

SECTION 4.8
HYDROLOGY AND WATER QUALITY

4.8 HYDROLOGY AND WATER QUALITY

4.8.1 Existing Conditions

4.8.1.1 Project Area

The project site is surrounded on the north, east, and west by existing industrial, business park, office, and commercial development. The site is bounded on the south by Hollister Avenue, with the Santa Barbara Municipal Airport (SBMA) and Goleta Slough located south of Hollister Avenue. The site is located in an area that was formerly part of the Goleta Slough and is currently just outside the northern boundary of the Goleta Slough.

The Goleta Slough is within the jurisdiction of the City of Santa Barbara and is considered an Environmentally Sensitive Habitat Area (ESHA) (City of Santa Barbara 1997). The Goleta Slough includes tidal and formerly tidal salt marsh, stream channels, bordering mud and sand flats, and transitional wetland-to-upland and estuarine-to-fresh water habitats. It also includes a few areas of elevated uplands and extensive areas that have been artificially elevated to form dikes, berms, or fill for development (City of Santa Barbara 1997). The Goleta Slough is listed as an Impaired Waterbody on the State's Clean Water Act 303(d) List of Water Quality Limited Segments.

The Goleta Groundwater Basin (Basin) underlies the City of Goleta. The Basin is approximately 9,210 acres and approximately 8 miles long and 3 miles wide. There is a combined total of about 30,000 to 60,000 acre-feet (AF) of operational storage (City of Goleta 2006b).

4.8.1.2 Project Site

Parcel 1, totaling 6.90 acres, is fully developed and includes the existing 106,500 square foot (SF) business park building, paved parking lot, and associated infrastructure. Parcel 2, totaling 3.71 acres, is undeveloped. Parcel 2 also includes some of the elements of development associated with the existing business park building, including a portion of the existing paved parking lot, landscaping, and utility infrastructure.

The project site is nearly level with a slope of 0–2% across the property, with a shallow previously graded drainage that runs in a northeast to southwest direction across the unpaved western portion of Parcel 2. All runoff leaving the site currently surface flows into three existing stormdrain outlets. Two of the outlets are located on the west side of the site and drain to a concrete channel on the west side of Robin Hill Road. A third outlet is located on the south side of the site and flows beneath Hollister Avenue. Surface flows from all three outlets discharge into a channel on the south side of Hollister Avenue, which drains into the Goleta Slough.

Los Carneros Creek is located approximately $\frac{1}{4}$ mile to the west of the project site, and San Jose Creek is located approximately $\frac{1}{2}$ mile to the east. The project site is located at an elevation of approximately 12–14 feet above mean sea level (msl) and lies within the 100-year floodplain of the area watershed system. The base flood elevation (BFE) for the 100-year event, as mapped by the Federal Emergency Management Agency (FEMA), is at 12–14 feet above msl, which is the same elevation as the project site.

4.8.2 Regulatory Framework

4.8.2.1 Federal

Clean Water Act

The primary goals of the Clean Water Act (CWA) 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. As such, the CWA forms the basic national framework for the management of water quality and the control of pollution discharges. The CWA provides the legal framework for several water quality regulations, including the National Pollutant Discharge Elimination System (NPDES), effluent limitations, water quality standards, pretreatment standards, anti-degradation policy, non-point source discharge programs, and wetlands protection. The United States Environmental Protection Agency (USEPA) has delegated the responsibility for administration of portions of the CWA to state and regional agencies. Therefore, the primary regulations resulting from the CWA are discussed below.

Federal Anti-Degradation Policy

The federal Anti-Degradation Policy requires states to develop statewide anti-degradation policies and identify methods for implementing them (Code of Federal Regulations Section 131.12). These policies and implementation methods will, at a minimum, protect and maintain (1) existing in-stream 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.

Federal Flood Insurance Program

FEMA administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA issues Flood Insurance Rate Maps for communities participating in the NFIP.

4.8.2.2 State

Porter-Cologne Water Quality Control Act (California Water Code)

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 (Porter-Cologne Act) was enacted in 1969 by the State of California. This act includes provisions to address requirements of the CWA. These provisions include NPDES permitting, dredge and fill programs, and civil and administrative penalties. Regulations promulgated as a result of the Porter-Cologne Act are codified in Sections 13000–14958 of the California Water Code. 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) shall be protected for the use and enjoyment of the people of the state.

The State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs) are agencies within the umbrella structure of the California

Environmental Protection Agency (CalEPA). The SWRCB has the principal responsibility for the development and implementation of California water quality policy and must develop programmatic water quality control procedures to be followed by the RWQCBs. The Central Coast Regional Water Quality Control Board (CCRWQCB) is the region that oversees water quality permitting in the City of Goleta. The CCRWQCB 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.

Section 13050 of the California Water Code 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 which 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. 99-08-DWQ]). Any project that disturbs an area more than 1 acre requires a Notice of Intent (NOI) 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 best management practices (BMPs) to reduce or eliminate pollutants in stormwater discharges and authorized nonstormwater 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 site would be covered under the Construction General Permit.

The CCRWQCB issues combined NPDES Permits under the CWA and California Water Code to all point source dischargers of waste to surface waters. To ensure protection of water quality, NPDES Permits 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 (POTWs) discharges, industrial wastewater discharges, and municipal, industrial, and construction site stormwater discharges.

State Anti-Degradation Policy

The SWRCB adopted Resolution No. 68-16, Statement of Policy with Respect to Maintaining High Quality Waters in California (more commonly referred to as the state Anti-Degradation 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) water quality lowerings since 1968; 3) all uses, both existing and potential uses, instream and

offstream; and only high quality (i.e. Tier 2) waters. The state policy is implemented by the CCRWQCB.

4.8.2.3 Local

County of Santa Barbara

Project Clean Water (PCW) 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 as well as pilot treatment control BMPs and monitoring. PCW is managed and staffed by the Santa Barbara County Water Agency (Public Works Department) and the Environmental Health Services Division (EHS) of the Public Health Department.

City of Santa Barbara Airport and Goleta Slough Coastal Plan

These plans focus on the approximately 800 acres of airport property located south of Hollister Avenue in the Coastal Zone. Policies are included that support the protection and restoration of wetlands and other sensitive habitats and require management and restoration of the slough in coordination with safe airport operations. The Coastal Plan also supports limited public use of the slough for research, education, and/or public service as long as it is consistent with safe airport operations.

Goleta Slough Ecosystem Management Plan (GSEMP)

The project is located outside of, but in close proximity to, the northern boundary of the Goleta Slough Ecosystem Management Plan (GSEMP) area. Figure 4.3-1 shows the Goleta Slough Ecosystem boundaries. The GSEMP includes policies and actions, which address coordination with other agencies on nearby developments. The GSEMP actions focus on ensuring that new development projects avoid direct and indirect impacts to the Goleta Slough ecosystem.

City of Goleta Storm Water Management Plan

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 Storm Water Management Plan (City of Goleta 2010). The Goleta SWMP was created pursuant to SWRCB General Permit No. CAS000004 for NPDES Phase II.

The SWMP 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 Phase II NPDES 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 having already passed through natural open space, residential, agricultural, commercial, and industrial land uses.

The purpose of the SWMP 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, which considers technical and economic feasibility. Since knowledge about controlling urban runoff continues to evolve, so does the mitigation, which constitutes MEP. Reducing the discharge of stormwater pollutants to the 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 an assessment of each relevant element of its program and revise, as necessary, activities, control measures, BMPs, and measurable goals to meet the MEP.

City of Goleta Floodplain Management Ordinance

The City's Floodplain Management Ordinance (Goleta Municipal Code, Chapter 15) allows structural development within the 100-year floodplain if the finished floor elevation is raised at least 2 feet above the BFE.

City of Goleta General Plan/Coastal Land Use Plan (GP/CLUP)

The General Plan/Coastal Land Use Plan (GP/CLUP) 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.

4.8.3 Project Impacts and Mitigation

4.8.3.1 Thresholds of Significance

Based on both the City's Initial Study Checklist (CEQA Appendix G; Environmental Checklist Form) and the City's *Environmental Thresholds and Guidelines Manual* (Thresholds Manual), a significant impact on hydrology and water quality could occur, if the 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 increase flooding on- or off-site.
- e. 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.
- 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. Result in inundation by seiche, tsunami, or mudflow.
- k. Be located within an urbanized area of the City and project construction would disturb one (1) or more acres of land.
- l. Increase the amount of impervious surfaces by 25 percent or more.
- m. Result in channelization or relocation of a natural drainage channel.
- n. Result in the removal or reduction of riparian vegetation or other vegetation (excluding non-native vegetation removed for restoration projects) from the buffer zone of any streams, creeks, or wetlands.
- o. 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.
- p. Result in a discharge of pollutants into an impaired waterbody 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).
- q. Result in a discharge of pollutants of concern to a receiving water body, as identified by the RWQCB.

Items a - j are from the Initial Study Checklist, and Items k - q are from the Thresholds Manual.

4.8.3.2 Project Impacts

Impact HYD-1. Groundwater Supplies¹

The water supply for the project would be provided by the Goleta Water District (GWD). The GWD supplies water primarily to the City, University of California, Santa Barbara Airport, and water users in the unincorporated areas of the County of Santa Barbara within the District's boundaries. The District relies on four sources of water to meet its existing and future demands: (1) surface water from the Cachuma Project; (2) surface water from the State Water Project (SWP); (3) groundwater from the Goleta Groundwater Basin; and (4) recycled water. The GWD operates under the 1989 Wright Judgment (Wright et al. V. Goleta Water District), which mandates maintenance of the Basin in a hydrologically balanced condition. Therefore, delivery of water to the project from the GWD would not result in any depletion of groundwater supplies.

According to the Santa Barbara County Groundwater Report (Santa Barbara County Public Works Department 2012), near-surface, low permeability sediments cause the southern portion of the North, Central, and West Sub-basins to be under confined conditions and provide a barrier to contamination from potential surface sources of water quality degradation. The report also identifies the presence of perched water in shallow aquifers above the confining layers and acknowledges that this perched water, which often has high levels of total dissolved solids (TDS), is not in general use. Perched groundwater is present at the project site at 4–8 feet below the ground surface. Project drainage features would convey stormwater runoff to onsite vegetated bioswales and an onsite vegetated detention basin, in addition to continued offsite conveyance of some project drainage (see below). Although project bioswales and the detention

¹ See Section 4.8.3.1, Threshold b.

basin would improve runoff water quality and reduce peak stormwater volumes leaving the site, these features would result in a de minimus change with regard to recharge to the Goleta Groundwater Basin.

Impacts to groundwater supplies are therefore considered less than significant.

Impact HYD-2. Drainage/Water Quality²

Onsite

There are no surface water bodies located on site and, as described above, the confined conditions of the groundwater basin in this area limit the ability of site runoff to percolate to underlying groundwater. Therefore, the project would not result in significant water quality impacts on the project site itself.

Offsite

Project stormwater runoff would be conveyed under Hollister Avenue continuing to the existing drainage swale running along the south side of Hollister Avenue before emptying into the Goleta Slough.

Although the project site is not located within the boundaries of the GSEMP and its related sub-areas, the GSEMP includes policies and actions that address coordination with other agencies on nearby developments. The GSEMP actions focus on ensuring that new development projects avoid direct and indirect impacts to the Goleta Slough ecosystem, including increased erosion/sedimentation from grading and construction activities.

Similarly, while the project is outside the boundaries of the City of Santa Barbara's Airport and Goleta Slough Coastal Plan, that plan also includes policies that serve to protect the biological functions of the slough, including but not limited to minimizing sedimentation and pollutants from non-point sources, which are conveyed to the Goleta Slough in stormwater runoff.

Project landscape plan installation and long-term maintenance may involve the use of a variety of chemicals that may be transported off site in tail-water from landscape irrigation and in stormwater runoff, particularly if improper application methods and/or over-application occur. These include, but are not limited to, fertilizers, which can increase nitrate levels and create algal blooms in surface water bodies, as well as herbicides, pesticides, and fungicides.

The development of Parcel 2 would cover much of the project site with impervious surfaces. Runoff from large parking areas is often contaminated with a mix of petroleum products and other pollutants resulting from vehicular use. Therefore, if runoff water from the project site includes high sediment loads or chemicals from washing of equipment and materials during construction, fertilizers and biocides used on project landscaping, oil and grease from the parking lot, or other pollutants, conveyance of this contaminated runoff has the potential to significantly impact the water quality and related biological functions of the slough.

The project design incorporates the use of vegetated bio-swales and a vegetated detention basin to pretreat surface flows from parking areas as well as to reduce peak stormwater flows. These drainage features are central to addressing potential point source pollution runoff from

² See Section 4.8.3.1, Thresholds a, c, e, f, k, l, o, p, and q.

increased impervious surfaces. The drainage design also incorporates mechanical filters to minimize pollutants in runoff exiting the site. However, additional BMPs prescribed in the City's Stormwater Management Program Ordinance and impending permit application under the NPDES for minimizing contaminant levels in stormwater runoff would need to be properly incorporated into the final project plans in order to avoid impacts to the Goleta Slough. Depending upon the details of the final grading and drainage plan (including erosion control component), the project could result in significant impacts to the Goleta Slough ecosystem from increased sedimentation and degraded water quality from site runoff.

Impact HYD-3. Drainage/Flooding³

The entirety of the project site lies within the 100-year floodplain. The City's Floodplain Management Ordinance (Chapter 15 of the City Code) allows structural development within the 100-year floodplain if the finished floor elevation is raised at least 2 feet above the BFE. The BFE for the 100-year event varies between 12 to 14 feet above msl across the entirety of the project site. The development plans for the hotel show a finished floor elevation of 18.06 feet, with finished elevations in the parking areas around the hotel varying from approximately 14 to 16 feet msl. Because the proposed elevation of the hotel's finished floor is greater than 2 feet above projected 100-year flood elevations, impacts from onsite flooding would be less than significant.

In order to reduce the potential for offsite flooding from peak stormwater runoff and to protect water quality, proposed drainage improvements would route much of the site runoff through the proposed landscaped bioswales. Site runoff would also be directed to the onsite vegetated detention basin proposed in the southeast corner of the property prior to exiting the site. Runoff would be directed to these vegetated areas on site for biofiltration and reduced peak stormwater flows prior to runoff being conveyed off site, under Hollister Avenue to the existing drainage swale running along the south side of Hollister Avenue. The drainage swale along Hollister Avenue outlets to the Goleta Slough. (Also refer to Section 4.4, "Biological Resources," with regard to discussion of the Goleta Slough Ecosystem Management Plan and biological impacts to the Goleta Slough).

Based on the July 2008 Penfield & Smith Drainage Report, the volume of water to be discharged from the site is projected to decrease from 42.48 cubic feet per second (cfs) for existing conditions to 39.60 cfs upon project completion. This reduction is primarily attributable to the installation of the detention basin located at the southeast corner of Parcel 2 and the landscaped bioswales along Robin Hill Road and Hollister Avenue.

Due to substantive changes to the project since preparation of the July 2008 Drainage Report (Appendix O), the project engineer prepared two separate updates to the Drainage Report to confirm whether the earlier conclusions were still valid for the revised project design (Appendices M and N). Design changes accounted for in the July 2010 update memo (Appendix N) include moving the building 22 feet to the north and relocating some of the parking to the south side of the building. Design changes accounted for in the September 2012 update memo (Appendix M) include the removal of the sewer lift station along Hollister Avenue and the removal of the portion of the project site dedicated to the City of Santa Barbara. The memos also take into account the changes to grades around the building. The memos state that the finished floor elevation is the same as was assumed in the 2008 report and that site drainage

³ See Section 4.1.3.1, Threshold d, g, h, and i.

would not change, including the locations and sizes for the detention basin and bioswales. Both update memos conclude that the findings of the July 23, 2008, Drainage Report are sufficient.

**TABLE 4.8-1
PRE-PROJECT AND POST-PROJECT PEAK FLOWS**

EXISTING CONDITIONS				
DRAINAGE AREA #	AREA (ACRES)	Q₅ FLOW (cfs)	Q₁₀ FLOW (cfs)	Q₂₅ FLOW (cfs)
1	5.52	11.95	14.59	17.82
2	0.24	0.44	0.58	0.77
3	1.82	3.64	4.80	6.25
4	4.18	10.50	12.93	15.92
5	0.30	0.48	0.65	0.85
6	0.18	0.60	0.72	0.87
TOTAL	12.24	27.61	34.27	42.46
PROPOSED CONDITIONS WITHOUT DETENTION				
DRAINAGE AREA #	AREA (ACRES)	Q₅ FLOW (cfs)	Q₁₀ FLOW (cfs)	Q₂₅ FLOW (cfs)
1	4.34	9.96	12.16	14.86
2	0.47	1.41	1.71	2.09
3	0.07	0.23	0.28	0.34
4	0.23	0.68	0.83	1.01
5	0.24	0.37	0.46	0.57
6	0.11	0.33	0.40	0.49
7	0.66	2.04	2.49	3.04
8	0.34	0.93	1.16	1.45
9	0.17	0.44	0.55	0.69
10	0.32	0.75	0.98	1.26
11	3.33	7.96	9.86	12.19
12	0.32	1.03	1.25	1.53
13	0.53	1.41	1.77	2.22
14	0.14	0.42	0.51	0.62
15	0.04	0.08	0.11	0.14
16	0.45	1.15	1.40	1.69
17	0.21	0.55	0.69	0.87
18	0.27	0.81	1.02	1.27
TOTAL	12.24	30.56	37.63	46.33
PROPOSED CONDITIONS WITH DETENTION				
DRAINAGE AREA #	AREA (ACRES)	Q₅ FLOW (cfs)	Q₁₀ FLOW (cfs)	Q₂₅ FLOW (cfs)
7, 8, 9, 10, 11, 12, 13, 16, 17 18 (Outlet A)	3.27	5.61	6.41	7.29
1, 2, 3, 4, 5, 6, 14, 15 (Outlet B)	5.64	13.48	16.46	20.12
11 (Outlet C)	3.33	7.96	9.86	12.19
TOTAL	12.24	27.05	32.73	39.60

Source: Penfield and Smith Drainage Report July 2008.

More recent revisions to the project Grading and Drainage Plan (August 2011) are limited to changes that do not alter grading quantities/design or design of drainage features (e.g., revising notes to clarify sewer lift station has already been relocated, updating acreage figures subsequent to dedication of Hollister right of way in fee to the City of Santa Barbara).

The July 21, 2010, update memo describes drainage patterns and drainage areas for the site as “relatively the same as they were before, so peak flows for the site will remain close to what they were before.” Although the building footprint and parking square footage for the project have been slightly reduced since preparation of the 2008 Drainage report, the total amount of impervious surfaces would still result in an overall increase in impervious surfaces on site. However, as projected in the 2008 report, the post-project peak runoff is projected to be less than pre-project (existing) peak runoff from the site, primarily due to installation of the detention basin.

The project would not result in the need for construction of new stormwater drainage facilities off site. However, if the final design details, related installation, and/or long-term maintenance of onsite drainage control systems are not adequate, stormwater detention and treatment prior to discharge would not be adequate and resulting potential impacts on water quality and the potential for flooding hazards would be potentially significant.

No alteration of the course of a stream or river would occur, and therefore related impacts to streams or rivers would be less than significant.

There are no levees or dams upstream of the project site to the top of the area’s watershed that would threaten the project in the event of a dam or levee failure. The entirety of the site lies outside the City’s Potential Tsunami Run-Up Area as mapped by the City’s General Plan. Therefore, impacts to people and property associated with the failure of an upstream levee and/or dam, or due to inundation as a result of a tsunami, are considered less than significant.

Impact HYD-4. Channelization/Vegetation Removal⁴

The project would not result in channelization, relocation, or other alterations to natural drainage channels nor would the project result in removal of vegetation from streams, creeks, wetlands, or their respective buffer zones. Therefore, the project would not result in related significant impacts to channelization or vegetation removal along such wetlands.

Impact HYD-5. Seiche, Tsunami, or Mudflow⁵

General Plan Figure 5-2, the Fire, Flood, and Tsunami Hazard Map, was recently updated with regard to the tsunami inundation area to reflect modeling by the University of Southern California funded by the California Emergency Management Agency by the National Tsunami Hazard Mitigation Program (Cal EMA 2009). Based on the updated information, the project site is located outside of the tsunami inundation area. With regard to seiches, these are typically associated with enclosed or partially enclosed water bodies, like the Great Lakes, although less significant seiches may be triggered in smaller water bodies including swimming pools. The planned swimming pool would be subject to small-scale seiches during large earthquakes, but the amount of water that would be affected would result not represent a significant hazard.

⁴ See Section 4.8.3.1, Thresholds m and n.

⁵ See Section 4.8.3.1, Threshold j.

Therefore, the project site is not associated with potentially significant impacts related to a tsunami or a seiche.

The project site is located within a developed urban area, just north of Hollister Avenue surrounded on all sides by nearly level topography, sloping slightly toward the Goleta Slough to the south of Hollister Avenue. The site is further separated from potential mudflows by Highway 101 and raised railroad tracks to the north as well as the concrete drainage opposite Robin Hill Road. Therefore, the project site is not subject to significant risk of mudflows.

4.8.4 Cumulative Impacts

As described above, project runoff would be conveyed to the Goleta Slough. Short-term construction activity impacts (e.g., sedimentation from grading, contaminated runoff from washing of construction equipment, vehicles, and materials) and impacts from long-term operations on site (landscaping chemicals, oil and grease in runoff from the parking lot) would result in potentially significant short-term and long-term water quality impacts to the nearby Goleta Slough from the potential for conveyance of degraded stormwater runoff from the site into the slough. Historically, the slough was much larger in size, with considerable acreage lost over time to urban development and agricultural use. This reduction in size reduces the area available to filter stormwater runoff and to accommodate floodwaters. In addition, the water quality of the seven tributary creeks and the slough itself has diminished as a result of sedimentation and conveyance of a variety of pollutants from agricultural uses and expanding urban development in the watershed. As a result, the slough is listed as an impaired waterbody on the State's Clean Water Act 303(d) List of Water Quality Limited Segments. The project would result in a potentially significant contribution to water quality degradation in the Goleta Slough.

4.8.5 Mitigation Measures

MM HYD-2a. National Pollutant Discharge Elimination System Permit

The permittee will obtain proof of exemption or proof of a National Pollutant Discharge Elimination System Permit from the California Regional Water Quality Control Board.

Plan Requirements and Timing: The permittee will submit required proof prior to land use permit issuance. If an NPDES permit is required, the NPDES permit requirements shall be incorporated into project grading, drainage, and building plans, as applicable.

Monitoring: City staff will confirm receipt of proof and integrate NPDES permit requirements into plan (if a NPDES Permit is issued) prior to land use permit issuance.

MM HYD-2b. Storm Water Pollution Prevention Plan

The permittee will prepare a Storm Water Pollution Prevention Plan covering all phases of grading/construction operations.

Plan Requirements: The Storm Water Pollution Prevention Plan shall be prepared by a licensed civil engineer and shall include the following:

- a. Temporary berms and sedimentation traps (such as silt fencing, straw bales, and sand bags) will be placed at the base of all cut/fill slopes and soil stockpile areas where potential erosion may occur and will be maintained to ensure effectiveness. The sedimentation basins

and traps will be cleaned periodically, and the silt will be removed and disposed of in a location approved by the City.

- b. Non-paved areas will be revegetated or restored (i.e., geotextile binding fabrics) immediately after grading and installation of utilities to minimize erosion and to re-establish soil structure and fertility. Revegetation will include non-invasive, drought-resistant, fast-growing vegetation that will quickly stabilize exposed ground surfaces. Alternative materials rather than reseeding (e.g., gravel) may be used, subject to review and approval by Planning and Environmental Services and Public Works.
- c. Runoff will not be directed across exposed slopes; all surface runoff will be conveyed in accordance with the approved drainage plans.
- d. Energy dissipaters or similar devices will be installed at the end of drainpipe outlets to minimize erosion during storm events.
- e. Grading will 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 will be identified on an erosion control plan and will prevent runoff, erosion, and siltation. All exposed graded surfaces will be reseeded with groundcover vegetation to minimize erosion. Graded surfaces shall be reseeded within 4 weeks of grading completion, with the exception of surfaces graded for the placement of structures; these surfaces will be reseeded if structural development does not commence within 4 weeks of grading completion.
- f. Site grading will be completed such that permanent drainage away from foundations and slabs is provided and so that water does not pond near structures or pavements.

Timing: The Storm Water Pollution Prevention Plan will be submitted to City staff for review and approval prior to land use permit issuance. Best management practices will be installed prior to initiation of grading and maintained throughout the grading/construction period, as applicable.

Monitoring: City staff will verify that the Storm Water Pollution Prevention Plan has been implemented per the approved plan prior to commencement of grading. City staff will inspect the site periodically to verify compliance with the SWPPP throughout the grading/construction period.

MM HYD-2c. Final Drainage/Stormwater Quality Protection Plan

The applicant will prepare a final drainage/stormwater quality protection plan consistent with the City's Storm Water Management Plan.

Plan Requirements: The final drainage/stormwater quality protection plan will be prepared by a licensed civil engineer. The plan will include, but not be limited to, the following:

- a. A final drainage analysis that provides final calculations on pre-/post-development stormwater runoff volumes, required storage capacity, and specification on all elements of the drainage control system.
- b. Catch basin filter inserts capable of capturing sediment, trash, debris, and petroleum products from low flow (first flush) stormwater runoff will be installed in each stormwater inlet/catch basin to be connected to the stormdrain system serving the project site. Catch basin filter inserts will be specified for installation in all project stormwater inlets/catch basins shown on the final grading/drainage plan.

- c. Regular maintenance and cleaning will be performed on catch basins and detention basins.
- d. Routine cleaning will be performed on streets, parking lots, and stormdrains.
- e. All stormdrain inlets will be stenciled to discourage dumping by informing the public that water flows to the ocean.
- f. An integrated pest management program will be developed for landscaped areas of the project, emphasizing the use of biological, physical, and cultural controls, rather than chemical controls.
- g. Educational flyers will be provided to residents/commercial tenants/operator regarding proper disposal of hazardous water and automotive waste.
- h. Trash storage/material storage areas will be provided that are covered by a roof and protected from surface runoff.
- i. Drainage improvements associated with the project will route as much roof, parking areas, and surface drainage as possible through onsite landscaped areas and bioswale before drainage enters the drop inlets.

Timing: The final drainage/stormwater quality protection plan will be submitted to City staff for review and approval prior to land use permit issuance. All best management practices will be installed as identified on the final drainage/stormwater quality protection plan and grading/drainage plan prior to occupancy clearance.

Monitoring: City staff will verify implementation per approved plans prior to occupancy clearance.

MM HYD-2d. Maintenance Agreement

The permittee will prepare and perform all tasks pursuant to a maintenance agreement that addresses maintenance requirements for all improvements associated with stormwater quality protection/best management practices described in the final drainage/stormwater quality protection plan.

Plan Requirements: At a minimum, the maintenance agreement will include requirements that all inline stormdrain filters will be inspected, repaired, and cleaned per manufacturer specifications and prior to September 30 of each year. Additional inspections, repairs, and maintenance will be performed after storm events, as needed, throughout the rainy season (November 1 to April 15) and/or per manufacturer specifications. Any necessary major repairs will be completed prior to the next rainy season. Prior to September 30 of each year, the permittee will submit to the City for its review and approval a report summarizing all inspections, repairs, and maintenance work done during the prior year.

Timing: The permittee will submit the required maintenance agreement to City staff for review, approval, and execution prior to land use permit issuance.

Monitoring: City staff will periodically verify compliance with the provisions of the agreement and respond to instances of noncompliance with the agreement.

4.8.6 Residual Impacts

With implementation of these mitigation measures, residual project specific and cumulative impacts on hydrology and water quality are considered less than significant.