F. HYDROLOGY

ENVIRONMENTAL SETTING

Project Site

The Project Site is located at 19601 Nordhoff Street in the Chatsworth area of the City of Los Angeles, California, within the Chatsworth - Porter Ranch Community Planning Area. The proposed Project Site is square in shape consisting of approximately 35.5 acres bounded by Prairie Street to the north, Corbin Avenue to the west, Nordhoff Street to the south, and Shirley Avenue to the east. The Project Site is developed with structures and surface parking with the exception of two portions of the Site: a small stand of trees located at the northeast corner of the intersection of Nordhoff Street and Corbin Avenue and a currently vacant parcel approved for the construction of a senior housing facility located at the southeast corner of Corbin Avenue and Prairie Street. The Project Site is assumed to be approximately 84 percent impervious.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) #0601370018C, the Project Site is located within Flood Zone C. According to FEMA, Zone C was replaced by Zone X (No Shading) which is determined to be outside both the 100-year and 500-year flood plain.[52]

On-Site Drainage

For analysis, the Project Site was divided into three subareas, as shown in **Figure 19: Hydrologic Subareas**. Portion A, consisting of approximately 5.3 acres, is located at the southeasterly corner of the intersection of Corbin Avenue and Prairie Street. This parcel is currently undeveloped. This portion of the Project Site has been approved for the construction of a senior housing facility and a building permit was issued for a private storm drain that will convey runoff from Portion A to the intersection of Shirley Avenue and Nordhoff Street, where it will join the existing 66-inch Reinforced Concrete Pipe (RCP).

Portion B is rectangular in shape, located at the southwestern corner of the intersection of Shirley Avenue and Prairie Street. Portion C is rectangular in shape, bounded by Portions A and B to the north and Nordhoff Street to the south. Collectively, Portions B and C comprise the remainder of the Project size, approximately 30.2 acres.

[52] Phone conversation between Jack Eldridge, FEMA, and Carrie Riordan, Planning Associates, Inc.; April 24, 2002.

Figure 19: Hydrologic Subareas

Portion B is developed with a surface parking lot. This portion drains via sheet flow to the private driveway located along the southerly border of Portion B. A private storm drain with catch basins located along Teledyne Way conveys runoff from Portion B to the existing storm drain located along Shirley Avenue.

Portion C, located north of Nordhoff Street, includes a paved surface parking lot for visitors, the main building at the Project Site, and a small stand of trees located at the northeast corner of Corbin Avenue and Nordhoff Street. Portion C drains via sheet flow to the northeasterly corner of the intersection of Shirley Avenue and Nordhoff Street, where it is accepted by a 66- inch storm drain.

Off-Site Drainage

There are several drainage devices located north of the Project Site. The purpose of these devices is to intercept sheet flow from properties to the north (off-site drainage) and direct the flow toward adjacent public streets, specifically Corbin Avenue and Shirley Avenue. These streets convey the off-site drainage from approximately 78 acres of the area upstream of the Project Site.

Off-site drainage was evaluated to determine the effects of Project Site development on downstream buildings and infrastructure and to estimate flooding potential for the Project Site itself. The hydrologic evaluation was conducted for a 160-acre study area, as shown in **Figure 19: Hydrologic Subareas**.

Study Area Watersheds

The study area consists of two watersheds hereinafter called the “Eastern” and “Western” watersheds. The eastern watershed consists of 89 acres and drains to the south along Shirley Avenue and its southernly prolongation. The western watershed, consisting of 71 acres, drains to the south along Corbin Avenue. The hydrology of each watershed is discussed below. There is an existing ridge located along the western border of Portions A and C that separates the designated eastern and western watersheds.

The hydrologic analysis was performed utilizing the Los Angeles County Rational Method computer application. The study area is located within Rainfall Zone K. The predominant soil classification is 019 for Subarea 1 of the western watershed and 016 for all other subareas. This study utilized standard hydrologic values in accordance with the recommendation of the Los Angeles County Department of Public Works Hydrology/Sedimentation Manual.

The City of Los Angeles Department of Public works requires the 10-year frequency peak runoff to be conveyed by a storm drain. However, any flow above the 10-year frequency peak runoff (i.e., 25-year frequency peak runoff) is permitted to be conveyed by a street section (i.e., curb full).

Eastern Watershed

The eastern watershed includes residential areas north of Plummer Street to the south of Superior Street, as well as commercial developments south of Plummer Street to the east of Melvin Avenue. As shown in **Figure 19: Hydrologic Subareas**, the watershed is divided into five subareas. Initial time of concentration was determined for each subarea. Routing data for the watershed is included in the attached hydrology study. The resulting 50-year-frequency peak discharge at the most downstream point of the Project Site was estimated to be 240 cubic feet per second (cfs).

Due to the high traffic volumes and intensity at the intersection of Nordhoff Street and Shirley Avenue, even shallow flooding of this intersection should be prevented. This intersection is currently protected from flooding by an overflow channel consisting of a driveway with concrete gutter leading to Limekiln Creek Channel. The driveway is located immediately downstream from the intersection.

The storm drain along Shirley Avenue, a main outflow drainage device for the Project Site, was analyzed to determine the existing capacity. The 66-inch diameter segment of the storm drain located under the intersection of Nordhoff Street and Shirley Avenue and extending southerly from analysis point 5A-eastern watershed to Limekiln Creek Channel was determined to have sufficient capacity to convey the 10-year frequency peak discharge of 190 cfs at this location.

The segment of the storm drain along Shirley Avenue upstream of the intersection of Nordhoff Street and Shirley Avenue was checked for a 10-year frequency peak runoff. An approximately 650-foot-long segment of 42-inch and 39-inch RCP upstream of the intersection of Nordhoff Street and Shirley Avenue (between analysis points 5A-eastern watershed and 3A-eastern watershed) was determined to have sufficient capacity to convey the 10-year frequency peak runoff of 132 cfs at this location.

The most upstream 36-inch and 33-inch diameter segments of the storm drain along Shirley Avenue were determined to be undersized. These segments, located north of analysis point 3A-eastern watershed, do not have sufficient capacity to convey the 10-year frequency peak flow of 101 cfs at this location. The 10-year frequency peak flow along Shirley Avenue is currently conveyed partially by the storm drain and partially by the street cross-section. Maximum capacity of the Shirley Avenue street cross section was estimated to be 112 cfs with the water surface at the top of the curb and 188 cfs with the water surface at the property line (i.e. back of sidewalk). Therefore, the estimated 10-year frequency peak flow of 101 cfs could be adequately conveyed within the curb along Shirley Avenue. Based on the City of Los Angeles Department of Public Works requirement that any flow above the 10-year frequency peak runoff is permitted to be conveyed by the street section, existing conditions between analysis point 3A-eastern watershed and Prairie Street are considered adequate although the existing storm drain pipes are considered undersized.

Western Watershed

The western watershed includes the residential development north of Superior Street to the west of Melvin Avenue, commercial development south of Plummer Street to the west of Melvin Avenue, and commercial development south of Prairie Street to the west of Corbin Avenue. For analysis, the watershed was divided into five subareas as shown in **Figure 19: Hydrologic Subareas**. The peak discharge for the 50-year frequency storm runoff for the intersection of Corbin Avenue and Nordhoff Street was determined to be approximately 153 cfs, currently conveyed by the street section and the existing 36-inch storm drain.

Add Area

The Add Area is located north of Prairie Street between Corbin Avenue and Shirley Avenue within the Chatsworth - Porter Ranch Community Planning Area. The Add Area is rectangular in shape, consisting of approximately fifteen acres. The Add Area is fully developed with one- and two-story buildings and surface parking lots and is assumed to be impervious.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) #0601370018C, the Project Site is located within flood zone C. According to FEMA, Zone C was replaced by zone X (No Shading) which is determined to be outside both the 100-year and 500-year flood plain.[53]

In general, stormwater in the area flows from north to south and is collected in catch basins and storm sewers at the intersections of Corbin Avenue and Nordhoff Street and Shirley Avenue and Nordhoff Street. Due to the proximity of the Add Area to the Project Site, the Add Area and properties north of the Add Area were included in the hydrologic analysis completed for the Project Site.

On-Site Drainage

The Add Area was divided into two subareas for analysis purposes, as shown in **Figure 19: Hydrologic Subareas**. Portion D occupies the western section of the Add Area. this portion is fully developed and includes paved areas and structures. Portion D drains via sheet flow and concrete gutters to adjacent public streets including Melvin Avenue, Prairie Street, and Corbin Avenue. Water from Portion D is part of the western watershed.

Portion E consists of the eastern section of the Add Area. It is fully developed and consists of paved areas and structures. Portion E drains via sheet flow and concrete gutters to adjacent public streets including Melvin Avenue, Prairie Street, and Shirley Avenue. Water from Portion E is

[53] Phone conversation between Jack Eldridge, FEMA, and Carrie Riordan, Planning Associates, Inc.; April 24, 2002.

currently picked up by catch basins located at the northwestern corner of Shirley Avenue and Prairie Street and piped to the south where it eventually connects with the 66-inch pipe located at the intersection of Nordhoff Street and Shirley Avenue. Water from Portion E is part of the eastern watershed.

Off-Site Drainage

There are several drainage devices located north of the Add Area. The purpose of these devices is to intercept sheet flow from properties to the north (off-site drainage) and direct the flow toward adjacent public streets, specifically Corbin Avenue and Shirley Avenue. These streets convey the off-site drainage from approximately 78 acres of the area upstream of the Project Site.

Off-site drainage was evaluated to determine the effects of the development scenarios analyzed for the Add Area on downstream buildings and infrastructure and to estimate flooding potential for the area. The hydrologic evaluation was conducted for a 160-acre study area, as shown in **Figure 19: Hydrologic Subareas**.

Study Area Watersheds

Due to the proximity of the Add Area properties with respect to the Project Site, the Add Area was included in the hydrologic study conducted for the Project Site. Therefore, the study area watershed information is similar to that provided in the Environmental Setting Section for the Project Site.

THRESHOLDS OF SIGNIFICANCE

According to the City of Los Angeles CEQA Thresholds Guide, 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.

A project would normally have a significant impact on surface water quality if

- Discharge associated with the project would create pollution, contamination or nuisance as defined in Section 13050 of the California Water Code (CWC) 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.

A project would normally have a significant impact on groundwater level if it would:

- Change potable water levels sufficiently to:
  - Reduce the ability of a water utility to use the groundwater basin for public water supplies, conjunctive use purposes, storage of imported water, summer/winter peaking, or to respond to emergencies and drought;
  - Reduce yields of adjacent wells or well fields (public or private); or
  - Adversely change the rate or direction of flow of groundwater; or
- Result in a demonstrable and sustained reduction of groundwater recharge capacity.

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, Chapter 15 and in the Safe Drinking Water Act.

Due to the existing developed and largely impervious nature of the Project Site and Add Area, a permanent, adverse change to the quantity of surface water will not occur as a result of the proposed Project. Additionally, the Project Site and Add Area have been fully developed for over 20 years and the development scenarios analyzed will not alter groundwater draft or recharge in the area. Therefore, thresholds referred to above that reference surface water quality, groundwater level, and groundwater quality will not be exceeded. Thresholds regarding surface water hydrology will be addressed further in the following section.

ENVIRONMENTAL IMPACTS

Project Site

The proposed development will result in an increase in the amount of impervious surface on the Project Site due to the removal of a small stand of trees located at the northeast corner of Corbin Avenue and Nordhoff Street. However, the drainage pattern will substantially remain the same.

Eastern Watershed

To model the proposed impervious conditions at the Project Site, the imperviousness of Subarea 4 was increased from 83 percent to 92 percent (established by Los Angeles County for commercial development). The resulting 50-year frequency peak discharge at the most downstream point of the Project Site was estimated to be 241 cfs. This presents a negligible 0.4 percent increase compared to existing conditions. Therefore, the proposed Project at the Project Site would result in a less than significant impact to people, property, or sensitive biological resources based on the occurrence of a projected 50-year developed storm event.

There are no bodies of water in the project area. Therefore, the proposed Project at the Project Site will result in a less than significant impact to the amount of surface water in a water body.

The proposed Project at the Project Site will not result in a permanent, adverse change to the movement of surface water that will produce a substantial change in the current or direction of water flow. Currently, water from the Project Site is carried via sheet flow and drainage pipes (along Teledyne Way) to Shirley Avenue and eventually to the 66-inch pipe that exists at the intersection of Nordhoff Street and Shirley Avenue. With the proposed Project, surface water from the Project Site will continue to travel via sheet flow to Teledyne Way and drainage pipe to the intersection of Nordhoff Street and Shirley Avenue. The proposed Project at the Project Site will increase surface water flow by a maximum of 1 cfs, a 0.4 percent increase, which will not significantly alter the quantity or direction of surface water flow.

The City of Los Angeles Department of Public Works requires that the 10-year- frequency peak runoff is conveyed by a storm drain. However, any flow above the 10-year-frequency peak runoff (i.e., 25-year-frequency peak flow) is permitted to be conveyed by the street section. According to the hydraulic analysis prepared for the project area, analysis point 5A-eastern watershed, located at the intersection of Nordhoff Street and Shirley Avenue, currently has adequate capacity to convey the estimated 10-year-frequency peak runoff of 190 cfs. Northerly of this intersection, it has been determined that the 42-inch and 39-inch RCP between analysis point 5A-eastern watershed and 3A-eastern watershed has adequate capacity to convey the 132 cfs 10-year-frequency peak runoff. The portion of storm drain north from analysis point 3A-eastern watershed to Prairie Avenue along Shirley Avenue does not currently have adequate capacity to convey the 10-year frequency peak runoff of 101 cfs. However, based on the Department of

Public Works requirement that flow in excess of the 10-year-frequency peak runoff is permitted to be conveyed by the street section, the proposed Project at the Project Site will result in a less than significant impact to this identified segment of storm drain although the existing storm drain does not have adequate capacity.

Stormwater from Portion A of the Project Site will be captured by a private storm drain on Site and conveyed to the intersection of Shirley Avenue and Nordhoff Street where it joins the existing 66-inch RCP. Stormwater from Portion B of the proposed Project Site will be captured by a private storm drain on Site and conveyed to the intersection of Shirley Avenue and Teledyne Way, analysis point 3A-eastern watershed, where it will join the existing 42-inch and 39-inch storm drains that currently have adequate capacity. This storm drain will convey stormwater from Portion B to the existing 66-inch RCP located at the intersection of Nordhoff Street and Shirley Avenue. Stormwater from Portion C of the Project Site will continue to drain to the existing 66-inch RCP located at the intersection of Nordhoff Street and Shirley Avenue. No stormwater from the Project Site will travel via sheet flow to Shirley Avenue and will therefore not adversely affect the existing inadequate storm drain system east of the project area. The increase of 1 cfs as a result of the proposed Project at the Project Site will be accommodated by existing capacity in the storm drain located at the intersection of Nordhoff Street and Shirley Avenue. Therefore, the proposed Project at the Project Site will result in a less than significant impact to hydrology in an area already identified as being underserved as a result of inadequate storm drain capacity to convey the 10-year-0frequency peak flow.

Western Watershed

The proposed development will not affect drainage within the western watershed. The peak discharge for the 50-year-frequency peak storm runoff and the 10-year- frequency peak storm runoff at the intersection of Corbin Avenue and Nordhoff Street (analysis point 5A-western watershed) will not be affected by the proposed development. As during existing conditions, storm runoff will be conveyed by the street section and the existing 36-inch storm drain. The proposed Project Site will not be subject to flooding during the projected 50-year-frequency peak runoff and therefore, the proposed Project would not harm people, property, or sensitive biological resources. There are no bodies of water within the project area, therefore, the proposed Project will not result in a change to the amount of surface water within a water body.

The capacity of Corbin Avenue was estimated to be approximately 83 cfs (curb full) and 209 cfs between the street property lines (back of sidewalk to back of sidewalk). Therefore, no overflow of the 50-year-frequency peak runoff (153 cfs) would be expected from the western watershed into the Project Site. The existing ridge along the westerly property line shall be preserved. This ridge line protects the Project Site from an overflow during storm events of a higher magnitude. Therefore, the proposed Project will not result in a permanent, adverse change to the movement of surface water that will substantially change the current or direction of water flow in the project area. As the proposed Project will not alter the quantity or direction of stormwater flow to the

western watershed, the proposed Project at the Project Site will result in a less than significant impact to hydrology in the area as a result of inadequate capacity in the local storm drain to convey the 10-year-frequency peak flow. Based on significance criteria established by the City of Los Angeles Department of Public Works and the Draft Los Angeles CEQA Thresholds Guide, the proposed Project at the Project Site will result in a less than significant impact to hydrology or stormwater in the area.

Hydrologic computations for the eastern and western watersheds as well as computations for initial time of concentration for all subareas are attached in the hydrology study in **Appendix E** of the Technical Appendices.

Add Area

The Add Area is developed with one- and two-story buildings and associated surface parking lots and can be considered approximately one hundred percent impervious. Therefore, the drainage pattern will substantially remain the same.

Eastern Watershed

Existing conditions at the Add Area are considered impervious. Therefore, development scenarios analyzed for the Add Area will not result in a substantial change to the quantity of stormwater in the area. A hydrology study was completed for the Add Area, including upstream properties and downstream properties (the Project Site). The existing 50-year-frequency peak discharge was determined to be 240 cfs. Under proposed conditions, the 50-year-frequency peak discharge at the most downstream point of the analysis was estimated to be 241 cfs. This presents a negligible 0.4 percent increase compared to existing conditions. Therefore, development scenarios analyzed for the Add Area would result in a less than significant impact to people, property, or sensitive biological resources based on the occurrence of a projected 50-year developed storm event.

There are no bodies of water in the project area. Further, the Add Area is approximately one hundred percent impervious under existing conditions and, with the construction of new development will not add additional stormwater to hydrology in the area nor contribute to an established water body. Therefore, development scenarios analyzed for the Add Area would result in a less than significant impact to the amount of surface water in a water body.

Due to existing impervious conditions, development scenarios analyzed for the Add Area will not result in a permanent, adverse change to the quantity or movement of surface water that will produce a substantial change in the current or direction of water flow.

The City of Los Angeles Department of Public Works requires that the 10-year- frequency peak runoff is conveyed by a storm drain. However, any flow above the 10-year-frequency peak flow (i.e., 25-year-frequency peak flow) can be conveyed by the street section. According to the hydraulic analysis prepared for the project area, analysis point 5A-eastern watershed, located at the intersection of Nordhoff Street and Shirley Avenue, currently has adequate capacity to convey the estimated 10-year-frequency peak runoff of 190 cfs. Northerly of this intersection, it has been determined that the 42-inch and 39-inch RCP between analysis point 5A-eastern watershed and 3A-eastern watershed have adequate capacity to convey the 132 cfs 10-year-frequency peak runoff. The portion of storm drain north from analysis point 3A-eastern watershed to Prairie Avenue along Shirley Avenue does not currently have adequate capacity to convey the 10-year-frequency peak runoff of 101 cfs. However, due to the existing impervious conditions, development scenarios analyzed for the Add Area will not add water to the existing inadequate storm drain system. Further, any flow above the 10-year-frequency peak runoff is permitted to be conveyed by the street section which has existing adequate capacity. Therefore, development scenarios analyzed for the Add Area would result in a less than significant impact to hydrology in an area already identified as being underserved as a result of inadequate storm drain capacity to convey the 10-year-frequency peak flow.

Western Watershed

The proposed development will not affect drainage within the western watershed. The peak discharge for the 50-year-frequency peak storm runoff and the 10-year- frequency peak storm runoff at the intersection of Corbin Avenue and Nordhoff Street (analysis point 5A-western watershed) will not be affected by the proposed development. As during existing conditions, storm runoff will be conveyed by the street section and the existing 36-inch storm drain. The Project Site will not be subject to flooding during the projected 50-year-frequency peak runoff and therefore, the proposed Project would not harm people, property, or sensitive biological resources. There are no bodies of water within the project area, therefore, the proposed Project will not change the amount of surface water in a water body.

The capacity of Corbin Avenue was estimated to be approximately 83 cfs (curb full) and 209 cfs between the street property lines (back of sidewalk to back of sidewalk). Therefore, no overflow of the 50-year-frequency peak runoff (153 cfs) would be expected from the western watershed into the Project Site. The existing ridge along the westerly property line shall be preserved. This ridge line protects the Project Site from an overflow during storm events of a higher magnitude. Therefore, the proposed Project will not result in a permanent, adverse change to the movement of surface water that will substantially change the current or direction of water flow in the project area. As the proposed Project will not alter the quantity or direction of stormwater flow to the western watershed, development scenarios analyzed for the Add Area would result in a less than significant impact to hydrology in the area as a result of inadequate capacity in the local storm drain to convey the 10-year-frequency peak flow.

Therefore, based on significance criteria established by the City of Los Angeles Department of Public Works and the Draft Los Angeles CEQA Thresholds Guide, development scenarios analyzed for the Add Area would result in a less than significant impact to hydrology or stormwater in the area.

Hydrologic computations for the eastern and western watersheds, as well as computations for initial time of concentration for all subareas are attached the hydrology study in **Appendix E** of the Technical Appendices.

MITIGATION MEASURES

Although no significant impacts to hydrology have been identified, environmental impacts to water quality and flow may result from the proposed Project at the Project Site and development scenarios analyzed for the Add Area. Further, in the event that development includes a restaurant facility at either the Project Site or Add Area, environmental impacts may result from the release of toxins into the stormwater drainage channels during the routine operation of restaurants, bakeries, and food producers.

However, the potential impacts will be mitigated to a less than significant level by incorporating stormwater pollution control measures. 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). Chapter IX, Division 70 of the Los Angeles Municipal Code addresses grading, excavation, and fills. Applicants must meet the requirements of the Standard Urban Stormwater Mitigation Plan (SUSMP) approved by Los Angeles Regional Water Quality Control Board, including the following: (a copy of the SUSMP can be downloaded at http://www.swrcb.ca.gov/rwqcb4/)

29. 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. (O, C, R)

30. The owner of the property will prepare and execute a covenant and agreement satisfactory to the Department of City Planning binding the owners to post construction maintenance on the structural BMPs in accordance with the Standard Urban Stormwater Mitigation Plan. (O, C, R)

31. Runoff must be treated prior to release into the storm drain. Three types of treatments are available: (1) dynamic flow separator, (2) filtration, (3) infiltration. Dynamic flow separator 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. (O, C, R)

32. Prior to the issuance of building permits for replacement buildings or new parking areas within the Add Area, a hydrologic analysis shall be conducted to determined if the project will create additional runoff. If the project proposed at that time will generate additional runoff, an analysis must be conducted to determine if the existing storm drain has adequate capacity to accommodate the additional runoff. If the existing system can not provide adequate capacity, the applicant at that time may be required to install a relief sewer along Shirley Avenue southward from Prairie Street to Teledyne Way. (O, C, R)

33. Cleaning of oily vents and equipment to be performed within a 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. (C)

34. 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. (C)

35. Reduce and recycle wastes, including oil and grease. (C)

36. To prevent downstream flooding, the existing ridge along the westerly property boundary shall be maintained unless additional storm drains capable of accommodating additional flow are developed. (C)

LEVEL OF IMPACT AFTER MITIGATION

Less than significant.

CUMULATIVE IMPACTS

Related Projects

Properties that may undergo substantial changes in the existing impervious conditions are of concern to stormwater hydrology in the project area. Due to the existing urban and fully-developed nature of the project area, there are few areas that could significantly alter the existing hydrologic conditions of the area. However, areas to the north of the Project Site and Add Area, primarily north of State Route 118, including the Porter Ranch and Deer Lake Ranch related projects, include unadulterated natural lands that, as a result of development, could change stormwater hydrology in the area.

The Porter Ranch related project (No. 4) does contain natural, vegetated lands that upon development, could cause a change in stormwater hydrology. It was determined in the Porter Ranch Specific Plan EIR that buildout of the specific plan area would increase the amount of runoff from a 50-year-frequency storm. However, this runoff would be controlled by storm drain systems designed in accordance with the standards of the City of Los Angeles Department of Public Works. With the application of all mitigation measures outlined in the Porter Ranch EIR and adherence to the recommendations and requirements of the responsible agencies, impacts would be reduced to a less than significant level. Stormwater collected in the Porter Ranch area will be piped southward by the Oakdale Drain, extending southward from the Porter Ranch area, eastward along Devonshire Street, and southward along Winnetka Avenue where it connects with the Limekiln Creek Channel. Therefore, as determined by the EIR prepared for the Porter Ranch Specific Plan, related project No. 4 will result in a less than significant impact to people, property, or sensitive biological resources due to stormwater hydrology. Further, it will not 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.

Other related projects upstream of the proposed Project include Deer Lake Ranch (No. 5) and the proposed Northridge office building (No. 9). Deer Lake Ranch is located west of Browns Canyon Wash to which future stormwater from this development would flow. The proposed Northridge Office building site is located in a fully-developed, urban area. Due to the existing impervious nature of the area, this related project will not increase the quantity of stormwater in the area. Therefore, related projects would result in a less than significant impact to stormwater hydrology in the project area.

Proposed Project, Add Area, and Related Projects

Based on the existing fully-developed, urban nature of the project area, the proposed Project at the Project Site and development scenarios analyzed for the Add Area, in combination with related projects, would result in a less than significant impact on hydrology due to an increase in stormwater quantity, substantial change in the direction of stormwater flow, or damage due to insufficient flood control.