

C. HYDROLOGY AND WATER QUALITY

INTRODUCTION

This section addresses potential changes in surface water and groundwater conditions that could result from construction and operation of the Abbot Laboratories West Coast Research Center. This section describes the existing hydrologic setting, the regulatory framework that applies to surface water, flooding and water quality, presents potential project impacts, and where appropriate, identifies mitigation. The primary focus of this section is surface water drainage, stormwater management, and discharge water quality at the property site.

SETTING

HYDROLOGY

The project site is bounded on the north and east by Redwood Creek, which flows approximately 1.9 miles northeast to the San Francisco Bay. Redwood Creek drains portions of Redwood City and Woodside, and most of the creek is concrete lined or contained in culverts. Land use within the Redwood subbasin is predominantly urban.

The site is bordered to the north and east by a levee, with a maximum elevation of 7 feet above mean sea level (msl).

The site is underlain by artificial fill consisting primarily of clay and gravel material. The site is currently occupied with salt mining equipment, a single-story office and storage building, and a paved access road. The project site is relatively flat, with a surface elevation ranging from approximately 0 to 7 feet above msl. Storm runoff flows to Redwood Creek on the northeast side and to a central depression on the site that is approximately 2 feet below msl.

Flooding

Under Executive Order 11988, the Federal Emergency Management Agency (FEMA) is responsible for management of floodplain areas defined as the lowland and relatively flat areas adjoining inland and coastal waters subject to a one percent or greater chance of flooding in any given year (also termed the 100-year floodplain). FEMA requires that local governments covered by federal flood insurance pass and enforce a floodplain management ordinance that specifies minimum requirements for any construction within the 100-year floodplain.

The project area is located within the FEMA-designated 100-year floodplain, Flood Hazard Zone A (at an elevation of 7 feet above msl). Structures below this elevation in this area have a 26 percent chance of suffering flood damage in a 30-year period.

The potential for inundation at the project site caused by tsunami in San Francisco Bay is low (Advance Soil Technology, 2001). The Bay and its tidally influenced tributaries are partially protected from inundation and damage associated with tsunamis because of the restrictive

hydraulic access at the Golden Gate. Wave energy that enters the mouth of the Golden Gate would be expected to attenuate as it moves into the open water of the bay (Goldman, 1969). While shallow inundation could occur at the site, large tsunami waves are not expected to occur in the vicinity of the project site.

Groundwater

Geotechnical investigation for the proposed project (Advance Soil Technology, Inc., 2001) included the drilling of four exploratory borings to depths ranging from 100 to 140 feet below ground surface (bgs). Free groundwater was encountered at depths of 3.5 to 4 feet bgs. Groundwater levels are affected by rainfall, and predominantly by the water level in the San Francisco Bay. Groundwater underlying the project site is not a drinking water source.

WATER QUALITY

Surface Water

During periods of wet weather, rain carries pollutants and sediments from all parts of a watershed into surface water bodies such as storm drains, streams, rivers, reservoirs, and marshes. In an urban setting, natural drainage patterns have been altered and stormwater runoff, as well as non-storm discharges (irrigation water, accidental spills, washdown water, etc.), picks up sediments and contaminants from land surfaces, and transports these pollutants into surface and ground water. The diffused sources of pollutants range from parking lots, bare earth at construction sites, agricultural sites and a host of other sources. The total amount of pollutants entering aquatic systems from these diffused, non-point sources is now generally considered to be greater than that from any other source, such as pipe discharges (point source).

Urban runoff can contribute nonpoint source pollutants to Redwood Creek, and eventually to the San Francisco Bay. Pollutants of concern typically found in urban runoff include sediments, nutrients, pathogens, oxygen demanding substances (plant debris, animal wastes, etc.), petroleum hydrocarbons, heavy metals, toxic pollutants, floatables (litter, yard wastes, etc.), and synthetic organics (pesticides, herbicides, PCBs, etc.). Urban runoff includes sediment and other pollutants discharging from construction sites due to improper erosion control measures. Pesticide and herbicide application to landscaping and agriculture also contributes significantly to nutrient loading in surface waters.

Groundwater

A Phase II Site Investigation was conducted at the project site in November 2000 (InteGreyted Consultants, 2000). The report included soil, groundwater and sediment investigations. The report found groundwater below the site to be contaminated by diesel fuel in some areas, and to be highly saline due to the historic uses at the site, including salt and bittern storage. Groundwater underlying the project site is not a drinking water source.

REGULATORY CONTEXT

Water Quality Regulation

Regulatory authorities exist on both the state and federal levels for the control of water quality in California. Under the Clean Water Act, the U.S. Environmental Protection Agency (EPA) is the federal agency responsible for water quality management. An EPA regional office (EPA Region IX) is located in San Francisco and delegates authority for waste discharge permitting to the State Water Resources Control Board (SWRCB).

The SWRCB, located in Sacramento, is the agency with jurisdiction over water quality issues in the State of California. The SWRCB is governed by the Porter-Cologne Water Quality Act (Division 7 of the California Water Code), which establishes the legal framework for water quality control activities by the SWRCB. Much of the implementation of the SWRCB's responsibilities is delegated to nine Regional Boards.

Both the SWRCB and EPA Region IX have been in the process of developing new water quality objectives and numeric criteria for toxic pollutants for California surface waters since 1994, when a State court overturned the SWRCB's water control plans containing water quality criteria for priority toxic pollutants. The EPA's draft California Toxics Rule (CTR) was published in the August 5, 1997, Federal Register [62 FR 42159], with the Final Rule promulgated on May 18, 2000. The proposed criteria largely reflect the existing criteria contained in the EPA's 304(a) Gold Book (WQ Criteria 1986) and its National Toxics Rule (NTR) adopted in December 1992 [57 Federal Register 60848], and those of earlier state plans (the *Inland Surface Waters Plan* and the *Enclosed Bays and Estuaries Plan* of April 1991, since rescinded). With promulgation of the Final CTR on May 18, 2000, these federal criteria are legally applicable in the State of California for inland surface waters, enclosed bays and estuaries for all purposes and programs under the Clean Water Act.

Total Maximum Daily Load (TMDL) – Section 303d of the Clean Water Act

California has identified waters that are polluted and need further attention to support their beneficial uses. These water bodies are listed under the Clean Water Act Section 303(d) list, which requires States to identify these polluted waters. Specifically, Section 303(d) requires that each state identify water bodies or segments of water bodies that are "impaired" (i.e., not meeting one or more of the water quality standards established by the state). Approximately 500 waterbodies or segments have been listed in California. Once the water body or segment is listed, the state is required to establish "Total Maximum Daily Load" or TMDL for the pollutant causing the conditions of impairment. The TMDL is the quantity of a pollutant that can be safely assimilated by a water body without violating water quality standards. The EPA estimates that within the next 15 years 40,000 TMDLs must be developed. At this time, the EPA has finalized only about 8 TMDLs and 4 have been approved. Listing of a water body as impaired does not necessarily suggest that the pollutants are at levels considered hazardous to humans or aquatic life or that the water body segment cannot support the beneficial uses. The intent of the 303(d) list is

to identify the water body as requiring future development of a TMDL to maintain water quality and reduce the potential for continued water quality degradation.

In accordance with Section 303(d) of the Water Code, the San Francisco Bay Regional Water Quality Control Board has identified impaired water bodies within its jurisdiction, the pollutant or stressor impairing water quality, and prioritized the urgency for developing a TMDL. While San Francisco Bay is included on the Section 303(d) list, Redwood Creek is not.

Regional Water Quality Control Board

The primary responsibility for the protection and enhancement of water quality in California has been assigned by the California legislature to the State Water Resources Control Board (SWRCB), and the nine regional water quality control boards. The SWRCB provides state-level coordination of the water quality control program by establishing statewide policies and plans for the implementation of state and federal laws and regulations. The regional water boards adopt and implement water quality control plans (basin plans) that recognize the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems.

RWQCB Regulations, Goals, and Policies

The project area lies within the jurisdiction of the San Francisco Bay Regional Water Quality Control Board (RWQCB). The RWQCB is responsible for the protection of beneficial uses of water resources within the San Francisco Bay Region. The RWQCB uses planning, permitting, and enforcement authorities to meet this responsibility, and has adopted the Water Quality Control Plan for the San Francisco Bay Region (Basin Plan), to implement plans, policies, and provisions for water quality management. Beneficial uses of surface waters are described in the Basin Plan and are designated for major surface waters and their tributaries. Redwood Creek is not listed as having any beneficial uses such as fishing or recreation.

For this project, the RWQCB is responsible for permitting project construction activities to ensure the protection of beneficial uses. Each of these permit responsibilities are described below.

Construction Activity Permitting. The RWQCB also administers the National Pollutant Discharge Elimination System (NPDES) stormwater permitting program in the San Francisco Bay region. Construction activities on one acre or more are subject to the permitting requirements of the NPDES General Permit for Discharges of Stormwater Runoff Associated with Construction Activity (General Construction Permit). The General Construction Permit requires the preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The plan would include specifications for Best Management Practices (BMPs) that would be implemented during project construction to control degradation of surface water by preventing the potential erosion of sediments or discharge of pollutants from the construction area. The General Construction Permit program was established by the RWQCB for the specific purpose of reducing impacts to surface waters that may occur due to construction activities. BMPs have been established by the RWQCB in the *California Stormwater Best Management Practice Handbook for Construction* (2003), and are recognized as effectively reducing degradation of

surface waters to an acceptable level. Additionally, the SWPPP would describe measures to prevent or control runoff degradation after construction is complete, and identify a plan to inspect and maintain these facilities or project elements.

Local Plans and Policies

San Mateo County

San Mateo County's Stormwater Pollution Prevention Program (STOPPP) is intended to reduce pollutant quantities in stormwater runoff to minimize damage to local water bodies, San Francisco Bay, and the Pacific Ocean. STOPPP is part of the National Pollutant Discharge Elimination System (NPDES) permit issued to the County of San Mateo and its cities and towns by the State Water Quality Control Board. The Federal Clean Water Act and the California Porter-Cologne Water Quality Control Act require that large urban areas discharging stormwater into the San Francisco Bay or the Pacific Ocean have an NPDES stormwater discharge permit.

STOPPP has issued guidelines for integrated pest management, and general and construction-specific best management practices (BMPs) to minimize sedimentation and discharge of pollutants into stormwater runoff. Construction best management practices incorporate measures described in *Start at the Source, a Design Guidance Manual for Stormwater Quality Protection*, a development and construction BMP guidebook developed by the Bay Area Stormwater Management Agencies Association (BASMAA). As an incorporated City within San Mateo County, Redwood City has adopted STOPPP guidelines.

The Regional Water Quality Control Board (RWQCB), San Francisco Bay Region, issued a Permit Amendment revising Provision C.3 to STOPPP on February 19, 2003. This new C.3 amendment would require on-site treatment and storage of stormwater runoff for development projects that fall under certain use and size characteristics.

City of Redwood City Strategic General Plan

The City of Redwood City Strategic General Plan's Safety Element includes several objectives and policies regarding the protection of water quality in Redwood City creeks and in the San Francisco Bay. The following objectives and policies would pertain to hydrology and water quality associated with the proposed project:

- Protect the community from the hazards of soil erosion, weak and expansive soils, and geologic instability (Objective 1, p. 12-3)
- New development should be designed to provide protection from potential impacts of flooding during the 100-year flood (Policy S-8, p. 12-3).
- Existing levees which protect residential communities and commercial areas should be upgraded to protect against the "100-year" flood (Policy S-14, p. 12-4).
- Levees which protect residential communities and commercial areas should be upgraded at regular prudent intervals to assure acceptable safety margins from flooding resulting from

land settlement or from the sea level increases expected from the greenhouse effect, as indicated by BCDC (Policy S-15, p. 12-4).

IMPACTS AND MITIGATION MEASURES

APPROACH TO ANALYSIS

The impact analysis is based on review of the Site Investigation prepared in 2002 (BKF, 2002). The impact evaluation identifies potentially significant hydrologic impacts of the project both during project construction and at buildout, and describes mitigation measures to reduce those impacts. The project site plan was evaluated with respect to the design elements presented in the BASMAA publication *Start at the Source, a Design Guidance Manual for Stormwater Quality Protection* (1999).

SIGNIFICANCE CRITERIA

According to Appendix G of the CEQA Guidelines, a project would result in a significant effect on hydrology or water quality if it would:

- violate any water quality standards or waste discharge requirements;
- cause or contribute to violations of ambient water quality objectives;
- contaminate a public water supply;
- violate water quality standards for construction activities;
- otherwise substantially degrade water quality;
- substantially deplete groundwater supplies or substantially interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- 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;
- place within a 100-year flood hazard area structures that would impede or redirect flood flows; or
- 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.

Impacts of the project would be considered significant if the project would result in exceedance of a RWQCB surface water or groundwater quality objective; would cause substantial erosion

and sedimentation problems; or would cause a flood hazard or exacerbate an existing flood hazard.

CONSTRUCTION IMPACTS

Impact C.1: Project construction activities could result in increased erosion and subsequent sedimentation and release of fuels or other hazardous materials that could degrade water quality. (Potentially Significant)

Grading and construction activities could contribute to local soil erosion and an increase in sediment loads of runoff leaving the site. Runoff during construction could increase sediment loads in San Francisco Bay. By volume, sediment is the principal pollutant component in most storm runoff. Sediments also transport substances such as nutrients, hydrocarbons, and trace metals, which are conveyed to receiving waters.

Hazardous materials associated with construction equipment, such as fuels, oils, antifreeze, coolants, and other substances could adversely affect water quality if released to surface waters. The RWQCB requires the project applicant to obtain an NPDES permit for construction activities associated with all phases of construction. As mandated by NPDES permit regulations, the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) describing construction associated with all phases of construction and identifying construction BMPs to reduce erosion of disturbed soils and prevent release of hazardous materials into water courses would be required. The SWPPP shall incorporate STOPPP construction BMPs, be submitted for review to San Mateo County and City of Redwood City Fire Department, and shall be approved prior to construction.

Mitigation Measure C.1: The applicant shall develop and implement a Stormwater Pollution and Prevention Plan that shall include, at minimum:

- **Source identification;**
- **Preparation of a site map;**
- **Description of construction materials, practices, and equipment storage and maintenance;**
- **List of pollutants likely to contact stormwater;**
- **Estimate of the construction site area and percent impervious area for all construction phases;**
- **Erosion and sedimentation control practices, including soils stabilization, revegetation, and runoff control to limit increases in sediment in stormwater runoff, such as detention basins, straw bales, silt fences, check dams, geofabrics, drainage swales, and sandbag dikes;**
- **Proposed construction dewatering plans;**

- **List of provisions to eliminate or reduce discharge of materials to stormwater;**
- **Description of waste management practices;**
- **Maintenance and training practices;**
- **Sampling and analysis strategy and sampling schedule for discharges from construction activities; and**
- **Other measures as required by the new C.3 regulations adopted by the RWQCB on February 19, 2003.**

(Proposed as part of the project)

Because measures required by the SWPPP would reduce the erosion of soils and release of hazardous materials into water courses, the proposed project would not violate water quality standards for construction activities. Implementation of BMPs identified in the SWPPP during all phases of construction would ensure that potential impacts to water quality would remain at less-than-significant levels.

Significance after Mitigation: Less than Significant.

PROJECT OPERATION

Impact C.2: The proposed project would place structures within the 100-year flood zone. (Potentially Significant)

The project site lies within the 100-year Flood Hazard Zone of Redwood Creek as designated by FEMA. In order to remove structures from the Flood Hazard Zone, a protective levee will be installed around the entire site.

The City of Redwood City has required that the entire Seaport Center area, including the Seaport Plaza project, be surrounded by a levee system to elevation 109.5 feet (or 9.5 feet above msl). The City would require, at a minimum, a levee with 2:1 slopes to an elevation of 7 feet above mean sea level (msl) with no more than a 30-inch wall, or 9.5 feet above msl without a wall. Alternatively, a larger area adjacent to the water could be graded to a minimum elevation of 0.5 feet above msl and used as a landscape amenity. The adjacent Seaport Plaza has utilized low seat walls and amphitheatre type seating to accommodate the grade requirements.

Several areas along the eastern shoreline of the proposed project are already at, or above, the 9.5-ft. elevation above msl. These areas, however, would require geotechnical investigations to determine if the soil material and compaction would satisfy the City's levee requirements. The applicant would join the Seaport Center Maintenance District which maintains levees in the Seaport Center.

Mitigation Measure C.2a: The applicant shall construct a levee at a minimum elevation of 9.5-feet above msl to satisfy FEMA requirements and to prevent 100-year flood water inundation of the project site. The applicant shall notify FEMA of the changes to the floodplain in the project vicinity; typically, this procedure involves submitting a Letter of Map Revision (LOMR) to the Federal Emergency Management Agency. (Proposed as part of the project)

Mitigation Measure C.2b: The applicant shall conduct a geotechnical investigation of the eastern shoreline of the project site to determine whether the soil material and compaction would satisfy the City's levee requirements. If levee reconstruction is determined to be advisable by the engineer, the applicant shall submit levee design plans and specifications to the City Engineer for review, and shall implement such plans as directed by the City Engineer. (Identified by this EIR)

Significance after Mitigation: Less than Significant.

Impact C.3: Increased intensity of urban uses at the site could result in degradation of the water quality of surface water runoff. (Potentially Significant)

The proposed project would increase the number of automobiles using the site, which could contribute to degradation of surface water quality. Urban runoff can carry a variety of pollutants, such as oil and grease, metals, sediment, and pesticide residues from roadways, parking lots, rooftops, and other surfaces, and deposit them in adjacent waterways. Pollutant concentrations in urban runoff are extremely variable and are dependent on storm intensity, land use, elapsed time between storms, and the volume of runoff generated in a given area that reaches a receiving water. The most critical time for urban runoff effects is in autumn under low flow conditions. Pollutant concentrations are typically highest during the first major rainfall event after the dry season, known as the "first flush."

The overall impact of the project would be to intensify urban uses at the site. Increased vehicular use and use of landscape chemicals could degrade the quality of runoff leaving the site compared to existing conditions. Runoff from the site is currently routed to a detention/retention pond or directly to Redwood Creek. The project proposes to install a storm drain system and pump station on-site to connect to the drainage system for the adjacent Seaport Center project. However, the storm drain system at the Seaport Center is not sized to handle storm flows from the project site. Therefore, the proposed project includes installation of new storm drain lines and an onsite pumping station with discharge to Redwood Creek. Design capacity of the proposed stormwater system would be for 100-year storm flows. In the preliminary design, the outfall is located at the northeast corner of the site. Details of the outfall location would be coordinated with the City during preparation of the project's tentative map. To help minimize the amount of pollutants entering the storm drain system, and subsequently Redwood Creek and the San Francisco Bay, storm drain facilities shall be equipped with treatment features and structural BMPs shall be constructed to provide filtration of stormwater runoff from paved and landscaped areas as discussed in the Mitigation Measures C.3a through C.3d identified below.

The project would be required to meet the provisions of the federal Clean Water Act (Ordinance 12024 § 1 (part), 1997) by submitting plans to the RWQCB to eliminate and control potential pollutants in stormwater discharge.

Mitigation Measure C.3a: Runoff from roads and parking lots shall be filtered through mechanical or natural filtration systems to remove oil and grease prior to discharge. The project applicant shall develop design specifications for the stormwater filtration system consistent with BASMAA and San Mateo County STOPPP guidelines, including new C.3 regulations adopted by the RWQCB on February 19, 2003. Additionally, the applicant shall be required to implement a written stormwater facilities cleaning and maintenance plan, which shall minimize, to the extent feasible, the amount of sediment and other contaminants in the stormwater leaving the site. (Proposed as part of the project)

Facilities shall be installed within the storm drainage system to provide filtration of stormwater prior to discharge. This can be accomplished through mechanical systems such as pre-manufactured oily water separators or through natural processes such as bioswales and settlement ponds. Oil and sediment separator or absorbent filter systems shall be designed and constructed in cooperation with the City Engineer to reduce water quality impacts from urban runoff. The performance of the filters shall be monitored regularly by the applicant or a third party to determine the effectiveness of the water treatment. The stormwater treatment plan shall be reviewed and approved by the City prior to issuance of building permits.

Typically, performance standards are established in the Stormwater Discharge Plan to gauge the effectiveness of the sediment and contaminant reduction. Structural and treatment BMPs are then designed to satisfy these performance standards. Effective structural and treatment BMPs that include the following:

- Grass strips, high infiltration substrates, and grassy swales shall be used where feasible throughout the project to reduce runoff and provide initial stormwater filtration.
- Detention basins shall be installed beneath large parking areas to provide initial filtration prior to discharge into the flood control basins.
- Roof drains shall discharge to natural surfaces or swales where possible to avoid excessive concentration and channelization of stormwater.
- Roof drains from exposed roof decks (such as those on the proposed parking structure) shall discharge to grass strips, high infiltration substrates, and grassy swales to reduce concentration and channelization of runoff and provide initial stormwater filtration.
- Permanent energy dissipaters shall be included at drainage outlets.
- Design water quality detention basins to provide effective water quality control measures including the following:
 - Maximum detention time for settling of fine particles;
 - Maintenance schedules for periodic removal of sedimentation, excessive vegetation, and debris that may clog basin inlets and outlets;

- Maximum detention basin elevation to allow the highest amount of infiltration and settling prior to discharge.
- Water Quality Monitoring and Maintenance Program.

Mitigation Measure C.3b: Direct runoff from landscaped areas into the onsite project storm drain system. All landscaped areas (except for minimal areas on the top of the levee and along the outside slope of the site perimeter) shall be contoured so that runoff is collected in the onsite project storm drain system and does not flow directly into Redwood Creek or the Bay. (Proposed as part of the project)

Mitigation Measure C.3c: The project shall use Integrated Pest Management techniques (methods that minimize the use of potentially hazardous chemicals for landscape pest control) to minimize the use of anti-fungal and anti-aphid and mite sprays, as recommended by San Mateo County’s STOPPP. Only landscape chemicals approved by the Environmental Protection Agency shall be used at the site. The handling, storage, and application of potentially hazardous chemicals shall take place in accordance with all applicable laws and regulations. (Identified by this EIR)

Mitigation Measure C.3d: The project sponsor shall implement appropriate source control measures to minimize the amount of pollutants entering the storm drain system. These source control measures include, but are not limited to: regular street sweeping by mechanized equipment, proper clean-up of soil debris following landscape work or small-scale construction, available trash receptacles, regular trash collection, and the application of absorbent material on oil and fuel leaks from automobiles. Additionally, litter and debris that may accumulate on the project site shall be regularly collected and properly disposed. The project sponsor shall incorporate appropriate source control measures as recommended in the California Stormwater Best Management Practice Handbooks for Industrial and Commercial Sites, and San Mateo County’s STOPPP.¹ (Identified by this EIR)

Significance after Mitigation: Less than Significant.

Impact C.4: The proposed project could alter the rate and amount of runoff from the site. (Potentially Significant)

The proposed project would cause an increase in the amount of runoff generated from the project site due to an increase from approximately 1 acre to approximately 8.8 acres of impermeable surfaces. Discharge of concentrated runoff can cause soil erosion at storm drain discharge areas. Increased storm runoff can also change the character of the receiving waters by increasing the peak flow during and immediately after storms, and decrease the amount of recharge from groundwater between storms and during the summer.

¹ The California Stormwater Best Management Practice Handbooks, dated January 2003, are prepared and provided by the California Stormwater Quality Association, an advisory body of municipal agencies regulated by the storm water program, and are available at <http://www.cabmphandbooks.org>.

The project proposes installation of a storm drain system with capacity for 100-year storm flows. Runoff from the site would be discharged into Redwood Creek or the yacht harbor waters (San Francisco Bay). The proposed outfall would require a U.S. Army Corps of Engineers Nationwide Permit #7 (33 CFR Part 330) for pipeline and outfall construction in waters of the U.S., and a BCDC permit. In addition, the project sponsor would be required by the RWQCB to obtain an NPDES permit for the proposed stormwater outfall. Construction of structural BMPs, as required by mitigation measure C.3a, would allow for infiltration of stormwater onsite, and would reduce pollutant concentrations in stormwater. Compliance with NPDES and U.S. Army Corps of Engineers permit requirements would minimize potential soil erosion at the discharge location and potential degradation of Redwood Creek water quality associated with the proposed project outfall.

Groundwater underlying the project site is not used for drinking water, and the depth of the local groundwater table is largely controlled by tidal influences associated with San Francisco Bay. Therefore, the decrease in surface water infiltration and subsequent decrease in recharge of the local groundwater aquifer associated with the proposed project is considered less than significant.

Mitigation Measure C.4: Implement Mitigation Measures C.3a and C.3b.

Significance after Mitigation: Less than Significant.

CUMULATIVE IMPACTS

This EIR identifies mitigation measures with the purpose of mitigating the project's contribution to cumulative hydrology and water quality impact. This section analyzes the surface hydrology, groundwater, and water quality characteristics of the project. Impacts are considered cumulative in nature, as each impact is considered in the context of existing and potential development in the surrounding area. Site-specific mitigation measures are identified that would reduce the potential contribution of the project to cumulative hydrology and water quality impacts to a less-than-considerable level.

REFERENCES – Hydrology and Water Quality

(The references cited below are available at the Redwood City Community Development Services Department, 1017 Middlefield Road, Redwood City, California, unless specified otherwise below.)

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