Resources Control Board (SWRCB). The restoration of the historical flow path may also require the approval of the San Bernardino Valley Municipal Water District (SBVMWD), which holds water rights to this drainage area (Bonadiman, 2010).

As described above, the proposed project would be subject to the rules and regulations of two RWQCBs, the Lahontan RWQCB and the Santa Ana RWQCB. Each of these regional boards sets forth rules and regulations in a water quality control plan, also known as a basin plan. These basin plans identify beneficial uses for surface water and groundwater and establish water quality objectives to attain those beneficial uses. The identified beneficial uses and the water quality objectives to maintain or achieve those uses are together known as water quality standards. The LRWQCB Basin Plan governs water quality for the project area and identifies beneficial uses for Houston Creek, Little Bear Creek, Lake Arrowhead, minor surface waters, and minor wetlands (LRWQCB, 2005). The SARWQCB Basin Plan identifies beneficial uses for Strawberry Creek, which would be affected by the storm water diversions that comprise the proposed project (SARWQCB, 2008). Table 3.6-1 below presents the beneficial uses for surface waters within the project area.

Table 3.6-1. Basin Plan Beneficial Uses

Basin Plan	Waterbody	Beneficial Uses
SARWQCB Basin Plan	Strawberry Creek	Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Ground Water Recharge (GWR), Contact Water Recreation (REC1), Non-contact Water Recreation (REC2), Cold Freshwater Habitat (COLD), Wildlife Habitat (WILD), Spawning, Reproduction and Development (SPWN)
LRWQCB Bain Plan	Houston Creek[1]	MUN, AGR, REC1, REC2, Commercial and Sportfishing (COMM), COLD, WILD
	Little Bear Creek	MUN, AGR, REC1, REC2, COMM, COLD, WILD
	Lake Arrowhead	MUN, AGR, GWR, Navigation (NAV), REC1, REC2, COMM, COLD, WILD
	Minor Surface Waters	MUN, AGR, GWR, Hydropower Generation (POW), REC1, REC2, WARM, COLD, WILD
	Minor Wetlands	MUN, AGR, GWR, Freshwater Replenishment (FRSH), REC1, REC2, WARM, COLD, WILD, Rare, Threatened, or Endangered Species (RARE), Water Quality Enhancement (WQE), Flood Peak Attenuation/Flood Water Storage (FLD)

1 – Houston Creek is outside of the drainage area of the proposed project but is included here because any groundwater that would be produced by dewatering activities is proposed to be discharged to Houston Creek.
Source: (LRWQCB, 2005; SARWQCB, 2008)

The Clean Water Act 303(d) list is a register of impaired and threatened waters which the CWA requires all states to submit for EPA approval. The list identifies all waters where the required pollution control measures have so far been unsuccessful in reaching or maintaining the required water quality standards. Waters that are listed are known as "impaired." There are no impaired waterbodies within or near the project area (SWRCB, 2010). The nearest impaired waterbody is Sheep Creek, which is a tributary to Deep Creek and is located approximately 4.6 miles east of the proposed project. Sheep Creek is listed as impaired by nitrate and total dissolved solids (SWRCB, 2010). The proposed project would not direct any runoff towards Sheep Creek. Sheep Creek is tributary to Deep Creek, as is Little Bear Creek (downstream of Lake Arrowhead). The proposed project would restore runoff into Little Bear Creek, which would eventually drain to Deep Creek. However, Deep Creek is not listed as impaired.

Areas that are subject to a risk of flooding from a 100-year flood event are identified by the Federal Emergency Management (FEMA) on the National Flood Hazard Layer (NFHL). There are no 100-year flood hazard zones within the project area (FEMA, 2015). However, both Little Bear Creek and Lake Arrowhead are within a 100-year flood hazard area designated as Zone A on the NFHL (FEMA, 2015). The proposed project would contribute additional runoff to Little Bear Creek, which drains to Lake Arrowhead.

3.6.1.2 Groundwater

The proposed project is not underlain by any groundwater basins. However, as shown above in Table 3.6-1, several of the waterbodies that would be affected by the proposed project have groundwater recharge as a designated beneficial use. Also, shallow groundwater occurs within the project area in zones of fractured granitic bedrock and in areas where the rock is highly weathered (Hilltop, 2010). Runoff that currently flows to Strawberry Creek recharges the Bunker Hill Subbasin of the Upper Santa Ana Valley Groundwater Basin (DWR, 2004a). Runoff that would be redirected towards Little Bear Creek would eventually join the Mojave River via Deep Creek and recharge the Upper Mojave River Valley Groundwater Basin (DWR, 2004b).

Bunker Hill Subbasin of the Upper Santa Ana Valley Groundwater Basin

The Bunker Hill Subbasin contains alluvial material that underlies roughly 120 square miles of the San Bernardino Valley and is bounded by the San Gabriel Mountains, the San Bernardino Mountains, the Crafton Hills, and several faults, including the San Andreas and San Jacinto faults (DWR, 2004a). Annual precipitation across the basin ranges from 13 to 31 inches (DWR, 2004a). The Subbasin is divided into upper and lower aquifers by a semi-permeable layer of clay. The Santa Ana River, Mill Creek, and Lytle Creek are the primary sources of recharge to the Subbasin (DWR, 2004a). Many of the creeks that flow down from the southern slopes of the San Bernardino Mountains (including Strawberry Creek) also contribute runoff that recharges the Subbasin (DWR, 2004a). The total groundwater storage capacity is estimated at 5,976,000 acre feet, and the total amount of water in storage in was last estimated at 5,890,300 in 1998 (DWR, 2004a). The Subbasin is managed by the San Bernardino Valley Water Conservation District, which controls groundwater levels so that they do not rise to the ground surface in downtown San Bernardino (DWR, 2004a). Several wells in the basin that were sampled between 1994 and 2000 showed contamination above Maximum Contaminant Levels (MCLs) for inorganics, radioactivity, nitrates, pesticides, volatile organic compounds, and semi-volatile organic compound (DWR, 2004a).

Upper Mojave River Valley Groundwater Basin

The Upper Mojave River Valley Groundwater Basin contains a generally unconfined aquifer formed in mostly younger alluvium that is bound on the south by the San Bernardino Mountains, on the north by basement rock outcrops between Helendale and the Shadow Mountains, on the east by the Helendale fault and the mountains surrounding Apple Valley, and on the west by a surface drainage divide and the Shadow Mountains (DWR, 2004b). The surface area of the Basin is roughly 645 square miles (DWR, 2004b). Annual precipitation across the basin ranges from 5 to 36 inches and averages 12 inches (DWR, 2004b). Direct precipitation, ephemeral stream flow, subsurface flow from the southwest, and intermittent flow from the Mojave River are the primary sources of recharge to the basin (DWR, 2004b). Groundwater levels in the Basin have generally declined over the last 60 years, but fluctuate in response to rainfall and runoff (DWR, 2004b). The storage capacity of the Basin is not well known, but the range has been estimated at 13,000,000 acre feet to approximately 28,000,000 acre feet (DWR, 2004b). The amount of groundwater currently in storage is also not well known, but was estimated at approximately 10,800,000 acre feet in 1998 (DWR, 2004b). Several wells in the basin that were sampled between 1994 and 2000 showed contamination above Maximum Contaminant Levels (MCLs) for inorganics, radioactivity, and nitrates (DWR, 2004b).

3.6.2 Applicable Regulations, Plans, and Standards

The project would involve the disturbance of more than one acre of land, most of which is in an existing stream bed, and would be subject to compliance with the regulations outlined in this section.

3.6.2.1 Federal

Clean Water Act

The Clean Water Act (CWA) (33 U.S.C. Section 1251 et seq., formerly the Federal Water Pollution Control Act of 1972) was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). NPDES permitting authority is administered by the California State Water Resources Control Board (SWRCB) and its' nine Regional Water Quality Control Boards (RWQCB). The proposed project is within areas administered by the Lahontan RWQCB, and would restore storm water that currently flows into the South Coast HR, which is administered by the Santa Ana RWQCB.

The proposed project would be required to obtain NPDES coverage under the California General Permit for Discharges of Storm Water Associated with Construction Activity. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) describing Best Management Practices (BMPs) the discharger would use to prevent and retain stormwater runoff. The SWPPP must contain a visual monitoring program and a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs. The proposed project would also be required to obtain NPDES coverage under the General Permit for Limited Threat Discharges to Surface Waters (NPDES No. CAG996001) before discharging any dewatered shallow groundwater to Houston Creek. Compliance with this permit would ensure that any discharges would not result in a threat to water quality or beneficial uses of water.

Section 401 of the CWA requires that any activity, including river or stream crossings during road or pipeline construction, which may result in a discharge into waters of the U.S. be certified, in the case of this project, by the SWRCB. This certification ensures that the proposed activity does not violate State and/or federal water quality standards. The proposed project could result in discharges to waters of the U.S., and would likely require Section 401 certification.

Section 404 of the CWA authorizes the U.S. Army Corps of Engineers (USACE) to regulate the discharge of dredged or fill material to the waters of the U.S. and adjacent wetlands. Discharges to waters of the U.S. must be avoided where possible, and minimized and mitigated where avoidance is not possible. The proposed project would discharge storm water to Little Bear Creek, which is a federally jurisdictional stream.

Section 303(d) of the Clean Water Act requires states to establish Total Maximum Daily Load (TMDL) programs for streams, lakes and coastal waters that do not meet certain water quality standards. There are no 303(d) listed waterbodies within or near the project area.

National Flood Insurance Act/Flood Disaster Protection Act

The National Flood Insurance Act of 1968 made flood insurance available for the first time. The Flood Disaster Protection Act of 1973 made the purchase of flood insurance mandatory for the protection of property located in Special Flood Hazard Areas. These laws are relevant because they led to mapping of regulatory floodplains and to local management of floodplain areas according to guidelines which include

prohibiting or restricting development in flood hazard zones. Although the proposed project is not located within a flood hazard zone, the redirection of storm water to Little Bear Creek could potentially alter downstream flood hazard zones associated with Little Bear Creek and Lake Arrowhead.

3.6.2.2 State

California Porter Cologne Water Quality Control Act

The Porter Cologne Water Quality Control Act of 1967, Water Code Section 13000 et seq., requires the SWRCB and the nine RWQCBs to adopt water quality criteria to protect State waters. These criteria include the identification of beneficial uses, narrative and numerical water quality standards, and implementation procedures. The criteria for the project area are contained in the Water Quality Control Plan for the Santa Ana River Basin (SARWQCB, 2008) and the Water Quality Control Plan for the Lahontan Region (LRWQCB, 2005). Constraints in the water quality control plans relative to the proposed Project relate primarily to the avoidance of altering the sediment discharge rate of surface waters, and the avoidance of introducing toxic pollutants to water resources. A primary focus of water quality control plans is to protect designated beneficial uses of waters. In addition, anyone proposing to discharge waste that could affect the quality of the waters of the state must make a report of the waste discharge to the Regional Water Board or State Water Board as appropriate, in compliance with Porter-Cologne.

California Streambed Alteration Agreement

Sections 1600–1616 of the California Fish and Game Code requires that any public utility (or other entity) that proposes an activity that would substantially divert or obstruct the natural flow of any river, stream or lake; substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or, deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake, must notify the California Department of Fish and Wildlife (CDFW). If the CDFW determines the alteration may adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement would be prepared. The Agreement includes conditions necessary to protect those resources. The Agreement applies to any stream including ephemeral streams and desert washes.

California Water Code §§1735-1737

The State Water Resources Control Board requires a petition for an appropriative water right for diversion of water for beneficial use in the Mojave River Watershed. Because the runoff that would be restored to its original flowpath by the proposed project is claimed by water rights held by the San Bernardino Municipal Water District (SBVMWD), the SBVMWD may need to petition the SWRCB for a long-term transfer of water to the Lake Arrowhead Community Services District (LACSD), which is the water supplier for the Lake Arrowhead reservoir that would receive the restored runoff. The need for a petition for a long-term transfer of water or water rights will be determined by the SWRCB prior to the commencement of construction activities.

California Water Code §13260

California Water Code §13260 requires that any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the State, other than into a community sewer system, must submit a report of waste discharge to the applicable Regional Board. Any actions related to the proposed action that would be applicable to California Water Code §13260 would be reported to the Lahontan RWQCB.

Other State Requirements

Water diversion and/or dewatering activities may be subject to discharge and monitoring requirements under either NPDES General Permit, Limited Threat Discharges to Surface Waters, Board Order R6T-2014-0049, or General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality, WQ0-2003-0003, both issued by the Lahontan Regional Water Quality Control Board.

3.6.2.3 Local

San Bernardino County Floodplain and Stormwater Management

The San Bernardino County Flood Control District controls runoff and flooding associated with all main streams and acquires a ROW for all main channels. An encroachment permit would not be required for any work within the District's ROW because the District is a participant in the proposed project. The proposed project may qualify as a Non-Category Project that creates a Hydrologic Condition of Concern (HCOC) and may be required to develop and implement a Water Quality Management Plan (WQMP) that includes Best Management Practices to minimize the impact from identified HCOCs.

County of San Bernardino General Plan

The County of San Bernardino 2007 General Plan contains goals and policies to maintain, protect, and improve water quality throughout the County. Applicable goals and policies are contained in the Circulation and Infrastructure Element, the Conservation Element, and the Safety Element. The General Plan includes goals and policies to minimize impacts to stormwater quality; ensure that infrastructure improvements are compatible with the natural environment of the region; protect and preserve water resources for the maintenance, enhancement, and restoration of environmental resources; minimize damage due to wind and water erosion; and provide adequate flood protection to minimize hazards and structural damage.

3.6.3 Environmental Impacts and Mitigation Measures

This section describes environmental impacts of the proposed project relevant to hydrology and water quality. The impact analysis is based on an assessment of baseline conditions relevant to the proposed project area climate, topography, watersheds and surface waters, groundwater, and floodplains, as described in Section 3.6.1. These baseline conditions were evaluated based on their potential to be affected by construction activities as well as operation and maintenance activities related to the proposed project.

Potential impacts were then identified based on the predicted interaction between construction, operation, and maintenance activities with the affected environment. Impacts are described in terms of location, context, and intensity, and are identified as being either short- or long-term, and direct or indirect in nature. Beneficial as well as adverse impacts are identified, with a discussion of the effect and risk to water quality and public health and safety, and potential violation of environmental laws. Mitigation measures are developed to avoid or minimize impacts.

In addition to the mitigation measures that are developed to avoid or minimize impacts, the County has incorporated Environmental Commitments (ECs) into the proposed project that would minimize potential environmental adverse effects. ECs related to hydrology and water quality include the preparation of a Water Quality Management Plan (WQMP) and a Stormwater Pollution Prevention Plan (SWPPP) to identify site design, pollution source control, and Best Management Practices (BMPs) to prevent water quality degradation. The County will also perform a preliminary drainage study to analyze potential 100-

year flood impacts at Lake Arrowhead that would result from the restoration of storm water runoff to Little Bear Creek.

3.6.3.1 Significance Criteria

To satisfy CEQA requirements, conclusions are made regarding the significance of each identified impact that would result from the proposed project. Appropriate criteria have been identified and utilized to make these significance conclusions based on the CEQA Appendix G Environmental Checklist, and relevance to this analysis based on local conditions and the project description.

Not all of the standard Appendix G criteria are applicable to the proposed project. The project does not involve the construction of housing, and is not near the coast or a lake where there could be a tsunami or seiche hazard. In the context of the proposed project, several of the CEQA criteria overlap, and in this analysis they are combined. For purposes of this analysis, the proposed project would result in significant impacts to hydrology and water quality if it would:

- *Criterion HWQ1: Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality*
- *Criterion HWQ2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)*
- *Criterion HWQ3: 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, siltation, or mudflow on- or off-site, or would provide substantial additional sources of polluted runoff*
- *Criterion HWQ4: 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, or would exceed the capacity of existing or planned stormwater drainage systems*

The following thresholds from CEQA Appendix G Environmental Checklist were found to have no impact or a less than significant impact in the Initial Study and are not discussed further beyond the summary below:

- *C.3.9 (g) Place housing within a 100 year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other hazard delineation map?*
- *C.3.9 (h) Place within 100 year flood hazard area structures that would impede or redirect flood flows?*
- *C.3.9 (i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.*

The proposed project does not include the construction of any housing, and would not place housing within a 100-year floodplain as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map; no impact would occur. The proposed project would not involve the construction of any structures within a 100-year floodplain that would impede or redirect flood flows; no impact would occur. As discussed under the criterion for on- or off-site flooding due to the alteration of the existing drainage pattern, it is possible that implementation of the project could result in increased flooding; however, project design features and mitigation measures would be implemented to avoid

increased flooding and associated adverse impacts, including the potential to expose people or structures to a risk of loss, injury, or death. There are no levees or dams in the vicinity of the project that could experience failure and cause flooding as a result of the project. The nearest dam to the project site is the Lake Arrowhead Dam, located more than four miles (linear) to the northeast and downstream of Rimforest. No impact would occur due to the failure of a levee or dam.

3.6.3.2 Project Impacts

This section describes the direct and indirect impacts of the proposed project. Cumulative impacts are discussed separately in Section 5 (Cumulative Effects).

Criterion HWQ1: Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality

Impact HYD-1: Construction, operation, and maintenance of the proposed project would degrade water quality and violate water quality standards or waste discharge requirements (Class II)

The project has the potential to exceed water quality standards described in the RWQCB Lahontan Region basin plan, including those related to chemical constituents, color, dissolved oxygen, floating materials, oil and grease, nondegradation of aquatic communities, pesticides, pH, sediment, suspended materials, taste and odor, temperature, toxicity, and turbidity. The beneficial uses described in Table 3.6-1 for the Lahontan Region could be affected. Water quality impacts could result from project construction activities, project operation and maintenance, alteration of hydrologic characteristics, or alteration of channel characteristics. The processes that could lead to exceedance of water quality standards and degradation of beneficial uses are described in the paragraphs below.

Construction of the proposed project would result in the temporary disturbance of approximately 10.03 acres and the permanent disturbance of approximately 6.24 acres. Ground disturbance activities associated with construction of the proposed project include excavation and trenching to install the storm water culvert and appurtenances and the channelized reaches, and excavation of the attenuation basin(s) to provide up to 20 acre feet of storage capacity. These ground disturbance activities could loosen and destabilize soils. These loose and destabilized soils could be mobilized during a subsequent storm event and could result in increased turbidity and sediment deposition in nearby waterbodies. The potential for loosened soil to be transported to a nearby waterbody would be minimized by the project schedule, which would limit construction activities to the non-rainy season. Potential increases in erosion and sedimentation would be further reduced by project ECs and applicable regulations that would require development and implementation of a WQMP and a SWPPP, which would include BMPs to prevent and control erosion and sedimentation.

Construction of the proposed project would involve the use of heavy equipment and machinery. Use of this construction equipment would involve the handling, use, and storage of hazardous materials, such as diesel fuel, gasoline, lubrication oil, cement slurry, hydraulic fluid, antifreeze, transmission fluid, and lubricating grease. Accidental releases or spills of hazardous materials used during construction could result in the direct contamination of waterbodies within the project area or the indirect contamination of nearby waterbodies through subsequent transport by stormwater runoff. The potential for the accidental release or spill of a hazardous material to contaminate surface water or groundwater within or near the project area would be relatively low due to the ephemeral or intermittent nature of most streams in the project area and the fact that construction activities would be limited to the non-rainy season. Also, the quantity of hazardous materials that would be handled, used, and stored during construction of the

proposed project would be small enough such that an accidental release or spill could be quickly contained and removed for safe disposal. The potential for the accidental release or spill of a hazardous material to contaminate a nearby waterbody would be further reduced through implementation of the required SWPPP, which would include BMPs to quickly and effectively contain and clean-up hazardous material leaks and spills.

Construction of the proposed project, including excavation and trenching, may encounter shallow groundwater. In the event that shallow groundwater is encountered, dewatering of the excavation or trenching site may be required. If improperly managed, these dewatering activities could result in the discharge of contaminated groundwater. Groundwater that is pumped from a subsurface construction site would be temporarily stored and tested prior to discharge. Contaminated groundwater would be treated prior to discharge or disposed of at an appropriate disposal facility or wastewater treatment plant. Prior to the discharge of any uncontaminated groundwater, the County would obtain all required permits (such as a General Permit for Limited Threat Discharges to Surface Waters, Waste Discharge Requirements application, or Conditional Waiver) from the applicable RWQCB.

Compliance with applicable laws and regulations and implementation of BMPs to protect water quality would ensure that construction of the proposed project would not substantially degrade water quality, or violate water quality standards or waste discharge requirements. BMPs typically used to protect water quality include sediment controls, waste management and material controls, non-storm water discharge controls, erosion control, soil stabilization, and minimization of vegetation removal. Specific BMPs would be developed as part of the compliance process. Compliance with the regulations described in Section 3.6.2 is intended to prevent exceedance of water quality standards and degradation of beneficial uses. This impact during construction would therefore be less than significant and no mitigation is required.

Operation and maintenance (O&M) activities would be substantially less intense than construction activities. O&M activities would generally include slope stabilization, where necessary to maintain the integrity of flood conveyance facilities; removal of sediment and vegetation from the attenuation basin(s) and channelized sections and catch basins to maintain capacity; regular inspection of facilities for wear and damage; repair of facilities as needed; and, maintenance of vegetated landscape buffers. These activities would result in a minor to moderate amount of ground disturbance. The greatest amount of ground disturbance during O&M would likely be associated with removal of sediment from the attenuation basin(s). This sediment would be removed during the non-rainy season, unless otherwise required for emergency repairs. Also, depending on the design of the attenuation basin(s) and outlet structure, most of the erosion that would occur during operation of the proposed project would be captured by the attenuation basin(s) and would not be transported downstream to Little Bear Creek.

Inspection activities during O&M would involve the use of light-duty vehicles. Heavy construction equipment would be required for sediment removal from the attenuation basin(s) and channelized sections. The use of these vehicles and equipment would require the use of hazardous materials, such as fuel, lubricants, and coolant. These hazardous materials could contaminate waterbodies in the project area through an accidental release or spill. The use of vehicles and construction equipment during O&M for the proposed project would be substantially less than during construction, and therefore the risk of contamination of a nearby waterbody from the accidental release or spill of a hazardous material would be proportionally lower. Dewatering activities during O&M are not anticipated. This impact to beneficial uses during operations and maintenance would be less than significant and no mitigation is required.

The attenuation basin and surrounding project features would be built in the headwaters of Little Bear Creek and would represent a permanent disturbance to that area. Local beneficial uses related to

recreation and habitat (REC1, REC2, COLD, WILD) could be locally impacted by the removal of vegetation and the change in configuration of the watercourse.

Because of the change in watershed area draining to Little Bear Creek, the hydrologic characteristics of Little Bear Creek downstream of the attenuation basin would be changed. Flood and runoff volumes in the Strawberry Creek watershed would be decreased an average of 47 acre feet per year, as measured at the 5631-Acre East Twin Creek watershed, which includes Strawberry Creek runoff, by the reduction of about 77 acres of watershed area (Bonadiman, 2010). Little Bear Creek runoff would be increased by a proportional amount. The project would not involve the addition of large impervious areas, so runoff frequency (how many events occur in a year) would be approximately similar to the existing condition. Although the 100-year peak discharge would be attenuated to a discharge that is at or below the existing discharge by the attenuation basin, there is a potential, depending on basin configuration and outlet conditions, for more frequent discharges, such as the 2-year return-period flood, to be higher than for existing conditions. The detention basin further has the potential for causing incoming sediments to settle, depriving the downstream channel of sediment. These effects could cause increased flood potential for discharges less than the 100-year, as well as water quality impacts related to downstream erosion and channel modification, potentially affecting beneficial uses of Little Bear Creek, that could result from increased frequent floods and the reduction in sediment supply.

Mitigation Measure HYD-1 would ensure that sediments transported by frequent floods, which can have a large effect on channel morphology by their frequency, be transported through the basin without settling. The mitigation measure also requires that the basin configuration and outlet be so designed as to attenuate all flood peaks up to the 100-year to approximate the current condition to the maximum extent possible. By allowing pass-through low flow sediment transport, and minimum alteration of flood peaks, these measures would minimize the potential for channel modification and degradation of beneficial uses of Little Bear Creek downstream of the attenuation basin. Mitigation Measure HYD-1 also requires that the basin be no larger than the minimum necessary to achieve the design purpose, to avoid excessive disturbance of the riparian area. With implementation of Mitigation Measure HYD-1, Impact HYD-1 would be less than significant (Class II).

The hydrologic characteristics of Strawberry Creek would be changed by directing 77 acres of the upper Strawberry Creek watershed to Little Bear Creek. Figure 3.6-1 shows the watershed configuration and the area to be routed from Strawberry Creek to Little Bear Creek. The effect would be a 77-acre reduction in Strawberry Creek watershed area, and the loss of about 47 acre feet of runoff to the watershed each year, as described above. This could have an adverse effect on beneficial uses through the reduction in flow.

An independent evaluation of the likely effect on Strawberry Creek flows was made using U.S.G.S. stream gage data (USGS, 2015) for representative small, gaged streams in the surrounding area. Representative streams included Abondigas Creek, Little Bear Creek, Grass Valley Creek, Waterman Canyon, Devil Canyon, Willow Creek, East Twin Creek, and the East Fork Mojave River, ranging from 1.15 square miles in watershed area (Abondigas Creek) to 11.2 square miles (East Fork Mojave River). Average daily runoff, averaged over the period of one year, was determined form USGS-reported monthly runoff totals for the periods represented by the gages. The gage data revealed an average daily runoff rate ranging from 1.3 cfs/square-mile for Little Bear Creek, to 0.5 cfs/square mile for the East Fork Mojave River, with the runoff rate per watershed square mile decreasing with increasing watershed area. The runoff rate per square mile could be approximated by a logarithmic trend line. This relationship was applied to the Strawberry Creek watershed as indicated in Table 3.6.2.

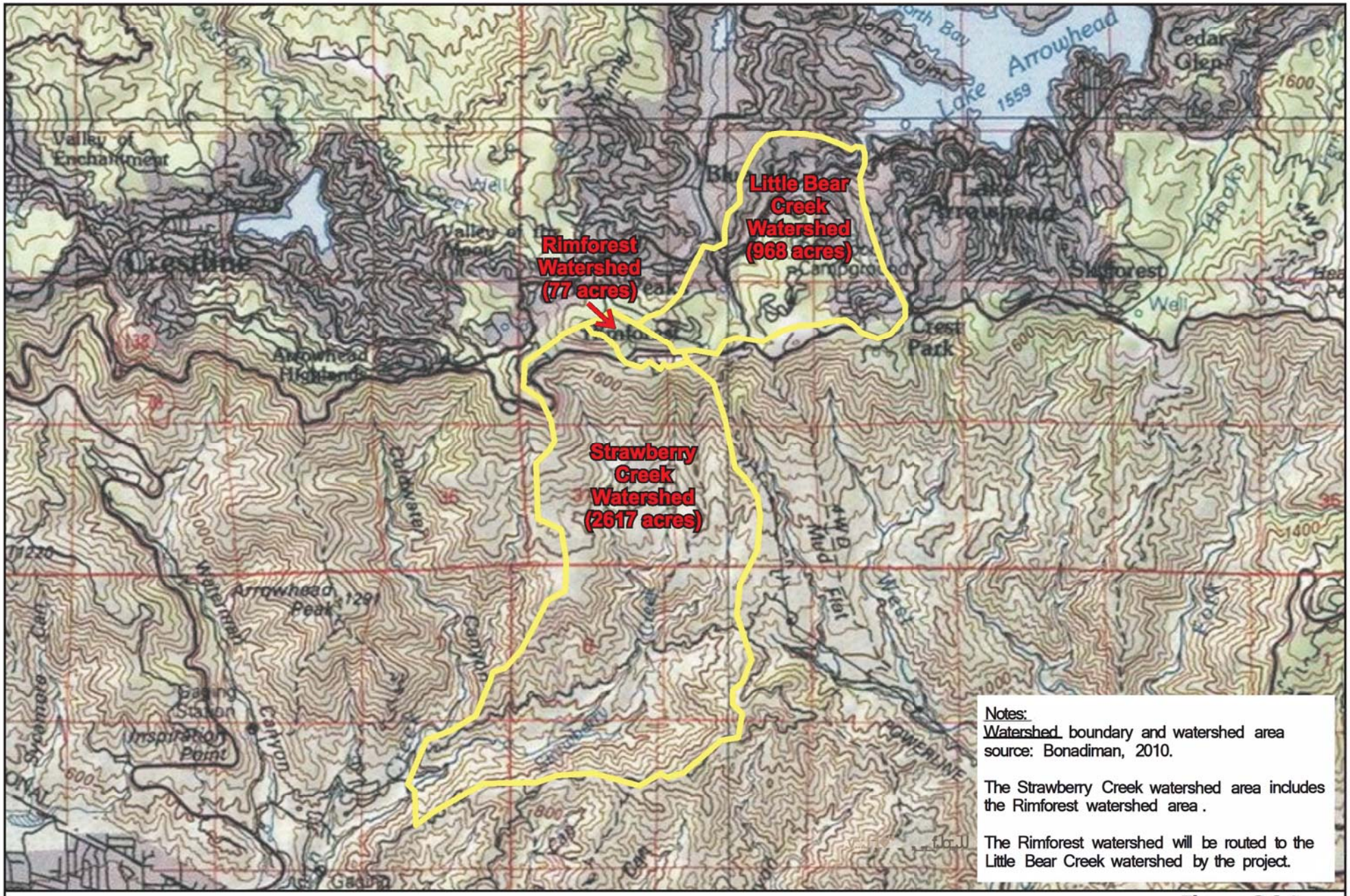

Figure 3.6-1
Strawberry Creek and Little Bear Creek Watersheds for the Rimforest Storm Drain Project

Table 3.6-2. Strawberry Creek Representative Estimated Average Daily Flows

Watershed Area, in Square Miles		Average Daily Discharge, in cfs	
Existing Conditions	With Project Conditions	Existing Conditions	With Project Conditions
1.00	0.88	1.29	1.17
2.00	1.88	2.06	1.98
3.00	2.88	2.64	2.58
4.00	3.88	3.10	3.05
4.40 (Confluence with East Twin Creek)	4.28 (Confluence with East Twin Creek)	3.26 (Confluence with East Twin Creek)	3.21 (Confluence with East Twin Creek)

Note: Average daily flows are approximated from available stream gage data from nearby watersheds of similar size and in similar terrain. The watershed areas for existing conditions are arbitrary and intended to provide information on likely average daily flow at various points along the Strawberry Creek stream channel.

Table 3.6-2 gives approximate Strawberry Creek average daily flows at various points along the stream channel defined by watershed area at one-square-mile intervals to the confluence with East Twin Creek. Expected average daily flows range from 1.29 cfs at the one-square-mile point, to 3.26 cfs at the confluence, for existing conditions. Probable flows after removal of the upper 77 acres of the watershed range from 1.17 cfs to 3.21 cfs. This amounts to a 1% to 9% reduction in stream flow, depending on distance from the upper watershed.

Table 3.6-3 gives a representation of how the reduction in discharge might be manifested in surface flow characteristics based on a standardized stream cross section intended to represent general conditions on Strawberry Creek. The greatest change in depth from existing to with-project conditions would be a 0.9-inch reduction (about 3% of the depth) at the one-mile point. Flow top width at the same point would be reduced by about 4%. Downstream of that point the change would be about 1% or less for depth and top width.

Table 3.6-3. Strawberry Creek Representative Estimated Average Daily Flow Depths and Top Widths

Existing Conditions			With Project Conditions		
Watershed Area, in Square Miles	Flow Depth, in Inches	Flow Top Width, in Feet	Watershed Area, in Square Miles	Flow Depth, in Inches	Flow Top Width, in Feet
1.00	2.74	0.92	1.29	2.65	0.88
2.00	3.27	1.09	2.06	3.23	1.08
3.00	3.59	1.20	2.64	3.56	1.19
4.00	3.82	1.27	3.10	3.79	1.26
4.40 (Confluence with East Twin Creek)	3.89	1.30	3.26 (Confluence with East Twin Creek)	3.87	1.29

Note: Depths and Top Widths are derived using the normal depth equation with discharges from Table 3.6-2. Representative cross section is: Bottom width: 0; Side Slopes: 2:1; Channel Slope: 0.12; Roughness Coefficient: 0.07. The data in this table are for the determination of the magnitude of likely impacts only, and are not intended to be used or interpreted for any other purpose.

From the upper watershed boundary to a point about one mile downstream (roughly the one-mile watershed area point), the Strawberry Creek channel appears to have been heavily impacted by the erosion caused by the discharge of Rimforest Flows over the steep slope just south of Rimforest and at the headwater of Strawberry Creek. The upper eroded area is steep-slope bare earth approximately nine

acres in area. Rock and dislodged earth from this area appear to have been deposited in the Strawberry Creek channel for about the first mile of channel. This is clearly visible in aerial photographs, and it appears that this channel is in a degraded ecological condition due to this deposition. The project, which would remove the source of water that is causing this erosion and deposition-related channel degradation, would likely result in a beneficial impact for this channel by allowing that portion of the channel to return to a more-natural hydrology and ecological function appropriate for a channel of this type at the upper reaches of the watershed. Downstream of the one-mile point, the project would have negligible and likely imperceptible effect on stream flows as indicated in the analysis summarized in Tables 3.6-2 and 3.6-3. For the reasons described above, the beneficial uses of Strawberry Creek would either be not significantly affected, or would be benefitted, by the project.

The overall effect of the project on the beneficial uses described in Table 3.6.1 would be beneficial to the upper mile of the Strawberry Creek watershed by eliminating a significant source of erosion and sediment that is currently affecting this area. Adverse impact on Strawberry Creek would be adverse, but not significant, for the reasons described in the analysis above. Impacts to beneficial uses on Little Bear Creek would be local and limited to the upper headwater and mitigated by MM BIO-1a (Implement Best Management Practices to Minimize Impacts to Jurisdictional Areas, MM BIO-1b (Pre-construction Surveys and Construction Monitoring), MM BIO-1c (Minimize Impacts to Sensitive Habitat and Compensate for Habitat Loss), and MM BIO-1d (Prevent Invasive Weed Introduction). Downstream of the headwater, impacts would be mitigated by MM HYD-1),

Mitigation Measure

MM HYD-1 **Attenuation basin to be no larger than necessary and designed to mimic downstream hydrology and sediment transport.** The attenuation basin shall include a low-flow channel designed to pass the average annual (about a 2-year return period) flows for existing conditions, unimpeded through the basin and outlet, to allow normal transport of sediments transported by frequent runoff events through the basin and into the downstream channel.

The attenuation basin and outlet shall be no larger than the minimum necessary to achieve the design purpose, and be designed to ensure that downstream peak flow rates for all flood return periods up to the 100-year be as close as possible to the existing conditions peak flow rates in Little Bear Creek at the attenuation basin outlet.

Criterion HWQ2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)

Impact HYD-2: Construction and operation of the proposed project would substantially deplete groundwater supplies or interfere substantially with groundwater recharge (Class III)

Construction of the proposed project would require a small amount of water for soil compaction, dust suppression, equipment wash down, concrete placement preparation, and potentially for concrete production. This water would be obtained from fire hydrants located within the community of Rimforest. Between 1989 and 2014, the community of Rimforest received its water supply from the City of Big Bear Lake Department of Water and Power (Big Bear Lake DWP). On October 1, 2014, water supply services for the community of Rimforest were transferred to the Lake Arrowhead Community Services District (LACSD), which is the current water supplier for the community (Big Bear Lake DWP, 2014). The LACSD

sources its water supply from surface water impounded in Lake Arrowhead, a small amount of groundwater extracted from fractured bedrock, and State Water Project (SWP) water purchased from the SBVMWD and delivered through the Crestline-Lake Arrowhead Water Agency (LACSD, 2015). Construction water use for the proposed project would not directly result in the extraction of groundwater or the depletion of groundwater resources. Because construction water would be provided by the LACSD, which sources a small portion of its water from groundwater, construction of the proposed project could indirectly lead to the extraction of groundwater. However, construction water use for the proposed project would be temporary and would represent a small percentage of total LACSD deliveries. Construction water use would not indirectly deplete groundwater supplies such that the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted.

Although some shallow groundwater may be encountered in the project area, the proposed project is not underlain by a DWR-identified groundwater basin. A small amount of dewatering may be required during construction of the proposed project, but these dewatering activities would be temporary and would not adversely affect the production of a nearby well or substantially deplete groundwater supplies. Neither construction nor operation of the proposed project would substantially interfere with groundwater recharge; impervious surfaces would be small and distributed throughout the watershed. Sufficient permeable surfaces would remain throughout the watershed such that the rate of groundwater recharge would remain unchanged as a result of construction and operation of the proposed project. Additionally, the attenuation basins that would be constructed as part of the proposed project may allow for increased groundwater recharge compared to baseline conditions.

Although construction and operation of the proposed project would not result in the direct extraction of groundwater or substantially interfere with groundwater recharge, the proposed project would restore approximately 47 acre feet of runoff per year from Strawberry Creek to Little Bear Creek as measured at the 5631-Acre East Twin Creek watershed, which includes Strawberry Creek runoff. This diversion would alter the amount of water available for recharge in both the Upper Santa Ana Valley Groundwater Basin (Santa Ana Basin) and the Upper Mojave River Valley Groundwater Basin (Mojave Basin). The amount of water available for recharge to the Mojave Basin would increase by approximately 47 acre feet per year, and would decrease by the same amount for the Santa Ana Basin (MBA, 2010). The proportion of the additional 47 acre feet entering the Mojave Basin annually that would actually infiltrate into the groundwater basin would depend on climate and water management at Lake Arrowhead. Based on information from DWR, the Santa Ana Basin has a greater percentage of its storage capacity filled than the Mojave Basin, and diversion of 47 acre feet of runoff from the Santa Ana Basin to the Mojave Basin represents an annual reduction of approximately 2% (47 acre feet per year) to the Santa Ana Basin (Bonadiman, 2010), which would not substantially deplete groundwater supplies, especially when the total volume of the Bunker Hill Subbasin of the Upper Santa Ana Valley groundwater basin, 5,890,300 acre feet, is considered. Nonetheless, this diversion may require a water rights transfer petition to the SWRCB. The SWRCB will determine the need for a water rights transfer petition prior to the commencement of construction activities.

Local groundwater in the Strawberry Creek watershed, in areas not underlain by usable groundwater basins, would potentially be decreased by amounts proportional to the discharges given in Table 3.6-2. Water available for groundwater recharge would decrease by approximately 9% at the one-mile-area watershed point, 4% at the 2-mile-area watershed point, and 2% at the 3-mile-area watershed point. Although this represents a slight reduction in water availability, surface flow is still expected to be present, meaning local groundwater content is likely to be reduced less, if at all.

For the reasons given above, this impact would be less than significant, and no mitigation measures are required (Class III).

Criterion HWQ3: 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, siltation, or mudflow on- or off-site, or would provide substantial additional sources of polluted runoff

Impact HYD-3: Construction and operation of the proposed project would result in substantial erosion, siltation, and mudflow due to alteration of the existing drainage pattern (Class IV)

The proposed project has been designed to reduce and prevent substantial erosion on the southern slopes of the San Bernardino Mountains, near the headwaters of Strawberry Creek. Restoration of the flowpath of runoff from Strawberry Creek to Little Bear Creek would substantially reduce the existing amount of erosion and subsequent siltation. The runoff would be directed via a culvert and open channel towards attenuation basin(s) within the headwaters of Little Bear Creek. As described above, soil that is loosened during construction could be eroded during a subsequent storm event, and this eroded soil could result in increased sedimentation of Little Bear Creek. However, construction-related erosion would be controlled by BMPs that would be specified in the project-specific SWPPP and WQMP. Also, depending on the design of the attenuation basin(s) and outlet structure, most of the erosion that would occur during operation of the proposed project would be captured by the attenuation basin(s) and would not be transported downstream to Little Bear Creek. This would be a beneficial impact, and no mitigation is required (Class IV).

Criterion HWQ4: 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, or would exceed the capacity of existing or planned stormwater drainage systems

Impact HYD-4: Construction and operation of the proposed project would result in flooding on- or off-site or would exceed the capacity of existing or planned stormwater drainage facilities due to alteration of the existing drainage pattern (Class III)

The proposed project would intentionally alter the existing drainage pattern to address erosion and landslide problems within the headwaters of Strawberry Creek. The proposed project would construct culverts, open channels, catch basins and attenuation basin(s) that would restore the flowpath of approximately 47 acre feet of runoff per year away from Strawberry Creek and towards Little Bear Creek (MBA, 2010). The project area itself is not located within a flood hazard zone (FEMA, 2015), and the drainage improvements associated with the proposed project would intercept hillside runoff and reduce the amount and extent of shallow flooding during a rain storm within the project area. Although the project area is not located within a flood hazard zone, the runoff flowpath that would be restored by the proposed project would be discharged to Little Bear Creek, which is located within a flood hazard zone downstream of the proposed project (FEMA, 2015). Little Bear Creek discharges to Lake Arrowhead, which is also located within a flood hazard zone (FEMA, 2015). The proposed project would restore approximately 47 acre feet of runoff per year towards Little Bear Creek, and the peak flow during a 100-year storm event would increase from the current rate of 167 cubic feet per second (CFS) to 470 CFS. This increased peak flow rate would exceed the capacity of downstream stormwater drainage facilities, including a storm drain located on the San Bernardino County Blue Jay maintenance yard. The increased peak flow rate could also result in flooding in the community of Blue Jay, downstream of Blue Jay along Little Bear Creek, and along the shores of Lake Arrowhead.

In order to prevent off-site flooding, the proposed project would construct an attenuation basin with a capacity of up to 20 acre feet. Preliminary hydrologic analysis that was conducted for the proposed project showed that a single attenuation basin with a capacity of 10 acre feet would reduce the peak flow rate to Little Bear Creek during a 100-year storm to 139 CFS, less than the current 100-year peak flow rate of 167 CFS (Bonadiman, 2010). The proposed attenuation basin would provide as much or more 100-year flood protection than the 10 acre-foot basin that was previously analyzed. Based on the results of the preliminary analysis, this attenuation basin, at 20 acre feet, may be larger than the minimum necessary to achieve the design purpose.

3.6.4 Level of Significance after Mitigation

With incorporation of Mitigation Measure HYD-1 (Attenuation basin to be no larger than necessary and designed to mimic downstream hydrology and sediment transport), Impact HYD-1 would be less than significant (Class II). All other hydrology and water quality impacts would be less than significant (Class III) or beneficial (Class IV), and no mitigation is required for those impacts.

5. Cumulative Effects

This section presents the cumulative scenario used to determine the cumulative impacts associated with the proposed Rimforest Storm Drain Project (proposed project). Cumulative effects are those impacts from related projects which would occur in conjunction with the proposed project. To document the process used to determine cumulative impacts, this section provides the CEQA requirements, the methodology used in the cumulative assessment, and the projects identified and applicable to the cumulative analysis. The analysis of cumulative impacts is presented by issue area in Section 5.4, below.

5.1 CEQA Requirements

Both CEQA and the CEQA Guidelines require that cumulative impacts be analyzed in an EIR when the resulting impacts are cumulatively considerable, and therefore, potentially significant. The discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. Further, the discussion is intended to be guided by the standards of practicality and reasonableness. As stated in Public Resources Code Section 21083(b), "a project may have a significant effect on the environment if the possible effects of a project are individually limited but cumulatively considerable."

According to Section 15355 of the 2014 CEQA Statute and Guidelines:

> *"Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.*
>
> *(a) The individual effects may be changes resulting from a single project or a number of separate projects.*
>
> *(b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

Further, according to CEQA Guidelines Section 15130 (a)(1):

> *As defined in Section 15355, a "cumulative impact" consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.*

In addition, as stated in the CEQA Guidelines, Section 15064(h)(4) it should be noted that:

> *The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable.*

Therefore, the cumulative discussion in an EIR focuses on whether the impacts of the project under review are cumulatively considerable within the context of impacts caused by other past, present, or future projects. Cumulative impact discussions for each issue area are provided in Section 5.4 (Cumulative Impact Analysis).

5.2 Cumulative Impact Analysis Methodology

The area within which a cumulative effect can occur varies by resource. For example, air quality impacts tend to disperse over a large area, while traffic impacts are typically more localized. For this reason, the geographic scope for the analysis of cumulative impacts must be identified for each resource area.

The analysis of cumulative effects considers a number of variables including geographic (spatial) limits, time (temporal) limits, and the characteristics of the resource being evaluated. The geographic scope of each analysis is based on the topography surrounding the proposed Project and the natural boundaries of the resource affected, rather than jurisdictional boundaries. The geographic scope of cumulative effects will often extend beyond the scope of the direct effects, but not beyond the scope of the indirect effects of the proposed Project. In addition, each project (see Table 5-1), has its own implementation schedule, which may or may not coincide or overlap with the proposed Project's schedule.

It is noted that cumulative impacts analyzed in this EIR would likely represent a "worst-case" scenario for the following reasons:

- Not all of the related projects will be approved and built. It is also possible that related projects will not be constructed or opened until after the proposed project has been built;
- Some related projects may be completed prior to the initiation of proposed project construction; and
- Related projects would likely be, or have been, subject to unspecified mitigation measures, which would reduce potential impacts.

The analysis below focuses on addressing the following: (1) the area(s) in which the effects of the proposed project would be felt (i.e., the geographic scope); (2) the effects that are expected in the area(s) from the proposed project; (3) past, present, and reasonably foreseeable future projects that have or that are expected to have impacts in the same area; (4) the impacts or expected impacts from these other projects; (5) and the overall impact(s) that can be expected if the individual impacts are allowed to accumulate.

5.3 Projects Considered in the Cumulative Impact Analysis

For preparation of the cumulative projects list, the County of San Bernardino, Land Use Services Department website (SBC, 2015) was accessed for a current list of projects within a one-mile radius of the proposed project site. The Church of the Woods proposed development, located within the unincorporated community of Rimforest, which would contain the area to be acquired for the planned attenuation basins of the proposed project, was the only cumulative project identified within a one-mile radius.

Since water flow would reach the Lake Arrowhead Reservoir, additional research was performed to identify any cumulative projects located within the unincorporated community of Lake Arrowhead. Two projects were identified.

The projects located within the one-mile radius and the unincorporated community of Lake Arrowhead are described in Table 5-1. Each project is also depicted on Figure 5-1.

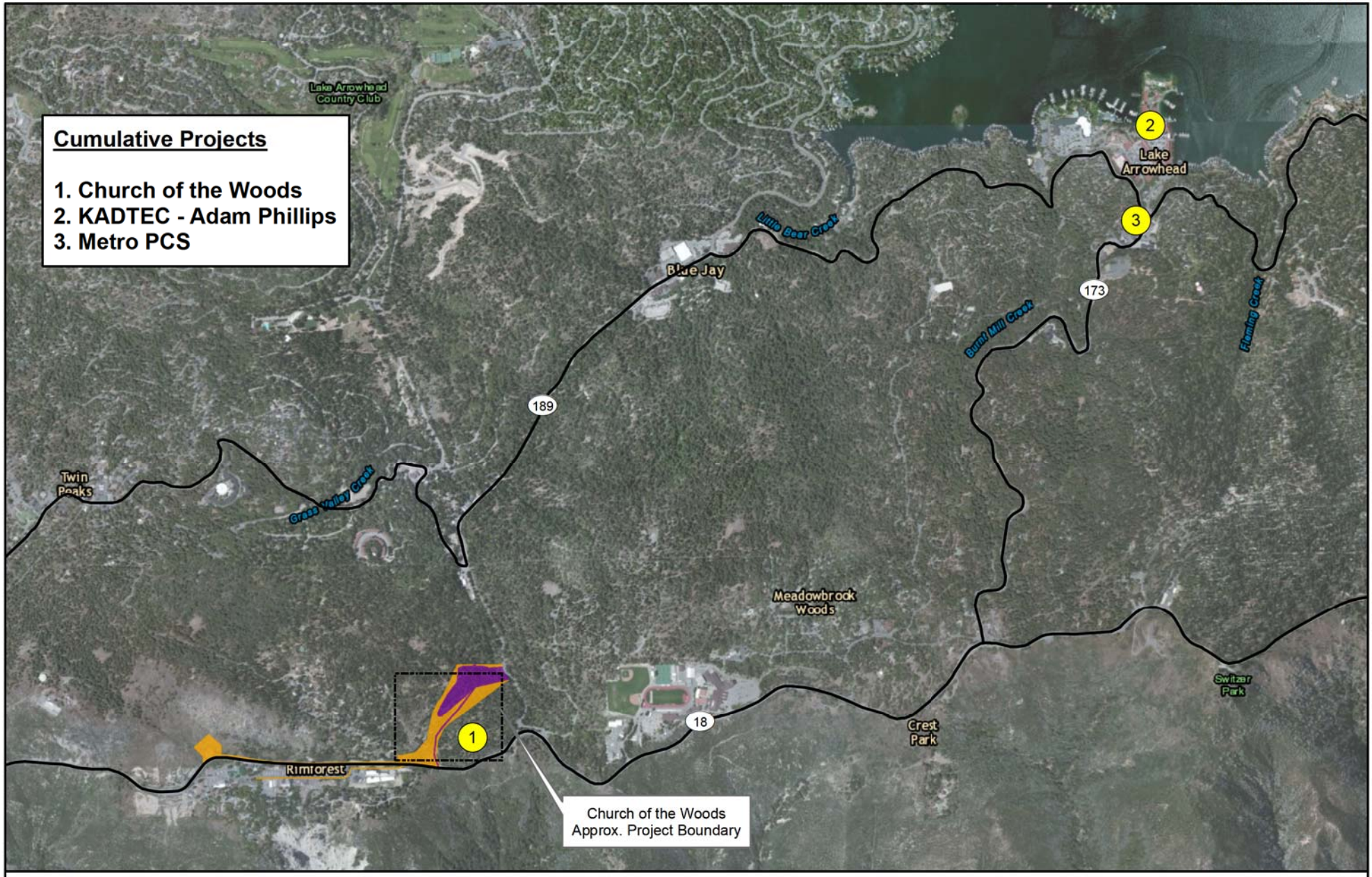

Figure 5-1

Cumulative Projects

Table 5-1. Rimforest Storm Drain Project Cumulative Projects List

Project	Type	Location	Status	Map No.
Rimforest				
Church of the Woods (COTW): application for a Tentative Parcel Map #16155 to create five (5) parcels: three (3) parcels for development of the church, baseball field, and soccer fields, and two (2) lettered parcels to be maintained as natural open space; and a Conditional Use Permit comprised of three phases: Phase I would establish a 27,364 square foot assembly building, temporary amphitheater, skate park, recreation facility, and soccer fields; Phase II would create a 41,037 square foot auditorium/ministry building and a 2,500 square foot maintenance building/caretaker unit; and Phase III would establish a ballfield, a 3,073 square foot chapel/retreat, and 23,510 square foot worship center to replace the temporary amphitheater, on 38 acres in the community of Rim Forest.	Tentative Parcel Map and a Conditional Use Permit	The site is located on the north side of Highway 18, approximately 450 ft. east of Bear Springs Road.	Final EIR was published in June 2011	1
Lake Arrowhead				
KADTEC – Adam Phillips: Revision to an approved action to permit multiple events Within the Lake Arrowhead Village commercial center to include summer concerts, farmers market, Oktoberfest, Halloween entertainment, holiday concerts, motorcycle and boat shows and other similar events.	Conditional Use Permit	The site is located north of Highway 173 and east of Highway 189	Mitigated Negative Declaration adopted May 2, 2014	2
Metro PCS: Establishment of a 38-foot tall wireless communication tower with three panel antennas and one microwave antenna camouflaged as a 40-foot monopine, one GPS antenna and four equipment cabinets within the second story of an existing storage structure with a variance to allow a 122-foot off-site residential setback in lieu of the required 300-foot standard separation distance on a portion of 0.37 acres	Conditional Use Permit	The site is located on the north side of holiday drive, approximately 70 feet west of Lakes Edge Road.	Power plan and easement discussions on hold as of Oct. 3, 2012.	3

5.4 Cumulative Impact Analysis

This section summarizes anticipated cumulative impacts by resource and identifies mitigation measures where appropriate (Public Resources Code Section 21102; CEQA Guidelines Sections 15002 and 15021).

5.4.1 Air Quality and Greenhouse Gases

Air Quality

The geographic extent for the analysis of cumulative impacts related to air quality is generally limited to areas within approximately one mile of a project area. It is possible that within this distance that air pollutant emissions from different sources could combine to create a significant impact to receptors in the same downwind direction. At distances greater than one mile air pollutants have had time to disperse

to concentrations that would not be of concern. The shorter the distance between projects, all other things being equal, the higher the potential for cumulative impacts. The baseline for assessing cumulative air quality impacts includes the ambient air quality in the project area and existing projects and land uses.

Construction

Construction of the COTW project, cumulative project #1 on Figure 5-1, would occur within a mile of the proposed project. The EIR performed for the COTW project determined significant regional air quality impacts during construction for Reactive Organic Compounds (ROC) and NOx, and localized significant air quality impacts for NOx, PM10, and PM2.5. It is unclear if and when the COTW project may initiate construction, but there is the potential for cumulative impacts if both projects undergo construction concurrently. The PM10 and PM2.5 emissions from the COTW construction project are well below the SCAQMD regional thresholds, so given the distance between these two projects and the distance to the nearest receptors it is determined that there would be no significant cumulative localized impacts for PM10 and PM2.5. Additionally, the proposed project has minimal VOC/ROC emissions and so would not contribute cumulatively considerable emissions. However, the proposed project's maximum NOx emissions are just below the SCAQMD regional emissions threshold, and therefore would be cumulatively considerable and the cumulative NOx emission impacts would be significant. To reduce the proposed project's NOx emissions, Mitigation Measures AQ-1 and AQ-2 are proposed. These measure would reduce the NOx emissions from the off-road equipment and on-road vehicles, respectively, that would be used during construction when that construction is scheduled to occur concurrently with COTW construction. These mitigation measures may reduce the construction NOx emissions by approximately 30 percent. However, after mitigation the proposed project's NOx emissions during construction would remain cumulatively considerable and the proposed project's construction NOx emissions impacts would be significant and unavoidable (Class I).

Mitigation Measures

AQ-1 **Off-road Equipment Emissions Control.** This mitigation measure shall be enforced when project construction is scheduled to be concurrent with construction of the Church of the Woods. Off-road equipment with engines larger than 50 horsepower shall have engines that meet or exceed US Environmental Protection Agency/California Air Resources Board (CARB) Tier 3 Emissions Standards. Exceptions will be allowed only on a case by case basis for three specific situations: (1) an off-road equipment item that is a specialty, or unique, piece of equipment that cannot be found with a Tier 3 or better engine after a due diligence search; and/or the off-road equipment is registered under CARB's Statewide Portable Equipment Registration Program. Additionally, all off-road equipment engines shall be maintained in good operating condition and in tune per manufacturers' specification, and equipment idling shall be limited to more than five minutes unless needed for proper operation.

AQ-2 **On-road Equipment Emissions Control.** This mitigation measure shall be enforced when project construction is scheduled to be concurrent with construction of the Church of the Woods. All non-employee on-road vehicle engines shall be turned off when not in use. Engine idling shall not exceed five (5) minutes unless required for proper operation. All non-employee on-road vehicle engines shall be maintained in good operating condition and in tune per manufacturers' specification.

Operation

The proposed project's long-term operational air quality impacts are related to intermittent emissions from sediment removal and slope stabilization events that may occur for a total of approximately 11 weekdays every 3 to 5 years and potentially quarterly for cleaning of catch basins and storm drains. The proposed project's weekday operating emissions would not overlap with the higher weekend emissions that would be associated with the operation of the COTW (San Bernardino County, 2010), which themselves were found to be well below SCAQMD emissions significance thresholds. Therefore, the proposed project's intermittent weekday air pollutant emissions, criteria and air toxic pollutant emissions, are not expected to cause significant cumulative impacts with what are expected to be minimal weekday operation emissions for the COTW Project.

Greenhouse Gas Emissions

Greenhouse gas emissions impacts are analyzed as a global cumulative impact, so additional separate cumulative impacts analysis was not performed.

5.4.2 Biological Resources

The geographic scope of the analysis of cumulative impacts to biological resources includes mid-elevation forested lands that encompass the project site and a one-mile radius around the project site. This includes similar habitats within the unincorporated communities of Rimforest, Lake Arrowhead, Twin Peaks, Blue Jay, and Skyforest. This is the area in which cumulative impacts to biological resources are likely to occur.

The project site is located in Rimforest within the surrounding San Bernardino National Forest. The majority of the local area has been developed as residential and recreational land uses, and the surrounding landscape is mostly natural open space. Current projects in the affected area are listed in Table 5-1. Two of these projects in the community of Lake Arrowhead are relatively small-scale projects which would have little to no impacts on biological resources.

The COTW project in Rimforest is located immediately adjacent to the proposed project and would have adverse impacts on biological resources. Impacts from that project are addressed and mitigated for in the COTW project's Draft EIR that was published in 2010. Because this project is located geographically and temporally near the proposed project, the impacts may be cumulative with the impacts of the proposed project. The proposed attenuation basin(s) are expected to be completed prior to the start of the COTW project. Therefore, wildlife would be able to move around the proposed attenuation basin(s) on surrounding habitat to the east and west and impacts to wildlife movement during construction would be negligible. Following construction of the attenuation basin(s), temporarily impacted habitat within the project site would be restored as stated in Mitigation Measure BIO-1c, which would create habitat for wildlife to utilize for movement through the area. Fencing is not proposed as part of the project, and wildlife would be able to enter and exit the project site without barriers once the project construction has been completed. Following the cumulative completion of the attenuation basin(s) and the COTW project, wildlife would be able to move through the immediate vicinity of the project site using undeveloped lands further to the east between Daley Canyon Road and Rim of the World High School. These are public lands managed by the San Bernardino National Forest. The proposed project site is within a mountain community with nearby residential areas and within forested natural habitat that supports native plants and wildlife, including special-status species. See Section 3.3 (Biological Resources) for a detailed description. The project would result in impacts to native vegetation, sensitive habitats, jurisdictional waters and wetlands, special-status plants, and special-status animals including listed species. With the

implementation of the mitigation measures identified in Section 3.3, the proposed project's potential impacts to biological resources would be less than significant.

Potential impacts of past, present, and reasonably foreseeable projects in the affected area are not anticipated to be cumulatively considerable. Therefore, the proposed project would not have a considerable contribution to cumulative impacts to biological resources.

5.4.3 Cultural Resources

The geographic scope for the analysis of cumulative impacts on cultural resources encompasses projects within a one-mile radius of the proposed project, as well as projects located within a one-mile radius of the unincorporated community of Lake Arrowhead. Within this area, there are currently at least three past, present, and future projects (Church of the Woods TPM#16155, KADTEC – Adam Phillips, and Metro PCS) that will disturb approximately 38.4 acres. The proposed project has the potential to disturb up to 15.3 acres, comprising nearly 28 percent of the known ground disturbing developments within the geographic scope.

With regard to impacts to significant cultural resources, the proposed project would not contribute significantly to cumulative impacts within the region. While the proposed project would not impact significant known cultural resources, there is a potential for unanticipated and previously unidentified archaeological remains to be present within the proposed project area. However, the proposed project would implement Mitigation Measure CUL-1a to monitor during excavations within Little Bear Creek and Mitigation Measure CUL-1b to treat previously unidentified cultural resources, thus reducing the proposed project impacts. Therefore, the proposed project, when combined with past, present, and future projects, would not have a cumulatively considerable adverse impact to cultural resources within the region.

With regard to disturbance of human remains, the proposed project could contribute to cumulative impacts within the region. No human remains have been identified within the proposed project area and there is a very low potential for their discovery during project construction. In the unlikely event of an accidental discovery of human remains during project construction, Mitigation Measure CUL-2 (properly treat human remains) would be implemented to reduce impacts. Therefore, the proposed project, when combined with past, present, and future projects, would not have the potential for a cumulatively considerable adverse impact to human remains within the region.

5.4.4 Geology and Soils

The geographic extent of cumulative analysis for geology and soils resources is limited to the project itself. This area is considered sufficient to capture potential cumulative effects to geologic and soils resources because primary impacts from geologic conditions, geologic hazards, and soils occur at specific locales and are unaffected by activities not acting on them directly and any impacts of the proposed project would be site-specific.

The impacts of each past, present, and reasonably foreseeable projects would be specific to the respective site and its users and would not be in common with or contribute to (or shared with, in an additive sense) the impacts on other sites. Past, existing, and future projects could contribute to the cumulative effects of geology and soils resources, creating any of the following conditions: triggering or acceleration of erosion or slope failures. These conditions would be limited to the areas within and adjacent to the boundaries of individual projects. In order to be cumulatively considerable, such conditions would have to occur at the same time and in the same location as the same or similar conditions of the proposed project. In addition,

development of each site would be subject to site development and construction guidelines and standards (local, state, and federal) that are designed to protect public safety. Seismic impacts (groundshaking, earthquake-induced ground failure, and fault rupture) from the numerous local and regional faults comprise an impact of the geologic environment on individual projects and would not introduce cumulatively considerable impacts. Impacts from unsuitable soils (expansive or corrosive soils) would also represent an impact of the environment on individual projects and would not be cumulatively considerable. Therefore adverse impacts from the proposed project would not be cumulatively considerable.

5.4.5 Hydrology and Water Quality

The geographic scope for the analysis of cumulative impacts on hydrology and water quality includes all of the surface waters and drainage areas within and adjacent to the project area, as well as downstream surface waters and floodplains that would be affected by implementation of the proposed project. Surface waters and floodplains within this geographic scope could be degraded through increased erosion and sedimentation or the accidental release of hazardous materials. Alteration of the existing drainage pattern could result in flooding on- or off-site, which could result in damage to or loss of property and injury or death of people.

Several past, present, and reasonably foreseeable projects have affected or would affect water quality and drainage patterns within the geographic scope for this analysis. The past residential and commercial development within the community of Rimforest substantially altered the natural drainage patterns within the cumulative analysis area. Construction of Highway 18 also resulted in substantial alteration of the natural drainage patterns in the area. Current projects in the affected area are listed in Table 5-1. Of the listed projects, only the COTW project would have the potential to affect water quality and drainage patterns within the cumulative analysis area for hydrology and water quality. The COTW project would alter the drainage pattern within the headwaters of Little Bear Creek and could result in increased erosion and sedimentation, the accidental release of hazardous materials, and flooding on- and off-site. These potential impacts on hydrology and water quality could combine with the hydrology and water quality impacts of the proposed project to result in a significant cumulative impact. However, with implementation of the Environmental Commitments and mitigation measures described in Section 3.6.3, the contribution of the proposed project to any significant cumulative impact would be less than cumulatively considerable.

5.4.6 Land Use and Planning

The geographic scope for the cumulative land use analysis includes the land uses within 0.5 mile of the proposed project site, which would only include the COTW Project. Construction of the COTW Project would occur immediately adjacent to the proposed project site and would generate temporary disturbances to surrounding land uses that are similar to those described for the proposed project. Therefore, the proposed project could contribute to cumulative land use impacts from construction activities. However, the majority of the construction activities associated with both projects that could overlap would occur in open forest lands, which would result in minimal cumulative impacts to surrounding land uses.

Operational land use impacts associated with both the proposed project and the COTW Project would be minimal. The only impacts would be associated with short-term temporary maintenance activities. While these activities could overlap on the same day, any maintenance activities would be minimal, temporary, and would likely occur during daytime weekday hours. Therefore, the proposed project would not contribute to permanent cumulative land use impacts.

5.4.7 Noise

The geographic scope for this cumulative noise analysis is within approximately 0.5 mile of the temporary and permanent impact areas (refer to Figure 2) and heavy truck routes. This is because noise impacts are localized and would attenuate beyond that distance. The proposed project would only generate noise of concern during construction. Construction of the Church of the Woods Project, cumulative project #1 on Figure 5-1, would occur within 0.5 mile of the proposed project. Noise generated during construction of the Church of the Woods Project is expected to generate similar temporary and periodic noise as described for the proposed project.

Cumulative noise impacts could occur if both construction timeframes overlap. While some residences could be impacted by short-term noise disturbances under such an occurrence, noise sources associated with construction of the Church of the Woods Project would also be exempt from noise performance standards identified within the San Bernardino County Noise Ordinance, provided such activities do not occur outside of the allowable hours of 7:00 a.m. and 7:00 p.m., per Section 83.01.090(c) of the County Development Code. Because construction of the proposed project would occur during these allowable times and includes proposed Mitigation Measure N-1 to address any noise complaints during construction, the proposed project would not contribute to cumulatively considerable temporary noise impacts.

As discussed in Section 3.8.3, the proposed project's long-term operational noise would be limited to the sounds of running water immediately following a large rain event. Therefore, the proposed project would not contribute to cumulatively considerable permanent noise impacts, which the Church of the Woods Project would likely generate.

5.4.8 Public Services

The geographic scope for the analysis of cumulative impacts on public services includes the service areas of the Mountain Division (Division 4) of the San Bernardino County Fire Department and the San Bernardino County Sheriff's Department Twin Peaks Station. This geographic scope is appropriate because potential public service impacts for the proposed project are limited to fire and police protection, and the two jurisdictions that would serve the proposed project are those that are listed above. Potential impacts to fire and police protection services include the degradation of or interference with the maintenance of acceptable service rations, response times, or other performance objectives. Numerous past, present, and reasonably foreseeable projects (including those listed in Table 5-1) have affected or would affect the provision of fire and police protection services in the cumulative analysis area. However, the provision of public services typically expands in parallel with an expanding population, thus anticipating and preventing significant negative impacts to public services. The analysis of impacts for the proposed project found that any impacts on fire and police protection would be less than significant. It is not anticipated that past, present, and reasonably foreseeable projects would combine to result in a significant cumulative impact to fire and police protection services. In the event that past, present, and reasonably foreseeable projects would combine to form a significant cumulative impact on fire and police protection services, the contribution of the proposed project to any significant cumulative impact would be less than cumulatively considerable.

5.4.9 Traffic and Transportation

The geographic scope for this cumulative traffic analysis includes study area roadways that may share traffic from cumulative projects, which is limited to State Route (SR) 18. The only cumulative project

generating measureable traffic volumes that could combine with proposed project trips is the Church of the Woods Project. However, because the proposed project would only generate trips during construction, the proposed project would only contribute considerably to cumulative traffic impacts if either construction timeframes overlap or the Church of the Woods Project is operational prior to construction of the proposed project.

Based on a review of the Church of the Woods Project Environmental Impact Report, this cumulative project would generate the following maximum daily trips (San Bernardino County, 2010):

- 25 daily trips during construction
- 58 trips during the Saturday peak hour
- 800 trips during the Sunday peak hour

Because the proposed project would not include construction work on the weekends, trips from the Church of the Woods Project would only combine with temporary construction trips associated with the proposed project on the segment of SR-18 near both sites if construction timeframes overlap (25 daily trips).

As discussed in Section 3.10.3, construction of the proposed project would generate a maximum of 189 daily trips temporarily during construction (worst-case scenario). Should these trips cumulatively combine with the Church of the Woods Project (assuming it is operating), this cumulative temporary increase in daily traffic would result in a temporary 2.0% increase (if occurring between Monday through Friday) to the existing traffic volumes (10,500 trips per day) on SR-18 near both project sites (refer to Section 3.10.1). Once operational, a worst-case scenario of 80 truck trips along SR-18 near the site for sediment removal once every 3 to 5 years (for up to 10 days) would result in a temporary 1.0% increase (assumed to only occur between Monday through Friday) on SR-18 near both project sites. Therefore, while the Church of the Woods Project may cumulatively increase traffic volumes in the study area if activities overlap with proposed project construction or maintenance traffic, these proposed project trips are temporary and would have a less than significant cumulative contribution. The cumulative contribution of the proposed project would be reduced with the implementation of proposed Mitigation Measure TR-1.

The proposed project would cause temporary lane closures and disruption to access, public transportation, and emergency service vehicle circulation. However, the only cumulative project that could combine with these temporary impacts is the Church of the Woods Project. Because this project is located along the portion of SR-18 disrupted by the proposed project, no additional disruption would cumulatively occur. With the implementation of proposed Mitigation Measures TR-2 through TR-4, the proposed project would not contribute considerably to cumulative roadway disruption impacts.

6. Other CEQA Considerations

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all aspects of a project must be considered when evaluating its impact on the environment. As part of this analysis, the Environmental Impact Report (EIR) must also identify: (1) significant environmental effects of a proposed project; (2) significant environmental effects that cannot be avoided if a proposed project is implemented; (3) significant irreversible environmental changes that would result from implementation of a proposed project; (4) growth-inducing impacts of a proposed project; (5) mitigation measures proposed to minimize significant effects; and (6) alternatives to a proposed project.

Table ES-1 (Summary of Environmental Impacts and Mitigation Measures) in the EIR Executive Summary and Sections 3.01 through 3.11 identifies the significant environmental effects of the proposed project and feasible mitigation measures to reduce the magnitude of impacts. Alternatives to the proposed project are described and analyzed in Section 4. The following addresses growth-inducing effects (Section 6.1), significant irreversible environmental changes (Section 6.2), and significant effects that cannot be avoided (Section 6.3).

6.1 Growth-Inducing Effects

Background

In accordance with Section 15126.2(d) of the CEQA Guidelines, an EIR must "discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." In addition, when discussing growth-inducing impacts of a proposed project, "it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment" [Section 15126.2(d) of the CEQA Guidelines]. Two issues must be considered when assessing the growth-inducing impacts of a project:

- **Elimination of Obstacles to Population Growth.** The extent to which additional infrastructure capacity or a change in regulatory structure would allow additional development in the County and region.
- **Promotion of Economic Growth**. The extent to which a project can cause increased activity in the local or regional economy. Economic impacts can include direct effects, such as the direction and strategies implemented within the area of a project and indirect or secondary impacts, such as increased commercial activity needed to serve the population growth forecasts for the project area.

Elimination of Obstacles to Population Growth

The elimination of either physical or regulatory obstacles to population growth is considered to be a growth-inducing impact. A physical obstacle to population growth typically involves the lack of critical public service infrastructure. The extension of critical public service infrastructure, including roadways, water mains, and sewer lines, into areas that currently do not have these services is expected to support new development. However, the proposed project would not remove any obstacle to growth as it does not include the extension of any critical public service infrastructures. While the project does include the extension of runoff and stormwater infrastructure, these services would restore the direction of existing flows in order to mediate ongoing erosion and landsliding hazards which pose significant risk to property and the public in southern Rimforest. This would remove an obstacle to population growth in the community of Rimforest; however, this community is already fairly developed. Therefore, while the proposed project could potentially remove an obstacle to growth, it would not be considered growth-inducing.

Promotion of Economic Growth

The proposed project would result in direct economic impacts to the County through employment and the local purchase of some construction materials, as well as secondary impacts from the purchases of goods and services by those employed to construct the proposed project. The project does not include any residential or commercial development. Approximately 10 workers on average would be required to construct the project (most of whom are expected to reside in the County), and construction would be completed over three summer seasons (2017-2019). Maintenance of the storm drain after completion of the proposed project would be performed by County operation and maintenance employees every 3-5 years with approximately quarterly cleaning of catch basin(s) and storm drains and would not require additional staffing. Therefore, the proposed project would not result in increased population or employment in the project area, and would not be considered growth inducing.

6.2 Significant Irreversible Environmental Changes

Section 15126.2(c) of the CEQA Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by the Project. Specifically, Section 15126.2(c) states:

> *Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.*

Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses
- The project would involve a large commitment of nonrenewable resources
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful inefficient, and unnecessary use of energy)
- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project

6.2.1 Irreversible Commitment of Resources

Implementation of the proposed project includes the construction and maintenance of a series of drainage facilities and a storm drain system to address historic erosion and landsliding in the southern Rimforest community. Nonrenewable energy resources would be committed during construction of the proposed project. This includes the use of fossil fuels and energy required for the attenuation basin(s) and culvert construction and associated activities, including earthen material and grading activities. Once completed, operation and maintenance activities would be limited to periodic inspections, vegetation control in the surrounding areas, debris and trash removal, and erosion and slope repair as needed. Therefore, an irreversible commitment of very small amounts of nonrenewable energy resources would occur.

Construction and operation of the proposed project would contribute to the incremental depletion of resources, including renewable and non-renewable resources. Non-renewable resources, such as natural

gas, petroleum products, asphalt, petrochemical construction materials, steel, copper, and other metals, rock, and sand and gravel are considered to be commodities that are available in a finite supply. The processes that created these resources occur over a long period. Therefore, replacement of these resources would not occur over the life of the project. To varying degrees, the aforementioned materials are all readily available and some materials, such as asphalt or sand, and gravel, are abundant. Other commodities, such as metals, natural gas, and petroleum products, are also readily available, but they are finite in supply, given the length of time required by the natural process to create them.

The demand for all such resources is expected to increase regardless of whether or not the project is developed. The Southern California Association of Governments (SCAG) forecasts that the population of Southern California will increase 23 percent between 2008 and 2035 (SCAG, 2012). These increases in population would directly result in the need for more public, commercial, and residential facilities in order to provide the needed services associated with this growth. If not consumed by this project, these resources would likely be committed to other projects in the region intended to meet this anticipated growth. Therefore, the proposed project would not increase energy consumption above what population growth itself would do. No increases in inefficiencies or unnecessary energy consumption are expected to occur as a direct or indirect consequence of the proposed project.

Furthermore, the investment of resources in the project would provide a community benefit by addressing historic erosion and landsliding in the southern Rimforest community. Mitigation measures have been included in this EIR to reduce and minimize project-specific and cumulative impacts.

6.2.2 Irreversible Damage from Environmental Accidents

The proposed project proposes no uniquely hazardous uses, and its operation would not be expected to cause environmental accidents that would affect other areas. The project site is located within a seismically active region and would be exposed to ground shaking during a seismic event. The project is not located on or crossing a known Alquist-Priolo zoned fault. Two potentially active faults are located within the project vicinity, the Waterman Canyon fault and the Rimforest fault. The Waterman Canyon fault (also referred to as the Devils Canyon fault) is a potentially north dipping reverse fault and is located approximately 0.6 miles south of the proposed project (USGS, 2003; SCEDC, 2015). The Rimforest fault zone crosses the edge of the southeast corner of the proposed project in an area of proposed grading and the southern end of the proposed access road. However, the fault does not cross any pipeline or attenuation basin structures, and would not cause any significant damage to project structures in the event of fault rupture. With regard to accidental spills, the Stormwater Pollution Prevention Plan (SWPPP) prepared for the project would provide BMPs to ensure potential contaminants used during construction (e.g., fuel, lubricants, sealants) would be stored away from areas where they could potentially affect water quality, and would provide measures for managing flows during accidental spills or storm events. Implementation of the SWPPP requirements would ensure that impacts during construction would not be significant.

6.3 Significant Effects that Cannot be Avoided

Section 15126.2(b) of the CEQA Guidelines specifies that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. Implementation of the proposed project would not result in any significant and unavoidable impacts.

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Exhibit D

ADDENDUM

to the Rimforest Storm Drain Project EIR (SCH# 2015051070)

CEQA Lead Agency

San Bernardino County Flood Control District

May 2019

Table of Contents

1. Purposes

The purposes of this Addendum are:

a) To describe project design changes for the Rimforest Storm Drain Project; and
b) To determine whether a subsequent or supplemental EIR is required under the California Environmental Quality Act as a result of the project design changes.

2. Introduction

This document is an Addendum to the Environmental Impact Report (EIR) for the Rimforest Storm Drain Project (project) addressing the construction and maintenance of a series of drainage facilities to address historic erosion and landsliding in the southern Rimforest community (SCH# 2015051070). This Addendum has been prepared based on changes to the detailed design plans and project disturbance area discussed in the Project EIR certified in 2017 by the San Bernardino County Flood Control District (District). A description of the design changes and detailed design plan are presented in Section 3, Project Design Changes, of this EIR Addendum.

The project addresses slope stability issues and includes restoring drainage runoff from north of Highway 18 into Little Bear Creek, which drains to Lake Arrowhead. In order to restore this flow pattern without increasing peak runoff downstream of Highway 18, the District proposes a detention basin to attenuate runoff.

A Final EIR for the project was prepared in 2017 by the District and certified by the San Bernardino County Board of Supervisors on May 23, 2017.

This Addendum has been prepared in accordance with Section 15164 of the CEQA Guidelines[1], which allows for the preparation of an EIR addendum when project changes or updates do not trigger preparation of a subsequent EIR or an EIR supplement. Preparation of an EIR Addendum is appropriate when an EIR was previously approved for a project and changes or additions to the project do not involve conditions that would require preparation of a subsequent EIR. When an EIR has been certified for a project, CEQA Guidelines Section 15162 states that no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects. (CEQA Guidelines §15162(a)(1))
2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects. (CEQA Guidelines §15162(a)(2))
3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

[1] This document is an addendum to the Final EIR. This document serves as an informational document to the District.

a. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

b. Significant effects previously examined will be substantially more severe than shown in the previous EIR;

c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative. (CEQA Guidelines §15162(a)(3)).

The District has conducted a comprehensive review of the currently proposed detailed design for the project. Based on this detailed review, presented in Section 4, the District has concluded that the revisions to the project set forth in the design changes and detailed design plan would not trigger any of the conditions set forth in CEQA Guidelines Section 15162 and, therefore, the use of an Addendum to memorialize the design changes and the revisions to the mitigation measures as set forth in herein is appropriate pursuant to CEQA Guidelines Section 15164.

3. Project Design Changes

3.1 Project Design as Described in the Final EIR

The project was designed to restore runoff from its current flow-path through the community of Rimforest and outlet at a landslide area, into a new flow-path comprised of channels and pipeline with an outlet into Little Bear Creek. The project would occur in two distinct phases:

- **Phase 1:** Phase 1 would intercept the largest part of runoff to be restored under the project and result in a 64 percent reduction in runoff into the landslide area. Improvements constructed under this phase would convey mountainside runoff from an area of approximately 51 acres and deliver this runoff to Little Bear Creek. This phase of the project includes approximately 0.8 miles of flood control improvements, comprised of approximately 0.2 miles of channel/basin and approximately 0.6 miles of pipe culvert and appurtenances.
- **Phase 2:** Phase 2 would restore the direction of runoff from 16 acres of the interior portion of the community of Rimforest and result in a 30 percent reduction in runoff into the landslide area. This phase includes installation of a culvert system to direct runoff from Pine Avenue, which travels parallel to the south of SR-18, and under SR-18 to join flows restored by Phase 1 in Little Bear Creek. The Phase 2 culvert system would include street inlets and storm drains within Rimforest to facilitate the routing of flows along Pine Avenue.

3.2 Changes to Project Design

The project design essentially remains the same. However, a few modifications were made during final design (see Figure 1).

- **Grading Modifications.** Due to grading difficulties, the size of the permanent impact area within the basin has increased. In order for the basin to work properly and provide adequate access for maintenance, slopes are required to extend to match grade.

- **Drainage Inlet Modifications.** A drainage course exists at the top of Scenic Way. During final design, it was determined that in order to prevent Scenic Way from washing out, installation of a concrete apron with headwall and trash rack would be necessary at the inlet. Similarly, the drainage course at the fire station would be modified to prevent erosion in this area. All of the new temporary impacts along Highway 18 are associated with drainage inlets.
- **Temporary Road Access.** Some temporary pavement will be installed along Highway 18 in order to allow two-way traffic while constructing the storm drain in Highway 18. The road width would be increased up to 9 feet in some areas.

4. Environmental Evaluation (pursuant to CEQA Guidelines §15162(a)(1))

Are there substantial changes proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effect (CEQA Guidelines §15162(a)(1))?

Conclusion: No

Analysis: The Final EIR for the Rimforest Storm Drain Project addressed impacts across nine broad topical categories, which include many subcategories of impacts. The impacts evaluated in the Final EIR and how they relate to the current detailed design plans for the project are discussed in Section 4.1 below.

Not all possible categories of impacts are analyzed in the Final EIR because CEQA emphasizes that EIR analyses should focus on significant impacts and issues, rather than on minor and insignificant effects. To demonstrate that the design changes would not result in any new significant impacts related to topics not specifically addressed in the Final EIR, Section 4.2 discusses the potential for impacts in other categories. These include impact categories that were not specifically addressed in the EIR, but were addressed in the Initial Study prepared by the District in order to help determine the scope of issues to be addressed in the EIR (see Appendix 1 of the EIR).

4.1 Impacts Analyzed in the Final EIR

The Final EIR analyzed a wide range of potential impacts associated with the project. For a full discussion of these impacts, the reader is referred to the Final EIR, which is available for review on the project website: http://cms.sbcounty.gov/Portals/50/public_notices/Rimforest/Rimforest-Final-EIR.pdf

The subsections below address each of the environmental impacts discussed in the Final EIR and explain how those impacts either would remain unchanged or not substantially altered by the current detailed design plans for the project. As demonstrated below, the new design changes would neither result in any new significant impacts nor substantially increase the severity of significant impacts identified in the Final EIR.

The following are the significant and unavoidable impacts of the project identified in the Final EIR:

- Cumulative impacts to Air Quality (NOx emissions during construction)

In addition, the Final EIR identified 15 significant impacts for the approved project that could be reduced to a less-than-significant level with the implementation of recommended mitigation measures. These impacts were related to biological resources, cultural resources, geology and soils, hydrology & water

quality, land use and planning, noise, traffic & transportation. The Final EIR also described two beneficial impacts of the project. All of these impacts are discussed below.

4.1.1 Air Quality and Greenhouse Gases

The Project would conflict with or obstruct implementation of the applicable air quality plan

Impacts associated with air quality plan compliance were analyzed in Section 3.02 of the EIR. It was concluded that because the 2007 Air Quality Management Plan (AQMP) assumes growth that is consistent with the implementation of this project, it would not exceed the future growth projections in the 2007 AQMP, and it would not conflict with or obstruct implementation of the SIP. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be similar to that identified in the EIR because the overall emissions generated and project scale would not significantly increase beyond that originally compared against the 2007 AQMP. Therefore, the project would be consistent with the AQMP and conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to compliance with the applicable AQMP.

The Project would violate any air quality standard or contribute substantially to an existing or projected air quality violation

Impacts associated with violating air quality standards were analyzed in Section 3.02 of the EIR. It was concluded that the project's air pollutant emissions would occur for a short period, less than a year total (occurring over multiple four-to-five month-long periods during summer seasons), and would be well below the magnitude that would cause air quality standard violations or contribute substantially to existing or projected air quality standard violations. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be similar to that identified in the EIR because the overall emissions generated would not significantly increase beyond that originally estimated in the EIR. Therefore, the project would not violate any air quality standards and be consistent with the conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to violating air quality standards.

The Project would result in cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard [including releasing emissions which exceed quantitative thresholds for ozone precursors]

Impacts associated with cumulatively considerable increases of any criteria pollutants were analyzed in Section 3.02 of the EIR. It was concluded that construction and operation of the project would not exceed any of the SCAQMD CEQA regional emissions significance thresholds. The changes to the project design would require additional construction activities to be completed or require minor increases to the previously estimated construction activities. However, these new and increased construction activities are fairly minor in the context of the previously evaluated project construction activities, and would not be greater in scope than those previously estimated activities, would not require different construction equipment or materials, and would not require significantly larger amounts of construction materials than identified and assessed in the EIR. Therefore, the maximum daily activities and associated criteria air pollutant emissions would not increase from those previously assessed. Additionally, the delay in project initiation would cause a reduction in unmitigated emissions estimates due to State regulated improvements occurring over time to the off-road equipment and heavy truck fleets.

The project's cumulative air quality impacts were assessed based on the assumption that the project could overlap with another nearby construction project, the proposed Church of the Woods development. It was determined that if these projects were in construction concurrently there could be significant cumulative air quality impacts, and without performing new emission estimates for each of these projects that determination stands. However, as noted above project level impacts would not increase, so the project's contribution to the cumulative air quality impacts would not increase, and the conditional implementation of mitigation measures AQ-1 and AQ-2 would still apply. Therefore, the project would not result in cumulatively considerable increases of any criteria pollutants and would be consistent with the conclusions in the EIR, with impacts being less than significant with implementation of mitigation measures AQ-1 and AQ-2. Changes to the project design do not contribute new or substantially greater impacts related to cumulatively considerable increases of any criteria pollutants.

The Project would expose sensitive receptors to substantial pollutant concentrations

Impacts associated with sensitive receptor exposure to substantial pollutant concentrations were analyzed in Section 3.02 of the EIR. It was concluded that construction and operation of the project would not exceed any of the SCAQMD CEQA LST significance thresholds. The changes to the project design would not require different construction equipment or materials and would not require significantly larger amounts of construction materials than identified and assessed in the EIR. Therefore, the maximum daily activities and associated criteria air pollutant emissions would not increase from those previously assessed. Therefore, the project would not result in sensitive receptor exposure to substantial pollutant concentrations and would be consistent with the conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to sensitive receptor exposure to substantial pollutant concentrations.

The Project would produce GHG emissions that exceed the SCAQMD CO2e annualized significance threshold

Impacts associated with GHG emissions were analyzed in Section 3.02 of the EIR. It was concluded that construction of the proposed project would have GHG emissions that are well below the SCAQMD GHG emissions significance criteria. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be identical to that identified in the EIR because GHG emissions reductions would also occur, at less substantial levels, due to improvements in off-road equipment and on-road vehicle efficiency. Therefore, the changes to the project design would not result in increased project level air quality and greenhouse gas emission impacts and would be consistent with the conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to GHG emission concentrations.

The Project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions

Impacts associated with GHG plan, policy, or regulation compliance were analyzed in Section 3.02 of the EIR. It was concluded that Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be identical to that identified in the EIR because GHG emissions reductions would also occur, at less substantial levels, due to improvements in off-road equipment and on-road vehicle efficiency. Therefore, the changes to the project design would not result in increased project level air quality and greenhouse gas emission impacts and would be consistent with the conclusions in the EIR, with impacts being less than significant. Changes

to the project design do not contribute new or substantially greater impacts related to GHG plan, policy, or regulation compliance.

4.1.2 Biological Resources

Construction activities would result in adverse effects to species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS

Impacts associated with adverse effects to species identified as a candidate, sensitive, or special-status species were analyzed in Section 3.03 of the EIR. It was concluded that two special-status plants (Common woolly sunflower and Laguna Mountains jewelflower) were observed on the project site. Three additional plant species with a CRPR 1B have the potential to be present on the project site, including San Bernardino Mountains owl's-clover, southern jewelflower, and silver-haired ivesia. In addition, Parish's yampah, a CRPR 2 species and Mojave a CRPR 4 species are known from the immediate vicinity and have potential to be present on the project site. Impacts to these plant species would be reduced with mitigation measures BIO-1b, BIO-1c, BIO-1l, and BIO-1f. Special-status wildlife including southern rubber boa, California spotted owl, San Bernardino flying squirrel, and others may be affected by temporary or permanent loss or modification of habitat, disturbance from fugitive dust, noise, and vibration, entrapment in construction materials or excavations, exposure to hazardous substances accidentally released by vehicles or other equipment, and displacement, injury, or morality from Project-related construction activities. Impacts to wildlife would be reduced with mitigation measures BIO-a through BIO-1l.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would not result in new significant impacts to special-status plants or wildlife. With implementation of mitigation measures, impacts would be consistent with the conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to adverse effects to species identified as a candidate, sensitive, or special-status species.

Construction activities would result in adverse effects to riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS

Impacts associated with adverse effects to riparian habitat or other sensitive natural communities were analyzed in Section 3.03 of the EIR. It was concluded that vegetation and habitat removal for the temporary and permanent disturbance areas for the attenuation basin(s) could cause displacement or mortality of native plants and most wildlife on the site. Ongoing routine maintenance on a three to five-year cycle may also cause similar impacts. Impacts to riparian habitat or other sensitive natural communities would be reduced with mitigation measures BIO-a through BIO-1f and BIO-1l.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would not result in new significant impacts to riparian habitat or other sensitive natural communities. With implementation of mitigation measures, impacts would be consistent with the conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to adverse effects to riparian habitat or other sensitive natural communities.

Although impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 are not expected to result in new significant impacts, additional information about the project design has indicated that the spring located within the temporary disturbance area may be indirectly impacted by nearby channel excavation or

vegetation removal. Based on this additional information we have modified the third paragraph of mitigation measure BIO-1c. Edits are shown in underline text.

MM BIO-1c **Minimize Impacts to Sensitive Habitat and Compensate for Habitat Loss.** The County of San Bernardino Flood Control District (District) will minimize impacts and permanent loss of all native vegetation that provides habitat for special-status plants and wildlife, at construction sites by flagging areas to be avoided, as feasible. As feasible, stands of native trees within the temporary impact areas shall be flagged for avoidance to reduce impacts to mature trees, which will improve the post-project habitat quality and allow the temporarily impacted areas to restore more quickly. Whenever possible, trees being removed from within temporary impact areas shall be cut off at ground level and the root structure should be left in place to stabilize the soil and allow the tree to re-sprout after the completion of project construction. In addition, large rocks or outcrops within the temporary impact areas shall be avoided and protected in place to maintain wildlife habitat wherever possible.

Within temporary impact areas, topsoil and leaf litter shall remain in place during construction unless grading is required. If grading or soil excavation is required, then topsoil and leaf litter will be salvaged and stockpiled on the project site to be used in the restoration of temporarily impacted areas. The trunks of large trees that are removed for project construction shall be kept on the project site and incorporated into the post project landscaping to provide refuge for wildlife and shelter for young plants as feasible.

The District shall avoid impacts to the spring located within the temporary disturbance area, as feasible. The spring and immediately adjacent vegetation will be flagged and avoided with a buffer of at least twenty-five feet to reduce impacts to the hydrology of the spring and to ensure that it continues to function following the completion of construction. If the spring is indirectly impacted by nearby excavations or if vegetation adjacent to the spring must be impacted, the District shall restore the vegetation within twenty-five feet of the spring and shall ensure that the spring continues to function once the project is completed.

These proposed changes to mitigation measure BIO-1c do not result in new significant impacts to biological resources and is intended to ensure that the project can be constructed and that the spring continues to function once the project has been completed.

Construction activities could result in a substantial adverse effect on federally protected wetlands, federally protected waters, non-federally protected state waters (SWRCB or RWQCB), and state waters regulated by CDFW through direct removal, filling, hydrological interruption, or other means

Impacts associated with wetlands and waters were analyzed in Section 3.03 of the EIR. It was concluded that Temporary impacts to jurisdictional waters would occur in portions of the project site that may be impacted by project activities but would be restored at the end of the project. This would include recontouring, restoring flow lines, and replanting vegetation. Permanent impact areas would be impacted during project activities and would not be restored at the end of the project. Some of these permanent impacts could lose function entirely while others may still convey water but would no longer be vegetated or provide habitat for wildlife. Impacts to wetlands and waters would be reduced with mitigation measures BIO-a through BIO-1f and BIO-1l.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would not result in new significant impacts to federally protected wetlands, federally protected waters, non-federally protected state waters, or state

waters regulated by CDFW. With implementation of mitigation measures, impacts would be less than significant, consistent with the conclusions in the EIR. With the proposed mitigation measures, the changes to the project design do not contribute new or substantially greater impacts related to adverse effects to riparian habitat or other sensitive natural communities.

Construction activities will have impacts to wildlife movement of native wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites

Impacts associated with wildlife movement were analyzed in Section 3.03 of the EIR. It was concluded that the proposed storm drains would be located within a developed community and would not substantially affect wildlife movement or nursery areas. Due to availability of surrounding habitat east and west of the proposed attenuation basin(s), the basin(s) would not substantially affect wildlife movement for many species. Given the relatively small size of the project disturbance areas, the limited timeline for project construction activities, and the availability of surrounding habitat east and west of the attenuation basin(s) for wildlife movement, the project would have a less-than-significant impact on wildlife movement or the use of wildlife nursery sites.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would not result in new significant impacts to wildlife movement or native nursery sites. With implementation of mitigation measures, impacts, should they occur, would be consistent with the conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to wildlife movement or wildlife nursery sites.

Construction activities may conflict with local policies or ordinances protecting biological resources

Impacts associated with compliance with local ordinances protecting biological resources were analyzed in Section 3.03 of the EIR. It was concluded that the District would comply with all applicable requirements of the San Bernardino County Development Code. No mitigation measure designed to avoid conflict with local policies or ordinances protecting biological resources would be required and impacts would be less than significant. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would not result in new significant impacts to local policies or ordinances protecting biological resources. With implementation of mitigation measures, impacts would be consistent with the conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to compliance with local ordinances protecting biological resources.

4.1.3 Cultural Resources

Construction, operation, and maintenance of the proposed project would demolish, destroy, relocate, or disturb the cultural resource in a manner that would diminish its integrity or materially impair the significance of the resource

Impacts associated with disturbing cultural resources were analyzed in Section 3.04 of the EIR. It was concluded that unknown buried resources (prehistoric and historical archaeological sites) could be inadvertently unearthed during ground-disturbing activities associated with project construction, particularly in the Little Bear Creek portion of the project area. This impact would be reduced to less than significant by the procedures and provisions in mitigation measures CUL-1a and CUL-1b. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be identical to that identified in the EIR

because the changes in project design are within areas previous evaluated for Historical Resources, and no resources have been identified that are evaluated as eligible for inclusion on the California Register of Historical Resources. Therefore, the potential for construction to impact unknown buried cultural resources would be consistent with the conclusions in the EIR, with impacts being less than significant with implementation of mitigation measures CUL-1a and MM CUL-1b. Changes to the project design do not contribute new or substantially greater impacts related to the potential for impacting cultural resources.

Construction, operation, and maintenance of the proposed project could uncover, expose, and/or damage human remains

Impacts associated with disrupting human remains were analyzed in Section 3.04 of the EIR. It was concluded that there is always the possibility that unmarked burials may be unearthed during construction. This impact would be reduced to less than significant by the procedures and provisions in mitigation measures CUL-2. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be identical to that identified in the EIR because the changes in project design have the same potential for encountering unmarked burials. Therefore, the potential for construction to impact unknown buried cultural resources would be consistent with the conclusions in the EIR, with impacts being less than significant with implementation of mitigation measure CUL-2. Changes to the project design do not contribute new or substantially greater impacts related to the potential for impacting human remains.

4.1.4 Geology and Soils

Project structures could be damaged by surface fault rupture

Impacts associated with fault rupture were analyzed in Section 3.05 of the EIR. It was concluded that the nearest faults do not cross any pipeline or attenuation basin structures and would not cause any significant damage to project structures in the event of fault rupture. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be identical to that identified in the EIR because the project area and distance to existing faults would be identical. Therefore, the potential for project structures to be damaged by surface fault rupture would be consistent with the conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to the potential for project structures to be damaged by surface fault rupture.

Strong to very strong earthquake-induced ground shaking could result in damage to project structures and/or injury to people

Impacts associated with ground shaking were analyzed in Section 3.05 of the EIR. It was concluded that while the potential for seismically induced ground shaking in the project area during project operation is unavoidable, the proposed project would not include any habitable structures that would expose people to significant hazards due to seismic shaking. Underground structures such as pipelines are generally less susceptible to damage due to strong groundshaking. However, they could be damaged in areas where they transition to other structures such as storm drains and channels, and the walls, dams, or spillways for the attenuation basin(s) could be damaged or collapse due to the strong ground motions.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be identical to that identified in the EIR because the project components that could be impacted by very strong earthquake-induced ground shaking would not be significantly changed. Consistent with the conclusions in the EIR, with the

implementation of Mitigation Measure (MM) G-1 (Geotechnical Evaluation and Design for Ground Shaking), impacts associated with earthquake-induced ground shaking would be less than significant. Changes to the project design do not contribute new or substantially greater impacts related to the potential for project structures to be damaged by earthquake-induced ground shaking.

Seismically induced landslides could damage project structures or expose people to injury

Impacts associated with landslide potential were analyzed in Section 3.05 of the EIR. It was concluded that while project structures are near areas of landslide susceptibility, the storm drains would be located north of landslide hazard areas and would likely not be impacted by earthquake induced landslides during the lifetime of the proposed project. Additionally, the diversion of the surface runoff away from the unstable slopes below Rimforest is intended to address and potentially reduce slope stability issues in this area. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be identical to that identified in the EIR because the project area and location relative to landslide hazard areas would be identical. Therefore, the potential for project structures to be damaged by seismically induced landslide would be consistent with the conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to the potential for project structures to be damaged by seismically induced landslide.

Project structures could be damaged by seismically induced liquefaction phenomena

Impacts associated with liquefaction potential were analyzed in Section 3.05 of the EIR. It was concluded that while most of the proposed project area is underlain by granitic bedrock with a thin covering of colluvium and alluvium and not susceptible to liquefaction, potentially liquefiable alluvial deposits of up to 40 feet thick exist within the community of Rimforest, resulting in a potential for liquefaction to occur in these sediments in the event of a large earthquake if it were to occur while the sediments were saturated.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be identical to that identified in the EIR because the project components that could be impacted by seismically induced liquefaction would not be significantly changed. Consistent with the conclusions in the EIR, with the implementation of MM G-2 (Geotechnical Evaluation and Design for Liquefaction), impacts associated with seismically induced liquefaction would be less than significant. Changes to the project design do not contribute new or substantially greater impacts related to the potential for project structures to be damaged by seismically induced liquefaction.

Expose people or structures to potential risk from landslides

Impacts associated with landslide potential were analyzed in Section 3.05 of the EIR. It was concluded that while project structures are near areas of landslide susceptibility, the storm drains would be located north of landslide hazard areas and would likely not be impacted by earthquake induced landslides during the lifetime of the proposed project. Additionally, the diversion of the surface runoff away from the unstable slopes below Rimforest is intended to address and potentially reduce slope stability issues in this area. However, ground disturbing activities for construction of the proposed project components adjacent to steep or unstable slopes along Highway 18 and within the Little Bear Creek drainage could potentially destabilize the susceptible slopes resulting in landslides or other slope failures during construction.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be identical to that identified in the EIR

because the project area that could be impacted by landslide would not be significantly changed. Consistent with the conclusions in the EIR, with the implementation of MM G-3 (Conduct Geotechnical Surveys for Landslides and Unstable Slopes), impacts associated with seismically induced liquefaction would be less than significant. Changes to the project design do not contribute new or substantially greater impacts related to exposure of people or structures to potential risk from landslides.

Construction could trigger or accelerate soil erosion

Impacts associated with soil erosion were analyzed in Section 3.05 of the EIR. It was concluded that ground disturbing activities during construction would loosen soils and could result in soil erosion. Current regulations require compliance with the National Pollution Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity and would require that the applicant submit a Storm Water Pollution Prevention Plan (SWPPP) for prevention of water quality degradation. The SWPPP would require development and implementation of best management practices (BMPs) to identify and control erosion. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be identical to that identified in the EIR because the overall potential for soil erosion would be similar, with impacts reduced by adherence to BMPs in the SWPPP. Therefore, the project's potential for soil erosion would be consistent with the conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to soil erosion.

Unsuitable soils result in damage to project structures

Impacts associated with unsuitable soils were analyzed in Section 3.05 of the EIR. It was concluded that affected soils are classified as having linear extensibility (shrink-swell susceptibility) ranging from low to moderate; with granular soils generally not considered expansive. The soils have low risk of corrosion to uncoated steel and concrete, and soils testing verified that the soils are not corrosive. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be identical to that identified in the EIR because the affected soil types would be the same. Therefore, the potential for project structures to be impacted by unsuitable soils would be consistent with the conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to unsuitable soils for project structures.

4.1.5 Hydrology and Water Quality

Construction, operation, and maintenance of the proposed project would degrade water quality and violate water quality standards or waste discharge requirements

Impacts associated with degrading water quality or violating water quality standards were analyzed in Section 3.06 of the EIR. It was concluded that during construction the potential for accidental release or spill of a hazardous material to contaminate surface water or groundwater within or near the project area would be relatively low due to the ephemeral or intermittent nature of most streams in the project area and the fact that construction activities would be limited to the non-rainy season. Also, the quantity of hazardous materials that would be handled, used, and stored during construction of the proposed project would be small enough such that an accidental release or spill could be quickly contained and removed for safe disposal. The potential for the accidental release or spill of a hazardous material to contaminate

a nearby waterbody would be further reduced through implementation of the required SWPPP, which would include BMPs to quickly and effectively contain and clean-up hazardous material leaks and spills.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be similar to that identified in the EIR because the overall potential for hazardous material discharge into a waterbody would be similar, with impacts reduced by adherence to BMPs in the SWPPP. Therefore, the project's potential for degrading water quality during construction would be consistent with the conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to degrading water quality during construction.

Inspection activities during operation and maintenance (O&M) would involve the use of light-duty vehicles. Heavy construction equipment would be required for sediment removal from the attenuation basin(s) and channelized sections. The use of these vehicles and equipment would require the use of hazardous materials, such as fuel, lubricants, and coolant. These hazardous materials could contaminate waterbodies in the project area through an accidental release or spill. The use of vehicles and construction equipment during O&M for the proposed project would be substantially less than during construction, and therefore the risk of contamination of a nearby waterbody from the accidental release or spill of a hazardous material would be proportionally lower.

The proposed project would restore the flowpath of the runoff in the area away from Strawberry Creek and the southern slopes of the San Bernardino Mountains and towards Little Bear Creek. This proposed change would reduce erosion of the hillside and reduce the sediment load that enters the creek. This reduction in erosion and sedimentation would likely lead to a reduction in turbidity and total suspended solids in Strawberry Creek, which would be a beneficial impact. Sediment would be removed during the non-rainy season, unless otherwise required for emergency repairs. Also, depending on the design of the attenuation basin(s) and outlet structure, most of the erosion that would occur during operation of the proposed project would be captured by the attenuation basin(s) and would not be transported downstream to Little Bear Creek.

Operational impacts associated with increasing the size of the impact/disturbance area and installing a concrete apron would be similar to that identified in the EIR because the overall potential for hazardous material discharge into a waterbody from O&M activities would be similar. While the greater impact area could result in more sediment accumulating, it would not increase potential erosion impacts and increased sedimentation would likely lead to a greater beneficial impact regarding a reduction in turbidity and total suspended solids in Strawberry Creek. Therefore, the project's potential for degrading water quality during O&M would be consistent with the conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to degrading water quality during operation.

Construction and operation of the proposed project would substantially deplete groundwater supplies or interfere substantially with groundwater recharge

Impacts associated with depleting groundwater resources were analyzed in Section 3.06 of the EIR. It was concluded that construction water use for the proposed project would be temporary and would represent a small percentage of total Lake Arrowhead Community Services District (LACSD) deliveries. Construction water use would not indirectly deplete groundwater supplies such that the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which

permits have been granted. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be similar to that identified in the EIR because the overall water required during construction would be similar. Therefore, the project's potential for depleting groundwater supplies during construction would be consistent with the conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to groundwater supplies during construction.

Sufficient permeable surfaces would remain throughout the watershed such that the rate of groundwater recharge would remain unchanged as a result of construction and operation of the proposed project. Additionally, the attenuation basins that would be constructed as part of the proposed project may allow for increased groundwater recharge compared to baseline conditions. Although construction and operation of the proposed project would not result in the direct extraction of groundwater or substantially interfere with groundwater recharge, the proposed project would restore approximately 100 acre-feet of runoff per year from Strawberry Creek to Little Bear Creek. This diversion would alter the amount of water available for recharge in both the Upper Santa Ana Valley Groundwater Basin (Santa Ana Basin) and the Upper Mojave River Valley Groundwater Basin (Mojave Basin). This diversion may require a water rights transfer petition to the SWRCB. The SWRCB will determine the need for a water rights transfer petition prior to the commencement of construction activities.

Operational impacts associated with increasing the size of the impact/disturbance area and installing a concrete apron would be similar to that identified in the EIR because the overall diversion of runoff and likelihood to affect groundwater recharge would be similar. While the greater impact area could result in more flow, it would not significantly increase the runoff from Strawberry Creek to Little Bear Creek compared to that analyzed in the EIR. Therefore, the project's potential for impacting groundwater supplies during operation would be consistent with the conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to groundwater supplies during operation.

Construction and operation of the proposed project would result in substantial erosion, siltation, and mudflow due to alteration of the existing drainage pattern

Impacts associated with soil erosion, siltation, and mudflow were analyzed in Section 3.06 of the EIR. It was concluded that construction-related erosion would be controlled by BMPs that would be specified in the project-specific SWPPP. Once operational, the project would reduce and prevent substantial erosion on the southern slopes of the San Bernardino Mountains, near the headwaters of Strawberry Creek. Restoration of the flowpath of runoff from Strawberry Creek to Little Bear Creek would substantially reduce the existing amount of erosion and subsequent siltation. Also, depending on the design of the attenuation basin(s) and outlet structure, most of the erosion that would occur during operation of the proposed project would be captured by the attenuation basin(s) and would not be transported downstream to Little Bear Creek.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be identical to that identified in the EIR for construction and operation because the overall potential for soil erosion would be similar, with impacts reduced by adherence to BMPs in the SWPPP during construction. Once operational, the proposed design changes would not alter the beneficial impacts the project would provide related to reducing erosion, siltation, and mudflow to Strawberry Creek. Therefore, the project's potential for soil

erosion would be consistent with the conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to soil erosion, siltation, or mudflow.

Construction and operation of the proposed project would result in flooding on- or off-site or would exceed the capacity of existing or planned stormwater drainage facilities due to alteration of the existing drainage pattern

Impacts associated with flooding and exceeding the capacity of the stormdrain system were analyzed in Section 3.06 of the EIR. It was concluded that the proposed project would intentionally alter the existing drainage pattern to address erosion and landslide problems within the headwaters of Strawberry Creek by restoring approximately 100 acre-feet of runoff per year towards Little Bear Creek. The proposed attenuation basin(s) would provide flood protection and a reduction in the 100-year peak flow rate would likely lead to a reduction in potential downstream flooding impacts. However, due to the change in existing drainage pattern, this analysis recommended MM HYD-1 (Perform downstream drainage and flooding analysis) to further reduce the potential for off-site flooding impacts.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be similar to that identified in the EIR because the project components that will redirect flows and alter the existing drainage pattern would not be significantly changed. Consistent with the conclusions in the EIR, with the implementation of MM HYD-1, impacts associated with altering drainage patterns and the potential for flooding would be less than significant. Changes to the project design do not contribute new or substantially greater impacts related to the potential for flooding.

4.1.6 Land Use Planning

The project could conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project

Impacts associated with conflicting with an applicable land use plan, policy, or regulation were analyzed in Section 3.07 of the EIR. It was concluded that the proposed project would not conflict with the San Bernardino County General Plan, Lake Arrowhead Community Plan, or the San Bernardino County Development Code. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be identical to that identified in the EIR because the project area and applicable land use plans and policies would be identical. Therefore, the potential for the updated project design to conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project would be consistent with the conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to the potential for the project to conflict with any applicable land use plan, policy, or regulation.

Construction of the project could preclude an existing or permitted land use, or create a disturbance that would diminish the function of a particular land use

Impacts associated with diminishing function of surrounding land uses during construction were analyzed in Section 3.07 of the EIR. It was concluded that construction would result in temporary nuisances to the surrounding land uses, which would include increased noise levels and traffic disturbances. The impacts associated with these issues are analyzed in detail in EIR Sections 3.8 (Noise) and 3.10 (Traffic and Transportation), respectively. Mitigation measures for these impacts include the following: MM N-1 (Construction Noise Complaint Response), MM TRA-1 (Prepare a construction area traffic control plan or

detour plan), and MM TRA-2 (Notify affected property owners and tenants). These measures require a mechanism for the public to notify the District about disruptive noise, implementation of a traffic control plan to ensure the project does not present safety hazards along affected roadways, and notification to affected parties regarding scheduling and duration of haul truck activity.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be identical to that identified in the EIR because nuisance impacts during construction would be similar and the affected population adjacent to the project area that could be impacted would not be changed. Consistent with the conclusions in the EIR, with the implementation of MM NOI-1, MM TRA-1, and MM TRA-2, impacts associated with temporary disturbances to adjacent land uses during construction would be less than significant. Changes to the project design do not contribute new or substantially greater impacts related to temporary disturbances to adjacent land uses.

Operation and maintenance of the project could preclude an existing or permitted land use, or create a disturbance that would diminish the function of a particular land use

Impacts associated with diminishing function of surrounding land uses during operation were analyzed in Section 3.07 of the EIR. It was concluded that maintenance activities may include quarterly cleaning of storm drains and intake facilities, which would be temporary and would not result in long-term conflicts with surrounding land uses. Operational impacts associated with increasing the size of the impact/disturbance area and installing a concrete apron would be similar to that identified in the EIR because the overall maintenance of the project would be similar. While the greater impact area could result in slightly increasing the duration of maintenance, the project's potential for disrupting adjacent land uses would be consistent with the conclusions in the EIR, with impacts being less than significant. Changes to the project design do not contribute new or substantially greater impacts related to long-term disturbances to adjacent land uses.

4.1.7 Noise

Noise from construction or maintenance activities would occur outside of the hours allowed by the County of San Bernardino Development Code

Impacts associated with temporary noise occurring outside allowable hours were analyzed in Section 3.08 of the EIR. It was concluded that construction noise would occur during the allowable hours and days per Section 83.01.080(g) of the County Development Code. Construction noise would be consistent with the San Bernardino County Development Code and all applicable noise performance standards.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be identical to that identified in the EIR because the hours and days of the week that construction would occur are identical. While the total duration of construction may be slightly longer, consistent with the conclusions in the EIR, no impact associated with temporary noise occurring outside allowable hours of the County of San Bernardino Development Code would occur. Changes to the project design do not contribute new or substantially greater impacts related to the hours and days of the week when temporary construction activities would occur.

Noise from construction activities would result in a temporary increase (more than 5 dBA Leq) over the lowest hourly ambient levels at sensitive receptors

Impacts associated with construction noise resulting in a significant temporary increase over ambient noise levels were analyzed in Section 3.08 of the EIR. It was concluded that use of construction equipment proximate to nearby residential receptors would temporarily exceed ambient noise conditions by 5 dBA or greater during the work day. While all noise generated during construction of the proposed project is exempt from any performance standard per Section 83.01.080(g) of the County Development Code, Mitigation Measures N-1 (Construction Noise Complaint Response) is proposed to ensure the County investigates any public complaints about excessive construction noise.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be identical to that identified in the EIR because the construction equipment used and generated noise would be identical. While the overall total duration of construction may be slightly longer, the maximum generated sound levels would be the same. Consistent with the conclusions in the EIR, with the implementation of MM N-1, impacts associated with temporary noise increases during construction would be less than significant. Changes to the project design do not contribute new or substantially greater impacts related to temporary sound levels generated during construction.

4.1.8 Public Services

Construction, operation, and maintenance of the proposed project would place a demand on public services that would adversely affect the maintenance of acceptable service ratios, response times, or other performance objectives

Impacts associated with increased demand on public services were analyzed in Section 3.09 of the EIR. It was concluded that public services in the project area are already accustomed to a large seasonal variation in population because many of the residences in the area are not occupied full-time. This would accommodate any temporary worker in-migration to the area during construction. The greatest project demand on public services would be for fire protection services during construction. However, the increased risk of wildfire due to construction activities would be minor compared to baseline conditions.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be identical to that identified in the EIR because the number of construction workers and the overall construction activities that would occur are identical. While the total duration of construction may be slightly longer, consistent with the conclusions in the EIR, impacts associated with temporary increases in public services demands would be less than significant. Changes to the project design do not contribute new or substantially greater impacts related to public service ratios, response times, or other performance objectives.

4.1.9 Traffic and Transportation

Construction of the proposed project would conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel

Impacts associated with construction affecting performance of the circulation system were analyzed in Section 3.10 of the EIR. It was concluded that worst-case peak hour and daily truck traffic volumes are minor compared to the existing traffic volumes on the study area roadway network and the roadway

capacities. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be similar to that identified in the EIR. While this increase in construction may slightly increase the number of peak daily trips, consistent with the conclusions in the EIR, impacts associated with temporary trips would be less than significant as peak daily trips would continue to be minor compared to the existing traffic volumes on the study area roadway network and the roadway capacities.

Construction activities would potentially result in temporary lane blockages within the rights-of-way of the roadway segments where trenching would be used to install the pipeline/culvert links. Depending on the lateral placement of the pipeline/culvert within the roadway, this blockage would displace one travel lane, parts of two travel lanes, the parking/shoulder area, or the parking/shoulder area and part of the adjacent travel lane. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be similar to that identified in the EIR because the same roadways would be impacted by temporary lane disruptions. Consistent with the conclusions in the EIR, with the implementation of MM TRA-1 (Prepare a construction area traffic control plan or detour plan), MM TRA-2 (Notify affected property owners and tenants), and MM TRA-3 (Coordinate with MARTA), impacts associated with temporary lane closures would be less than significant. Changes to the project design do not contribute new or substantially greater impacts related to performance of the circulation system.

Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the County congestion management agency for designated roads or highways

Impacts associated with trips conflicting with an applicable congestion management plan were analyzed in Section 3.10 of the EIR. It was concluded that the project would not generate trip volumes that could conflict with an applicable congestion management program or level of service standard established by the congestion management agency. While project design changes may slightly increase the number of peak daily trips, consistent with the conclusions in the EIR, impacts associated with temporary trips would be less than significant as peak daily trips would continue to be minor compared to the existing traffic volumes on the study area roadway network and the roadway capacities. Changes to the project design do not contribute new or substantially greater impacts related to conflicting with an applicable congestion management plan.

Construction of the proposed project would substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)

Impacts associated with construction substantially increasing roadway hazards were analyzed in Section 3.10 of the EIR. It was concluded that construction of the proposed pipelines/culverts and other project components within the public right-of-way would potentially result in increased hazards to motorists, bicyclists, transit users, and pedestrians because the construction activities would occur within the travel lanes and shoulders of various roadways. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be similar to that identified in the EIR because the same roadways would be impacted by temporary lane disruptions. Consistent with the conclusions in the EIR, with the implementation of MM TRA-1, MM TRA-2, and MM TRA-3, impacts associated with temporary lane closures would be less than significant. Changes to the project design do not contribute new or substantially greater impacts related to increasing roadway hazards.

Construction of the proposed project would result in inadequate emergency access

Impacts associated with construction affecting emergency access were analyzed in Section 3.10 of the EIR. It was concluded that construction activities within the public right-of-way could increase the response times for emergency vehicles (police, fire, and ambulance/paramedic units) and block or disrupt access to adjacent properties. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be similar to that identified in the EIR because the same roadways would be impacted by temporary lane disruptions. Consistent with the conclusions in the EIR, with the implementation of MM TRA-1 and MM TRA-4 (Coordinate with emergency service providers), impacts associated with temporary lane closures would be less than significant. Changes to the project design do not contribute new or substantially greater impacts related to emergency access.

Construction of the proposed project would conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities

Impacts associated with construction conflicting with adopted programs related to alternative modes of transportation were analyzed in Section 3.10 of the EIR. It was concluded that the project could potentially result in disrupted public transit service, including schedule delays and blocked bus stops, as the construction activities would occur at locations that are adjacent to MARTA bus routes on SR-18. In addition, the project could potentially block or disrupt the movement of pedestrians and bicycles adjacent to a construction zone.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be similar to that identified in the EIR because the same roadways would be impacted by temporary lane disruptions. Consistent with the conclusions in the EIR, with the implementation of MM TRA-1 and MM TRA-3, impacts associated with temporary lane closures would be less than significant. Changes to the project design do not contribute new or substantially greater impacts related to adopted programs and performance of alternative modes of transportation.

Operation of the proposed project would conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel

Impacts associated with construction affecting performance of the circulation system were analyzed in Section 3.10 of the EIR. It was concluded that worst-case peak hour and daily truck traffic volumes are minor compared to the existing traffic volumes on the study area roadway network and the roadway capacities. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would be similar to that identified in the EIR. While this increase in construction may slightly increase the number of peak daily trips, consistent with the conclusions in the EIR, impacts associated with temporary trips would be less than significant as peak daily trips would continue to be minor compared to the existing traffic volumes on the study area roadway network and the roadway capacities. Changes to the project design do not contribute new or substantially greater impacts related to performance of the circulation system.

4.1.10 Cumulative Impacts

Section 5.0, Cumulative Impact Analysis, of the EIR evaluated the potential for cumulative effects on the environment from implementation of the proposed project. Cumulative impacts refer to the potential for

the project's impacts to combine with similar impacts of past, present, or reasonably foreseeable future projects. The EIR concluded that the proposed project would make a significant contribution to cumulative impacts to air quality (NOx emissions during construction). For all other issue areas analyzed in the EIR, the project was determined to have a relatively minor contribution to cumulative impacts given that the project's adverse impacts are short-term in nature, and because mitigation measures presented in the EIR would effectively reduce these adverse impacts. Thus, the conclusions of the cumulative impact analysis remain valid. An adverse cumulative impact is most likely to occur if another construction project is ongoing at the same time as project construction and is in close enough proximity to result in combined impacts. Elements of the project design update would occur concurrently with construction of the project. Therefore, all of the project's identified contributions to cumulative impacts, as evaluated fully in the EIR, are specifically applicable to the updated project design.

4.2 Other Potential Environmental Impacts

An Initial Study was prepared in 2015 to determine the scope of issues to be addressed in the EIR for the project. As it was anticipated that the proposed project would result in significant impacts to the environment, the District determined that preparation of an EIR was necessary to analyze the impacts associated with the project in accordance with the requirements of CEQA.

4.2.1 Aesthetics

Aesthetics was analyzed in detail as part of the Initial Study for the Rimforest Stormdrain Project (included as Appendix 1 of the EIR). The analysis determined that potential impacts on aesthetics associated with the construction and operation of the project did not rise to the level of significance requiring analysis within the EIR. Residential and commercial development is present along the proposed project site where the channel and pipeline would be constructed; therefore, the proposed project would not substantially degrade the visual quality and surroundings in this developed area. Construction of the retarding basins would require excavation, trenching, and the removal of trees, which would alter or degrade the existing visual character of the proposed project site. However, the proposed project would also include landscape buffers along the slopes of the retarding basins, which would avoid substantial degradation of visual character of the site.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would not contribute new or substantially greater impacts related to aesthetics compared to the project design analyzed in the Initial Study. Therefore, the conclusions of the Initial Study related to aesthetics remain valid and no further analysis is warranted.

4.2.2 Agriculture and Forestry Resources

Aesthetics was analyzed in detail as part of the Initial Study for the project (included as Appendix 1 of the EIR). The analysis determined that potential impacts on agriculture and forestry resources associated with the construction and operation of the project did not rise to the level of significance requiring analysis within the EIR. The project site is not located on land that is zoned for agricultural use, forest land, or timberland. Construction of the channel and pipeline would primarily occur along SR-18 in an area that is predominantly characterized by residential and commercial development. Therefore, these components of the proposed project would not convert forest land to a non-forest use. However, construction of the retarding basins would occur on up to ten acres of an undeveloped site located within an existing drainage channel that is surrounded by coniferous forest land. The removal of trees and vegetation would be

required for construction; however, the retarding basins would be designed for minimal tree removal. In addition, the conversion of up to 10 acres of forest land to open space for the purposes of flood control would not be a significant loss of forest land.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would not contribute new or substantially greater impacts related to aesthetics compared to the project design analyzed in the Initial Study. While the increase in impact/disturbance area would increase the amount of land impacted, the project would continue to not result in a significant loss of forest land. Newly affected lands are also not zoned or utilized for agriculture or timber production. Therefore, the conclusions of the Initial Study related to agriculture and forestry resources remain valid and no further analysis is warranted.

4.2.3 Hazards and Hazardous Materials

Hazards and hazardous materials were analyzed in detail as part of the Initial Study for the project (included as Appendix 1 of the EIR). The analysis determined that potential impacts on the environment associated with hazards and hazardous materials during construction and operation of the project did not rise to the level of significance requiring analysis within the EIR. The use of such materials for the operation of vehicles and equipment would occur under standard BMPs to avoid accidental spill(s) or leak(s) and would not create a hazard to the public or the environment. Therefore, the proposed project would not introduce significant potential for hazard to the public or the environment associated with accidental spill(s) or leak(s) of hazardous materials, including through reasonably foreseeable upset and accident conditions. Additionally, the proposed project would be constructed in accordance with standard safety measures and would not introduce a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would not contribute new or substantially greater impacts related to hazards or hazardous materials compared to the project design analyzed in the Initial Study. While the overall construction duration may be slightly increased, there would be no increased risk associated with accidental spills or leaks of hazardous materials. Therefore, the conclusions of the Initial Study related to hazards and hazardous materials remain valid and no further analysis is warranted.

4.2.4 Mineral Resources

Mineral resources were analyzed in detail as part of the Initial Study for the project (included as Appendix 1 of the EIR). The analysis determined that potential impacts to mineral resources during construction and operation of the project did not rise to the level of significance requiring analysis within the EIR. There are no active mineral sites within the affected area, and consequently construction and operation of the proposed project would not result in the loss of availability of mineral resources. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would not contribute new or substantially greater impacts related to mineral resources compared to the project design analyzed in the Initial Study. While the overall acreage of disturbed lands would be increased, there would be no increased risk associated with loss of availability of mineral resources. Therefore, the conclusions of the Initial Study related to mineral resources remain valid and no further analysis is warranted.

4.2.5 Paleontological Resources

Effects on paleontological resources were analyzed in detail as part of the Initial Study for the project (included as Appendix 1 of the EIR). The analysis determined that the colluvial and alluvial deposits and colluvial soils have low sensitivity based on their relative youthful age and/or their high-energy depositional history and are unlikely to produce important fossil remains. The granitic bedrock has zero sensitivity; zero sensitivity is assigned to crystalline rocks because they have no potential for producing fossil remains. The geologic units in the proposed project area have low to zero sensitivity, therefore there is a less than significant potential to damage or destroy paleontological resources. The project changes do not include additional areas that may be of paleontological sensitivity. All areas of Rimforest have a very low paleontological sensitivity rating. As such, the updated design would not increase areas sensitive to paleontological resources and there would be no new or increased impacts. Therefore, the conclusions of the Initial Study related to paleontological resources remain valid and no further analysis is warranted.

4.2.6 Population and Housing

Population and housing effects were analyzed in detail as part of the Initial Study for the project (included as Appendix 1 of the EIR). The analysis determined that potential impacts to population and housing during construction and operation of the project did not rise to the level of significance requiring analysis within the EIR. Construction would be short-term and temporary, and construction personnel would reside either in the County or in the vicinity of the County. The proposed project would not result in the creation of new permanent jobs and there would not be a need for new housing. There is no existing housing within the project site. Therefore, the proposed project would not result in the displacement of people. Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would not contribute new or substantially greater impacts related to population and housing compared to the project design analyzed in the Initial Study. The updated design would not increase the construction or operational workforce and would not require the displacement of any housing or persons. Therefore, the conclusions of the Initial Study related to population and housing remain valid and no further analysis is warranted.

4.2.7 Recreation

Recreational resources were analyzed in detail as part of the Initial Study for the project (included as Appendix 1 of the EIR). The analysis determined that potential impacts to recreation during construction and operation of the project did not rise to the level of significance requiring analysis within the EIR. The proposed project is not expected to induce either short-term or long-term population growth, either during project construction or operation. As such, there would be no impact to recreational facilities because there would be no increased need for recreational resources. The updated design would not increase the construction or operational workforce. Therefore, the conclusions of the Initial Study related to recreation remain valid and no further analysis is warranted.

4.2.8 Utilities and Service Systems

Utilities and service systems were analyzed in detail as part of the Initial Study for the project (included as Appendix 1 of the EIR). The analysis determined that potential impacts on the environment associated with utilities and service systems during construction and operation of the project did not rise to the level of significance requiring analysis within the EIR. During construction of the proposed project, wastewater would be contained within portable toilet facilities and disposed of at an approved site. Water would be used during construction for dust control and would be obtained using existing fire hydrants in the

community of Rimforest. Operation of the project is not expected to generate wastewater or require the use of water. As such, sufficient water supplies are available to serve the proposed project from existing entitlements and resources, and no new or expanded water entitlements would be required. The proposed project is designed to accommodate existing and projected stormwater flows and would not require the construction of additional new or expanded stormwater facilities. All solid waste generated would be transferred to an appropriately permitted landfill in Redlands, Colton, or Rialto, each of which have sufficient throughput and capacity to accommodate waste generated by the proposed project.

Impacts associated with increasing the size of the impact/disturbance area, installing a concrete apron, and installation of temporary pavement along Highway 18 would not contribute new or substantially greater impacts related to utilities and service systems compared to the project design analyzed in the Initial Study. While the overall scope of construction would be slightly increased, requiring slightly more water use for dust suppression and slightly more solid waste generated, these increases would not contribute new or substantially greater impacts related to the capacities of the affected utilities. Therefore, the conclusions of the Initial Study related to utilities and service systems remain valid and no further analysis is warranted.

4.3 Conclusion (pursuant to CEQA Guidelines §15162(a)(1))

As demonstrated above, the new design for the project is not a substantial change in the original project design and would not result in any new significant impacts or substantially increase the magnitude of any significant impacts identified in the Final EIR, and no new mitigation would be required. However, a modification to an existing mitigation measure for Biological Resources is required. The modification does not change the severity of the impact and no new significant impacts would result from this modification. The approval of the design changes to the project would not trigger any of the conditions set forth in CEQA Guidelines Section 15162(a)(1).

5. Environmental Evaluation (pursuant to CEQA Guidelines §15162(a)(2))

Have substantial changes occurred with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects (CEQA Guidelines §15164)?

Conclusion: No

Analysis: Circumstances for the Rimforest Storm Drain Project have not changed substantially since the certification of the Final EIR, as detailed below.

5.1 Project Circumstances as Analyzed in the Final EIR

The impact summaries presented in Section 4 show that circumstances have not changed for the Rimforest Storm Drain Project such that new or substantially greater impacts would occur.

5.2 Conclusion (pursuant to CEQA Guidelines §15162(a)(2)

As documented in Section 4 above, no substantial changes in circumstances have occurred since the certification of the Final EIR. Therefore, the approval of the design changes to and the design details for the project would not trigger any of the conditions set forth in CEQA Guidelines Section 15162(a)(2)).

6. Environmental Evaluation (pursuant to CEQA Guidelines §15162(a)(3)

Does new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, show any of the following:

a. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

b. Significant effects previously examined will be substantially more severe than shown in the previous EIR;

c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative (CEQA Guidelines §15164)?

Conclusion: No

Analysis: No new information of substantial importance has become known since the certification of the Final EIR, as detailed below. The approval of the design changes to and the design details for the project would not have any new or substantially more severe significant impacts, and no new mitigation or alternatives are warranted.

6.1 New Information of Substantial Importance

As shown in Section 4, no new information of substantial importance has been received since the certification of the Final EIR.

6.2 Additional Environmental Topics in Updated CEQA Checklist

Two new environmental topics were recently added (2019) to Appendix G (CEQA Checklist) of the CEQA Guidelines. These topics include Energy and Wildfire. Although these two topics were not analyzed in the EIR, the design changes for the project are would not be expected to cause any increase in potential impact to energy or wildfire.

6.3 Conclusion (pursuant to CEQA Guidelines §15162(a)(3)

As documented in Section 4 above, no new information has become known, and no new mitigation or alternatives are warranted. Therefore, the approval of the design changes to and the design details as well as the related minor modification to an existing mitigation measure, for the project do not trigger any of the conditions set forth in CEQA Guidelines Section 15162(a)(3).

7. Conclusion

Based on the above analysis, the approval of the design changes to and the design details for the project and the related minor modification of an existing mitigation measure, would not trigger any of the conditions requiring a subsequent or supplemental EIR set forth in CEQA Guidelines Sections 15162(a)(1) through (a)(3). As such, use of an Addendum is appropriate pursuant to CEQA Guidelines Section 15164.

8. Finding

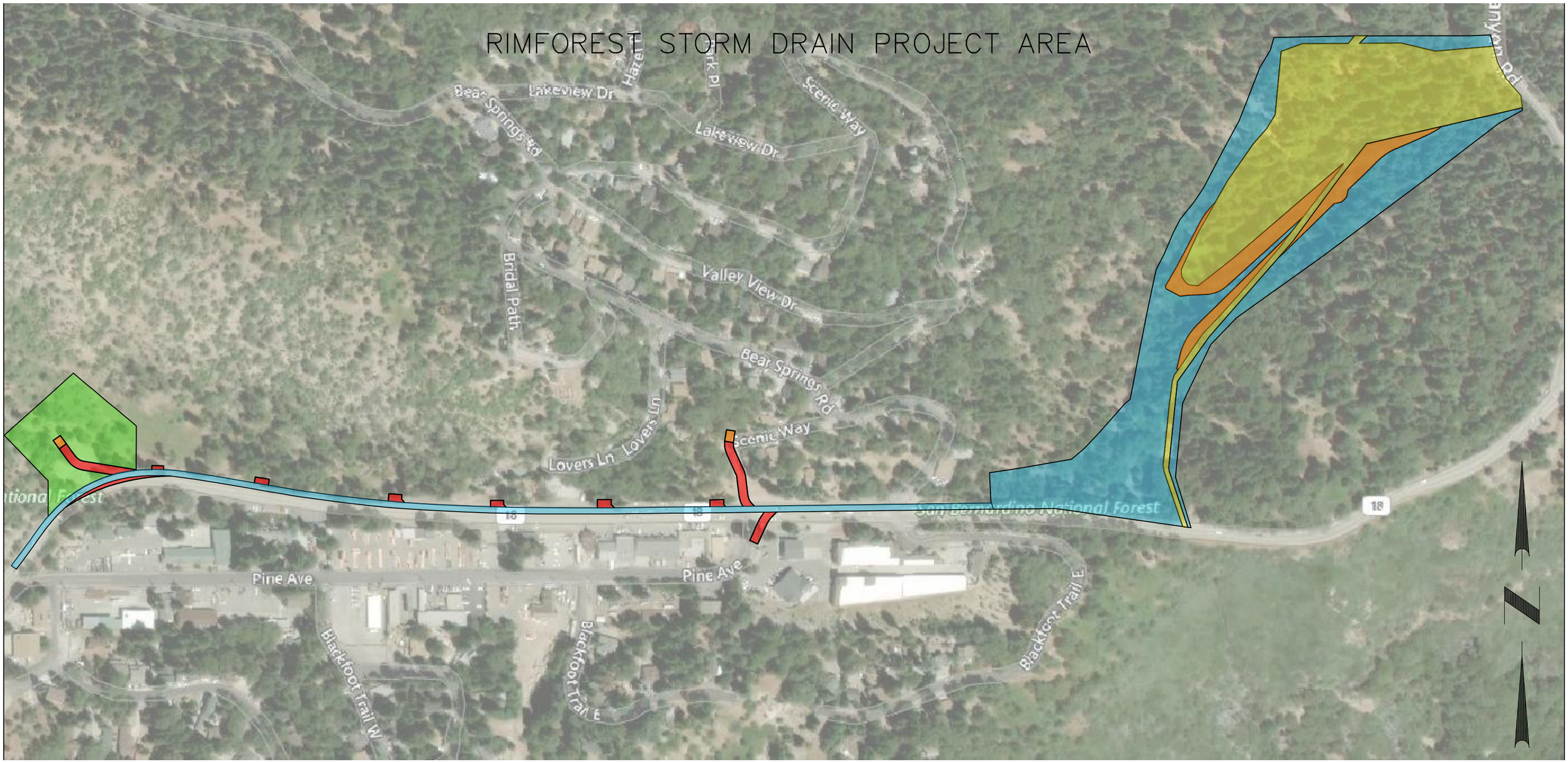
No subsequent or supplemental EIR is necessary for the approval of the design changes to and the design details for the Rimforest Storm Drain Project.

Nancy Sansonetti, AICP, Senior Planner
San Bernardino County Flood Control District

05.28.19
Date

Attachment 1 – Figure 1

RIMFOREST STORM DRAIN PROJECT AREA



NEW PERMANENT IMPACT AREA

NEW TEMPORARY DISTURBANCE AREA

PREVIOUS PERMANENT IMPACT AREA

PREVIOUS TEMPORARY GRADING AREA

PREVIOUS TEMPORARY DISTURBANCE AREA

	PREVIOUS TOTAL AREA (ACRES)	ADDED AREA(ACRES)	SUBTRACTED AREA(ACRES)	NEW TOTAL AREA (ACRES)
PERMANENT IMPACT AREA	5.27	1.04	N/A	6.31
TEMPORARY DISTURBANCE AREA	7.98	0.37	1.01	7.34

Figure 1
Changes to Project Design

GRAPHIC SCALE 1”=250’

250 0 250 500

Exhibit E

From: Gayman, Johnny - DPW <Johnny.Gayman@dpw.sbcounty.gov>
Sent: Tuesday, May 5, 2020 4:02 PM
To: Drake, David - DPW <David.Drake@dpw.sbcounty.gov>
Subject: FW: Rimforest - SD realignment concept

Dave, are you going to want to make a comment on this or should I just get back to AECOM without your input?

SAN BERNARDINO COUNTY

@SBCoPublicWorks

JOHNNY D. GAYMAN, P.E.
Department of Public Works
Flood Control Engineering Division
Supervising Engineer
Phone: 909.387.7965 | Fax: 909.387.7911
Johnny.gayman@dpw.sbcounty.gov

Our job is to create a county in which those who reside and invest can prosper and achieve well-being.

From: Gayman, Johnny - DPW
Sent: Monday, May 4, 2020 11:23 AM
To: Chavez, Reyes - DPW ; Drake, David - DPW
Subject: RE: Rimforest - SD realignment concept

Yes, mine is in red. I'm trying to get AECOM to try to match it as best as possible.

SAN BERNARDINO COUNTY

@SBCoPublicWorks

JOHNNY D. GAYMAN, P.E.
Department of Public Works
Flood Control Engineering Division
Supervising Engineer
Phone: 909.387.7965 | Fax: 909.387.7911
Johnny.gayman@dpw.sbcounty.gov

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From: Chavez, Reyes - DPW
Sent: Monday, May 4, 2020 11:22 AM
To: Gayman, Johnny - DPW <Johnny.Gayman@dpw.sbcounty.gov>; Drake, David - DPW <David.Drake@dpw.sbcounty.gov>
Subject: RE: Rimforest - SD realignment concept

JD

Sorry, is your proposed alignment that line in RED, if it is, it is a better overall horizontal alignment and AECOM should try to match as closely as possible..

Sal Chavez, PE
Supervising Engineer
Operations Support Division
Department of Public Works
Phone: 909-387-7941
Cell: 951-204-8073
Fax: 909-387-1858
825 East Third Street, Room 108
San Bernardino, CA, 92415-0835

From: Gayman, Johnny - DPW <Johnny.Gayman@dpw.sbcounty.gov>
Sent: Monday, May 4, 2020 11:17 AM
To: Chavez, Reyes - DPW <Reyes.Chavez@dpw.sbcounty.gov>; Drake, David - DPW <David.Drake@dpw.sbcounty.gov>
Subject: RE: Rimforest - SD realignment concept

Maybe I should give you more information.

We already have the TCE. Initially the SD was designed so it ran right down the middle. Then we discovered the spring so we needed to realign the SD. Vertical profile is not a huge concern. Management did not want to go back and revise the TCE, so the goal is to make the old TCE work. And technically, we have a TCE for this whole parcel if we need it to construct the SD. The Easement lines shown on the plans is just what the SD needs to lie within once it is constructed.

My thoughts with the redlines I drew in was to try to get the SD more centered while avoiding the sewer manhole. My alignment has smaller radius. AECOM wants to avoid the spring which I can see their point. But there is no telling if the location of the spring that is shown on the plans is where we say it is, this is only the location it comes out of the ground at. The spring can be crossing the pipe, we don't know until we dig it up.

So the question really is, do we like their alignment or do you want to push for my alignment. Or if you have a better suggestion on the alignment.

Drake, still waiting for your input.

JOHNNY D. GAYMAN, P.E.
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Johnny.gayman@dpw.sbcounty.gov

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From: Chavez, Reyes - DPW
Sent: Monday, May 4, 2020 11:07 AM
To: Gayman, Johnny - DPW <Johnny.Gayman@dpw.sbcounty.gov>; Drake, David - DPW <David.Drake@dpw.sbcounty.gov>
Subject: RE: Rimforest - SD realignment concept

Hi JD

Sorry for the late response, the horizontal alignment looks fine, but we need to correlate with the vertical alignment once it is prepared. The only comment I have is that Temporary Construction Easements (TCE) will be required, see attached comments in **Green**.

Sal Chavez, PE
Supervising Engineer
Operations Support Division
Department of Public Works
Phone: 909-387-7941
Cell: 951-204-8073
Fax: 909-387-1858
825 East Third Street, Room 108
San Bernardino, CA, 92415-0835

From: Gayman, Johnny - DPW <Johnny.Gayman@dpw.sbcounty.gov>
Sent: Monday, May 4, 2020 7:42 AM
To: Drake, David - DPW <David.Drake@dpw.sbcounty.gov>; Chavez, Reyes - DPW <Reyes.Chavez@dpw.sbcounty.gov>
Subject: FW: Rimforest - SD realignment concept

How do you guys feel about the alignment? Any suggestions?

JOHNNY D. GAYMAN, P.E.
Department of Public Works
Flood Control Engineering Division
Supervising Engineer
Phone: 909.387.7965 | Fax: 909.387.7911
Johnny.gayman@dpw.sbcounty.gov

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@SBCoPublicWorks

From: Andersen, Michael <Michael.Andersen2@aecom.com>
Sent: Thursday, April 30, 2020 4:06 PM
To: Gayman, Johnny - DPW <Johnny.Gayman@dpw.sbcounty.gov>; Chavez, Reyes - DPW <Reyes.Chavez@dpw.sbcounty.gov>
Cc: Smith, Brian <Brian.Smith3@aecom.com>
Subject: RE: Rimforest - SD realignment concept

Johnny,

The SD alignment will be shifted closer to the center of the easement as shown near Hwy 18.
We wanted to double check on the proximity to the ex SWR MH that is to be protected in place. The SD is approx 20' underground adjacent to it and at about the same location as the approved SWR plans show it (2.5' farther away). The current outside horizontal separation is approx 14'. This could be reduced if the District is comfortable with it.

The SD is shown outside of the spring buffer zone but it is anticipated that the trench walls will extend into it. How far will be determined by the contractor.
We view the spring as a risk from a design perspective and for contractor safety and would prefer the SD were farther away from it as the underground flow direction of the spring water is unknown. The SD curve radii are trying to be kept at a maximum because the stormwater velocity is very high, 35 ft/s in this reach, and debris is expected in the SD. If the full width of the easement could be used to approach the spring it would be preferred.

Thank you,

Michael Andersen, PE.
M +1-707-227-8806

AECOM
Ontario, CA, USA
aecom.com

From: Gayman, Johnny - DPW <Johnny.Gayman@dpw.sbcounty.gov>
Sent: Thursday, April 30, 2020 11:42 AM
To: Andersen, Michael <Michael.Andersen2@aecom.com>; Chavez, Reyes - DPW <Reyes.Chavez@dpw.sbcounty.gov>
Cc: Smith, Brian <Brian.Smith3@aecom.com>
Subject: [EXTERNAL] RE: Rimforest - SD realignment concept

Hi Michael.

Are you trying to stay completely out of the spring area? My Planners are telling me we can encroach somewhat if we want, we just need to replant the natural vegetation. Also, the alignment near Hwy 18 seems pushed further out than it needs to be. See my revised alignment, can't we make something like this work? What is the minimum radius you guys are comfortable with?

SAN BERNARDINO COUNTY

JOHNNY D. GAYMAN, P.E.
Department of Public Works
Flood Control Engineering Division
Supervising Engineer
Phone: 909.387.7965 | Fax: 909.387.7911
Johnny.gayman@dpw.sbcounty.gov

@SBCoPublicWorks

Our job is to create a county in which those who reside and invest can prosper and achieve well-being.

From: Andersen, Michael <Michael.Andersen2@aecom.com>
Sent: Thursday, April 30, 2020 10:44 AM
To: Gayman, Johnny - DPW <Johnny.Gayman@dpw.sbcounty.gov>; Chavez, Reyes - DPW <Reyes.Chavez@dpw.sbcounty.gov>
Cc: Smith, Brian <Brian.Smith3@aecom.com>
Subject: Rimforest - SD realignment concept

Johnny,

See attached proposed Rimforest SD realignment concept. Please review.

To get an alignment bearing to stay outside the Spring buffer zone and enter the SD easement, the SD was shifted to the west side of the SD easement.
The ex SWR MH that the proposed SWR improvements tie into is within the SD easement, therefore the SD was then shifted to the east side of the SD easement.

If the District approves, we will proceed with updating the SD profiles and Drainage Report hydraulic calculations for this update.

Thank you,

Michael Andersen, PE
Project Engineer, Transportation Group
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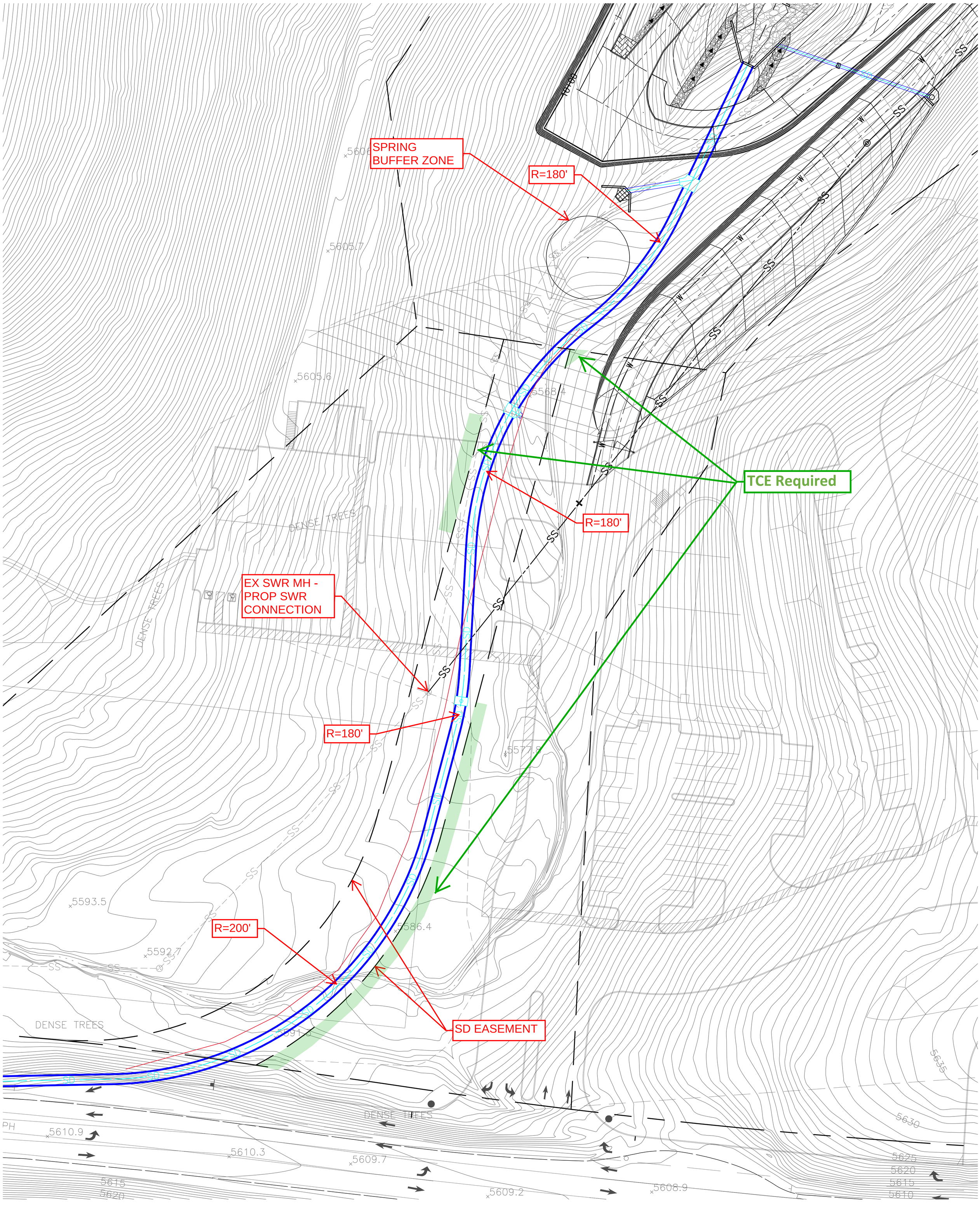
Exhibit F



RIMFOREST
SD - REALIGNMENT
CONCEPT
4-30-2020

Exhibit G

Letter No. B6

California Natural Resources Agency
DEPARTMENT OF FISH AND GAME
http://www.dfg.ca.gov
Inland Deserts Region
3602 Inland Empire Blvd., Suite C-200
Ontario, CA 91764
(909) 484-0167

ARNOLD SCHWARZENEGGER, Governor
JOHN MCCAMMAN, Director

June 2, 2010

Mr. Matthew Slowik
Land Use Services Dept.
San Bernardino County
385 North Arrowhead Avenue, 1st Floor
San Bernardino, CA 92415-0182

Re: Draft Environmental Impact Report for Church of the Woods Project
SCH No. 2004031114

Dear Mr. Slowik:

The Department of Fish and Game (Department) appreciates this opportunity to comment on the Draft Environmental Impact Report (DEIR) for the Church of the Woods project. The Department is responding as a Trustee Agency for fish and wildlife resources [Fish and Game Code sections 711.7 and 1802 and the California Environmental Quality Act Guidelines (CEQA) section 15386] and as a Responsible Agency regarding any discretionary actions (CEQA Guidelines section 15381), such as a Lake and Streambed Alteration Agreement (Section 1600 *et seq.*) or a California Endangered Species Incidental Take Permit (Fish and Game Code Sections 2080 and 2080.1). As a Responsible Agency the Department will be obligated to consult the Final Environmental Impact Report (FEIR) in order to prepare a Lake and Streambed Alteration Agreement or a California Endangered Species Incidental Take Permit. If the FEIR fails to identify and adequately mitigate all of the impacts of the proposed project and any alternatives, the project proponents will be required to reinitiate the CEQA process at their expense, or fund another CEQA process under the direction of the Department to identify and adequately mitigate all impacts associated with any Department discretionary actions **B6-1**

The site is located on 37 acres in the Big Bear Lake area, with vacant land to the north, State Route 18 (SR-18) to the south, State Route 189 (SR-189) to the east and single family development to the west. As proposed, the project would occur on 23 of the 37 acres in three phases. At build out the project would consist of a skateboard park, a 27,364 sq. ft. assembly building, a baseball field, soccer fields, a 41,037 sq. ft. auditorium, a 2,500 sq. ft. caretaker building, a 3,073 sq. ft. chapel and a 23,510 sq. ft. church. The project also includes two open space parcels. **B6-2**

Recommendations
The Department recommends that the Lead Agency address the recommendations listed below and provide a response in the FEIR: **B6-3**

Conserving California's Wildlife Since 1870

Draft Environmental Impact Report Church of the Woods
County of San Bernardino SCH 2004031114
Page 2 of 8

1. The Applicant shall notify the Department if southern rubber boa (*Charina bottae umbratica*) and/or San Bernardino flying squirrel (*Glaucomys sabrinus californicus*) are found within the project site;

2. A qualified biologist shall conduct pre-construction surveys for both southern rubber boa and San Bernardino flying squirrel prior to initiation of any project activities.

B6-3 Cont'd

3. The Applicant shall apply for a California Endangered Species Act Incidental Take Permit (CESA Permit) for southern rubber boa and demonstrate that impacts to southern rubber boa are minimized and fully mitigated prior to initiation of any project activities;

B6-4

4. The Applicant shall submit to the Department for review and approval any avoidance, minimization, and mitigation proposals for both the southern rubber boa and San Bernardino flying squirrel;

B6-5

5. The Applicant shall provide an analysis of the potential impacts of the project on the Strawberry Creek Open Space Corridor and provide measures to mitigate these impacts;

B6-6

6. The Applicant shall provide an analysis of the impacts associated with the foreseeable fuel modification requirements associated with protecting the proposed project, and require mitigation for such impacts;

B6-7

7. The Applicant shall provide an analysis of the quantity of riparian vegetation that will be permanently and/or temporarily impacts by the project;

B6-8

8. The Applicant shall provide a hydrological analysis of the proposed project with a focus on how alterations and concentrations of flows from the site will impacts local drainages downstream to Lake Arrowhead; and

B6-9

9. The Applicant shall apply for a Lake or Streambed Alteration Agreement (Agreement) and include an impact analysis of jurisdictional waters within and adjacent to the project site, as well as provide avoidance, minimization, and mitigation measures for any potential impacts.

B6-10

The Department is particularly concerned about the following species and environmental issues: southern rubber boa, San Bernardino flying squirrel, State jurisdictional waters within the project site, potential project impacts on the Strawberry Creek Open Space Corridor, and the magnitude and intensity of development project proposed at the site.

B6-11

Biological Resources

Biological Resources Assessments completed for the project site include the following: a general assessment from 2001; plant surveys from 2002 and 2003; focused surveys for southern rubber boa from 2002; a habitat assessment for southern rubber boa in 2007; surveys for the California spotted owl (*Strix occidentalis*) from 2003, 2004, 2005, and 2007; a survey for white-eared pocket mouse (*Perognathus alticolus*) from 2003, with reconnaissance surveys in 2005 and 2006; and surveys for San Bernardino flying squirrel from 2007. Ninety-five percent of the habitat within the project site is ponderosa

B6-12

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pine forest. A State jurisdictional stream, vegetated with arroyo willow, flows through the center of the project site. In addition the project site is immediately adjacent to the Strawberry Creek Open Space Corridor. A jurisdictional delineation was conducted in 2005 and indicated there were 3,475 linear feet of stream and 0.22 acres of State jurisdictional waters on site. These surveys and reports are more than two years old and thus may not accurately reflect the biological resources on the project site, or the site's suitability to provide habitat for various species. The Department recommends that all biological surveys and the jurisdictional delineation be updated and that the results are included in the FEIR.

B6-12 Cont'd

The DEIR states that project impacts to State-listed species of special concern are not significant because these species are not listed as threatened or endangered. The biological surveys and assessments listed above indicate that the project site is used by several species of special concern, including the California spotted owl, San Bernardino flying squirrel, ring-neck snake (*Diadophys punctatus*), California mountain kingsnake (*Lampropeltis zonata parvirubra*), Cooper's hawk (*Accipiter cooperii*), sharp shinned hawk (*Accipiter striatus*), northern goshawk (*Accipiter gentilis*), merlin (*Falco columbarius*), yellow warbler (*Dendroica petechia brewsteri*), pallid bat (*Antrozous pallidus*), Townsend's western big-eared bat (*Plecotus townsendii*), spotted bat (*Euderma maculatum*), California mastiff bat (*Eumops perotis),* and big free-tailed bat (*Nyctinomops macrotis*). The Department believes that avoidance, minimization, and mitigation measures are required not only for threatened and endangered species, but species of special concern as well, particularly when the entire project site will be rendered unsuitable for sensitive native species due the level and intensity of development for this project.

B6-13

The project has the potential to have significant environmental impacts on sensitive flora and fauna resources, including a State-listed threatened species. Therefore, critical aspects of the FEIR should include an alternatives analysis which focuses on environmental resources and in-kind mitigation measures for impacts identified as significant. To enable Department staff to adequately review and comment on the proposed project, we suggest that updated biological studies be conducted prior to any environmental or discretionary approvals. The following information should be included in any focused biological report or supplemental environmental report:

B6-14

1. A complete assessment of the flora and fauna within and adjacent to the project site, with particular emphasis upon identifying endangered, threatened, and locally unique species and sensitive habitats.

B6-15

   a. A thorough assessment of rare plants and rare natural communities, following the Department's November 2009 Guidance for Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. The guidance document can be found at the following website: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/Protocols_for_Surveying_and_Evaluating_Impacts.pdf

   b. A complete assessment of sensitive fish, wildlife, reptile, and amphibian species at the project site. Seasonal variations in species' use of the

B6-16

project area should also be addressed. Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the Department and the U.S. Fish and Wildlife Service. **B6-16 Cont'd**

c. Rare, threatened, and endangered species to be addressed should include all those which meet the California Environmental Quality Act (CEQA) definition (See CEQA Guidelines, 15380) **B6-17**

d The Department's California Natural Diversity Data Base in Sacramento should be contacted at (916) 327-5960 to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code. **B6-18**

Although no southern rubber boa were identified within the project site during previous surveys, the project site is located within the historical habitat of the southern rubber boa. The southern rubber boa was listed as a threatened species by the State of California and a species of special concern by the United States Fish and Wildlife Service and the Forest Service in 1971. The southern rubber boa is endemic to the San Bernardino and San Jacinto Mountains of southern California and prefers moist, montane habitats at elevations between 5,000 to 8,000 feet above sea level. Known tree associations include Jeffrey pine, sugar pine, ponderosa pine, white fir, black oak, and incense cedar, most of which are found on the project site. Southern rubber boa is highly secretive, a burrower, utilizes logs and surface litter or duff for cover, and is nocturnal. Rocks, logs, and a litter/duff layer are important for southern rubber boa because they provide soil moisture, which in turn provides habitat for prey species. The presence of water appears to be critical to the southern rubber boa, as it is frequently observed in association with damp draws near springs, seeps, and streams during the summer months. **B6-19**

Impacts and Mitigation

Section 14(a) of Appendix G of the CEQA Guidelines provides an outline for significant biological impacts. Section (a) asks whether the project will have a substantial adverse effect "...either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species..."

Section (b) asks, in part, whether the project will have a substantial adverse effect on any riparian habitat or other sensitive natural community identified by the California Department of Fish and Game. **B6-20**

The project has the potential to have a substantial adverse effect on the southern rubber boa and its habitat, and will alter the natural drainage pattern of onsite watercourses and fish and wildlife resources dependent upon those watercourses, including but not limited to the southern rubber boa. The entire project site is identified within southern rubber boa maps as habitat, which was confirmed by the DEIR. Southern rubber boa is not compatible with high density development. The presence of southern rubber boa in

human-occupied areas, such as campgrounds, depends upon the density of development, severity of habitat alteration, and proximity of unaltered habitat nearby. B6-20 Cont'd

The "Habitat Management Guide for Southern Rubber Boa on the San Bernardino National Forest" dated 1985 states that southern rubber boa are only able to survive on the fringes of development projects. Factors contributing to the species' decline includes: removal of dead wood and brush for fires, domestic animals, human utilization of stream/riparian areas, and direct human predation. For these reasons, implementation of the proposed project may render the site unsuitable habitat for southern rubber boa. B6-21

To ensure that project impacts are identified and fully mitigated, the Department recommends the FEIR include:

1. A thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts. B6-22

   a. CEQA Guidelines, 15125(a), direct that knowledge of the regional setting is critical to an assessment of environmental impacts and that special emphasis should be placed on resources that are rare or unique to the region. The impacts to southern rubber boa habitat should be thoroughly addressed.

   b. Project impacts should be analyzed relative to their effects on habitats both onsite and offsite. Specifically, this should include nearby public lands, open space, adjacent natural habitats, and riparian ecosystems. Impacts to and maintenance of wildlife corridor/movement areas, including access to undisturbed habitat in adjacent areas, should be fully evaluated. B6-23

   c. The zoning of areas for development projects or other uses that are nearby or adjacent to natural areas may inadvertently contribute to wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the environmental document. B6-24

   d. A cumulative effects analysis should be developed as described under CEQA Guidelines, 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats. B6-25

   e. The document should include an analysis of the effect that the project may have on completion and implementation of regional and/or subregional conservation programs. The Department, through Sections 2800 through 2835 of the Fish and Game Code and the Natural Communities Conservation Planning (NCCP) program, is coordinating with local jurisdictions, landowners, and the Federal Government to preserve local and regional biological diversity. B6-26

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California Endangered Species Act Individual Take Permits and CEQA
The criteria defining the requirements for a CESA Permit are found in Title 14 CCR, Sections 783.4(a) and (b). These sections require that the take is incidental to an otherwise lawful activity; the impacts of the take are minimized and fully mitigated; and the measures to minimize and fully mitigate impacts are roughly proportional to the impact on the species, maintain the applicant's objectives to the greatest degree possible, and are capable of successful implementation. These sections also require that adequate funding be provided to implement the mitigation measures and that issuance of a CESA Permit will not jeopardize the continued existence of a State-listed species. B6-27

If these requirements regarding the State-listed threatened southern rubber boa are not satisfied prior to approval of the FEIR, then a subsequent CEQA document must be prepared so that it can be reviewed by the public and comply with the Department's duties as a Responsible Agency under CEQA.

Project Alternatives
The DEIR presents a "No Project" alternative and a "Reduced Density" alternative. The reduced density alternative involves a reduction in the size of the project by approximately 25 percent while substantially avoiding grading and disturbance of natural vegetation within a 200 foot setback along Highway 18. It would also substantially avoid alteration of the onsite natural drainage. The DEIR states that the reduced project/alternative site design is the environmentally superior alternative.

The Department recommends that the Applicant take into account the project site constraints, such as slope, fire hazard, and the scale of surrounding development. A reduced density alternative also appears desirable in light of the recent San Gabriel fires, the previous fires in the San Bernardino Mountains, and the existing high risk of fire at the site. Since the proposed development is within a forest, the threat of a crown fire poses a risk to the development. The project was not examined in consideration of a crown fire and how a reduced density alternative would reduce the risk to the development, occupants, and firefighters. The Department recommends the FEIR include an analysis of the impacts associated with the foreseeable fuel modification requirements associated with protecting the proposed development, and require mitigation for the impacts. B6-28

Streambed Alteration Agreements and CEQA
The site is located on the western boundary of Wildlife Corridor 20, Strawberry Creek, as identified in the County's General Plan Open Space Element. The DEIR does not include a discussion of Wildlife Corridor 20 or how the proposed project may impact this corridor. This should be addressed in the FEIR and mitigation measures be proposed to offset any impacts. B6-29

The mitigation proposed for impacts to State jurisdictional waters is for impacts to be mitigated at a ratio of no less than 2:1. The DEIR also states that during the consultation process with the Department for an Agreement, avoidance and/or onsite mitigation within the remaining open space area shall be considered. B6-30

If the CEQA documents do not fully identify potential impacts to lakes, streams, and associated resources and do not provide adequate avoidance, mitigation, monitoring,

funding sources, and a habitat management plan and reporting commitments, additional CEQA documentation will be required prior to execution (signing) of the Agreement. In order to avoid delays or repetition of the CEQA process, potential impacts to a stream or lake, as well as avoidance, minimization, and mitigation measures need to be discussed within this CEQA document.

B6-30 Cont'd

The Department opposes the elimination of streams, lakes, and their associated habitats. The Department recommends avoiding the stream and riparian habitat to the greatest extent possible. Any unavoidable impacts need to be compensated with the creation and/or restoration of in-kind habitat either onsite or offsite at a minimum 3:1 replacement-to-impact ratio, depending on the impacts and proposed mitigation. Additional mitigation requirements through the Department's Agreement process may be required depending on the quality of habitat impacted, proposed mitigation, project design, and other factors.

B6-31

We recommend submitting a notification early on, since modification of the proposed project may be required to avoid or reduce impacts to fish and wildlife resources. To obtain a Streambed Alteration Agreement notification package, please call (562) 430-7924.

The following information will be required for the processing of an Agreement and the Department recommends incorporating this information to avoid subsequent CEQA documentation and project delays:

1. Delineation of lakes, streams, and associated habitat that will be temporarily and/or permanently impacted by the proposed project (include an estimate of impact to each habitat type);

2. Discussion of avoidance and minimization measures to reduce project impacts; and

3. Discussion of potential mitigation measures required to reduce the project impacts to a level of insignificance.

B6-32

Section 15370 of the CEQA guidelines includes a definition of mitigation. It states that mitigation includes:

1. Avoiding the impact altogether by not taking a certain action or parts of an action;

2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation;

3. Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment;

4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and

5. Compensating for the impact by replacing or providing substitute resources or environments.

In the absence of specific mitigation measures in the CEQA documents, the Department believes that it cannot fulfill its obligations as a Trustee and Responsible Agency for fish and wildlife resources. Permit negotiations conducted after and outside of the CEQA process deprive the public of its right to know what project impacts are and how they are being mitigated. The Department does not believe that the Lead Agency can appropriately make the determination that impacts to jurisdictional drainages and/or riparian habitat are "less than significant", since those impacts were not analyzed or identified in the CEQA document.

B6-32
Cont'd

Thank you for this opportunity to comment. Please contact Robin Maloney-Rames at (909) 980-3818, if you have any questions regarding this letter.

Sincerely,

Jeff Brandt
Senior Environmental Scientist
Habitat Conservation Planning

Exhibit H

From: Jennifer D Alford
Sent: Monday, January 20, 2020 7:48 PM
To: hedi.duron@lus.sbcounty.gov <hedi.duron@lus.sbcounty.gov>; tom.nievez@Lus.sbcounty.gov <tom.nievez@Lus.sbcounty.gov>; Terri.rahhal@lus.sbcounty.gov <Terri.rahhal@lus.sbcounty.gov>; Supervisor.Rutherford@bos.sbcounty.gov <Supervisor.Rutherford@bos.sbcounty.gov>; lewis.murry@bos.sbcounty.gov <lewis.murry@bos.sbcounty.gov>
Subject: CSUSB Water Quality Research Data - Little Bear Creek COTW Proposed Development

Dear Supervisor Rutherford, Ms. Duron, Mr. Nievez, Ms. Rahhal and Mr. Murray,

I hope this email finds you all doing well. I am contacting you regarding to ongoing research funded by the Water Resources and Policy Initiatives (WRPI) related to water quality in Little Bear Creek; a headwater tributary to Lake Arrowhead located in the San Bernardino National Forest. As you likely know this tributary traverses a watershed drainage area that includes Blue Jay and the proposed Church of the Woods (COTW) project site.

Our research assesses stream physiochemical trends bi-weekly at two sites along Little Bear Creek (upstream of Blue Jay (LBC1) and at Blue Jay (LBC2)) and two additional tributaries entering Lake Arrowhead; Willow Creek and Orchard Creek. Testing has been conducted in both dry and precipitation events in situ since September 2019 to present for dissolved oxygen, turbidity, nitrate (NO3-), ammonium (NH4+), conductivity, pH, temperature, stream flow on a bi-weekly basis with additional lab-based testing for E. coli, total coliform and enterococcus on a monthly basis.

Observations include that episodic spikes in nutrients (NH4+ and NO3-) as well as bacteria are currently present in Little Bear Creek, as well as the other sites entering Lake Arrowhead. Collectively these trends indicate that there are already activities on the landscape related to transportation, tourism, infrastructure (i.e. septic and sewer) and impervious surfaces that are adversely impacting surface water resources in perennial streams entering Lake Arrowhead. More specifically, data to date indicates that LBC1 has exceeded regulatory standards 36% of the sampling periods for NH4+, 63% for NO3-, 20% for total coliform, 40% for E. coli and 67% for enterococcus. The second site, LBC2, has exceeded regulatory standards for 70% of the sampling periods for NH4+, 40% for NO3-, 50% for total coliform, 17% for E. coli and 50% for enterococcus with many of the exceedances occurring simultaneously across multiple metrics. These trends continue to contribute to algal blooms and, if not mitigated,

could result in the harmful algal blooms associated with cyanobacteria (blue-green algal blooms) as experienced by Lakes Gregory and Silverwood. Such conditions impact the social, economic and environmental quality of all mountain communities since many of the communities are financially dependent on tourist activities year-round as well as public health and safety, especially as they related to recreational waters.

I would also like to share that recent field research also assessed water quality in the BMPs at SkyPark that were required as part of their CUP permitting process. Trends indicate that while the BMPs were effective in reducing some turbidity, they were ineffective in reducing nutrient loads to Hooks Creek. Consequently, the BMPs ability to effectively mitigate headwater impacts from stormwater flowing over impervious surfaces declined over time.

This is an important finding when considering if the BMPs proposed by the COTW will mitigate impacts related to the proposed development because not only will the excavation of a substantial about of soil and removal of vegetation creates changes to groundwater flows needed to sustain both water quality and quantity entering Lake Arrowhead year-round, it will simultaneously impact surface hydrology. The proposed BMPs have also not been proven, empirically, under similar site and climatic conditions, that they are/can be effective in mitigating downstream impacts in the short or long term. Additionally, it is highly likely, based on numerous peer-reviewed studies and assessments by hydrologists and biological engineers, that the county's proposed, and now approved, stormwater project entering Little Bear Creek will impact water quality as indicated in over 30 years of academic research based on real-world assessments of BMP effectiveness. Simply put, any alterations to the natural landscape create some degree of adverse impacts to downstream water resources.

Given the already approved stormwater project flowing into Little Bear Creek, it does not seem reasonable based on the implementation of verified scientific research methods in this creek system, even comparing it to other, less developed tributaries, that the COTW project will benefit the community across social, economic and environmental metrics because the location, landscape and hydrological alterations of the proposed COTW project, by design, will create adverse impacts to water resources that characterize the mountain communities.

I hope and trust that your backgrounds and commitment to public health and safety will alert you to the danger in setting such precedent, not only in the communities located in a National Forest highly depended on tourism based on natural settings and pristine outdoor quality to support summer and winter activities, but how such decisions can impact communities across San Bernardino County including where you live and or work. Supporting a poorly design project largely based on site location and no inclusion of a comprehensive hydrologic assessments that goes beyond a "one size fits all" approach to stormwater management will allow 1.5% (i.e. the 350 members of the COTW congregation) to impact 98.5% of residents across three mountain communities directly now and for generations to come.

To illustrate the scientific findings related to current water quality, I have attached a presentation of my research findings and would welcome the opportunity to discuss ways to support healthy watershed initiatives using natural resource conservation while also supporting innovative design that benefits all community members and visitors alike.

I welcome an open dialogue and hope that you will fully consider the existing, scientifically verified, realities of the adverse water quality conditions already present in this community prior to the approval and potential development of the COTW project.

Please feel free to reach out to me to discuss this further.

Sincerely,

Jennifer B. Alford

(910) 547-4245

Jennifer.alford@csusb.edu

Assistant Professor

Faculty Associate, CSUSB Office of Community Engagement

Co-Chair, Resilient CSUSB Sustainability Taskforce

Department of Geography and Environmental Studies

CSU San Bernardino

jennifer.alford@csusb.edu

Exhibit I

LAKE ARROWHEAD
Tributary Water Quality Community Report 2019-2020

Jennifer B. Alford, PhD
Assistant Professor
California State University San Bernardino
Department of Geography and Environmental Studies

Study Purpose and Objectives: (1) Understand the spatiotemporal physiochemical characteristics of perennial (year-round flow) tributary headwater streams entering Lake Arrowhead (Figure 1), (2) determine the frequency of samples meeting regulatory standards (Table 1), and (3) to identify water quality best management practices to mitigate and improve surface water resource quality.

Lake Arrowhead serves as the primary drinking water resources for Lake Arrowhead residents. Secondary purposes include recreational opportunities (i.e. fishing, boating and swimming) and providing water resources for ecological services.

Sampling Locations (Figure 1):

1. Little Bear Creek 1 (LBC1) - Upstream from Blue Jay Business District
2. Little Bear Creek 2 (LBC2) -
3. Across from Jensens - prior to entering Lake Arrowhead
4. Willow Creek (WC1) - Beach Club/ Lake Arrowhead Resort.
5. Orchard Creek (OC) - Southwest of Cedar Glen.

Water Quality Monitoring:

- Sampling bi-weekly unless unsafe conditions
- August 2019 - Present
- Capturing Dry and Wet (stormflow/snowmelt) events – When possible, pre and post precipitation event sampling takes place.
- Total coliform, E. coli and Enterococcus tested at least monthly and more frequently during precipitation events.