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Subject: Comments on the Draft Environmental Impact Report for the Arroyo Seco Canyon Project Areas 2 and 3, SCH #2014101022, Los Angeles County

Dear Ms. Ventura:

The California Department of Fish and Wildlife (CDFW) has reviewed the above-referenced Arroyo Seco Canyon Project Areas 2 and 3 (Project) Draft Environmental Impact Report (DEIR). The DEIR's supporting documentation includes a *Biological Resources Technical Report* (BRTR).

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW's Role

CDFW is California's Trustee Agency for fish and wildlife resources, and holds those resources in trust by statute for all the people of the State [Fish & G. Code, §§ 711.7, subdivision (a) & 1802; Public Resources Code, § 21070; California Environmental Quality Act (CEQA) Guidelines, § 15386, subdivision (a)]. CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Id., § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect state fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Public Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code, including lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take", as defined by state law, of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), or state-listed rare plant pursuant to the Native Plant Protection Act (NPPA; Fish & G. Code, §1900 et seq.) authorization as provided by the applicable Fish and Game Code will be required.

Project Description and Summary

Objective: The Project is divided into two areas (Area 2 and Area 3) along the Arroyo Seco. Improvements in Area 2 include the removal of the existing diversion/weir structure and intake structure. This would be replaced with a new diversion/weir structure that could be operated to divert up to 25 cubic feet per second (cfs) of creek flows through the new intake structure and into the existing conveyance system (a combination of tunnels and pipelines). Improvements in Area 3 include the reconfiguration and expansion of the spreading basins to accommodate the increased flows for infiltration into the Raymond Basin. Various facilities would be demolished, including inlet/outlet structures, pipes and valves, fencing, and other small appurtenant structures, to allow for the reconstructed basins. The Project objective is to increase the use of the City's surface water rights and to improve biological functions within the Arroyo Seco.

Location: The Project site is located within the Arroyo Seco Canyon adjacent to North Arroyo Boulevard (i.e., Gabriellino Trail/Access Road), located in Township 1 North, Range 12 West. The proposed Project consists of two primary areas, including Area 2, Diversion and Intake Replacement and Area 3, Spreading Basin Improvements, which is adjacent to the former Jet Propulsion Laboratory (JPL) parking lot in the City of Pasadena.

Comments and Recommendations

CDFW offers the comments and recommendations below to assist the City of Pasadena (Lead Agency; City) in adequately identifying, avoiding, and/or mitigating the Project's significant, or potentially significant, direct, and indirect impacts on fish and wildlife (biological) resources. CDFW recommends the measures or revisions below be included in a science-based monitoring program that contains adaptive management strategies as part of the Project's CEQA mitigation, monitoring and reporting program (Public Resources Code, § 21081.6 and CEQA Guidelines, § 15097).

Comment #1: Diversion of Flows

Issue #1: The DEIR states, "while the footprint of the inundated area during dry years is less than average or wet years, the duration of inundation along these fringes is increased in the with-diversions scenario. Inundation duration in dry years is increased by diversions because the amount of runoff required to initiate dam operations is increased. Overall, the hydraulics model indicates that any reduction to the inundation footprint is infrequent (occurring only during dry years) and duration period is slightly increased on the fringes (Psomas 2018)."

CDFW is concerned that even if the duration of inundation is increased, that the decrease in footprint will result in the loss of potential habitat (e.g., willow riparian) for special status species; therefore, adversely impacting biological resources.

Issue #2: The DEIR states, "The Ecological Modeling Study indicates that water depth and duration of inundation correlate most highly with changes in the extent of willow riparian habitat in the Reservoir. Because the rainfall and resulting stream flows can vary so dramatically in the Arroyo Seco and because willow riparian habitat is dependent on available water, it stands to reason that the extent of willow habitat would mirror the dynamics of the site hydrology. Therefore, changes in the willow habitat that may result from proposed diversion changes during dry year conditions would likely be temporary (due to the high growth rate of the species

and the likelihood that dry year conditions would be followed by average or wet year conditions) and within the normal range of variability of the system (Psomas 2018)."

CDFW is concerned that the there is too much dependence on the possibility that dry year conditions will be temporary and they will subsequently be followed by average or wet year conditions.

Issue #3: The DEIR states, "the minimal potential effects on riparian habitat resulting from future Project diversions, as described in previous sections, are further reduced due to changing existing conditions that would occur due to the Devil's Gate Sediment Removal Project (Psomas 2018)."

CDFW is concerned that the conclusion that the changes in flow due to the diversion are inconsequential. The Lead Agency has suggested that changes in downstream vegetation due to the nearby Devil's Gate Sediment Removal Project have minimized potential effects from their own proposed Project. The Devil's Gate Dam Sediment Removal Project includes several areas of on-site mitigation currently in progress with habitat enhancement and planting of native riparian vegetation. It should be considered that changes in riparian areas "may result from proposed diversion changes during dry year conditions" should be given even more attention at the potential loss caused be diversion activities of this Project when there is already a loss of habitat downstream.

Specific impacts: The potential loss of riparian habitat because of the long term surface water diversion components with the Project could potentially result in significant loss of habitat for biological resources, including CESA-listed species, such as least Bell's vireo (*Vireo bellii pusillus*) know to occur downstream in the Devil's Gate Reservoir. In addition, changes in the frequency, duration, and intensity of future precipitation or drought events due to climate change does not appear to be included in the analysis in the changes of water availability and its impact on the surrounding habitat in combination with the diversion activities of the Project.

Since 2018, the Devil's Gate Dam Sediment Removal Project includes areas of riparian habitat restoration that is mitigation for impacts to least Bell's vireo. The diversion of water may result in a decrease in objective and goals of the restoration efforts.

Why impact would occur: Project implementation will result in diversion of flows outside of the Arroyo Seco and into spreading basins. This diversion, along with the cumulative impact of other projects, will cause changes in inundation and water elevation both in the Project area and downstream. The changes will result in the loss of potential habitat for special status species both within the Project and downstream.

In addition, most of the analysis was focused on impacts to habitat during dry years. But, impacts to changes of dry, wet and average years in the future should be involved in the analysis.

Evidence impact would be significant: Flow diversion as a result of Project implementation may result in the reduction in wetted perimeter. The lack of flow may result in loss of vegetation recruitment, especially of riparian trees. This may result, over time, in a narrowing of the channel upstream, downstream, and riparian canopy as well as associated watershed function and biological diversity. In addition, potential depletion of alluvial groundwater as a result of reduced stream flow following a diversion may interrupt the stream to groundwater transfer that would be located downstream of the diversion, adversely impacting vegetation, such as decline

in cottonwood (Rood et al. 2003). This diversion may adversely affect the existing riparian habitat within and in the vicinity of the Project site, which absent specific mitigation, could result in substantial changes to riparian composition.

Especially in southern California, climate change is expected to cause impacts of opposing precipitation projections with substantial implications. For example, these projections can lead to saturated soils, landslides, and reduction in water quality due to sedimentation. In addition, the increases in drought events can lead to a decrease in water quantity, persistent wildfires, and even desertification of the landscape (Underwood, E.C. et al. 2019). All of these impacts should be considered when analyzing the impacts to the habitat within and around the Project area and how potentially less than significant impacts previously identified by the Project diversion may be exacerbated with the impending impacts of climate change.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW recommends the final EIR include an analysis of the change in flow in the Arroyo Seco with diversion on a monthly basis as well as the analysis of wet, dry, and average precipitation. This analysis should also include projected changes in the hydrogeomorphology of the Arroyo Seco system as a result of climate change and how this would impact the biological resources in the Project area. This climate change analysis should include potential changes in ecosystem services such as water runoff, groundwater recharge, and biodiversity as well and changes in sediment export within the system. This analysis should be included in the final environmental document for review.

Mitigation Measure #2: CDFW recommends that post-project riparian impact monitoring be conducted over a period of time that includes a wider range of expected monthly precipitation cycles (e.g., dry, average, and wet) during which the riparian vegetation response can be evaluated to represent a more accurate response to reduced flows from the Project.

Monitoring of post-project conditions should include soil moisture measurements at depths representative of root zone accessibilities of selected target riparian plant species in the monitoring areas.

Mitigation Measure #3: Any Lake and Streambed Alteration (LSA) Agreement issued for the Project by CDFW may include additional measures protective of streambeds on and downstream of the Project. The LSA may include further erosion and pollution control measures. To compensate for any on-site and off-site impacts to riparian resources, additional mitigation conditioned in any LSA may include the following: avoidance of resources, on-site or off-site creation, enhancement or restoration, and/or protection and management of mitigation lands in perpetuity.

Comment #2: Pre-Construction Survey and Relocation Plan

Issue #1: Biological Mitigation Measure 1 (MM-BIO-1) of the DEIR states, “Prior to commencement of any earthmoving activities or the pre-construction staging of equipment on the Project site, the City shall develop a Preconstruction Survey and Relocation Plan for terrestrial reptiles, including the California newt, two-striped garter snake, Southern California legless lizard, and coastal whiptail.”

CDFW agrees that these species should require a plan to detect presence/absence on site prior

to Project activities. Yet, CDFW is concerned because temporary relocation of on-site wildlife does not constitute effective mitigation for the purposes of offsetting Project impacts associated with habitat loss.

Issue #2: MM-BIO-1 lists a minimum of six aspects that will be included in the Preconstruction Survey and Relocation Plan. Two of these aspect include, "(1) protocols for pre-construction surveys to flush out and/or move identified special status wildlife within the study area, as feasible; (2) the timing, frequency, and locations where surveys should be conducted." CDFW is concerned the protocols for protocol for pre-construction surveys, and the timing, frequency, and locations should include further details for species specific protocols.

Specific impacts: While this mitigation measure may aid in avoiding direct mortality of these species in the event they are detected, it does not address the loss of habitat for special status species. In addition, the lack of species-specific protocols may cause survey efforts to be insufficient in detecting the species in question.

Why impact would occur: Project implementation includes ground disturbing, vegetation clearing, and construction activities. All these activities have potential to impact, either temporarily or permanently, the habitat of special status species.

In addition, without appropriate species-specific protocols for timing, frequency, and location to conduct surveys, the survey efforts will be ineffective for detecting the species and may result in a false negative. The proposed relocation sites need to be appropriate habitat for the species.

Evidence impact would be significant: The loss of occupied habitat, especially that of special status species, would constitute a significant impact absent mitigation.

Surveys that are not species specific would not likely provide enough information regarding the presence/absence of the species within the Project footprint. False negatives can result in mortality of individuals that were not detected during survey efforts. Additionally, the two-striped gartersnake (*Thamnophis sirtalis*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), and California newt (*Taricha torosa*) are designated as California Species of Special Concern. CEQA provides protection not only for CESA- and Federal Endangered Species Act (ESA)-listed species, but for any species including but not limited to California Species of Special Concern. Therefore, take of these Species of Special Concern could require a mandatory finding of significance by the Lead Agency, (CEQA Guidelines, § 15065).

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: Due to potentially suitable habitat California newt, two-striped garter snake, Southern California legless lizard, and coastal whiptail within the Project site, prior to vegetation removal, grading, and/or other ground disturbing activities, qualified biologists familiar with the reptile and amphibian species behavior and life history should conduct specialized surveys to determine the presence/absence of Species of Special Concern. Focused surveys should be conducted during active season/time of day when each reptile and/or amphibian species are most likely to be detected. Survey results, including negative findings, should be submitted to CDFW for review two weeks prior to initiation of Project activities.

Mitigation Measure #2: Permanent impacts to special status species including occupied and

adjacent foraging habitat should be offset by setting aside replacement habitat to be protected in perpetuity under a conservation easement dedicated to a local land conservancy or other appropriate entity, that should include an appropriate non-wasting endowment to provide for the long-term management of mitigation lands. CDFW recommends that the City require the conservation easement be a part of the Pre-Construction and Relocation Plan to be submitted to CDFW for review and comment prior to Project implementation.

Mitigation Measure #3: For proposed preservation and/or restoration for streams and associated habitats that are likely occupied by special status species the final environmental document should include monitoring and management measures to protect the targeted habitat values in perpetuity. The objective should be to offset the Project-induced qualitative and quantitative losses of wildlife habitat values. Issues that should be addressed include, but are not limited to, restrictions on access, proposed land dedications, monitoring and management programs, control of illegal dumping, water pollution, and increased human intrusion. An appropriate non-wasting endowment should be provided for the long-term monitoring and management of mitigation lands. CDFW recommends that mitigation occur at a CDFW-approved bank or via an entity that has been approved to hold and manage mitigation lands pursuant to Assembly Bill 1094 (2012), which amended Government Code sections 65965-65968. Under Government Code section 65967(c), the lead agency must exercise due diligence in reviewing the qualifications of a governmental entity, special district, or nonprofit organization to effectively manage and steward land, water, or natural resources on mitigation lands it approves.

Comment #3: Impacts to Sensitive Vegetation Communities

Issue #1: As stated in MM-BIO-4, “Mitigation for impacts to sensitive vegetation communities shall consider and overlap with compensation for jurisdictional waters (MM-BIO-6) since the sensitive vegetation is associated with the jurisdictional limits of Arroyo Seco.”

CDFW is concerned that any sensitive community that is impacted outside the limits of the Arroyo Seco will not be sufficiently mitigated if the sensitive community is not within the lateral extent of the stream and not subject to an Fish and Game code 1602.

Issue #2: MM-BIO-4 also states, “Mitigation for direct impacts to sensitive vegetation communities shall be implemented through on-site creation/enhancement, program funding, mitigation bank credits, and/or creation/enhancement of native vegetation communities on City lands.”

CDFW does not generally accept “program funding” or in lieu fees as a proper means and method of mitigation as in lieu fees do not assure adequate implantation of the appropriate mitigation required to off-set the Project impacts.

Issue #3: MM-BIO-4 presents a table describing the mitigation ratio and the acreage that will be created/restored/ or mitigated through either on-site and/or off-site efforts. There is also discussion of a Habitat Mitigation and Monitoring Plan (HMMP) that will be prepared for either on- or off-site mitigation. CDFW is concerned that there is not discussion that each of these sensitive vegetation communities will be mitigated for, in kind. As in, the HMMP should address and mitigate each vegetation community individually. It is unclear the anticipated amount of acreage and types of type of habitat to be mitigated on site, and the amount of acreage and type of mitigation off site.

Specific impacts: CDFW considers white alder-California sycamore woodland association and California sycamore woodlands alliance as unique as distinct biological communities consisting of layers that include trees and herbaceous understory vegetation. The DEIR does not appear to characterize the value of these unique individual communities separately in a biological setting. In addition, monetary means do not mitigate for the complete loss of this distinct biological community.

Why impacts would occur: Project implementation includes grading, vegetation clearing, building construction, and other activities that may result in direct mortality, population declines, or local extirpation of white alder-California sycamore association and California sycamore alliance woodlands.

Evidence impacts would be significant: The goal of compensatory mitigation is to recreate functioning associations and alliances of similar composition, structure, and function to the selected alder-sycamore and sycamore woodland that will be impacted. The mitigation site should mimic the acreage, function, density, diversity, canopy, and species composition, as well as other measurable success criteria before the mitigation should be deemed sufficient. Mitigation measures should repair, rehabilitate, or restore each unique, impacted woodland. CDFW will consider the mitigation for jurisdictional areas separately from the sensitive community that is outside of jurisdictional limits. Monetary mitigation does not compensate for the significant impact by replacing or providing substitute resources/environments, for such unique, biologically valuable vegetation communities that, if not mitigated in kind, will be lost forever. It should also be noted, CDFW does not support transplantation of rare plants, into occupied or unoccupied areas they currently do not occur, as a mitigation strategy. The scientific literature does not support the assertion that transplanting plants into areas they do not occur is viable in assuring long term survival.

In addition, the DEIR does not address the cumulative loss of white alder-California sycamore woodland association and California sycamore woodlands alliance in Los Angeles County adequately. A description of the remaining acreage compared to historical range, connectivity of remaining association and alliances and how the potential loss of individuals in this location will affect the local region should be discussed in more detail and figures. Based upon MM-BIO-4, the Project would continue to result in a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or United States Fish and Wildlife Service (USFWS). Absent adequate mitigation, the ecosystem function and contribution to genetic biological diversity of alder-sycamore association and other California Native Plant Society (CNPS) special status plants in conjunction with their contribution to breeding, feeding and cover habitat for wildlife will be compromised.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW recommends avoidance of sensitive vegetation communities as the most effective mitigation for protection and preservation for these communities.

Mitigation Measure #2: CDFW recommends the DEIR include defined mitigation measures for adverse project-related impacts to sensitive plants. Mitigation measures should emphasize avoidance and reduction of project impacts. For any impacts that have been adequately demonstrated to be unavoidable, CDFW recommends that the City should require a scientifically rigorous monitoring and management program as part of the Project's CEQA

Mitigation, Monitoring, and Reporting Program (MMRP) that would include adaptive management strategies (Public Resources Code 21081.6 and CEQA Guidelines Section 15097) for the individual communities impacted. If on-site mitigation is not feasible or would not be biologically viable and therefore not adequately mitigate the loss of biological functions and values, off-site mitigation through occupied habitat acquisition and preservation in perpetuity may be appropriate.

Mitigation Measure #3: If avoidance is not possible, impacts to the white alder-California sycamore woodland association and California sycamore woodland alliance should be mitigated through habitat restoration or conservation. All revegetation/restoration areas that will serve as mitigation should include preparation of a separate restoration plan, to be approved by USFWS and CDFW prior to any ground disturbance. The restoration plan should include restoration and monitoring methods; annual success criteria; contingency actions should success criteria not be met; long-term management and maintenance goals; and, a funding mechanism to assure for in perpetuity management and reporting. Areas proposed as mitigation should have a recorded conservation easement and be dedicated to an entity that has been approved to hold/manage lands (AB 1094; Government Code, §§ 65965-65968).

Comment #4: Biological Monitoring and Impacts to Special Status Species

Issue #1: MM-BIO-1 in the DEIR states the, “Biological Monitor be present during initial vegetation clearing activities within Areas 2 and 3, as well as twice weekly until ground disturbing activities are completed” and MM-BIO-5 states, “A qualified biologist shall be present during initial ground disturbing activities within the Project Site to ensure that Project activities stay within the demarcated limits.”

CDFW is concerned by the lack of a biological monitor presence during all ground disturbing activities.

Issue #2: MM-BIO-1 states, “If a least Bell’s vireo or other State of federally listed species is detected, work activity within 200 feet of the detected occupied habitat will be temporarily halted and the City will consult with the appropriate wildlife agencies.” In addition, Table 3 in the BRTR identifies the southeastern willow flycatcher (*Empidonax traillii extimus*) and least Bell’s vireo (*Vireo bellii pusillus*), both of which are CESA- and federal Endangered Species Act (ESA)-listed species, as having marginal to suitable nesting habitat within the study area.

CDFW is concerned the work area buffer does not constitute a no-effect buffer for the species if a CESA Incidental Take Permit (ITP) is not obtained for the project.

Specific impact: CDFW considers ground disturbing activities, especially in sensitive vegetation communities, to be a potentially significant impact. The presence of the biologist should aid in mitigating for any potential significant impacts to not only the vegetation but also the wildlife community within and around disturbance areas. If the biological monitor is only present during initial ground disturbing to enforce buffer zones or construction limits, there is potential to miss impacts to vegetation and special status wildlife communities during the duration of ground disturbing activities as well as the duration of the Project.

For least Bell’s vireo, a 200-foot buffer may not be sufficient to avoid impacts. Indirect impacts, such as noise, dust, and surrounding habitat modifications from activities outside the buffer may still adversely impact the species and result in direct mortality (e.g., nest abandonment). With

the biological monitor only present during initial ground disturbing and twice a week thereafter, there will be no individual to monitor for nesting issues and enforce a buffer once a nest is identified.

Why impact would occur: Project implementation includes ground disturbing, vegetation clearing, construction, and other activities that may result in direct mortality, population declines, or local extirpation of sensitive vegetation communities and/or special status species. These Project activities may have direct or indirect effects to CESA- and/or ESA-listed species. In addition, the lack of biological monitoring during the entirety of ground disturbing activities may have the potential to miss the detection of CESA and/or ESA-listed species.

Evidence impact would be significant: CDFW considers adverse impacts to a species protected by CESA to be significant without mitigation under CEQA. As to CESA, take of any endangered, threatened, candidate species, or CESA-listed rare plant species that results from the Program is prohibited, except as authorized by state law (Fish and G. Code, §§ 2080, 2085; Cal. Code Regs., tit. 14, §786.9).

Inadequate avoidance, minimization, and mitigation measures for impacts to these special status species will result in the Project continuing to have a substantial adverse direct, indirect, and cumulative effect. This, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or United States Fish and Wildlife Service (USFWS). Impacts to all sensitive communities should be considered significant under CEQA unless they are clearly mitigated below a level of significance.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: CDFW recommends a biological monitor, one that is familiar with the CESA-and ESA-listed species with potential to be found in the Project area, be on-site for the duration of the ground disturbing activities and three times a week for the duration of the Project.

Mitigation Measure #2: If Project-related construction or activity during the life of the Project will result in take of a species designated as endangered or threatened, or a candidate for listing under CESA, CDFW recommends that the Lead Agency seek appropriate take authorization under CESA prior to implementing the Project. Appropriate authorization from CDFW may include an Incidental Take Permit (ITP) or a Consistency Determination in certain circumstances, among other options [Fish & G. Code, §§ 2080.1, 2081, subds. (b) and (c)]. Early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, may require that CDFW issue a separate CEQA document for the issuance of an ITP unless the Project CEQA document addresses all Project impacts to CESA-listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of an ITP. For these reasons, biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA ITP.

Mitigation Measure #3: To protect nesting birds that may occur on site or adjacent to the Project boundary, CDFW recommends that no construction activities should occur from February 15 (January 1 for raptors) through August 31. CDFW also recommends a 0.5-mile

buffer, if feasible, around active CESA- and ESA-listed bird species nests. These buffers should be increased if needed to protect the nesting birds.

Comment #4: Impacts to Bat Species, including California Species of Special Concern

Issue: CDFW recognizes MM-BIO-3 has been included to mitigate impacts to bat species. CDFW agrees with the methods presented in MM-BIO-3 for the assessment of structures and trees as marked for potential removal. CDFW is concerned with the potential impacts to bat species that may be present both within the Project boundary and in the vicinity.

Specific impacts: Project activities include the removal of trees, vegetation, and/or structures that may provide roosting and/or foraging habitat; therefore, has the potential for the direct and indirect loss of bat.

Why impacts would occur: Regardless of whether the removal of vegetation, trees, and/or structures will take place during the day or nighttime hours, the activity will potentially result in the loss of foraging and roosting habitat for bats.

Evidence impacts would be significant: Bats are considered non-game mammals and are afforded protection by state law from take and/or harassment, (Fish & G. Code, § 4150; Cal. Code of Regs, § 251.1). Although the hoary bat (*Lasiurus cinereus*) is the special status species identified in Table 4 of the BRTR, it is important to remember that there are many bat species, for example the western yellow bat, that can be found year-round in urban areas throughout the south coast region (Miner & Stokes, 2005). In addition, several bat species are considered California Species of Special Concern, including the pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), western mastiff bat (*Eumops perotis californicus*), western red bat (*Lasiurus blossevillii*), western yellow bat (*Lasiurus xanthinus*), Californian leaf-nosed bat (*Macrotus californicus*), big free-tailed bat (*Nyctinomops macrotis*) identified in Appendix H of the BRTR, meet the CEQA definition of rare, threatened or endangered species (CEQA Guidelines, § 15065). Take of California Species of Special Concern could require a mandatory finding of significance by the Lead Agency (CEQA Guidelines, § 15065).

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure: CDFW recommends bat surveys be conducted by a qualified bat specialist to determine baseline conditions within the Project and within a 500-foot buffer. In addition, an analysis of the potential significant effects of the proposed Project on the species (CEQA Guidelines §15125). CDFW recommends the use of acoustic recognition technology to maximize detection of bat species to minimize impacts to sensitive bat species. The final environmental document should document the presence of any bats. If certain species are detected, MM-BIO-3 should include species specific measures such as avoiding the area during roosting season/time of day when each bat species are most likely to be present.

Comment #5: Impacts to Burrowing Owl (*Athene cunicularia*)

Issue: Regarding the burrowing owl, Appendix H of the BRTR states, "There is marginal associated habitat species and there is only one wintering record for the species within Hahamonga Watershed Park".

Specific impact: Potential for burrowing owl habitat on site indicates that Project activities may result in direct and/or indirect burrowing owl mortality or injury; the disruption of natural burrowing owl breeding behavior; and loss of breeding, wintering and foraging habitat for the species. Project impacts would contribute to statewide population declines for burrowing owl.

Why impact would occur: Burrowing owls have been known to use highly degraded and marginal habitat where existing burrows or stem pipes are available. Nest and roost burrows of the burrowing owl are most commonly dug by ground squirrels (*Otospermophilus beecheyi*), but they have also been known to use a variety of other species dens or holes, including coyote (*Canis latrans*) and Botta's pocket gopher (*Thomomys bottae*) (Gervais, J.A., Rosenberg, D.K., & Comrack, L.A., 2008). All these associated species having either been observed or are expected to occur on site. Impacts to burrowing owl could result from vegetation clearing and other ground disturbing activities. Project disturbance activities may result in crushing or filling of active owl burrows, causing the death or injury of adults, eggs, and young. In addition, the Project may remove burrowing owl foraging habitat by eliminating native vegetation that supports essential rodent, insect, and reptile that are prey for burrowing owl. Rodent control activities could result in direct and secondary poisoning of burrowing owl ingesting treated rodents.

Evidence impact would be significant: Take of individual burrowing owls and their nests is defined by Fish and Game Code section 86 and prohibited by sections 3503, 3503.5, and 3513. Take is defined in Fish and Game Code section 86 as "hunt, pursue, catch, capture or kill, or attempt to hunt, pursue, catch, capture or kill." Without appropriate take avoidance surveys prior to Project operations including, but not limited to, ground and vegetation disturbing activities and rodent control activities, adverse impacts to burrowing owl may occur because species presence/absence has not been verified. In addition, burrowing owl qualifies for enhanced consideration afforded to species under CEQA, that can be shown to meet the criteria for listing as endangered, rare or threatened (CEQA Guidelines, § 15380(d)).

Inadequate avoidance and mitigation measures will result in the Project continuing to have a substantial adverse direct and cumulative effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or United States Fish and Wildlife Service (USFWS).

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #1: To reduce impacts to burrowing owl, CDFW recommends that the Project adhere to CDFW's March 7, 2012, *Staff Report on Burrowing Owl Mitigation*. All survey efforts should be conducted prior to any project activities that could result in habitat disturbance to soil, vegetation or other sheltering habitat for burrowing owl. In California, the burrowing owl breeding season extends from 1 February to 31 August with some variances by geographic location and climatic conditions. Survey protocol for breeding season owl surveys states to conduct four survey visits: 1) at least one site visit between 15 February and 15 April, and 2) a minimum of three survey visits, at least three weeks apart, between 15 April and 15 July, with at least one visit after 15 June.

Mitigation Measure #2: Permanent impacts to occupied owl burrows and adjacent foraging habitat should be offset by setting aside replacement habitat to be protected in perpetuity under a conservation easement dedicated to a local land conservancy or other appropriate entity, that should include an appropriate non-wasting endowment to provide for the long-term

management of mitigation lands. CDFW recommends that the City require a burrowing owl mitigation plan be submitted to CDFW for review and comment prior to Project implementation.

Mitigation Measure #3: Project use of rodenticides that could result in direct or secondary poisoning to burrowing owl should be avoided.

Comment #6: Mountain lion (*Puma concolor*)

Issue: The DEIR did not identify the recent change in protection status of the mountain lion population within the San Gabriel/San Bernardino Mountains and the potential for human-wildlife conflict during Project activities.

The mountain lion is a specially protected mammal in the State (Fish and Game Code, § 4800). In addition, on April 21, 2020, the California Fish and Game Commission (Commission) accepted a petition to list an evolutionarily significant unit (ESU) of mountain lion in southern and central coastal California as threatened under CESA. As a CESA-candidate, the species is granted full protection of a threatened under CESA.

Therefore, any new development project should analyze the potential for mountain lion, which are known to occur in the Arroyo and surrounding San Gabriel Mountains, and may be impacted by development and human activity in the Project area.

Specific Impact: Due to mountain lion's updated status, it is important for the final environmental document to analyze the impacts associated with human-wildlife conflicts that come with increases in human development and presence in potential wildlife corridor areas.

Why impact would occur: Mountain lions potentially present in the Project vicinity may be impacted by Project activities such as increased human presence, increase in traffic causing vehicle strikes, as well as increased exposure to light and noise. Mountain lions rely on deer as a food source, so any impacts to deer should be considered. Mountain lion may also cause concern for public safety if they encounter people.

Evidence impact would be significant: Human interactions are one of the main drivers of mortality and increasing development and human presence (even temporary) in this area could increase the need for public safety removal and/or vehicle strikes of mountain lions. According to Gustafson et al. (2018), the San Gabriel mountain lion population exhibits extremely low genetic diversity and effective population size. The population in the San Gabriel Mountains was also found to be a sink population, with limited gene flow with populations in the Western Sierra Nevada, California Central Coast, and the Eastern Peninsular Range (Gustafson et al. 2018). Although genetic studies on this population are limited, patterns of isolation, loss of genetic diversity, and low effective population size are major threats to the continued survival of the species in the area.

If "take" or adverse impacts to mountain lion cannot be avoided either during project development activities or over the life of the development project, the project proponent must consult CDFW to determine if a CESA ITP is required (pursuant to Fish & Game Code, § 2080 et seq.).

Recommended Potentially Feasible Mitigation Measure (s):

CDFW recommends the final environmental document address the potential to adversely impact, reduce, and modify habitat for the mountain lion, reduce and/or potentially impair the viability of populations of mountain lion, and reduce the number and range of the species.

Mitigation Measure #1: Due to potential habitat within the Project site, within one year prior to Project activities, a qualified biologist familiar with the mountain lion species behavior and life history should conduct surveys in areas that may provide possible habitat for mountain lion to determine the potential presence/absence of the species. Surveys should be conducted when the species is most likely to be detected, during crepuscular periods at dawn and dusk (Pierce and Bleich 2003). Survey results including negative findings should be submitted to CDFW prior to initiation of project activities.

Mitigation Measure #2: Two weeks prior to construction activities and once a week during construction activities, a qualified biologist should conduct a survey for mountain lion natal dens. The survey area should include the construction footprint and the area within 2,000 feet (or the limits of the property line) of the Project disturbance boundaries. Should an active natal den be located, the applicant should cease work within 2000 feet and inform CDFW with 24 hours. No construction activities should occur in the 2000-foot buffer until a qualified biologist in consultation with CDFW establishes an appropriate setback from the den that would not adversely affect the successful rearing of the cubs. No construction activities or human intrusion should occur within the established setback until the cubs have been successfully reared or the cats have left the area.

Comment #7: Fish Survey

Issue: Appendix C: *Non-protocol Fish Survey Memorandum* of the BRTR states “The focused survey passes were conducted by walking along and within the stream. Any pools, if present, where southern steelhead/rainbow trout could be present would be examined from a distance using binoculars before being approached.”

Specific Impact: While CDFW agrees that the area surveyed for the Project is adequate, CDFW is concerned about the methods taken to conduct the survey. Insufficient surveys (including the methods used) may result in a false negative that could have further negative implications for fish that may be located in the stream.

Why impact would occur: The methods for survey appear not be robust. “Walking along and within the stream” seem to be only visual methods taken. These methods can miss fish that may be hiding between boulders, below undercut banks, or in shadowed areas of the stream.

Evidence impact would be significant: In an area with historically low populations for fish species, such as the Arroyo Seco, above water visual surveys along and within the stream may not be adequate to state absence of fish in the stream. The lack of deep pool habitats, as stated in Appendix C, does not dismiss rainbow trout potential from the stream. In southern California, rainbow trout are known to utilize a variety of stream habitat at a variety of depths.

Recommended Potentially Feasible Mitigation Measure(s)

Mitigation Measure: CDFW recommends conducting surveys, such as underwater or electrofishing, as described in the California Salmonid Stream Habitat Restoration Manual, part

IV covers fish survey methods, https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=22654. Surveys should be conducted in the same survey area as the previous survey. All results, including negative results should be reported to CDFW and included in the final environmental document.

Comment #8: Tree Removal

Issue: CDFW recognizes that in *Appendix I: Protected Tree Report for the Arroyo Seco Canyon Project Areas 2 and 3 City of Pasadena, California* of the DEIR concludes that "No pests or pathogens were observed on site." However, CDFW is concerned that the DEIR does not contain procedures for disposal of removed trees that may be infested with invasive pests and disease.

Specific Impact: Project activities have the potential to result in the spread of tree insect pests and disease into areas not currently exposed to these stressors. This could result in expediting the loss of oaks, alders, sycamore and other trees in California which support a high biological diversity including special status species.

Why impact would occur: Several species of tree will be removed and presumably hauled to off-site locations for disposal, thereby potentially exposing off-site tree species to infestation and disease.

Evidence impact would be significant: The Project may have a substantial adverse effect on any sensitive natural communities (e.g., riparian habitat, oak woodlands) identified in local or regional plans, policies, and regulations or by the CDFW or USFWS. The Project may result in a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS that are dependent on oak woodlands and riparian habitats susceptible to insect and disease pathogens.

Recommended Potentially Feasible Mitigation Measure(s)

Mitigation Measure: To reduce impacts to less than significant the final environmental document should describe an infectious tree disease management plan and how it will be implemented to avoid significant impacts under CEQA. All trees identified for removal resulting from the Project should be inspected for contagious tree diseases including but not limited to: thousand canker fungus (*Geosmithia morbida*), see http://www.thousandcankers.com/; Polyphagous Shot Hole Borer (*Euwallacea spp*.), see http://eskalenlab.ucr.edu/avocado.html); and goldspotted oak borer (*Agrilus auroguttatus), see* http://ipm.ucanr.edu/PMG/PESTNOTES/pn74163.html. To avoid the spread of infectious tree diseases, diseased trees should not be transported from the Project site without first being treated using best available management practices relevant for each tree disease observed.

Comment #9: Wildlife Movement Corridor

Issue: The BRTR states, "The study area does not reside within any designated wildlife corridors and/or habitat linkages identified in the South Coast Missing Linkages analysis project (South Coast Wildlands 2008) or California Essential Habitat Connectivity project (Spencer et al. 2010). On a regional level, the study area and Hahamongna Watershed Park form an open

space area that is located just south of the ANF [Angeles National Forest], which has large, continuous natural habitats. Urban development is located to the east, west, and south of this area, which includes the artificial channelization of Arroyo Seco.

Larger, urban-adapted terrestrial wildlife (e.g., coyotes [*Canis latrans*]) are expected to pass through the study area and Hahamongna Watershed Park to the urban environment, but the study area is not part of a regional corridor or habitat linkage between another large open space."

CDFW is concerned that the DEIR does not recognize that this area does contribute to regional wildlife movement and acts as a corridor, linking the greater San Gabriel Mountains with the Hahamongna Watershed.

Specific Impact: The Project area is located in a small corridor that connects the San Gabriel Mountains to the Devil's Gate Reservoir and the Hahamongna Watershed, yet the DEIR does not recognize the important role the Project area plays for the regional movement of wildlife. This may lead to negative consequences with potential future development and further urbanization in the area if the City reduces the importance of the Project site and does not prioritize its protection and conservation.

Why impact would occur: If the City does not recognize this area as an important corridor for the movement of wildlife it is possible that future development in an area that is already surrounded by urbanization may lead to further loss of these biological resources. This area is already vulnerable to urbanization and continued fragmentation as well as local extirpations of wildlife species, such as the previously mentioned mountain lion, that require large areas of habitat to sustain viable populations.

Evidence impact would be significant: The Project area contributes to regional wildlife movement/habitat corridor and linkage to the greater San Gabriel Mountain complex. The Project site supports the passage of large and small mammals as well as migrating birds. In addition, the habitat in the Project site supports the natural areas and the open space around the Project vicinity, that contributes to the high biological diversity found in the San Gabriel Mountains. Despite the urbanization also in the Project vicinity, it facilitates the maintenance of biological diversity that is unique to the Hahamongna Watershed and healthy populations of plants and wildlife by allowing gene flow (movement) between the San Gabriel Mountains and other areas of open space.

Recommended Potentially Feasible Mitigation Measure(s)

Mitigation Measure: CDFW recommends that any activity that could result in the reduction, fragmentation, or other degradation of habitat value within the habitat core be considered under CEQA. CDFW further recommends that any proposed unavoidable impacts to the habitat core within the City's CEQA purview be subject to conditions that will further verify wildlife movement and other habitat values. Habitat use and impact assessments should be informed by efforts to further document wildlife movement through the habitat core using techniques such as, but not limited to, camera and tracking stations and radio telemetry conducted over at least a two-year period.

CDFW recommends that the City include a discussion on the habitat values and wildlife movement when considering any discretionary activities located within the habitat core including

the Project footprint.

Additional Recommendations

Recommendation #1: Entrapment

The Project may result in the use of open pipes used as fence posts, property line stakes, signs, etc. Due to the location of the Project site and the undeveloped areas that are in the surrounding vicinity, CDFW recommends that all hollow posts and pipes be capped to prevent wildlife entrapment and mortality because these structures mimic the natural cavities preferred by various bird species and other wildlife for shelter, nesting and roosting. Raptor's talons can become entrapped within the bolt holes of metal fence stakes resulting in mortality. Metal fence stakes used on the Project site should be plugged with bolts or other plugging materials to avoid this hazard.

Recommendation #2: Pasadena shrimp (*Syncaris pasadenae*)

The Pasadena shrimp is species of freshwater shrimp that lived in the drainage basin of the Los Angeles River, near Pasadena, San Gabriel and Warm Creek, and is believed to be extinct. No specimens of this species have been collected since the 1930s (Hedgpeth, 1968). CDFW recommends considering this species when conducting any future surveys in the creek. There is a possibility of finding species once thought to be extinct and this shrimp species is endemic to the Project area. Any record of detection of this species should be reported to CDFW.

Recommendation #3: Project Alternatives

CDFW recommends considering a Project alternative to restore some of the natural flows of the Arroyo Seco. This could include the current placement and design of the spreading basins in Area 3. Moving the basins so they are not directly adjacent or in line to the creek, relieving the pinch point that starts just below the Explorer Road crossing, would allow the Arroyo Seco to spread out and flow over approximately 6.4 acres adjacent to the former Jet Propulsion Laboratory (JPL) parking lot along Explorer Road. In addition to an alternative location, the number of basins could be decreased and engineered to be deeper in order to take up less surface area, therefore, allowing more acreage for the Arroyo Seco to spread to its historical reach. Another potential alternative that should be explored is local storage of winter flows for use during the summer season, to prevent water diversion during the period when flows in the creek are critically low. Other potential alternatives include removing additional cement from the channel to increase groundwater percolation, or even relocating the direct diversion structure downstream (i.e., southern edge of City limits) to allow the water to support fish and wildlife habitat before it is diverted. These alternatives may reduce or eliminate the need for additional percolation ponds proposed for the JPL parking lot. Areas of space for mitigation purposes may not be readily available along the Arroyo Seco. The JPL parking lot could be designed as a mitigation area for the loss of alluvial scrub habitat proposed from the Devil's Gate sediment removal project by the County of Los Angeles Department of Public Works.

Filing Fees

The Project, as proposed, could have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead

Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required for the underlying Project approval to be operative, vested, and final (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

Conclusion

We appreciate the opportunity to comment on the Project to assist the City in adequately analyzing and minimizing/mitigating impacts to biological resources. CDFW requests an opportunity to review and comment on any response that the City has to our comments and to receive notification of any forthcoming hearing date(s) for the Project. Questions regarding this letter and further coordination on these issues should be directed to Felicia Silva, Environmental Scientist, at Felicia.Silva@wildlife.ca.gov or (562) 430-0098.

Sincerely,

DocuSigned by:
Erinn Wilson-Olgin
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Erinn Wilson
Environmental Program Manager I

ec: CDFW
Victoria Tang – Los Alamitos
Karen Drewe – Los Alamitos
Felicia Silva – Los Alamitos
Andrew Valand – Los Alamitos
Frederic Reiman – Los Alamitos
Susan Howell – San Diego
CEQA Program Coordinator - Sacramento

State Clearinghouse

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GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

CDFW recommends the following language to be incorporated into a future environmental document for the Project.

Biological Resources			
	Mitigation Measure	**Timing**	**Responsible Party**
MM-BIO-1-Diversion of Flows	Further analyze the changes in flow Seco with diversion in the Arroyo Seco on a monthly basis in addition to the analysis of wet, dry, and average precipitation. This analysis should also include projected analysis in changes to hydrogeomorphology of the Arroyo Seco system as a result of climate change. This climate change analysis should include potential changes in ecosystem services such as water runoff, groundwater recharge, and biodiversity as well and changes in sediment export within the system. This analysis shall be included in the final environmental document for review.	Prior to Construction	City of Pasadena Project Proponent
MM-BIO-2-Diversion of Flows	A post-project riparian impact monitoring shall be conducted over a period of time that includes a wider range of expected precipitation cycles (dry, average and wet) during which the riparian vegetation response can be evaluated to represent a more accurate response to reduced flows from the Project. Monitoring of post-project conditions should include soil moisture measurements at depths representative of root zone accessibilities of selected target riparian plant species in the monitoring areas.	Prior to Construction	City of Pasadena Project Proponent
MM-BIO-3-Diversion of Flows	Any LSA Agreement issued for the Project by CDFW may include additional measures protective of streambeds on and downstream of the Project. The LSA may include further erosion and pollution control measures. To compensate for any on-site and off-site impacts to riparian resources,	Prior to Construction	City of Pasadena Project Proponent

	additional mitigation conditioned in any LSA may include the following: avoidance of resources, on-site or off-site creation, enhancement or restoration, and/or protection and management of mitigation lands in perpetuity.		
MM-BIO-4-Pre-Construction Survey and Relocation Plan	Due to potentially suitable habitat within the Project site, prior to vegetation removal and/or grading, qualified biologists familiar with the reptile/amphibian species behavior and life history shall conduct specialized surveys to determine the presence/absence of Species of Special Concern. Focused surveys shall be conducted during active season/time of day when each reptile/amphibian species are most likely to be detected. Survey results, including negative findings, shall be submitted to CDFW for review two weeks prior to initiation of Project activities.	Prior to Construction	City of Pasadena Project Proponent
MM-BIO-5-Pre-Construction Survey and Relocation Plan	Permanent impacts to occupied habitat and adjacent foraging habitat for special status species shall be offset by setting aside replacement habitat to be protected in perpetuity under a conservation easement dedicated to a local land conservancy or other appropriate entity, that shall include an appropriate non-wasting endowment to provide for the long-term management of mitigation lands. CDFW recommends that the City require the conservation easement be a part of the Pre-Construction and Relocation Plan to be submitted to CDFW for review and comment prior to Project implementation.	Prior to Construction	City of Pasadena Project Proponent
MM-BIO-6-Pre-Construction Survey and Relocation Plan	For proposed preservation and/or restoration, the final environmental document shall include measures to protect the targeted habitat values in perpetuity from direct and indirect negative impacts. The objective shall be to offset the Project-induced qualitative and quantitative losses of wildlife habitat values. Issues that shall be addressed include, but are not limited to, restrictions on access, proposed land dedications, monitoring and management programs, control of illegal dumping, water pollution, and increased human intrusion. An appropriate non-wasting endowment shall be	Prior to Construction	City of Pasadena Project Proponent

	provided for the long-term monitoring and management of mitigation lands. Mitigation shall occur at a state-approved bank or via an entity that has been approved to hold and manage mitigation lands pursuant to Assembly Bill 1094 (2012), which amended Government Code sections 65965-65968. Under Government Code section 65967(c), the City must exercise due diligence in reviewing the qualifications of a governmental entity, special district, or nonprofit organization to effectively manage and steward land, water, or natural resources on mitigation lands it approves.		
MM-BIO-7-Impacts to Sensitive Vegetation Communities	CDFW primarily recommends avoidance of sensitive vegetation communities as the most effective mitigation for protection and preservation for these communities.	Prior to Construction	City of Pasadena Project Proponent
MM-BIO-8-Impacts to Sensitive Vegetation Communities	CDFW recommends the DEIR include defined mitigation measures for adverse project-related impacts to sensitive plants. Mitigation measures shall emphasize avoidance and reduction of project impacts. For any impacts that have been adequately demonstrated to be unavoidable, CDFW recommends that the City shall require a scientifically rigorous monitoring and management program as part of the Project's CEQA Mitigation, Monitoring, and Reporting program (MMRP) that would include adaptive management strategies (Public Resources Code 21081.6 and CEQA Guidelines Section 15097). If on-site mitigation is not feasible or would not be biologically viable and therefore not adequately mitigate the loss of biological functions and values, off-site mitigation through occupied habitat acquisition and preservation in perpetuity may be appropriate.	Prior to Construction	City of Pasadena Project Proponent
MM-BIO-9-Impacts to Sensitive Vegetation Communities	If avoidance is not possible, impacts to the white alder-California sycamore woodland association and California sycamore woodland alliance shall be mitigated through habitat restoration or conservation. All revegetation/restoration areas that will serve as mitigation	During Construction	City of Pasadena Project Proponent

	shall include preparation of a separate restoration plan, to be approved by USFWS and CDFW prior to any ground disturbance. The restoration plan shall include restoration and monitoring methods; annual success criteria; contingency actions shall success criteria not be met; long-term management and maintenance goals; and, a funding mechanism to assure for in perpetuity management and reporting. Areas proposed as mitigation shall have a recorded conservation easement and be dedicated to an entity that has been approved to hold/manage lands (AB 1094; Government Code, §§ 65965-65968).		
MM-BIO-10-Biological Monitoring and Impacts to Special Status Species	CDFW recommends a biological monitor, one that is familiar with the CESA/ESA-listed species with potential to be found in the Project area, be on-site for the duration of the ground disturbing activities and three times a week for the duration of the Project.	Prior to Construction	City of Pasadena Project Proponent
MM-BIO-11-Biological Monitoring and Impacts to Special Status Species	If Project-related construction or activity during the life of the Project will result in take of a species designated as endangered or threatened, or a candidate for listing under CESA, CDFW recommends that the City seek appropriate take authorization under CESA prior to implementing the Program. Appropriate authorization from CDFW may include an Incidental Take Permit (ITP) or a consistency determination in certain circumstances, among other options [Fish & G. Code, §§ 2080.1, 2081, subds. (b) and (c)]. Early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, may require that CDFW issue a separate CEQA document for the issuance of an ITP unless the Project CEQA document addresses all Project impacts to CESA-listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of an ITP. For these reasons, biological mitigation monitoring and reporting proposals shall be of	Prior to Construction	City of Pasadena Project Proponent

	sufficient detail and resolution to satisfy the requirements for a CESA ITP.		
MM-BIO-12-Biological Monitoring and Impacts to Special Status Species	To protect nesting birds that may occur on site or adjacent to the Project boundary, no construction activities shall occur from February 15 (January 1 for raptors) through August 31. CDFW recommends a 0.5 mile, if feasible, around active CESA/ESA-listed bird nests. These buffers should be increased by the biologist if needed to protect the nesting birds.	Prior to Construction	City of Pasadena Project Proponent
MM-BIO-13-Bat Species	Bat surveys shall be conducted by a qualified bat specialist to determine baseline conditions within the Project and within a 500-foot buffer. In addition, an analysis of the potential significant effects of the proposed Project on the species (CEQA Guidelines §15125). The use of acoustic recognition technology shall be utilized to maximize detection of bat species to minimize impacts to sensitive bat species. If certain species are detected, MM-BIO-3 in the DEIR shall include species specific measures, such as avoiding the area during roosting season/time of day when each bat species are most likely to be present.	Prior to Construction	City of Pasadena Project Proponent
MM-BIO-14-Impacts to Burrowing Owls	The Project shall adhere to CDFW's March 7, 2012, *Staff Report on Burrowing Owl Mitigation* as referenced in the MND. All survey efforts shall be conducted prior to any project activities that could result in habitat disturbance to soil, vegetation or other sheltering habitat for burrowing owl. In California, the burrowing owl breeding season extends from 1 February to 31 August with some variances by geographic location and climatic conditions. Survey protocol for breeding season owl surveys states to conduct four survey visits: 1) at least one site visit between 15 February and 15 April, and 2) a minimum of three survey visits, at least three weeks apart, between 15 April and 15 July, with at least one visit after 15 June.	Prior to Construction	City of Pasadena Project Proponent
MM-BIO-15-Impacts to Burrowing Owls	Permanent impacts to occupied owl burrows and adjacent foraging habitat shall be offset by setting aside replacement	Prior to Construction	City of Pasadena Project Proponent

	habitat to be protected in perpetuity under a conservation easement dedicated to a local land conservancy or other appropriate entity, that shall include an appropriate non-wasting endowment to provide for the long-term management of mitigation lands. The City shall require a burrowing owl mitigation plan be submitted to CDFW for review and comment prior to Project implementation.		
MM-BIO-16-Impacts to Burrowing Owls	Project use of rodenticides that could result in direct or secondary poisoning to burrowing owl shall be avoided.	Prior to Construction	City of Pasadena Project Proponent
MM-BIO-17-Mountain Lion	Due to potential habitat within the Project site, within one year prior to Project activities, a qualified biologist familiar with the mountain lion species behavior and life history should conduct surveys in areas that may provide possible habitat for mountain lion to determine the potential presence/absence of the species. Surveys should be conducted when the species is most likely to be detected, during crepuscular periods at dawn and dusk (Pierce and Bleich 2003). Survey results including negative findings should be submitted to CDFW prior to initiation of project activities.	Prior to Construction	City of Pasadena Project Proponent
MM-BIO-18-Mountain Lion	Two weeks prior to construction activities and during construction, a qualified biologist shall conduct a survey for mountain lion natal dens. The survey area shall include the construction footprint and the area within 2,000 feet (or the limits of the property line) of the Project disturbance boundaries. Should an active natal den be located, the applicant shall cease work within 2000 feet and inform CDFW with 24 hours. No construction activities shall occur in the 2000-foot buffer until a qualified biologist in consultation with CDFW establishes an appropriate setback from the den that would not adversely affect the successful rearing of the cubs. No construction activities or human intrusion shall occur within the established setback until the cubs have been successfully reared or the cats have left the area.	Prior to Construction	City of Pasadena Project Proponent

MM-BIO-19-Fish Survey	Surveys, such as underwater or electrofishing, shall be conducted as described in the California Salmonid Stream Habitat Restoration Manual, https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=22654. Surveys shall be conducted in the same survey area as the previous fish survey. All results, including negative results shall be reported to CDFW and included in the final environmental document.	Prior to Construction	City of Pasadena Project Proponent
MM-BIO-20-Tree Removal	To reduce impacts to less than significant, the final environmental document shall describe an infectious tree disease management plan and how it will be implemented in order to avoid significant impacts under CEQA. All trees identified for removal resulting from the Project shall be inspected for contagious tree diseases including but not limited to: thousand canker fungus (*Geosmithia morbida*), see http://www.thousandcankers.com/; Polyphagous Shot Hole Borer (*Euwallacea spp*.), see http://eskalenlab.ucr.edu/avocado.html); and goldspotted oak borer (*Agrilus auroguttatus), see* http://ipm.ucanr.edu/PMG/PESTNOTES/pn74163.html. To avoid the spread of infectious tree diseases, diseased trees shall not be transported from the Project site without first being treated using best available management practices relevant for each tree disease observed.	Prior to Construction	City of Pasadena Project Proponent
MM-BIO-21-Wildlife Movement Corridor	CDFW recommends that any activity that could result in the reduction, fragmentation, or other degradation of habitat value within the habitat core be considered under CEQA. CDFW further recommends that any proposed unavoidable impacts to the habitat core within the City's CEQA purview be subject to conditions that will further verify wildlife movement and other habitat values. Habitat use and impact assessments should be informed by efforts to further document wildlife movement through the habitat core using techniques such as, but not limited to, camera and tracking stations and radio telemetry conducted over at least a two-	Prior to Construction	City of Pasadena Project Proponent

	year period. CDFW recommends that the City include a discussion on the habitat values and wildlife movement when considering any discretionary activities located within the habitat core including the Project footprint.		