4.3 HYDROLOGY AND WATER QUALITY

This section focuses on hydrologic processes, including water resources and flooding potential related to the proposed project area which includes the Comstock Development, Coronado Butterfly Preserve, Phelps Ditch Trail, and Ellwood Mesa Open Space; assesses impacts of the proposed uses; and recommends mitigation measures to reduce potential project impacts related to hydrologic processes and water quality. The information contained in this section is based primarily on previous reports such as the Ellwood Beach-Santa Barbara Shores Specific Plan Area EIR (ESA, 1992), Project Cleanwater Water Quality Analysis Report (County of Santa Barbara, 2000) and the University Campus Wetlands Management Plan (Davis et al., 1990).

This information has been updated with more recent publications and sources, as listed in the References section, as well as aerial photo interpretation, GIS work, and confirmatory fieldwork performed during July and August 2003. An analysis of the project's demand for water supply and wastewater services, and associated impacts to water supply and wastewater treatment capacity, is provided in Section 4.15, Public Services, of this EIR.

4.3.1 Existing Setting

4.3.1.1 Regional Overview of Water Resources and Flooding

Hydrologic features in the project area include Devereux Creek, which spans the entire project area from west to east, and tributaries to Devereux Creek that flow from outside the project area into Devereux Creek (including Phelps Ditch, also known as El Encanto Creek). In addition, numerous wetland features are present in the project area; wetland features are more fully discussed in Section 4.4 (Biological Resources).

4.3.1.1.1 Devereux Creek Watershed. The project area is located within the Devereux Creek Watershed, which is bounded by the foothills of the Santa Ynez Mountains to the north, Storke Road and Isla Vista to the east, the Pacific Ocean to the south, and Ellwood Canyon to the west. Figure 4.3-1 shows the Devereux Creek Watershed area and the main tributaries to Devereux Creek. The Devereux Creek/Slough Watershed encompasses 2,240 acres, and watershed elevations range from sea level to 580 feet above mean sea level. Lower areas of the watershed are generally urbanized, and the upper reaches consist primarily of native coastal sage scrub, chaparral vegetation, and agricultural lands. Approximately 60 percent of the watershed area has been developed. Although annual rainfall averages approximately 14.1 inches at the Santa Barbara Airport, the basin-wide average is nearly 18 inches over a 61-year period of record (National Weather Service [NWS], 2003). Natural annual average runoff has increased over time with urban development and now exceeds 690 acre-feet per year (Davis et al., 1990).

Within the watershed, stormwater runoff drains from the foothill area downstream towards U.S. Highway 101 via natural tributaries of Devereux Creek. Storm drains convey water under U.S. Highway 101 and the Southern Pacific Railroad tracks through culverts. South of Hollister Avenue, storm flows pass through Sandpiper Golf Course and residential developments via

natural drainage channels that flow to the main east-west branch of Devereux Creek. Devereux Creek drains through Santa Barbara Shores, Ellwood Mesa, Ocean Meadows Golf Course, and the Coal Oil Point Reserve (COPR).

Within the proposed Ellwood Mesa Open Space Plan area there are no other significant creeks or channels but there are several deeply eroded, north-south trending drainage features that channel runoff during storm events northward into Devereux Creek. One of these drainages is approximately 800 feet long and connects to a tributary to Devereux Creek near the Coronado Butterfly Preserve. Three shorter drainages, each less than 600 feet long, drain the northeastern corner of the Ellwood Mesa Open Space Plan area into Devereux Creek. In addition, there are two small ravines that drain seaward from the coastal bluff located at the southeast and southwest corners of the Ellwood Mesa Open Space Plan area.

South of Ocean Meadows Golf Course, Devereux Creek empties into Devereux Slough. The 48-acre Devereux Slough is located on lands primarily within the University's COPR, with two fingers extending east onto West Campus Mesa and Devereux School. Remnant habitats of a formerly much larger lagoon are located upstream along Devereux Creek.

Figure 4.3-2 shows the hydrologic features within the project area, including 100-year flood hazard areas.

Watershed Health. Since the late 1920s, coastal development and industrialization has led to significant decline in general ecosystem health (California Coastal Conservancy, 2001; McGinnis, 2002; National Park Service, 2003). Coastal wetland and estuarine habitats were often seen as a dumping area or a breeding ground for disease-carrying mosquitoes. Federal, state, and local policies to drain, fill, or somehow convert wetlands to more "productive" agricultural and urban land uses were the norm, resulting in widespread direct destruction of wetland habitat. Significant ecological impacts to wetlands continue from historical filling; hydrologic modification including flood control and water supply projects; pollution from point and non-point sources; and introduction of invasive exotic species (California Coastal Conservancy, 2001).

When human activity fragments and severs the connection between coastal watersheds, wetlands, and the marine system, the biological, physical, and chemical processes of fragile wetlands and the marine ecosystems are affected (National Oceanic and Atmospheric Administration [NOAA], 1999). As these biophysical and chemical processes are changed by coastal developments and other land-use activities, the general health of coastal wetlands, which are considered the nurseries of the sea, is degraded to the point where animals, such as shorebirds, plants, and fishes decline in abundance and distribution. The U.S. Department of the Interior (Noss, LaRoe and Scott, 1997) notes that every coastal ecosystem of the California coast is either threatened or endangered. Coastal dune habitats, native grasslands, vernal pools, and other coastal habitats are increasingly rare along the south coast.

FIGURE 4.3-1

AND

FIGURE 4.3-2

Notable examples of wetland types that largely have been eliminated in southern California include (California Coastal Conservancy, 2001; National Park Service, 2003):

- Estuarine wetlands (i.e., salt marshes) as an entire subsystem at 75 to 90 percent
- "The riparian community" at 90 to 95 percent
- Vernal pools at 90 percent

The losses of these habitats have contributed directly to the reduction in coastal and marine biodiversity of southern California, as evidenced by estimates that 55 percent of the animals and 25 percent of the plants designated as threatened or endangered by the state depend on wetland habitats for their survival (California Coastal Conservancy, 2001).

Moreover, the decline of indicator species, such as endangered southern steelhead, is an example of the significant change in general coastal ecosystem and watershed health. There are between 100 and 300 southern steelhead remaining south of Point Sal (California Coastal Conservancy, 2001; NOAA, 2002; National Park Service, 2003).

Precipitation. Annual precipitation in the project area averages 14.1 inches over a 61-year period of record, with 95 percent falling between November and April. Surface flows can become erosive during the months of January through March when average monthly precipitation rates can reach 3 inches (NWS, 2003).

Flood Conditions. Extended periods of heavy rainfall from storms originating over the Pacific Ocean can produce floods that are characterized by a rapid rise in stream flow and a recession that is almost as rapid. Streams in the region may be out of their banks for only a few hours or for several days. During winter months, a series of storms or a single stalled storm has produced large floods, which have damaged property by erosion, flotation, inundation, and depositing debris against bridges and on downstream properties.

As shown on Figure 4.3-2, according to the National Flood Insurance Rate Maps (FIRM), areas subject to flooding during a 100-year storm include the beach, portions of the Devereux Slough, and the lower reach of Devereux Creek within Ocean Meadows Golf Course (Federal Emergency Management Agency [FEMA], 2003). According to the currently adopted FIRM, the 100-year flood inundation area extends approximately 1,200 feet north of the Venoco Ellwood Marine Terminal access road to a point approximately 200 feet south of the confluence of Devereux Creek and Phelps Ditch. There are no designated 500-year flood hazard areas in the project area.

The FEMA Floodway map for the site area (FEMA, 1985) shows only the shoreline as a flood hazard area. The County of Santa Barbara (U.S. Army Corps of Engineers, 1979) designates all streams as potential flood areas. Devereux Creek high-water marks for recent years suggest that 2 to 3 feet of runoff water is present during an average rainfall event.

At the request of the County of Santa Barbara, FEMA commissioned a study of flood conditions in the lower Devereux Creek watershed (Parker, 2003). The 2001 study, performed by Schaaf and Wheeler, used the HEC-2 model to predict 100-year flood conditions in the study area. The results of this study are still under FEMA review and have not been finalized. Also, a creek restoration project in the Ocean Meadows Golf Course section of Devereux Creek, conducted in 2002, has slightly improved drainage in the area and reduced flooding (Penfield and Smith, 2003). These drainage improvements are not accounted for in the Schaaf and Wheeler study. However, based on comparisons with other flood inundation studies in the project area (Penfield and Smith, 1996) and field observations, the Schaaf and Wheeler study contains the best available model of 100-year flood inundation in the project area. Data from the Schaaf and Wheeler study updates, as well as data from the existing FIRM maps, is presented on Figure 4.3-2 for California Environmental Quality Act (CEQA) planning purposes. Discussions of 100-year flood zones (as presented in the Schaaf and Wheeler study) relative to the project area and individual sub-areas are presented in the following sections.

Tsunamis. Numerous tsunamis have occurred historically in the Santa Barbara/Goleta area. Tsunamis may be generated by distal sources in other parts of the Pacific Rim, or by coseismic displacements on local faults, such as the Channel Islands Thrust fault system. Local earthquake events may trigger large-scale slope failures in the Santa Barbara channel, resulting in moderate to large local tsunami events such as occurred in 1812. Recent work suggests that purely tectonically generated tsunamis could result in run-up of about 7 feet, whereas combinations of tectonic sources and submarine mass movements could generate local tsunami run-up as high as about 50 feet (Borrero et al., 2001). The California Office of Emergency Services has been provided with a recommended tsunami evacuation zone by Synolakis (2003) of 33 feet above sea level for coastal portions of southern Santa Barbara County.

Tsunami run-up of 50 feet is theoretically possible (Borrero et al., 2001). The flooding hazard is high along the shoreline and Devereux Creek, but low in other areas. The tsunami hazard at the proposed Comstock Homes Development site is negligible, and within the majority of the Ellwood Mesa Open Space Plan area, the hazard is low.

Groundwater Setting. The following is a brief summary of regional and site groundwater information based on limited available site data. The Devereux Creek Watershed is on the south limb of a large anticline exposing a thick section of strata of Tertiary age. The strata consists largely of marine sandstone, siltstone, and shale, but beds of terrestrial origin also occur in the section. The chief aquifers presently utilized are the alluvium of Quaternary age and the Monterey Shale, Vaqueros Formation, and Sespe Formation of Tertiary age. In the older undifferentiated formation of Tertiary age, groundwater occurs chiefly in fractures and in beds of loosely cemented sandstone (Miller and Rapp, 1968).

Groundwater recharge to the watershed is primarily derived from the deep infiltration of rainfall. Some recharge, however, is derived by seepage from streams during floodflows and by infiltration of water imported to the area for irrigation.

Groundwater from the mountainous area moves generally southward in the watershed toward the coast at a steep hydraulic gradient. At the barrier formed by the impermeable mudstone of the Rincon Shale unit, groundwater is seasonally forced to the surface and discharges into upstream tributaries (e.g., El Encanto Creek) of Devereux Creek. Groundwater is an important source of seasonal flow to Devereux Slough, the Dune Ponds, and the Dune Seep within the COPR.

Groundwater Use. Groundwater data in the project area has been compiled for the Ellwood Mesa area (Upson, 1951; Hoover and Associates, 1987a,b, 1989, 1997a; County of Santa Barbara, 2000). The groundwater immediately beneath Ellwood Mesa is not part of the Goleta Basin. This groundwater is locally recharged. Over forty test pits or trenches have been dug within the Coronado Butterfly Preserve; free ground water was encountered in only one previously excavated geologic trench, which crossed Devereux Creek. The shallow unconsolidated terrace deposits have not been found to contain ground water. A monitoring well (MW-1) was drilled adjacent to Devereux Creek in April 1997. The well was found to contain a thin saturated zone perched on the shale bedrock, approximately at elevation +1 foot MSL (19 feet below ground surface). Ground water is also present in the Monterey shale, where the first measurable water produced during drilling was 120 to 450 feet below ground surface (Hoover and Associates, 1987a,b). The Monterey shale aquifer has a piezometric head of 79.1 feet below ground surface, equivalent to an elevation of –8.1 feet MSL (well No. 3, May 1997). Production water wells are inactive and are no longer intended to provide a water supply for the Monarch Point project.

Groundwater Quality. Groundwater studies have been conducted at the Ellwood Mesa site. Those studies have shown the overall background water quality to be poor. The groundwater in the alluvium is highly mineralized, but does not exhibit evidence of hydrocarbon contamination. The shallow unconsolidated terrace deposits, where petroleum contaminated soils have been most commonly found on the site, are located topographically higher than Devereux Creek and do not contain groundwater (Hoover and Associates, 1997a).

Native water quality in the Monterey Shale aquifer and the alluvium are generally poor with total dissolved solids (TDS) ranging between 4,800 ppm and 13,000 ppm in five project area wells at the end of a 1989 aquifer test. Although more recent water quality analyses performed by Hoover and Associates indicate that the TDS concentration has improved (TDS at 5,000 ppm), water quality in the Monterey Shale aquifer still did not meet the State of California standard for drinking water (Hoover and Associates, 1989, 1997a).

Erosion and Sedimentation. The erosion hazard for native soils in the project area (Comstock Development, Ellwood Mesa Open Space, Coronado Butterfly Preserve, and Goleta Unified School District Site) ranges from slight to very high. Erosion is problematic in several areas where there are existing trails, such as the bluff trails at Ellwood Mesa. Much of the resulting sedimentation is deposited in the Devereux Slough. A further discussion of erosion and sedimentation in the project area is provided in Section 4.2, Geology and Geologic Hazards.

Surface Water Quality. In the Devereux Creek Watershed, the primary source of water pollution comes from the untreated runoff flowing from the land through storm drains and into natural stream courses. This urban runoff comes from rooftops, streets, yards, gardens, open spaces, parking lots, orchards, agricultural fields, animal yards, golf courses, construction sites, and any other surface exposed to rain. Drainages in the watershed collect animal waste, oil and rubber residue from cars, asbestos and metals from brake linings, pesticides, silt, and various types of vegetable matter. These inputs may contain high bacterial counts and viruses, may be toxic to aquatic life, and can carry garbage and silt that litter the ocean and its beaches and kill or injure marine life. This runoff does not come from a discrete source, such as a pipe, therefore it is regarded as a "nonpoint source discharge." There are currently no regulated point source discharges in the Devereux Creek Watershed (Environmental Protection Agency [EPA], 2003).

The County of Santa Barbara's Project Cleanwater has taken several samples of water quality in the lower Devereux Creek watershed. Between 1999 and 2001, nine samples were taken at Devereux Creek at the upstream end of the culvert underneath the Ocean Meadows Golf Course service road between the Ocean Meadows Golf Course and Devereux Slough. Analytical results for these samples exceeded applicable water quality standards for pesticides, metals, and bacteria. A summary of samples exceeding applicable water quality standards is provided in Table 4.3-1. The data reflects analytical results for samples taken at a location downstream from the proposed project sub-areas, but are considered to be indicative of the water quality issues in the overall Open Space Plan area.

Table 4.3-1. Water Quality Data for Devereux Creek at Ocean Meadows Golf Course[1]

Constituent	Detection per # of Samples	Water Quality Standard[2]	Percent of Detections	Minimum Value[3]	Average Value[3]	Maximum Value[3]
Diazinon (mg/L)	4 of 7	0.00000009	57%	0.00008	0.000115	0.00019
Malathion (mg/L)	1 of 7	0.0001	14%	0.0001	0.0001	0.0001
Dissolved Mercury (mg/L)	2 of 4	0.000012	50%	0.0004	0.00045	0.0005
Total Copper (mg/L)	3 of 4	0.009	75%	0.02	0.113	0.23
Total Zinc (mg/L)	3 of 4	0.004	75%	0.03	0.053	0.07
Total coliform (MPN)[4]	4 of 4	1000	100%	41060	191705	241920
E. coli (MPN)[4]	4 of 4	400	100%	830	11072	26130
Enterococcus (MPN)[4]	4 of 4	104	100%	2046	14261	27550

[1] Source: Santa Barbara County Project Clean Water 1999-2001.

[2] See Project Clean Water results for standards; sources vary.

[3] As shown, all test values are equal to or exceed the applicable water quality standard.

[4] MPN refers to Most Probable Number.

Between 1999 and 2000, four samples were taken at the Phelps Road crossing of Phelps Ditch; three samples were taken in Devereux Creek at Coronado Road just upstream of the confluence with the major tributary; and three samples were taken on the major tributary west of this confluence. These samples only tested bacteria loading to the Creek and all samples exceeded applicable water quality standards (County of Santa Barbara, 2000).

Scientific evidence has linked storm water runoff with high levels of bacteria in creeks and ocean water. Exposure to these bacteria can pose an increased health risk to humans. During the heavy rains of 1995, the Santa Barbara Environmental Health Services Department began testing several local beaches for bacteria (County of Santa Barbara, 2003a). If a water sample fails to meet one or more of the health standards, a warning status for the beach is issued. In 371 samples taken at Sands Beach near the mouth of the Devereux Slough since 1995, 41 have exceeded one or more of the health standards. Warning statuses are most frequent in February. Three-quarters of warnings occur between December and April.

Devereux Sewer Trunkline. The Goleta West Sanitation District (GWSD) operates and maintains a sewer line, referred to as the Devereux Creek trunkline, that is located in the riparian corridor of Devereux Creek (a designated Environmentally Sensitive Habitat Area [ESHA]) through the Santa Barbara Shores and Ellwood Mesa properties. This line is proposed to receive an estimated 13,100 gallons per day of sewage from the Comstock Homes development (based on 78 Equivalent Residential Units [ERUs] times 168 gallons per day per ERU). Sewer leaks in this area represent a long-term human health and water quality problem in the Devereux Creek watershed. Ongoing maintenance activities related to the sewer line in the riparian corridor also present a long-term water quality threat. The addition of flows into the line from the Comstock development would potentially add to this water quality threat.

GWSD proposes several upgrades to the sewer lines in the Ellwood area. One of these upgrades would partially eliminate flows into the Devereux trunkline by intercepting flows from north of Hollister Avenue with a new Hollister trunkline. Once the new Hollister trunkline is installed, the Devereux trunkline segment that traverses Santa Barbara Shores property would receive flow from one source - the Sandpiper Golf Course maintenance building located at Hollister Avenue, immediately west of the Comstock Homes proposed development site. This segment of the line has no history of leaks.

The line segment east of the Santa Barbara Shores parcel (east of Santa Barbara Shores Drive) handles wastes from the Ellwood/Santa Barbara Shores neighborhood. This segment of the line has experienced cracks and root intrusion, with associated sewer leaks in the eucalyptus groves surrounding Devereux Creek. This segment of the line is proposed to be repaired by GWSD as one of several steps to improve structural integrity and reliability of sewer lines throughout the Ellwood area. Specifically, GWSD proposes to use Cure-In-Place-Pipe (CIPP), a trenchless technology, to re-sleeve a 5,350-foot segment of pipe from approximately the south end of Coronado Drive east to Storke Road (SAIC, 2003; Nation, 2004). This work would be completed after installation of the new Hollister trunkline. Maintenance in the form of cleaning

the line would continue to occur approximately once per year with more frequent check of manholes.

4.3.1.2 Water Resources and Flooding Setting – Comstock Development

4.3.1.2.1 Onsite Drainage Conditions – Comstock Development. The Comstock Homes Development site receives seasonal stormwater flows from commercial and residential development north of Hollister Avenue via two culverts connecting to Drainage A1 and A2 under Hollister Avenue. Although the two channels formed by these culverts begin over 400 feet apart, they come to confluence within 1,000 feet south of Hollister Avenue. The channel is referred to as Drainage A downstream of the confluence of A1 and A2 (SAIC, 2000a). From this confluence, a deep gully is formed and flows southeast, leaving the Comstock Homes Development site, and joining a tributary to Devereux Creek within the proposed Ellwood Mesa Open Space Plan area. Flows in Drainage A are intermittent and generally contain surface water only during the winter and early spring. During other seasons, Drainage A is dry. Drainage A also collects local surface flows from the western section of the Comstock Homes Development site A1 and drains south through the development footprint into Devereux Creek.

The central portion of the Comstock Homes Development site is drained to the south by a small swale exhibiting only minor signs of hydrologic function. This swale is referred to as Drainage B and discharges into Devereux Creek at the southern edge of the property. Flows in Drainage B are ephemeral and generally contain surface water only during the winter and early spring. During other seasons, Drainage B and other drainages on the site are dry.

The western section of the Comstock Homes Development site is drained to the south by a small, highly eroded channel, Drainage C. After leaving the Comstock Homes Development site, flows from this drainage join Devereux Creek. Similar to the other drainages on this site, the flows are ephemeral and generally contain surface water only during the winter and early spring.

4.3.1.2.2 Flooding Conditions – Comstock Development. Figure 4.3-2 shows 100-year flood inundation areas as modeled by the Schaaf and Wheeler study (Parker, 2003). Based on the flood inundation areas documented in this study, the Comstock Development site would not encroach into the 100-year flood inundation area. However, the southern perimeter of the Comstock Development site, is immediately adjacent to the limit of the 100-year flood inundation area. Proposed drainage features of the Comstock development that are immediately upslope from the flood inundation zone in this area include the proposed southerly bioswale/detention basin ("Bioswale A") and its associated drain pipe, as well as two drain pipes from residential lots that do not drain into the bioswales.

4.3.1.3 Water Resources and Flooding Setting – Coronado Butterfly Preserve

4.3.1.3.1 Onsite Drainage Conditions – Coronado Butterfly Preserve. The Coronado Butterfly Preserve is a roughly 22-acre open space located along the banks of Devereux Creek. The north branch of Devereux Creek flows through culverts under Hollister

Avenue, Santa Barbara Shores Drive, and Newport Drive. The creek flows through the preserve and empties into the west-east trending section of Devereux Creek in the Ellwood Mesa Open Space Plan area. The north branch of Devereux Creek is intermittent and generally contains surface water only during the winter and early spring. During other seasons, the creek is dry.

4.3.1.3.2 Flooding Conditions – Coronado Butterfly Preserve. Within the Coronado Butterfly Preserve and the adjacent neighborhood trail area, flooding is generally confined to established channels in Devereux Creek. Figure 4.3-2 shows 100-year flood inundation areas as modeled by the Schaaf and Wheeler study. Some open space areas adjacent to the creek are identified as 100-year flood inundation areas by this study. Additionally, the southerly portion of the Coronado Butterfly Preserve in the area surrounding Devereux Creek is potentially susceptible to tsunami run-up.

4.3.1.4 Water Resources and Flooding Setting – Phelps Ditch Trail

4.3.1.4.1 Onsite Drainage Conditions – Phelps Ditch Trail. Phelps Ditch is a previously realigned tributary to Devereux Creek that traverses from north to south through the eastern portion of a 9.2-acre parcel owned by the Goleta Union School District, located on the south side of Phelps Road. The stream channel upstream of Phelps Road has been historically known as El Encanto Creek. Phelps Ditch enters the property via a culvert under Phelps Road and receives local drainage from the surrounding area and two 24-inch culverts. Phelps Ditch continues south into the University North Campus – North Parcel property and then flows southeasterly through the Ocean Meadows Golf Course where it converges with the west-to-east section of Devereux Creek (Figure 4.3-2). The Urban Creeks Council replanted the banks of this tributary in recent years and it now supports well-developed riparian woodlands. Seven small, mostly degraded, seasonal wetlands totaling less than one acre are scattered across the site.

4.3.1.4.2 Flooding Conditions – Phelps Ditch Trail. Figure 4.3-2 shows 100-year flood inundation areas as modeled by the Schaaf and Wheeler study (Parker, 2003). According to this study, the Phelps Ditch Trail is susceptible to flood inundation and tsunami run-up.

4.3.1.5 Water Resources and Flooding Setting – Ellwood Mesa Open Space

4.3.1.5.1 Onsite Drainage Conditions – Ellwood Mesa Open Space. The west branch of Devereux Creek flows through the eastern section of Sandpiper Golf Course before entering the proposed Ellwood Mesa Open Space Plan area. Water flow in Devereux Creek is intermittent and normally lasts no more than a few days beyond any particular rainfall event. Ponding occurs in the few depressions that exist in the relatively level creek bed, but otherwise standing water is not normally present in the creek. The creek may contain water as late as spring or early summer during years of normal rainfall.

Within Devereux Creek, the width of the ordinary high water mark, used to measure U.S. Army Corps of Engineers jurisdiction, varies between 6 and 65 feet. The configuration of the channel is broadly U-shaped with a relatively level bed and gently sloping sides. A concrete channel

forms the northern bank of the creek downstream from the end of Coronado Drive; this channel slopes at approximately 60 degrees and extends approximately 400 feet from west to east.

Within the proposed Ellwood Mesa Open Space Plan area there are no other significant creeks or channels but there are several deeply eroded, north-south trending drainage features that channel runoff during storm events northward into Devereux Creek. One of these drainages is approximately 800 feet long and connects to a tributary to Devereux Creek near the Coronado Butterfly Preserve. Three shorter drainages, each less than 600 feet long, drain the northeastern corner of the Ellwood Mesa Open Space Plan area into Devereux Creek. In addition, there are two small ravines that drain seaward and down the coastal bluff located at the southeast and southwest corners of the Ellwood Mesa Open Space Plan area.

A surface water pond exists along the western beach access near the coastal bluff and due south of Santa Barbara Shores Drive (refer to Figure 4.3-2). Based on field observations and interviews with area residents, the depression for this pond appears to have been artificially created by grading to extinguish a fire. It is not known whether the fire was at a natural tar seep or at the site of an abandoned oil well. There are no records of an oil well at this site. The pond is "perched water," recharged by winter rains and spring sapping.

Ponding occurs on the central and southeastern portions of the Ellwood Mesa Open Space Plan area. Depressions in the surface topography in these areas collect runoff after periods of heavy precipitation. The water remains intermittently in these depressions due to the presence of an impermeable clay layer that typically ranges from 23 to 30 inches below the surface of the ground. Ponding and associated vernal pool habitats are more fully discussed in Section 4.4, Biological Resources.

4.3.1.5.2 Flooding Conditions – Ellwood Mesa Open Space. Within the Ellwood Mesa Open Space, flooding is generally confined to established channels in Devereux Creek. Observed high water marks for Devereux Creek in the Ellwood Mesa Open Space suggest that high flows during normal rainfall events do not exceed 2 to 3 feet in depth (ESA, 1992). However, Santa Barbara County has designated the creek channel as a potential flood area (ESA, 1992). The Phelps Ditch trail area is potentially susceptible to flooding and tsunami run-up. Phelps Ditch is maintained by the Santa Barbara County Flood Control District. Figure 4.3-2 shows 100-year flood inundation areas as modeled by the Schaaf and Wheeler study (Parker, 2003).

4.3.2 Regulatory Framework

4.3.2.1 Federal Authorities and Administering Agencies

4.3.2.1.1 National Flood Insurance Act (42 USC §§ 4001 et seq.) and Flood Disaster Protection Act (42 USC §§ 4001 et seq.). Congress acted to reduce the costs of disaster relief by passing the National Flood Insurance Act (42 USC §§ 4001 et seq.) of 1968

and the Flood Disaster Protection Act (42 USC §§ 4001 et seq.) of 1973. The intent of these acts was to reduce the need for large, publicly funded flood control structures and disaster relief efforts by restricting development in floodplains (California Department of Water Resources, 1980).

FEMA administers the National Flood Insurance Program to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in a floodplain. FEMA issues Flood Insurance Rate Maps (FIRMs) of communities participating in the National Flood Insurance Program. These maps delineate flood hazard zones in the community.

4.3.2.1.2 Clean Water Act §402, 33 USC §1342; 40 CFR Parts 122 – 136. Stormwater discharges to waters of the U.S. are regulated under the Clean Water Act §402, 33 USC §1342; 40 CFR Parts 122 – 136. In the project area, this requirement is regulated by the California Regional Water Quality Control Board (RWQCB) – Central Coast Region under the Stormwater Pollution Prevention Plan program. Refer to Section 4.3.2.3.1 for additional discussion of state implementation of this federal regulation.

4.3.2.1.3 Clean Water Sections 401 and 404. Discharge of dredge or fill material into waters of the U.S. (e.g., wetlands, including Devereux Creek and/or Slough) are regulated under Section 404 of the Clean Water Act of 1977. Such activities would require a 404 Permit from the U.S. Army Corps of Engineers as well as an associated Section 401 Water Quality Certification from the RWQCB – Central Coast Region. Refer to Section 4.4.2 for more information.

4.3.2.1.4 The National Pollutant Discharge Elimination System. The EPA administers the National Pollutant Discharge Elimination System Program (40 CFR §122.1 et seq.) under sections 318, 402, and 405 of the Clean Water Act (CWA) (Public Law 92-500, as amended, 33 U.S.C. 1251 et seq.). Pursuant to authority provided by the California Water Code (§13370 et seq.), the California Regional Water Quality Control Board issues National Pollutant Discharge Elimination System permits to regulate wastewater and stormwater discharges.

4.3.2.1.5 Clean Water Act (§311; 33 USC §1321; 40 CFR Parts 110, 112, 116, 117). The Clean Water Act (§311; 33 USC §1321; 40 CFR Parts 110, 112, 116, 117) requires the reporting of any prohibited discharge of oil or hazardous substance. In the project area, this requirement is regulated by the RWQCB – Central Coast Region and the County Office of Emergency Services (with oversight provided by the EPA Region IX).

4.3.2.2 State Authorities and Administering Agencies

4.3.2.2.1 CEQA. The State CEQA Guidelines require that the CEQA Lead Agency (i.e., City of Goleta) evaluate whether the proposed project would have a significant effect on the environment, including water resources. Potential impacts that need to be considered include: degradation of water quality, contamination of a public water supply, degradation or depletion of groundwater resources, and causation of substantial flooding, erosion, or siltation.

4.3.2.2.2 California Department of Fish and Game. Activities within a streambed would require a Streambed Alteration Agreement (Section 1600) from the California Department of Fish and Game. Refer to Section 4.4.2 for more information.

4.3.2.2.3 California Coastal Act §30000 et seq. As described in Section 1, the Coastal Act is the only set of policies that apply to development projects within the City of Goleta's Coastal Zone, pending certification of the City of Goleta's Local Coastal Plan. The California Coastal Act Coastal Resources Planning and Management Policies include provisions (§30220, 30221, and 30223) for the protection and management of coastal hydrologic resources. The Coastal Act includes several policies in Section 30231 that directly address the issue of stormwater runoff and its potential effects on water quality, particularly as it relates to protecting the water quality of wetlands and coastal waters. Section 30253 of the Coastal Act also discusses the protection of life and property in flood prone areas. These policies identify numerous specific measures to reduce the potential for impacts to water quality, including compliance with all applicable standards of the RWQCB (30231.2). Policy 30232 requires mitigation and minimization of impacts to rivers and streams.

4.3.2.2.4 Stormwater Discharges. In 1992, the SWRCB adopted a General Construction Storm Water Permit, which requires landowners to file a Notice of Intent to discharge stormwater runoff to waters of the United States from land disturbances greater than 5 acres. In 2003, this threshold was reduced to 1 acre. The permit generally requires dischargers to eliminate non-stormwater discharges to stormwater systems, develop and implement a stormwater pollution prevention plan, and perform inspections of stormwater pollution prevention measures. Because the proposed Comstock Homes Development project would disturb an area greater than 1 acre in size, the developer will be required to file a Notice of Intent to comply with the National Pollutant Discharge Elimination System general construction activities stormwater discharge permit from the SWRCB, and develop and implement a stormwater pollution prevention plan.

A Storm Water Management Plan (SWMP) for the City of Goleta has been prepared in response to requirements of the Draft General Phase II Small MS4 Activities Storm Water Permit (Draft General Permit) that addresses six minimum control measures, including: 1) public education and outreach; 2) public participation/involvement; 3) illicit discharge detection and elimination; 4) construction site stormwater runoff control for sites greater than one acre; 5) post-construction stormwater management in new development and redevelopment; and 6) pollution prevention/good housekeeping for operations. The Draft General Permit requires applicable dischargers to prepare and implement a SWMP in order to reduce the discharge of pollutants to the "maximum extent practicable"(MEP), protect water quality, and satisfy the appropriate water quality requirements of the Clean Water Act, and RWQCB Basin Plan. The City of Goleta would be required to file a Notice of Intent to comply with the NPDES general construction activities stormwater discharge permit from the SWRCB, and develop and implement a SWPPP for individual construction projects that would result in the disturbance of one acre or more.

Basin Plan. In addition to National Pollutant Discharge Elimination System requirements and Total Maximum Daily Loads (TMDLs), the RWQCB sets water quality objectives to provide the highest quality water reasonably possible (RWQCB, 1994). These are presented in the Basin Plan (Central Coast RWQCB, 2002). The objectives are implemented and enforced through National Pollutant Discharge Elimination System permits.

Beneficial uses of Devereux Creek and Lagoon, as listed in the Basin Plan, include Municipal and Domestic Supply (MUN), Ground Water Recharge (GWR), Freshwater Replenishment (FRSH), Water Contact Recreation (REC-1), Non-Contact Water Recreation (REC-2), Commercial and Sport Fishing (COMM), Warm Fresh Water Habitat (WARM), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN), Preservation of Biological Habitats of Special Significance (BIOL), Estuarine Habitat (EST), Rare, Threatened, or Endangered Species (RARE), Shellfish Harvesting (SHELL), and Wildlife Habitat (WILD).

4.3.2.2.5 Prohibited Discharges.

The Clean Water Act (§311; 33 USC §1321; 40 CFR Parts 110, 112, 116, 117) requires the reporting of any prohibited discharge of oil or hazardous substance. In the project area, this requirement is regulated by the RWQCB – Central Coast Region and the Santa Barbara County Office of Emergency Services (with oversight provided by the EPA Region IX).

4.3.2.3 Local Authorities and Administering Agencies

4.3.2.3.1 City of Goleta Coastal Zoning Ordinance.

As described in Section 1, the County of Santa Barbara's Coastal Zoning Ordinance and other implementing ordinances (including subdivision and grading ordinances) were adopted by the City of Goleta but have not been certified by the California Coastal Commission. The City of Goleta's Article II Coastal Zoning Ordinance provides guidance for those areas of the City of Goleta within the Coastal Zone. Applicable procedures require proper drainage and vegetation within bluff top setbacks (35-67.3), prohibit any activity beyond the bluff top setback that contributes to bluff erosion (35-67.4), and prohibit drainage devices directed over bluff tops (35-67.5).

4.3.3 Project Impacts and Mitigation

This section assesses impacts associated with the proposed Comstock Homes Development and the Ellwood Mesa Open Space Plan components, and recommends mitigation measures to reduce potential project impacts related to hydrology and water quality.

Key issues identified in the Notice of Preparation (City of Goleta, 2002) associated with the proposed Comstock Homes Development include short-term construction-related impacts, such as sediment loading into Devereux Creek and long-term increases in onsite and offsite erosion that may impact water resources in the project vicinity. The Notice of Preparation also identified key issues for the Ellwood-Devereux Open Space Plan components, including: increased erosion on the coastal bluffs due to possible increased use of existing paths, trails, ramps and stairway

access points to the beach and construction activities (e.g., construction of bluff and beach access trails and creek crossing structures, public service improvements, site remediation and cleanup, and other activities that may require heavy equipment operations or generate increased truck traffic); increased risk of localized flood hazards due to placement of new creek crossing structures; and pollutant load to creeks and the ocean resulting from continued equestrian and dog use of the area.

4.3.3.1 Thresholds of Significance

Project water resource impacts would be identified as significant if they degrade surface or groundwater quality in violation of the Central Coast RWQCB Basin Plan (2002), or other applicable water quality regulations, and/or result in substantial degradation of water quality conditions that could affect beneficial uses of receiving waters.

The Santa Barbara County Environmental Thresholds and Guidelines Manual (Thresholds Manual) (County of Santa Barbara, 2002) has been adopted by the City of Goleta for conducting CEQA analysis. The Thresholds Manual provides surface and stormwater quality significance guidelines. Under these guidelines, the proposed residential development and open space plan area improvements are presumed to have less than significant impacts since the project is a new development project that incorporates into the project design construction Best Management Practices (BMPs) for erosion, sediment and construction waste control and incorporate post-construction BMPs to protect sensitive riparian or wetland resources, reduce the quantity of runoff and, for the Comstock Homes Development portion, treat runoff generated by the project to pre-project levels.

4.3.3.2 Project Impacts

4.3.3.2.1 Impacts from Residential Development.

Impact H/WQ-1: Onsite and Downstream Flooding. The proposed Comstock Homes Development would result in permanent changes to topography and potential changes in hydrology of the area due to the creation of additional impervious ground coverage that would substantially reduce the ability of the site to absorb surface water runoff. Flooding potential at the site and at downstream sites within the Devereux Creek watershed could be increased due to the proposed Comstock Homes Development. Natural drainage patterns would be replaced with surface and subsurface drains. A proposed drainage crossing in the northern portion of Drainage A1 could require construction of a culvert and fill. The development would reduce the ground surface area capable of absorbing rainfall and therefore potentially increase stormwater runoff across the site and into Devereux Creek. The increased runoff could result in greater risks of flooding if proposed site drainages, including Devereux Creek, were not capable of handling the flow.

Based on the flood inundation areas document in the Schaaf and Wheeler study (Parker, 2003), the Comstock Development site would not encroach into the 100-year flood inundation area.

However, the southern perimeter of the Comstock Development site is immediately adjacent to the limit of the 100-year flood inundation area (Figure 4.3-2). Proposed drainage features of the Comstock development that are immediately upslope from the flood inundation zone in this area include the proposed southerly detention basin/bioswale ("Bioswale A") and its associated drain pipe, as well as two drain pipes from residential lots that do not drain into the detention basins/bioswales.

While the residential development is essentially located out of the 100-year floodplain, it is conceivable that flood conditions within Devereux Creek could impair the ability of the retention basins to handle flows from the development. As described further below, the retention basins are sized for a 100-year event, therefore, this potential flooding event is not considered significant provided that the retention basins are appropriately sited.

Established floodplain maps provide an important benchmark for the siting and design of development in the watershed. Although the project does not lie directly in the 100-year floodplain, downstream land uses, including existing and proposed residential developments in the vicinity of Ocean Meadows Golf Course, could be adversely affected if the volume and rate of runoff from the Comstock Homes site exceeds the pre-development rate, and thus alters the downstream floodplain. To avoid this potential impact to downstream land uses, the project includes two detention basins to limit the rate of post-development storm runoff. Developed areas that would not convey stormwater to these two detention basins include:

- A 1-acre portion of the subdivision in the northeastern corner of the development, as described below for Tributary Area "A"
- Six residential lots (Lots 48 through 53) on the southeastern perimeter (approximately 1.5 acres) would convey stormwater to a rock/concrete velocity dissipator located on the eastern bank of Drainage B
- One residential lot (Lot 47) on the southern perimeter (approximately 0.25 acre) would convey stormwater to a rock/concrete velocity dissipator on the western bank of Drainage B
- Portions of various lots would drain without conveyances to native soils

According to the applicant's preliminary hydraulic report for the project, anticipated stormwater runoff was calculated using Santa Barbara County Flood Control urban hydrograph computer programs and design charts assuming a 25-year return period. Results of the applicant's preliminary hydraulics report are summarized below.

The preliminary drainage plan allows for stormwater runoff from approximately 25.9 acres of developed area. Most of this developed area will be drained to the proposed detention basins / bioswales. The drainage plan consists of four tributary areas, described as follows based on the applicants preliminary plans:

- Tributary Area "A" drains a 1-acre area in the northeast corner of the development, specifically the proposed cul-de-sac and all or portions of seven lots (Lots 72 through 78,

refer to Figure 2.2-2 for lot locations) on the east side of the proposed bridge culvert, including 0.3 acres of asphalt concrete pavement. This area is proposed to drain to the existing drainage course south of road "B". An 18-inch smooth bore HDPE pipe would be required to carry the 25-year flow event. A cast-in-concrete endwall is proposed at the end of the pipe. A 380-square foot bioswale is proposed for this drainage flow. No detention basin is proposed.

- Tributary Area "B" drains a 5.5-acre area in the northwestern portion and center of the development, including 2.13 acres of asphalt concrete pavement. These areas are proposed to drain to the detention basin along the easterly edge of the tract. Various sizes of smooth bore HDPE pipe would be required to carry the 25-year flow event. A cast-in-concrete endwall is proposed at the end of the pipe.

- Tributary Area "C" drains a 11.65-acre area in the southern, western and central portions of the development, including the 4.2-acre common open space area located in the western and central portion of the site. These areas are proposed to drain to the detention basin along the southern edge of the tract. Various sizes of smooth bore HDPE pipe would be required to carry the 25-year flow event. A cast-in-concrete endwall is proposed at the end of the pipe.

- Tributary Area "D" drains a 3.0-acre area in the southwestern portion and center of the development. These areas are proposed to drain to the detention basin along the southern edge of the tract. An 18-inch smooth bore HDPE pipe would be required to carry the 25-year flow event. A cast-in-concrete endwall is proposed at the end of the pipe. Tributary Areas C and D include a combined 6.23 acres of asphalt concrete pavement.

The ten-year storm water runoff generated from the various drainage areas was used to determine the size of the bioswales, using the Santa Barbara County Flood Control channel program and biofilter Best Management Practices BMP TC4, Biofilters, as published by the California Storm Water Task Force (SWRCB, 1993). The biofilters are sized slightly larger than that required under the BMP methodology.

Stormwater runoff for the total project site was determined for the existing and post-development scenarios, using the SBCFCD urban hydrograph computer program for the 10, 25, 50, and 100 year return storm event, and impervious factors of 0.02 and 0.35 for pre-development and post-development ground surfaces, respectively, and a time concentration of 12 minutes. Based on this analysis, the preliminary drainage report determined the following 10, 25, 50, and 100-year runoff due to proposed development.

Return Period	Pre-Development Runoff, cfs	Post-Development Runoff, cfs	Increase, cfs
100	69.1	72.4	3.3
50	60.4	64.0	3.6
25	51.8	55.7	3.9
10	41.6	45.7	4.1

Biofilter/detention basin "A" would be located southeast of the easterly terminus of Road "D" and accept stormwater runoff from a tributary of 7.0 acres. Bioswale/detention basin "B" would be located south of Road "F" near the southern boundary of the development, and would accept stormwater runoff from a tributary of 15.5 acres. The calculated post-development runoff would be routed through these biofilters/detention basins to maintain pre-development runoff levels. Routing stormwater runoff through the biofilter/detention basins would result in the following 10, 25, 50, and 100 year return storm events for Basins A and B respectively.

Return Period – Basin A	Pre-Development Runoff, cfs	Post-Development Runoff, cfs*	Decrease, cfs
100	13.4	11.1	2.3
50	11.8	10.0	1.8
25	10.1	8.9	1.2
10	8.1	7.2	0.9

Return Period – Basin B	Pre-Development Runoff, cfs	Post-Development Runoff, cfs*	Decrease, cfs
100	29.7	24.8	4.9
50	26.0	21.7	4.3
25	22.3	18.5	3.8
10	17.9	14.6	3.3

Stormwater runoff from approximately 13.5 acres on the remainder of the site will not flow into the biofilter / detention basins after the site development. Post-development runoff calculations for each basin, combined with the remainder of the site, are summarized below.

Return Period	Post-Development Runoff, Basin A, cfs	Post-Development Runoff, Basin B, cfs	Post-Development Runoff, Remainder of Site, cfs	Total cfs
100	11.1	24.8	27.2	63.1
50	10.0	21.7	24.0	55.7
25	8.9	18.5	20.9	48.3
10	7.2	14.6	17.1	38.9

The preliminary drainage plan thus concludes that construction of the drainage improvements would result in post-development peak runoff flow rates equal to or less than expected rates for the same periods from the pre-development peak runoff rates, as summarized below (Mac Design Associates, 2003).

Return Period	Pre-Development Runoff, cfs	Post-Development Runoff, cfs*	Decrease, cfs
100	69.1	63.1	6.0
50	60.4	55.7	4.7
25	51.8	48.3	3.5
10	41.6	38.9	2.7

Based on the preliminary drainage analysis provided by the applicant and summarized above, post-development peak runoff flow rates are not anticipated to exceed pre-development peak runoff rates during the 10, 25, 50, or 100 year storm events. Additional analysis will be required prior to completion of the final site plans. Therefore, depending on the final drainage design for the residential development, potential flooding impacts are potentially *significant, but feasibly mitigated (Class II).*

Impact H/WQ-2: Erosion and Sedimentation from the Residential Development. Increased runoff could result in increased long-term erosion and sedimentation, and therefore decreased water quality in Devereux Creek and Devereux Slough. The majority of the project runoff is proposed to flow to Devereux Creek at several locations in the southern portion of the site. As discussed above, post-development site runoff would be conveyed to the creek via overland flow from two biofilter/detention basins, and/or stormdrains that would flow directly to tributaries of Devereux Creek. Additional runoff would be directed toward Hollister Avenue via overland flow on the northern perimeter of the developed area. As noted above, peak runoff flow rates are not anticipated to exceed pre-development peak runoff rates during the 10, 25, 50 or 100 year storm events. However, for those areas that would not drain to a retention basin (specifically, the cul-de-sac and homes within a one-acre building site in the northeast corner of the development, and seven building sites along the southeastern perimeter), site runoff could result in isolated cases of erosion and sedimentation in tributaries to Devereux Creek. Therefore, pending review of the final grading and drainage plans, potential impacts associated with erosion-induced siltation are *significant but feasibly mitigated (Class II).* See Section 4.2, Geology and Geological Hazards, for a discussion of potential short-term erosion-induced siltation impacts during grading and construction, and Section 4.4, Biological Resources, for further discussion of impacts and proposed mitigation measures associated with sedimentation.

Impact H/WQ-3: Pollutants in Runoff from the Residential Development. Pollution from vehicles, roadways, and parking areas, as well as from landscape and household chemicals, during residential construction and during post-construction, could be carried in surface runoff into Devereux Creek, thereby degrading the quality of waters contributing to Devereux Slough from this portion of its watershed. Devereux Slough and its watershed have been extensively altered over the past century by urban and recreational development. Scientific studies have revealed that development in the watershed has affected the volume and quality of freshwater runoff entering the slough. Annual storm runoff from urban areas directed into the wetlands dramatically lowers salinity, erodes channels, and transports large quantities of sediment, nutrients, and other materials to the slough (County of Santa Barbara, 2001).

Increased runoff from the proposed project could potentially result in decreased water quality in Devereux Creek due to runoff of oil and grease from roadways and parking areas and runoff of pesticides, herbicides and fertilizers from the landscaped areas. Construction projects of 1 acre or more are subject to National Pollutant Discharge Elimination System Phase II permit regulations, which require the development of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP is designed to minimize water quality degradation though storm water monitoring, establishment of BMPs, implementation of erosion control measures, and implementation of spill prevention and containment measures. Separate SWPPPs are required for construction and post-construction operations. Measures contained within the SWPPPs would reduce potential effects to surface water quality from pollutant inputs associated with construction and operations. The proposed biofilter/detention basins described above are designed to capture project runoff and allow for filtering of urban pollutants prior to release into the watershed. However, for those areas that would drain directly to a natural drainage (specifically, the cul-de-sac and homes within a one-acre building site in the northeast corner of the development, and seven residential lots along the southeastern perimeter), site runoff could result in urban pollutants entering directly to tributaries of Devereux Creek. Therefore, pending review of the final grading and drainage plans, potential water quality impacts to Devereux Creek and Slough from the construction and maintenance of the Comstock Homes Development are *significant but feasibly mitigated (Class II)*. See Section 4.4, Biological Resources, for further discussion of impacts and mitigation measures related to pollutants in drainages.

Impact H/WQ-4: Devereux Creek Sewer Trunkline Connection. The GWSD's Devereux trunkline is located in the riparian corridor of Devereux Creek in a designated Environmentally Sensitive Habitat Area (ESHA). ESHA areas near the project site are detailed in Section 4.4, Biological Resources. The Devereux trunkline is proposed to receive an estimated 13,100 gallons per day of sewage from the Comstock Homes development. The sewer line segment immediately downstream of the development site on the Santa Barbara Shores parcel has no history of leaks (likely due to the absence of dense eucalyptus in the riparian corridor adjacent to the line). The line segment east of the Santa Barbara Shores parcel (east of Santa Barbara Shores Drive) has experienced cracks from root intrusion, but GWSD maintains it has no evidence of past leakage. Sewer leaks in the Devereux Creek riparian corridor would represent a long-term human health and water quality problem in the Devereux watershed. Ongoing sewer line maintenance activities in the riparian corridor also present a long-term water quality threat due to physical maintenance/construction activities. The addition of flows into the line from the Comstock development would potentially add to and/or prolong the duration of this water quality threat.

The portion of the line that has experienced root intrusion and cracks is proposed to be upgraded by installing a liner. Consequently, much of the potential water quality threat posed by continued operation of this line segment would be eliminated. Furthermore, the line segment that traverses the Santa Barbara Shores property has no history of leaks (Nation, 2004). GWSD proposes several other upgrades to the sewer lines in the Ellwood area. One of these upgrades would partially eliminate flows into the Devereux trunkline by intercepting flows from north of Hollister Avenue with a new Hollister trunkline. Once the new Hollister trunkline is installed,

the Devereux trunkline segment that traverses Santa Barbara Shores property would receive flow from one existing source – the Sandpiper Golf Course maintenance building located at Hollister Avenue, immediately west of the Comstock Homes proposed development site – thus further reducing the volume of sewage flows and the potential consequences of future leaks in the Devereux Creek area.

From a water quality perspective, the project's proposed increased load into the Devereux trunkline is considered *adverse but not significant (Class III)* because the Devereux trunkline is proposed to be upgraded in areas of historical leaks, and because the post-development flows into the trunkline would not exceed the present flows.

While mitigation measures are not required for Class III impacts, the potential long-term risks to water quality associated with the continued use of the Devereux trunkline could be further reduced by avoiding new hookups to the Devereux trunkline and instead connecting the Comstock development to the Hollister trunkline, as specified in recommended mitigation measure H/WQ-3. The Hollister Avenue trunkline has sufficient capacity to handle the project sewage flows. However, due to site topography, use of the Hollister trunkline would require construction, operation, and maintenance of a lift station. Lift stations are generally very reliable but are nevertheless susceptible to leaks and associated service disruptions. On balance, however, the use of a lift station for the Comstock Homes project, if properly maintained and operated, would be an environmentally acceptable alternative to the proposed use of the Devereux Creek line. This recommended mitigation is discussed further in Section 5.0, Consistency With Plans and Policies, as it relates to applicable State and local policies.

4.3.3.2.2 Coronado Butterfly Preserve. No adverse hydrology and water quality impacts are anticipated from the proposed rezone of three parcels within the Coronado Preserve area from residential to recreation. No adverse hydrology and water quality impacts are anticipated from closure and restoration of certain trails within the Preserve. Existing maintenance practices in the Preserve are generally protective of water quality. Therefore, no adverse hydrology and water quality impacts are anticipated from the ongoing maintenance of the open space amenities within the Coronado Butterfly Preserve area (including the City of Goleta's maintenance of the nearby neighborhood trail [Trail 20]).

4.3.3.2.3 Phelps Ditch Trail.

Impact H/WQ-5: Trail Construction at Phelps Ditch. The Open Space Plan provides for continued maintenance of public access and possible future recreational trail improvements on the existing flood control road easement located on the west side of Phelps Ditch. If future trail improvements are implemented in this area, then construction of those improvements adjacent to the creek could result in discharges of solid or liquid wastes and/or sediment into the creek. Pending detailed design of trail improvements near Phelps Ditch, potential water quality impacts associated with trail construction, use, and maintenance are considered *significant but feasibly mitigated (Class II).*

4.3.3.2.4 Ellwood Mesa Open Space Plan Area. As described in Section 3.0, construction activities for the open space component could include: trail upgrades and trail closures; minor improvements to beach access bluff trails; construction of new benches; a 40-space public parking area and restroom facility; habitat restoration and enhancement; and new signage. In addition to these site improvements, several historic oil wells located on the Ellwood Mesa are likely to be re-abandoned to current standards, and certain areas of known soil contamination may require soil remediation, depending on the eventual preparation and approval of a Remedial Action Plan; these activities are discussed further in Section 4.5, Hazards and Hazardous Materials.

Impact H/WQ-6: Flooding from the Open Space Parking Area. The proposed Open Space parking area would encompass approximately one-half acre of gently sloping undeveloped land located immediately south of Hollister Avenue, between the proposed Comstock Homes Development site and the eastern eucalyptus grove. Minor grading would be performed to ensure that slopes on the parking lot do not exceed ADA-compliant regulations. Depending on the design and performance of the actual ground surface materials selected for the parking area, there could be a reduction in the ground surface area capable of absorbing rainfall and therefore, there could be an increase in stormwater runoff across the site and into site drainages. Small fixed structures, such as the public restroom, would also contribute to impervious surfaces in the parking area and contribute runoff that is presently absorbed into native soils. Although Devereux Creek does not have a FIRM-designated 100-year floodplain in the vicinity of the site, flooding potential could be increased due to the proposed parking area if impervious surfaces are used. The increased runoff could result in greater risks of flooding if proposed site drainages, including Devereux Creek, were not capable of handling the flow. Pending detailed design of the parking area, potential flooding impacts are *significant, but feasibly mitigated (Class II).*

Impact H/WQ-7: Erosion and Sedimentation from the Open Space Parking Area. Increased runoff from the Open-Space parking area could potentially result in increased long-term erosion and sedimentation, and therefore decreased water quality in Devereux Creek. If not properly controlled, parking area runoff could be conveyed to onsite drainages that lead to Devereux Creek via overland flow and/or storm drain. Pending detailed design of the parking area, potential impacts associated with erosion-induced siltation are *significant, but feasibly mitigated (Class II*).

Impact H/WQ-8: Trail Construction, Well Abandonment, and Remediation. Trail construction, well re-abandonment, and site remediation activities could result in short-term water quality impacts. Pollution from construction vehicles and activities could be carried in surface runoff into Devereux Creek. Some common sources of construction site pollution include spilled oil, fuel, and fluids from vehicles and heavy equipment; construction debris; sediment created by erosion; irrigation runoff containing pesticides or weed killers; and materials such as used motor oil, antifreeze, and paint products. In addition to these pollutants, the potential well re-abandonment and soil remediation activities could result in runoff from contaminated soils reaching Devereux Creek.

Trail construction projects may be subject to National Pollutant Discharge Elimination System Phase II permit regulations, which require the development of a SWPPP. Water quality impacts to Devereux Creek and Slough from the construction and maintenance of the Open Space components, including possible activities associated with well re-abandonment and soil remediation, are *significant, but feasibly mitigated (Class II).*

Devereux Creek Boardwalk and Steps Scenario. Trails accessing the Ellwood Monarch Main Grove area from the north are generally inundated with water during the rainy season, which coincides with the peak monarch viewing season. Trails 16 to 20 cross Devereux Creek, which typically contains flowing or standing water during the winter months. Visitors to the grove typically either wade across the inundated creek bottom and riparian zone wetlands, and/or use makeshift creek crossings made from fallen logs. Similarly, the east-west trail leading from the end of Coronado Drive (Trail 18) to the Main Monarch Grove typically remains wet (usually 5-8 inches of standing water) and muddy for the entire rainy season.

As shown on Figure 14, the Open Space Plan proposes no new structures or trail improvements in this area of Devereux Creek and the Main Monarch Grove. However, as shown on Figure 3.4-9, an optional scenario under consideration would involve construction of approximately 500 feet of boardwalk through the east-west trending low-lying areas of Devereux Creek (Trail 18). This scenario would also include a north-south bridge between Trail 18 and the main monarch grove (Trail 16); and new steps on the steep slope within the monarch grove (Trail 19). The design aspects of these optional features are only conceptual at this time. If the concept were realized, the improvements would potentially improve the safety, convenience, and aesthetic experience of pedestrian access to these areas during the wet season, which is also the peak season for viewing the wintering monarchs. In addition to improving public access, these optional features would potentially reduce trampling of wetland biological resources, and significantly reduce trail erosion and related sedimentation to Devereux Creek.

Impact H/WQ-9: Flood Impacts from Devereux Creek Bridge and Boardwalk Scenario. If the optional Devereux Creek bridge and boardwalk scenario is pursued, then those structures would need to be designed so as to avoid creating on obstruction to flood waters in Devereux Creek. Design details will only be developed at the time that the creek crossing scenario is pursued. Therefore, pending design details, the potential exists that the optional trail improvements could – if not properly designed, sited, and maintained – result in long-term flood hazards. This potential flood hazard impact is considered *significant but feasibly mitigated through design (Class II).*

Impact H/WQ-10: Pollutants from Devereux Creek Bridge and Boardwalk Scenario. Construction of the Devereux Creek Boardwalk and Steps Scenario could trap debris, impede flows, or result in releases of contaminants into Devereux Creek. The Open Space Plan proposes no new structures or trail improvements in the area of the Main Monarch Grove. Ongoing use of this area in its current state, while not optimal for public access, does not pose an imminent threat to hydrologic function, water quality or flood safety. However, the continued public use of this area during the wet season – particularly the use of makeshift creek crossings –

could lead to increased risk of flood obstruction and/or injury hazards from slips, trips and falls. Moreover, the lack of trail improvements on heavily used steep slopes during the wet season could exacerbate anthropogenic-induced erosion of the creek banks and bed, and increase sedimentation to Devereux Creek.

From a hydrologic, flooding, and water quality perspective, the Devereux Creek Boardwalk and Steps Scenario, which could include a boardwalk through seasonally inundated creek crossings and steps on the slopes leading to the Main Monarch Grove, would provide a long-term benefit to the hydrologic, flooding and water quality environment. These open space improvements are therefore considered a *beneficial impact (Class IV)*.

If these structures were built, then there would be the potential for short-term construction impacts to water quality, and long-term impacts to flooding. Short-term impacts could include trail erosion and sedimentation to Devereux Creek resulting from vehicle access and earthwork activities in the creek itself and on the slopes of Devereux Creek. Fuel spills or other material leaks from vehicles or equipment could potentially reach Devereux Creek if not properly prevented or controlled. Bridge and boardwalk construction would need to be timed to avoid impacts to butterfly aggregations and would need to use construction methods that would avoid adding sediment, cement, or wood treatment products to the water. These potential short-term impacts are considered *significant but feasibly mitigated (Class II)*.

4.3.3.3 Cumulative Impacts

Cumulative hydrologic and water quality impacts include existing and pending land uses within the South Coast Hydrologic Unit, which generally encompass that area west of the Santa Ynez Mountains, from Carpinteria to Point Arguello, and includes lands that affect water quality and hydrologic function throughout the Devereux Creek Watershed. Cumulative hydrology and water quality impacts, like direct impacts, result from increased impervious surfaces, accelerated erosion, and pollutant loading (including sediment, oil and grease, pesticides, and other pollutants) that are typically associated with increased impervious surfaces, large-scale agricultural operations, and increased use of an area by the generally expanding population base. As discussed in the project setting, the Devereux Creek watershed is a typical coastal watershed of the Santa Barbara South Coast, in that limited data suggests that various long-term water quality problems are linked to a wide range of existing urban and agricultural land uses. Given the generally degraded state of this coastal watershed, the Comstock Homes Development and the Ellwood Mesa Open Space Plan have the potential to contribute to cumulative water quality impacts if the projects, when considered in combination with existing and pending land uses, significantly contribute to the degradation of water quality or hydrologic conditions. In general, direct impacts from the residential project and implementation of the Ellwood Mesa Open Space Plan are not anticipated, provided that the above impacts are addressed through proper design and mitigation. Nevertheless, the potential exists for the projects to cumulatively contribute to water quality degradation in the lower reaches of the watershed due to greater intensity of public use of the open space and associated impacts from animal wastes, trash, and

creek sedimentation. Potential cumulative impacts associated with the project are further discussed below.

Impact H/WQ-11: Cumulative Pollutant Loading from Use of Open Space Area. Pollution from trash and domestic animal waste, including dogs and horses, could be carried in surface runoff into Devereux Creek, thereby degrading the quality of waters contributing to the Devereux Slough from this portion of its watershed. Although no significant increase in land use intensity is proposed or anticipated as a result of the Open Space Plan, implementation of the Open Space Plan, combined with the general long-term trend in increased urbanization of the coastal zone, could nonetheless result in increased long-term public use of the Open Space Plan area. Increased public use of the Open Space Plan area could result in adverse impacts to water quality, such as through introduction of domestic animal wastes and associated increases in nutrient loading and/or bacterial pathogens. The Open Space Plan provides for long-term monitoring and maintenance of the open space lands and watercourses. A key feature of the Open Space Plan is a flexible management approach based on continual monitoring of activities within the Open Space Plan area. However, pending the actual adoption and long-term implementation of the maintenance practices and land use controls throughout the Open Space Plan area, this cumulative impact is considered *potentially significant but feasibly mitigated (Class II).*

Impact H/WQ-12: Cumulative Pollutant Loading from the Residential Development. Two bioswales are proposed to be constructed as part of the Comstock Homes Development. This design feature is intended to prevent the potential for polluted runoff to enter the watershed, and thus the project, as designed, would not contribute to the cumulative pollutant runoff and resulting surface water impacts on Devereux Creek and Slough. However, if not properly designed, installed, and maintained, these bioswales have the potential to allow the project to directly contribute to erosion-inducing siltation of surface waters and runoff of pollutants as a result of increased impervious surfaces, pesticide and herbicide use, and oil and grease residues from the proposed project. This direct contribution of pollutants in an already degraded watershed could result in cumulative impacts to water quality in the Devereux Creek and Slough. Stormwater quality testing included as part of Santa Barbara County Water Agency's Project Clean Water indicates that the Devereux Slough is polluted by runoff containing bacteria and nutrients that exceed acceptable levels, including elevated levels of fecal and total coliform, enterococcus, pesticides, and heavy metals such as copper, lead, and zinc, and are capable of accelerating aquatic plant and algae growth. In addition, the Devereux Creek watershed delivers a high sediment load to the Slough. Numerous other approved and probable future projects within the Devereux Slough watershed could contribute runoff and pollutants. The pollutant load contribution of these projects and the resulting further degradation of the Devereux Creek watershed and Devereux Slough could result in cumulative impacts to water quality. Therefore, the project's contribution to this cumulative impact is considered *cumulatively significant, but feasibly mitigated (Class II).*

Impact H/WQ-13: Cumulative Flooding from the Residential Development. Increased stormwater runoff as a result of the project's increased impervious surfaces together with potential increased runoff from other future developments in the watershed could

exacerbate existing flood hazards downstream from the development site (i.e., existing and proposed residential areas surrounding Ocean Meadows Golf Course). Two bioswales are proposed to be constructed as part of the Comstock Homes Development. Together with the overall drainage design, the bioswales are intended to reduce flood runoff rates and volumes to levels that approximate the present pre-development rate and volume of runoff. Thus the project, as designed, is not expected to contribute to cumulative flooding impacts on Devereux Creek and Slough. However, if the drainage system is not properly designed, installed, and maintained, the proposed project's contribution to cumulative flood flows in the watershed could be potentially significant. Therefore, pending final design and installation of the site drainage plan, the project's contribution to cumulative flooding impacts in the lower Devereux watershed is considered *significant but feasibly mitigated (Class II).*

4.3.3.4 Mitigation Measures

The following measures are proposed to address flooding and water quality impacts from the proposed project.

Mitigation H/WQ-1: Flood Prevention at Comstock Development. Outlet pipes, velocity reduction structures (e.g., rip-rap) and detention basins/bioswales shall be designed, constructed, inspected, and maintained at the Comstock Homes Development site to reduce off-site runoff velocities and to prevent off-site flooding and long-term erosion induced sedimentation in Devereux Creek and Slough. The final grading and drainage plans shall demonstrate that the project will control site stormwater runoff so that project 50- and 100-year peak discharges leaving the site do not exceed the pre-project rates. The final grading and drainage plans shall demonstrate that measures are provided to ensure that all flows discharging from the property are spread or dissipated to the extent necessary to avoid erosion of adjacent properties, for storm conditions up to and including the 100-year event.

Detention basins/bioswales shall be constructed during initial site grading and shall be functional during the construction phase. Detention basins/bioswales shall be maintained frequently throughout the construction phase to remove accumulated sediment. These features shall be depicted on drainage plans (addresses Impacts H/WQ-1 though H/WQ-3, and H/WQ-12 through H/WQ-13).

Plan Requirements and Timing. The final grading and drainage plans shall be reviewed and approved by the City of Goleta prior to approval of the Land Use Permits.

Monitoring. The City of Goleta shall inspect implementation of these measures pursuant to approved plans prior to occupancy clearance.

Mitigation H/WQ-2: Runoff Control. To reduce runoff from impervious areas and allow for infiltration at the Comstock Homes Development site to the maximum extent feasible, pervious materials or surfaces (e.g., porous pavement or unit pavers on sand) shall be incorporated into the project design in key areas, such as adjacent to concrete walkways and road

surfaces for the Comstock Homes Development. The City of Goleta shall incorporate similar measures for the Open Space parking and restroom area, and at trail improvement sites (addresses Impacts H/WQ-1 through H/WQ-3, H/WQ-5 through H/WQ-7, and H/WQ-12 through H/WQ-13).

Plan Requirements and Timing. Pervious surfaces shall be described and depicted graphically on the site, building, grading, and landscape plans. The plans shall be submitted to the City of Goleta for review and approval prior to approval of Land Use Permits.

Monitoring. The City of Goleta shall inspect implementation of these measures pursuant to approved plans prior to occupancy clearance.

Recommended Mitigation H/WQ-3: Avoidance of Devereux Creek Trunkline. The Comstock Homes Development project and the Ellwood Mesa Open Space restroom shall avoid sanitary connections to the Devereux trunkline, which is partly located within a City-identified ESHA (addresses Impact H/WQ-4).

Plan Requirements and Timing. Development plans shall describe and depict an alternative sewer line conveyance to the Hollister Avenue trunkline, including the preliminary design details for a lift station, if needed. The plans shall be submitted to the City of Goleta for review and approval prior to approval of Land Use Permits.

Monitoring. The City of Goleta shall inspect implementation of these measures pursuant to approved plans prior to occupancy clearance.

Mitigation H/WQ-4: Flood Prevention in the Open Space Plan Area. All new structures (e.g., bridges) in Devereux Creek and its tributaries shall be designed, inspected, and maintained to minimize obstruction and collection of debris that could impede flows and result in localized flooding, consistent with recommendations of the Open Space Plan (addresses Impact H/WQ-6 through H/WQ-10).

Plan Requirements and Timing. The design of structures in and around Devereux Creek shall be described and depicted on the site building plans, and shall be reviewed and approved by the City of Goleta prior to approval of a Land Use Permit.

Monitoring. The City of Goleta shall inspect implementation pursuant to approved plans at the completion of construction, and shall periodically inspect structures for long-term maintenance.

Mitigation H/WQ-5: Storm Water Pollution Prevention. The drainage plan for the Comstock Homes Development shall include permanent detention basins/bioswales designed to retain runoff and maintain pre-development runoff rates associated with a 25-year storm event. The final grading and drainage plans shall demonstrate that the proposed detention basins/bioswales will be able to withstand hydraulic conditions up to and including the 25-year

flood event which is the design level for the storm drain system that the bioswales are connected to.

The bioswale shall be designed to ensure that the retention time of water and the plants selected are adequate to reduce the concentrations of target pollutants. Where feasible, local plant sources (i.e. collected from the watershed or propagated cuttings or seed collected from the watershed) shall be used. The plan shall include specifications for the bioswales to be maintained in working order, and shall assign enforceable responsibility for long-term inspection and maintenance (addresses Impact H/WQ-1 through H/WQ-3, and H/WQ-12 through H/WQ-13).

Plan Requirements and Timing. Final grading, drainage and landscape plans, including long-term maintenance plans, shall be reviewed and approved by the City of Goleta prior to Land Use Permit approval. Drainage, grading, and landscape plans shall contain specification procedures, including plant palette and the source of plant material.

Monitoring. The City of Goleta shall monitor mitigation implementation prior to, during, and after construction. The City of Goleta shall site inspect to ensure basins are maintained and effectively mitigating impacts.

The following development standards are proposed to ensure that the project is consistent with existing National Pollutant Discharge Elimination System policies.

Mitigation H/WQ-6: Storm Water Pollution Prevention Plan. The applicant shall submit a copy of the Notice of Intent to obtain coverage under the Construction General Permit of the National Pollutant Discharge Elimination System issued by the California Regional Water Quality Control Board (addresses Impact H/WQ-3).

Plan Requirements and Timing. Prior to approval of Land Use Permits, the applicant shall submit a copy of the Notice of Intent and a copy of the required Storm Water Pollution Prevention Plan (SWPPP) to the City of Goleta. A copy of the SWPPP shall be maintained on the project site during grading and construction activities.

Monitoring. The City of Goleta shall review the SWPPP prior to approval of Land Use Permits. The City of Goleta shall site inspect during construction for compliance with the SWPPP.

Mitigation H/WQ-7: Storm Water Pollutants at Open Space Parking Site. The Open Space parking area shall be designed to minimize degradation of storm water quality. A site-specific Erosion and Sediment Control Plan shall be developed for the parking area. The Plan shall incorporate appropriate BMPs such as oil/water separators, sand filters, landscaped areas for infiltration, basins or other equivalent BMPs designed to intercept and effectively prohibit pollutants from discharging to onsite drainages. The BMPs selected shall be maintained

in working order. The Plan shall included long-term maintenance plans. The location and type of BMPs shall be shown on all site, building and grading plans (addresses Impact H/WQ-7).

Plan Requirements and Timing. The Erosion and Sediment Control Plan shall be reviewed and approved by the City of Goleta prior to approval of Land Use Permits. A copy of the Plan shall be maintained on the project site during grading and construction activities.

Monitoring. The City of Goleta shall monitor and inspect the site during construction and during post-construction for compliance with the Erosion and Sediment Control Plan.

Mitigation H/WQ-8: Storm Water Pollution Prevention at Comstock Development Site. The drainage plan for the Comstock Homes Development shall include provisions for treatment of all polluted run-off (i.e., from streets and driveways). The plan shall include specifications for the drains and treatment/filtration systems to be maintained in working order and shall assign enforceable responsibility for long-term inspection and maintenance (addresses Impact H/WQ-3).

Plan Requirements and Timing. The drainage plan shall contain specification plans. The plan shall be reviewed by the City of Goleta prior to approval of Land Use Permits.

Monitoring. The City of Goleta shall monitor mitigation implementation prior to, during, and after construction.

Mitigation H/WQ-9: Animal Waste Minimization. Animal waste minimization measures (e.g., mutt-mitt dispensers) shall be implemented in the vicinity of Devereux Creek, consistent with the Ellwood Mesa Open Space Plan recommendations. Mutt-mitt dispensers shall be installed and maintained by the Comstock Homes Development at appropriate Open Space access points within the Comstock Homes Development, and installed and maintained by the City of Goleta at public trailheads. Educational displays/signs shall be installed which provide information about water quality in the Devereux Creek watershed, and appropriate educational materials shall be incorporated into the Home Owners' Association literature. The displays shall include information pertaining to animal waste and surface water pollution prevention (addresses Impact H/WQ-11).

Plan Requirements and Timing. Animal waste minimization measures shall be depicted on the final drainage plan, subject to City of Goleta review and approval prior to approval of Land Use Permits. Animal waste minimization measures shall be implemented prior to occupancy clearance within the residential development and at the completion of the public parking area.

Monitoring. The City of Goleta shall inspect for all requirements prior to occupancy clearance and at completion of the public parking area.

Mitigation H/WQ-10: Landscape Management Plan. A Pesticide, Herbicide, and Fertilizer Maintenance Plan shall be prepared that minimizes the use of these materials in

common areas and private landscape areas, particularly during the rainy season. Biodegradable pesticides and herbicides shall be maximized. Grasses not generally susceptible to pest disease shall be planted in the common area turf areas.

Plan Requirements and Timing. The Pesticide, Herbicide, and Fertilizer Maintenance Plan shall incorporate the types of chemicals to be used and a procedure for their application during the rainy season. The plan shall be reviewed and approved by the City of Goleta and incorporated into the subdivision's landscape maintenance guidelines prior to issuance of Land Use Permits (*addresses Impacts H/WQ-3*).

Monitoring. The City of Goleta shall inspect for all requirements prior to occupancy clearance.

Mitigation H/WQ-11. If trail improvements are constructed at the Phelps Ditch Trail site, or if boardwalks, stairs, or other public access improvements are constructed in or across Devereux Creek, these improvements shall be constructed during the dry season. Construction methods shall include appropriate Best Management Practices to prevent construction equipment leaks or spills from entering Devereux Creek and Phelps Ditch. Structures shall not use chemically treated materials that could leach into water. Trails and structures shall be periodically inspected during the wet season to ensure structural integrity and avoidance of flood hazards or obstructions. Maintenance and repairs shall be performed as needed.

Project plans shall include provisions for construction in wetlands in consultation with appropriate State, federal and local agencies, including the Regional Water Quality Control Board, and U.S. Army Corps of Engineers, and other resource agencies, as appropriate. Work plans and project design details shall minimize the footprint of structures in wetlands, as feasible for safe public access.

Plan Requirements and Timing. Construction plans shall be reviewed and approved by the City of Goleta prior to issuance of Land Use Permits.

Monitoring. The City of Goleta shall inspect to ensure mitigation implementation during and after construction.

4.3.3.5 Residual Impacts

Mitigation Measures H/WQ-1, -2, -4, -5, and -6 would reduce potential off-site and on-site flooding impacts and erosion-induced sedimentation of Devereux Creek and Devereux Slough. The residual impact of Impacts H/WQ-1, -2, -3, -4, -5, and -6 would be reduced to less than significant levels. Water quality related measures H/WQ-5, -6, -7, -8, and -9 in combination with a state-mandated, site-specific SWPPP for the residential development, any necessary well-abandonment, site remediation, and/or trail improvements, and a site-specific Erosion and Sediment Control Plan for the public parking area, would ensure that the project is consistent with existing City of Goleta and National Pollutant Discharge Elimination System policies, and would result in mitigated surface water quality impacts below those established in the Water

Quality Objectives for Inland Surface Waters, as established in the Water Quality Control Plan (Basin Plan) for the Central Coast Region. The residual impacts of H/WQ-3, -7, and -8 would be less than significant. With the incorporation of Mitigation Measure H/WQ-10, the residual impact of H/WQ-9 and –10 would be less than significant. Therefore, the project's contribution to cumulative impacts H/WQ-11, -12, and -13 on Devereux Creek would be reduced to less than significant.