5.7 HYDROLOGY AND WATER QUALITY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential impacts to hydrology and water quality conditions in the City of Newport Beach from implementation of the Hyatt Regency Newport Beach expansion (proposed project). Hydrology deals with the distribution and circulation of water, both on land and underground. Water quality deals with the quality of surface and groundwater. Surface water is water on the surface of the land and includes lakes, rivers, streams, and creeks. Groundwater is water below the surface of the earth. The analysis in this section is based in part on the following technical reports:

- *Preliminary Hydrology/Hydraulic Report, Hyatt Regency Newport Beach,* Fuscoe Engineering, January 2007.
- *Water Quality Report, Hyatt Regency Newport Beach,* Fuscoe Engineering, January 24, 2007.
- *Geotechnical Feasibility Study, Proposed Additions, Hyatt Regency Newport Beach, 1107 Jamboree Road, Newport Beach, California*, Kleinfelder, November 29, 2005.

Copies of these reports are included in Appendix I of this DEIR. The Geotechnical Feasibility Study is included in Appendix F of this DEIR.

5.7.1 Environmental Setting

Climate and Precipitation

Climate in the City of Newport Beach is Mediterranean, characterized by warm summers, cool winters, and seasonal rainfall. Nearly all rain falls from late autumn to early spring; virtually no precipitation falls during the summer. The average annual rainfall in Newport Beach is approximately 12 inches. Potential evapotranspiration in the region exceeds precipitation on an annual basis, and, under natural conditions, the lower reaches of rivers that drain the watersheds are dry during the summer (Newport Beach 2006a).

Hydrologic Conditions

Watershed

A watershed is the geographic area draining into a river system, ocean, or other body of water through a single outlet and includes the receiving waters. Watersheds are usually bordered and separated from other watersheds by mountain ridges or other naturally elevated areas (OCWCRD 2006).

In Orange County there are 13 watersheds. The project site is located within the boundaries of the Newport Bay Watershed, which contains an interconnected system of surface water resources that feed into the underlying groundwater or drain into the ocean. The Newport Bay Watershed covers 13.2 square miles along the coast of central Orange County. This watershed encompasses most of the western portion of the City of Newport Beach and the eastern portion of Costa Mesa (see Figure 5.7-1, *Newport Bay Watershed*). The San Diego Creek drains into Upper Newport Bay. The East Costa Mesa and Santa Isabel channels, and other smaller channels of this watershed, drain into Newport Bay (OCWCRD 2006).

Regional Drainage

Generally, the City of Newport Beach provides storm drain service to the entire City. The Orange County Resources and Development Management Department maintains the regional drainage facilities in the City, including the Santa Ana River and San Diego Creek, and is described further in Flood Hazards, below.

The existing storm drain system owned and operated by the City consists of pipelines, catch basins, manholes, tide valves, open channels, and retention basins located throughout the system. Pipelines range from 3 to 120 inches in diameter, and are constructed of materials such as reinforced concrete, corrugated metal, plastic, ductile iron, steel, clay, and asbestos cement. Some segments of the system are over 50 years old, while other segments have been recently constructed (Newport Beach 2000b). Overall, urban street flooding is rarely considered a problem in the City of Newport Beach (Newport Beach 2003).

The City's storm drain system also includes retarding basins. These include the Koll Center retarding basin, located north of State Route 73 (SR-73), the Farallon/El Paseo retarding basin, located between Avocado Street and MacArthur Boulevard, near Fashion Island, and the Harbor View retarding basin, located between Corona del Mar and San Joaquin Hills Road. The purpose of these retarding basins is to reduce the flow rate within the respective downstream storm drain systems so that older, possibly undersized, downstream facilities will be able to carry the discharge from new development areas upstream (Newport Beach 2000b).

Project-Area Drainage

Currently, drainage for the project site is via surface flow. The golf course and central portion of the site drain toward the southern portion of the main hotel parking area into an existing collection drain in Jamboree Road. The northern, western, and southwestern portions of the site drain toward the northwestern portion of the main hotel parking area and into an existing collection drain in Back Bay Drive. Figure 5.7-2, *Existing Project Site Drainage Flow*, illustrates the existing drainage flow within the project site. Off-site flows from an existing storm drain on the south side of Jamboree Road are discharged to the project site near the parking lot and flow to a collection drain in Back Bay Drive.

Water Resources

Water resources for the City of Newport Beach are comprised of surface and groundwater sources.

Surface-Water Sources

The City of Newport Beach has over 30 miles of bay and ocean waterfront. Over 63 percent of the City is in the coastal zone. Surface-water resources such as freshwater wetlands, estuaries, tideland and submerged lands, reservoirs, and waterways are located within the City. Upper Newport Bay extends south of SR-73 to the Pacific Ocean, virtually dividing the City into east and west sides. This bay area makes up many of the tidelands and submerged lands in the City, and connects with the estuary waters south of it, including Newport Dunes, Lido Channel, and Newport Channel. An additional estuary is also located in the northern portion of the City, east of Upper Newport Bay and south of SR-73. Small amounts of freshwater wetlands are scattered throughout the central portion of the City east of Upper Newport Bay and North Star Beach (Newport Beach 2006a).

The City contains two aboveground reservoirs, Big Canyon and San Joaquin Reservoirs, which are located in the eastern portion of the City. Big Canyon Reservoir is about 0.25 mile north of San Joaquin Hills Road, and San Joaquin Reservoir is approximately 0.75 mile northeast of Big Canyon Reservoir. The main tributaries within the City are the Santa Ana River, San Diego Creek, and Big Canyon Wash.

Newport Bay Watershed

NOT TO SCALE

Source: Orange County Resources and Development Management Development

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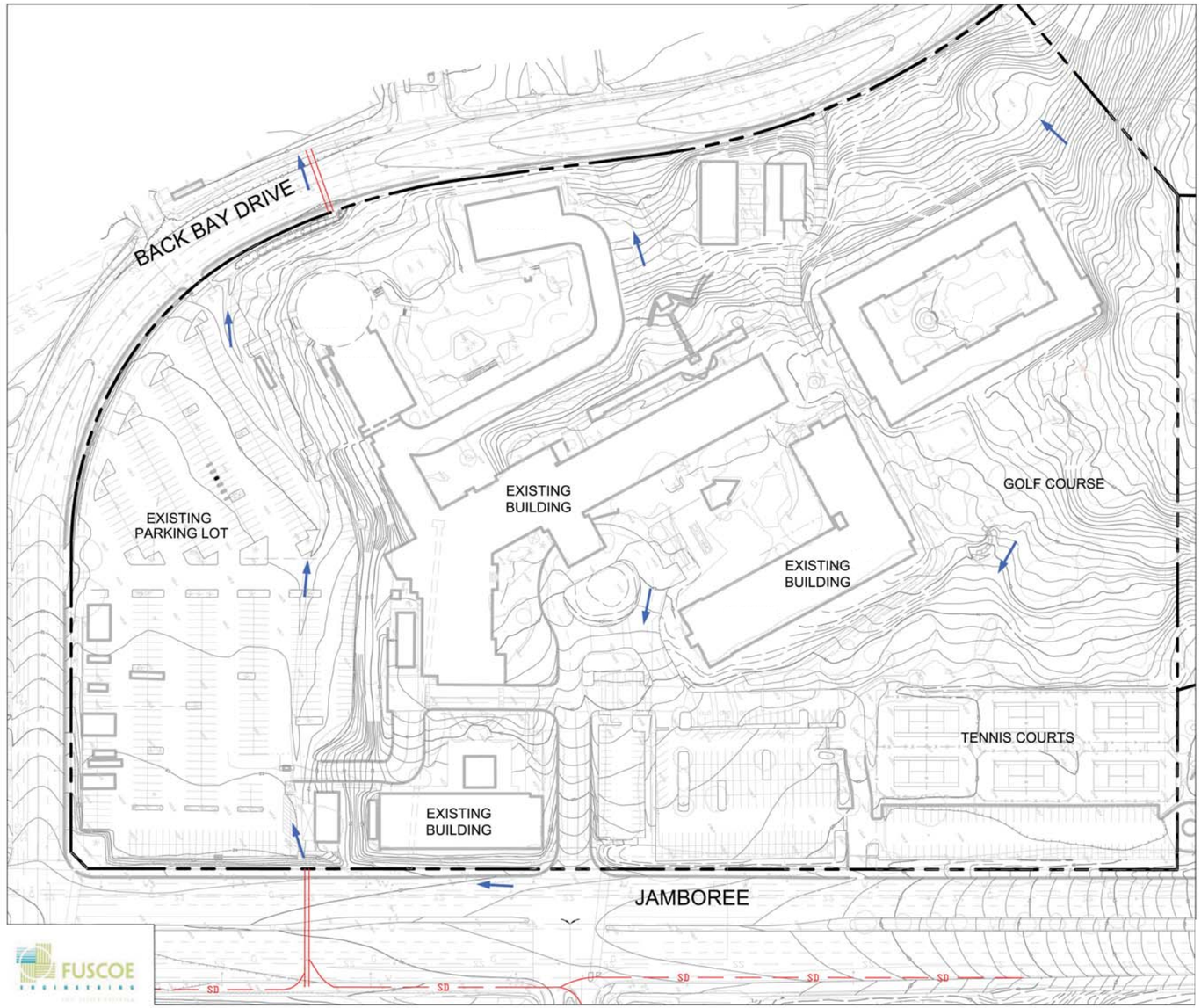
Existing Project Site Drainage Flow



LEGEND

PROJECT BOUNDARY

SD EXISTING STORM DRAIN

EXISTING FLOW DIRECTION

GRAPHIC SCALE

120 0 60 120 240

(IN FEET)

1 inch = 120 ft.

Source: Fuscoe Engineering

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Santa Ana River

Flowing over 100 miles from the San Bernardino Mountains to the Pacific Ocean, the Santa Ana River traverses portions of San Bernardino, Riverside, and Orange Counties. The river drains an area of over 2,700 square miles before flowing into the Pacific Ocean between Newport and Huntington Beaches (USGS 2003). The Santa Ana River transports more than 125 million gallons per day of reclaimed water from Riverside and San Bernardino Counties for recharge into the Orange County Groundwater Basin. This satisfies approximately 40 percent of the county's water demand (OCWCRD 2006b).

The Santa Ana River is the receiving waters of the urban, industrial, and agricultural runoff from the inland cities that it traverses, such as Santa Ana and Costa Mesa. Receiving water is defined as a river, lake, ocean, stream, or other body of water into which wastewater or treated effluent is discharged. The river also provides water for recreation and for aquatic and wildlife habitat in the inland cities.

Three components make up the flow of the water in the Santa Ana River, and the ratio of these components varies throughout the year. The first component is storm flows, directly resulting from rainfall, usually between the months of December and April. The rainfall and surface water runoff from the storms is captured and percolated into the groundwater basins. The baseflow makes up the second component of water supply, a large portion of which comes from the discharges of treated wastewater into the river, in addition to rising groundwater in the basin. This baseflow includes the non–point-source discharges, as well as the uncontrolled and unregulated agricultural and urban runoff. The third component of the water supply is imported water, which is characterized by the Santa Ana Regional Water Quality Control Board (SARWQCB) as nontributary flow (Newport Beach 2006a).

San Diego Creek

San Diego Creek is the main tributary to Newport Bay, has a drainage area of 118 miles, and drains all or portions of the cities of Irvine, Laguna Woods, Lake Forest, Newport Beach, Orange, and Tustin (Newport Beach 2003). Its headwaters lie about one mile east of the Interstate 5/Interstate 405 intersection, at an elevation of about 500 feet. The creek flows westerly from its headwaters and empties into Newport Bay in the vicinity of Jamboree Road, one mile west of the University of California at Irvine campus. Flooding on this creek has historically caused significant damage. Portions of San Diego Creek were channelized in 1968 for flood protection purposes. However, channelization of the creek also resulted in increased sediment flow into Upper Newport Bay, requiring extensive dredging projects to restore the ecosystem.

Big Canyon Wash

Big Canyon Wash drains from the Big Canyon Reservoir area in a northwesterly direction toward Upper Newport Bay. A wash is a dry riverbed, area, or channel that only contains water during the rainy season. These riverbeds are completely dry throughout most of the year. Washes are formed when flooding occurs on a desert plain. The ground does not easily absorb water, generating a large amount of runoff that collects in the wash area. While providing rich habitat for a variety of wildlife species, rainstorms in remote locations can result in flash flooding of local washes (Newport Beach 2006a).

Groundwater Sources

The Coastal Plain of the Orange County Groundwater Basin (Basin) underlies the northwestern portion of the City of Newport Beach and provides groundwater for much of central and northern Orange County, including the City of Newport Beach (CDWR 2003). The Basin underlies a coastal alluvial plain in the northwestern portion of Orange County, and is bounded by consolidated rocks exposed on the north in the Puente and Chino Hills. On the east are the Santa Ana Mountains, and on the south are the San Joaquin Hills. The Basin

is bounded by the Pacific Ocean on the southwest and by a low topographic divide approximated by the Orange County Los Angeles County line on the northwest. In addition, the Basin underlies the lower Santa Ana River watershed.

Shallow groundwater levels (less than 50 feet from the ground surface) are known to occur along the coast, around Newport Bay, and along the major drainages in the Newport Beach area. Shallow groundwater perched on bedrock may also be present seasonally in the canyons draining the San Joaquin Hills. Upper, middle, and lower aquifer systems are recognized in the Basin. Well yields range from 500 to 4,500 gallons per minute (gpm), but are generally 2,000 to 3,000 gpm. The total capacity of the Basin is approximately 38,000,000 acre-feet (Newport Beach 2006a).

Recharge to the Basin is derived from percolation of Santa Ana River flow, infiltration of precipitation, and injection into wells. The Santa Ana River flow contains natural flow, reclaimed water, and imported water that is spread in the Basin forebay, which is the upper region of the Basin. Infiltration primarily occurs in this area; the City of Newport Beach is in the pressure area of the Basin, which is an area that is not used for recharge (OCWD). There are no designated recharge areas in the City.

The Groundwater Replenishment System (GRS), a joint venture by OCWD and the Orange County Sanitation District (OCSD), will help reduce Orange County and Newport Beach's reliance on imported surface water by taking treated wastewater and returning it into the Basin via injection or passive settling. Sewer water will be purified using a state-of-the-art, three-step process—microfiltration, reverse osmosis, and ultraviolet light with hydrogen peroxide disinfection. Roughly half of the water from the GRS will be injected into Orange County's seawater barrier. The remaining water will be piped to recharge lakes in Anaheim, where the water will take the natural path of rainwater as it filters through clay, sand, and rock to the deep aquifers of the groundwater basin. The GRS-purified water will exceed all state and federal drinking-water standards and have water quality similar to, or better than, bottled water. The GRS will be online by 2007, and will produce approximately 70,000 acre-feet of water per year (OCWD 2006).

Water Quality

Surface Water Quality

As previously stated, the project site is located within the Newport Bay Watershed. More specifically, the proposed project would indirectly discharge to the Upper Newport Bay, which ultimately discharges into the Lower Newport Bay and the Pacific Ocean.

The beneficial uses of the downstream receiving water bodies of the proposed project include but are not limited to commercial and sport fishing, noncontact water recreation, and estuarine, marine, and wildlife habitat.

General water quality objectives have been prescribed in the Water Quality Control Plan (Basin Plan) for all enclosed bays and estuaries within the Santa Ana Region. Brief summaries of these objectives are provided in Table 5.7-1.

Table 5.7-1
Water Quality Objectives for Santa Ana Region Enclosed Bays and Estuaries

Element	Objective
Algae	Waste discharges shall not contribute to excessive algal growth.
Bacteria, Coliform	Due to SHEL designation, fecal coliform median concentration shall not be more than 14 MPN/100ml.
Chlorine	Chlorine residual shall not be present in discharges that exceed 0.1 mg/L.
Color	Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses.
Floating Material	Waters shall not contain floating materials including solids, liquids, foam, or scum in concentrations that cause nuisance or adversely affect beneficial uses.
Oil and Grease	Waters shall not contain oils and greases in concentrations that result in visible film or coating on the surface of the water, that cause nuisance, or that otherwise adversely affect beneficial uses.
Oxygen, Dissolved (DO)	The dissolved oxygen content shall not be depressed to levels that adversely affect beneficial uses
pH	The pH shall not be depressed below 7.0 or raised above 8.6 as a result of controllable water quality factors; ambient pH levels shall not be changed more than 0.2 units.
Radioactive Substances	Radioactive materials shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life.
Solid, Suspended, or Settleable Materials	Waters shall not contain solid, suspended, or settleable materials that cause nuisance or adversely affect beneficial uses as a result of controllable water quality factors.
Sulfides	Dissolved sulfide content shall not be increased as a result of controllable water quality factors.
Surfactants	Waste discharges shall not contain concentrations that will result in foam that would adversely affect aquatic life.
Taste and Odor	Waters shall not contain taste- or odor-producing substances in concentrations that cause nuisance or otherwise adversely affect beneficial uses.
Temperature	All bay and estuary waters shall meet the objective specified in the Thermal Plan.
Toxicity	Waters shall be maintained free of toxic substances in concentrations that are toxic to human, plant, animal, or aquatic life.
Turbidity	Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.

Source: Fuscoe Engineering, *Water Quality Report, Hyatt Regency Newport Beach*, January 2007.

Based on the 2002 section 303(d) list of Water Quality Limited Segments, the Upper Newport Bay is an impaired water body for metals and pesticides, and the Lower Newport Bay is listed as an impaired water body for metals, pesticides, and priority organics. The sources of these pollutant stressors include urban runoff, agriculture, and unknown sources (SWRCB 2003a). Currently, there are Total Maximum Daily Loads (TMDL) allocations for the Upper and Lower Newport Bay. In compliance with the TMDL requirements, routine monitoring programs have been developed to determine compliance with the water quality objectives and the TMDL requirements (Fuscoe 2007a).

Ground Water Quality

The proposed project is situated within the Irvine Groundwater Management Zone of the Lower Santa Ana River Basin. The Irvine Groundwater Management Zone was identified in the Basin Plan as having three beneficial uses. They are:

- MUN – municipal and domestic supply
- IND – industrial service supply
- AGR – agricultural supply

Specific water quality objectives have been established for the Irvine Groundwater Management Zone to maintain its three beneficial uses. In addition to specific water quality objectives, narrative objectives for all

groundwaters in the Santa Ana Region also apply to the Irvine Groundwater Management Zone. Brief summaries of these objectives are summarized in Table 5.7-2.

Table 5.7-2
Water Quality Objectives for All Groundwaters of the Santa Ana Region

Element	*Objective*			
Arsenic	Not to exceed 0.05 mg/L.			
Bacteria	Concentration of coliform organisms shall be less than 2.2 / 100 mL over any seven-day period.			
Barium	Not to exceed 1.0 mg/L.			
Boron	Not to exceed 0.75 mg/L.			
Color	Waste discharges shall not result in coloration of receiving waters that causes a nuisance or adversely affect beneficial uses.			
Cyanide	Not to exceed 0.2 mg/L.			
Fluoride	Not to exceed 1.0 mg/L.			
Metals	**Metal**	**Concentration (mg/L)**	**Metal**	**Concentration**
	Cadmium	0.01	Lead	0.05
	Chromium	0.05	Manganese	0.05
	Cobalt	0.2	Mercury	0.002
	Copper	1.0	Selenium	0.01
	Iron	0.3	Silver	0.05
MBAS	Not to exceed 0.05 mg/L.			
Oil and Grease	Waste discharges shall not result in deposition of oil, grease, wax, or other materials in concentrations that cause a nuisance or adversely affect beneficial uses.			
pH	The pH shall not be depressed below 6 or raised above 9 as a result of controllable water quality factors.			
Radioactivity	Radioactive materials shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life, and shall meet the limits specified Title 22 California Code of Regulations.			
Taste and Odor	Groundwaters shall not contain taste- or odor-producing substances that cause nuisance or adversely affect beneficial uses.			
Toxicity	Waters shall be maintained free of toxic substances in concentrations that are toxic to human, plant, animal, or aquatic life.			

Source: Fuscoe Engineering, *Water Quality Report, Hyatt Regency Newport Beach*, January 2007.

Although the Orange County Water District administers a water quality monitoring program throughout Orange County, there are no monitoring wells within the vicinity of the project site (Fuscoe 2007a).

It is generally acknowledged that there are typically high sodium (Na) concentrations for groundwater within the area, which is due to saltwater intrusion from the Pacific Ocean. The GRS specifically tackles this issue of saltwater intrusion. As part of the GRS project, treated water is injected into groundwater basins within northern and central Orange County, which will expand the seawater intrusion barrier that keeps the Pacific Ocean out of the geologically connected basins near the coast. Ultimately, the GRS will aid in the reduction of Na concentrations in Orange County's groundwater basins and help the region meet groundwater quality objectives established in the Santa Ana Basin Plan.

Drinking Water Quality

The drinking water supply for the City is a blend of mostly groundwater from the Basin and surface water imported by MWD (Newport Beach 2006a).

Flood Hazards

Flood Zones

Storm-induced flood hazards in Newport Beach can be classified into two general categories: flash flooding from small, natural channels, and more moderate and sustained flooding from the Santa Ana River and San Diego Creek.

The 100- and 500-year flood zones have been identified by the Federal Emergency Management Agency (FEMA), and include the low-lying areas in West Newport at the base of the bluffs, the coastal areas which surround Newport Bay, and all low-lying areas adjacent to Upper Newport Bay. 100- and 500-year flooding is also anticipated to occur along the lower reaches of Coyote Canyon, in the lower reaches of San Diego Creek and the Santa Ana Delhi Channel, and in a portion of Buck Gully. Most flooding along these second- and third-order streams is not expected to impact significant development. However, flooding in the coastal areas of the City will impact residential and commercial zones along West Newport, the Balboa Peninsula and Balboa Island, and the seaward side of Pacific Coast Highway. Figure 5.7-3, *Flood Hazards*, shows the 100- and 500-year flood zones and the project location as it relates to the flood zones (Newport Beach 2006b). As this figure shows, the project site is not located within a designated flood zone.

Coastal Flood Hazards

Newport Beach is susceptible to low-probability but high-risk events such as tsunamis, and more common hazards such as storm surges and coastal erosion. Each of these has a potential to significantly impact Newport Beach residents and the built environment. Figure 5.7-4, *Coastal Hazards*, shows the tsunami inundation areas, and areas subject to coastal erosion. As this figure shows, the project site is not located within a coastal flood-hazard area.

Tsunamis and Rogue Waves

Newport Beach is generally protected from most distantly generated tsunamis by the Channel Islands and Point Arguello, except for those generated in the Aleutian Islands, off the coast of Chile, and possibly off the coast of Central America. Nevertheless, since the early 1800s, more than 30 tsunamis have been recorded in southern California, and at least 6 of these caused damage in the area, although not necessarily in Newport Beach. Tsunamis generated in the Alaskan region take approximately 6 hours to arrive in the southern California area, while tsunamis generated off the Chilean coast take 12 to 15 hours. Given those timeframes, coastal communities in southern California can receive adequate warning, allowing them to implement evacuation procedures (Newport Beach 2006b).

Alternatively, very little warning time, if any, can be expected from locally generated tsunamis caused by faulting or landsliding immediately offshore from Newport Beach. These tsunamis have the potential to be worst-case scenarios for the coastal communities in Orange County. Modeling off the Santa Barbara coast suggests that locally generated tsunamis can cause waves between 6 to 60 feet high, and that these could impact the coastline with almost no warning, within minutes of the causative earthquake or slump. Areas within Newport Beach that are most likely to be impacted by a tsunami include West Newport, Balboa Peninsula, Lido Isle, Balboa Island, and Upper Newport Bay (Newport Beach 2006b).

Rogue waves are very high waves that arise unexpectedly in the open ocean. These waves are difficult to plan for as they are unpredictable. Rogue waves have historically impacted the Orange County coast and have the potential to impact Newport Beach in the future.

Storm Surges

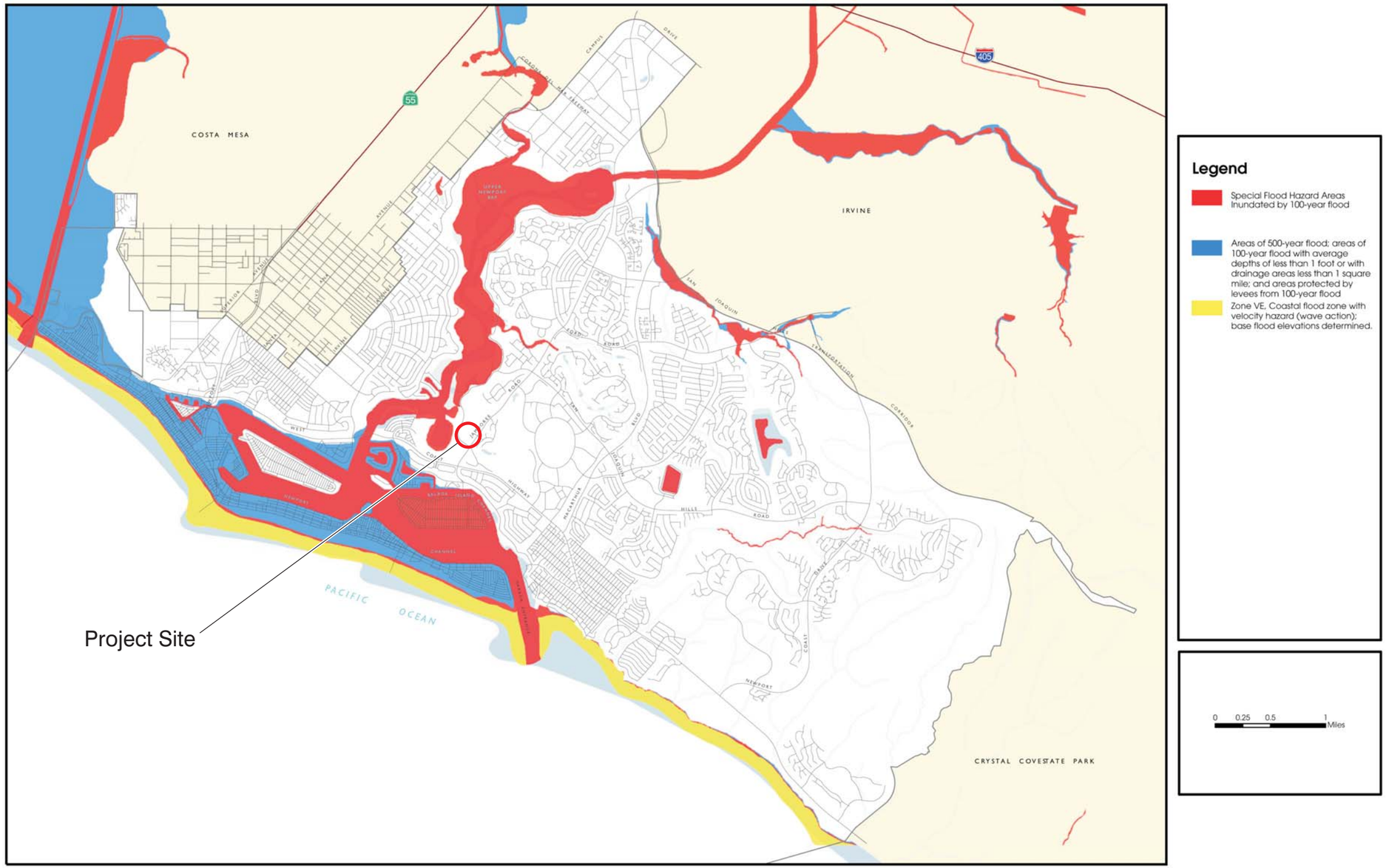
Unlike tsunamis, which can occur anytime, storm surges are associated with inclement weather. Given that fewer people are expected to be at the beach during inclement weather, storm surges are more likely to impact residents than tourists, and the potential number of casualties can be expected to be significantly less than tsunamis. The most common problem associated with storm surges is flooding of low-lying areas, including structures. This is often compounded by intense rainfall and strong winds. If a storm surge occurs during high tide, the flooded area can be significant. Coastal flooding in Newport Beach has occurred in the past when major storms, many of these El Niño Southern Oscillation events, impacted the area. Storm surging associated with a tropical storm has been reported only once in the history of Newport Beach, in 1939. This suggests that the hazard of cyclone-induced storm surges has a low probability of occurrence (Newport Beach 2006b).

Coastal Erosion

Newport Beach has a variety of coastal features ranging from replenished beach sands in West Newport to steep bluffs comprised of sandstone and siltstone to the south of Corona del Mar. Significant coastal-bluff retreat, bluff-top erosion, gullying, and beach erosion are occurring along the eastern Newport shoreline, and the rates of erosion are dependent on the underlying geologic units and their different responses to the weathering effects of water (including rain and waves), gravity, and wind. Coastal erosion occurs as a result of natural processes such as long-shore drift, storm surge, and sea level rise. Sea-bluff erosion occurs as a result of processes that impact both the bottom and top of the cliffs. Pounding of the waves during high tide and storm surges causes considerable damage to the bottom of the bluffs. If the sediments exposed in this zone are soft and highly erodible, eventual collapse of the bluff can occur as it is undercut by wave action. Uncontrolled surface runoff, if allowed to flow over the top of the bluffs, can cause extensive erosion in the form of rills and gullies. During wet years, large canyons can develop quickly, often as a result of a single storm. Unchecked foot and vehicular traffic and rodent burrowing can also cause significant damage at the top of the bluffs. Increased irrigation associated with agricultural and residential watering can lubricate fine-grained layers in the sediments or bedrock forming the cliffs, leading to failure as a result of landsliding.

The protection of the beaches from coastal erosion, through effective structural devices and sand replenishment, provides more than just a wider beach; it serves as a buffer zone that provides protection from tsunami run-up or storm surges, especially in areas where there are no dune deposits in front of residential or commercial development.

Flood Hazards



Source: EIP Associates

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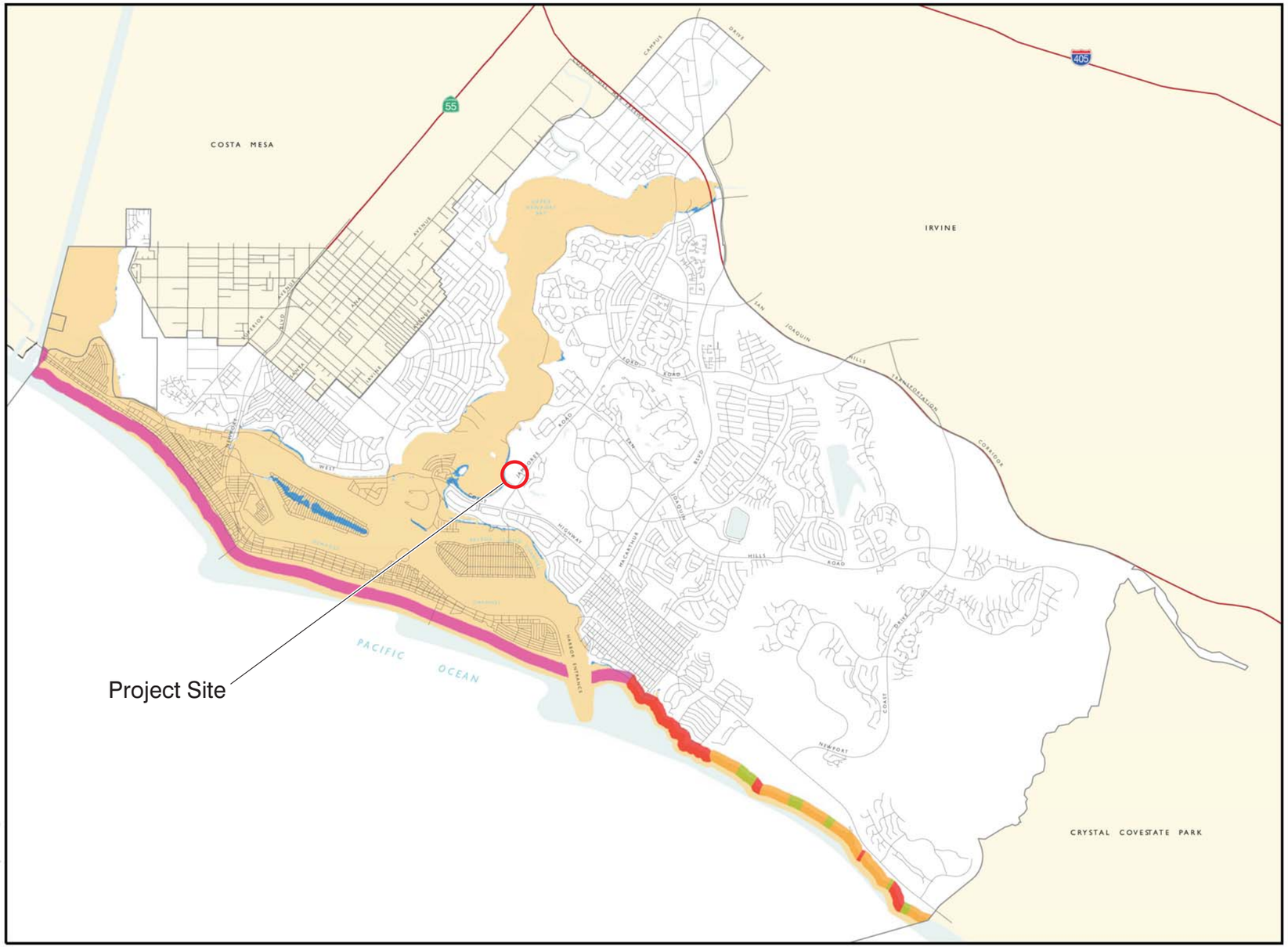
Coastal Hazards



Source: EIP Associates

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Seismically Induced Inundation

Seismically induced inundation, which refers to flooding that results when water retention structures fail due to an earthquake, can also occur in the City. Portions of Newport Beach are threatened by flooding from Prado Dam, Santiago Creek Reservoir, Villa Park Reservoir, San Joaquin Reservoir, Big Canyon Reservoir, and Harbor View Reservoir. Seismically induced inundation can also occur if strong ground shaking causes structural damage to aboveground water tanks. Currently, there are no existing or planned aboveground water tanks in the City (Newport Beach 2006a).

Reservoirs, lakes, ponds, swimming pools, and other enclosed bodies of water are subject to potentially damaging oscillations (sloshing) called seiches. This hazard is dependent upon specific earthquake parameters (e.g., frequency of the seismic waves, distance and direction from the epicenter), as well as site-specific design of the enclosed bodies of water, and thus is difficult to predict. Areas of the City that may be vulnerable to this hazard are primarily improvements located next to waterways, such as Newport Harbor and the southern part of Upper Newport Bay. However, the probability that damaging seiches would develop in these bodies of water was considered low in the 1975 Newport Beach Safety Element. The Hazards Assessment Study within the 2004 Technical Background Report concludes that no new information has been found to indicate otherwise (Newport Beach 2003).

Various flood-control measures have helped mitigate flood damage in the City, including reservoirs in the San Joaquin Hills and Santa Ana Mountain foothills and channel alterations for the Santa Ana River. These structures help regulate flow in the Santa Ana River, San Diego Creek, and smaller streams, and hold back some of the flow during intense rainfall periods that could otherwise overwhelm the storm drain system in Newport Beach (Newport Beach 2006b). In addition, the City's storm drain system includes mechanisms that minimize flood hazards resulting from high-tide events.

Regulatory Background

Local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized below. They designed to achieve regional water quality objectives and thereby protect the beneficial uses of the region's surface and groundwater.

Federal

Clean Water Act

The Clean Water Act (CWA) is a 1977 amendment to the Federal Water Pollution Control Act of 1972. The CWA is the principal statute governing water quality. It establishes the basic structure for regulating discharges of pollutants into the waters of the United States[1] and gives the federal Environmental Protection Agency (EPA) the authority to implement pollution-control programs, such as setting wastewater standards for industry. The statute's goal is to end all discharges entirely and to restore, maintain, and preserve the integrity of the nation's waters. The CWA regulates both the direct and indirect discharge of pollutants into the nation's waters. The CWA sets water quality standards for all contaminants in surface waters and makes it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit is obtained under its provisions. The CWA mandates permits for wastewater and stormwater discharges, requires states to establish site-specific water quality standards for navigable bodies of water, and regulates other activities that affect water quality, such as dredging and the filling of wetlands. The CWA also funded the construction of sewage treatment plants and recognized the need for planning to address

[1] Waters of the United States, generally include surface waters—lakes, rivers streams, bays, the ocean, dry streambeds, wetlands, and storm sewers that are tributary to any surface water body.

nonpoint sources of pollution. The following CWA Sections assist in ensuring water quality in surrounding water bodies.

- Section 208 of the CWA requires the use of best management practices (BMPs) to control discharge of pollutants in stormwater during construction.

- Section 303(d) requires creation of a list of impaired water bodies by states, territories, and authorized tribes; evaluation of lawful activities that may impact impaired water bodies;[2] and preparation of plans to improve the quality of these water bodies. Water bodies on the list do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution-control technology.

- Section 401 of the CWA requires any project that needs a federal permit (such as a Section 404 permit) to allow discharge to waters of the U.S. to also obtain state certification that the activity would not violate water quality standards.

- Section 402(p) establishes a framework to control water pollution by regulating point-source discharges under the National Pollutant Discharge Elimination System (NPDES) permit program. Point-source discharges are readily identifiable, discrete inputs where waste is discharged to the receiving waters from a pipe or drain. Nonpoint discharges occur over a wide area and are associated with particular land uses (such as urban runoff from streets and stormwater from construction sites).

- Section 404 authorizes the U.S. Army Corps of Engineers to require permits for projects that will discharge dredge or fill materials into waters of the U.S., including wetlands.

State

California Coastal Act (1976)

The California Coastal Act established a permanent Coastal Commission whose mandate is to protect and enhance the resources of the coastal zone mapped by the State Legislature. The goals of the Coastal Act are as follows:

- Protect, maintain and, where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources.
- Assure orderly, balanced utilization and conservation of coastal zone resources taking into account the social and economic needs of the people of the State.
- Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of private property owners.
- Assure priority for coastal-dependent and coastal-related development over other development on the coast.
- Encourage State and local initiatives and cooperation in preparing procedures to implement coordinated planning and development for mutually beneficial uses, including educational uses, in the coastal zone.

[2] Impaired water bodies, and water bodies that do not meet, or are not expected to meet, water quality standards.

Implementation of Coastal Act policies designed to achieve the above goals is accomplished primarily through the preparation of a Local Coastal Program (LCP), reviewed and approved by the Coastal Commission. An LCP typically consists of a land use plan and an implementation plan. The land use plan indicates the kinds, location, and intensity of land uses, the applicable resource-protection and development policies, and, where necessary, a listing of implementing actions. The implementation plan consists of the zoning ordinances, zoning district maps, and other legal instruments necessary to implement the land use plan. Any amendments to the certified LCP would require review and approval by the Coastal Commission prior to becoming effective.

The Coastal Land Use Plan (CLUP) prepared as part of the City's LCP is described further in Local Regulations, below.

SARWQCB National Pollutant Discharge Elimination System Permit

Industrial facilities and construction sites are regulated by the SWRCB through general stormwater permits. Cities and counties are regulated through permits issued by the Regional Water Quality Control Boards (RWQCBs). Since 1990, operators of large storm drain systems such as the City of Newport Beach's have been required to do the following:

- Develop a stormwater management program designed to prevent harmful pollutants from being dumped or washed by stormwater runoff, into the stormwater system, then discharged into local waterbodies

- Obtain a NPDES permit

The NPDES permit programs in California are administered by the SWRCB and by nine regional boards that issue NPDES permits and enforce regulations within their respective region. Newport Beach lies within the jurisdiction of the Santa Ana Region. This regional board issues permits to the Orange County Permittees, which includes the County of Orange, Orange County Flood Control District, and incorporated cities of Orange County. Since the program's inception, the County of Orange has served as the principal permittee.

The City of Newport Beach is listed as a co-permittee for the SARWQCB's NPDES permit and is bound to comply with all the aspects of the permit requirements. Therefore, the Hyatt Regency Newport Beach is under the jurisdiction of the SARWQCB. The City holds a NPDES permit to operate its municipal separate storm sewer systems (MS4s). Newport Beach's MS4 permit (adopted January 2002) directs it to keep pollutants out of its MS4s to the maximum extent practicable and to ensure that dry-weather flows entering recreational waters from the MS4s do not cause or contribute to exceedances of water quality standards. The permit requires the City to do the following:

- Control contaminants into storm drain systems
- Educate the public about stormwater impacts
- Detect and eliminate illicit discharges
- Control runoff from construction sites
- Implement BMPs and site-specific runoff controls and treatments for new development and redevelopment
- Prevent pollution from municipal operations, including fixed facilities and field activities
- Inspect industrial and commercial sites for compliance with NPDES regulations

In addition to managing municipal stormwater discharges, the NPDES permit program requires permitting of construction-related stormwater discharges. Specifically, development that is greater than one acre in size is required to comply with the provisions of the General Construction Activity Stormwater Permit adopted by the

SWRCB. Under this permit, applicants are required to prepare, retain, and implement at the construction site a Stormwater Pollution Prevention Plan (SWPPP). In addition, the permit would require the employment of BMPs to limit the extent of eroded materials from discharging into the City's drainage system and affecting water quality. BMPs would consist of any activity, prohibition, practice, procedure, program, or other measure designed to prevent or reduce the discharge of pollutants directly or indirectly into the City's drainage system. Under these regulations, implementation of programs and practices to control polluted stormwater runoff are required, including the inspection of construction sites and enforcement actions against violators.

Furthermore, Provision C.3 of the General Construction Activity Stormwater Permit requires local municipalities to evaluate water quality effects and identify appropriate mitigation measures when they conduct environmental review of proposed projects. In order to implement Clean Water Act provisions governing discharges to municipal storm drains, Provision C.3 requires new and redevelopment projects that would modify hydrographs (i.e., create or replace impervious area) to treat and/or detain stormwater runoff before it is discharged to creeks or storm drains. The primary goals of Provision C.3 are to protect water quality by minimizing sediment and other pollutants in site runoff, and to prevent downstream erosion by ensuring that postproject runoff and volume do not exceed preproject runoff and volume.

General Construction Permit

According to the USEPA, construction sites without proper sediment and erosion controls can discharge 10 to 20 times the sediment load of agricultural lands and 1,000 to 2,000 times that of forest lands (US EPA 1999b). The General Construction Permit (GCP), Waste Discharge Requirements (WDRs) Order 99-08-DWQ, NPDES Permit No. CAS000002, regulates stormwater discharges associated with construction activities disturbing one acre or greater of soil. Construction sites that qualify must submit a Notice of Intent (NOI) to file for permit coverage or otherwise be in violation of the CWA.

The General Construction Permit "requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP should contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project site. The SWPPP must list Best Management Practices (BMPs) [that will achieve BCT and BAT performance standards] the discharger will use to protect stormwater runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for 'non-visible' pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP" (SWRCB 2003b).

The proposed project redevelopment area encompasses approximately 15 acres, and is therefore subject to the stormwater discharge requirements of the GCP. The proposed project would require NPDES permit coverage prior to the commencement of soil-disturbing activities. In the Santa Ana Region, where the proposed project resides, the SWRCB is the permitting authority, while the SARWQCB provides local oversight and enforcement of the GCP.

De Minimus Permit for San Diego Creek/Newport Bay Watershed

The Santa Ana RWQCB requires a permit for short-term (intermittent and/ or one year or less duration) discharges from activities involving groundwater extraction and discharge within the Newport Bay Watersheds. Under Order No. R8-2004-0021, NPDES No. CAG998002, permittees shall be required to monitor their discharges from groundwater dewatering activities during construction to ensure that proposed effluent limitations for constituents, such as selenium, are not exceeded.

Due to its relative proximity to Upper Newport Bay and its groundwater quality concerns referenced in the tentative De Minimus Permit, the proposed project may encounter groundwater during construction activities and may require dewatering. The proposed project is, therefore, subject to the requirements of the General Waste Discharge Requirements for Short-Term Groundwater Related Discharges and De Minimus Wastewater Discharges to Surface Waters within the San Diego Creek/ Newport Bay Watershed (Order No. R8-2004-0021, NPDES No. CAG998002) if groundwater dewatering is required at any time during the construction of the project.

Santa Ana River Basin Water Quality Control Plan (Basin Plan)

The document for each region of the SWRCB's jurisdiction is the Basin Plan. It is the foundation for the regulatory programs of each of the nine RWQCBs. The Basin Plan documents the beneficial uses of the region's ground and surface waters, existing water quality conditions, problems, and goals, and actions by the regional board and others that are necessary to achieve and maintain water quality standards.

The RWQCBs implement the SWRCB's Guidelines for Regulation of Water Reclamation and issue waste discharge permits that serve to regulate the quality of reclaimed water based on stringent water quality requirements. The State Department of Health Services develops policies protecting human health and comments and advises on RWQCB permits.

Local

Orange County MS4 Permit (Santa Ana Region)

In January 2002, the SARWQCB issued an MS4 stormwater permit, WDRs Order No. R8-2002-0010, NPDES Permit No. CAS618030, to the County of Orange and the incorporated cities of Orange County within the Santa Ana Region.

Whereas the General Industrial Permit and GCP are issued statewide, MS4 permits are issued by local RWQCBs in order to provide the permits with the means to address stormwater quality issues specific to the local watershed or region. As a result, MS4 permits are a more prescriptive level of regulation, requiring permittees to develop and implement a stormwater-management program with the goal of reducing the discharge of pollutants to the maximum extent practicable (MEP). The MEP standard is a more stringent performance standard than BCT/ BAT established for both the General Industrial Permit and GCP. The stormwater management program or Drainage Area Management Plan (DAMP), as it is referred to in the Orange County MS4 Permit, must specify SARWQCB-approved BMPs to address the following program areas: public education and outreach, illicit discharge detection and elimination, construction and postconstruction, and good housekeeping for municipal operations (SWRCB 2003c).

The proposed project and its facilities would discharge into the MS4 within the jurisdiction of the City of Newport Beach. Pursuant to the Orange County MS4 Permit, the City is responsible for controlling or limiting urban pollutants generated by construction and postconstruction activities from reaching their MS4s. The proposed project is, therefore, subject to the requirements of the Orange County MS4 Permit (Santa Ana Region) as it is applied by the permittee and its co-permittees.

Coastal Land Use Plan

The CLUP of the City of Newport Beach LCP was prepared in accordance with the California Coastal Act of 1976, approved by the California Coastal Commission in October 2005, and adopted in December 2005. The CLUP sets forth goals, objectives, and policies that govern the use of land and water and the protection of coastal resources in the coastal zone within the City of Newport Beach and its Sphere of Influence. The

policies contained in the CLUP address public access, recreation, marine environment, land resources, and residential and commercial development.

City of Newport Beach General Plan

Water quality is addressed in the Natural Resources Element of the City's General Plan. Of particular application to the proposed project are Goal NR 3 and NR 4 of the General Plan Natural Resources Element. The goals are supported by the following policies:

Goal NR 3 *Enhancement and protection of water quality of all natural water bodies, including coastal waters, creeks, bays, harbors, and wetlands.*

NR 3.4 **Storm Drain Sewer System Permit (page 10-19).** Require all development to comply with the regulations under the City's municipal separate storm drain system permit under the National Pollutant Discharge Elimination System.

NR 3.9 **Water Quality Management Plan (page 10-20).** Require new development applications to include a Water Quality Management Plan (WQMP) to minimize runoff from rainfall events during construction and post-construction.

NR 3.10 **Best Management Practices (page 10-20).** Implement and improve upon Best Management Practices (BMPs) for residences, businesses, development projects, and City operations.

NR 3.11 **Site Design and Source Control (page 10-20).** Include site design and source control BMPs in all developments. When the combination of site design and source control BMPs are not sufficient to protect water quality as required by the National Pollutant Discharge Elimination System (NPDES), structural treatment BMPs will be implemented along with site design and source control measures.

NR 3.14 **Runoff Reduction on Private Property (page 10-20).** Retain runoff on private property to prevent the transport of pollutants into natural water bodies, to the maximum extent practicable.

NR 3.15 **Street Drainage Systems (page 10-20).** Require all street drainage systems and other physical improvements created by the City, or developers of new subdivisions, to be designed, constructed, and maintained to minimize adverse impacts on water quality. Investigate the possibility of treating or diverting street drainage to minimize impacts to water bodies.

NR 3.17 **Parking Lots and Rights-of-Way (page 10-21).** Require that parking lots and public and private rights-of-way be maintained and cleaned frequently to remove debris and contaminated residue.

NR 3.19 **Natural Drainage Systems (page 10-21).** Require incorporation of natural drainage systems and stormwater detention facilities into new developments, where appropriate and feasible, to retain stormwater in order to increase groundwater recharge.

NR 3.20 **Impervious Surfaces (page 10-21).** Require new development and public improvements to minimize the creation of and increases in impervious surfaces, especially directly connected impervious areas, to the maximum extent practicable. Require redevelopment to increase area of pervious surfaces, where feasible.

Goal NR 4 *Maintenance of water quality standards through compliance with the total maximum daily loads (TMDLs) standards.*

NR 4.4 **Erosion Minimization (page 10-22).** Require grading/erosion control plans with structural BMPs that prevent or minimize erosion during and after construction for development on steep slopes, graded, or disturbed areas.

City of Newport Beach Council Policies

City Council Policy L-18: This policy, along with Policy L-22, is intended to minimize dry-weather runoff and runoff from small rain events (collectively referred to as "runoff" in this Policy) in an effort to improve water quality of Newport Bay, water quality-limited receiving waters (like Buck Gully) and the near-shore ocean environment. The motivation for this Policy, in addition to the community's interest in clean water, is in part the adoption of new regulations upon the City of Newport Beach by the California Regional Water Quality Control Board, Santa Ana Region ("Regional Board") contained in the Regional Board's Order # R8-2002-0010, NPDES No. CAS618030.

Whenever possible, runoff should be retained on private property to prevent the transport of these pollutants. Reduction, retention or diversion of runoff can benefit property owners through water conservation and reuse of water that would otherwise drain to the City's street drainage system and our harbors, bays, and ocean (Newport Beach 2002a).

City Council Policy L-22: This policy, along with Policy L-18, is intended to minimize dry-weather runoff and runoff from small rain events (collectively referred to as "runoff" in this Policy) in an effort to improve water quality of Newport Bay, water quality-limited receiving waters (like Buck Gully) and the near-shore ocean environment. The motivation for this Policy, in addition to the community's interest in clean water, is in part the adoption of new regulations upon the City of Newport Beach by the California Regional Water Quality Control Board, Santa Ana Region ("Regional Board") contained in the Regional Board's Order # R8-2002-0010, NPDES No. CAS618030.

New development or redevelopment presents the City and the public with the opportunity to reduce the impacts of runoff that would otherwise drain to the City's street drainage system and the harbors, bays, and ocean. At the time of submittal of an application for a new development or redevelopment project, an applicant shall submit a Water Quality Management Plan (WQMP) to the City. The WQMP's purpose is to minimize to the maximum extent practicable dry weather runoff and runoff from small storms (less than 3/4" of rain falling over a 24-hour period) during construction and postconstruction from the property (Newport Beach 2002a).

City of Newport Beach Municipal Code

Chapter 14.34 (Water Well Standards): The purpose of the water-well standards contained in Chapter 14.34 of the City's Municipal Code is to control the construction and reconstruction of water wells such that the City's groundwater quality will not be impaired. Chapter 14.34 also provides for the destruction of abandoned or nuisance wells so that they will not impair the quality of groundwater.

Chapter 14.36 (Water Quality): Chapter 14.36 of the City's Municipal Code requires the City to participate as a co-permittee under the NPDES permits in the development and adoption of an ordinance to accomplish the requirements of the CWA. The purpose of this chapter is for the City to participate in the improvement of water quality and comply with federal requirements for the control of urban pollutants to stormwater runoff, which enters the network of storm drains throughout Orange County.

Chapter 15.10 (Excavation and Grading Code): As required by the City's Municipal Code, grading activities shall obtain a grading permit from the City's Building Official. The Building Official also issues drainage permits as appropriate. Chapter 15.10 contains grading, fill, drainage, and erosion-control standards that shall be applied to the corresponding construction activity. The purpose of this chapter is to safeguard life, limb, property, and the public welfare by regulating grading, drainage, and hillside construction on private property, and for similar improvement proposed by private interests on City right-of-way where regulations are not otherwise exercised.

Chapter 15.50 (Flood Damage Prevention): The purpose of Chapter 15.50 of the City's Municipal Code is to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions. To accomplish this purpose, this chapter includes methods and provisions to do the following:

- Restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities
- Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction
- Control the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters
- Control filling, grading, dredging, and other development which may increase flood damage
- Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas

Chapter 19.24 (Subdivision Design): Chapter 19.24 of the City's Municipal Code contains slope, grading, drainage, and flood-protection provisions specific to the development of subdivisions.

5.7.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

HYD-1 Violate any water quality standards or waste discharge requirements.

HYD-3 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 a substantial erosion or siltation on- or off-site.

HYD-4 Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

HYD-5 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.

HYD-6 Otherwise substantially degrade water quality.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

HYD-2 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).

HYD-7 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.

HYD-8 Place within a 100-year flood hazard area structures which would impede or redirect flood flows.

HYD-9 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.

HYD-10 Be subject to inundation by seiche, tsunami, or mudflow.

These impacts will not be addressed in the following analysis.

5.7.3 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

IMPACT 5.7-1: THE PROPOSED PROJECT WOULD NOT VIOLATE ANY WATER QUALITY STANDARDS OR WASTE-DISCHARGE REQUIREMENTS, PROVIDE SUBSTANTIAL ADDITIONAL SOURCES OF POLLUTED RUNOFF, OR OTHERWISE DEGRADE WATER QUALITY. [THRESHOLDS HYD-1, HYD-5, AND HYD-6]

Impact Analysis: Urban runoff resulting from storms or nuisance flows (runoff during dry periods) from development projects can carry pollutants to receiving waters. Runoff can contain pollutants such as oil, fertilizers, pesticides, trash, soil, and animal waste. This runoff can flow directly into local streams or lakes or into storm drains and continue through pipes until it is released untreated into a local waterway and eventually the ocean. Untreated stormwater runoff degrades water quality in surface waters and groundwater and can affect drinking water, human health, and plant and animal habitats. Additionally, increased runoff from urban surfaces can increase the intensity of flooding and erosion.

The construction and operational phases of the proposed project could have the potential to impact water quality. Construction activities associated with the proposed project may impact water quality due to sheet erosion of exposed soils. The operational phase would alter the existing land uses of the project site and would, consequently, alter the anticipated and potential pollutant sources generated at the site. The following is a discussion of the potential impacts that the construction and operational phases of the proposed project could have on water resources and quality.

Construction Phase

Clearing, grading, excavation and construction activities associated with the proposed project may impact water quality due to sheet erosion of exposed soils and subsequent deposition of particles and pollutants in drainage areas. Grading activities, in particular, lead to exposed areas of loose soil, as well as sediment stockpiles, that are susceptible to uncontrolled sheet flow. The use of materials such as fuels, solvents, and paints also present a risk to surface-water quality due to an increased potential for nonvisible pollutants entering the storm drain system.

If uncontrolled, these materials could lead to water quality impacts including the discharge of sediment-laden runoff, prohibited non-stormwater discharges, and ultimately the degradation of downstream receiving water bodies, such as the Upper and Lower Newport Bay, of which sedimentation is a major water quality concern. The soil-disturbing activities associated with the proposed project necessitate the implementation of an SWPPP and related construction BMPs, with the best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT).

Under the Statewide General Construction NPDES Permit No. CAS000002 (Order 99-08-DWQ), the project proponent is required to submit an NOI to the SWRCB prior to the commencement of construction activities. In addition, an SWPPP must be prepared and implemented at the project site, and revised as necessary as administrative or physical conditions change. Prior to the issuance of a grading permit by the City, project applicants are required to provide proof of filing for an NOI with the SWRCB and prepare an SWPPP that will describe the BMPs to be implemented during the project's construction activities. Construction contractors are required to maintain a copy of the SWPPP at the site at all times and implement all construction BMPs identified in the SWPPP during construction activities. The general categories of construction BMPs are outlined in Table 5.7-3.

Table 5.7-3
Construction BMPs

BMP Category	*BMP Description*			
Erosion Controls	EC-1	Scheduling	EC-8	Wood Mulching
	EC-2	Preservation of Existing Vegetation	EC-9	Earth Dikes and Swales
	EC-3	Hydraulic Mulch	EC-10	Velocity Dissipation Devices
	EC-4	Hydroseeding	EC-11	Slope Drains
	EC-5	Soil Binders	EC-12	Streambank Stabilization
	EC-6	Straw Mulch	EC-13	Polyacrylamide
	EC-7	Geotextiles and Mats		
Sediment Controls	SE-1	Silt Fence	SE-7	Street Sweeping
	SE-2	Desilting Basin	SE-8	Sandbag Barrier
	SE-3	Sediment Trap	SE-9	Straw Bale Barrier
	SE-4	Check Dam	SE-10	Chemical Treatment
	SE-5	Fiber Rolls	SE-11	Chemical Treatment
	SE-6	Gravel Bag Berm		
Wind Erosion Controls	WE-1	Wind Erosion Control		
Tracking Controls	TC-1	Stabilized Construction Entrance / Exit		
	TC-2	Stabilized Construction Roadway		
	TC-3	Entrance / Outlet Tire Wash		
Non-Stormwater Management Controls	NS-1	Water Conservation Practices	NS-9	Vehicle & Equipment Fueling
	NS-2	Dewatering Operations	NS-10	Vehicle & Equipment Mainten.
	NS-3	Paving and Grinding Operations	NS-11	Pile Driving Operations
	NS-4	Temporary Stream Crossing	NS-12	Concrete Curing
	NS-5	Clear Water Diversion	NS-13	Concrete Finishing
	NS-6	IC/ID Detection and Reporting	NS-14	Material Use Over Water
	NS-7	Potable Water / Irrigation	NS-15	Demolition Over Water
	NS-8	Vehicle & Equipment Cleaning	NS-16	Temporary Batch Plants
Waster Management and Controls (i.e., good housekeeping practices)	WM-1	Material Delivery & Storage	WM-6	Hazardous Waste
	WM-2	Material Use	WM-7	Contaminated Soil
	WM-3	Stockpile Management	WM-8	Concrete Waste
	WM-4	Spill Prevention and Control	WM-9	Sanitary / Septic Waste
	WM-5	Solid Waste Management		

Source: Fuscoe Engineering, *Water Quality Report, Hyatt Regency Newport Beach*, January 2007.

The SWPPP is required to identify construction BMPs necessary to mitigate project impacts, including but not limited to the following.

- Sediment from areas disturbed by construction shall be retained on-site using structural controls (erosion and sediment controls) and sediment debris basins (first flush basin will serve this function during construction activities) to the maximum extent practicable. Streets adjacent to the site entrance and exits shall be free of sediment and debris from the project site and shall be swept as directed by the City.

- Stockpiles of soil shall be properly contained to minimize sediment transport from the site to streets, drainage facilities, or adjacent properties via runoff, vehicle tracking, wind, or water.

- Appropriate BMPs for construction-related materials, wastes, and spills shall be implemented to minimize transport from the site to streets, drainage facilities, or adjoining properties by wind or runoff.

- Runoff from equipment and vehicle washing shall be contained at construction sites unless treated to reduce or remove sediment and other pollutants.

- All construction contractor and subcontractor personnel are to be made aware of the required BMPs and good housekeeping measures for the project site and any associated construction staging areas.

- At the end of each day of construction activity all construction debris and waste materials shall be collected and properly disposed in trash or recycle bins.

- Construction sites shall be maintained in such a condition that an anticipated storm does not carry wastes or pollutants off the site. Discharges of material other than stormwater can occur only when necessary for performance and completion of construction practices and where they do not cause or contribute to a violation of any water quality standard; cause or threaten to cause pollution, contamination, or nuisance; or contain a hazardous substance in a quantity reportable under federal regulations 40 CFR Parts 117 and 302.

- Potential pollutants include but are not limited to solid or liquid chemical spills; wastes from paints, stains, sealants, glues, limes, pesticides, herbicides, wood preservatives, and solvents; asbestos fibers, paint flakes, or stucco fragments; fuels, oils, lubricants, and hydraulic, radiator, or battery fluids; fertilizers, vehicle/equipment wash water, and concrete wash water; concrete, detergent or floatable wastes; wastes from any engine/equipment steam cleaning or chemical degreasing; and super-chlorinated potable water-line flushing. During construction, the permittee shall dispose of such materials in a specified and controlled temporary area on-site, physically separated from potential stormwater runoff, with ultimate disposal in accordance with local, state, and federal requirements.

- Dewatering of contaminated groundwater or discharging contaminated soils via surface erosion is prohibited. Dewatering of noncontaminated groundwater requires an NPDES permit from the local RWQCB.

- The permittee and contractor shall inspect the erosion-control work to ensure that the work is in accordance with the approved plans.

- The permittee shall notify all general contractors, subcontractors, material suppliers, lessees, and property owners that dumping of chemicals into the storm drain system is prohibited.

- Equipment and workers for emergency work shall be made available at all times during the rainy season. Necessary materials shall be available on-site and stockpiled at convenient locations to facilitate rapid construction of temporary devices when rain is imminent.

Implementation of the SWPPP and its associated BMPs throughout the construction phase of the proposed project would address anticipated and expected pollutants of concern as a result of construction activities.

Operational Phase

The operational phase of the proposed project may result in long-term impacts to the quality of stormwater and urban runoff, subsequently impacting downstream water quality. Although the existing on-site drainage facilities would be substantially improved as a result of the proposed project, the proposed land uses and site features nevertheless pose a significant water quality threat to downstream receiving waters—Upper and Lower Newport Bay. Development projects, such as the proposed hotel expansion, can alter the existing drainage course and can potentially create new sources for runoff contamination. Consequently, the proposed project has the potential to increase the postconstruction pollutant loadings of certain constituent pollutants associated with the proposed hotel expansion and its project features, such as parking lots and drive aisles.

As proposed, the project would indirectly discharge into the Upper Newport Bay via the MS4 at Back Bay Drive, which is owned and operated by the City of Newport Beach. Under the current Orange County MS4 permit, no numeric effluent limitations are required for stormwater discharges and no sampling or monitoring programs are required by the owner/developer. However, the long-term operation of the proposed project necessitates the implementation of postconstruction BMPs to the maximum extent practicable to mitigate and abate pollutants that may compromise the Newport Bay's beneficial uses and water quality objectives.

Pollutants of Concern

As a result of the proposed alteration of existing site conditions, the proposed project would create new pollutant sources, and in turn, change the makeup of pollutant constituents generated by the proposed land uses. Because stormwater-runoff pollution is diffuse in nature, the composition, level, and cumulative effects of specific pollutant levels generated by the proposed project cannot be appropriately quantified. However, based on the proposed land uses, the anticipated and potential pollutants generally associated with the project's postconstruction operations can be predicted.

Primary pollutants of concern are those that have already been identified as causing impairment of receiving waters, and are described in Section 5.7.1. Table 5.7-4, *Anticipated and Potential Pollutants*, summarizes the categories of land use or project features of concern and the general pollutant categories associated with them.

Table 5.7-4
Anticipated and Potential Pollutants

Project Features Of Water Quality Concern	General Pollutant Categories								
	Bacteria/ Virus	Heavy Metals	Nutrients	Pesticides	Organic Compounds	Sediments	Trash & Debris	Oxygen Demanding Substances	Oil & Grease
Commercial/ Industrial Development >100,000 ft^2	P[3]	P	P[1]	P[1]	P[5]	P[1]	X	P[1]	X
Attached Residential	P		X	X		X	X	P[1]	P[2]
Parking Lots	P	X	P[1]	P[1]	X[4]	P[1]	X	P[1]	X
Streets	P	X	P[1]	P[1]	X[4]	X	X	P[1]	X

Source: County of Orange Flood Control District, 2003 Drainage Area Master Plan, Table 7-1.3, July 1, 2003.
X = anticipated. P = potential
[1] A potential pollutant if landscaping or open areas exist on-site.
[2] A potential pollutant if the project includes uncovered parking areas.
[3] A potential pollutant if land use involves food or animal waste products.
[4] Including petroleum hydrocarbons.
[5] Including solvents.

As required by City of Newport Beach water quality ordinances and City Council Policies L-18 and L-22, at the time of submittal of an application for a new development or redevelopment, project applicants are required to submit a WQMP—utilizing the Model WQMP (dated September 26, 2003)—to the City of Newport Beach that outlines approved postconstruction BMPs including site-design and source and treatment control BMPs selected for the project to reduce pollutants in postdevelopment runoff to the BAT/ BCT performance standard. The following is a discussion of site-design, source control, and treatment control BMPs that would be incorporated as a part of the proposed project.

Site-Design BMPs

Site-design considerations to reduce the potential impacts on surface and groundwater quality would be incorporated into the project's design. These include, but are not limited to, maximizing pervious areas, minimizing directly connected impervious areas, use of on-site ponding areas, constructing hardscape with permeable materials, and implementing on-lot hydrologically functional landscape design. Specific details and guidelines for the implementation of site design BMPs are provided in the City's Model WQMP.

The proposed project would, at minimum, incorporate the following site-design BMPs, where feasible.

- Overflow parking areas and other low traffic areas would incorporate the use of open-jointed paving materials or permeable surfaces.
- Rooftop drainage would be designed to drain to adjacent landscaping or to areas that can facilitate some form of filtration/infiltration of roof runoff prior to discharging to the storm drain.
- An urban curb/swale system would be provided for surface parking areas that drain towards landscaping, whereby biofiltration can be facilitated for parking lot runoff.

Source-Control BMPs

Source-control BMPs effectively minimize the potential for typical urban pollutants to come into contact with stormwater, thereby limiting water quality impacts downstream. Numerous source-control BMPs would be incorporated into the proposed project.

- Educational materials related to urban runoff would be provided to all employees and tenants upon occupancy.
- Activity restrictions would be developed to prevent additional pollutants to stormwater.
- Common-area landscape management that includes minimizing fertilizer and pesticide application, maintenance activities, and proper education and training for employees.
- Regular litter control for the entire project area, including trash pick up and sweeping of littered common areas, as performed by the maintenance crew.
- Routine maintenance of all catch basins, grate inlets, etc., for debris and litter removal.
- Street sweeping of all impervious streets and parking lots performed at a frequency that reduces or prevents sediment and debris from entering receiving waters and prior to the rainy season.
- Storm drain stenciling or signage on all catch basins with highly visible source-control messages (e.g., "no dumping—drains to ocean").
- Properly designed trash enclosures to minimize contact with stormwater.
- Proper landscaping design incorporating native drought-tolerant species, protection of slopes, and efficient irrigation design.

Treatment-Control BMPs

In addition to source-control BMPs, the proposed project requires treatment-control BMPs (single or in combination) to remove anticipated pollutants of concern from on-site runoff. Treatment-control BMPs can range from natural treatment systems such as vegetated swales, detention basins, and constructed wetlands, to proprietary control measures. Since no single treatment BMP can effectively remove all contaminants that can pollute stormwater runoff, the treatment-control BMP(s) required for the proposed project would be high to moderately efficient in removing the target pollutants. Table 5.7-5, *Treatment Control BMPs,* demonstrates the variation in pollutant-removal efficiencies of several treatment-control BMPs.

Table 5.7-5
Treatment Control BMPs

Pollutant of Concern	Treatment Control BMP Categories[1]							
	Biofilters	Detention Basins	Infiltration Basins	Wet Ponds or Wetlands	Filtration	Water Quality Inlets	Hydrodynamic Separator Systems	Manufactured/ Proprietary Devices
Sediment/Turbidity	H/M	M	H/M	H/M	H/M	L	H/M	H/M
Nutrients	L	M	H/M	H/M	L/M	L	L	H/M
Organic Compounds	U	U	U	U	H/M	L	L	U
Trash and Debris	L	M	U	U	H/M	M	H/M	U
Oxygen Demanding Substances	L	M	H/M	H/M	H/M	L	L	U
Bacteria and Viruses	U	U	H/M	U	H/M	L	L	H/M
Oil and Grease	H/M	M	U	U	H/M	M	L/M	U
Pesticides (non-soil bound)	U	U	U	U	U	L	L	H/M
Metals	H/M	M	H	H	H	L	L	U

Sources: JLC Engineering 2007.
Notes:
L: Low removal efficiency
M: Medium removal efficiency
H: High removal efficiency
U: Unknown removal efficiency
1. Project proponents should base BMP designs on the Riverside County Stormwater Quality Best Management Practice Design Handbook. However, project proponents may also wish to reference the California Stormwater BMP Handbook – New Development and Redevelopment (www.cabmphandbooks.com). The Handbook contains additional information on BMP operation and maintenance.

Moreover, the treatment-control BMPs selected for the proposed project would be required to mitigate (infiltrate, filter, or treat) either:

- The volume of runoff produced from a 24-hour 85th percentile storm event, as determined from the local historical rainfall record; or
- The volume of runoff produced by the 24-hour 85th percentile runoff event, determined as the maximized capture urban-runoff volume for the area, from the formula recommended in the Urban Runoff Quality Management, Water Environment Federation (WEF) Manual of Practice No. 23/ American Society of Civil Engineers (ASCE) Manual of Practice No. 87, (1998); or
- The volume of annual runoff based on unit basin storage volume, to achieve 90 percent or more volume treatment by the method recommended in the California Stormwater Best Management Practices Handbook – Industrial/ Commercial, (1993); or
- The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 24-hour 85th percentile runoff event; or
- The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour for each hour of a storm event; or

- The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or

- The maximum flow rate of runoff, as determined from the local historical rainfall record, which achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile hourly rainfall intensity, multiplied by a factor of two.

Based on the proposed drainage and hydrologic conditions, several feasible treatment-control BMP alternatives within the project site could fulfill the above mitigation requirements (Fuscoe 2007a). The project site is considered a priority project since it is a redevelopment of 5,000 square feet or greater. Since the proposed redevelopment encompasses greater than 50 percent of the total project site, the treatment control BMPs would be designed to treat runoff from the entire project site, where possible.

The project site can be divided into three general drainage areas, based on the proposed grading and general drainage characteristics. Drainage Area A encompasses the development in the southern portion of the project site, and includes the proposed ballroom and associated parking, as well as the proposed parking structure. Drainage Area B encompasses the western portion of the timeshare development area, closest to Back Bay Drive, including the existing amphitheatre area and the proposed housekeeping building in the main hotel complex. Drainage Area C encompasses the eastern portion of the timeshare development area, the proposed fitness center, and parking lot adjacent to the existing tennis courts. Figure 3-8, *Conceptual Drainage Plan*, illustrates the three drainage areas.

Several treatment-control BMP options were developed for each drainage area, as discussed below. These treatment alternatives would be used in conjunction with one another to treat each drainage area or to provide additional pretreatment opportunities. Figure 3-8 illustrates the opportunity areas within the project site where these treatment-control BMPs would be implemented.

Drainage Area A

Drainage Area A encompasses approximately 12.37 acres of the project site, of which 9.42 acres would be developed with a new ballroom, two-level parking structure, and new fitness center. The following treatment-control BMPs would be incorporated within this drainage area to mitigate anticipated and potential pollutants of concern.

- Vegetated swale and sand filter treatment train
- Media filtration
- Permeable paving
- Filtration trench

The water quality "treatment train" consisting of a vegetated swale and sand filter would provide treatment of sediment, metals, oil and grease, and organic constituents, and further treatment of bacteria and dissolved metals from the development area of Drainage Area A as well as adjacent buildings associated with the main hotel complex. The media-filtration alternative would provide treatment by removing sediment, nutrients, trash, metals, oil and grease, and organics, depending on the type of media filter used. The filtration trenches alternative would provide pretreatment of flows prior to discharging into the vegetated swale, or be utilized as stand-alone BMPs treating flows from the parking structure and adjacent parking lot.

Porous pavement may also provide pretreatment of particulates if used in series with the vegetated swale primarily as a detention device, or can be used as a stand-alone treatment BMP if it can be determined that it does not impact groundwater or adjacent slopes, if any. Together or in combination, these treatment-control BMPs could provide treatment of the anticipated and potential pollutants associated with the development within Drainage Area A.

Drainage Area B

Drainage Area B encompasses approximately 7.7 acres of the project site, of which 3.35 acres would be developed as timeshare units. This area currently consists primarily of landscaped slopes associated with the golf course. Due to space limitations, land-intensive treatment-control BMPs could not be effectively integrated into this drainage area. The following treatment-control BMP would be incorporated within this drainage area to mitigate anticipated and potential pollutants of concern.

- Underground media filtration

Due to sizing limitations, natural treatment-control BMPs cannot be sized to treat the entire drainage area. The underground media filtration would provide treatment of sediment, nutrients, trash, metals, oil and grease, and organics, depending on the type of media filter used, as well as have the capacity to treat the required Storm Quality Design Flow (SQDF) for Drainage Area B. The underground media filtration would provide the necessary treatment of the anticipated and potential pollutants associated with Drainage Area B.

Drainage Area C

Drainage Area C encompasses approximately 5.62 acres of the project site. Within this drainage area, the existing golf course would be developed with timeshare units on approximately 3.66 acres. The following treatment-control BMPs would be incorporated within this drainage area to mitigate anticipated and potential pollutants of concern.

- Underground media filtration
- Bioretention (rain garden)

Due to site constraints, natural treatment-control BMPs cannot be implemented to treat the entire drainage area. However, the rain garden/bioretention area would provide pretreatment by removing sediment, trash, metals, bacterial, oil and grease, and organics pollutants in stormwater from a portion of the timeshare development area. The media-filter unit would provide treatment of sediment, nutrients, trash, metals, oil and grease, and organics, depending on the type of media filter used, as well as have the capacity to treat the required SQDF for Drainage Area C. Together or in combination, these BMPs would provide the necessary treatment of the anticipated and potential pollutants associated with Drainage Area C.

Conclusion

Collectively, the site-design and source, and treatment-control project design features would address the anticipated and expected pollutants of concern from the operational phase of the proposed project. Additionally, through the development-review process, the City of Newport Beach complies with various statutory requirements necessary to achieve regional water quality objectives and protect groundwater and surface waters from pollution by contaminated stormwater runoff. Stormwater runoff generated from within the project site would be managed in accordance with all applicable federal, state, and local water quality rules and regulations in order to effectively minimize the project's impact on water quality.

IMPACT 5.7-2: EXPANSION OF THE HYATT REGENCY NEWPORT BEACH WOULD NOT SUBSTANTIALLY ALTER THE EXISTING DRAINAGE PATTERN OF THE SITE OR AREA, RESULTING IN SUBSTANTIAL EROSION OR SILTATION, OR FLOODING ON- OR OFF-SITE. [THRESHOLD HYD-3 AND HYD-4]

Impact Analysis:

Increased runoff from urban surfaces can increase the intensity of flooding and erosion. The following is a discussion of the potential erosion, siltation, and flooding impacts that could occur as a result of the project development.

Erosion and Siltation

The majority of the potential erosion and siltation impacts would occur during the construction phase (e.g., grading, clearing, and excavating) of the proposed project. During construction, the project site would be cleared of vegetation and existing facilities and structures in preparation for grading, which would expose loose soil to potential wind and water erosion. If not controlled, the transport of these materials to local waterways would temporarily increase suspended sediment concentrations and release pollutants attached to sediment particles into local waterways. As previously stated, the project proponent is required to submit an NOI and SWPPP prior to the commencement of construction activities. The SWPPP would describe the BMPs to be implemented during the project's construction activities.

The operational phase of the proposed project would include extensive landscaping, impervious surface coverage, and the project-related water quality design features. The permanent erosion and siltation treatment-control BMP features would include the following:

- Underground media filtration
- Bioretention (rain garden)
- Vegetated swale and sand filter treatment train
- Media filtration
- Permeable paving
- Filtration trench

Collectively, implementation of the BMPs outlined in the SWPPP and the project's proposed water quality design features would address the anticipated and expected erosion and siltation impacts during the construction and operational phases of the proposed project.

Flooding

The proposed on-site storm drain system for the project would consist of grated inlets and curb-opening catch basins at sump locations. The proposed project can be categorized into three drainage areas. The drainage pattern and improvements within each drainage area under the pre- and postconstruction phases of the proposed project are as shown in Figure 3-8 and as described below.

Drainage Area A (Jamboree Road)

Under existing conditions, surface runoff from the existing parking lot area and adjacent buildings is conveyed west and northwest through a v-gutter along the northern side of the parking lot (see Figure 5.7-2). The runoff then discharges to a concrete drainage ditch prior to discharging into the existing MS4 at Back Bay Drive. The flow travels west from this point. Under proposed conditions, flows from Drainage Area A

would be collected by a proposed storm drain beginning at Jamboree Road and traversing west through the project site along the southern parking lot and eventually discharging into the existing MS4 at Back Bay Drive (see Figure 3-8). The flow would travel west from this point.

Drainage Area B (Back Bay Drive)

Under existing conditions, flows from Drainage Area B are collected by local-area drains and conveyed west along Back Bay Drive and are discharged into the existing MS4 at Back Bay Drive (see Figure 5.7-2, *Existing Project Site Drainage Flow*). Under proposed conditions, a storm drain system would be constructed to collect flows from the development area and connect directly to the MS4 at Back Bay Drive (see Figure 3-8).

Drainage Area C (East Watershed)

Under existing conditions, flows from Drainage Area C discharges into the watershed east of the project site (see Figure 5.7-2). Under proposed conditions, a storm drain system would be constructed to collect flows from this drainage area and discharge them directly into the existing watershed to the east of the project site (see Figure 3-8).

Table 5.7-6 summarizes the findings of preconstruction flow. The results are a direct sum of all the subareas within each drainage area. Table 5.7-7 summarizes the findings of postconstruction flow. The total is a direct sum of the flow rate generated by the subareas within each major division. The adjusted total accounts for the friction loss for flow within a pipe.

Table 5.7-6
Preconstruction Flow

Drainage Pattern	*Preconstruction Flow (cubic feet per second)*
Jamboree Road/West Parking Lot Watershed	
Subarea A	18.56
Subarea I	10.02
Subarea J	1.43
Subarea K	6.43
Flow from Jamboree Rd	96.90
Total	**133.34**
Back Bay Drive Watershed	
Subarea B	5.81
Subarea C	8.07
Subarea D	3.07
Subarea E	11.62
Subarea F	3.22
Total	**31.79**
East Watershed	
Subarea G	14.62
Subarea H	4.93
Total	**19.55**

Table 5.7-7
Postconstruction Flow

Drainage Pattern	*Postconstruction Flow (cubic feet per second)*
Jamboree Road/West Parking Lot Watershed	
Subarea A-1	7.78
Subarea A-2	3.92
Subarea A-3	6.43
Subarea A-4	96.90
Subarea A-5	6.97
Subarea A-6	0.52
Subarea A-7	6.91
Subarea A-8	3.33
Subarea A-9	2.45
Total	135.21
Adjusted Total	**132.48**
Back Bay Drive Watershed	
Subarea C-1	5.35
Subarea C-2	3.59
Subarea C-3	0.56
Subarea C-4	0.64
Subarea C-5	0.85
Subarea C-6	9.52
Subarea D	1.73
Subarea E	2.03
Subarea F	5.89
Total	30.16
Adjusted Total	**29.84**
East Watershed	
Subarea B-1	0.43
Subarea B-2	4.65
Subarea B-3	10.02
Subarea H	4.93
Total	20.03
Adjusted Total	**19.44**

As shown in these tables, the postconstruction flows would be slightly less than the preconstruction flows. Additionally, as discussed above in the drainage-area descriptions, the drainage flows would remain the same. Collectively, implementation of the project's proposed drainage improvements would ensure that flooding on- or off-site would not occur.

5.7.4 Cumulative Impacts

Implementation of the proposed project, in conjunction with related projects located within the Newport Bay Watershed, would result in increased flows that ultimately discharge to the Pacific Ocean. Related projects that would direct stormwater flows to channels that drain to the Upper and Lower Newport Bay include projects located within the Newport Bay Watershed. Ultimate development of the proposed project and other development within the area would potentially impact water quality. Without controls, both short-term construction-related impacts and long-term operational impacts could substantially impact water quality. The impacts of the proposed project to the watershed and groundwater would be minimal, but would incrementally contribute to the increase in impervious surfaces and discharge of pollutants and sediment to receiving waters and groundwater within the region. As with the proposed project, related projects would be required to mitigate impacts through implementation of a project-specific WQMP. The WQMP is required to demonstrate that the project in question would implement operational BMPs to the maximum extent practicable in order to mitigate and abate anticipated and potential pollutants generated at the project site that may compromise the beneficial uses and water quality objectives of downstream receiving water bodies. In consideration of the preceding factors, cumulative water quality impacts would be rendered less than considerable, and therefore less than cumulatively significant.

5.7.5 Existing Regulations

- General Construction Permit (GCP), WDRs Order 99-08-DWQ, NPDES Permit No. CAS000002
- SARWQCB MS4 stormwater permit, WDRs Order No. R8-2002-0010, NPDES Permit No. CAS618030
- City of Newport Beach Council Policies L-18 and L-22
- City of Newport Beach Municipal Code
    - Chapter 14.34 (Water Well Standards)
    - Chapter 14.36 (Water Quality)
    - Chapter 19.24 (Subdivision Design)
    - Chapter 15.50 (Flood Damage Prevention)
    - Chapter 15.10 (Excavation and Grading Code)

5.7.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements, the following impacts would be less than significant: 5.7-1 and 5.7-2

5.7.7 Mitigation Measures

No mitigation measures are necessary.

5.7.8 Level of Significance After Mitigation

No significant impacts have been identified and no mitigation measures are necessary.

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