



3.7 HYDROLOGY AND WATER QUALITY

The Initial Study¹ determined that the subsequent projects developed under the Rio Hondo College Master Plan may cause significant adverse water quality impacts, thus requiring further analysis in the Master Environmental Impact Report. The analysis of hydrology and water quality include a description of the regulatory framework that guides the decision-making process, existing conditions of the proposed project area, thresholds to determine if the proposed project would result in significant impacts, anticipated impacts (project and cumulative), mitigation measures, and level of significance after mitigation.

Hydrology and water quality at the proposed project site was evaluated in accordance with the methodologies and information provided by the State of California Environmental Quality Act (CEQA) Guidelines.²

3.7.1 Environmental Setting

3.7.1.1 Regulatory Setting

Construction and operation of the Rio Hondo College Master Plan will be conducted in accordance with applicable laws, ordinances, regulations, and standards pertinent to water quality.

Federal Regulations

Section 303(d) of the Clean Water Act. Under Section 303(d) of the Clean Water Act, states are required to identify the water bodies that do not meet water quality objectives necessary to support designated beneficial uses. This list of water bodies that have been identified as impaired is often referred to as the “303(d) List.” For these impaired water bodies, states are required to develop Total Maximum Daily Loads (TMDLs), which are the sum of the individual pollutant load allocations for point sources, non-point sources, and natural background conditions, with an appropriate margin of safety for a designated water body. The TMDLs are established based on a quantitative assessment of water quality impairments, the contributing

¹ Rio Hondo Community College, January 2005. *Initial Study for the Proposed Rio Hondo College Master Plan.* prepared by URS Corporation, 915 Wilshire Blvd, Los Angeles, CA 90017.

² *California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000 – 15387.* Available at: http://ceres.ca.gov/topic/env_law/ceqa/guidelines/



Draft Master Environmental Impact Report Rio Hondo College Master Plan

sources, and load reductions or control actions needed to restore and protect an individual water body.³

Section 402 of the Clean Water Act. The Clean Water Act prohibits the discharge of pollutants to “waters of the United States” from any point source unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. Section 402 of the Clean Water Act requires a NPDES permit for the discharge of storm water from municipal separate storm sewer systems (MS4s) serving urban areas with population greater than 10,000, construction sites that disturb one acre or more, and industrial facilities. The Los Angeles Regional Water Quality Control Board (Regional Board) administers these permits with oversight provided by the State Water Resources Control Board (SWRCB) and United States Environmental Protection Agency (USEPA) Region IX.

Storm Water Phase II Final Rule (64 FR 68722) In 1990, USEPA promulgated rules establishing Phase I of the NPDES storm water program. The Phase I program for MS4s requires operators of “medium” and “large” MS4s (those serving populations of 100,00 or greater) to implement a storm water management program as a means to control polluted discharges from these MS4s. The Storm Water Phase II Rule extends coverage of the NPDES storm water program, to certain “small” MS4s including state departments of transportation, universities, local sewer districts, hospitals, military bases, and prisons. The Phase II Rule defines a small MS4 storm water management program as a program comprising the following six elements: 1) Public Education and Outreach, 2) Public Participation/Involvement, 3) Illicit Discharge Detection and Elimination, 4) Construction Site Runoff Control, 5) Post-Construction Runoff Control, and 6) Pollution Prevention/Good Housekeeping.

State Regulations

Porter-Cologne Water Quality Control Act; California Water Code §13000-14957; 23CCR. This Act establishes the SWRCB and the Regional Boards as the principal state agencies with primary responsibility for the coordination and control of water quality. The Los Angeles Regional Board has jurisdiction over water quality over the region within which Rio Hondo College is located. The Los Angeles Regional Board developed the Water Quality Control Plan (Basin Plan) for the Los Angeles Region⁴, which guides conservation and enhancement of water

³ *United States Environmental Protection Agency, Total Maximum Daily Load Fact Sheet, Available: www.epa.gov/region09/water/tmdl/fact.html[10/28/03]*

⁴ *California Regional Water Quality Control Board, Los Angeles Region 4, Water Quality Control Plan for the Los Angeles Region, February 23, 1995.*

resources and establishes beneficial uses for surface waters and groundwater basins within the region. Beneficial uses are designated for receiving waters so that water quality objectives can be established and programs that enhance or maintain water quality can be implemented.

Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges within the County of Los Angeles, and the Incorporated Cities Therein, Except the City of Long Beach, Order No. 01-182, NPDES No. CAS004001. This Order is a joint MS4 NPDES permit with the Los Angeles County Flood Control District, the County of Los Angeles, and 84 incorporated cities within the Los Angeles Flood Control District referred to separately as “Permittees” and jointly as the “Discharger”. The objective of this MS4 NPDES Permit and the associated Storm Water Management Plan is to effectively prohibit non-storm water discharges and to reduce pollutants in storm water discharges to the “maximum extent practicable” with the purpose of attaining water quality objectives and protecting the beneficial uses of receiving waters.

A provision of this MS4 NPDES Permit requires new development, significant redevelopment, and public works projects to address storm water runoff quality during the planning phase of proposed projects. The MS4 Permit identifies Priority Development Project categories and requires the implementation of a Standard Urban Storm Water Mitigation Plan (SUSMP) that includes treatment control Best Management Practices (BMPs) for Priority Development Projects. For all categories, the SUSMP requires:

- ◆ Maintenance of post-development peak storm water runoff discharge rates at pre-development levels where the increased peak storm water discharge rates will result in increased potential for downstream erosion;
- ◆ Conservation of natural areas;
- ◆ Minimization of storm water pollutants of concern;
- ◆ Protection of slopes and channels;
- ◆ Provision of storm drain system stenciling and signage;
- ◆ Properly designed outdoor material storage areas;
- ◆ Properly designed trash storage areas;
- ◆ Proof of ongoing BMP maintenance;
- ◆ Sizing of treatment control BMPs to meet specified minimum volume-based or flow-based design criteria.

Although Rio Hondo College is not legally subject to the provisions of this MS4 permit or the SUSMP, the facility design will meet the requirements of the SUSMP in accordance with the recommendation of the Los Angeles County Department of Public Works.



NPDES General Permit and Waste Discharge Requirements for Discharges of Storm Water Associated with Construction Activity, Order No. 99-08-DWQ. The SWRCB issued Order No 99-08-DWQ, which is a NPDES General Permit and Waste Discharge Requirements for discharges of storm water associated with construction activity (Construction Storm Water General Permit), in accordance with federal storm water regulations. Project proponents planning construction activities that disturb an area of one acre or more are required to file a Notice of Intent to comply with the requirements of the Construction Storm Water General Permit. After a Notice of Intent has been submitted, the discharger is authorized to discharge storm water under the terms and conditions of the Construction Storm Water General Permit. The major provisions of the Construction Storm Water General Permit are the minimization or elimination of non-storm water discharges from the site, implementation of BMPs to control construction materials and wastes, erosion, and sediment, and monitoring to assure the maintenance and adequacy of the BMPs that are being implemented. Project construction activities must be conducted consistent with a Storm Water Pollution Prevention Plan (SWPPP) and the associated Monitoring and Reporting Plan (MRP) developed in accordance with the provisions of the Construction Storm Water General Permit.

NPDES General Permit and Waste Discharge Requirements for Discharges from Small Municipal Separate Storm Sewer Systems, Order No. 2003-0005-DWQ. The SWRCB issued Order No. 2003-0005-DWQ, which is a NPDES General Permit and Waste Discharge Requirements for discharges of storm water from small “traditional MS4s” and MS4s that are similar to traditional MS4s but operate at a separate campus or facility as “non-traditional”. This General Permit prohibits the discharge of materials other than storm water that are not authorized non-storm water discharges or authorized by a separate NPDES permit, requires the permittee to implement BMPs that reduce pollutants in storm water runoff to the MEP and requires the preparation of a Storm Water Management Plan describing BMPs, measurable goals and timetables for implementation of the following six program areas: 1) public education, public participation, illicit discharge detection and elimination, construction site storm water runoff control, post construction storm water management, and pollution prevention/good housekeeping for municipal operations.

3.7.1.2 Regional Setting

The project site is contained within the San Gabriel River Watershed and the San Gabriel Valley Groundwater Basin under the jurisdiction of the Los Angeles Regional Water Control Board. The San Gabriel River receives drainage from a large area of eastern Los Angeles County with its headwaters originating in the San Gabriel Mountain. Much of the watershed of the of the

West and East Forks of the river north of the Project site is set aside as a wilderness area while other areas in the upper watershed are subject to heavy recreational use. The upper watershed also contains a series of flood control dams. Towards the middle of the watershed and downstream of the Project site, the river has been extensively modified to control flood and debris flows and to recharge groundwater. In fact, approximately 90 percent of the annual water consumption in the San Gabriel Valley Groundwater Basin is supplied by groundwater. The San Gabriel River Watershed is hydraulically connected to the Los Angeles River through the Whittier Narrows Reservoir. Further south of the Project site, the lower part of the river flows through a concrete-lined channel in a heavily urbanized portion of the county before becoming a soft bottom channel near the ocean in the city of Long Beach.

The Water Quality Control Plan for the Los Angeles Region identifies beneficial uses for the San Gabriel River, San Jose Creek, and the San Gabriel Valley Groundwater Basin. Beneficial uses for the San Gabriel River and San Jose Creek within the project area include:

- ◆ Municipal supply
- ◆ Industrial service supply
- ◆ Industrial process supply
- ◆ Warm freshwater habitat
- ◆ Wildlife habitat
- ◆ Rare, threatened or endangered species
- ◆ Recreation

Under Section 303(d) of the Clean Water Act, states are required to identify the water bodies that do not meet water quality objectives necessary to support designated beneficial uses. This list of water bodies that have been identified as impaired is often referred to as the “303(d) List”. San Gabriel River Reaches 1 and 2, and the San Jose Creek downstream of the Project site, are listed as impaired on the 2002 303(d) List for the following constituents:

- ◆ Toxicity
- ◆ Algae
- ◆ Lead
- ◆ Copper
- ◆ Zinc, dissolved
- ◆ High Coliform Count
- ◆ Abnormal fish histology

Beneficial uses for the San Gabriel Valley Groundwater Basin are:

- ◆ Municipal supply
- ◆ Industrial process supply
- ◆ Industrial service supply
- ◆ Agricultural supply

The San Gabriel Valley Groundwater Basin is the primary source of drinking water for 1.4 million people in southern California. In 1979, the presence of volatile organic compounds was first detected in the basin. In 1984, the basin was included in the USEPA's national priority list of Superfund sites. More recently perchlorates were discovered and it has been shown that perchlorate contamination is spreading downstream toward the Whittier Narrows.

3.7.1.3 Project Specific Setting

Rio Hondo College covers 185 acres on primarily elevated terrain. Storm water runoff from the campus drains in a southwest direction to the San Gabriel River. The San Jose Creek flows from the east and undergrounds when it reaches the student parking lot in the northwest section of the campus. The northern portion of this student parking lot and staff parking lot F drains to this creek through a combination of campus and county owned storm drain system. The pipe sizing for this section of system is unknown. This on-site system then drains to the County 42-inch RCP, which then discharges into an unimproved section of San Jose Creek. This section of San Jose Creek is a natural channel with heavy vegetation in and around the creek. The channel remains this way until the creek crosses Baybar Road, approximately 500 feet southwest of the existing pipe outlet, where the channel is concrete lined. Runoff in the channel passes under the San Gabriel Freeway and discharges into the San Gabriel River just west of the Freeway.

The remainder of the student parking lot and most of the central campus drain to an underground collection system that runs through the center of the campus. This system consists of four to fifteen inch piping (VCP, CMP and RCP). This central system then connects and drains to the County's 36-inch RCP located with in the Workman Mill Road right-of-way, which then also drains to the San Jose Creek. There is a third on-site system located in the area of the existing baseball field that ultimately drains to a County 60-inch RCP that drains to the south.

Lastly, there are two additional small systems on this site. Student parking lots "A" and "C" and staff parking lot "B" drain to a separate underground collection system on the east side of the campus and discharges to an open ditch to the south of the campus. The Administration of

Justice building area is drained by a small system that daylight into natural drainage area which ultimately enters the San Jose Channel.

3.7.2 Significance Thresholds

The potential for the proposed projects to be developed under the Rio Hondo College Master Plan to result in impacts to water quality was analyzed in relation to the questions contained in Appendix G of the State of California Environmental Quality Act (CEQA) Guidelines. The proposed project would normally be considered to have a significant impact related to hydrology and water quality if it would cause exceedance of or violation of any water quality standards or waste discharge requirements:

- ◆ 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;
- ◆ 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 offsite; and/or
- ◆ 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 or otherwise substantially degrade water quality.

3.7.3 Environmental Impact Analysis

Drainage for the proposed project will include localized area drains around proposed buildings and structures which will join the already established backbone storm drain system. Since runoff from the campus will discharge into open, natural channels, there is the potential for downstream erosion should the post-development peak stormwater runoff discharge rate exceed the pre-development rate. In order to maintain pre-development discharge rates, natural areas will be conserved to the extent possible and the majority of new development will be on existing paved surfaces. The percentage of impervious surface will change from 26.9% pre- development to 27.3% post-development. Consideration will also be given to paving new parking areas with porous pavement. The use of these project features will help create only a minimal increase in total runoff volume. To manage peak flows, bioswales are being considered at the following locations to provide retention:

- Between the parking lot and Workman Mill Road;
- At the northeast side of the parking lot between the internal campus roadway and the Administration of Justice building.

These areas are being considered based on the viability of the grading of the selected areas for a retention facility.

The San Gabriel River downstream of the Project site is listed as impaired on the 2002 303(d) List for toxicity, zinc, algae, lead, copper, coliform and abnormal fish histology. Potential pollutants typically associated with parking lots, streets and hillside development are pathogens, heavy metals, nutrients, pesticides, oxygen demanding substances, organic compounds including petroleum hydrocarbons (oil and grease), and other automotive fluids such as ethylene glycol. To reduce the discharge of these pollutants, a combination of filtration methods will be used. The bioswales discussed above will serve not only to reduce peak flows but will also filter out pollutants that may have become entrained in campus runoff. Bioswales will be designed to treat at the very least, the volume of runoff produced from the first 0.75 inches of runoff, which is consistent with the requirements of the Los Angeles County Standard Urban Storm Water Mitigation Plan (SUSMP). In addition to bioswale filtration, Continuous Deflective Separator (CDS) units will be placed at all discharge points including those discharging from the bioswales in order to filter overflows. To supplement treatment control BMPs, intentional discharge of pollutants into on-site storm drains will be discouraged by stenciling new catch basins with prohibitive language and parking areas will be swept and cleaned regularly. Following established procedure, trash from new facilities will be taken by collection vehicles to the campus' maintenance facility from which it will be hauled offsite by a licensed waste hauler.

3.7.3.1 Project Specific

Construction

During the construction period, there is potential for sediment to erode from exposed soils into San Jose Creek and the San Gabriel River and for that sediment to reduce water quality in those water bodies. There is also the possibility for accidental spills and leaks of fuels at construction sites and trash and debris to be discharged through storm water runoff into the San Jose Creek and San Gabriel River. Project's disturbing one acre or more are required to apply for coverage under the Construction General Permit to minimize the discharge of pollutants to receiving waters during the Project's construction phase. This Project will require coverage under the Construction General Permit which will include the preparation of a Storm Water Pollution

Prevention Plan (SWPPP) outlining appropriate BMPs to be implemented during construction activities. With this mitigation, less than significant impacts are anticipated.

Operations

New buildings, roads and parking structures would increase runoff from new paved surfaces. However, the conversion of pervious to impervious surfaces will be minimized by conserving natural areas to the extent possible. No storm water runoff will be discharged to local surface water drainages before being treated by either a bioswale, CDS unit or both. Some of the storm water retained in the bioswale will be filtered through percolation into the soil.

Bedrock underlies the campus therefore, changes in groundwater recharge resulting from this Project is not a concern. The Upper San Gabriel Valley Municipal Water District will provide potable water to the revised campus. The water demand of the proposed project would not result in an exceedance of the current or projected water capacity of the water supply system, therefore, no groundwater overdraft is anticipated. Some percolation of stormwater from the campus will occur through the bioswales. However, only a limited amount of runoff will reach groundwater through fissures in the bedrock. This water will be filtered through vegetation and soil before reaching the groundwater. No groundwater contamination from the Project is anticipated.

With the proposed Project features, less than significant impacts are anticipated.

Cumulative Impact Analysis

Development of the Rio Hondo College Master Plan, in conjunction with proposed development identified in the General Plan would not result in significant water quality impacts. Any future development within the study area would be required to mitigate specific water quality impacts on a project-by-project basis. Implementation of BMPs would assure that the project would not significantly contribute to the cumulative addition of contaminants impacting water quality. No cumulative water impacts are anticipated to occur as a result of the proposed project.

3.7.4 Mitigation Measures

With the Project features discussed in Section 3.7.3, less than significant impacts are anticipated. No mitigation measures are recommended.

3.7.5 Level of Significance After Mitigation

No significant hydrology and/or water quality impacts are anticipated.