
IV.G. HYDROLOGY AND WATER QUALITY

The following section presents the information provided in the hydrology report prepared by Sukow Engineering. The Hydrology Report is provided in Appendix G of this Draft EIR.

ENVIRONMENTAL SETTING

Surface Water Hydrology

The proposed project site is located in an urbanized area within metropolitan Los Angeles. The site is a rectangular shaped parcel consisting of approximately 1.43 acres. The site is occupied by the City of Los Angeles Historic-Cultural Monument No. 184, Tower of Wooden Pallets, a vacant single-family structure in a state of disrepair, several sheds. The immediate environs are covered with impervious surfaces with streets and structures. The project site is outside of the 100-year flood plain.

On-Site Drainage Pattern

The project site drains southerly via sheet flow to Magnolia Boulevard and via the street flow along Magnolia Boulevard to its intersection with Sepulveda Boulevard. At that intersection the flow is intercepted by catch basins which connect to the existing 48-inch diameter storm drain under Sepulveda Boulevard. The surrounding land uses (multi-family structures and private school) do not drain onto the site. The property on the south side of Magnolia Boulevard is occupied by a large paved parking lot. This parking lot drains into Magnolia Boulevard via sheet flow.

Off-Site Drainage Pattern

The project site is located in a fully developed urban area within the limits of a watershed of approximately 13.45 acres. The entire watershed drains to Magnolia Boulevard and then via street flow to the intersection of Magnolia Boulevard and Sepulveda Boulevard.

The 1987 amendments to the Federal Water Pollution Control Act ("Clean Water Act"), added Section 402(p), which establishes a framework for regulating municipal and industrial storm water discharges under the National Pollution Discharge Elimination System (NPDES) program. Subsequently, the EPA published final regulations that established requirements for applications for storm water permits for specified categories of industrial and construction activities of 5 acres or more. Therefore, a permit is not required because the project site is less than 5 acres.

In 1992, the California State Water Resources Control Board (SWRCB) adopted the General Construction Activity Storm Water Permit (GCASWP) which is "... required for all storm water discharges associated with construction activity where clearing, grading, and excavation results in a land disturbance of 5 or

more acres.” Since the project site is less than 5 acres (1.43 acres), the project is not required to obtain an SWCRB permit. However, the project would be subject to water discharge requirements under the Los Angeles County NPDES Permit (No. CA0061654).

ENVIRONMENTAL IMPACTS

Thresholds of significance

Based on the City of Los Angeles CEQA Thresholds Guide (1998), the project would result in a significant impact to surface water hydrology if it:

- Causes 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 reduces or increases the amount of surface water in a water body; or
- Results 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.

The project would 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) 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.

Project impacts

Surface Water Hydrology

The proposed residential development will consist of a four-story structure that would include 98 units in three residential levels situated above a partial subterranean parking level. The structure would be 45-feet in height. The proposed development will change the general drainage pattern. The site will continue to drain southerly to Magnolia Boulevard and then via street flow to the catch basins located at the intersection of Magnolia Boulevard and Sepulveda Boulevard. There will be a change in the ratio of pervious versus impervious surfaces with project implementation.

A hydrologic analysis was performed utilizing the City of Los Angeles Peak Rate method to calculate future storm water flows from the site with the proposed project. As a result, the proposed project would create an insignificant increase in storm water flows under future conditions in a 10-year and 50-year frequency peak runoff. In addition, hydraulic calculations were performed utilizing a standard street crown section method to determine depth of the street flow along Magnolia Boulevard for the 10-year and

50-year frequency peak runoff for existing and proposed conditions. The site in its existing condition has a runoff of 2.3 cubic feet per second (cfs) for a 10 year storm event and 3.8 cfs for a 50 year event. In the proposed site condition, the runoff is 4.9 cfs for the 10 year event and 6.3 cfs for the 50 year event. The site drainage is a small portion of a total watershed that drains into Magnolia Boulevard. The total existing drainage into Magnolia Boulevard for a 10 year event is 43.1 cfs. With the proposed project this 10 year event drainage would increase to 45.7 cfs. This would be a 6% increase in total flow which would remain contained within the street right of way. The total drainage for a 50 year event under the existing conditions is 57.0 cfs which would increase to 59.5 cfs with implementation of the proposed project. Representing a 4.4% increase in total flow, this increase in a 50 year event would remain contained within the street right of way. The hydraulic analysis of the street indicated that the increase in street flow depth from existing to proposed future conditions would be negligible. The existing depth of street flow for the 10 year event is 0.71 feet; with the proposed project this street flow depth would increase to 0.73 feet, which would be a 3% increase. The existing depth of street flow for the 50 year event without the development is 0.78 feet; with the proposed project this street flow depth would increase to 0.79 feet, which would be a 1.3% increase. Thus, the proposed project would not produce a significant impact on the surrounding properties or create a flood hazard. Further, the project would not substantially reduce or increase the amount of surface water in a water body as the increase in runoff would be insignificant. Since the increase in runoff is negligible, the runoff flows would not result in a permanent, adverse change in the movement of surface water sufficient to produce a substantial change in the current or direction of water flow. Therefore, the project would not result in any significant impacts related to the amount or rate of stormwater runoff and drainage. Project-specific impacts associated with drainage and surface runoff and the potential for increased flooding during the projected 50-year storm event would be less than significant.

Surface Water Quality

Construction of the proposed project has the potential to affect the quality of storm water runoff. Typically, runoff picks up pollutants as it flows over the ground or paved areas and carries these pollutants into the storm drain system or directly into natural drainages. There are three general sources of short-term construction-related stormwater pollution associated with the proposed project: 1) the handling, storage, and disposal of construction materials containing pollutants; 2) the maintenance and operation of construction equipment; and 3) earth moving activities which, when not controlled, may generate soil erosion.

The project construction site will contain a variety of construction materials that are potential sources of stormwater pollution, such as adhesives, cleaning agents, landscaping, plumbing, painting, heat/cooling, masonry materials, floor and wall coverings, and demolition debris. Construction material spills can also 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 potential pollution of stormwater by these materials. These same types of common sense, “good housekeeping” procedures can also be extended to non-hazardous stormwater pollutants such as sawdust and other solid wastes.

Soil erosion is the process by which soil particles are removed from the land surface, by wind, water and/or gravity. Soil particles removed by stormwater runoff are pollutants, which, when deposited in local watercourses, can have negative impacts on downstream conditions. Grading and brush clearing activities can greatly increase erosion processes. Two general strategies are typically required to prevent construction silt from entering drainage courses. First, the amount of exposed soil is typically limited and erosion control procedures are implemented for those areas that must be exposed. Appropriate dust suppression techniques, such as watering or tarping, are used in areas that must be exposed. The Bureau of Engineering indicates that many of the common mitigation measures for controlling fugitive dust emissions, such as covering truck loads and street sweeping, are also effective in controlling stormwater quality. Second, the construction area would be secured to control off-site migration of pollutants. Erosion control devices, including temporary diversion dikes/berms, drainage swales and siltation basins, are typically required around construction areas to insure that sediment is trapped and properly removed. Also construction activities must adhere to the relevant stormwater management regulations under Los Angeles County’s NPDES Permit No. CA0061654. When properly designed and implemented, these Best Management Practices (BMPs) would ensure that short-term construction related water quality impacts are not significant.

Water Quality – Long Term Operational Impacts

If not properly designed and constructed, the proposed project could increase the rate of urban pollutant introduction into stormwater runoff, and increase erosion, transport of sediment load and downstream siltation, all of which constitute avoidable impacts to surface water quality. In order to prevent these potential impacts, the project will be designed in compliance with Order No. 90-079 of the Regional Water Quality Control Board, Los Angeles Region, which regulates the issuance of water discharge requirements to Los Angeles County (including Cities that are tributaries to the County for stormwater discharge), under NPDES Permit No. CA0061654.

Under existing conditions, runoff from the project site may contain urban pollutants such as automotive fluids, heavy metals and chemical constituents, fertilizers, pesticides and herbicides that could be discharged into the storm drainage system. Because there would be no substantial increase in runoff as a result of the project, urban contaminants that may be present in urban runoff from the site would not differ substantially in type or quantity than that which currently exists. The proposed project would be required to submit site drainage plans to the City Engineer and other responsible agencies for review and

approval prior to development of any drainage improvements. Impacts to stormwater quality as a result of project implementation would be less than significant.

CUMULATIVE IMPACTS

The project area is highly urbanized, well drained and mostly covered with impermeable surfaces. With implementation of appropriate mitigation measures such as BMPs for individual projects in the project area, related project impacts to stormwater quality and quantity would not be cumulatively considerable, and therefore, not significant.

MITIGATION MEASURES

As construction of the project would be required to comply with all applicable requirements associated with NPDES Permit No. CA 0061654 and all relevant storm water quality management regulations, no significant impacts would occur and no mitigation measures are required.¹

LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant hydrology-related impacts are anticipated. Compliance with the requirements of NPDES Permit No. CA0061654 would ensure that the proposed project does not create any significant water quality impacts.

¹ Utilizing a standard street crown-section, the calculations show that the existing and proposed 10-year frequency storm runoff overflows the top of curb elevations in Magnolia Boulevard. In a situation like this, the construction of a storm drain in Magnolia Boulevard capable of handling the 10-year peak runoff might be required by the regulating agencies. However, the proposed project does not generate an impact by which the flows overflow the top of the curb. The overflow the top of the curb is an existing condition.