PCE concentrations are used to define the extent of the groundwater plume in the Sites 2/12 area. VOCs are also present in soil gas in the vadose zone⁴ above the groundwater. Soil gas is being remediated using soil gas extraction and treatment where the soil gas is pumped out of the ground and through granular activated carbon that captures the VOCs. Groundwater is being remediated using groundwater extraction and treatment where groundwater is pumped out of the ground and through granular activated carbon followed by secondary treatment by air stripper, both of which capture the VOCs. The treated water is then recharged back into the aquifer using two injection wells and three infiltration galleries.

⁴ The vadose zone is the unsaturated soil zone above the water table. Soil gas is located in the spaces between soil particles.

Fort Ord University Villages

The US Army investigated pre-1978 structures to assess the potential presence of lead in soil from historical use of lead-based paint (West, 2007). The soil investigations revealed the presence of lead from lead-based paint in soil at various locations, including the Fort Ord University Villages, located just east of Highway 1 (**Map ID 8**). Soil with lead-based paint around former buildings was excavated and removed from the portions along Highway 1 where the new Transmission Main pipeline would be located.

Fort Ord Site 11

The USTs at the former Fort Ord fueling station were previously located in the southern portion of the current service station located on the west side of General Jim Moore Boulevard, just north of the northwest corner of General Jim Moore Boulevard and Gigling Road (**Map ID 9**) (FORA, 2016b). The previous USTs were removed and the site remediated prior to 1998. The site was subsequently rebuilt to the current service station configuration.

Former Exxon Service Station

A fuel service station formerly occupied the eastern corner of the intersection of Merritt Street (Highway 183), Haro Street, and the on and off ramps for Highway 156 (**Map ID 14**) (RRM, 2016). The underground storage tanks, contaminated soil, and buildings site have been removed, and the site is being remediated using air sparging and soil vapor extraction. The depth to groundwater ranged from about 24 to 33 feet below ground surface from 2009 to 2016. The Castroville Pipeline Optional Alignment would pass just west of and adjacent to this site.

4.7.1.2 Structural and Building Components

Hazardous materials, such as asbestos, lead, and polychlorinated biphenyls, may occur in older building materials and be released during demolition or renovation of existing facilities. Because the proposed project does not include demolition or renovation of existing facilities, buildings, or structures, hazardous materials in building debris would not be encountered and, therefore, are not discussed in detail in this section.

4.7.1.3 Existing Hazardous Materials Usage

Hazardous materials are currently used at the existing ASR injection/extraction wells (ASR-1, ASR-2, ASR-3, and ASR-4) and existing California American Water Company (CalAm) pump station sites. Operation of the ASR wells involves the storage and use of carbon dioxide, lime, sodium hypochlorite solution (bleach), and other substances required for water treatment. Existing CalAm pump stations are powered by electricity, but may store fuel for backup emergency generators, and minor amounts of solvents and lubricants for maintenance.

4.7.1.4 Nearby Airports

The new Desalinated Water Pipeline would be located 1.7 miles west of the Marina Municipal Airport, which is north of the intersection of Reservation Road and Imjin Road in Marina (see

Figure 4.7-1). The new Transmission Main Pipeline would be located 0.3 miles north of the Monterey Peninsula Airport, which is east of Highway 1 and north of Highway 68 in Del Rey Oaks (see **Figure 4.7-2**).

4.7.1.5 Nearby Schools

Schools are considered sensitive receptors for hazardous materials because children are more susceptible than adults to the effects of hazardous materials. Schools that are located within 0.25 mile of the project are listed in **Table 4.7-2** and shown on **Figures 4.7-1** and **4.7-2**.

**TABLE 4.7-2
 SCHOOLS IN THE VICINITY OF PROJECT COMPONENTS**

Project Component	Schools within 0.25 Mile of Project Components
New Desalinated Water Pipeline	<ul style="list-style-type: none"> • Olsen Elementary 261 Beach Road, Marina
New Transmission Main	<ul style="list-style-type: none"> • Marina Del Mar Elementary School 3066 Lake Drive, Marina • Seaside Middle School, 999 Coe Avenue, Seaside
ASR Pipelines	Seaside Middle School, 999 Coe Avenue, Seaside
Ryan Ranch-Bishop Interconnection Improvements	<ul style="list-style-type: none"> • York School, 9501 York Rd, Monterey
Castroville Pipeline, Source Water Pipeline, and Brine Discharge Pipeline; Main System-Hidden Hills Interconnection Improvements; Carmel Valley Pump Station	None

SOURCE: MPUSD, 2016; NMCUSD, 2016.

4.7.1.6 Wildfire Hazards

California Department of Forestry and Fire Protection (CAL FIRE) maps identify fire hazard severity zones in state and local responsibility areas for fire protection. Portions of the southern project area are situated either within or near a Very High or High Fire Hazard Severity Zone (CAL FIRE, 2007, 2008). Project components located within and near these areas include the new Transmission Main, ASR Pipelines, Terminal Reservoir, Ryan Ranch-Bishop Interconnection Improvements, Main System-Hidden Hills Interconnection Improvements, and Carmel Valley Pump Station (see Figure 4.7-2).

4.7.2 Regulatory Framework

This section provides an overview of notable federal, state, and local environmental laws, policies, plans, regulations, and/or guidelines (hereafter referred to generally as “regulatory requirements”) relevant to hazards and hazardous materials. A brief summary of each is provided, along with a finding regarding the project’s conformity with those regulatory requirements. The conformity findings concern the project as proposed, without mitigation. Where the project, as proposed, would be consistent with the applicable regulatory requirement, no further discussion of project consistency with that regulatory requirement is provided. Where the project, as proposed, would be potentially inconsistent with the applicable regulatory requirement, the reader

is referred to a specific impact topic within EIR/EIS Section 4.7.5, Direct and Indirect Effects of the Proposed Project, where the potential inconsistency is addressed in more detail. Where applicable, the discussion in Section 4.7.5 includes identification of feasible mitigation that would resolve or minimize the potential inconsistency.

4.7.2.1 Federal Regulations

Comprehensive Environmental Response, Compensation, and Liability Act, Superfund Amendments and Reauthorization Act of 1986 (42 USC Section 9601 et seq.)

The Comprehensive Environmental Response, Compensation, and Liability Act, also known as CERCLA, created the federal Superfund program that provides for the response and cleanup of hazardous substances that may endanger public health or the environment. The Superfund Amendments and Reauthorization Act (SARA) amended CERCLA in 1986 to increase state involvement and required Superfund actions to consider state environmental laws and regulations. SARA also established a regulatory program for the Emergency Planning and Community Right-to-Know Act. The applicable part of SARA for the MPWSP is Title III, otherwise known as the Emergency Planning and Community Right-To-Know Act of 1986. Title III requires states to establish a process for developing local chemical emergency preparedness programs and to receive and disseminate information on hazardous substances present at facilities in local communities. The law provides primarily for planning, reporting, and notification concerning hazardous substances. Key provisions require notification when extremely hazardous substances are present above their threshold planning quantities, immediate notification to the local emergency planning committee and the state emergency response commission when a hazardous material is released in excess of its reportable quantity, and that material safety data sheets for all hazardous materials or a list of all hazardous materials be submitted to the state and local emergency planning agencies and local fire department. Contractors during construction activities and Cal-Am during operations would be required to prepare Hazardous Materials Business Plans, as required under the state Hazardous Materials Release Response Plans and Inventory Act, described below, which would make the proposed project consistent with CERCLA as amended by SARA.

Toxic Substances Control Act (15 USC 2605)/Resource Conservation and Recovery Act (42 USC 6901 et seq.)/Hazardous and Solid Waste Act

The federal Toxic Substances Control Act of 1976 and the Resource Conservation and Recovery Act of 1976 authorized the USEPA to regulate the generation, transportation, treatment, storage, and disposal of hazardous waste. The Resource Conservation and Recovery Act was amended in 1984 by the Hazardous and Solid Waste Act, which affirmed and extended the “cradle to grave” system of regulating hazardous wastes. Contractors would be required to comply with state regulations including the Hazardous Materials Release Response Plans and Inventory Act, Unified Hazardous Waste and Hazardous Materials Management Regulatory Program, License to Transport Hazardous Materials, and Hazardous Materials Storage and Handling, which would make the proposed project consistent with the Toxic Substances Control Act.

U.S. Department of Transportation Hazardous Materials Transport Act (49 USC 5101)

The U.S. Department of Transportation, in conjunction with the USEPA, is responsible for enforcement and implementation of federal laws and regulations pertaining to transportation of hazardous materials. The Hazardous Materials Transportation Act of 1974 directs the U.S. Department of Transportation to establish criteria and regulations regarding the safe storage and transportation of hazardous materials. 49 CFR 171–180, regulates the transportation of hazardous materials, types of material defined as hazardous, and the marking of vehicles transporting hazardous materials. Contractors would be required to comply with state regulations including the Hazardous Materials Release Response Plans and Inventory Act, Unified Hazardous Waste and Hazardous Materials Management Regulatory Program, License to Transport Hazardous Materials, and Hazardous Materials Storage and Handling, which would make the proposed project consistent with the U.S. Department of Transportation Hazardous Materials Transport Act.

Occupational Safety and Health Act (29 USC 15)

The Occupational Safety and Health Act of 1970 was passed to address employee safety in the workplace. The Act created the Occupational Safety and Health Administration (OSHA), whose mission is to ensure the safety and health of America’s workers by setting and enforcing standards; providing training, outreach, and education; establishing partnerships; and encouraging continual improvement in workplace safety and health. The OSHA staff establishes and enforces protective standards and reaches out to employers and employees through technical assistance and consultation programs. Contractors would be required to comply with California OSHA regulations, described below, which would make the proposed project consistent with the federal OSHA.

4.7.2.2 State Regulations

California Coastal Act

The California Coastal Act (Public Resources Code Section 30000 et seq.) provides for the long-term management of lands within California’s coastal zone boundary. Of primary relevance to hazards and hazardous materials is a Coastal Act policy concerning oil and hazardous substance spills. A preliminary assessment of project consistency with this priority is provided here. Final determinations regarding project consistency are reserved for the Coastal Commission. The MPWSP would be required to prepare a Hazardous Materials Business Plan and a Storm Water Pollution Prevention Plan and comply with the California Fire Code, both of which would provide procedures to store hazardous materials and respond to accidents. With implementation of this required plan, the project would be consistent with Coastal Act policy concerning oil and hazardous substance spills.

Safe Drinking Water and Toxics Enforcement Act, Proposition 65 - Health and Safety Code, Section 25249.5 et seq.

This law identifies chemicals that cause cancer and reproductive toxicity, provides information for the public, and prevents discharge of the chemicals into sources of drinking water. Lists of the

chemicals of concern are published and updated periodically. Businesses are required to notify Californians about the chemicals in products they purchase, in the workplace, or that are released to the environment. By providing this information, individuals are able to make informed decisions about protecting themselves from exposure to these chemicals. Contractors would be required to comply with state regulations including the Hazardous Materials Release Response Plans and Inventory Act, Unified Hazardous Waste and Hazardous Materials Management Regulatory Program, and Hazardous Materials Storage and Handling, which would make the proposed project consistent with the state Safe Drinking Water and Toxics Enforcement Act.

Aboveground Petroleum Storage Act - Health and Safety Code, Section 25270

Health and Safety Code Sections 25270 to 25270.13 ensure compliance with the federal Clean Water Act. The law applies to facilities that operate a petroleum aboveground storage tank with a capacity greater than 660 gallons or combined aboveground storage tanks capacity greater than 1,320 gallons or oil-filled equipment where there is a reasonable possibility that the tank(s) or equipment may discharge oil in “harmful quantities” into navigable waters or adjoining shore lands. If a facility falls under these criteria, it must prepare a Spill Prevention Control and Countermeasure Plan which would make the proposed project consistent with the Aboveground Petroleum Storage Act.

Hazardous Materials Release Response Plans and Inventory Act - Health and Safety Code, Section 25500 et seq.

The Hazardous Materials Release Response Plans and Inventory Act of 1985, also known as the Business Plan Act, requires businesses using hazardous materials to prepare a Hazardous Materials Business Plan that describes their facilities, inventories, emergency response plans, and training programs. Business plans contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed. This Act and the related regulations in Title 19 of the California Code of Regulations (CCR) Section 2620, et seq., require local governments to regulate local business storage of hazardous materials in excess of certain quantities. The law also requires that entities storing hazardous materials be prepared to respond to releases. Those using and storing hazardous materials are required to submit a Hazardous Materials Business Plan (HMBP) to their local Certified Unified Program Agency (CUPA) and to report releases to their CUPA and the State Office of Emergency Services. The California Office of Emergency Services is responsible for implementing the accident prevention and emergency response programs established under the Act and its implementing regulations. Contractors would be required to prepare and submit Hazardous Materials Business Plans, which would make the proposed project consistent with the Hazardous Materials Release Response Plans and Inventory Act.

Hazardous Waste Control Act – Health and Safety Code, Section 25100 et seq.

The Hazardous Waste Control Act of 1972 created the State hazardous waste management program, which is similar to but more stringent than the federal Resource Conservation and

Recovery Act program. The Act is implemented by regulations contained in Title 26 of the CCR,⁵ which describes the following required aspects for the proper management of hazardous waste: identification and classification; generation and transportation; design and permitting of recycling treatment, storage and disposal facilities; operation of facilities and staff training; and closure of facilities and liability requirements. These regulations list more than 800 materials that may be hazardous and establish criteria for identifying, packaging, and disposing of such waste. Under the Hazardous Waste Control Act and its implementing regulations in Title 26, the generator of hazardous waste must complete a manifest that accompanies the waste from generator to transporter to the ultimate disposal location. Copies of the manifest must be filed with the DTSC. Contractors would be required to comply with the Hazardous Waste Control Act, which would make the proposed project consistent.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program) – Health and Safety Code Sections 25404 et seq.

This program requires the administrative consolidation of six hazardous materials and waste programs (Program Elements) under one agency, a CUPA. The following Program Elements are consolidated under the Unified Program:

- Hazardous Waste Generator and On-site Hazardous Waste Treatment Programs (a.k.a. Tiered Permitting)
- Aboveground Petroleum Storage Tanks
- Hazardous Materials Release Response Plans and Inventory Program (a.k.a. Hazardous Materials Disclosure or “Community-Right-To-Know”)
- California Accidental Release Prevention Program
- UST Program
- Uniform Fire Code Plans and Inventory Requirements

The Unified Program is intended to provide relief to businesses complying with the overlapping and sometimes conflicting requirements of formerly independently managed programs. The Unified Program is implemented at the local government level by CUPAs. Most CUPAs have been established as a function of a local environmental health or fire department. The local CUPA for this project is the Monterey County Environmental Health Division. Some CUPAs have contractual agreements with another local agency, a participating agency, which implements one or more Program Elements in coordination with the CUPA. Contractors would be required to comply with the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program, which would make the proposed project consistent.

⁵ Title 26 is a compilation of all environmental and hazardous waste regulations issued by state regulatory agencies published in a single title of the California Administrative Code. These toxics regulations are also found in the original titles assigned to each agency, and are repeated in Title 22 and in Title 23.

California Occupational Safety and Health Act – California Labor Code, Section 6300 et seq.

The California Occupational Safety and Health Act of 1973 addresses California employee working conditions, enables the enforcement of workplace standards, and provides for advancements in the field of occupational health and safety. The Act also created the California Occupational Safety and Health Administration (Cal OSHA), the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal OSHA's standards are generally more stringent than federal regulations. Under the former, the employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR Sections 337-340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings. All contractors are required to comply with Cal OSHA, which would make the proposed project consistent.

License to Transport Hazardous Materials – California Vehicle Code, Section 32000.5 et seq.

A valid Hazardous Materials Transportation License, issued by the California Highway Patrol, is required by the State of California Vehicle Code Section 32000.5 for transportation of hazardous materials shipments for which the display of placards is required by State regulations; or hazardous materials shipments of more than 500 pounds.

Additional requirements on the transportation of explosives, inhalation hazards, and radioactive materials are enforced by the California Highway Patrol under the authority of the State Vehicle Code Sections 32100 – 33002. Transportation of explosives generally requires consistency with additional rules and regulations for routing, safe stopping distances, and inspection stops (Title 14, CCR, Chapter 6, Article 1, Sections 1150-1152.10). Inhalation hazards face similar, more restrictive rules and regulations (Title 13, CCR, Chapter 6, Article 2.5, Sections 1157-1157.8). Contractors that transport hazardous materials are required to acquire the license for and comply with the requirements of the License to Transport Hazardous Materials regulations, which would make the proposed project consistent.

Water Main Separation – California Code of Regulations, Title 22, Section 64572

California Code of Regulations, Title 22, Section 64572 states that new water mains and supply lines shall not be within the same trench as, and must be located least 10 feet horizontally from, any parallel pipeline conveying sewage, secondary-treated recycled water, and hazardous fluids such as fuels, industrial wastes, and wastewater sludge. In addition, new water mains may not be installed within 100 horizontal feet of any sanitary landfill, wastewater disposal pond, or hazardous waste disposal site, or within 25 horizontal feet of the nearest edge of any cesspool, septic tank, sewage leach field, underground hazardous material storage tank, or groundwater recharge site. None of the proposed project's pipelines will be co-located with sewer lines; contractors are required to comply with the water main separation regulations, which would make the proposed project consistent.

Utility Notification Requirements – California Code of Regulations, Title 8, Section 1541

Title 8 CCR Section 1541 requires excavators to determine the approximate locations of subsurface installations, such as sewer, telephone, fuel, electric, and water lines (or any other subsurface installations that may reasonably be encountered during excavation work) prior to opening an excavation. The California Government Code (Section 4216 et seq.) requires owners and operators of underground utilities to become members of and participate in a regional notification center. According to Section 4216.1, operators of subsurface installations who are members of, participate in, and share in the costs of a regional notification center, such as Underground Services Alert, are in compliance with this section of the code. Underground Services Alert (known as USA North 811) receives planned excavation reports from public and private excavators and transmits those reports to all participating members of USA North that may have underground facilities at the location of excavation. Members will mark or stake their facilities, provide information, or give clearance to dig (USA North, 2016). Contractors are required to comply with the Utility Notification Requirements, which would make the proposed project consistent.

Prohibited Activities in Forests, Forestry and Range and Forage Lands – California Public Resources Code, Section 4411 et seq.

The California Public Resources Code (PRC) restricts the use of internal combustion engines in forest-, brush-, and grass-covered lands ; specifies requirements for the safe use of gasoline-powered tools in fire hazard areas; and specifies fire suppression equipment that must be provided onsite for various types of work in fire-prone areas. More specifically, the PRC requires the following:

- Earthmoving and portable equipment with internal combustion engines must be equipped with a spark arrestor⁶ to reduce the potential for igniting a wildland fire (PRC Section 4442).
- Appropriate fire suppression equipment must be maintained during the highest fire danger period—from April 1 to December 1 (PRC Section 4428).
- On days when a burning permit is required, flammable materials must be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor must maintain the appropriate fire suppression equipment (PRC Section 4427).
- On days when a burning permit is required, use of portable tools powered by gasoline-fueled internal combustion engines are prohibited within 25 feet of any flammable materials (PRC Section 4431).

Contractors would be required to comply with state restrictions regarding the use of internal combustion engines in forest-, brush-, and grass-covered lands, which would make the proposed project consistent.

⁶ A spark arrestor is a device that prohibits exhaust gases from an internal combustion engine from passing through the impeller blades where they could cause a spark. A carbon trap is commonly used to retain carbon particles from the exhaust.

Hazardous Materials Storage and Handling, California Fire Code, California Code of Regulations, Title 24, Part 9, Section 2700 et seq.

The California Fire Code (Chapter 27) includes specific requirements for the safe storage and handling of hazardous materials. These requirements reduce the potential for a release of hazardous materials and for mixing of incompatible chemicals, and specify the following specific design features to reduce the potential for a release of hazardous materials that could affect public health or the environment:

- Separation of incompatible materials with a noncombustible partition, or appropriate distance separation.
- Spill control in all storage, handling, and dispensing areas.
- Separate secondary containment for each chemical storage system. The secondary containment must hold the entire contents of the tank, plus the volume of water needed to supply the fire suppression system for a period of 20 minutes in the event of a catastrophic spill.

The California Fire Code (Chapter 14) also addresses fire safety during construction and demolition and includes requirements for smoking, waste disposal, cutting and welding, fire protection equipment, fire reporting, access for firefighting. Contractors would be required to comply with the Hazardous Materials Storage and Handling regulations, which would make the proposed project consistent.

Screening Levels for Hazardous Materials in Soil or Groundwater

The RWQCB Environmental Screening Levels (ESLs) are guidelines used to evaluate the potential risk associated with chemicals found in soil or groundwater where a release of hazardous materials has occurred. The RWQCB has established ESLs for both residential and commercial/industrial land uses, and for construction workers. Residential screening levels are the most restrictive; soil with chemical concentrations below these levels generally would not require remediation and would be suitable for unrestricted uses if disposed of offsite. Commercial/industrial screening levels are generally less restrictive than residential screening levels because they are based on potential worker exposure to hazardous materials in the soil (and these are generally less than residential exposures). Screening levels for construction workers are also less restrictive than for commercial/industrial workers because construction workers are only exposed to the chemical of concern during the duration of construction, while industrial workers are assumed to be exposed over a working lifetime.

The California Environmental Project Agency (Cal/EPA) has also developed screening levels for human exposure to potentially hazardous chemicals. The California Human Health Screening Levels (CHHSLs) are concentrations of 54 hazardous chemicals in soil or soil gas that Cal/EPA considers to be below thresholds of concern for risks to human health. The CHHSLs can be used to screen sites for potential human health concerns where releases of hazardous chemicals have occurred. The presence of a chemical at concentrations in excess of a CHHSL does not indicate that adverse impacts are occurring or will occur, but suggests that further evaluation is warranted.

The CHHSLs are guidance, and not regulatory cleanup standards. The proposed project could be inconsistent with soil or groundwater screening levels for hazardous materials if the screening levels were not applied during soil excavation activities. This is addressed below in Impact 4.7-2.

4.7.2.3 Local Regulations

Table 4.7-3 describes the regional and local land use plans, policies, and regulations pertaining to hazards and hazardous materials that are relevant to the MPWSP and that were adopted for the purpose of avoiding or mitigating an environmental effect. Also included in Table 4.7-3 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 4.7.5, Direct and Indirect Effects of the Proposed Project, for additional discussion. In that subsection, the significance of the potential conflict is evaluated. Where the effect of the potential conflict would be significant, feasible mitigation is identified to resolve or minimize that conflict.

**TABLE 4.7-3
APPLICABLE REGIONAL AND LOCAL PLANS AND POLICIES RELEVANT TO HAZARDS AND HAZARDOUS MATERIALS**

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)	City of Marina Local Coastal Program Land Use Plan	Policies	Subsurface Slant Wells, Source Water Pipeline, New Desalinated Water Pipeline, and New Transmission Main	Policy 20: The policy of the City of Marina shall be: To seek assistance and direction in protecting Marina's beach resources from destruction by oil spills and other hazardous substances.	The intent of this policy is to protect beach resources from the damaging effects of hazardous material releases.	<u>Consistent:</u> The project would be required to prepare a Hazardous Materials Business Plan and comply with the California Fire Code, both of which would provide procedures to store hazardous materials and respond to accidents.
City of Marina (coastal zone and inland areas)	City of Marina General Plan	Community Design and Development	Subsurface Slant Wells, Source Water Pipeline, New Desalinated Water Pipeline, and New Transmission Main	Policy 4.103: To protect the public from health threats posed by hazardous materials, the following policies shall be adhered to: 1. The City shall support all local, regional and state efforts directed at preventing injuries and avoiding environmental contamination due to the uncontrolled release of hazardous substances. The City shall follow all applicable regulations and procedures related to the use, storage and transportation of toxic, explosive and other hazardous materials to prevent uncontrolled discharges. 2. The City shall require discretionary review and approval of all commercial and industrial uses which will generate more than 27 gallons of hazardous wastes monthly (the limitation imposed by Monterey Regional Waste Management District for non-household hazardous wastes). City approval of these uses shall be contingent upon preparation and approval by the County Health Department of a hazardous-waste-disposal plan for these uses prepared in accordance with the requirements of the Monterey County Health Department. 3. All uses involving the handling of significant amounts of hazardous materials shall be subject to discretionary approval. Hazardous materials management and disposal plans shall be prepared in accordance with the requirements of the Monterey County Health Department for all such projects prior to the granting of any entitlements by the City. The City shall ensure that proposed industrial or commercial projects that will use or generate hazardous materials shall be compatible with surrounding uses as designated by the General Plan. Residential uses and other sensitive uses such as schools shall be adequately buffered from adjoining uses which involve the use or generation of hazardous materials.	This policy is intended to protect the public and the environment from health risks associated with the use, storage, transport, and uncontrolled release of hazardous materials.	<u>Consistent:</u> The project would be required to prepare a Hazardous Materials Business Plan and comply with the California Fire Code, both of which would provide procedures to store hazardous materials and respond to accidents.
City of Marina (coastal zone and inland areas)	Marina Municipal Code	Chapter 15.56 - Digging and Excavation the Former Fort Ord	Subsurface Slant Wells Source Water Pipeline, New Desalinated Water Pipeline, and New Transmission Main	Chapter 15.56 - Digging and Excavation the Former Fort Ord establishes special standards and procedures for digging and excavation on those properties in the former Fort Ord which are suspected of containing ordnance and explosives. This ordinance requires that a permit be obtained from the City for any excavation, digging, development or ground disturbance of any type involving the displacement of ten cubic yards or more of soil. The permit requirements include providing each site worker a copy of the notice; complying with all requirements placed on the property by the Army and DTSC; obtaining ordnance and explosives construction support; ceasing soil disturbance activities upon discovery of suspected ordnance, and reporting of project findings.	This section of municipal code is intended to protect the public, workers, and the environment from uncontrolled detonation of ordnance.	<u>Potentially Inconsistent:</u> Some of the project components would result in excavation in areas within the Former Fort Ord. Although cleanup activities have removed known contamination, previously-unknown contamination may be discovered. This issue is addressed in Impact 4.7-2 .
City of Marina (coastal zone and inland areas)	Marina Municipal Code	Chapter 8.12 – Hazardous Materials Storage and Registration	Subsurface Slant Wells, Source Water Pipeline, New Desalinated Water Pipeline, and New Transmission Main	Section 8.12.050: Hazardous materials registration form. Any person who owns or operates an establishment that contains at any one time during the year, hazardous materials as defined in Section 8.12.020 shall file a completed hazardous material registration form with the health department within ninety days of the effective date of this chapter (1983).	This policy is intended to protect the public and the environment from health risks associated with uncontrolled releases of hazardous materials.	<u>Consistent:</u> There would be no facilities within the City of Marina that store hazardous materials.
City of Monterey (inland areas)	Monterey City Code	Chapter 13 – Fire Protection	Ryan Ranch-Bishop Interconnection Improvements	Chapter 13: Defines standards for fire protection, hazardous substances clean up, and the establishment of fire hazard severity zones within the City of Monterey. The City of Monterey has adopted the 2013 California Fire Code, with amendments. The Fire Chief may require that fire hydrants be installed on private property if the Chief determines that development of the property creates an additional fire hazard that cannot be adequately served by publicly maintained fire hydrants.	The intent of this city code is to protect the public and the environment from fire hazards and uncontrolled hazardous material releases.	<u>Consistent:</u> As discussed in the Regulatory Framework, the project would be required to prepare a Hazardous Materials Business Plan and comply with the California Fire Code, all of which would provide procedures to store hazardous materials and respond to accidents.
City of Monterey (inland areas)	Monterey City Code	Chapter 9 – Building Regulations	Ryan Ranch-Bishop Interconnection Improvements	Chapter 9, Article 8: Contains digging and excavation standards that apply to land once part of the former Fort Ord, including prohibition of digging, excavation, and development of this land until ordnance or explosive remediation is completed.	This policy is intended to protect the public, workers, and the environment from uncontrolled detonation of ordnance.	<u>Potentially Inconsistent:</u> Some of the project components would result in excavation in areas within the Former Fort Ord. Although cleanup activities have removed known contamination, previously-unknown contamination may be discovered. This issue is addressed in Impact 4.7-2 .

**TABLE 4.7-3 (Continued)
APPLICABLE REGIONAL AND LOCAL PLANS AND POLICIES RELEVANT TO HAZARDS AND HAZARDOUS MATERIALS**

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)	Seaside General Plan	Safety	New Transmission Main, ASR Wells, ASR Conveyance Pipeline, ASR Pump-to-Waste Pipeline, ASR Recirculation Pipeline, ASR Settling Basin, and Terminal Reservoir	Policy S-2.2: Minimize the risk to community associated with hazardous materials.	The intent of this policy is to protect the public and the environment from health risks associated with hazardous materials.	<u>Consistent:</u> As discussed in the Regulatory Framework, the project would be required to prepare a Hazardous Materials Business Plan and a Storm Water Pollution Prevention Plan, and comply with the California Fire Code, all of which would provide procedures to store hazardous materials and respond to accidents.
City of Seaside (coastal zone and inland areas)	Seaside General Plan	Safety	New Transmission Main, ASR Wells, ASR Conveyance Pipeline, ASR Pump-to-Waste Pipeline, ASR Recirculation Pipeline, ASR Settling Basin, and Terminal Reservoir	Implementation Plan S-2.2.1: Hazardous Materials. Minimize public health risk and environmental risks from the use, transport, storage, and disposal of hazardous materials by: <ul style="list-style-type: none"> Cooperating with federal, State, and County agencies to effectively regulate the management of hazardous materials and hazardous waste, especially on the former Fort Ord; Cooperating with the County of Monterey to reduce the per capita production of household hazardous waste in accordance with the County Hazardous Waste Management Plan; Identifying roadway transportation routes for conveyance of hazardous materials (the City does not exercise jurisdiction over transportation of freight along railroad right-of-way or state highways); Implementing a Multihazard Emergency Plan for accidents involving hazardous materials; and Cooperating with the Certified Unified Program Agency (CUPA) for Seaside (the County of Monterey, Environmental Health Division) and the Seaside Fire Department to administer Risk Management Plans for businesses within the City. 	This plan is intended to protect the public and the environment from health risks associated with the use, storage, transport, and uncontrolled release of hazardous materials.	<u>Consistent:</u> As discussed in the Regulatory Framework, the project would be required to prepare a Hazardous Materials Business Plan and a Storm Water Pollution Prevention Plan, and comply with the California Fire Code, all of which would provide procedures to store hazardous materials and respond to accidents.
City of Seaside (coastal zone and inland areas)	Seaside Municipal Code	Chapter 15.34 - Digging and Excavation the Former Fort Ord	New Transmission Main, ASR Wells, ASR Conveyance Pipeline, ASR Pump-to-Waste Pipeline, ASR Recirculation Pipeline, ASR Settling Basin, and Terminal Reservoir	Chapter 15.34: Digging and Excavation the Former Fort Ord contains the "Ordinance Remediation District Regulations of the City" (Ord. 924 (part)) and establishes special standards and procedures for digging and excavation on those properties in the former Fort Ord military base which are suspected of containing ordnance and explosives. This ordinance requires that a permit be obtained from the City for any excavation, digging, development, or ground disturbance of any type involving the displacement of ten cubic yards or more of soil. The permit requirements include providing each site worker a copy of the Ordinance and Explosives Safety Alert; complying with all requirements placed on the property by an agreement between the City, FORA, and DTSC; obtaining ordnance and explosives construction support; ceasing soil disturbance activities upon discovery of suspected ordnance and notifying the Seaside Police department, the Presidio law enforcement, the Army and DTSC; coordinating appropriate response actions with the Army and DTSC; and reporting of project findings.	The intent of this code is to protect the public, workers, and the environment from health risks associated with uncontrolled ordnance detonation.	<u>Potentially Inconsistent:</u> Some of the project components would result in excavation in areas within the Former Fort Ord. Although cleanup activities have removed known contamination, previously-unknown contamination may be discovered. This issue is addressed in Impact 4.7-2 .
City of Seaside (coastal zone and inland areas)	Seaside Municipal Code	Chapter 8.50 – Hazardous Materials Registration	New Transmission Main, ASR Wells, ASR Conveyance Pipeline, ASR Pump-to-Waste Pipeline, ASR Recirculation Pipeline, ASR Settling Basin, and Terminal Reservoir	Chapter 8.50: Hazardous Materials Registration requires that any person who owns or operates an establishment that contains hazardous materials any time during the year file a completed hazardous material registration form with the department of health. This form must be updated annually to ensure that the City has current information regarding hazardous substances and materials being used in the city.	This policy is intended to protect the public and the environment from health risks associated with the use, storage, transport, and uncontrolled release of hazardous materials.	<u>Consistent:</u> As discussed in the Regulatory Framework, the project would be required to prepare a Hazardous Materials Business Plan and a Storm Water Pollution Prevention Plan, and comply with the California Fire Code, all of which would provide procedures to store hazardous materials and respond to accidents.
County of Monterey (coastal zone)	North County Land Use Plan	2.3 Environmentally Sensitive Habitats	Source Water Pipeline and New Desalinated Water Pipeline	2.3.3.B.8 Oil and other toxic substances shall not be allowed to enter or drain into the estuarine system. Oil spill and toxic substance discharge contingency plans shall be developed by the appropriate agencies of Monterey County to coordinate emergency procedure for clean-up operations of all foreseeable conditions. New development shall be permitted adjacent to estuarine areas only where such development does not increase the hazard of oil spill or toxic discharge into the estuaries.	This policy is intended to protect estuaries from the unintended release of hazardous substances.	<u>Consistent:</u> As discussed in the Regulatory Framework, the project would be required to prepare a Hazardous Materials Business Plan and a Storm Water Pollution Prevention Plan, and comply with the California Fire Code, all of which would provide procedures to store hazardous materials and respond to accidents.
County of Monterey (coastal zone)	North County Land Use Plan	2.8 Hazards	Source Water Pipeline and New Desalinated Water Pipeline	2.8.2 (1): All development shall be sited and designed to minimize risk from geologic, flood, tsunami or fire hazards to a level generally acceptable to the community. Areas of a parcel which are subject to high hazard(s) shall generally be considered unsuitable for development. Any proposed development in high hazard areas shall require the preparation of an environmental or geotechnical report prior to County review of the project.	This policy is intended to protect the public and property from natural hazards.	<u>Consistent:</u> As discussed in the Regulatory Framework, the project would be required to prepare a Hazardous Materials Business Plan and comply with the California Fire Code, which would provide procedures to store hazardous materials, reduce fire hazards, and respond to accidents. Geologic and flood hazards are addressed in Section 4.2, Geology, Soils, and Seismicity.

TABLE 4.7-3 (Continued)
APPLICABLE REGIONAL AND LOCAL PLANS AND POLICIES RELEVANT TO HAZARDS AND HAZARDOUS MATERIALS

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
County of Monterey (coastal zone and inland areas)	Monterey County Code	Chapter 10.65 – Hazardous Materials Registration	Source Water Pipeline, MPWSP Desalination Plant, New Desalinated Water Pipeline, Brine Discharge Pipeline, Pipeline to CSIP Pond, Castroville Pipelines, Carmel Valley Pump Station Main System-Hidden Hills and Ryan Ranch-Bishop Interconnection Improvements	Chapter 10.65: Hazardous Materials Registration requires that any person who owns or operates an establishment that contains hazardous materials at any one time during the year file a completed hazardous materials registration form to the Department of Health. An updated completed hazardous material form must be submitted to the Department of Health annually.	The intent of this policy is to protect the public and the environment from health risks associated with the use, storage, transport, and uncontrolled release of hazardous materials.	<u>Consistent:</u> As discussed in the Regulatory Framework, the project would be required to prepare a Hazardous Materials Business Plan and a Storm Water Pollution Prevention Plan, and comply with the California Fire Code, all of which would provide procedures to store hazardous materials and respond to accidents.
County of Monterey (coastal zone and inland areas)	Monterey County Code	Chapter 10.67 - Hazardous Materials Emergency Response	Source Water Pipeline, MPWSP Desalination Plant, New Desalinated Water Pipeline, Brine Discharge Pipeline, Pipeline to CSIP Pond, Castroville Pipelines, Carmel Valley Pump Station Main System-Hidden Hills and Ryan Ranch-Bishop Interconnection Improvements	Chapter 10.67: Hazardous Materials Emergency Response establishes a surcharge that applies to businesses that use, store, or otherwise handle hazardous materials. The surcharge funds current or future Fire Hazardous Material Emergency Response Teams that would respond to threats to life, property, or natural resources arising from the use, storage, or handling of hazardous materials by these businesses.	This code is intended to protect public health and the environment from risks associated with the uncontrolled release of hazardous materials from businesses that use, store, or handle these substances.	<u>Consistent:</u> As discussed in the Regulatory Framework, the project would be required to prepare a Hazardous Materials Business Plan and a Storm Water Pollution Prevention Plan, and comply with the California Fire Code, all of which would provide procedures to store hazardous materials and respond to accidents.
County of Monterey (coastal zone and inland areas)	Monterey County General Plan	Safety	MPWSP Desalination Plant Carmel Valley Pump Station	Policy S-4.11: The County shall require all new development to be provided with automatic fire protection systems (such as fire breaks, fire-retardant building materials, automatic fire sprinkler systems, and/or water storage tanks) approved by the fire jurisdiction.	This policy is intended to protect the public and the environment from fire hazards associated with New development.	<u>Consistent:</u> As discussed in the Regulatory Framework, the project would be required to prepare a Hazardous Materials Business Plan and comply with the California Fire Code, which would provide procedures to store hazardous materials, reduce fire hazards, and respond to accidents.
County of Monterey (coastal zone and inland areas)	Monterey County General Plan	Safety	MPWSP Desalination Plant	Policy S-4.13: The County shall require all new development to have adequate water available for fire suppression. The water system shall comply with Monterey County Code Chapter 18.56, NFPA Standard 1142, or other nationally recognized standard. The fire authority having jurisdiction, the County Departments of Planning and Building Services, and all other regulatory agencies shall determine the adequacy and location of water supply and/or storage to be provided.	The intent of this policy is to ensure that New development would be served by water supplies adequate to protect the public and the environment from fire hazards.	<u>Consistent:</u> As discussed in the Regulatory Framework, the project would be required to prepare a Hazardous Materials Business Plan and comply with the California Fire Code, which would provide procedures to store hazardous materials, reduce fire hazards, and respond to accidents.
County of Monterey (coastal zone and inland areas)	Monterey County General Plan	Safety	Source Water Pipeline, MPWSP Desalination Plant, New Desalinated Water Pipeline, Brine Discharge Pipeline, Pipeline to CSIP Pond, Castroville Pipelines, Carmel Valley Pump Station Main System-Hidden Hills and Ryan Ranch-Bishop Interconnection Improvements	Policy S-4.14: Water systems constructed, extended, or modified to serve a new land use or a change in land use or an intensification of land use, shall be designed to meet peak daily demand and recommended fire flow.	This policy is intended to ensure that water utility systems have capacity to protect the public and the environment from fire hazards associated with changes in land use within the County.	<u>Consistent:</u> As described in the Description of the Proposed Project, the purpose of this project is to replace public water supply that would be constrained by the state Cease and Desist Order limitations to the use of Carmel River water.
County of Monterey (coastal zone and inland areas)	Monterey County General Plan	Safety	Source Water Pipeline, MPWSP Desalination Plant, New Desalinated Water Pipeline, Brine Discharge Pipeline, Pipeline to CSIP Pond, Castroville Pipelines, Carmel Valley Pump Station Main System-Hidden Hills and Ryan Ranch-Bishop Interconnection Improvements	Policy S-4.21: All permits for residential, commercial, and industrial structural development (not including accessory uses) shall incorporate requirements of the fire authority having jurisdiction.	The intent of this policy is to protect the public and the environment from fire hazards.	<u>Consistent:</u> As discussed in the Regulatory Framework, the project would be required to comply with the California Fire Code.

**TABLE 4.7-3 (Continued)
APPLICABLE REGIONAL AND LOCAL PLANS AND POLICIES RELEVANT TO HAZARDS AND HAZARDOUS MATERIALS**

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
County of Monterey (coastal zone and inland areas)	Monterey County General Plan	Safety	Source Water Pipeline, MPWSP Desalination Plant, New Desalinated Water Pipeline, Brine Discharge Pipeline, Pipeline to CSIP Pond, Castroville Pipelines, Carmel Valley Pump Station Main System-Hidden Hills and Ryan Ranch-Bishop Interconnection Improvements	Policy S-4.22: Every building, structure, and/or development shall be constructed to meet the minimum requirements specified in the current adopted state building code, state fire code, Monterey County Code Chapter 18.56, and other nationally recognized standards.	This policy is intended to protect the public and the environment from hazards associated with structures, including fire hazards and seismic hazards.	<u>Consistent:</u> As discussed in the Regulatory Framework, the project would be required to comply with the California Fire Code. Compliance with the California Building Code is addressed in Section 4.2, Geology, Soils, and Seismicity.
County of Monterey (coastal zone and inland areas)	Monterey County General Plan	Safety	Carmel Valley Pump Station Main System-Hidden Hills and Ryan Ranch-Bishop Interconnection Improvements	Policy S-4.26: When public facilities and above-ground utilities are located in high or very high fire hazard areas, special precautions shall be taken to mitigate the risks from wildfire and to ensure uninterrupted operation.	This policy is intended to protect the public, the environment, and utility systems from wildfire hazards.	<u>Consistent:</u> As discussed in the Regulatory Framework, the project would be required to comply with the California Fire Code, which would reduce fire hazards.
County of Monterey (coastal zone and inland areas)	Monterey County General Plan	Safety	Carmel Valley Pump Station Main System-Hidden Hills and Ryan Ranch-Bishop Interconnection Improvements	Policy S-4.31: A zone that can inhibit the spread of wildland fire shall be required of New development in fire hazard areas. Such zones shall consider irrigated greenbelts, streets, and/or Fuel Modification Zones in addition to other suitable methods that may be used to protect development. The County shall not preclude or discourage a landowner from modifying fuel within the Fuel Modification Zone, or accept any open space easement or other easement over land within a Fuel Modification Zone that would have that effect.	The intent of this policy is to protect people and structures from risk of loss, injury, or death associated with wildland fires.	<u>Consistent:</u> As discussed in the Regulatory Framework, the project would be required to comply with the California Fire Code, which would reduce fire hazards.
County of Monterey (coastal zone and inland areas)	Monterey County General Plan	Safety	Carmel Valley Pump Station Main System-Hidden Hills and Ryan Ranch-Bishop Interconnection Improvements	Policy S-4.32: Property owners in high, very high, and extreme fire hazard areas shall prepare an overall Fuel Modification Zone plan in conjunction with permits for new structures, subject to approval and to be performed in conjunction with the CDFFP and/or other fire protection agencies in compliance with State Law.	The intent of this policy is to protect people and structures from risk of loss, injury, or death associated with wildland fires.	<u>Consistent:</u> As discussed in the Regulatory Framework, the project would be required to comply with the California Fire Code, which would reduce fire hazards.
Fort Ord Reuse Authority (Seaside)	Fort Ord Reuse Plan	Safety	New Transmission Main, ASR Conveyance Pipelines, ASR Pump-to-Waste Pipeline, ASR Recirculation Pipeline, ASR Settling Basin, Terminal Reservoir	Hazardous and Toxic Materials Safety Policy C-1: The City of Seaside shall require hazardous materials management and disposal plans for any future projects involving the use of hazardous materials.	This policy is intended to protect the public and the environment from health risks associated with the use, storage, transport, and uncontrolled release of hazardous materials.	<u>Consistent:</u> As discussed in the Regulatory Framework, the project would be required to prepare a Hazardous Materials Business Plan that would provide procedures to store, manage, and dispose of hazardous materials.
Fort Ord Reuse Authority (Monterey County)	Fort Ord Reuse Plan	Safety	Ryan Ranch-Bishop Interconnection Improvements	Hazardous and Toxic Materials Safety Policy C-1: The County of Monterey shall require hazardous materials management and disposal plans for any future projects involving the use of hazardous materials.	This policy is intended to protect the public and the environment from health risks associated with the use, storage, transport, and uncontrolled release of hazardous materials.	<u>Consistent:</u> As discussed in the Regulatory Framework, the project would be required to prepare a Hazardous Materials Business Plan and a Storm Water Pollution Prevention Plan, and comply with the California Fire Code, all of which would provide procedures to store hazardous materials and respond to accidents.

SOURCES: City of Marina, 2006, 2013; City of Seaside, 2004; FORA, 1997; Monterey County, 1999, 2010

4.7.3 Evaluation Criteria

Implementation of the proposed project would have a significant impact related to hazards and hazardous materials if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;
- Be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment;
- Be located within an area covered by an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, and would result in a safety hazard for people residing or working in the project area;
- Be located within the vicinity of a private airstrip and would result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

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

- ***Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school during operations.*** The project components that would be located within 0.25 mile of a school would be underground pipelines. There would be no storage or use of hazardous materials associated with the pipelines; therefore, no release of hazardous emissions would occur within 0.25 mile of a school during operations.
- ***Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area.*** The proposed project would not be located within the vicinity of a private airstrip; therefore, no safety hazard would result from project implementation.
- ***Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.*** The Monterey County Emergency Operations Plan provides an overview of agency roles and responsibilities during emergencies (Monterey County Office of Emergency Services, 2011). The proposed project would not interfere with the designated agency responsibilities and reporting in the event of an emergency because no roads would be completely closed, and some work activities would not occur on public roads.

- Increase risk of wildland fire during operations.*** Operation of the proposed project would not introduce potentially flammable activities in fire-prone areas. Project components that would be located within high fire hazard areas consist of underground water pipelines. Operation of the Carmel Valley Pump Station, which is located just south of an area of high fire hazard, could require temporary and intermittent use of a diesel-powered generator that would be stored onsite. This backup generator would be installed in accordance with applicable NFPA standards and other requirements for generators, and its operation would not be expected to increase wildfire risk. Accordingly, there would be no increased risk of wildland fire hazards.

4.7.4 Approach to Analysis

Hazards and hazardous materials information for the project area was derived from various sources and compiled in this chapter to develop a comprehensive understanding of the potential constraints and hazards associated with project construction and operations. Information sources include findings resulting from regulatory agency database searches, review of hazardous materials investigation reports, site reconnaissance, applicable regulations and guidelines, and proposed project construction and operations. Significant impacts would occur if the location or activities of project components resulted in conflicts with known hazardous materials sites.

As described in more detail below, the analysis of hazards and hazardous materials impacts in this section takes into account the various existing federal, state, and local regulations that apply to hazards and hazardous materials. Through compliance with the existing regulations, CalAm would be required to use, transport, store, and dispose of hazardous materials using procedures that would avoid hazards or reduce the potential for hazardous materials incidents.

4.7.5 Direct and Indirect Effects of the Proposed Project

Table 4.7-4 summarizes the proposed project's impacts and significance determinations related to hazards and hazardous materials.

**TABLE 4.7-4
SUMMARY OF IMPACTS – HAZARDS AND HAZARDOUS MATERIALS**

Impacts	Significance Determinations
Impact 4.7-1: Use of hazardous materials during construction.	LS
Impact 4.7-2: Encountering hazardous materials during construction.	LSM
Impact 4.7-3: Location on a known hazardous materials site.	LS
Impact 4.7-4: Hazardous materials within 0.25 mile of schools during construction.	LS
Impact 4.7-5: Wildland fires during construction.	LS
Impact 4.7-6: Use of hazardous materials during project operations.	LS
Impact 4.7-C: Cumulative impacts related to hazards and hazardous materials.	LSM

NOTES:

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

4.7.5.1 Construction Impacts

Impact 4.7-1: Create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials during construction. (Less than Significant)

All Project Components

Petroleum products, such as gasoline, diesel fuel, lubricants, and cleaning solvents would be utilized to fuel and maintain construction vehicles and equipment for all project components. As discussed in Section 3.3.2.1, the proposed slant wells would be drilled using mud rotary drilling techniques. Drilling fluids, such as bentonite mud, would be used to drill through the shallow dry dune sands to prevent loose dry sand from locking up the drill bit inside the conductor casing. Once the drill bit reaches groundwater, the construction contractor would pump out all of the sand-bentonite mud slurry and put it in a storage container for offsite hauling and disposal. Below the top of the groundwater table, only the water already present in the sand, and possibly additional potable water, would be used to circulate the drill cuttings. As discussed in Section 3.3.2.2, Wells ASR-5 and ASR-6 would be installed using a reverse rotary drilling technique. Bentonite drilling fluids would not be used during ASR well drilling; however, non-corrosive, environmentally inert, biodegradable additives might be used to keep the borehole open, as discussed in Section 4.4, Groundwater Resources. The well drilling methods would not use pressurized drilling techniques, and frac-out events are not anticipated. The routine use or reasonably foreseeable upset and accident conditions could result in inadvertent releases of small quantities of hazardous materials, which could adversely affect construction workers, soil, and surface water. Neither of the drilling methods would use fracking techniques or the chemicals used in fracking.⁷

Construction activities are required to comply with numerous hazardous materials and stormwater regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials to affect stormwater and downstream receiving water bodies (see Section 4.7.2, Regulatory Framework). The HMBP would require that hazardous materials used for construction are stored in appropriate containers, with secondary containment to contain a potential release. The California Fire Code would require measures for the safe storage and handling of hazardous materials. As discussed in Section 4.3, Surface Water Hydrology and Water Quality, the construction contractor would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) for construction activities according to the National Pollutant Discharge Elimination System (NPDES) General Construction Permit requirements. The SWPPP would list the hazardous materials (including petroleum products) proposed for use during construction and describe spill prevention measures, equipment inspections, equipment and fuel storage, and protocols for responding immediately to spills. In addition, the drilling operations would not be conducted using pressure methods and would only use water or non-corrosive, environmentally inert, biodegradable additives.

⁷ Hydraulic fracturing (also fracking, hydrofracturing or hydrofracking) is a well-stimulation technique in which rock is fractured by a pressurized liquid.

Impact Conclusion

Through compliance with applicable hazardous materials storage, disposal, and stormwater permitting regulations, hazardous materials impacts associated with potential releases from the routine transport, use, or disposal of hazardous materials or the accidental release of hazardous materials during construction would be less than significant for all project components.

Mitigation Measures

None proposed.

Impact 4.7-2: Encountering hazardous materials from other hazardous materials release sites during construction. (Less than Significant with Mitigation)

All Pipelines and Conveyance Facilities, and Terminal Reservoir

The proposed project involves excavation, trenching, and grading for the construction of water conveyance pipelines, building footings, and utilities. As identified in **Table 4.7-1**, some sites with known soil and/or groundwater contamination are located within 0.25 mile of project facilities and may have affected subsurface conditions at various locations along the project area. In addition, although previous site cleanup activities have remediated known contamination at some sites, it is still possible that undiscovered contamination may be present, given the land use history in the project area. The contaminants anticipated to be encountered during project construction activities include petroleum hydrocarbons, VOCs, PAHs, and metals from gasoline service stations, and dry cleaners. Construction activities conducted within the former Fort Ord military base, a National Priorities List site, could result in exposure to UXO, which is discussed separately under Impact 4.7-3, below. Soil disturbance during construction could further disperse existing contamination into the environment and expose construction workers and the public to contaminants. If substantial hazardous materials are present in excavated soils, health and safety risks to workers and the public could occur. Such risks could occur from stockpiling, handling, or transportation of soils that have been contaminated by hazardous materials from previous spills or leaks. The dewatering of contaminated groundwater could also present risks to public health and safety, and the environment, if the contaminated groundwater (i.e., dewatering effluent) is not handled properly. The potential for contaminated soil and groundwater to be released into the environment during project construction would be considered a significant impact.

Impacts resulting from the potential release of or exposure to hazardous materials in soil or groundwater would be reduced to a less-than-significant level with implementation of **Mitigation Measures 4.7-2a (Health and Safety Plan)** and **4.7-2b (Soil and Groundwater Management Plan)**. **Mitigation Measure 4.7-2a** would require that construction contractors prepare a health and safety plan in accordance with Cal OSHA regulations. The plan would specify personal protective equipment for workers, outline construction measures to reduce the potential for workers' exposures to hazardous materials in soil and groundwater, and describe procedures for handling accidental hazardous materials releases and unanticipated contamination. **Mitigation Measure 4.7-2b** requires construction contractors to comply with all relevant environmental

regulations and plan appropriately for the safe and lawful handling and disposal of excavated soil and groundwater, when encountered. With implementation of **Mitigation Measures 4.7-2a** and **4.7-2b**, the potential for harmful exposure to hazardous materials present in soil or groundwater during pipeline and other conveyance facility construction would be reduced to a less-than-significant level.

All Other Project Components

Although hazardous materials sites are not currently identified in proximity to other proposed project components, newly discovered sites may arise prior to the time of construction that could affect subsurface conditions in the project area. Encountering unanticipated soil or groundwater contamination could result in potential exposures to construction workers, the public, or the environment, resulting in a significant impact. However, this impact would be reduced to a less-than-significant level with implementation of **Mitigation Measures 4.7-2a** and **4.7-2b**.

Consistency with Plans & Policies

As discussed above, the construction of the project has the potential to discover previously unknown contamination from previous land uses. This would be inconsistent with the City of Marina's Chapter 15.56; and the City of Monterey's Chapter 9, Article 8, as discussed above in Table 4.7-3. The construction of the project would be made consistent with the implementation of **Mitigation Measures 4.7-2a** and **4.7-2b**, and through compliance with applicable hazardous materials laws and regulations.

Impact Conclusion

There is a potential to encounter contaminated soil and/or groundwater during construction of all proposed project components. Thus, the potential for contaminated soil and groundwater to be released into the environment during project construction is considered a significant impact for all project components. However, with implementation of **Mitigation Measures 4.7-2a (Health and Safety Plan)** and **4.7-2b (Soil and Groundwater Management Plan)**, and through compliance with applicable hazardous materials laws and regulations, the potential for exposure to hazardous materials in soil and groundwater during construction would be reduced to a less-than-significant level and the MPWSP would be brought into conformance with the above-noted policies.

Mitigation Measures

Mitigation Measure 4.7-2a applies to all project components.

Mitigation Measure 4.7-2a: Health and Safety Plan.

The construction contractor(s) shall prepare and implement a site-specific Health and Safety Plan as required by and in accordance with 29 CFR 1910.120 to protect construction workers and the public during all excavation and grading activities. This plan shall be submitted to the California Public Utilities Commission for review prior to commencement of construction. The Health and Safety Plan shall include, but is not limited to, the following elements:

- Designation of a trained, experienced site safety and health supervisor who has the responsibility and authority to develop and implement the site health and safety plan;
- A summary of all potential risks to construction workers and maximum exposure limits for all known and reasonably foreseeable site chemicals;
- Specified personal protective equipment and decontamination procedures, if needed;
- Emergency procedures, including route to the nearest hospital; and
- Procedures to be followed in the event that evidence of potential soil or groundwater contamination (such as soil staining, noxious odors, debris or buried storage containers) is encountered. These procedures shall be in accordance with hazardous waste operations regulations and specifically include, but are not limited to, the following: immediately stopping work in the vicinity of the unknown hazardous materials release, notifying Monterey County Department of Environmental Health, and retaining a qualified environmental firm to perform sampling and remediation.

Mitigation Measure 4.7-2b applies to all project components except the slant wells.

Mitigation Measure 4.7-2b: Soil and Groundwater Management Plan.

In support of the Health and Safety Plan described above, CalAm or its contractor shall develop and implement a Soil and Groundwater Management Plan that includes a materials disposal plan specifying how the construction contractor will remove, handle, transport, and dispose of all excavated material in a safe, appropriate, and lawful manner. The plan must identify protocols for soil testing and disposal, identify the approved disposal site, and include written documentation that the disposal site will accept the waste. Contract specifications shall mandate full compliance with all applicable local, state, and federal regulations related to the identification, transportation, and disposal of hazardous materials, including those encountered in excavated soil or dewatering effluent.

As part of the Soil and Groundwater Management Plan, CalAm or its contractor shall develop a groundwater dewatering control and disposal plan specifying how contaminated groundwater (dewatering effluent), if encountered, will be handled and disposed of in a safe, appropriate and lawful manner. The plan must identify the locations at which groundwater dewatering is likely to be required, the method to analyze groundwater for hazardous materials, and the appropriate treatment and/or disposal methods. If the dewatering effluent contains contaminants that exceed the requirements of the *General WDRs for Discharges with a Low Threat to Water Quality* (Order No. R3-2011-0223, NPDES Permit No. CAG993001), the construction contractor shall contain the dewatering effluent in a portable holding tank for appropriate offsite disposal or discharge (see Section 4.5.3 in Section 4.3, Surface Water Hydrology and Water Quality, for more information regarding this NPDES permit). The contractor can either dispose of the contaminated effluent at a permitted waste management facility or discharge the effluent, under permit, to a publicly owned treatment works such as the MRWPCA Regional Wastewater Treatment Plant. This plan shall be submitted to the California Public Utilities Commission and Monterey Bay National Marine Sanctuary for review and approval prior to commencement of construction.

Impact 4.7-3: Project facilities would be located on a known hazardous materials site. (Less than Significant)

Portions of New Transmission Main and Terminal Reservoir

As discussed above in Section 4.7.1.1, Soil and Groundwater Conditions, the Terminal Reservoir (above and below ground options) and portions of the new Transmission Main and ASR Pipelines would be located in the former Fort Ord Seaside MRA. This is a known former hazardous materials site and is identified on the National Priorities List. Construction activities within this area have the potential to encounter undiscovered UXO, which, if not identified and properly handled, could cause injury to or death of construction workers or result in wildfire.

As discussed in the setting section, above, the investigations and remedial actions conducted for the Seaside MRSs are largely complete within the footprint of the project components. However, cleanup activities are ongoing and specific regulations still apply to any ground-disturbing activities within these areas, including the City of Seaside's Ordnance Remediation District regulations and the environmental protection provisions of the FOSET agreement. Prior to any construction, the applicant or its contractor would need to obtain a Right of Entry agreement from FORA (or the future property owner) and obtain a permit for digging and excavation from the City of Seaside. As part of the permit application, CalAm or its contractors would be required to provide proposed project plans, a technical summary of ordnance removal activities performed on the property in the past, a soils management plan, a UXO support workplan, an oversight reimbursement agreement, and confirmation of DTSC approval. Compliance with the City of Seaside digging and excavation permit and FORA Right of Entry requirements would ensure that all personnel authorized to access the former Fort Ord Seaside MRAs receive MEC recognition training, coordinate with a qualified Ordnance and Explosive Safety Specialist during all activities on the site, and comply with all requirements placed on the property by an agreement between the City of Seaside, FORA, and DTSC. All permits require ceasing soil disturbance activities and notification to the Seaside Police Department, the Presidio law enforcement, the U.S. Army, and DTSC of any suspected UXO immediately upon discovery. Compliance with the foregoing regulations for construction work at the former Fort Ord military base would ensure the potential impact of encountering UXO during project construction would be less than significant.

All Other Project Components

None of the other project components would be located on known hazardous materials sites. Therefore, no impact associated with the siting of these facilities on a known hazardous materials site would occur. The potential for contaminated soil or groundwater from nearby hazardous materials sites to migrate into the project area and then be encountered during project construction is addressed above under Impact 4.7-2.

Impact Conclusion

The proposed Terminal Reservoir and portions of New Transmission Main would be located on a known hazardous materials site. However, with compliance with the above-described regulations, the project would ensure the impact is less than significant. None of the other project components are located within a known hazardous materials site.

Mitigation Measures

None proposed.

Impact 4.7-4: Handle hazardous materials or emit hazardous emissions within 0.25 mile of a school during construction. (Less than Significant)

New Desalinated Water Pipeline, new Transmission Main, ASR Pipelines, and Ryan Ranch-Bishop Interconnection Improvements

These project components would be located within 0.25 mile of a school. As discussed above under Impact 4.7-1, project construction could require the use of small quantities of fuel, lubricants, paints, and solvents.

The hazardous materials storage and stormwater permitting requirements discussed under Impact 4.7-1, above, impose performance standards on the construction activities that would ensure the risk of release of hazardous materials during construction would be low. Therefore, the potential for a hazardous materials release during construction to result in increased exposure to hazardous materials at the nearby schools (see Figure 4.7-1 and 4.7-2) is remote; therefore, this impact is less than significant.

Hazardous air emissions are toxic air contaminants identified by the California Air Resources Board. Construction would result in the short-term emissions of diesel particulate matter (DPM), a toxic air contaminant, within 0.25 mile of schools. However, based on a screening-level analysis discussed in Section 4.10, Air Quality, DPM emissions would be less than the Monterey Bay Unified Air Pollution Control District's increased cancer risk threshold. Thus, this would be a less-than-significant impact.

All Other Project Components

None of the other proposed project components are located within 0.25-mile of a school. No impact would result.

Impact Conclusion

The new Desalinated Water Pipeline, new Transmission Main, ASR Pipelines, and Ryan Ranch-Bishop Interconnection Improvements Pipeline would result in a less-than-significant impact from the handling of hazardous materials within 0.25 mile of schools during construction.

Mitigation Measures

None proposed.

Impact 4.7-5: Increased risk of wildland fires during construction. (Less than Significant)

New Transmission Main, ASR Pipelines, Terminal Reservoir, Ryan Ranch-Bishop Interconnection Improvements, Main System-Hidden Hills Interconnection Improvements, and Carmel Valley Pump Station

As illustrated in **Figure 4.7-2**, the new Transmission Main, ASR Pipelines, Terminal Reservoir, Ryan Ranch-Bishop Interconnection Improvements, Main System-Hidden Hills Interconnection Improvements, and Carmel Valley Pump Station are proposed in or near areas classified by CAL FIRE as High or Very High Fire Hazard Severity Zones.

California regulations governing the use of construction equipment in fire prone areas are designed to minimize the risk of wildland fires during construction activity (e.g., PRC Sections 4411 et seq.). These regulations restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that has an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided onsite for various types of work in fire prone areas. In addition, the California Fire Code addresses the fire safety of general construction operations. The construction contractor must comply with these regulations and any additional requirements imposed by CAL FIRE or the local fire protection departments. With compliance, the impact associated with an increased risk of wildland fires during construction of the Highway 68 interconnection improvements and the Carmel Valley Pump Station would be less than significant.

Further, as noted above under Impact 4.7-3, the Terminal Reservoir and portions of the New Transmission Main and ASR Pipelines are located in an area with the potential for undiscovered UXO. This area is also a Very High Fire Hazard Severity Zone as shown on Figure 4.7-2. Explosions of ordnance could result in wildfires that could be severe. As described under Impact 4.7-3, compliance with permit requirements from the City of Seaside would ensure that if UXO is encountered, it is safely handled, reducing the risk of wildfire caused by accidental detonation of UXO to a level that is less than significant.

All Other Proposed Facilities

None of the other project facilities are located within or near an area classified by CAL FIRE as a High or Very High Fire Hazard Severity Zone; however, construction activities could temporarily increase fire risk. With compliance with California Fire Code regulations for construction, the potential impact associated with an increased risk of fire during construction of all other project components would be less than significant.

Impact Conclusion

The proposed project would result in a less-than-significant impact from potential increased fire risk during construction.

Mitigation Measures

None proposed.

4.7.5.2 Operational and Facility Siting Impacts

Impact 4.7-6: Create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials during project operations. (Less than Significant)

Project components that would involve the storage and use of hazardous materials are discussed below.

Subsurface Slant Wells

Periodic maintenance of the subsurface slant wells would be required every 5 years. Maintenance workers would lower mechanical brushes into the slant wells to mechanically clean the screens. If chemical cleaning products are needed for maintenance, only environmentally inert products would be used.

Access to and the use of cleaning equipment for well maintenance would require the use of the same types of vehicles and equipment used during construction. Similar to construction, petroleum products, such as gasoline, diesel fuel, lubricants, and cleaning solvents could be utilized to fuel and maintain maintenance vehicles and equipment. The routine use or reasonably foreseeable upset and accident conditions could result in inadvertent releases of small quantities of these hazardous materials into soil and surface water. However, compliance with the various regulations regarding the safe transport, use, and storage of hazardous materials (see Section 4.7.2, Regulatory Framework) as well as the NPDES General Construction Permit requirements would ensure this impact is less than significant, similar to as discussed above in Impact 4.7-1. The SWPPP would identify the hazardous materials to be used during slant well maintenance and would describe spill prevention measures, equipment inspection requirements, equipment and fuel storage, and spill response protocols. No mitigation measures are proposed.

MPWSP Desalination Plant

The operation of the MPWSP Desalination Plant is discussed in Section 3.2.2., The desalination process would use chemicals during the pretreatment of the seawater, the post treatment of the desalination water and for cleaning the membranes; they are listed in Table 4.7-5 and include sodium hypochlorite, sodium bisulfite, sodium hydroxide, zinc orthophosphate, strong bases or acids, carbon dioxide, lime, sodium hydroxide, and flocculating agents.

The MPWSP Desalination Plant operations would involve the use and storage of chemicals to remove performance-reducing deposits from the pretreatment filtration system and reverse osmosis (RO) membranes, as well as chemicals to adjust product water quality. The types and amounts of chemicals that would be utilized in the MPWSP Desalination Plant treatment processes are listed in **Table 4.7-5**.

**TABLE 4.7-5
 MPWSP DESALINATION PLANT (9.6 MGD) – WATER TREATMENT CHEMICALS**

Chemical	Application	Approximate Chemical Usage (pounds/year)
Sodium Hypochlorite	Pretreatment / Post-treatment	140,000 / 55,000
Sodium Bisulfite	Pretreated source water	85,000
Carbon Dioxide	Post-treatment	420,000
Lime	Post-treatment	960,000
Sodium Hydroxide	Post-treatment	55,000
Orthophosphate	Post-treatment	30,000
RO Cleaning Chemicals (various)	RO membrane cleaning	To be determined
Coagulant (if needed)	Pretreatment	To be determined

SOURCE: RBF Consulting, 2013; CalAm, 2014.

Pretreatment Process. As discussed in Section 3.2.2 of Chapter 3, Description of the Proposed Project, source water would be pretreated using pressure filters or multimedia gravity filters to remove suspended solids, microbes, and other contaminants such as iron and manganese. Routine backwashing of the pretreatment filters would occur each day. Backwashing the pretreatment filters would require that a chlorine solution (sodium hypochlorite, similar to bleach) be added to the backwash water supply to control bacterial growth on the filters. If data collected during the pilot program indicates that a chemical coagulant (e.g., ferric chloride, a commonly used coagulant) is needed in the pretreatment process, the backwash effluent would be treated to remove the coagulant chemical prior to discharge. Waste effluent produced during backwashing would flow by gravity from the pretreatment filters to two 0.25-acre, 6-foot-deep lined backwash settling basins. Suspended solids in the waste effluent would settle to the bottom of the basins, and the clarified water would be decanted. Approximately 0.4 million gallons per day (mgd) of decanted backwash water may be pumped to the Brine Discharge Pipeline, blended with brine produced by the RO system, and discharged to the existing MRWPCA ocean outfall. Alternatively, the decanted backwash water could be blended with source water before undergoing pretreatment and the RO process. Sludge formed by the solids in the backwash effluent would be periodically removed from the backwash settling basin and disposed of at a sanitary landfill.

RO System. The RO system would remove salts and other minerals from the seawater. The RO membranes would be cleaned to remove the accumulation of silts or scale, which reduces membrane performance. The RO system is expected to require cleaning two to three times per year. The RO membranes would be cleaned by circulating a cleaning solution (comprised of strong bases or acids) through the membranes and then flushing the membranes with clean water to remove the spent cleaning solution and waste effluent from the RO system. The spent cleaning solution and waste effluent would be discharged into a collection sump, chemically neutralized, then pumped into tank trucks and transported to an offsite disposal site.

Desalination Plant Post-Treatment Process. Desalinated water would be disinfected and treated with chemicals to adjust alkalinity and hardness. The primary disinfectant is a solution of sodium hypochlorite.

Bulk storage of these chemicals would be located in various 5,000- to 10,000-gallon tanks with secondary containment located within the process and electrical building. The capacity of the chemical storage tanks would vary by chemical. The design of the process and electrical building would incorporate all regulatory requirements for hazardous materials storage, such as spill containment features that exceed the capacity of the tanks; segregation of individual chemicals to prevent mixing in the case of accidental spillage; and appropriate alarm and fire sprinklers. Chemicals that have specific reactivity risks with one another will be stored at opposite ends of the storage area to reduce the potential risk of mixing. Lime and carbon dioxide would be used for post-treatment. In addition, a 750-kilowatt (KW) emergency diesel-gas powered generator and 2,000-gallon double-walled, aboveground diesel storage tank would be installed adjacent to the process and electrical building for emergency backup.

CalAm would be required to implement the project in accordance with all applicable laws and regulations governing hazardous materials storage, handling, and disposal. These regulations are designed to protect worker safety, provide for the safe storage and use of hazardous materials, reduce the potential for accidental releases, track and clean up accidental releases, and ensure that hazardous wastes are disposed of appropriately. A summary of these laws and regulations is provided in Section 4.7.2, Regulatory Framework. For example, California Fire Code, Article 80, requires all chemical storage and handling systems be designed and constructed to ensure the safe storage and handling of hazardous materials. Some of the requirements specifically applicable to the proposed project include spill control in all storage, handling and dispensing areas, separate secondary containment for each chemical storage system, and separation of incompatible materials with a non-combustible partition. These requirements reduce the potential for a release of hazardous materials and for mixing of incompatible materials that could pose a risk to workers, the public, and the environment.

As required by law, CalAm would submit a HMBP for the proposed project to the Monterey County Environmental Health Division prior to the start of project operations. The HMBP is required to include information on hazardous material handling and storage, including containment, site layout, and emergency response and notification procedures in the event of a spill or release. In addition, the plan requires annual employee health and safety training. The plan must be approved by the County prior to commencement of project construction and the proposed project would be subject to post-construction compliance inspections. The HMBP would also provide the local agencies with the information they need to plan appropriately for a chemical release, fire, or other incident, which would reduce the potential for an accidental release to cause harmful health effects to workers or the public or substantial degradation to soil or water quality.

Transportation and disposal of wastes, such as spent cleaning solutions, would also be subject to regulations for the safe handling, transportation, and disposal such as the California Labor Code, Section 6300 et seq., California Vehicle Code Sections 32000 et seq., and Health and Safety Code,

Sections 25100 et seq. Transporters licensed to haul hazardous wastes are required to meet requirements for training, secondary containment, and placarding to reduce the potential for a release of hazardous materials during transport to disposal facilities. Compliance with these various regulations would ensure this impact is less than significant. No mitigation measures are proposed.

ASR-5 and ASR-6 Wells, and Terminal Reservoir

Water recovered from the two proposed ASR injection/extraction wells would be chlorinated using sodium hypochlorite for disinfection prior to being conveyed into the distribution system. The existing disinfection system has sufficient capacity to treat ASR product water extracted from all six ASR injection/extraction wells (e.g., the four existing ASR injection/extraction wells [ASR-1, ASR-2, ASR-3, and ASR-4] and the two new wells [ASR-5 and ASR-6] proposed under the MPWSP). The disinfection chemicals for the proposed ASR-5 and ASR-6 wells would be stored at the existing chemical/electrical control building at the Phase I ASR facilities site. The existing disinfection system includes a 5,000-gallon sodium hypochlorite tank with double containment, vent fume neutralizers, and a forced-air ventilation system. The proposed project would increase the annual quantity of sodium hypochlorite handled by the disinfection system, but the amount stored on-site would be the same. Sodium hypochlorite solution (12.5 percent NaOCl) would be delivered to the existing ASR disinfection facility by tanker trucks approximately once per month to replenish the system. With all six wells in operation, the expected chemical use would be less than 150 gallons per day of sodium hypochlorite.

Additional chemicals of concern are generated from the injection of chlorinated water into a groundwater aquifer. This process is known to result in the formation of disinfection by-products (DBPs) including trihalomethanes (THMs) and haloacetic acids (HAAs) from reactions with organic matter present in the aquifer. Studies regarding the fate and stability of DBPs injected into the groundwater aquifer at the MPWMD Santa Margarita Test Injection Well (Pueblo Water Resources, 2013) indicate that THMs appear to increase during the first 60 days of storage, then decline slowly over the following 90 to 150 days to below initial injection levels. According to the studies, HAAs declined steadily during aquifer storage, reaching non-detectable levels within 90 days. Groundwater extracted for drinking water supply would be required to meet drinking water requirements. The DBP data collected during the 2012 water year show that THMs were below regulatory limits for drinking water. Refer to Section 4.4, Groundwater Resources, for further discussion of groundwater quality.

With compliance with applicable regulations, the potential impact resulting from an accidental release of hazardous materials used during operation the ASR-5 and ASR-6 Wells, and Terminal Reservoir would be less than significant.

Carmel Valley Pump Station

A portable 50 kW portable diesel-powered generator would be stored at the Carmel Valley Pump Station to provide backup power in the event of a power outage. The generator would be operated in compliance with all hazardous materials regulations. Therefore, the potential impact related to release of hazardous materials during operation of the Carmel Valley Pump Station would be less than significant.

All Other Proposed Facilities

Operation of all pipelines, Ryan Ranch-Bishop Interconnection Improvements, and the Main System-Hidden Hills Interconnection Improvements would not involve the routine storage or use of hazardous materials. No impact related to the inadvertent release of hazardous materials during operation of these project components would result.

Impact Conclusion

Through compliance with existing state and federal laws and regulations regarding hazardous materials storage and management, the potential for environmental impacts due to the accidental release of hazardous materials associated with project operations would be less than significant.

Mitigation Measures

None proposed.

4.7.6 Cumulative Effects of the Proposed Project

The cumulative scenario and cumulative impacts methodology are described in Section 4.1.7. Table 4.1-2 lists potential cumulative projects. As discussed in Section 4.7.3, above, the project would have no impact with respect to the use of hazardous materials within 0.25 mile of a school (during operations), the location of project components within 2 miles of an airport, interference with an adopted emergency response plan or emergency evacuation plan, or wildland fire hazards (during operations). Accordingly, the proposed project could not contribute to cumulative impacts related to these topics.

Impact 4.7-C: Cumulative impacts related to hazards and hazardous materials. (Less than Significant with Mitigation)

The geographic scope of analysis for cumulative hazards and hazardous materials impacts encompasses the project area and nearby areas that: (1) could affect soil and groundwater conditions within the project area; or (2) are in or near areas classified by CAL FIRE as High or Very High Fire Hazards Severity Zones. The former types of impacts are generally site-specific and depend on past, present, and future land uses and existing soil, sediment, and groundwater conditions. The latter tend to be in suburban or rural areas, within or adjacent to large tracts of densely vegetated upland open spaces. The timeframe during which the MPWSP could contribute to cumulative hazards and hazardous materials effects includes the construction and operations phases.

Cumulative Impacts during Project Construction

Significant cumulative impacts related to hazards could occur if the incremental impacts of the MPWSP combined with the incremental impacts of one or more projects identified in **Table 4.1-2** to: (1) substantially increase risk that people or the environment would be exposed to hazardous

materials (as described in Impacts 4.7-1 through 4.7-4); or (2) substantially increase risk of wildfire (as described in Impact 4.7-5).

The following cumulative projects described in Table 4.1-2 in Section 4.1 would potentially be geographically adjacent to or overlap with components of the proposed project, and could result in ground disturbance and construction activities that would overlap in time with project construction:

- Laguna Seca Villas (No. 3)
- Marina Downtown Vitalization Specific Plan (No. 10)
- Marina Station (No. 12)
- Main Gate Specific Plan (No. 18)
- TAMC's Monterey Peninsula Light Rail Project (No. 38)

Because potential impacts related to the release of hazardous materials and risk of wildfire are highly site-specific, this analysis first addresses the potential for impacts of the proposed project and the above projects to combine at these specific locations, and then describes the potential cumulative impacts that could occur if the impacts do combine.

The Laguna Seca Villas Project would be located approximately 350 feet from the eastern end of the Ryan Ranch-Bishop Interconnection Improvements pipeline. Although the construction schedule for the Laguna Seca Villas Project is currently unknown, the likelihood that both projects would be under construction at the same time is remote because construction of the Ryan Ranch-Bishop Interconnection pipeline would proceed at about 250 feet per day, and so would only be in the immediate vicinity of the Laguna Seca project location for several days at most, while construction of the Laguna Seca project is unknown and could occur after the proposed project construction has been completed in this location. As described in Section 4.7.1.1 and shown in Figure 4.7-2, there is one site (former Fort Ord York School) within 0.25 mile of this location that was investigated for the presence of MECs, but none were identified and the property was cleared for transfer; therefore, no existing environmental contamination, including contaminated groundwater, is expected to be present at this location.

The reasonably foreseeable physical environmental changes associated with the proposed Marina Downtown Vitalization Specific Plan include construction on the east side of Del Monte Boulevard at Reservation Road, where the new Desalinated Water Pipeline would connect to the new Transmission Main. Although the construction schedule for this component of the specific plan is currently unknown, the likelihood that both projects would be under construction at the same time is remote because the specific plan has not been adopted and no projects have been approved at this intersection, and because construction of the new Desalinated Water Pipeline and new Transmission Main would proceed at about 250 feet per day, and so would only be in the immediate vicinity of the Del Monte Boulevard/Reservation Road intersection for several days. As described in Section 4.7.1.1 and shown in Figure 4.7-2, the former Don's One Hour Dry Cleaners site is undergoing remediation for dry cleaning solvents released to groundwater beneath the site, located at the Del Monte Boulevard/Reservation Road intersection. While the specific

plan project on the north side of Reservation Road at Del Monte Boulevard would be located on the remediation site, as noted in Table 4.7-1, the groundwater remediation at this location does not underlie proposed project components. Therefore, the proposed project would not contribute to a potential cumulative impact associated with disturbing or dewatering contaminated groundwater at this location.

The Marina Station project would be located along Del Monte Boulevard in the vicinity of the new Desalinated Water Pipeline. For the same reasons described for the Marina Downtown Vitalization Specific Plan above, the potential for construction of the new Desalinated Water Pipeline to occur at the same time as the proposed Marina Station project is remote. No existing environmental contamination, including contaminated groundwater, is expected to be present within 0.25 mile of the Marina Station project.

The adopted Main Gate Specific Plan is located near the junction of Highway 1 and Lightfighter Drive in the vicinity of the new Transmission Main. For the same reasons described for the Marina Downtown Vitalization Specific Plan above, the potential for construction of the new Transmission Main to occur at the same time as the proposed Main Gate Specific Plan projects is remote. No existing environmental contamination, including contaminated groundwater, is expected to be present within 0.25 mile of the location of the Main Gate Specific Plan projects.

TAMC's Monterey Peninsula Light Rail Project would be located adjacent to approximately 9 miles of proposed project pipelines, including portions of the Castroville Pipeline, new Desalinated Water Pipeline, and new Transmission Main. Because the light rail project is on hold indefinitely until TAMC can secure funding, its construction schedule is unknown. Because that project must undergo environmental review and permitting prior to construction, it is unlikely that construction of the light rail project and the proposed project pipelines would occur at the same time. The U.S. Army Fort Ord Sites 2 and 12 and University Villages are located on the other side of Highway 1 from the TAMC right-of-way, and as shown in Table 4.7-1, remediation for those sites does not underlie proposed project components and therefore also does not underlie the TAMC right-of-way.

All of the above projects would be subject to the same regulatory requirements as the proposed project, including the implementation of health and safety plans and soil and groundwater management plans (implemented as **Mitigation Measures 4.7-2a** and **4.7-2b** for the proposed project), and therefore any cumulative projects involving releases of hazardous materials also would be required to remediate their respective sites to established regulatory standards. This would be the case regardless of the number, frequency, or size of the release(s), or the residual amount of chemicals present in the soil from previous spills. Therefore, while it is possible that the proposed project and other projects in the cumulative could result in releases of hazardous materials at the same location, the responsible party associated with each spill would be required to remediate site conditions to the same established regulatory standards. The proposed project would result in a significant impact resulting from the potential release of or exposure to hazardous materials in soil or groundwater that could have a cumulatively considerable contribution to a potentially significant cumulative impact resulting from such releases from more than one project. However, the proposed project's impact would be reduced to a less-than-

significant level with implementation of **Mitigation Measures 4.7-2a** and **4.7-2b**, which would require that construction contractors prepare a health and safety plan in accordance with Cal OSHA regulations and comply with all relevant environmental regulations and plan appropriately for the safe and lawful handling and disposal of excavated soil and groundwater, when encountered. The residual less-than-significant effects of the proposed project that would remain after mitigation would not combine with the potential residual effects of cumulative projects to cause a potential significant cumulative impact because residual impacts would be highly site-specific and, as described above, are highly unlikely to occur within the same timeframe such that multiple releases could occur before containment and/or mitigation can be implemented. Accordingly, with implementation of mitigation measures, the project would not have a cumulatively considerable contribution to a significant cumulative impact with respect to the release of hazardous materials during construction (*less than significant with mitigation*).

As also described in Section 4.7.5.1, proposed project components located in or near areas classified by CAL FIRE as High or Very High Fire Hazard Severity Zones include Main System Hidden Hills Interconnection Improvements, Ryan Ranch-Bishop Interconnection Improvements, and Carmel Valley Pump Station (CAL FIRE, 2007; 2008). As described in Impact 4.7-5, compliance with CAL FIRE's regulations governing the use of construction equipment in fire-prone areas (see Section 4.7.2, Regulatory Framework) and compliance with the state fire code would reduce the project-specific incremental impact to a less-than-significant level.

Two of the cumulative projects identified in **Table 4.1-2** – Rancho Cañada Village and Golf Club (Nos. 27 and 28) – are proposed for the Very High Fire Hazard Severity Zone within which the Carmel Valley Pump Station is proposed. Although the Rancho Cañada projects' construction schedules are unknown, there is some possibility that they could overlap with the timing of the Carmel Valley Pump Station construction, and would involve the use of construction equipment or other vehicles with internal combustion engines and/or gasoline powered tools that are capable of producing a spark, flame, or fire. Concurrent activities could result in a cumulative increase in wildland fire risk in this location. This compounded increase in risk could place an additional burden on local fire departments, particularly if access for emergency vehicles were impeded. CAL FIRE's fire prevention regulations related to the use of construction equipment in fire-prone areas also would apply to all cumulative projects involving construction. The Rancho Cañada Village and Golf Club projects would be required to comply with these fire prevention regulations, including the use of spark arrestors and fire suppression equipment. Compliance with these regulations would reduce the potential for a significant cumulative impact with respect to substantial increase in wildfire risk, and would ensure that the project's incremental contribution is not cumulatively considerable (*less than significant*).

Cumulative Impacts during Project Operations

Significant cumulative impacts related to operational hazards could occur if the incremental impacts of the proposed project combined with those of one or more of the projects identified in **Table 4.1-2** to cause a substantial increase in risk that people or the environment would be exposed to hazardous materials used or encountered during the operations phase (Impact 4.7-6).

As discussed in Section 4.7.5.2, Subsurface Slant Wells, maintenance of the proposed subsurface slant wells would require use of cleaning materials and vehicles, introducing potential for inadvertent releases of hazardous materials into the soil and groundwater. MPWSP Desalination Plant operation would require the use of hazardous materials, such as fuels and water treatment chemicals, to be stored onsite. The ASR injection/extraction wells would require disinfection chemicals stored at the Phase I ASR facilities site to be used at a higher rate, but would not cause an increase in onsite storage volume. Compliance with the various regulations regarding the safe transport, use, and storage of hazardous materials (see Section 4.7.2, Regulatory Framework) would reduce the project-specific incremental impact to a less-than-significant level.

Many of the cumulative projects identified in **Table 4.1-2** also would require the transport, use, and storage of hazardous chemicals. However, none of the cumulative projects would be expected to store or handle large quantities of hazardous materials on or adjacent to sites of proposed project components that would also require storage or handling of such materials. As a result, no significant cumulative impact would occur in association with the storage or handling of hazardous materials. However, significant cumulative impacts involving hazardous materials releases could occur along transportation corridors used by the MPWSP and cumulative projects.

For all project components involving the handling, storage, and disposal of hazardous materials, CalAm and/or its contractors would be required to implement a Hazardous Materials Business Plan and comply with applicable regulations, including those governing containment, site layout, and emergency response and notification procedures in the event of a spill or release. Transportation and disposal of wastes, such as spent cleaning solutions, would also be subject to regulations for the safe handling, transportation, and disposal of chemicals and wastes (see Section 4.7.2, Regulatory Framework). As noted previously, such regulations include standards to which parties responsible for hazardous materials releases must return spill sites, regardless of location, frequency, or size of release, or existing background contaminant concentrations. Therefore, compliance with existing laws and regulations regarding hazardous materials transport would reduce the risk of environmental or human exposure to such materials. The combined effects of the proposed project and cumulative projects would not result in a significant cumulative impact (*less than significant*).

References – Hazards and Hazardous Materials

- Ahtna, 2016a, *Final Operable Unit Carbon Tetrachloride Plume Fourth Quarter 2014 through Third Quarter 2015 Groundwater Monitoring Report, Former Fort Ord, California*, March.
- Ahtna, 2016b, *Final Operable Unit 2 Fourth Quarter 2014 through Third Quarter 2015 Groundwater Monitoring and Treatment System Report, Former Fort Ord, California*, March
- Ahtna, 2016c, *Final Sites 2 and 12 Fourth Quarter 2014 through Third Quarter 2015 Groundwater Monitoring and Soil Gas Monitoring and Treatment System Report, Former Fort Ord, California*, March

- California American Water Company (CalAm), 2014. Responses to March 31, 2014, Request for Information.
- California Department of Forestry and Fire Protection (CAL FIRE), 2007. Fire and Resource Protection Program (FRAP), *Fire Hazard Severity Zones in State Responsibility Areas, Monterey County*, November 7, 2007. Available online at: http://frap.cdf.ca.gov/webdata/maps/monterey/fhsz_map.27.pdf. Accessed April 25, 2013.
- California Department of Forestry and Fire Protection (CAL FIRE), 2008. FRAP, *Monterey County Very High Fire Hazard Severity Zones in LRA As Recommended By CAL FIRE*, November 4, 2008. Available online at: http://frap.fire.ca.gov/webdata/maps/monterey/fhszl_map.27.pdf. Accessed April 25, 2013.
- City of Marina, 2006. *City of Marina General Plan*, updated December 31, 2006.
- City of Marina, 2013. *City of Marina Local Coastal Land Use Plan*. Amended November 2013.
- City of Seaside, 2004. Seaside General Plan EIR. Adopted January 2004.
- Fort Ord Base Realignment and Closure Office, U.S. Army. 2012. *Final 3rd Five-Year Review Report for Fort Ord Superfund Site, Monterey County, California*. September 2012.
- Fort Ord Reuse Authority (FORA), 1997. *Fort Ord Reuse Plan*. Adopted June 13, 1997.
- Fort Ord Reuse Authority (FORA), 2015, *Annual Report FY 2014-2015*.
- Fort Ord Reuse Authority (FORA), 2016a, personal communication with Stan Cook, FORA Program Manager, Seaside Munitions Response Area.
- Fort Ord Reuse Authority (FORA), 2016b, personal communication with John Elliott, FORA, Former Site 11 Area.
- Findings of Suitability for Early Transfer (FOSET), 2007. *Former Fort Ord, California, Environmental Services Cooperative Agreement (ESCA) Parcels and Non-ESCA Parcels (Operable Unit Carbon Tetrachloride Plume) (FOSET 5)*. June 2007.
- Kleinfelder, 2010. *Preliminary Corridor Environmental Assessment, Transportation Agency for Monterey County (TAMC), Monterey Branch Line, Monterey County, California*. November 17, 2010.
- LFR, Weston Solutions and Westcliffe Engineers, 2008. *Final Technical Information Paper, Phase II Seaside Munitions Response Area, Roadway Alignment and Utility Corridor (Pollution Report and Removal Action Activity Report), Former Fort Ord, Monterey County, California*. September 26, 2008.
- LFR, Weston Solutions and Westcliffe Engineers, 2011. *Final Technical Information Paper, Phase II Seaside Munitions Response Area, Outside Roadway Alignment and Utility Corridor (Pollution Report and Removal Action Activity Report), Former Fort Ord, Monterey County, California*. March 25, 2011.
- Monterey County, 1999. *North County Land Use Plan*, updated October 25, 1999.

- Monterey County, 2010. *2010 Monterey County General Plan*. Adopted October 26, 2010.
- Monterey County Office of Emergency Services, Emergency Response and Operations Plan, June 2011.
- Monterey Peninsula Unified School District (MPUSD), 2016. *Our Schools*. Available online at: <http://www.mpusd.k12.ca.us/ourschools/>. Accessed June 15, 2016.
- North Monterey County Unified School District (NMCUSD), 2016, *Our Schools*, Available online at: <http://www.nmcusd.org/>. Accessed June 15, 2016
- Pueblo Water Resources, 2013. *Summary of Operations, Monterey Peninsula ASR Project, Water Year 2012*, prepared for Monterey Peninsula Water Management District. September 2013.
- RBF Consulting, 2012. *Phase I Environmental Site Assessment, Approximate 46-Acre Marina Property APN 229-011-021, For California American Water*. October 2012.
- RBF Consulting, 2013. *Monterey Peninsula Water Supply Project (MPWSP) Project Description Update*. January 9, 2013.
- Regenesis, 2016, *Technical Memorandum, Temporary Well Installation and Hydrogen Release Compound® and Bioaugmentation Reapplication at the Former Don's 1 Hour Cleaner Site - Marina, CA*, February 29.
- Regional Water Quality Control Board, Central Coast Region, (RWQCB), 2016. *Former Fort Ord: Draft Technical Memorandum Operable Unit 1 Attainment Monitoring Results Acceptance*, February 26.
- RRM, Inc., 2016. 1st Semi-Annual 2016 Groundwater Monitoring, Remediation Status, and Additional Subsurface Investigation Report; Former Exxon Service Station, 11399 Merritt Street, Castroville, CA. May 16.
- RMC Geoscience, Inc., 2016. *Monterey Peninsula Landfill First 2016 Semiannual Water Quality Monitoring Report, October 2015 – March 2016*, May 2016.
- United States Department of Army (U.S. Army), 1997, Quitclaim Deed, January 30, 1997.
- United States Department of Army (U.S. Army), 2012. 3rd Five Year Review Report for Fort Ord Superfund Site, Monterey County, California, September 2012.
- United States Environmental Protection Agency (USEPA), 2016. Fort Ord Cleanup and Redevelopment, April 27, 2016. Available online at: <http://www.epa.gov/region9/superfund/fort-ord/>. Accessed June 9, 2016.
- USA North, 2016. California Excavation Manual. Available online at: www.usanorth.org/CALIFORNIAexcavationman.pdf. Accessed May 3, 2016.
- West Environmental Services & Technology, 2007, Removal Action Completion Report, University Villages, Monterey County, California, June.