

3.5 HYDROLOGY AND WATER QUALITY

This section evaluates existing hydrologic resources at the site and potential impacts associated with the proposed project. This section describes impacts to water quality and alteration of existing drainage patterns, as well as potential increases in surface runoff, flooding, and soil erosion. The regulatory framework governing water resources is described.

3.5.1 EXISTING SETTING

REGIONAL SETTING

The lease boundary is located approximately 0.25-miles north of the San Gabriel River. The San Gabriel River flows from the San Gabriel Mountains in the north through the San Gabriel Valley and the Los Angeles Coastal Plain before emptying into the Pacific Ocean through the Los Angeles/Long Beach Harbor. The major tributaries to the San Gabriel River include Walnut Creek, San Jose Creek, and Coyote Creek. The Rio Hondo, a distributary of the San Gabriel River, branches from the river below Santa Fe Dam and flows westward to the Whittier Narrows area.¹ At Whittier Narrows, portions of the flow from the San Gabriel River are conveyed to the Rio Hondo by a manmade channel known as Lario Creek (LADPW 2005). Lario Creek conveys storm water flows, imported water, and recycled water between the San Gabriel River and the Rio Hondo. Whittier Narrows Dam, the largest flood control facility on the river, is operated by the United States Army Corps of Engineers (USACE) to regulate flows from the San Gabriel River to the Rio Hondo for flood control and conservation. Flood flows from the San Gabriel River are stored temporarily behind the dam in the Whittier Narrows area, and controlled releases are made to the Rio Hondo and/or the San Gabriel River (LADPW 2005).

SURFACE DRAINAGE CHARACTERISTICS OF THE PROJECT SITE

The lease boundary contains both impervious areas, such as parking lots and buildings, and pervious open space. Surface runoff from the lease boundary drains along natural courses towards the San Gabriel River, which runs northeast-southwest south of the lease boundary. There are no man-made drains located within the lease boundary. However, the lease boundary is located approximately 200 feet west of the Robert S. Joe Commemorative Ditch. The ditch carries storm water runoff from Durfee Avenue south to the San Gabriel River. The ditch does not always contain water.

The lease boundary is currently developed with the WNNC, a County Police substation, outbuildings, an outdoor classroom, and a 33-car surface parking lot. Approximately 0.9 acres (or roughly 8 percent) of the 7-acre construction impact area is currently developed with impervious surfaces. Paved and impervious surfaces, including buildings, contribute greater quantities of runoff to storm water systems than landscaped surfaces. Water cannot permeate compacted and impervious surfaces as easily as landscaped areas, and consequently, rain is converted to runoff, removed from the site by culverts or

¹ A distributary, or a distributary channel, is a stream that branches off and flows away from a main stream channel.

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channels which would ultimately reach the San Gabriel River. An increase in impervious surface area reduces the amount of rainfall absorbed through soils, while also preventing contaminants from being trapped and neutralized in the soil.

FLOODING

The Whittier Narrows Dam Flood Control Project was completed and began operation in 1957 as the Whittier Narrows Dam Recreation Area (Recreation Area), a regional park featuring dry-land recreational activities and wildlife management areas. The USACE operates and maintains the flood control works at the Recreation Area. There is no permanent impoundment for this reservoir. The amount of water stored in the reservoir is based on the total capacity of the reservoir, flood capacity in the event of a storm, and the amount of water that can safely pass through the spillway. The USACE utilizes the project site and the entire Recreation Area as a major flood control reservoir behind the Whittier Narrows Dam. The dam protects a 554-square mile densely populated area comprised of residential, commercial, and industrial land. The San Gabriel River, the Rio Hondo Channel, and the flood-flow channel are within the reservoir (USACE 1996).

The 100-year flood line, set by the dam, is 227.3 feet above mean sea level. The majority of the lease boundary, with the exception of the WNNC building pad, falls within the 100-year flood zone (See Figure 2-5) (USACE 1996). Any development within the Recreation Area behind the dam cannot impede the primary purpose of flood control. As such, the USACE delineates the “taking line,” the 229-foot above mean sea level elevation, as the point at which all construction or other activities planned within this elevation must compensate on a 1:1 ratio for any loss of flood storage capacity. In other words, if soil is added to extend the area above the flood elevation and the taking line, an equivalent amount of soil must be removed from within the taking line. In this way, the USACE is able to ensure a continuous level of flood storage capacity.

SOIL CONDITIONS

The geology of the San Gabriel Basin is dominated by unconsolidated to semi-consolidated alluvium deposited by streams flowing out of the San Gabriel Mountains. These deposits include Pleistocene and Holocene (10,000 years ago to the present) alluvium and the lower Pleistocene San Pedro Formation. The Upper Pleistocene alluvium deposits form alluvial fans along the San Gabriel Mountains. The San Pedro Formation is characterized by its interbedded marine sand, gravel, and silt. The primary native soil types in the San Gabriel Basin area are sandy loam, silt loam, and clay loam (LADPW 2005).

EROSION

Soil erosion is the process whereby soil materials are worn away and transported to another area by either wind or water. Rates of erosion can vary depending on the soil material, structure, and placement by human activity. Soil containing high amounts of silt can be susceptible to erosion, while sandy soils are more resistant. Excessive soil erosion can eventually lead to damage of building foundations, roadways,

and embankments. Erosion is most likely to occur in sloped areas with exposed soils, especially where unnatural slopes are created by cut and fill activities (LADPW 2005). The proposed project site is currently susceptible to a low level of erosion. The trails that lead from the WNNC are unpaved and are subject to erosion during high wind and rain events. However, approximately 96 percent of the project site contains buildings, paved surfaces, and vegetated areas that are not be susceptible to erosion. Eroded soils are eventually carried to Lario Creek, which is located approximately 0.25 miles south of lease boundary between the Natural Area and the San Gabriel River, or the Robert S. Joe Commemorative Ditch, which is located approximately 200 feet east of the lease boundary.

WATER QUALITY

According to Section 303(d) of the Clean Water Act list of impaired water bodies, the water quality of the San Gabriel River is substantially impaired downstream of Whittier Narrows. Major point source contributors to poor water quality in the San Gabriel River include municipal storm drains and water reclamation plants. Non-point sources include equestrian facilities, golf courses, and plant nurseries. Trash is also a large contributor to poor water quality. There are several segments of water bodies within the San Gabriel River Watershed, including Legg Lake, that the Regional Water Quality Control Board has established as 303(d) Water Quality Impacted Segments. Segments located downstream of the proposed project site are impaired with coliform, dissolved copper, lead, dissolved zinc, abnormal fish histology, algae, and toxicity.

In addition, storm water contains various pollutants that are picked up as runoff travels through urban and suburban areas. Typical pollutants in urban storm water are bacteria, nutrients, trash, sediment, heavy metals, and organic compounds (e.g., pesticides, vehicular exhaust materials, and chemicals used in industrial processes). The types and amounts of pollutants contained in storm water are highly variable. This problem is common to all water bodies within Los Angeles County and is not specific to the San Gabriel River.

3.5.2 REGULATORY SETTING

FEDERAL

Per the USACE, land use projects located within the 100-year floodplain are subject to infrequent flooding, sedimentation, and wave erosion. Flood-proof structures are permitted in these areas. Flood proofing is defined as a combination of structural changes and/or adjustments (such as soil excavation and backfilling to raise the elevation above the 100-year flood line), and/or construction and alteration of individual buildings, structures or properties subject to flooding (such as raising building foundations, building on stilts, or designing structures that can be flooded), with the primary purpose of reducing or eliminating flood damages. All such structures must be approved by the USACE District Engineer, Los Angeles District. Structures conducive to human habitation are prohibited (LADPW 2005). The USACE requires that all soils used for cut and fill shall be balanced on-site (Bass 2006). The USACE delineates

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the “taking line,” the 229-foot above mean sea level elevation, as the point at which all construction or other activities planned within this elevation must compensate on a 1:1 ratio for any loss of flood storage capacity. In other words, if soil is added to extend the area above the flood elevation and the taking line, an equivalent amount of soil must be removed from within the taking line. In this way, the USACE is able to ensure a continuous level of flood storage capacity.

The National Pollution Discharge Elimination System (NPDES) storm water permitting program, under Section 402(p) of the federal Clean Water Act, is administered by the Regional Water Quality Control Board on behalf of the EPA. Because construction activities associated with the proposed project would result in the disturbance of more than one acre, compliance with the statewide NPDES storm water general permit for construction activity would be required. The NPDES storm water permit would require the following:

- elimination or reduction of non-storm water discharges to storm water systems and other waters of the United States.
- development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) for temporary construction activities. As described in Section 2.8, the SWPPP must include the following:
 - minimizing the extent of the disturbed area and duration of exposure;
 - stabilizing and protecting the disturbed area as soon as possible;
 - keeping runoff velocities low;
 - protecting disturbed areas from contact with runoff; and
 - retaining sediment within the construction area.

In addition to construction best management practices, operational features of the SWPPP must include the following:

- adoption of permanent post-construction water quality best management practices.
- inspections of storm water control structures and pollution prevention measures.

STATE

The State Water Resources Control Board and 9 associated Regional Water Quality Control Boards enforce State of California statutes, which are equivalent to or more stringent than the federal statutes. The Los Angeles Regional Water Quality Control Board issues permits for activities, including construction activities that could cause impacts on surface waters and groundwater. The Los Angeles Regional Water Quality Control Board developed a Water Quality Control Plan to protect the quality of surface and ground waters of the region and is also responsible under Section 303(d) of the Clean Water Act for protecting surface waters and groundwater from both point and non-point sources of pollution within the proposed project site. The Water Quality Control Plan establishes water quality standards and objectives that protect the beneficial uses of various waters. In order to protect these uses, the state

develops Total Maximum Daily Loads, which is a calculation of the maximum amount of a pollutant that a water body can receive and still meet Water Quality Objectives established in the Water Quality Control Plan (LADPW 2005). The San Gabriel River Watershed has an established Total Maximum Daily Loads (TMDLs) for trash with TMDLs for metals and Selenium awaiting approval by the State Water Resources Control Board (LADPW 2005).

LOCAL

The County of Los Angeles and 84 other municipal co-permittees have been issued a storm water permit by the Los Angeles Regional Water Quality Control Board. The permit consists of various storm water management programs designed to reduce pollutants in storm water and urban runoff. Under the County's NPDES storm water permit requirements, development construction projects must implement at a minimum, best management practices to reduce pollutants to the maximum extent practicable for water quality protection. This includes sediment control, construction materials control, and erosion control to prevent storm water pollutants from leaving construction sites. Implementation of a SWPPP is required for projects with one acre or greater of soil disturbance. The SWPPP must be prepared before the project owner, developer, or contractor receives a grading or building permit and must be implemented year-round throughout construction. In the event soil is disturbed during the rainy season, generally defined as October 1 through April 15, construction projects must implement a Wet Weather Erosion Control Plan. A Wet Weather Erosion Control Plan must be prepared prior to each rainy season, and must be implemented throughout that rainy season. Projects, including those including the construction of parking lots with 25 or more spaces, are also subject to post-construction storm water requirements of the Standard Urban Storm Water Mitigation Plan. The Standard Urban Storm Water Mitigation Plan identifies applicable, required, or suggested treatment and source control storm water best management practices based on the operational-specific nature of the project (LADPW 2007). These would include the following best management practices:

- Post-development peak storm water runoff discharge rates shall not exceed the estimated pre-development rate for developments where the increased peak storm water discharge rate would result in increased potential for downstream erosion.
- Use permeable materials for private sidewalks, driveways, parking lots, or interior roadway surfaces (examples: hybrid lots, parking groves, permeable overflow parking, etc.)
- All storm drain inlets and catch basins within the project area must be stenciled with prohibitive language (such as: "NO DUMPING – DRAINS TO OCEAN") and/or graphical icons to discourage illegal dumping.
- Materials with the potential to contaminate storm water must be: (1) placed in an enclosure such as, but not limited to, a cabinet, shed, or similar structure that prevents contact with runoff or spillage to the storm water conveyance system; or (2) protected by secondary containment structures such as berms, dikes, or curbs.

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- The hazardous materials storage area must be paved and sufficiently impervious to contain leaks and spills.
- The hazardous materials storage area must have a roof or awning to minimize collection of storm water within the secondary containment area.
- 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 areas
- Infiltrate runoff before it reaches storm drain system.
- Treat runoff before it reaches storm drain system
- Vegetated swales and strips
- Infiltration basin
- Constructed wetlands

3.5.3 ENVIRONMENTAL IMPACTS

The following hydrology and water quality analysis is based on review of available technical reports and knowledge of the proposed type, intensity, and duration of project construction activities and proposed changes in the surface hydrology of the lease boundary.

THRESHOLDS OF SIGNIFICANCE

As part of the Initial Study (see Appendix A), it was determined that the proposed project would not substantially deplete groundwater supplies; place housing within a 100-year flood hazard area; expose people or structures to a significant risk of loss, injury, or death involving flooding; or inundation by seiche, tsunami, or mudflow. Accordingly, these issues are not further analyzed in the EIR.

A hydrologic or water quality impact is considered significant if implementation of the proposed project would:

- Violate a water quality standard or waste discharge requirement;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place within a 100-year flood hazard area structures that would impede or redirect flows; or
- Result in substantial soil erosion, loss of topsoil, or changes in topography or unstable soil conditions from excavation, grading, or fill.

IMPACT ANALYSIS

HYDRO-1 *Operation of the proposed project would violate a water quality standard or waste discharge requirement, or otherwise substantially degrade water quality.*

Construction

Construction activities such as clearing, grading, excavation, and building construction would result in the disturbance of soil. Additionally, construction activities and equipment would require the onsite use and storage of fuels, lubricants, and other hydrocarbon fluids. Construction activities that involve soil disturbance would temporarily increase the potential for soil erosion. During storm events, storm water runoff could carry disturbed sediments and spilled substances from construction activities, resulting in erosion and storm water pollution discharges to the nearby receiving waters.

Prior to the issuance of grading permits, the proposed project would be required to develop a SWPPP to outline the control of storm water pollution runoff and waste management during construction. The SWPPP would include the following:

- minimizing the extent of the disturbed area and duration of exposure;
- stabilizing and protecting the disturbed area as soon as possible;
- keeping runoff velocities low;
- protecting disturbed areas from contact with runoff; and
- retaining sediment within the construction area.

Construction best management practices would include, at minimum, the following:

- temporary desilting basins;
- silt fences;

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- gravel bag barriers;
- temporary soil stabilization through mattress or mulching;
- temporary drainage inlet protection; and
- diversion dikes and interceptor swales.

This plan is part of the NPDES permit for discharge of storm water associated with construction activities. As discussed above, incorporation of best management practices in the SWPPP would reduce the potential for soil erosion and release of other pollutants into Lario Creek, and ultimately the San Gabriel River, during construction. The Authority would be required to develop a Wet Weather Erosion Control Plan for construction activities that will occur during the rainy season. These measures would minimize the amount of runoff and associated pollutants leaving the construction site by containing runoff on-site, containing sediments on-site, and minimizing the potential for storm water to come into contact with pollutants. Compliance with existing regulations would ensure that the proposed project would not violate a water quality standard or otherwise substantially degrade water quality. The construction impact would be less than significant, and no mitigation is required.

Operation

The proposed project would involve the construction of approximately 1.2 acres of impermeable surface area, including the interpretive center, maintenance building, roadways, and paved walkways. This is an increase in 0.3 acre of impermeable surface, or 2.7 percent. In addition, the proposed project would include a 150-space, 1.8-acre parking lot paved with a semi-permeable material. Although a minor increase, additional impermeable and semi-permeable surfaces have the potential to result in increased runoff during a storm event. Drainage from the driveway and parking lot surfaces are primary sources of urban storm water pollution. This pollution may include heavy metals, petroleum products, oil, grease, and hydrocarbons. Trails and walkways can also be sources of trash. Such contaminants may be transported into the San Gabriel River by storm water runoff. Due to the close proximity of the San Gabriel River, which is a 303(d) listed water bodies downstream of the lease boundary, impacts related to surface runoff would be potentially significant. As such, the proposed project has been designed to include vegetated drainage swales in the island of the proposed parking lot. Excess runoff from the parking lot and runoff from the interpretive center would be channeled by underground pipes to the riparian/wetland area. Additional detention would be provided south of the parking lot and east of the outdoor classroom building (see Figure 2-7, Conceptual Site Plan). These features are intended to filter and cleanse storm water runoff and reduce runoff velocities prior to storm water runoff entering the San Gabriel River. Site surfaces would be vegetated following proposed project construction to reduce the potential for erosion and sedimentation in runoff carried to the San Gabriel River. Pesticides or herbicides could be used during proposed project operation that would impact the quality of storm water runoff eventually entering the San Gabriel River corridor. As such, the proposed project would violate water quality standards and substantially degrade water quality in the San Gabriel River. Implementation of mitigation is required to reduce the level of impact. Accordingly, the use of chemicals would be limited to approved herbicides and pesticides and application would be restricted during rain storms or

when rainstorms are predicted as specified in mitigation measure HYDRO-A. With implementation of mitigation, operational impacts on water quality would be less than significant.

HYDRO-2 *Implementation of the proposed project would not alter drainage patterns of the site which could potentially result in erosion, siltation, or flooding on or off-site. Further, construction and operation of the proposed project would not increase the amount of surface runoff, potentially exceeding the capacity of the existing storm drain system.*

Construction

Soil disturbance during construction would increase the potential for wind and water erosion at the proposed project site. During construction, grading would create additional exposed earth and, if not controlled, surface water can move greater quantities of sediment to local drainages and flood control facilities, such as the San Gabriel River. As described in HYDRO-1 above, the construction contractor would develop and implement a SWPPP. The SWPPP would include the following:

- minimizing the extent of the disturbed area and duration of exposure;
- stabilizing and protecting the disturbed area as soon as possible;
- keeping runoff velocities low;
- protecting disturbed areas from contact with runoff; and
- retaining sediment within the construction area.

Construction best management practices implemented as part of the SWPPP would include, at minimum, the following:

- temporary desilting basins;
- silt fences;
- gravel bag barriers;
- temporary soil stabilization through mattress or mulching;
- temporary drainage inlet protection; and
- diversion dikes and interceptor swales.

This plan is part of the NPDES permit for discharge of storm water associated with construction activities. As discussed above, incorporation of best management practices in the SWPPP would reduce the potential for soil erosion and release of other pollutants into the San Gabriel River during construction. The Authority would be required to develop a Wet Weather Erosion Control Plan for construction activities that will occur during the rainy season. These measures would minimize the amount of runoff and associated sediments leaving the construction site by containing runoff and sediments on-site. Compliance with existing regulations would ensure that the proposed project would not increase the amount of surface runoff during construction such that it would exceed the capacity of the existing drainage system. Further, compliance with existing NPDES regulations during construction

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would ensure that the proposed project would not alter existing drainage such that it results in substantial erosion, siltation, or flooding on- or off-site. The impact would be less than significant, and no mitigation measures are required.

Operation

As described in the Environmental Setting, there are no drainage features on the existing project site. Storm water runoff drains by sheet flow to vegetated areas where it percolates into the ground. No surface runoff from within the lease boundary is channeled such that it drains directly to the San Gabriel River. No surface runoff would directly discharge to the San Gabriel River during operation of the proposed project. However, drainage patterns within the proposed project site would be altered by site layout. The larger WNNC and additional outbuildings would provide impediments to storm flows compared to the existing site conditions. The parking lot would have a substantially different configuration and be located in a currently vegetated area. More runoff would be created from the site structures because the developed portion of the lease boundary site would be increased by 0.3 acre of impermeable surface, or 2.7 percent.

Runoff from the lease boundary would continue to be carried by sheet flow on paved surfaces. To account for these changes in the site's drainage pattern and increase in surface runoff that would be created, the proposed project includes the collection and treatment of storm water runoff as part of proposed project design. As described above, the proposed project includes vegetated drainage swales in the island of the proposed parking lot. The elevation of the parking lot is such that runoff from the upper half of the parking lot would naturally flow toward the vegetated swales in the median. The vegetated swales would filter and cleanse runoff and allow it to percolate back into the ground. Excess runoff from the parking lot and runoff from the interpretive center would be channeled by underground pipes to the constructed riparian/wetland area. Storm water runoff from the lease boundary would be used to provide water for the constructed riparian/wetland area. In the unlined portion of the constructed riparian/wetland area, storm water would be filtered through the vegetation and allowed to percolate into the ground. Additional detention would be provided south of the parking lot and east of the outdoor classroom building (see Figure 2-7, Conceptual Site Plan). This detention basin would be a large vegetated basin that would filter and cleanse runoff as it percolates into the ground. As such, operation of the proposed project would not increase the amount of surface runoff such that it would exceed the capacity of the existing drainage system. With these features, the amount of storm water runoff discharged into the San Gabriel River (located approximately 0.25-miles south of the lease boundary) would not change over existing conditions. The impact would be less than significant, and no mitigation is required.

During operation of the proposed project, open areas of the lease boundary would be vegetated, thereby limiting the amount of soil that is exposed to wind and rain. The erosion and siltation potential of the vegetated areas of the site would be low. Building entryways and the driveway would be paved with standard impermeable materials. As such, there would no erosion potential from these surfaces. The walkways from the parking lot to the interpretive center and from the interpretive center to the open air

classroom and covered outdoor classroom would be crushed rock paving, asphalt paving, and unit pavers with low to no potential for erosion. The parking lot would consist of permeable unit pavers and Grasscrete would be installed in the loading zone adjacent to the interpretive center. These materials have low to no erosion potential. Thus, operation of the proposed project would not alter existing drainage patterns on the lease boundary such that it would result in substantial erosion, siltation, or flooding on- or off-site. The impact would be less than significant, and no mitigation measures are required.

HYDRO-3 *The proposed project site would not place structures within the 100-year flood zone, potentially impeding or redirecting flow.*

As discussed above, portions of the lease boundary are not located within the 100-year flood zone (see Figure 2-5). These include existing WNNC and outbuildings, and the County Police Substation. The picnic shelter, maintenance garage, and storage building are located within the 100-year flood zone. All structures within the 100-year flood zone must be designed to flood (such as the picnic shelter) or constructed above the level of the 100-year flood (such as built on stilts or on a raised building pad). The majority of the lease boundary, with the exception of the existing WNNC and outbuildings, is located within the USACE “taking line.” The taking line is the floodplain elevation for the Whittier Narrows Dam. All activities occurring within the taking line are prohibited from reducing the flood capacity of the downstream areas of the Whittier Narrows Dam. This means that any new structures within the taking line must be built above the level of the flood elevation by backfilling the soil around the building pad to raise the structure above the flood elevation; conversely, any soil backfilled in the taking line must be removed from a nearby section of the floodplain such that the total capacity of the floodplain to hold floodwaters is not altered.

As part of the proposed project, portions of the interpretive center would be constructed below the taking line flood elevation. As such, backfill from the constructed riparian/wetland area would be used to raise the elevation of the entire interpretive center building pad above the taking line. All soils would be balanced on-site per USACE requirements to ensure that the capacity of the floodplain does not change with construction of the proposed facilities. Approximately 6,000 cubic yards of soil is proposed to be removed from the constructed riparian/wetland area to backfill the building pad for the interpretive center. This would raise the entire building pad above the taking line and outside of the 100-year flood zone without diminishing the capacity of the Whittier Narrows floodplain. Other structures would be located within the 100-year flood zone and below the taking line. These include the open air classroom, covered classroom, and maintenance building. The open air classroom and covered outdoor classroom would be designed to flood in the event of a 100-year storm event. Nothing would be stored in these areas that could be damaged by a flood or cause hazardous conditions (e.g., floating furniture, toxic materials released into the water, etc.) during a flood event. Because the maintenance garage would serve as storage for landscape equipment, an All-Terrain Vehicle, and small quantities of oil, paint, and pesticides and herbicides, this structure would be constructed on a raised platform such that it is located above the level of a 100-year flood. As such, the proposed project does not have the potential to redirect or impede

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the flow of floodwaters within a 100-year flood zone. The impacts would be less than significant, and no mitigation measures are required.

3.5.4 MITIGATION MEASURES

HYDRO-A Biological or non-chemical means of controlling exotics and pests shall be utilized over pesticides where feasible. Should chemical pesticides or herbicides be required, less-persistent compounds shall be used in accordance with manufacturers' recommendations and general standards of use. Application of chemicals shall be restricted such that they are not used immediately before and during rain storms or within the 24-hour period in which rain is forecast to occur.

3.5.5 SIGNIFICANCE AFTER MITIGATION

Impacts to water quality would be less than significant following the implementation of the above mitigation measure. All other impacts would be less than significant.