4.6 HYDROLOGY AND WATER QUALITY

This section identifies potential impacts to drainage and watershed resources that would result from the proposed project. A watershed is a region, usually defined by ridgelines and topography, which drains into a specified body of water. Watershed-related impacts are those associated with grading and drainage, erosion, stormwater runoff, and water quality that may arise as a result of earth disturbing activities and land development.

4.6.1 Existing Conditions

4.6.1.1 Climate and Topography

The project area is located on the Pacific coast in unincorporated Monterey County. Climate in the area is typically moderate throughout the year with warm, dry summers and cool, moist winters. The average annual temperature in the project area ranges from a low of 48 degrees Fahrenheit (°F), with the lowest average temperature recorded at 43.4°F during the month of January, to a high of 65°F, with the highest average temperature recorded at 71.5°F during the month of September (Western Regional Climate Center 2014). Rainfall primarily occurs between November and April, with the average annual rainfall recorded at 17.73 inches (Western Regional Climate Center 2014). Currently, California is experiencing an unprecedented drought which has led Governor Brown to declare a statewide drought emergency. Year 2013 was recorded as the driest year in history for many areas throughout California, and current conditions suggest the drought is likely to persist (County of Monterey 2015). The USDA has designated all areas of Monterey County as D2 (Severe Drought), D3 (Extreme Drought), or D4 (Exceptional Drought) (USDA 2015).

The project area is located in the Coast Ranges Geomorphic Province. The Coast Ranges are generally northwest-trending mountain ranges that range in elevation from 2,000 to 6,000 feet above msl (CGS 2002). The ranges and valleys within this province are composed of thick Mesozoic and Cenozoic sedimentary strata. The Pacific coastline is uplifted (lifted by tectonic forces), terraced (characterized by raised terraces or platforms formed by wave erosion and shoreline retreat), and wave cut. The project site slopes downward from east to west, with the existing natural grade across the parcel ranging from approximately 50 to 105 feet above msl. The existing residence is located approximately 800 feet east of the Pacific Ocean (0.15 mile), though lower (western) portions of the project parcel extend within less than 500 feet (0.1 mile) of the shoreline.

4.6.1.2 Regional Hydrology

<u>Surface Water</u>

The project site is located within a small unnamed watershed approximately 700 feet from the Pacific Ocean, and is surrounded by the Sawmill Gulch and Seal Rock watersheds to the north that are drained by the Sawmill Gulch and Seal Rock Creeks, respectively (County of Monterey 2012a). The project site is bordered to the south by the Pescadero Watershed that drains to the Carmel Bay Area of Special Biological Significance. The watersheds are shown in Figure 4.6-1.

Figure 4.6-1. Watershed Map

Groundwater

The project site is not located within an identified groundwater basin. The closest groundwater basin is the Seaside Area Subbasin of the Salinas Valley Groundwater Basin, located approximately 3.5 miles east of the project site.

The geotechnical study prepared for the project included seven exploratory borings, and the reported depth to bedrock ranged from 8 to 14 feet below the ground surface. Free water was encountered in two of the seven borings at depths ranging from 10.5 to 16 feet below ground surface. According to the log for boring no. 2, the depth to bedrock was 12 feet and the depth to groundwater was 16 feet. The borings were only open for a period of a few hours; therefore, it is possible that these measurements do not reflect the stabilized water table conditions and actual groundwater depths may vary. Additionally, fluctuations of localized perched groundwater may occur due to variations in rainfall, temperature, runoff, irrigation, and other factors (Cleary 2010).

Stormwater Drainage

The project site is located within an existing residential neighborhood above 17-Mile Drive and is currently developed with an existing 4,125-square-foot single-family residence and approximately 2,825 square feet of asphalt driveway and concrete patios. The remainder of the 2.22-acre lot is composed of undeveloped, pervious, remnant sand dune.

The project site slopes downward from east to west, with the existing residence located at the upper end of the parcel near Signal Hill Road. The existing natural grade underlying the area proposed for development ranges from 105 to 95 feet above msl, resulting in an average grade of 100 feet above msl. Stormwater runoff at the project site generally flows west off the property via sheet flow over a vegetated slope, where it eventually collects in a drainage channel located on the Cypress Point Golf Course before being conveyed through three 36-inch culverts beneath 17-Mile Drive and into the Pacific Ocean.

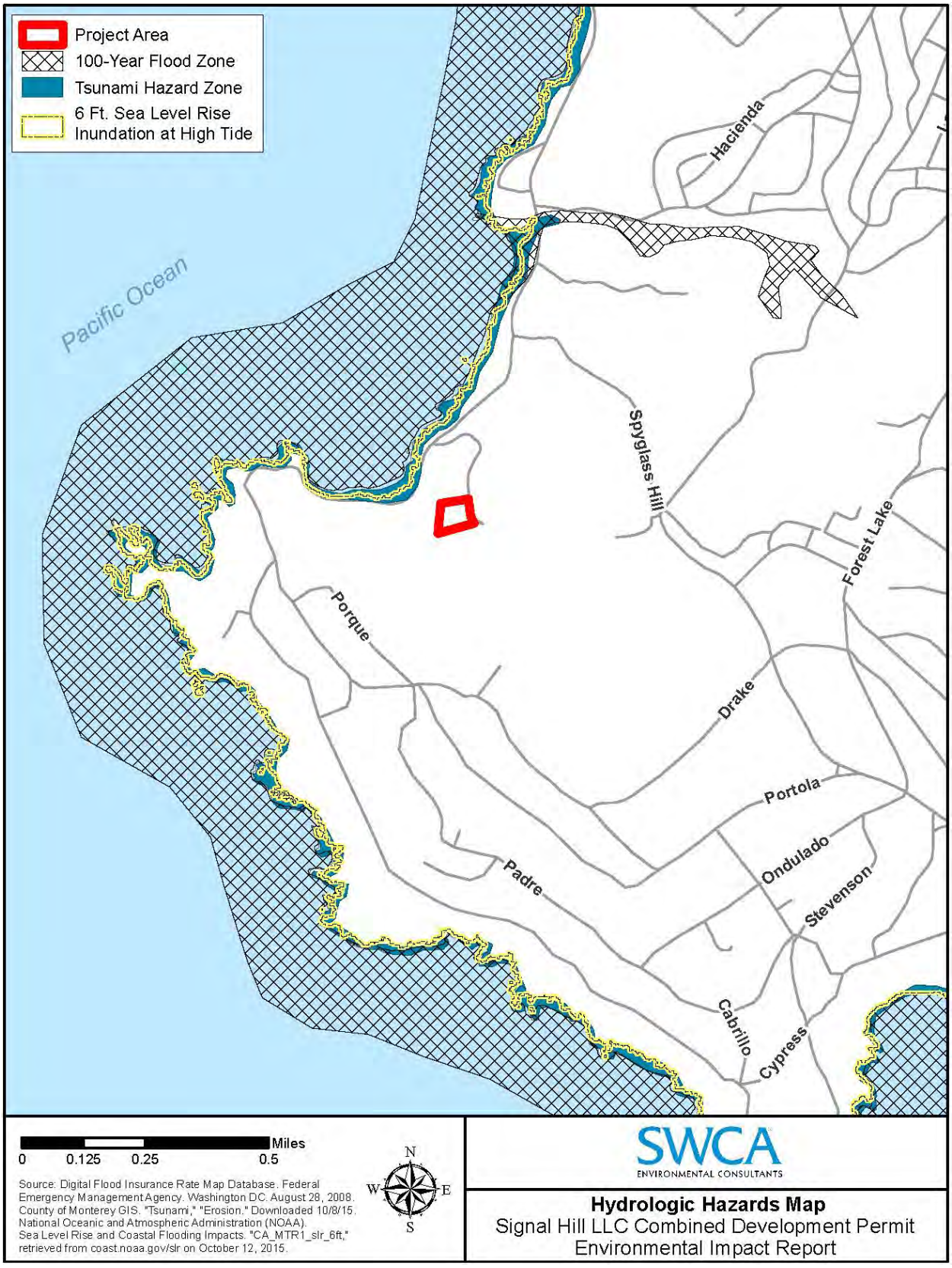
Flooding

The project site is not within a 100-year floodplain designated by the Federal Emergency Management Agency (Map Number 06053C0305G; Federal Emergency Management Agency [FEMA] 2009). Additionally, the site is not located within an area identified by FEMA as being subject to coastal flooding or from sea level rise (FEMA 2015; NOAA 2015), tsunami inundation (CGS 2009), or mudflow (County of Monterey 2010). Figure 4.6-2 shows mapped flood areas and hydrogeologic hazards in the project vicinity.

4.6.1.3 Surface Water Quality

California Clean Water Act §303(d), Threatened and Impaired Waters List, identifies waterbodies that are impaired or are threatened to be impaired by pollutants, and lists 29 water resources on the central coast for various impairments as of Reporting Year 2012 (USEPA 2012). Surface water resources located in the vicinity of the project site, including Seal Rock Creek and the adjacent segment of the Pacific Ocean coastline, are not included on the §303(d) Threatened and Impaired Waters List.

Figure 4.6-2. Hydrologic Hazards Map



The 2012 California Clean Water Act §305(b) National Water Quality Inventory Report, which discloses conditions of all water bodies in the State, including causes of impairment from types of pollution and likely sources of pollution, lists 10 water bodies on the central coast as "impaired" (USEPA 2012). Surface water resources located in the vicinity of the project site, including Seal Rock Creek and the adjacent segment of the Pacific Ocean, are not included on the 2012 California Clean Water Act §305(b) National Water Quality Inventory Report.

The Central Coast RWQCB's Water Quality Control Plan for the Central Coastal Basin does not identify beneficial uses for the inland surface water resources located in the vicinity of the project site, including Seal Rock Creek. Existing beneficial uses for the segment of coastline parallel to the project site include recreation, navigation, marine habitat, commercial, rare species habitat, and wildlife habitat (RWQCB 2011).

The closest impaired water body in Monterey County is the coastal shoreline along Pacific Grove, Monterey, and Sand City, approximately 4.5 miles northeast of the project site (County of Monterey 2010).

4.6.1.4 Coastal Flooding and Sea Level Change

Coastal flooding can occur following a short- or long-term increase in sea level resulting from a period of abnormally high precipitation and runoff. Wave runup, the maximum vertical extent of wave uprush on a beach or structure above the still water level, can occur in Monterey County as a result of stormy weather combined with strong winds and high tides, particularly during the wet months of November through April. Significant wave runup can contribute to coastal erosion and flooding during these abnormally high precipitation and runoff events. In addition to offshore storm-generated waves, seismically-induced waves (i.e., tsunamis) can occur at any time of year and can also contribute to wave runup and coastal flooding.

Sea level rise, at a global scale, is caused by an increase in the volume of the global ocean, resulting from thermal expansion (i.e., ocean warming), loss of ice by glaciers and ice sheets, and reduction of liquid storage on land (Intergovernmental Panel on Climate Change [IPCC] 2014). Based on the IPCC's 2014 Assessment Report, global mean sea level rose by 7.48 inches between the years 1901 and 2010. IPCC estimates that a global mean sea level rise of 17.72 to 32.28 inches is likely to occur by 2081–2100, with sea level continuing to rise beyond year 2100 (IPCC 2014). The National Research Council predicts that sea level off the coast of California is expected to rise approximately 39.37 inches over the next century, with sea levels off the coast south of Cape Mendocino (approximately 285 miles north of the project site) rising between 1.57 and 11.81 inches by year 2030, 4.72 to 24.02 inches by 2050, and 16.54 to 65.75 inches by year 2100 (National Research Council 2012; CCC 2015).

The project site is located within the Coastal Zone of Monterey County; however, it is not located in an area designated as being subject to flooding as a result of wave runup, tsunami inundation, or sea level rise (refer to Figure 4.6-2).

4.6.2 Regulatory Setting

4.6.2.1 Federal Regulations

Clean Water Act

The Federal Water Pollution Control Act of 1972 and its 1977 amendments, collectively known as the Clean Water Act (33 U.S.C. §1251 et. seq.), aims to restore and preserve the chemical, physical, and biological integrity of the nation's waterways by preventing pollution and giving

assistance to publicly owned treatment works for the improvement of wastewater treatment, and to protect the integrity of wetlands. The Clean Water Act regulates the water quality of all discharges into waters of the United States including wetlands and perennial and intermittent stream channels.

Section 303(d), Impaired Water Bodies and Total Maximum Daily Loads

Clean Water Act §303(d) established the total maximum daily load (TMDL) process to guide the application of state water quality standards. To identify candidate water bodies for TMDL analysis, a list of "water quality limited" streams is generated. These streams are impaired by the presence of pollutants, including sediments, and have no additional assimilative capacity for these pollutants.

The project site does not include and is not upstream of any creeks or tributaries that are listed as impaired in SWRCB's §303(d) list.

Section 402, National Pollutant Discharge Elimination System

The 1972 amendments to the Clean Water Act established the NPDES permit program to control discharges of pollutants from point sources (§402). The 1987 amendments to the Clean Water Act created a new section of the act devoted to stormwater permitting (§402[p]). The USEPA granted the state primary authority in administering and enforcing the provisions of the Clean Water Act and the NPDES permit program. The NPDES permit program is the primary federal program that regulates point-source and non-point-source discharges to waters of the United States. SWRCB issues both general and individual permits for certain activities. Relevant general and individual NPDES permits are discussed under relevant state regulations, below.

4.6.2.2 State Regulations

California Department of Water Resources

The California Department of Water Resources (CDWR) major responsibilities include preparing and updating the California Water Plan to guide development and management of the state's water resources; planning, designing, constructing, operating, and maintaining the State Water Resources Development System; regulating dams; providing flood protection; assisting in emergency management to safeguard life and property; educating the public; and serving local water needs by providing technical assistance. In addition, CDWR cooperates with local agencies on water resources investigations; supports watershed and river restoration programs; encourages water conservation; explores conjunctive use of ground and surface water; facilitates voluntary water transfers; and, when needed, operates a state drought water bank.

State Water Resources Control Board

SWRCB and its nine RWQCBs are the principal state agencies with primary responsibility for the coordination and control of water quality. SWRCB enforces the water quality standards set forth in the Clean Water Act for the State of California on behalf of the USEPA. Most SWRCB objectives are based on the CCR Title 22, State Drinking Water Standards.

NPDES General Construction Permit

Projects disturbing more than 1 acre of land during construction are required to file a Notice of Intent with SWRCB to be covered under the State NPDES General Construction Permit for discharges of stormwater associated with construction activity. The project proponent must implement control measures that are consistent with the State General Permit. A Storm Water

Pollution Prevention Plan must be developed and implemented for each site covered by the General Permit.

The area that would be disturbed under the proposed project is approximately 0.55 acre; therefore, the project would not be required to comply with the General Construction Permit.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act requires SWRCB and RWQCBs to adopt water quality criteria to protect state waters. These criteria include the identification of beneficial uses, narrative and numerical water quality standards, and implementation procedures. The Porter-Cologne Water Quality Control Act also requires SWRCB and RWQCBs to ensure the protection of water quality through the regulation of waste discharges.

Under the Porter-Cologne Act, California Water Code §13260 requires that any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the State, other than into a community sewer system, must submit a report of waste discharge to the applicable RWQCB. “Waste” is defined in the Water Quality Control Plan for the Central Coast Region (Basin Plan) to include any waste or deleterious material including, but not limited to, waste earthen materials (such as soil, silt, clay, rock, or other organic or mineral material) and any other waste as defined in the California Water Code, §13050(d). Any actions related to the project that would be applicable to California Water Code §13260 would be reported to Central Coast RWQCB.

4.6.2.3 Local Regulations and Policies

County of Monterey

Chapter 16.08 – Grading Ordinance

The County of Monterey Grading Ordinance was adopted to safeguard health, safety, and public welfare; minimize erosion; protect fish and wildlife; and otherwise protect the natural environment of Monterey County. The Grading Ordinance sets forth rules and regulations to control all grading, including excavations, earthwork, road construction, fills, and embankments, and establishes the administration procedure for issuance of permits. The Grading Ordinance also guides approval of plans and inspections of grading construction.

Chapter 16.12 – Erosion Control Ordinance

The County of Monterey Erosion Control Ordinance was adopted to eliminate and prevent conditions of accelerated erosion that have led to, or could lead to, degradation of water quality, loss of fish habitat, damage to property, loss of topsoil or vegetation cover, disruption of water supply, or increased danger from flooding. The Erosion Control Ordinance requires control of all existing and potential conditions of accelerated (human-induced) erosion; sets forth required provisions for project planning, preparation of erosion control plans, runoff control, land clearing, and winter operations; and establishes procedures for administering those provisions.

Chapter 20.147 – Regulations for Development in the Del Monte Forest Land Use Plan Area

The purpose of this chapter is to establish regulations, standards, and procedures to implement the policies of the Del Monte Forest Land Use Plan. These regulations, standards, and procedures apply only to property located within the Del Monte Forest planning area and the Coastal Zone that is subject to the Del Monte Forest Land Use Plan.

The intent of §20.147.030 is to ensure that the water quality and biological value of the Del Monte Forest's coastal streams, wetlands, open coastal waters, and the Carmel Bay are protected and maintained, including through application of adequate buffers and setbacks, maintaining hydrologic inputs, protecting riparian and wetland vegetation, carefully controlling grading to minimize erosion and sedimentation, and effectively collecting, filtering, and treating runoff.

Monterey County Water Resources Agency

The Monterey County Water Resources Agency (MCWRA) is the local administrator of the National Flood Insurance Program. Development is not proposed in a FEMA-designated Special Flood Hazard Area, within 200 feet of a river, or within 50 feet of a watercourse; therefore, Monterey County Code Chapter 16.16 does not apply.

Central Coast Regional Water Quality Control Board

Resolution R3-2013-0032c, Central Coast Post-Construction Stormwater Requirements

The project site is located outside the Phase II Municipal General Permit area of applicability; therefore, the Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region (Resolution No. R3-2013-0032, July 12, 2013) do not apply.

4.6.2.4 Applicable State, Regional and Local Land Use Plans and Policies Relevant to Hydrology and Water Quality

Table 4.6-1 lists applicable state, regional, and local land use policies and regulations pertaining to hydrology and water quality that were adopted for the purpose of avoiding or mitigating an environmental effect and that are relevant to the proposed project. A general overview of these policy documents is presented in Section 4.6.2, Regulatory Setting, and Chapter 3, Environmental Setting. Also included in Table 4.6-1 is an analysis of project consistency with identified policies and regulations. Where the analysis concludes the proposed project would potentially conflict with the applicable policy or regulation, the reader is referred to Section 4.6.5, Impact Assessment and Mitigation Measures, for additional discussion.

Table 4.6-1. Applicable Local Plans and Policies Relevant to Hydrology and Water Quality

Goals, Policies, Plans, Programs and Standards	Intent of the Policy in Relation to Avoiding or Mitigating Significant Environmental Impacts	Preliminary Consistency Determination*
County of Monterey Del Monte Forest Area Land Use Plan		
Del Monte Forest Land Use Plan Key Policies		
Freshwater and Marine Resources: The water quality and biological value of the Del Monte Forest's coastal streams, wetlands, open coastal waters, and the Carmel Bay shall be protected and maintained, including through application of adequate buffers and setbacks, maintaining hydrologic inputs, protecting riparian and wetland vegetation, carefully controlling grading to minimize erosion and sedimentation, and effective collection, filtration, and treatment of runoff.	The intent of this policy is to ensure that proposed projects do not result in adverse impacts to coastal streams, wetlands, and coastal waters.	Potentially Consistent. The proposed project is located on a stabilized sand dune and would not affect open coastal or freshwater resources. However, the site contains a small, one-parameter, coastal wetland dominated by Mexican rush in the area of proposed dune restoration activities. Mitigation has been identified to ensure dune restoration activities do not adversely affect the wetland (refer to BIO/mm-4.1 and BIO/mm-4.2). With implementation of identified mitigation, the project would be consistent with this policy.
Resource Management Element		
FRESHWATER AND MARINE RESOURCE POLICIES		
Policy 1. New development shall be sited and designed to minimize runoff, site disturbance, erosion, and sedimentation. All new development shall be designed to conform to site topography as much as possible. New residential driveways and other vehicular surfaces shall be kept to the minimum length and width to provide simple, direct access, and surfaces shall be designed to minimize runoff (including through use permeable materials, filtration strips, and use of engineered collection/treatment units). Other impervious vehicular surfaces shall be limited to the minimum required to meet daily (not occasional) parking needs. This policy shall not be read to preclude safe bicycle lanes or adequate parking for commercial visitor-serving development and access points.	The intent of this policy is to minimize runoff, site disturbance, erosion, and sedimentation.	Potentially Consistent. The project design includes an increase in existing impervious surfaces; however, the new concrete driveway includes a 6-inch trench drain to minimize runoff. The proposed 858-square-foot driveway barely extends beyond the required lot setback and is, therefore, the minimum length necessary to serve the proposed development and would provide simple, direct access to the residence from Signal Hill Road (refer to Figure 2-4), consistent with this policy. The project includes proposed erosion control and drainage plans that would reduce erosion

Table 4.6-1. Applicable Local Plans and Policies Relevant to Hydrology and Water Quality

Goals, Policies, Plans, Programs and Standards	Intent of the Policy in Relation to Avoiding or Mitigating Significant Environmental Impacts	Preliminary Consistency Determination*
		potential and direct stormwater into the proposed on-site storm drain system. Implementation of the proposed erosion control plan and drainage plan would ensure that stormwater runoff would be dispersed at multiple points with erosion control measures at the outlets, consistent with this policy.
Policy 3. Grading and site preparation activities shall incorporate design features to prevent soil erosion, repair existing erosion damage within the development footprint and prevent pollution of coastal waters.	The intent of this policy is to prevent soil erosion and prevent pollution of coastal waters.	Potentially Consistent. The proposed project includes an erosion control plan which requires implementation of erosion control measures such as the installation of silt fencing and sediment rolls, hydroseeding and application of straw following seeding to stabilize soils, storm drain inlet protection including filter fabric or silt sacks installed around the inlet and on top of the storm drain grate and catch basin, and construction and use of a stabilized construction entrance (refer to Figure 2-12, Erosion Control Plan). Runoff from the site would be retained or filtered by berms, vegetated filter strips, and/or catch basins to prevent the escape of sediment from the site, consistent with this policy.
Policy 4. All development shall employ adequate erosion/sediment control and water quality construction best management practices (BMPs) during construction, and all such BMPs shall be in place prior to the commencement of construction and shall be maintained in good operating condition through the construction period.	The intent of this policy is to ensure that all new development employ adequate erosion/sediment control and water quality BMPs.	Potentially Consistent. The proposed project includes an erosion control plan which requires implementation of erosion control measures such as the installation of silt fencing and sediment rolls, hydroseeding and application of straw following seeding to stabilize soils, storm drain inlet protection including filter fabric or silt sacks installed around the inlet and on top of the storm drain grate and catch

Table 4.6-1. Applicable Local Plans and Policies Relevant to Hydrology and Water Quality

Goals, Policies, Plans, Programs and Standards	Intent of the Policy in Relation to Avoiding or Mitigating Significant Environmental Impacts	Preliminary Consistency Determination*
		basin, and construction and use of a stabilized construction entrance (refer to Figure 2-12, Erosion Control Plan). Mitigation has been identified that requires installation of these controls prior to the commencement of construction and regular inspection and maintenance throughout the duration of construction. With implementation of identified mitigation, the project would be consistent with this policy.
Policy 5. Erosion control measures (e.g., native vegetation cover, temporary vegetation, seeding, mulching, or other suitable stabilization methods) shall be used to protect soils that have been disturbed during grading or development. Manufactured slopes shall be stabilized as soon as possible with planting of native annual grasses and shrubs, appropriate native compatible plants, and with approved landscaping.	The intent of this policy is to ensure erosion control measures are implemented to protect soils disturbed during grading or development.	Potentially Consistent. The proposed project includes an erosion control plan which requires hydroseeding and application of straw following seeding to stabilize soils (refer to Figure 2-12, Erosion Control Plan), consistent with this policy.
Policy 6. Provisions shall be made to collect and conduct runoff to drainage areas/devices capable of polluted runoff filtration/treatment (e.g., vegetated filtration strips, detention/retention basins, storm drains, etc.) to ensure maximum on-site filtration/treatment. Permanent onsite drainage areas/devices shall be designed to accommodate increased runoff resulting from site modification. Where necessitated by good drainage design considerations, on-site retention of storm water may be considered to reduce the size requirements for drainage structures, consistent with resource protection policies.	The intent of this policy is to ensure maximum on-site filtration/treatment of runoff.	Potentially Consistent. The proposed project includes implementation of a drainage plan, which would direct stormwater into the proposed on-site storm drain system. All drain system components would be located within the proposed construction footprint (refer to Figure 2-11, Grading and Drainage Plan) and all runoff would be dispersed at multiple points with erosion control measures at the outlets.
Policy 7. Dumping of spoil (dirt, garbage, refuse, etc.) into riparian habitat and drainage courses shall be prohibited.	The intent of this policy is to prevent dumping of spoil into riparian habitat and drainages.	Potentially Consistent. The proposed project would not include dumping of spoil into riparian habitat or drainage courses. All removed materials associated with demolition and construction would be hauled offsite for

Table 4.6-1. Applicable Local Plans and Policies Relevant to Hydrology and Water Quality

Goals, Policies, Plans, Programs and Standards	Intent of the Policy in Relation to Avoiding or Mitigating Significant Environmental Impacts	Preliminary Consistency Determination*
		recycling or disposal at the MRWMD facility.
HAZARDS		
Policy 43. No habitable structures shall be permitted along the shoreline in areas subject to storm wave run-up. New development shall be sited and designed in such a manner as to avoid the need for shoreline armoring and/or other such shoreline altering development over the development's lifetime, and shall include enforceable provisions for addressing any future bluff retreat/erosion danger to the development without shoreline armoring (e.g., moving the development, removing the development, etc.). In addition, bluff and cliff top development shall be permitted only if design and setback provisions are adequate to assure stability and structural integrity for the development's lifetime and if the development (including associated storm runoff, foot traffic, grading, and irrigation) will neither create nor contribute significantly to erosion problems or geologic instability of the site or surrounding area. Development on bluff faces shall be prohibited except for public access pathways, including stairways.	The intent of this policy is to restrict development of habitable structures in areas subject to storm wave run-up.	Potentially Consistent. The project site is not located on a bluff face or top, cliff, or within a FEMA-designated storm wave run-up zone, and the site would not be adversely affected by flooding as a result of sea level rise in the future (refer to Figure 4.6-2).
Land Use and Development Element		
LAND USE AND DEVELOPMENT POLICIES		
Policy 78. Development on slopes of 30% or more is prohibited unless such siting better addresses LUP objectives as a whole when compared to other possible siting alternatives on slopes of less than 30% associated with projects and/or sites.	The intent of this policy is to restrict development on slopes of 30% or more.	Potentially Consistent. The project would be located within and proximate to the previously disturbed and graded portions of the site. Alternative site locations would require construction in areas containing relatively undisturbed dune habitat at natural grades, which would be inconsistent with LUP policies. The proposed development on 30% slopes would be limited to the proposed driveway, which would be constructed across a steep decline from Signal Hill Road to the proposed residence. There

Table 4.6-1. Applicable Local Plans and Policies Relevant to Hydrology and Water Quality

Goals, Policies, Plans, Programs and Standards	Intent of the Policy in Relation to Avoiding or Mitigating Significant Environmental Impacts	Preliminary Consistency Determination*
		are no feasible alternatives that would avoid development on slopes without creating other LUP inconsistencies; therefore, the proposed project is potentially consistent with this policy.
Monterey County Coastal Implementation Plan		
Part 1 Title 20 Zoning Ordinance		
20.64.230 – DEVELOPMENT ON SLOPES IN EXCESS OF 30%		
20.64.230 Regulations for Development on Slopes in Excess of 30% A. Purpose: The purpose of this Section is to establish regulations, procedures and standards to consider development on slopes in excess of 30% (25% in North County). In areas within the North County Land Use Plan boundaries 25% shall replace 30% throughout this Section. B. Applicability: The provisions of this Section are applicable in all zoning districts for all proposed development on slopes in excess of 30%. C. Regulations. 1. All development on slopes of 30% or more requires a Coastal Development Permit, except as provided in Section 20.64.230 (C) (2) and (3). 2. The following development may be allowed on slopes exceeding 30% provided a Coastal Administrative Permit is first obtained: a. soils tests, percolation tests, geologic tests and similar exploratory tests; b. excavations on man-made slopes provided: i.) the excavation does not exceed 100 hundred cubic yards; and ii.) the excavation does not exceed 2 feet in depth; and	The intent of this policy is to regulate development on slopes greater than 30%.	Potentially Consistent. The proposed driveway would be constructed across the steep downward slope from Signal Hill Road to the proposed residence (30% slopes or more); therefore, a Coastal Development Permit is required, consistent with this policy. The project does not appear to fall within any of the stated exceptions to the Coastal Development Permit requirement (i.e., it does not include soil testing, excavation or fill on man-made slopes, or an addition to an existing structure, and the project would require a total of approximately 1,200 cubic yards of cut and 500 cubic yards of fill, amounts exceeding the exception thresholds).

Table 4.6-1. Applicable Local Plans and Policies Relevant to Hydrology and Water Quality

Goals, Policies, Plans, Programs and Standards	Intent of the Policy in Relation to Avoiding or Mitigating Significant Environmental Impacts	Preliminary Consistency Determination*
iii.) the excavated slopes is not steeper than the 1-1/2 horizontal to 1 vertical; c. fills on man-made slopes provided: i.) the fill contains earth material only; and ii.) the fill does not exceed 100 cubic yards; and iii.) the fill does not exceed 2 feet in depth; and iv.) the fill is not placed on a man-made slope in excess of 1-1/2 horizontal to 1 vertical. d. additions to existing structures on natural or man-made slopes provided the addition does not exceed 120 square feet on the slope area. 3. Internal remodeling and second story additions of portions of structures existing on slopes of 30% or more are exempt from Coastal Development Permit and Coastal Administrative Permits provided such remodeling or additions causes no site disturbance on slopes of 30% or more.		
Water Quality Control Plan for the Central Coastal Basin. Regional Water Quality Control Board, Central Coast Region (Region 3)		
Chapter 3. Water Quality Objectives		
II.A.1. Objectives for Ocean Water The provisions of the State Board's "Water Quality Control Plan for Ocean Waters of California" (Ocean Plan), "Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California" (Thermal Plan), and any revisions thereto shall apply in their entirety to affected waters of the basin. The Ocean and Thermal Plans shall also apply in their entirety to Monterey Bay and Carmel Bay.	The intent of this objective is to ensure compliance with the provisions of SWRCB's "Water Quality Control Plan for Ocean Waters of California" (Ocean Plan), "Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California" (Thermal Plan), and any revisions thereto for affected waters for the basin, Monterey Bay, and Carmel Bay.	Potentially Consistent**.** The proposed project would include the implementation of an erosion control plan and a drainage plan that would ensure that stormwater runoff and pollutants are controlled on-site, erosion is minimized, and impacts to surrounding water resources do not occur as a result of the proposed project.

Table 4.6-1. Applicable Local Plans and Policies Relevant to Hydrology and Water Quality

Goals, Policies, Plans, Programs and Standards	Intent of the Policy in Relation to Avoiding or Mitigating Significant Environmental Impacts	Preliminary Consistency Determination*
II.A.4. Objectives for Ground Water **II.A.4.a. General Objectives** The following objectives apply to all ground waters of the basin. *Tastes and Odors* Ground waters shall not contain taste or odor producing substances in concentrations that adversely affect beneficial uses. *Radioactivity* Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life; or result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or aquatic life.	The intent of this objective is to protect the quality of groundwater within the basin.	Potentially Consistent**.** The project site is not located within a groundwater basin and there are no beneficial uses identified for groundwater beneath the project site. Implementation of the erosion control plan and drainage plan would ensure that impacts to groundwater do not occur as a result of the proposed project.
Chapter 4. Implementation Plan		
I. Regional Water Quality Control Board Goals To ensure that the water resources of the Central Coastal Basin are preserved for future generations of Californians, the California Regional Water Quality Control Board, Central Coast Region, determined it was desirable to establish certain planning goals. These goals pertain to utilization of the basin's water resources and guidelines for control of waste discharges, as follows: 1. Protect and enhance all basin waters, surface and underground, fresh and saline, for present and anticipated beneficial uses, including aquatic environmental values. 2. The quality of all surface waters shall allow unrestricted recreational use. 3. Manage municipal and industrial wastewater disposal as part of an integrated system of fresh water supplies to achieve maximum benefit of fresh water resources for present and future beneficial uses and to achieve harmony with the natural environment. 4. Achieve maximum effective use of fresh waters through reclamation and recycling. 5. Continually improve waste treatment systems and processes to assure consistent high quality effluent based on best economically achievable technology.	The intent of these goals is to ensure that the water resources of the Central Coastal Basin are preserved for future generations of Californians.	Potentially Consistent**.** The proposed project would include the implementation of an erosion control plan and a drainage plan that would facilitate infiltration of stormwater runoff into the groundwater table and would ensure that stormwater runoff, sediment, and pollutants are controlled on-site, that erosion is minimized, and that adverse impacts to surrounding water resources do not occur as a result of the proposed project.

Table 4.6-1. Applicable Local Plans and Policies Relevant to Hydrology and Water Quality

Goals, Policies, Plans, Programs and Standards	Intent of the Policy in Relation to Avoiding or Mitigating Significant Environmental Impacts	Preliminary Consistency Determination*
6. Reduce and prevent accelerated (man-caused) erosion to the level necessary to restore and protect beneficial uses of receiving waters now significantly impaired or threatened with impairment by sediment.		
County of Monterey General Plan (1982)		
Goals, Objectives, and Policies for Natural Resources		
WATER RESOURCES		
Goal 5: To conserve and enhance the water supplies in the county and adequately plan for the development and protection of these resources and their related resources for future generations	The intent of this goal is to conserve and enhance the county's water supplies and resources.	Potentially Consistent. The proposed project is not located within a critical watershed or within a groundwater basin or important recharge area. The project includes the implementation of an erosion control plan and drainage plan to minimize the potential for impacts to water resources associated with construction and development of the project.
Policy 5.1.1 Vegetation and soil shall be managed to protect critical watershed areas.	The intent of this policy is to protect and preserve critical watershed areas.	Potentially Consistent. The project is not located within a critical watershed; however, the project plans and mitigation identified in the EIR include erosion control measures and native plant restoration to minimize potential impacts to the local watershed.

Table 4.6-1. Applicable Local Plans and Policies Relevant to Hydrology and Water Quality

Goals, Policies, Plans, Programs and Standards	Intent of the Policy in Relation to Avoiding or Mitigating Significant Environmental Impacts	Preliminary Consistency Determination*
Policy 5.1.2 Land use and development shall be accomplished in a manner to minimize runoff and maintain groundwater recharge in vital water resource areas.	The intent of this policy is to protect and preserve watersheds and recharge areas, particularly those critical for the replenishment of reservoirs and aquifers.	Potentially Consistent. Although the project site is not located within a groundwater basin or important recharge area, the proposed project includes the implementation of a drainage plan, which would direct stormwater into the proposed on-site storm drain system and prevent off-site runoff. Implementation of the drainage plan would ensure that stormwater runoff is controlled, consistent with this policy.
Policy 6.1.1 Increased uses of groundwater shall be carefully managed, especially in areas known to have ground water overdrafting.	The intent of this policy is to eliminate overdrafting of groundwater resources.	Potentially Consistent. The proposed project would not substantially change water demands at the site from those associated with the existing single family residential use. The proposed project has an Authorization for Water Permit, signed by the MPWMD on July 26, 2011 for use of water provided by Cal Am. The proposed project would tie-in to existing water supply infrastructure. The MPWMA is responsible for managing its water supply.
Policy 6.1.2 Water conservation measures for all types of land uses shall be encouraged.	The intent of this policy is to encourage water conservation.	Potentially Consistent. The proposed project would include the construction of a new single-family residence in compliance with the California Building Standards Code, which requires the use of water conserving plumbing fixtures. Additionally, the project includes implementation of a landscape plan which would not require irrigation, consistent with this policy.

Table 4.6-1. Applicable Local Plans and Policies Relevant to Hydrology and Water Quality

Goals, Policies, Plans, Programs and Standards	Intent of the Policy in Relation to Avoiding or Mitigating Significant Environmental Impacts	Preliminary Consistency Determination*
Goals, Objectives, and Policies for Air and Water Resources		
Goal 21: To ensure that the County's water quality is protected and enhanced to meet all beneficial uses, including domestic, agricultural, industrial, recreational, and ecological.	The intent of this goal is to protect the County's water quality.	Potentially Consistent. The proposed project is not located within a critical watershed or within a groundwater basin or important recharge area. The project includes the implementation of an erosion control plan and a drainage plan to minimize the potential for impacts to water resources associated with construction and development of the project.
Policy 21.2.1 The County shall require all new and existing development to meet federal, state, and County water quality regulations.	The intent of this policy is to ensure all development meets applicable water quality standards.	Potentially Consistent. The proposed project incorporates Best Management Practices for erosion and stormwater through implementation of the erosion control plan and drainage plan, consistent with this policy.

* Although a preliminary determination regarding project consistency is made, it is the responsibility of the County Planning Commission or Board of Supervisors, the lead CEQA decision makers, to make the final determination regarding consistency issues.

4.6.3 Thresholds of Significance

The significance of potential hydrology or water quality impacts are based on thresholds identified within Appendix G of the State CEQA Guidelines and the County's Initial Study Checklist, which provide the following thresholds for determining impact significance with respect to hydrology and water quality resources. Impacts would be considered significant if the proposed project would:

a) Violate any water quality standards or waste discharge requirements?

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off-site?

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site?

e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

f) Otherwise substantially degrade water quality?

g) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

j) Be subject to inundation by seiche, tsunami, or mudflow?

4.6.4 Impact Assessment Methodology

An impact to water quality would occur if the proposed project results in the discharge of pollutants into ground or surface waters. Impacts to the movement of water may occur if the project would affect stormwater runoff, including existing drainage infrastructure, resulting in flooding, erosion, and sedimentation. Potential impacts are assessed based on site topography, the proposed layout and elevations of potential project components, the erodibility of soils, existing drainage patterns, and the regulatory framework applicable to the project. The proposed project design and preliminary grading and drainage plans incorporate applicable hydrological standards, and consider other site conditions and geologic hazards.

4.6.5 Impact Assessment and Mitigation Measures

4.6.5.1 Violate Any Water Quality Standards

Construction-Related Impacts

The proposed project includes construction activities that would require demolition of the existing single-family residence, removal of all existing structures and paved areas, foundation, debris, and landscape irrigation system. Construction would include site clearing, rough grading, and cut and fill activities for the building pad for the proposed new single-family residence and associated built components. Activities within an approximately 0.55-acre construction area would include site preparation, ground disturbance, and/or grading, including 1,200 cubic yards of cut and 500 cubic yards of fill for the demolition of the existing residence and construction of the new residence and ancillary components. Approximately 700 cubic yards of excess material would be exported offsite (refer to Figure 2-11, Grading and Drainage Plan). The project also includes restoration of approximately 1.67 acres of degraded dune habitat. Proposed dune restoration would include eradication of exotic species using broadcast spraying and hand removal techniques, and replanting and maintenance of native species. If sand stabilization is determined necessary, bundles of sterile rice straw may be inserted into the sand to stabilize the area. Some ground disturbance would occur within the Dune Restoration Area during exotic species eradication and native species planting and sand stabilization activities, if necessary; however, no staging, grading, or heavy equipment use is proposed.

All removed materials would be hauled offsite for recycling or disposal at the MRWMD facility. Construction and grading activities are expected to last approximately 18 to 24 months. Construction staging areas are also proposed within the construction footprint, within the 30-foot front yard setback along Signal Hill Road.

Total project grading would occur over an approximately 6-week period. The combination of all ground-disturbing construction activities, if not properly managed, could result in increased erosion and the transportation of sediment and/or construction debris off-site during rain events and result in the increased sedimentation or contamination of adjacent drainages that deposit directly into the Pacific Ocean.

As detailed in Chapter 2, Project Description, the proposed project includes erosion control measures to be implemented during construction, including installation of silt fencing and sediment rolls, hydroseeding and application of straw following seeding to stabilize soils, storm drain inlet protection, including filter fabric or silt sacks installed around the inlet and on top of the storm drain grate and catch basin, and construction and use of a stabilized construction entrance (refer to Figure 2-12, Erosion Control Plan). Runoff from the site would be dispersed at multiple points with erosion control at the outlets.

Proper implementation and maintenance of the proposed erosion control plan would ensure that the proposed project minimizes erosion and sedimentation associated with disturbed soils, and prevents the inadvertent transport and/or release of contaminants that could impact surrounding water resources. Therefore, impacts would be *less than significant with mitigation*.

HYD Impact 1	
During construction, the proposed project would require grading on slopes in excess of 30%, which may result in increased runoff, erosion, and sedimentation associated with soil disturbance, potentially violating water quality standards during construction, resulting in a potentially significant impact.	
Mitigation Measures (mm) and Mitigation Monitoring Actions (mma)	
HYD/mm-1.1	*Prior to issuance of demolition, grading, or construction permits, the Applicant shall submit an erosion control plan to the County of Monterey Resource Management Agency for review and approval.* *All identified erosion control measures shall be in place prior to the start of construction. The County of Monterey Resource Management Agency shall periodically conduct subsequent inspections of the site throughout the duration of construction, including prior to the start of construction and prior to permit final, to:* *a. Ensure all identified erosion control measures are in place prior to the start of construction;* *b. Assess the adequacy of the best management practices and controls in place to reduce pollutant loadings and ensure they were properly installed and are functioning appropriately;* *c. Determine whether implementation of additional best management practices or corrective measures are needed; and* *d. Ensure all disturbed areas have been stabilized and all erosion control measures that are no longer needed have been removed.* *Requirements of the approved erosion control plan and drainage plan shall be included on all construction specifications.*
HYD/mma-1.1.1	*Prior to issuance of demolition, grading, or construction permits, the Applicant shall submit an erosion control plan to the County of Monterey Resource Management Agency – Environmental Services for review and approval to establish compliance with this measure.*
Residual Impacts	
With implementation of the above mitigation measure, residual construction-related impacts to hydrology and water quality would be *less than significant*.	

Operational Impacts

The project would result in a 2,990-square-foot increase in impervious surfaces at the site. An increase in impervious surfaces would prevent surface water infiltration into the ground surface on a portion of the site and would increase the stormwater runoff volume and rate compared to existing conditions, which could cause erosion, increased peak flows, and other impacts to the existing drainage pattern at the site.

As detailed in the project description, the proposed project includes a drainage plan that includes construction of a series of downspout outlets, 12 × 12-inch drainage inlets surrounding the proposed residence, 4- to 6-inch diameter storm drains, a 6-inch trench drain across the proposed driveway, and erosion control measures at the storm drain outlets. All drain system components would be located within the proposed construction footprint (refer to Figure 2-11, Grading and Drainage Plan).

Proper implementation and maintenance of the proposed drainage plan would ensure that the proposed project mitigates potential impacts from increased stormwater runoff. Therefore, impacts would be *less than significant with mitigation*.

HYD Impact 2	
After construction, the proposed project would increase impervious surfaces at the project site, potentially increasing the stormwater runoff volume and rate compared to existing conditions, which could cause erosion, increased peak flows, and other impacts to the existing drainage pattern, resulting in a potentially significant impact.	
Mitigation Measures (mm) and Mitigation Monitoring Actions (mma)	
HYD/mm-2.1	*Prior to issuance of demolition, grading, or construction permits, the Applicant shall submit a drainage plan to the County of Monterey Resource Management Agency – Environmental Services for review and approval.* *Upon completion of construction, and periodically thereafter as necessary, the County of Monterey Resource Management Agency – Environmental Services shall inspect the site to ensure the following:* *a. All best management practices and drainage facilities are properly installed and functioning properly; and* *b. The best management practices and drainage facilities are adequate to control erosion and stormwater runoff.*
HYD/mma-2.1.1	*Prior to issuance of demolition, grading, or construction permits, the Applicant shall submit a drainage plan in compliance with this measure to the County of Monterey Resource Management Agency to establish consistency with this measure.*
Residual Impacts	
With implementation of the above mitigation measure, residual operational impacts to hydrology and water quality would be *less than significant*.	

4.6.5.2 Substantially Deplete Groundwater Supplies

The project site is located approximately 800 feet east of the Pacific Ocean and is not located within a designated groundwater basin. The closest groundwater basin is the Seaside Area Subbasin of the Salinas Valley Groundwater Basin, located approximately 3.5 miles east of the project site.

Based on the results of a geotechnical study prepared for the project area, the depth to bedrock ranged from 8 to 14 feet below the ground surface in seven exploratory borings. Free water was encountered in two of seven borings. According to the log for boring no. 2, the depth to bedrock was 12 feet and the depth to groundwater was 16 feet. In boring no. 7, the depth to bedrock was 14 feet and the depth to groundwater was 10.5 feet (Cleary 2010).

The proposed project includes the demolition of the existing single-family residence and the development of a new single-family residence and associated built components. Although groundwater levels have the potential to be shallow within the project site, and ground disturbance, such as grading and cut and fill activities is proposed, any potential impacts or dewatering activities would be temporary and minor. Groundwater resources beneath the project site do not have a designated beneficial use.

Operation of the proposed project would include water use by the new single-family residence. The proposed use would not result in a significant increase in water demand over existing uses, as discussed in Section 4.7.9, Public Services and Utilities. Therefore, implementation of the proposed project would not substantially deplete groundwater supplies or interfere with groundwater recharge. Impacts would be *less than significant* and mitigation is not necessary.

4.6.5.3 Result in Substantial Erosion or Siltation On- or Off-Site

The proposed project includes construction activities that would require demolition of the existing single-family residence and removal of all existing structures, paved areas, foundation, debris, and the landscape irrigation system. Construction would include site clearing, rough grading, and cut and fill activities for the building pad for the proposed new single-family residence and associated built components. Implementation of the aforementioned construction activities would result in the alteration of existing drainage patterns on-site, which could contribute to increased erosion and sedimentation on- and off-site.

Additionally, the completed project would create a 2,990-square-foot increase in impervious surfaces at the site, which would prevent surface water infiltration into the ground surface within the developed footprint and would increase the stormwater runoff volume and rate compared to existing conditions, which could cause erosion, increased peak flows, and other impacts to the existing drainage pattern at the site.

As discussed previously, the proposed project includes the implementation of erosion control measures during construction such as the installation of silt fencing and sediment rolls, hydroseeding and application of straw following seeding to stabilize soils, storm drain inlet protection including filter fabric or silt sacks installed around the inlet and on top of the storm drain grate and catch basin, and construction and use of a stabilized construction entrance (refer to Figure 2-12, Erosion Control Plan).

The proposed project also includes a drainage plan, which includes construction of a series of downspout outlets, 12 × 12-inch drainage inlets surrounding the proposed residence, 4- to 6-inch diameter storm drains, a 6-inch trench drain across the proposed driveway, and erosion control measures at the storm drain outlets. All drain system components would be located within the proposed construction footprint (refer to Figure 2-11, Grading and Drainage Plan).

The proposed project would alter the existing drainage pattern located on the project site; however, this would not involve the alteration of an existing surface water resource such as a stream or river. Based on existing site conditions, including slope, sandy soils, and proximity to the ocean (800 feet west), it is expected that surface water runoff that does not percolate into the sand is likely conveyed to the ocean in the form of sheet flow. With adequate implementation and maintenance of the proposed erosion control plan and drainage plan, the proposed project would not substantially alter the drainage pattern beyond the construction footprint and would not alter off-site drainage patterns. Therefore, impacts would be *less than significant with mitigation*.

HYD Impact 3
The project would alter the existing drainage pattern both during and following construction, which could contribute to increased erosion and sedimentation on- and off-site, resulting in a potentially significant impact.
Mitigation Measures (mm) and Mitigation Monitoring Actions (mma)
Implement HYD/mm-1.1, HYD/mma-1.1.1, HYD/mm-2.1, and HYD/mma-2.1.1.
Residual Impacts
With implementation of the above mitigation measures, residual impacts related to increased erosion and siltation would be *less than significant*.

4.6.5.4 Substantially Increase Surface Runoff

As discussed previously, construction of the proposed project includes approximately 0.55 acres of site preparation, ground disturbance, and grading, including 1,200 yards of cut and fill. Construction activities would alter the existing drainage pattern on-site; however, they would not result in the alteration of a stream or river. Alteration of the existing drainage patterns could result in an increase in the existing peak flow levels on-site; however, due to the sloping topography of the area, and surrounding dune habitat, the increased peak flows are not expected to result in flooding on- or off-site.

Development of the proposed project would result in a 2,990-square-foot increase in impervious surfaces within the project site associated with the new building pad and paved areas. The increase in impervious surfaces would prevent surface water infiltration within the developed footprint and would increase the stormwater runoff volume and rate compared to existing conditions, which could cause erosion, increased peak flows, and other impacts to the existing drainage pattern at the site.

As discussed previously, implementation of the proposed drainage plan would ensure that impervious surface stormwater runoff is dispersed at multiple points with erosion control measures at the outlets. Therefore, impacts would be *less than significant with mitigation*.

HYD Impact 4
The project would increase impervious surfaces at the site, which would increase stormwater runoff volume and rate compared to existing conditions potentially causing erosion, increased peak flows, and other impacts to the existing drainage pattern, resulting in a potentially significant impact.
Mitigation Measures (mm) and Mitigation Monitoring Actions (mma)
Implement HYD/mm-1.1, HYD/mma-1.1.1, HYD/mm-2.1, and HYD/mma-2.1.1.
Residual Impacts
Implementation of the above mitigation measure would ensure that the proposed project does not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site, and residual impacts would be *less than significant*.

4.6.5.5 Create Substantial Additional Sources of Polluted Runoff

As discussed previously, development of the proposed project would result in a 2,990-square-foot increase in impervious surfaces on the site, which would contribute to an increase in stormwater runoff and could potentially create additional sources of polluted runoff. However, with the implementation of the proposed drainage plan, impervious surface stormwater runoff would be dispersed at multiple points onsite with erosion control measures at the outlets. Impacts would be *less than significant* and no additional mitigation is necessary.

4.6.5.6 Otherwise Substantially Degrade Water Quality

Impacts to water quality that could occur as a result of the proposed project are limited to erosion, sedimentation, and increased stormwater runoff associated with construction activities and development of increased impervious surfaces. Implementation of the erosion control plan and drainage plan are expected to minimize the potential for impacts to water quality associated with the proposed project. No additional impacts are anticipated. Therefore, impacts are expected to be *less than significant* and no additional mitigation is necessary.

4.6.5.7 Place Housing within a 100-Year Flood Hazard Area

As discussed in the Existing Setting section and shown in Figure 4.6-1, the project site is not located within a 100-year floodplain designated by FEMA (Map Number 06053C0305G; FEMA 2009) or other flood hazard delineation map. All built components of the proposed project would be located within the construction footprint, which is not located within a 100-year floodplain. The proposed project would not result in the development of housing within a 100-year flood hazard area. Therefore, *no impact* would occur and no mitigation is necessary.

4.6.5.8 Impede or Redirect Flood Flows

As discussed above, the project site is not located within a 100-year floodplain and no components of the proposed project would be located within a 100-year floodplain. The proposed project would not place structures within a 100-year flood hazard area which would impede or redirect flood flows. Therefore, *no impact* would occur and no mitigation is necessary.

4.6.5.9 Expose People or Structures to Flooding

The project site is not located within a designated dam inundation zone as identified by the County of Monterey General Plan (County of Monterey 2010) or FEMA 100-year flood zone. The proposed project is not expected to expose people or structures to a significant risk involving flooding. Therefore, impacts would be *less than significant* and additional mitigation is not required.

4.6.5.10 Inundation by Seiche, Tsunami, or Mudflow

The project site is not located within a designated tsunami inundation zone (CGS 2009) or an area identified by the County as being subject to seiche or mudflow hazards (County of Monterey 2010). In the event of a tsunami, the County's Tsunami Incident Response Plan would apply, and the occupants would evacuate pursuant to the applicable emergency response directives. Therefore, impacts associated with seiche, tsunami, and mudflow are expected to be *less than significant* and mitigation is not necessary.

4.6.6 Cumulative Impacts

The Del Monte Forest area is bordered by the Pacific Ocean to the west and supports several surface water resources including Sawmill Gulch and Seal Rock Creeks. None of the surface water resources within this area are listed as impaired; however, cumulative development in the Del Monte Forest could contribute to increased erosion, sedimentation, impervious surfaces, reduced groundwater recharge, stormwater runoff, increased peak flows, new sources of pollution, and other potential impacts to water resources. The project site is not located within a groundwater basin or an area that relies on the underlying groundwater basin, and there are no surface water resources that bisect the property; therefore, no direct impacts to water resources are expected to occur as a result of the proposed project. As discussed previously, the proposed project includes the implementation of an erosion control plan and a drainage plan to ensure construction and development of the project would not contribute to cumulative impacts to water resources and mitigation is identified to ensure these plans adequately reduce potential adverse impacts. Therefore, cumulative impacts related to hydrology and water quality would be *less than significant* and no mitigation is necessary.

4.6.7 References

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