

4.5 HYDROLOGY AND WATER QUALITY

Note: After the Draft EIR was released, the applicant chose to remove the car wash facilities from the Project site, and use of the car wash area is no longer part of the proposal. All references to future use of the car wash area have been removed from the project description and the impact analysis.

This section focuses on impacts from construction immediately adjacent to Devereux Creek, including accidental spills and erosion and sedimentation. It also addresses runoff from the emergency access road and water quality impacts from use of the car wash site, which drains to an open space area near Devereux Creek. Impacts from repaving the car wash area already have occurred and are not expected to have affected water quality or hydrology, and they are not discussed further.

4.5.1 Existing Conditions

Devereux Creek, an intermittent stream, runs along the southern side of the Project site in a west to east direction. The creek drains into Devereux Slough, which lies southeast of the Project site and ultimately discharges into the ocean. A steep (3:1 slope) concrete wall, approximately 4 feet tall, lines the northern bank, although accumulated fill may make the wall appear shorter. The primary low-flow channel is about 30 feet south of the wall near Coronado Drive and trends towards the north as it moves downstream. Braids and accumulated debris are present. At the eastern end of the site, the low-flow channel has moved against the wall or bank. The low-flow bed width ranges from 12 to 20 feet wide. The actual width of the creek is well over the width of the current low-flow channel. If the concrete wall is the northern bank, and the low flow channel is somewhere in the middle, the southern bank is held by the steep ascent of the slope of the south side of the creek (Tierney and Collins 2015).

Devereux Creek is designated as an impaired water body by the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Board (RWQCB) under Section 303(d) of the Clean Water Act (CWA) (codified at 33 USC §§ 1251, *et seq.*). Causes of impairment for the creek are low dissolved oxygen levels and fecal coliform. Total maximum daily loads (TDMLs) are not yet established for these two impairments (CalEPA 2012).

The Project site is outside the 100-year floodplain mapped for Devereux Creek, which generally lies south of the creek in the vicinity of the emergency access road and southeast of the former car wash area. The emergency access road, associated water line, and the former car wash area are within a potential tsunami runup area (City of Goleta 2006).

The Goleta Groundwater Basin underlies the City of Goleta, including the Project site. It is approximately 8 miles long and 3 miles wide, encompassing approximately 9,210 acres (California Department of Water Resources [DWR] 2004; Goleta Water District [GWD] 2011).

4.5.2 Regulatory Framework

4.5.2.1 Federal

Clean Water Act

The primary goals of the CWA (33 USC §§ 1251, *et seq.*) are to restore and maintain the chemical, physical, and biological integrity of the nation's waters and to make all surface waters fishable and swimmable. CWA forms the basic national framework for managing water quality and

controlling pollution discharges. The CWA provides the legal framework for several water quality regulations, including the NPDES, effluent limitations, water quality standards, pretreatment standards, antidegradation policy, nonpoint-source discharge programs, and wetlands protection. The US Environmental Protection Agency (USEPA) has delegated responsibility for administration of portions of the CWA to state and regional agencies. The primary federal and state regulations resulting from the CWA are discussed below.

Federal Antidegradation Policy

The federal Antidegradation Policy requires states to develop statewide anti-degradation policies and identify methods for implementing them (40 CFR §131.12). These policies and implementation methods, at a minimum, protect and maintain (1) existing instream uses; (2) existing water quality where the quality of waters exceeds levels necessary to support existing beneficial uses, unless the state finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and (3) water quality in waters considered an outstanding national resource. State permitting actions must be consistent with the federal Anti-degradation Policy.

4.5.2.2 State

Porter-Cologne Water Quality Control Act

The State of California is authorized to administer federal law or state-enacted laws regulating water pollution within the state. The Porter-Cologne Water Quality Control Act (Water Code §§ 13000, *et seq.*) includes regulations to address requirements of the CWA. These regulations include NPDES permitting, dredge and fill programs, and civil and administrative penalties. The Porter-Cologne Act is broad in scope and addresses issues relating to the conservation, control, and utilization of the water resources of the state. Additionally, the Porter-Cologne Act states that the quality of all the waters of the state (including groundwater and surface water) must be protected for the use and enjoyment of the people of the state.

The SWRCB and the nine RWQCBs are agencies within the umbrella structure of the California Environmental Protection Agency (CalEPA). The SWRCB has the principal responsibility for development and implementation of California water quality policy and must develop programmatic water quality control procedures to be implemented by the RWQCBs. The Central Coast RWQCB is the regional board that regulates water quality in the city of Goleta; it adopted a Revised Water Quality Control Plan (Basin Plan) on September 8, 1994. The Basin Plan designates beneficial uses and establishes water quality objectives for groundwater and surface water within the Central Coast Region. It has been amended but not updated since 1994.

Water Code § 13050 defines what is considered pollution, contamination, or nuisance. Briefly defined, pollution means an alteration of water quality such that it unreasonably affects the beneficial uses of water (which may be for drinking, agricultural supply, or industrial uses). Contamination means an impairment of water quality to the degree that it creates a hazard to the public health. Nuisance is defined as anything that is injurious to health, is offensive to the senses, or is an obstruction to property use, and affects a considerable number of people.

Discharge Permits

The SWRCB has issued a statewide NPDES General Permit for stormwater discharges associated with construction activities (known as the Construction General Permit [SWRCB Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ]). Any project that disturbs an area larger than 1 acre requires a Notice of Intent to discharge under the Construction General Permit. The Construction General Permit includes measures to eliminate or reduce

pollutant discharges through implementation of a Stormwater Pollution Prevention Plan (SWPPP), which describes the implementation and maintenance of BMPs to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from a site during construction. The Construction General Permit contains receiving water limitations that require stormwater discharges to not cause or contribute to a violation of any applicable water quality standard. The permit also requires implementation of programs for visual inspections and sampling for specified constituents (e.g., nonvisible pollutants). ~~Any construction activities at the Project property would not be covered under~~ subject to the provisions of the Construction General Permit, as discussed in detail below because it would disturb less than 1 acre.

The Central Coast RWQCB issues combined NPDES permits under the CWA and Porter-Cologne Act to all point-source dischargers of waste to surface waters. To ensure protection of water quality, NPDES permits (known as Waste Discharge Requirements) may contain effluent limitations for pollutants of concern, pollutant monitoring frequencies, reporting requirements, schedules of compliance (when necessary), mandates for operating conditions, BMPs, and administrative requirements. NPDES permits apply to publicly owned treatment works discharges; industrial wastewater discharges; and municipal, industrial, and construction site stormwater discharges.

State Antidegradation Policy

The SWRCB adopted Resolution No. 68-16 (October 28, 1968), “Statement of Policy with Respect to Maintaining High Quality Waters in California” (more commonly referred to as the state Antidegradation Policy), which restricts the degradation of surface waters of the state and protects bodies of water where the existing water quality is higher than necessary for the protection of present and anticipated designated beneficial uses. This state policy is generally consistent with the subsequently adopted federal Anti-degradation Policy, discussed above. State policy differs from federal policy in that it applies to: (1) all waters, including surface waters and groundwater; (2) reductions in water quality since 1968; (3) all uses, both existing and potential uses, instream and offstream; and (4) only high quality (i.e., Tier 2) waters. The state policy is implemented by the Central Coast RWQCB.

4.2.1.1 Local

County of Santa Barbara

Project Clean Water is the County of Santa Barbara’s stormwater quality program initiated in 1998 to improve water quality in local creeks and the ocean by implementing many of the aspects of NPDES BMPs. This program also includes watershed planning and restoration, pilot treatment control BMPs, and monitoring. Project Clean Water is managed and staffed by the Santa Barbara County Water Agency (under the Public Works Department) and the Environmental Health Services Division of the Public Health Department.

City of Goleta Stormwater Management Guidance Document

Planning, implementation, and enforcement related to stormwater management during construction and post-construction activities on proposed and active development sites are governed by the City of Goleta Stormwater Management Guidance Document (Guidance Document; City of Goleta 2014). The Guidance Document was created pursuant to SWRCB General Permit No. CAS000004 for NPDES Phase II.

The Guidance Document outlines the means by which the City will (1) protect the health of the recreational public and the environment, (2) meet CWA mandates through compliance with NPDES Phase II Permit requirements and applicable regulations, and (3) foster increased public

involvement and awareness. Water quality monitoring has been conducted to define pollutants in many watersheds, resulting in identification of bacteria, nutrients, pesticides, sediment, and heavy metals as pollutants of concern in certain drainages. Storm drains may empty into drainages after already passing through natural open space, residential, agricultural, commercial, and industrial land uses.

The purpose of the Guidance Document is to implement and enforce a program designed to reduce the discharge of pollutants to the maximum extent practicable (MEP) to protect water quality. According to the General Permit, the MEP standard is an ever-evolving, flexible, and advancing concept that considers technical and economic feasibility. Since knowledge about controlling urban runoff continues to evolve, so does the mitigation, which is defined as MEP. Reducing the discharge of stormwater pollutants to MEP in order to protect beneficial uses requires review and improvement, which includes seeking new opportunities. To do this, the City must conduct and document an evaluation and assessment of each relevant element of its program and revise, as necessary, activities, control measures, BMPs, and measurable goals to meet MEP.

City of Goleta General Plan/Coastal Land Use Plan

The GP/CLUP (City of Goleta 2006) contains policies in the Conservation Element regarding protection of water quality, including Policy CE 2, Protection of Creeks and Riparian Areas; Policy CE 3, Protection of Wetlands; and Policy CE 10, Watershed Management and Water Quality.

4.2.1.2 Regulatory Requirements

The following regulatory requirements apply to the Project and would be implemented to ensure compliance with applicable federal, state, and local regulations to minimize potential impacts on hydrology and water quality.

Erosion and Sediment Control Plan

The applicant must submit an erosion and sediment control plan to the City prior to issuance of a grading permit. At a minimum, this plan must include the following BMPs:

1. Wet weather measures: If possible, avoid land-disturbing activities during the wet weather season of October 1 through May 31.
2. Existing vegetation: Protect existing vegetation where possible.
3. Perimeter control: A properly installed silt fence or equivalent shall be installed around the site perimeter and located so that all runoff from the construction site is filtered prior to leaving the site.
4. Construction site entrances: These shall be designed and maintained to prevent all construction vehicles and equipment from tracking dirt or mud offsite. Periodic street sweeping may also be needed.
5. Erosion control measures: Measures such as erosion control blankets or equivalent shall be used to protect small, highly erodible areas and temporary stockpiles of material.
6. Catch basin protection: Catch basins or drop inlets that receive storm water must be covered or otherwise protected from receiving sediment, mud, dirt, or debris.
7. Waste management: All construction waste, including paint, concrete, or any other type of wash out, shall be contained and disposed of properly; no construction material shall be washed to the street.

Site-specific BMPs may also be included. The contractor is required to inspect BMPs regularly and prior to storm events and to maintain BMPs in good repair at all times.

Stormwater Pollution Prevention Plan

~~Erosion control BMPs are designed to prevent erosion, whereas sediment controls are designed to trap sediment once it has been mobilized. A SWPPP would be developed as required by, and in compliance with, the Construction General Permit and City regulations. Interim BMPs to control erosion and sedimentation and keep pollutants from reaching drainage facilities during construction would also be implemented. These BMPs would ensure effective control of not only sediment discharge, but also of pollutants associated with sediments including, without limitation, nutrients, heavy metals, and certain pesticides or herbicides.~~

~~The SWPPP must be prepared by a licensed civil engineer or Qualified SWPPP Developer and include, at a minimum, the following:~~

- ~~1. Temporary berms and sedimentation traps (such as silt fencing, straw bales, and gravel bags) must be placed at the base of all cut/fill slopes and soil stockpile areas where potential erosion may occur and must be maintained to ensure effectiveness. Sedimentation basins and traps must be cleaned periodically, and silt must be removed and disposed of in a location approved by the City.~~
- ~~2. Unpaved areas must be revegetated or restored (e.g., with geotextile binding fabrics) immediately after grading and installation of utilities to minimize erosion and to reestablish soil structure and fertility. Revegetation must include noninvasive, drought-resistant, fast-growing vegetation that will quickly stabilize exposed ground surfaces. Alternative materials rather than reseeding (e.g., gravel) may be used upon approval by the Planning and Environmental Review Director (or designee) and the Public Works Director (or designee).~~
- ~~3. Runoff cannot be directed across exposed slopes; all surface runoff must be conveyed in accordance with the approved drainage plans.~~
- ~~4. Energy dissipators or similar devices must be installed at the end of drainpipe outlets to minimize erosion during storm events.~~
- ~~5. Grading must occur during the dry season (April 15 to November 1), unless a City-approved erosion control plan is in place and all erosion control measures are in effect. Erosion control measures must be identified in an erosion control plan and must prevent runoff, erosion, and siltation. All exposed graded surfaces must be reseeded with groundcover vegetation to minimize erosion. Graded surfaces must be reseeded within 4 weeks of grading completion, with the exception of surfaces graded for placement of structures; these surfaces must be reseeded if structural development does not commence within 4 weeks of grading completion.~~
- ~~6. Site grading must be completed such that permanent drainage away from foundations and slabs is provided and so that water does not pond near structures or pavements.~~

Final Drainage Study and Stormwater Management Plan

The applicant must also prepare a final drainage/stormwater quality protection plan consistent with the City's Stormwater Management Guidance Document and Central Coast RWQCB post-construction stormwater management requirements. The final drainage/stormwater quality protection plan must be prepared by a licensed civil engineer, and it must be submitted to the City for review and approval before issuance of any grading permit.

The plan must include, without limitation, the following:

1. A final drainage analysis that provides final calculations on pre- and post-development stormwater runoff volumes, peak flows, effective impervious area, required storage capacity, and specifications of all elements of the drainage control system.

Routine cleaning must be performed on streets, parking lots, and storm drains.

All BMPs will be installed as identified in the final drainage/stormwater quality protection plan and grading/drainage plan before issuance of any grading permit.

City of Goleta Stormwater Management and Discharge Control Ordinance

The City's Stormwater Management and Discharge Control Regulations (Goleta Municipal Code, Chapter 13.04) implements the CWA and Porter-Cologne Act "by reducing pollutants and non-stormwater discharges to the maximum extent practicable by prohibiting non-stormwater discharges into the storm drain system and improving stormwater management." It includes regulations regarding point and nonpoint source discharges of pollutants, and also codifies the City's implementation and enforcement of the Central Coast post-construction requirements.

4.5.3 Project Impacts

4.5.3.1 Thresholds of Significance

The City's Initial Study Checklist (CEQA Guidelines, Appendix G) and the City's Thresholds Manual (City of Goleta 2008) specify the following significance thresholds; these thresholds have been organized according to the topics addressed in this chapter. The thresholds marked with an asterisk (*) are from the Initial Study Checklist; the others are from the Thresholds Manual.

Surface and Groundwater Quality

A significant impact on surface and groundwater water quality could occur if construction or occupation of the Project would:

1. *Violate any water quality standards or waste discharge requirements.
2. Discharge pollutants that exceed the water quality standards set forth in the applicable NPDES Permit, the RWQCB's Basin Plan, or otherwise impair the beneficial uses of a receiving water body.
3. Result in a discharge of pollutants into an impaired water body that has been designated as such by the SWRCB or the RWQCB under Section 303(d) of the Federal Water Pollution Prevention and Control Act (i.e., the Clean Water Act).
4. Result in a discharge of pollutants of concern to a receiving water body, as identified by the RWQCB.
5. *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 preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
6. Be located within an urbanized area of the City and project construction would disturb one (1) or more acres of land.
7. Result in the removal or reduction of riparian vegetation or other vegetation (excluding nonnative vegetation removed for restoration projects) from the buffer zone of any streams, creeks, or wetlands.

8. *Otherwise substantially degrade water quality.

The Project would not use groundwater and therefore would not deplete groundwater supplies. The Project also would not create new impervious surfaces (the emergency access road would be paved with gravel, ~~the car wash area was previously paved,~~ and other improvements would be located within the paved areas of the mobile home park) and thus would not impede groundwater recharge; the potential for groundwater recharge would be slightly increased because the peak discharges to Devereux Creek from the emergency access road during storms would be slightly increased over current conditions. The Project also would disturb less than 1 acre of land. Therefore, Criteria 5 and 6 are not considered further.

Stormwater Flows and Drainage

A significant impact on stormwater flows and drainage could occur if construction or occupation of the Project would:

1. *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.
2. *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 increase flooding on- or off-site.
3. *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
4. Result in channelization or relocation of a natural drainage channel.
5. Increase the amount of impervious surfaces by 25 percent or more.

The Project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems because any drainage from the emergency access road ~~and car wash area~~ would drain toward Devereux Creek, not a storm drainage system. The Project also would not provide substantial additional sources of polluted runoff (refer to Impacts HYD-1 and HYD-2 for a discussion of water quality impacts). The Project also would not alter the natural channel of Devereux Creek, nor would it increase the amount of impervious surfaces. Therefore, Criteria 11, 12, and 13 are not considered further.

Flooding

A significant impact on stormwater flows and flooding could occur if construction of the Project would:

1. *Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map.
2. *Place within a 100-year flood hazard area structures which would impede or redirect flood flows.
3. *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.
4. *Result in inundation by seiche, tsunami, or mudflow.

The Project would not place housing or other structures within a 100-year flood hazard area or alter the natural channel of Devereux Creek. Seiches and mudflows would not occur in this area

because it contains no large water bodies or steep terrain. The Project would not increase the surrounding area's susceptibility to tsunami-related damages, so Criteria 14, 15, and 17 are not discussed further.

4.5.3.2 Project Impacts

Impact HYD-1. Surface Water and Groundwater Quality (Construction Impacts)

Potential impacts on water quality from construction-related activities would occur due to vegetation removal, grading, and use of construction equipment associated with construction of the emergency access road and fire water line. Other improvements would require minor ground disturbance and would be located in already developed, relatively level areas, and would not affect water quality. Construction of the emergency access road and fire water line could expose soil to erosion and potentially could cause sedimentation of surface water bodies such as the adjacent Devereux Creek. Accidental releases of hazardous materials such as fuels, solvents, and concrete additives also could occur, potentially entering Devereux Creek.

The Project applicant is required by federal, state, and local regulations to comply with the Construction General Permit, which requires implementation of a SWPPP. As described in the Regulatory Requirement section above, the SWPPP would include erosion and sediment control BMPs that would meet or exceed measures required in the Construction General Permit, as well as BMPs that control other potential construction-related pollutants. Also refer to BMPs included in Section 2.4.4. Construction-related impacts on water quality would be **less than significant (Class III)** based on the implementation of these required measures.

Impact HYD-2. Surface Water and Groundwater Quality (Operational Impacts)

~~The primary source of pollutants once the Project was operational would be soaps, oil, grease, and other materials from car washing activities at the hammerhead turnaround. Pollutants from these activities would be discharged on the pavement, which slopes toward Devereux Creek. Runoff from the car wash area was observed on multiple occasions to pond near the base of the paved area beyond the chain link fence that separates it from the open space area adjoining the creek. This open space area is located within an ESHA and the SPA buffer, and pollutants from the runoff, if not treated, would enter this environmentally sensitive area. This would be a **significant but mitigable to less than significant (Class II)** impact because it would degrade environmentally sensitive habitat. The impact would be mitigated by MM HYD-1, which would require runoff from the car wash area to be clarified and directed into the sanitary sewer system where it would be treated appropriately, instead of potentially draining into the sensitive habitat. Given the area's topography, it is unlikely that runoff would enter Devereux Creek. Any potential releases from the Fire Department's use of the emergency access road likely would be minor, infrequent, and limited to emergency conditions and thus would be **less than significant (Class III)**.~~

Emergency access road construction would permanently remove riparian vegetation from the buffer zone of Devereux Creek, including approximately nine trees (a mature sycamore tree, three coast live oak trees, and five willows). The long-term impact on the creek's water quality would be **less than significant (Class III)** due to the small area of the creek that would be affected, the small amount of runoff that would enter the creek in relation to the overall flow during storm events, the concrete wall that lines and stabilizes the northern side of the creek, and soil stabilization measures that would be in place to protect the road.

Impact HYD-3. Stormwater Flows and Drainage

The Project would not alter the course of Devereux Creek. As indicated in the hydrology report prepared for the Project (Goldstien 2015, 2016, included in Appendix F), the emergency access road would result in additional peak discharge during the 2- to 100-year storm events ranging from 0.07 to 0.12 cubic feet per second (cfs). As is the case with existing runoff, this generally would sheet drain to vegetated areas and to the creek. Table 4.6-1 summarizes the peak flows for the emergency access road portion of the Project under predevelopment conditions and post-development conditions.

Table 4.5-1 Pre- and Post-project Peak Flows for the Emergency Access Road

Storm Event	Predevelopment Runoff (cfs)	Post-development Runoff (cfs)	Increase in Runoff (cfs)
2-year	0.48	0.55	0.07
5-year	0.81	0.89	0.08
10-year	1.03	1.13	0.10
25-year	1.30	1.41	0.11
50-year	1.50	1.62	0.12
100-year	1.70	1.82	0.12

Source: Goldstien 2015
 cfs = cubic feet per second

These incremental increases would represent a minor change in the streamflow and would not result in substantial erosion or siltation or increased risk of flooding. Impacts would be **less than significant (Class III)**.

4.5.4 Cumulative Impacts

None of the related projects identified in Table 3-1 are in proximity to Devereux Creek and thus would not contribute to a cumulative impact in combination with the impacts of the Rancho Goleta Estates Project. Moreover, each of these projects would be required to comply with the City’s standard conditions including not discharging into the creek, which are intended to minimize the potential for impacts on local hydrology and water quality. No cumulative impacts would occur.

4.5.5 Mitigation Measures

No mitigation measures are required for hydrology and water quality because no significant impacts were identified.

The following measure would mitigate Impact HYD-2.

~~MM-HYD-1. Discharge Car Wash Runoff to Sewer System~~

~~Runoff from the car wash area must be directed to the nearby Goleta West Sanitary District sanitary sewer line at an approved location. Runoff must be pretreated using an oil and grease separator per the requirements of the Goleta West Sanitary District before it enters the sewer system. The separator must be covered or otherwise designed to prevent rain water from entering the sanitary sewer system and must be surrounded by a berm in order to ensure that no runoff enters the surrounding environmentally sensitive habitat, including Devereux Creek.~~

Plan Requirements and Timing: Specifications for the drainage plan must be included on all construction plans and approved by the City of Goleta Public Works Department before the City issues a grading permit or the Goleta West Sanitary District issues a connection permit. The applicant also must pay the appropriate fees to the Goleta West Sanitary District before the connection permit is issued.

Monitoring: The Planning and Environmental Review Director (or designee) and an inspector from the Goleta West Sanitary District must conduct periodic site inspections to verify compliance during any site preparation, ground disturbance, grading, and/or construction activities.

4.5.6 Residual Impacts

The residual impact from Impact HYD-2 would be less than significant given the implementation of MM HYD-1 because runoff from the car wash area would be clarified and directed into the sanitary sewer system where it would be treated appropriately, instead of draining into environmentally sensitive habitat. The amount of runoff would be well within the capacity of the Goleta West Sanitary District to accommodate. Impacts HYD-1, HYD-2, and HYD-3 and a portion of Impact HYD-2 would be less than significant and do not require mitigation.