IV. ENVIRONMENTAL IMPACT ANALYSIS

E. WATER RESOURCES

This section of the Draft EIR discusses a range of water resource issues, including hydrology, water quality and water supply. To facilitate the discussion, this section is subdivided into two separate areas of water resources: (1) Hydrology/Water Quality; and (2) Water Supply. In Section E.1: Water Resources: Hydrology/Water Quality, the hydrology analysis and discussion is limited to the Proposed Project's effect on stormwater runoff, as flood hazard and debris production are not relevant. The water quality analysis and discussion focuses on watershed management programs and project compliance with National Pollution Discharge Elimination System (NPDES) and Standard Urban Stormwater Mitigation Plan (SUSMP).

In Section E.2: Water Resources: Water Supply, the discussion is focused on water supply (and demand) and its relationship to regional water quality and watershed management issues. Groundwater is also addressed in this section in the context of its relationship to water supply, urban runoff, and overall water quality. It should be noted that while the Proposed Project is not subject to Senate Bill (SB) 610 (Cal. Water Code Sections 10910-10912) or SB 221 (Cal. Government Code Section 66473.7), which require the preparation by water purveyors of assessments and analyses verifying available water supply, this Draft EIR nonetheless provides an analysis of the Proposed Project's potential impact on the ability of the Los Angeles Department of Water and Power (LADWP) to meet the Project's water demands. The information presented in this section regarding current and projected water supplies is based on information provided in the City of Los Angeles Department of Water and Power 2005 Urban Water Management Plan (LA-UWMP).

E.1. WATER RESOURCES: HYDROLOGY/WATER QUALITY

1. ENVIRONMENTAL CONDITIONS

a. Physical Setting

(1) Site Hydrology and Stormwater Runoff

(a) Surface Water Flows and Urban Runoff

The project site is located on Riverside Drive within an urbanized area of the San Fernando Valley and has been developed since the early 1960s with the existing Fashion Square shopping center. The surface of the project site is currently fully covered with either structures or pavement. As such, the site is predominantly considered impervious and there are no undeveloped parcels or open space areas located on the project site. Vegetation on the project site is limited to ornamental landscaping associated with existing development. The site is currently graded, developed with structures, and improved for stormwater drainage. The surrounding project area exhibits similar conditions and is typical for an urban environment.

Under existing conditions, runoff at the site sheetflows in two primary directions - eastward to Woodman Avenue and westward to Hazeltine Avenue, which in turn flow into the Los Angeles River.

As determined by the Flood Insurance Rate Maps, the project site is located within Flood Zone C (since reclassified as Zone X-No Shading) which is located outside of both the 100- and 500-year floods. Furthermore, no bodies of water contained by dams or levees are located directly upstream of the project site that could expose people or structures to a significant risk. Therefore, the project site is not subject to a significant impact due to the creation of a significant flood risk to people and/or structures. The Los Angeles City-wide General Plan Framework Final EIR does not designate the project site as being an inundation and tsunami hazard area.

According to the United States Geological Survey (USGS) Map, Van Nuys Quadrangle, no blue line streams are located on the project site. The nearest identified blue line stream is the Los Angeles River, located approximately 300 feet southerly of the site, separated from the site by the Ventura (US 101) Freeway. The Los Angeles River through this area is entirely channelized in concrete.

(b) Surface Water Runoff Quality

Potential Pollutants of Concern

Potential pollutants of concern consist of those pollutants that exhibit one or more of the following characteristics: current loadings or historic deposits of the pollutant are impacting the beneficial uses of a receiving water; elevated levels of the pollutant are found in sediments of a receiving water and/or have the potential to bioaccumulate in organisms therein; or the detectable inputs of the pollutant are at concentrations or loads considered potentially toxic to humans and/or flora and fauna. The potential pollutants of concern for the water quality analysis are those pollutants that are anticipated or potentially could be generated by the Proposed Project at concentrations, based on water quality data collected in Los Angeles County from land uses that are the same as those proposed by the Proposed Project, that exhibit these characteristics. Identification of the pollutants of concern for the Proposed Project considered proposed land uses, current 303(d) listings and Total Maximum Daily Loads (TMDLs) in the Los Angeles River, as well as pollutants that have the potential to cause toxicity or bioaccumulate in the Project's receiving waters.

The following pollutants were chosen as the potential pollutants of concern for purposes of evaluating water based upon the above considerations:

Sediments (TSS and Turbidity). Excessive erosion, transport, and deposition of sediment in surface waters are a significant form of pollution resulting in water quality impairments. Sediment imbalances impair waters' designated uses. Excessive sediment can impair aquatic life by reducing beneficial habitat structure in stream channels affecting benthic infauna, by filling interstitial spaces of spawning gravels, impairing fish food sources, and filling rearing pools. In addition, excessive sediment can cause taste and odor problems in drinking water supplies and block water intake structures or recharge systems.

Nutrients (Phosphorus and Nitrogen (Nitrate-N, Nitrite-N and Ammonia-N). Inorganic forms of nitrogen include nitrate, nitrite and ammonia. Organic forms of nitrogen are associated with vegetative matter such as particulates from sticks and leaves. Total Nitrogen (TN) is a measure of nitrogen present, including inorganic and particulate forms. There are several sources of nutrients in urban areas, mainly fertilizers in runoff from lawns, pet wastes, failing septic systems, and atmospheric deposition from industry and automobile emissions. Nutrient over-enrichment is especially prevalent in agricultural areas where manure and fertilizer inputs to crops significantly contribute to nitrogen and phosphorus levels in streams and other receiving waters. Eutrophication due to excessive nutrient input can lead to changes in algae, benthic, and fish communities; extreme eutrophication can cause hypoxia or anoxia, resulting in fish kills. Surface algal scum, water discoloration, and the release of toxins from sediment can also occur.

Various downstream reaches of the Los Angeles River are identified as impaired by nutrients in general and nitrogen compounds in particular. Evidence of impairment includes low diversity of benthic macroinvertebrates and observations of excessive algae growth. TMDLs have been developed and adopted into the Los Angeles Region Basin Plan[1] for nitrogen compounds, including nitrate/nitrite and ammonia.

Trace Metals (Copper, Lead, and Zinc). The primary sources of trace metals in stormwater are typically commercially available metals used in transportation (e.g., automobiles), buildings, and infrastructure. Metals are also found in fuels, adhesives, paints, and other coatings. Copper, lead, and zinc are the most prevalent metals typically found in urban runoff. Other trace metals, such as cadmium, chromium, and mercury, are typically not detected in urban runoff or are detected at very low levels. Metals are of concern because of the potential for toxic effects on aquatic life and the potential for ground water contamination resulting from surface water infiltration to underlying aquifer systems. High metal concentrations can lead to bioaccumulation in fish and shellfish and affect beneficial uses of receiving waters.

Various downstream reaches of the Los Angeles River are identified as impaired for metals including cadmium, copper, lead, and zinc and TMDLS have been developed and adopted into the Basin Plan.

Pathogens (Bacteria, Viruses, and Protozoa). Elevated pathogens are typically caused by the transport of domestic animal, wildlife, or human fecal wastes from the watershed. Runoff that flows over land such as urban runoff can mobilize pathogens, including bacteria and viruses. Even runoff from natural areas can contain pathogens (e.g., from wildlife). Other sources of pathogens in urban areas include pets, leaky sanitary sewer pipes, and recreational vehicle waste discharges to the storm sewer system. The presence of pathogens in runoff can impair receiving waters and contaminate drinking water sources. Many of the downstream reaches of the Los Angeles River are identified as impaired by high fecal coliform counts. However, coliform TMDLs have not yet been developed.

[1] The *Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Waters of Los Angeles and Ventura Counties* (or Basin Plan), adopted in 1994 and subsequently amended, sets pollutant criteria objectives that must be attained or maintained to protect the designated beneficial uses of receiving waters and conform to the state's anti-degradation policy. See the Regulatory and Policy Setting discussion in this section for more information on the role of the Basin Plan.

Petroleum Hydrocarbons (Oil and Grease and PAHs). The sources of oil, grease, and other petroleum hydrocarbons in urban areas include spillage fuels and lubricants, discharge of domestic and industrial wastes, atmospheric deposition, and runoff. Runoff can be contaminated by leachate from road surfaces, wearing of tires, and deposition from automobile exhaust. Also, do-it-yourself auto mechanics may dump used oil and other automobile-related fluids directly into storm drains. Petroleum hydrocarbons, such as polycyclic aromatic hydrocarbons (PAHs), can bioaccumulate in aquatic organisms from contaminated water, sediments, and food and are toxic to aquatic life at low concentrations. Hydrocarbons can persist in sediments for long periods of time and result in adverse impacts on the diversity and abundance of benthic communities. Hydrocarbons can be measured as total petroleum hydrocarbons (TPH), oil and grease, or as individual groups of hydrocarbons, such as PAHs.

Pesticides. Pesticides (including herbicides, insecticides and fungicides) are chemical compounds commonly used to control insects, rodents, plant diseases, and weeds. Excessive application of a pesticide may result in runoff containing toxic levels of its active component. Pesticides may be classified as organochlorine pesticides or organophosphorus pesticides, the former being associated with persistent bioaccumulative pesticides (e.g., DDT and other legacy pesticides) which have been banned. The Los Angeles River estuary is listed as impaired for legacy pesticides. Organophosphorus pesticides include diazinon and chlorpyrifos whose uses also are being restricted by EPA.

Trash and Debris. Trash (such as paper, plastic, polystyrene packing foam, and aluminum materials) and biodegradable organic debris (such as leaves, grass cuttings, and food waste) are general waste products on the landscape that can be entrained in urban runoff. The presence of trash and debris may have a significant impact on the recreational value of a water body and aquatic habitat. Excess organic matter can create a high biochemical oxygen demand in a water body and thereby lower its water quality. Also, in areas where stagnant water exists, the presence of excess organic matter can promote septic conditions resulting in the growth of undesirable organisms and the release of odorous and hazardous compounds such as hydrogen sulfide. Trash TMDLs for the Los Angeles River Watershed are currently being scoped by the Los Angeles Regional Water Quality Control Board (LARWQCB).

(2) Groundwater

Test boring locations conducted at the project site were checked for the presence of groundwater during and immediately following testing drilling operations. Free groundwater was encountered in three of six total borings at the project site, with groundwater encountered at depths of 34, 43.5 ad 44.5 feet during field explorations. The depth of the water table elevation may fluctuate with time and groundwater can be expected to fluctuate both seasonally and from year to year. Fluctuations in the groundwater level may occur due to variations in precipitation, irrigation practices at the site and in the surrounding areas, climatic conditions, flow in adjacent or nearby canals, pumping from wells and possibly as the result of other factors that were not evident at the time of the geotechnical investigation. Long-term monitoring in observation wells, sealed from the influence of surface water, is often required to more accurately define the potential range of groundwater conditions on a site.

b. Regulatory and Policy Setting

(1) Federal Clean Water Act of 1972 (33 USC.§ 1251 et seq.), Sections 401 and 404

Under the federal Clean Water Act (CWA) Section 401, an activity involving discharge to a waterbody must obtain a federal permit and a State Water Quality Certification to ensure that the activity will not violate established water quality standards.[2] Section 404 of the Clean Water Act regulates the discharge of dredge-and-fill material into waters of the United States including wetlands. Dredge and fill activities are typically associated with development projects; water-resource related projects; infrastructure development and wetland conversion to farming; forestry; and urban development. The Environmental Protection Agency (EPA) is the federal regulatory agency responsible for implementing the CWA. However, it is the State Water Resources Control Board (SWRCB) in conjunction with the nine California Regional Water Quality Control Boards who essentially have been delegated the responsibility to administer the water quality certification (401) program. The U.S. Army Corps of Engineers (USACE) is the designated regulatory agency responsible for administering the 404 permit program and for making jurisdictional determinations. While these provisions of the CWA do not pertain to flood hazards per se, areas under the USACE's jurisdiction (through Sections 401 and 404 of the CWA) typically occur within some floodplain areas.

(2) State Porter-Cologne Act (California Water Code § 13000 et seq.)

The Porter-Cologne Act established the State Water Resources Control Board and the nine Regional Water Quality Control Boards. It authorized the State Board to formulate and adopt state water policy, including water quality objectives, principles, and guidelines. The Porter-Cologne Act directs the Regional Boards to adopt, review and revise Basin Plans and provides direction on factors to be considered in the adoption of water quality objectives and implementation measures to protect water quality in the State.

In adopting water quality objectives, the Regional Boards are required to consider the following factors[3]:

- Past, present, and probable future beneficial uses of water;
- Environmental characteristics of the hydrographic unit under consideration, including the quality of the water available thereto;
- Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area;
- Economic considerations;
- The need for developing housing within the region;
- The need to develop and use recycled water.
- The shopping center project site is located within the Los Angeles Region 4.

[2] U.S. Congress, 95th Congress. 1977 (as amended). *U.S. Code* (Title 33, Chapter 26). Federal Clean Water Act of 1977. 6 June 2008 <http://www.access.gpo.gov/uscode/title33/chapter26_.html >.
[3] Section 13241. California, State of. 2006 (as amended). *California Water Code*. 20 May 2008 <http://www.leginfo.ca.gov/calaw.html>.

(3) NPDES General Construction Permit

The State Water Resources Control Board (SWRCB), Division of Water Quality issues National Pollutant Discharge Elimination System (NPDES) stormwater permits for general construction activities. The Los Angeles Regional Water Quality Control Board (LARWQCB) enforces the NPDES program for the State of California within its jurisdiction (including all of Los Angeles and Ventura Counties) and includes the project area. Dischargers whose projects disturb one or more acres of soil are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit 99-08-DWQ). Coverage under the Construction General Permit is accomplished by completing and filing a Notice of Intent with the SWRCB and by preparing and implementing a Storm Water Pollution Prevention Plan (SWPPP) prior to grading. The primary objective of the SWPPP is to identify, construct, implement, and maintain Best Management Practices[4] (BMPs) to reduce or eliminate pollutants in stormwater discharges from the construction site. The SWPPP must include BMPs that the discharger will use to protect storm water runoff during construction and the placement of those BMPs. Additionally, a SWPPP must include a site map, a visual monitoring program, and a chemical monitoring program for "non-visible" pollutants to be implemented, if there is a failure of a BMP.

(4) Los Angeles Region Basin Plan

The Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, (Basin Plan), adopted by the LARWQCB in 1994, is a resource guide for those who use water and/or discharge wastewater in the Los Angeles Region. Agencies and organizations involved in environmental permitting and resource management activities also use the Basin Plan. The Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan: (1) designates beneficial uses for surface and ground waters; (2) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's antidegradation policy; and (3) describes implementation programs to protect all waters in the Los Angeles Region. In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. The Basin Plan is reviewed and updated as necessary to reflect changing regulations, watershed conditions and best management practices.

(5) SUSMP Requirements

On March 8, 2000, the Los Angeles County Standard Urban Stormwater Mitigation Plan (SUSMP) requirements were approved by the RWQCB as part of the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Program to address stormwater pollution from new construction and redevelopment projects in the County. The SUSMP contains a list of minimum site design, source control and treatment controls best management practices (BMPs) that must be employed to infiltrate or treat

[4] Effective management of wet and dry weather runoff water quality begins with limiting increases in runoff pollutants and flows at the source. Site design and source control best management practices (BMPs) are practices designed to minimize runoff peaks and volumes, as well as the initial introduction of pollutants in stormwater runoff. Treatment control BMPs are designed to remove pollutants once they have been mobilized by rainfall and runoff.

stormwater runoff, control peak flow discharge, and reduce the post-Project discharge of pollutants from stormwater conveyance systems. The SUSMP defines, based upon land use type, the types of practices that must be included and issues that must be addressed as appropriate to the development type and size.

Table 19: SUSMP Requirements, provides a summary of the SUSMP requirements and stormwater BMPs to be implemented on all significant new development and redevelopment projects in Los Angeles County. The Proposed Project fits the criteria of redevelopment projects requiring SUSMP mitigation for potential storm water quality impairments. The Proposed Project's goal at the project site is compliance with NPDES water quality objectives, including SUSMP requirements.

TABLE 19
SUSMP REQUIREMENTS

SUSMP REQUIREMENT	CRITERIA/ DESCRIPTION
1. Peak Flow Controls	• Control post-development peak discharge rates, velocities and duration in Natural Drainage Systems to prevent accelerated downstream erosion and to protect habitat related beneficial uses.[1] • All post-development runoff from a 2-year, 24-hour storm shall not exceed the predevelopment peak flow rate, burned, from a 2-year, 24-hour storm when the predevelopment peak flow rate equals or exceeds five cubic feet per second. Discharge flow rates shall be calculated using the County of Los Angeles Modified Rational Method. • Post-development runoff from the 50-year capital storm shall not exceed the predevelopment peak flow rate, burned and bulked, from the 50-year capital storm. • Control peak flow discharge to provide stream channel and over bank flood protection, based on flow design criteria selected by the local agency.
2. Conserve Natural Areas	• Concentrate or cluster development on portions of a site while leaving the remaining land in a natural undisturbed condition. • Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection. • Maximize trees and other vegetation at each site, planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants. • Promote natural vegetation by using parking lot islands and other landscaped areas. • Preserve riparian areas and wetlands.
3. Minimize Stormwater Pollutants of Concern	• Minimize, to the maximum extent practicable, the introduction of pollutants of concern that may result in significant impacts generated from site runoff of directly connected impervious areas (DCIA) to the stormwater conveyance system as approved by the building official.
4. Protect Slopes and Channels	Project plans must include BMPs consistent with local codes and ordinances and the SUSMP requirements to decrease the potential of slopes and/or channels from eroding and impacting stormwater runoff: • Convey runoff safely from the tops of slopes and stabilize disturbed slopes • Utilize natural drainage systems to the maximum extent practicable • Control or reduce or eliminate flow to natural drainage systems to the maximum extent practicable • Stabilize permanent channel crossings • Vegetate slopes with native or drought tolerant vegetation • Install energy dissipaters, such as riprap, at the outlets of new storm drains,

SUSMP REQUIREMENT		CRITERIA/ DESCRIPTION
		culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion with the approval of all agencies with jurisdiction, e.g., the U.S. Army Corps of Engineers and the California Department of Fish and Game.
5.	Provide Storm Drain System Stenciling and Signage	• All storm drain inlets and catch basins within the Project area must be stenciled with prohibitive language and/or graphical icons to discourage illegal dumping. • Signs and prohibitive language and/or graphical icons, which prohibit illegal dumping, must be posted at public access points along channels and creeks within the Project area. • Legibility of stencils and signs must be maintained.
6.	Properly Design Outdoor Material Storage Areas	• Where proposed Project plans include outdoor areas for storage of materials that may contribute pollutants to the stormwater conveyance system measures to mitigate impacts must be included.
7.	Properly Design Trash Storage Areas	All trash containers must meet the following structural or treatment control BMP requirements: • Trash container areas must have drainage from adjoining roofs and pavement diverter around the areas. • Trash container areas must be screened or walled to prevent offsite transport of trash.
8.	Provide Proof of Ongoing BMP Maintenance	• Applicant required to provide verification of maintenance provisions through such means as may be appropriate, including, but not limited to legal agreements, covenants, and/or Conditional Use Permits.
9.	Design Standards for Structural or Treatment Control BMPs	• Post-construction Structural or Treatment Control BMPs shall be designed to mitigate (infiltrate or treat) stormwater runoff using either volumetric treatment control BMPs or flow-based treatment control BMPs sized per a project specific criteria developed in consultation between the applicant and Los Angeles City Bureau of Sanitation.
10.B.1.	Properly Design Loading/ Unloading Dock Areas (100,000 sq. ft. Commercial Developments)	• Cover loading dock areas or design drainage to minimize run-on and runoff of stormwater. • Direct connections to storm drains from depressed loading docks (truck wells) are prohibited.
10.B.2.	Properly Design Repair/ Maintenance Bays (100,000 sq. ft. Commercial Developments)	• Repair/maintenance bays must be indoors or designed in such a way that does not allow stormwater run-on or contact with stormwater runoff. • Design a repair/maintenance bay drainage system to capture all wash water, leaks, and spills. Connect drains to a sump for collection and disposal. Direct connection of the repair/ maintenance bays to the storm drain system is prohibited. If required by local jurisdiction, obtain an Industrial Waste Discharge Permit.
10.B.3.	Properly Design Vehicle/Equipment Wash Areas (100,000 sq. ft. Commercial Developments)	• Self-contained and /or covered, equipped with a clarifier, or other pretreatment facility, and properly connected to a sanitary sewer.
10.D.	Properly design fueling area (Retail Gasoline Outlets)	• The fuel dispensing area must be covered with an overhanging roof structure or canopy. The cover's minimum dimensions must be equal to or greater than the area within the grade break. The cover must not drain onto the fuel dispensing area and the downspouts must be routed to prevent drainage across the fueling area. • The fuel dispensing area must be paved with Portland cement concrete (or equivalent smooth impervious surface). The use of asphalt concrete shall be prohibited.

SUSMP REQUIREMENT	CRITERIA/ DESCRIPTION
	• The fuel dispensing areas must have a 2% to 4% slope to prevent ponding, and must be separated from the rest of the site by a grade break that prevents run-on of urban runoff. • At a minimum, the concrete fuel dispensing area must extend 6.5 feet (2.0 meters) from the corner of each fuel dispenser, or the length at which the hose and nozzle assembly may be operated plus 1 foot (0.3 meter), whichever is less.
10.E.1. Properly design fueling area (Automotive Repair Shops)	• See requirement 10.D. above.
10.E.2. Properly design repair/maintenance bay (Automotive Repair Shops)	• See requirement 10.B.2 above.
10.E.3. Properly design vehicle/equipment wash areas (Automotive Repair Shops)	• Self-contained and/or covered, equipped with a clarifier, or other pretreatment facility, and properly connected to a sanitary sewer or to a permitted disposal facility.
10.E.4. Properly design loading/unloading dock areas (Automotive Repair Shops)	• See requirement 10.B.1. above.
10.F.1. Properly Design Parking Area (Parking Lots)	• Reduce impervious land coverage of parking areas. • Infiltrate runoff before it reaches the storm drain system. • Treat runoff before it reaches storm drain system.
10.F.2. Properly Design to Limit Oil Contamination and Perform Maintenance (Parking Lots)	• Treat to remove oil and petroleum hydrocarbons at parking lots that are heavily used. • Ensure adequate operation and maintenance of treatment systems particularly sludge and oil removal.
13. Limitation of Use of Infiltration BMPs	• Infiltration is limited based on design of BMP, pollutant characteristics, land use, soil conditions, and traffic. • Appropriate conditions (groundwater >10 ft from grade) must exist to utilize infiltration to treat and reduce stormwater runoff for the Project.
[1] This requirement is from Part 4, § D.1 of the MS4 Permit.	

(5) LA River Revitalization Master Plan and River Improvement Overlay

In May 2007, the City of Los Angeles recently adopted the Los Angeles River Revitalization Master Plan (LARRMP), which targets the redevelopment and revitalization of a 32-mile segment of the Los Angeles River and the land uses that surround it. The LARRMP establishes the creation of the River Improvement Overlay (RIO) as the implementing mechanism, which in turn establishes requirements for private property and publicly owned facilities to comply with design categories addressing watershed, urban design and mobility alternatives. The project site and surrounding properties are located within the RIO District. Many of the watershed management practices requested in the RIO are consistent with BMPs that would be employed with the Proposed Project. Please refer to Section IV: Environmental Impact Analysis: F-Land Use, Planning and Urban Decay, of this DEIR, which identifies applicable watershed management design criteria and project compliance with those criteria.

2. THRESHOLDS OF SIGNIFICANCE

Unless otherwise indicated, the thresholds of significance identified in this section and used to determine the Proposed Project environmental effects are based on direction from the Los Angeles CEQA Thresholds Guide (as adopted 2006).

Surface Water Hydrology

A proposed project would normally have a significant impact on surface water hydrology if it would:

- Cause flooding during the projected 50-year developed storm event, which would have the potential to harm people or damage property or sensitive biological resources;
- Substantially reduce or increase the amount of surface water in a water body; or
- Result in a permanent, adverse change to the movement of surface water sufficient to produce a substantial change in the current or direction of water flow.

Surface Water Quality

A project would normally have a significant impact on surface water quality if discharges associated with the project would create pollution, contamination or nuisance as defined in Section 13050 of the California Water Code (CWC) (see definitions below) or that cause regulatory standards to be violated, as defined in the applicable NPDES stormwater permit or Water Quality Control Plan for the receiving water body.

Groundwater Quality

A project would normally result in a significant impact on groundwater quality if it would:

- Affect the rate or change the direction of movement of existing contaminants;
- Expand the area affected by contaminants;
- Result in an increased level of groundwater contamination (including that from direct percolation, injection or salt water intrusion); or
- Cause regulatory water quality standards at an existing production well to be violated, as defined in the California Code of Regulations (CCR), Title 22, Division 4, and Chapter 15 and in the Safe Drinking Water Act.

3. ENVIRONMENTAL IMPACTS

a. Relevant Project Characteristics

The Proposed Project would include project design features (PDFs) specifically designed to reduce urban runoff and associated pollutants. These PDFs include source controls, low impact development concepts, and treatment control best management practices (BMPs) that will be selected and sized in accordance with applicable regulations. At this stage of conceptual design, site-specific BMPs for the Proposed Project have not been selected or finalized. Ultimately, site-specific constraints, such as paved surface area needed to meet parking requirements and traffic control and American Disability Act (ADA) requirements, and surface and underground utility clearance requirements for the project upgrades will dictate PDFs that will be evaluated as part of final design.

The Proposed Project will not discharge any "waste" as defined by the statutes governing waste discharge requirements, and will not violate any water quality standards applicable to the project concerning stormwater runoff.

The analysis assumes that the following Project Design Features are supported by the Proposed Project:

- In compliance with LEED Certification and the River Implementation Overlay District (see Section IV: Environmental Impact Analysis: F-Land Use, Planning and Urban Decay), the Proposed Project would incorporate a range of "green strategy" project design features for water quality and hydrologic impacts that would include site design, source control, and treatment control BMPs that would be incorporated into the project.

- In accordance with the SUSMP requirements, the Proposed Project would meet (or exceed) all minimum site design and source control BMPs.

- The Proposed Project would incorporate treatment control BMPs that will minimize urban runoff and associated impacts to receiving water quality and specifically address the identified pollutants of concern. Many BMP alternatives can be integrated into planned landscaping, right-of-ways, and planned infrastructure. BMP alternatives that would be implemented with the Proposed Project include: (1) vegetated treatment BMPs, (2) onsite storage and reuse, (3) permeable paving, (4) roof top BMPs, and (5) media filters.

- The Proposed Project would incorporate a number of vegetated treatment BMPs, including swales, filter strips, bioretention and planter boxes. When properly designed and maintained, vegetated BMPs are among the most effective, cost efficient treatment approaches for dry and wet-weather runoff. Treatment occurs through sedimentation, filtration, adsorption to organic matter, and vegetative uptake. Additionally, vegetated treatment systems would reduce runoff volumes through soil soaking, infiltration, and evapotranspiration. On-site implementation of these systems would be integrated into

surface conveyances and on-site landscaping in innovative ways that provide dual-functional site amenities.

- The Proposed Project would incorporate permeable (porous) pavement material in pavement areas (such as roadways, driveways, parking areas, and walkways). The permeable (porous) pavement materials would allow water to drain down to the underlying soil and reduce the volume of wet weather urban runoff. The Proposed Project would incorporate a mix of porous concrete, pervious asphalt, pervious pavers, grass/gravel pavers, and crushed stone, into the landscape plan and design of surface parking areas as functionally appropriate.

- The Proposed Project would employ rooftop BMPs for filtering and/or capturing stormwater in order to contribute toward the reduction of small storm events peaks and the overall runoff volume via inter-event evaporation and transpiration. Rooftop BMPs incorporated into the project design include planters and landscaping on the rooftop portion of the new parking structures, and hanging planters along the parking building tiers and along the Riverside Drive mall elevation.

- The Proposed Project would employ media filtration to separate and filter fine particulates and associated pollutants from captured stormwater to the extent feasible.

The analysis assumes that the Proposed Project will be constructed and operated in accordance with all applicable codes, regulations and standard practices, including the following:

- The City of Los Angeles Development Best Management Practices Handbook, Part A Construction Activities (3rd Edition), adopted by the Los Angeles Board of Public Works on September 29, 2004, and associated ordinances have specific minimum BMP requirements for all construction activities and require that construction projects with one acre or greater of disturbed soil prepare a SWPPP and file a Notice of Intent to comply with the State NPDES General Construction Permit with the SWRCB.

- City of Los Angeles Ordinance No. 172,176 and Ordinance No. 173,494 specify Stormwater and Urban Runoff Pollution Control which requires the application of Best Management Practices (BMPs). Also, the LAMC, Chapter IX, Division 70 addresses grading, excavations, and fills that would be required. The Proposed Project is required to comply with those provisions as well as meet the applicable requirements of the Standard Urban Stormwater Mitigation Plan (SUSMP) approved by Los Angeles Regional Water Quality Control Board (LARWQCB), including the sections related to commercial development and the restaurant industry. A complete list of the LARWQCB required stormwater pollution control measures for commercial and restaurant development is provided with MM WR-2 at the end of this section.

- The Proposed Project would adopt an erosion and sediment control plan for the project site during the construction phase that would employ strategies such as temporary and permanent seeding, mulching, earth dikes, silt fencing, sediment traps and sediment basins. The erosion and sediment control plan would comply with U.S. Environmental

Protection Agency (EPA) Document No. EPA 832/R-92-005 (September 1992), Storm Water Management for Construction Activities, Chapter 3 (or the local agency equivalent erosion and sedimentation control standards and codes) and would address soil loss, stormwater runoff, wind erosion, sedimentation, and fugitive dust at a minimum. The erosion and sediment control plan would contribute to minimizing water quality impacts and may indirectly minimize aesthetic effects during the construction phase.

b. Project Impacts

Based on the IS, potential impacts for a number of environmental issues were determined to be less than significant. The scope of the following analysis focuses only on those impacts that were determined through the NOP and IS process to have a potential significant environmental effect. Issues related to Hydrology and Water Quality that were determined to be less than significant, and not addressed further, include: flooding and groundwater. An explanation supporting this conclusion is provided in Section VI: Other Environmental Considerations: A-Effects Not Found To Be Significant.

(1) Surface Water

(a) Short-Term Construction Activity

During construction of the Proposed Project, existing buildings, pavement and landscaping would be removed to make way for the proposed improvements. As a result, the underlying soils would be temporarily exposed making the project site temporarily more permeable and vulnerable to erosion and sedimentation that could be conveyed into nearby storm drains during storm events. In addition, on-site watering activities to reduce airborne dust could contribute to short-term drainage and pollutant loading in urban runoff. Other sources of short-term, construction-related water pollution that may be associated with the Proposed Project, include the handling, storage and disposal of construction materials that contain pollutants (i.e., demolition debris) and the maintenance and operation of construction equipment (i.e., due to fuel and grease spills).

Construction at the project site would utilize a number of construction materials that are potential sources of water pollutants, such as adhesives, cleaning agents, paints, heating/cooling fluids, and demolition debris. Construction material spills can be a source of stormwater pollution and/or soil contamination. According to the Los Angeles City Bureau of Engineering, routine safety precautions for handling and storing toxic and hazardous materials, and maintaining construction equipment in proper working condition, may effectively control the use of these items and their potential to contribute pollutants to the urban runoff. These "good housekeeping" measures apply to non-hazardous runoff pollutants (such as sawdust or other solid construction debris) as well.

Because the construction site would be greater than one acre in size, the Proposed Project would be required to obtain an NPDES General Construction Permit. In order to obtain coverage under the NPDES General Construction Permit (see discussion above under Regulatory and Policy

Setting section), the Proposed Project developer must submit a Notice of Intent (NOI) to the SWRCB and prepare a SWPPP. The NPDES General Construction Permit requires that developers:

- eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the U.S.;
- develop and implement a SWPPP, which would specify BMPs that will reduce pollution in stormwater discharges to the Best Available Technology Economically Achievable/Best Conventional Pollutant Control Technology standards; and
- perform inspections and maintenance of all BMPs that are implemented at the project site.

BMPs within the SWPPP typically target minimization of erosion during construction, stabilization of the construction areas, sediment control, control of pollutants from construction materials, as well as post-construction stormwater management (i.e., minimization of impervious surfaces, treatment of stormwater runoff, etc.). The SWPPP also must include a discussion of the program for inspection and maintenance of all BMPs.

The City of Los Angeles Development Best Management Practices (BMPs) Handbook, Part A Construction Activities (3rd Edition), adopted by the Los Angeles Board of Public Works on September 29, 2004, and associated ordinances also have specific minimum BMP requirements for all construction activities and require that construction projects with on acre or greater of disturbed soil require the preparation of a SWPPP and filing of a NOI to comply with the State NPDES General Construction Permit with the SWRCB.

The Proposed Project would be designed to comply with all applicable construction and operational water quality standards and waste discharge requirements. Further, the Proposed Project would be required to file a stormwater plan with the City of Los Angeles for grading activities during the construction phase. It is anticipated that the NPDES General Construction Permit would serve as a temporary permit for the construction phase.

During the construction activities, the Proposed Project would implement a variety of BMPs to minimize erosion and sedimentation, eliminate runoff pollutants, and maintain post-construction water quality. Measures specific to erosion and sediment control would include soil stabilization, dust control, sediment control, and roadway cleaning practices. The final selection of BMPs would occur in the field prior to commencement of various construction activities, based in part on the ultimate construction staging plans and the time of year during which construction will occur. Typical BMPs to be utilized during construction activities at the project site include, but would not be limited to, covering construction driveways with gravel, establishing a vehicle washing station, utilizing mulch and roughing soil (to slow down runoff), installing temporary detention basins, avoiding activity during storm events, placement of sedimentation traps, etc. Physical erosion control devices, including temporary diversion dikes/berms, drainage swales, sediment traps, are also effective in protecting downstream receiving waters. These BMPs would eliminate or reduce pollutant levels in stormwater/urban

runoff during construction. Thus, compliance with SWPPP guidelines, including implementation of BMPs, would ensure that the Proposed Project would not violate water quality standards during construction activity and construction-related impacts to hydrology and surface water quality would be less than significant.

(b) Hydrology

The project site is currently fully covered with either structures or pavement and is considered to be impervious. The Proposed Project will be located on an area that is currently developed with structured and surface parking. Due to the existing impervious nature of the project site and the length of time these conditions have existed, the Proposed Project will not substantially alter existing drainage patterns on the project site nor substantially increase the amount of water flowing from the site. Implementation of the Proposed Project would not substantially alter the existing drainage patterns at the project site or surrounding area.

Under the Proposed Project, the project site will continue to be considered impervious and drainage will continue to travel via sheetflow to the adjacent roadways and into the Los Angeles River (located south of the project site). Based on the existing and proposed impervious conditions, the amount and quality of stormwater will not change substantially. The Proposed Project will comply with SUSMP requirements.

The Proposed Project will not change the existing stormwater drainage systems in the project area. Existing capacity of the stormwater system in the project area is adequate to accommodate existing flows. Due to the impervious nature of the site, the continuation of surface and/or rooftop parking and the location of the project site within an urban, developed area, the Proposed Project will not create substantial additional runoff that will exceed the capacity of stormwater drainage systems in the project area.

(c) Urban Runoff Water Quality

The project site is currently graded and improved for stormwater drainage. Due to the urban nature of the project area, surface runoff routinely collects oil, fuel and debris deposited on the ground. The existing shopping center uses are served by large surface parking areas (and include open rooftop parking levels) over which stormwater currently travels, collecting the existing deposits on the ground. Stormwater on the project site and in the project area is currently degraded when runoff mixes with pollutants on surface parking areas and adjacent major roadways. Potential water quality issues are associated with stormwater runoff across existing paved areas and streets that have accumulated fuel, oil, grease and trash deposits.

Adverse impacts may result from the release of contaminants into the stormwater drainage channels during the routine operation of commercial development projects. However, the potential impacts will be mitigated to a level of insignificance by incorporating standard stormwater pollution control measures defined through Ordinance No. 172,176, Ordinance No. 173,494 and LAMC Chapter IX, Division 70. The Proposed Project will meet the applicable requirements of the SUSMP approved by LARWQCB, including the sections related to commercial development and the restaurant industry.

The Proposed Project includes construction of two parking structures over a large portion of the existing surface parking area to serve the entire shopping center. Because the retail building and parking structures will provide rooftop parking, stormwater quality on the project site will not be altered (as the rooftop parking footprint would cover the equivalent area of existing surface parking). In addition, the Proposed Project must meet the requirements of the SUSMP approved by the LARWQCB. Adherence to these standards will insure that storm water discharge from the project site will not exceed existing storm water discharge from the site. With incorporation of the SUSMP requirements, the Proposed Project will not create an adverse storm water runoff or discharge impact. The Proposed Project will not violate any water quality standards or waste discharge requirements and will result in a less than significant impact to water quality.

The Proposed Project will utilize a variety of water quality improvement project design features (PDFs). Preferred over a "one size fits all" approach, the potential use of a few appropriately-placed PDFs will allow the Project meet the tight space constraints of the upgrade and to potentially divide flows for desired reduction in flow and water quality impacts to surrounding systems (both natural and engineered). PDFs for water quality and hydrologic impacts include site design, source control, and treatment control BMPs that will be incorporated into the Proposed Project and are considered a part of the Proposed Project for impact analysis. Effective management of wet and dry weather runoff water quality begins with limiting increases in runoff pollutants and flows at the source. Site design and source control BMPs are practices designed to minimize runoff peaks and volumes, as well as the initial introduction of pollutants in stormwater runoff. Treatment control BMPs are designed to remove pollutants once they have been mobilized by rainfall and runoff.

In accordance with the SUSMP requirements, minimum site design and source control BMPs will be met or exceeded. The Proposed Project will also incorporate, as PDFs, treatment control BMPs that will minimize urban runoff and associated impacts to receiving water quality and specifically address the identified pollutants of concern. Many BMP alternatives can be integrated into planned landscaping, right-of-ways, and infrastructure without requiring large areas of dedicated open space while still meeting the SUSMP sizing requirements.

The following paragraphs describe the types of BMP alternatives that are recommended for implementation at the Proposed Project. While these alternatives are described herein for planning purposes only (i.e., no site-specific designs have been finalized), they provide a listing of the water quality improvement BMPs specifically being evaluated for the Proposed Project. The alternatives have been grouped into (1) vegetated treatment BMPs, (2) onsite storage and reuse, (3) permeable paving, (4) roof top BMPs, and (5) media filters.

Vegetated Treatment BMPs. Vegetated treatment BMPs include swales, filter strips, bioretention and planter boxes. When properly designed and maintained, vegetated BMPs are among the most effective, cost efficient treatment approaches for dry and wet-weather runoff. While the Project is significantly space-constrained, areas such as the northern frontage of the Project adjacent to Riverside Drive will be evaluated for possible siting of such PDFs. Treatment occurs through sedimentation, filtration, adsorption to organic matter, and vegetative uptake. Additionally, vegetated treatment systems can help to reduce runoff volumes through soil soaking, infiltration, and evapotranspiration. A beneficial feature of vegetated treatment systems

is that their design and implementation is highly flexible and adaptable. On-site implementation of these systems can be integrated into surface conveyances and on-site landscaping in innovative ways that provide site amenities, are functionally effective for runoff conveyance and water quality treatment, and in some cases are less costly to construct than traditional storm sewers.

Onsite Storage and Reuse. The goal of onsite storage and reuse is to temporarily detain stormwater and then use it to meet irrigation or other non-potable water demands. With the space and geotechnical constraints of the existing on-site (commercial buildings) and off-site (utility corridors and roadways) structures, large-scale retention is not feasible. Nevertheless, small-scale systems such as small storage tanks strategically located next to and upgradient from landscaped areas will be evaluated for feasibility at the Project.

Permeable Paving. Areas such as roadways, driveways, parking areas, and walkways covered with impermeable (non-porous) pavement are one of the largest contributors to wet weather urban runoff. Permeable or porous pavements are a special type of material that allows water to drain down to the underlying soil, yet are strong enough to structurally support vehicular or pedestrian traffic. Many types of porous pavements and configurations have been developed for a variety of applications. Most of the systems are supported by a stone base that has large pore spaces. This base acts both as pavement support and as a reservoir to store water so that it can be infiltrated, if the soil conditions allow, or detained and slowly released to the storm drain system. In addition, the pavement roughness may be improved (i.e., increased with no significant effect on the driver) thereby providing greater control of runoff hydraulics (i.e., increasing the time required to reach discharge points). Supplemental storage facilities, such as underground vaults (described above) or drainage blankets, can be used in conjunction with these systems. Some of the available permeable pavements that may be further evaluated as PDFs for the Project, subject to geotechnical constraints, are described below. Similar to other PDF alternatives described above, these paving alternatives may be used in specific locations and in conjunction with other PDFs. It should also be noted that these systems are currently being evaluated for the concrete matrix ability to support beneficial bacterial growth that can provide treatment benefits to the water percolating through the pavement.

Media Filters. Media filtration is primarily intended to separate fine particulates and associated pollutants, but depending on the type of media, dissolved constituents, such as metals and nutrients, may be removed via sorption processes. Stormwater is captured and directed either under gravity or pressure through media such as sand, engineered media, compost, zeolite, or combinations of media. These PDFs can be either large installations (not described herein due to Project size constraints), or sized to address a portion of the Project runoff.

Furthermore, the project will not discharge any "waste" as defined by the statutes governing waste discharge requirements, and will not violate any water quality standards applicable to the project concerning stormwater runoff.

Based on the existing and proposed impervious conditions, the amount and quality of stormwater will not change substantially. Due to the impervious nature of the site, the continuation of surface parking (perhaps on the rooftop of the proposed parking structure) and the location of the

project site within an urban, developed area, the Proposed Project will not create substantial additional sources of polluted runoff. The Proposed Project will not otherwise degrade water quality and will result in a less than significant impact to water quality.

(d) Sedimentation and Erosion

There are no undeveloped parcels or open space located on the project site or nearby in the project area. Substantial soil erosion and siltation that could adversely affect water quality will not occur due to the impervious conditions. Due to the existing and proposed impermeable conditions at the project site, the length of time this development has existed on site, and the lack of streams in the project area, the Proposed Project will not substantially alter the existing drainage pattern nor substantially alter the amount of erosion at the project site. Therefore, the Proposed Project will result in a less than significant hydrologic impact due to erosion or siltation.

(2) Consistency with Applicable Plans and Policies

Consistency with applicable plans and policies, including land use and design policies which indirectly address water resource protection, is discussed in detail in Section IV: Environmental Impact Analysis: F-Land Use, Planning and Urban Decay, of this EIR.

(3) Cumulative Impacts

The project site has considered to be impervious and vegetation is limited to installed landscaping associated with the existing development and parking areas. Stormwater currently sheetflows across the site to existing City of Los Angeles facilities, picking up debris, oils, and grease left behind by vehicles. With implementation of standard regulatory requirements including the use of biological and/or material filters, water quality from the site will be improved from current conditions. The project would not negatively change the quantity or quality of stormwater at the project site and the Proposed Project will result in a less than significant hydrologic impact. Based on this, the Proposed Project is not anticipated to contribute to a cumulative impact to hydrology based on either quantity or quality of stormwater.

No significant cumulative impacts on the stormwater drainage system, hydrology or water quality are anticipated from implementation of this and other projects included under the related project list. The related projects would result in increased runoff to the County storm drain system as a whole. However, none of the related projects are located immediately adjacent to the project site such that they might contribute to a significant hydrologic impact in the project area. Furthermore, a separate, site-specific environmental analysis will be prepared for related projects to assess and mitigate related project-specific potential impacts to hydrology.

4. MITIGATION PROGRAM

MM WR-1: The Proposed Project will comply with provisions of the City of Los Angeles Development Best Management Practices Handbook, Part A Construction Activities (3rd Edition), adopted by the Los Angeles Board of Public Works on September 29, 2004, and associated ordinances, which have specific minimum BMP requirements for all construction activities and require that construction projects with one acre or greater of disturbed soil prepare a SWPPP and file a NOI to comply with the State NPDES General Construction Permit with the SWRCB.

MM WR-2: The Proposed Project will comply with City of Los Angeles Ordinance No. 172,176 and Ordinance No. 173,494, which specify Stormwater and Urban Runoff Pollution Control requiring the application of Best Management Practices (BMPs), and the LAMC, Chapter IX, Division 70, which addresses grading, excavations, and fills. The Proposed Project will meet the applicable requirements of the Standard Urban Stormwater Mitigation Plan (SUSMP) approved by Los Angeles Regional Water Quality Control Board (LARWQCB), including the sections related to commercial development and the restaurant industry. The following LARWQCB list of stormwater pollution control measures for commercial and restaurant development is required:

For Commercial development (Lot size 100,000 square feet)

- Project applicants are required to implement stormwater BMPs to retain or treat the runoff from a storm event producing 3/4 inch of rainfall in a 24 hour period. The design of structural BMPs shall be in accordance with the Development Best Management Practices Handbook Part B Planning Activities. A signed certificate from a California licensed civil engineer or licensed architect that the proposed BMPs meet this numerical threshold standard is required.

- Post development peak stormwater runoff discharge rates shall not exceed the estimated pre-development rates for developments where the increased peak stormwater discharge rate will result in increased potential for downstream erosion.

- Concentrate or cluster development on portions of a site while leaving the remaining land in a natural undisturbed condition.

- Limit clearing and grading of native vegetation at the project site to the minimum needed to build lots, allow access, and provide fire protection.

- Maximize trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants.

- Reduce impervious surface area by using permeable pavement materials where appropriate, including: pervious concrete/asphalt; unit pavers, i.e. turf block; and granular materials, i.e. crushed aggregates, cobbles.

- Promote natural vegetation by using parking lot islands and other landscaped areas.

- Preserve riparian areas and wetlands.
- Cover loading dock areas or design drainage to minimize run-on and run-off of stormwater.

- Direct connections to storm drains from depressed loading docks (truck wells) are prohibited.

- Repair/maintenance bays must be indoors or designed in such a way that doesn't allow stormwater run-on or contact with storm water run-off.

- Vehicle/equipment wash areas must be self-contained and/or covered, equipped with a clarifier, or other pretreatment facility, and properly connected to the sanitary sewer.

- Any connection to the sanitary sewer must have authorization from the Bureau of Sanitation.

- The following activities are to be conducted under proper cover with drain routed to the sanitary sewer:
  - Storage of industrial wastes
  - Handling or storage of hazardous wastes
  - Metal fabrication or pre-cast concrete fabrication
  - Welding, cutting or assembly
  - Painting, coating or finishing

- Reduce impervious surface area by using permeable pavement materials where appropriate including pervious concrete, unit pavers, and granular materials.

- Store above ground liquid storage tanks (drums and dumpsters) in areas with impervious surfaces in order to contain leaks and spills. Install a secondary containment system such as berms, dikes, liners, vaults, and double-wall tanks. Where used oil or dangerous waste is stored, a dead-end sump should be installed in the drain.

- Toxic wastes must be discarded at a licensed regulated disposal site. Store trash dumpsters either under cover and with drains routed to the sanitary sewer or use non-leaking and water-tight dumpsters with lids. Use drip pans or absorbent materials whenever grease containers are emptied. Wash containers in an area with properly connected sanitary sewer.

- Reduce and recycle wastes, including paper, glass, aluminum, oil and grease.

- Reduce the use of hazardous materials and waste by using detergent-based or water-based cleaning systems, and avoid chlorinated compounds, petroleum distillates, phenols, and formaldehyde.

- Convey runoff safely from the tops of slopes and stabilize disturbed slopes.

- Utilize natural drainage systems to the maximum extent practicable.

- Control or reduce or eliminate flow to natural drainage systems to the maximum extent practicable.

- Stabilize permanent channel crossings.

- Protect slopes and channels and reduce run-off velocities by complying with Chapter IX, Division 70 of the Los Angeles Municipal Code and utilizing vegetation (grass, shrubs, vines, ground covers, and trees) to provide long-term stabilization of soil.

- Cleaning of vehicles and equipment to be performed within designated covered or bermed wash area paved with Portland concrete, sloped for wash water collection, and with a pretreatment facility for wash water before discharging to properly connect sanitary sewer with a CPI type oil/water separator. The separator unit must be designed to handle the quantity of flows, removed for cleaning on a regular basis (at least twice a year) to remove any solids, and the oil absorbent pads must be replaced regularly, once in fall just before the wet season, and in accordance with manufacturer specifications.

- All storm drain inlets and catch basins within the project area must be stenciled with prohibitive language (such as "NO DUMPING - DRAINS TO THE OCEAN") and/or graphical icons to discourage illegal dumping.

- Signs and prohibitive language and/or graphical icons, which prohibit illegal dumping, must be posted at public access points along channels and creeks within the project area.

- Legibility of stencils and signs must be maintained.

- Materials with the potential to contaminate stormwater must be:
  - Placed in an enclosure such as, but not limited to, a cabinet, shed or similar stormwater conveyance system; or
  - Protected by secondary containment structures such as berms, dikes or curbs.

- The storage area must be paved and sufficiently impervious to contain leaks and spills.

- The storage area must have a roof or awning to minimize collection of stormwater within the secondary containment area.

- The owner(s) of the property will prepare and execute a covenant and agreement (Planning Department General Form CP-6770) satisfactory to the Planning Department binding the owners to post construction maintenance on the structural BMPs in accordance with the Standard Urban Stormwater Mitigation Plan and or per manufacturers instructions.

- Cut and fill slopes in designated hillside areas shall be planted and irrigated to prevent erosion, reduce run-off velocities and to provide long-term stabilization of soil. Plant materials include grass, shrubs, vines, ground covers and trees.

- Incorporate appropriate erosion control and drainage devices such as interceptor terraces, berms, vee-channels, and inlet and outlet structures, as specified by LAMC Section 91.7013. Protect outlets of culverts, conduits or channels from erosion by discharge velocities by installing rock outlet protection. Rock outlet protection is a physical device composed of rock, grouted riprap, or concrete rubble placed at the outlet of a pipe. Install sediment traps below the pipe outlet. Inspect, repair, and maintain the outlet protection after each significant rain.

- Trash container areas must have drainage from adjoining roofs and pavement diverted around the area(s).

- Trash container areas must be screened or walled to prevent off-site transport of trash.

- Reduce impervious land coverage of parking lot areas.

- Infiltrate runoff before it reaches the storm drain system.

- Runoff must be treated prior to release into the storm drain. Three types of treatments are available: (1) dynamic flow separator; (2) filtration; or (3) infiltration. Dynamic flow separators uses hydrodynamic force to remove debris, and oil and grease, and are located underground. Filtration involves catch basins with filter inserts. Filter inserts must be inspected every six months and after major storms, cleaned at least twice a year. Infiltration methods are typically constructed on-site and are determined by various factors such as soil types and groundwater table.

- Prescriptive methods detailing BMPs specific to this project category are available. Applicants are encouraged to incorporate the prescriptive methods into the design plans. These prescriptive methods can be obtained at the Public Counter or downloaded from the City's website at: http://www.lastormwater.org.

For Food Service Industry (Restaurants, Bakeries, Food Processors)

- Project applicants are required to implement stormwater BMPs to retain or treat the runoff from a storm event producing 3/4 inch of rainfall in a 24 hour period. The design of structural BMPs shall be in accordance with the Development Best Management Practices Handbook Part B Planning Activities. A signed certificate from a California licensed civil engineer or licensed architect that the proposed BMPs meet this numerical threshold standard is required.

- Post development peak stormwater runoff discharge rates shall not exceed the estimated pre-development rates for developments where the increased peak stormwater discharge rate will result in increased potential for downstream erosion.

- Concentrate or cluster development on portions of a site while leaving the remaining land in a natural undisturbed condition.

- Limit clearing and grading of native vegetation at the project site to the minimum needed to build lots, allow access, and provide fire protection.

- Maximize trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants.

- Promote natural vegetation by using parking lot islands and other landscaped areas.

- Preserve riparian areas and wetlands.

- Incorporate appropriate erosion control and drainage devices such as interceptor terraces, berms, vee-channels, and inlet and outlet structures, as specified by LAMC Section 91.7013. Protect outlets of culverts, conduits or channels from erosion by discharge velocities by installing rock outlet protection. Rock outlet protection is a physical device composed of rock, grouted riprap, or concrete rubble placed at the outlet of a pipe. Install sediment traps below the pipe outlet. Inspect, repair, and maintain the outlet protection after each significant rain.

- Any connection to the sanitary sewer must have authorization from the Bureau of Sanitation.

- Cleaning of oily vents and equipment to be performed within designated covered area, sloped for wash water collection, and with a pretreatment facility for wash water before discharging to properly connected sanitary sewer with a CPI type oil/water separator. The separator unit must be: designed to handle the quantity of flows; removed for cleaning on a regular basis to remove any solids; and the oil absorbent pads must be replaced regularly according to manufacturer's specifications.

- Store trash dumpsters either under cover and with drains routed to the sanitary sewer or use non-leaking and water tight dumpsters with lids. Wash containers in an area with properly connected sanitary sewer.

- Reduce and recycle wastes, including paper, glass, aluminum, oil and grease.

- Store liquid storage tanks (drums and dumpsters) in designated paved areas with impervious surfaces in order to contain leaks and spills. Install a secondary containment system such as berms, curbs, or dikes. Use drip pans or absorbent materials whenever grease containers are emptied.

- All storm drain inlets and catch basins within the project area must be stenciled with prohibitive language (such as "NO DUMPING - DRAINS TO THE OCEAN") and/or graphical icons to discourage illegal dumping.

- Signs and prohibitive language and/or graphical icons, which prohibit illegal dumping, must be posted at public access points along channels and creeks within the project area.

- Legibility of stencils and signs must be maintained.

- Materials with the potential to contaminate stormwater must be:
  - Placed in an enclosure such as, but not limited to, a cabinet, shed or similar stormwater conveyance system; or
  - Protected by secondary containment structures such as berms, dikes or curbs.

- The storage area must be paved and sufficiently impervious to contain leaks and spills.

- The storage area must have a roof or awning to minimize collection of stormwater within the secondary containment area.

- The owner(s) of the property will prepare and execute a covenant and agreement (Planning Department General Form CP-6770) satisfactory to the Planning Department binding the owners to post construction maintenance on the structural BMPs in accordance with the Standard Urban Stormwater Mitigation Plan and or per manufacturers instructions.

- Prescriptive methods detailing BMPs specific to this project category are available. Applicants are encouraged to incorporate the prescriptive methods into the design plans. These prescriptive methods can be obtained at the Public Counter or downloaded from the City's website at: www.lastormwater.org.

MM WR-3: The Proposed Project will adopt an erosion and sediment control plan for the project site during the construction phase that would employ strategies such as temporary and permanent seeding, mulching, earth dikes, silt fencing, sediment traps and sediment basins. The erosion and sediment control plan will be reviewed and approved by Department of Building & Safety to insure it complies with U.S. Environmental Protection Agency (EPA) Document No. EPA 832/R-92-005 (September 1992), Storm Water Management for Construction Activities, Chapter 3 (or the local agency equivalent erosion and sedimentation control standards and codes) and would address soil loss, stormwater runoff, wind erosion, sedimentation, and fugitive dust at a minimum. The erosion and sediment control plan would contribute to minimizing water quality impacts and may indirectly minimize aesthetic effects during the construction phase.

MM WR-4: In accordance with the SUSMP requirements, the Proposed Project shall meet (or exceed) all minimum site design and source control BMPs.

MM WR-5: The Proposed Project shall incorporate treatment control BMPs that will minimize urban runoff and associated impacts to receiving water quality and specifically address the identified pollutants of concern. Acceptable BMP alternatives that may be implemented with the Proposed Project include: (1) vegetated treatment BMPs, (2) onsite storage and reuse, (3) permeable paving, (4) roof top BMPs, and (5) media filters.

MM WR-6: The Proposed Project shall incorporate vegetated treatment BMPs, including swales, filter strips, bioretention and planter boxes and appropriate and approved by the City.

MM WR-7: The Proposed Project shall incorporate permeable (porous) pavement material in pavement areas (such as roadways, driveways, parking areas, and walkways), such that the pavement materials will allow water to drain down to the underlying soil and reduce the volume of wet weather urban runoff. The Proposed Project shall incorporate a mix of porous concrete, pervious asphalt, pervious pavers, grass/gravel pavers, and crushed stone, into the landscape plan and design of surface parking areas as functionally appropriate.

MM WR-8: The Proposed Project shall employ rooftop BMPs for filtering and/or capturing stormwater in order to contribute toward the reduction of small storm events peaks and the overall runoff volume via inter-event evaporation and transpiration. Acceptable rooftop BMPs incorporated into the project design include planters and landscaping on the rooftop portion of the new parking structures, and hanging planters along the parking buildings and along the Riverside Drive mall elevation.

MM WR-9: The Proposed Project shall employ media filtration to separate and filter fine particulates and associated pollutants from captured stormwater to the extent feasible and as approved by the City.

5. SIGNIFICANT PROJECT IMPACTS AFTER MITIGATION

Implementation and of BMPs during construction activities at the project site, including covering construction driveways with gravel, establishing a vehicle washing station, utilizing mulch and roughing soil (to slow down runoff), installing temporary detention basins, avoiding activity during storm events, placement of sedimentation traps, creation of temporary diversion dikes/berms, drainage swales, etc., would all serve to protect downstream receiving waters. These BMPs would eliminate or reduce pollutant levels in stormwater/urban runoff during construction. Compliance with SWPPP guidelines, including implementation of BMPs, would ensure that the Proposed Project would not violate water quality standards during construction activity. Construction-related impacts to hydrology and surface water quality would be less than significant.